Atop Technologies, Inc.

Network Management Utility

User Manual

V1.2

Sep 25, 2020

This PDF Document contains internal hyperlinks for ease of navigation.
For example, click on any item listed in the **Table of Contents** to go to that page.

Published by:

Atop Technologies, Inc.

2F, No. 146, Sec. 1, Tung-Hsing Rd,
30261 Chupei City, Hsinchu County
Taiwan, R.O.C.

Tel: +886-3-550-8137
Fax: +886-3-550-8131
www.atoponline.com

Important Announcement

The information contained in this document is the property of ATOP Technologies, Inc., and is supplied for the sole purpose of operation and maintenance of ATOP Technologies, Inc., products.
No part of this publication is to be used for any other purposes, and it is not to be reproduced, copied, disclosed, transmitted, stored in a retrieval system, or translated into any human or computer language, in any form, by any means, in whole or in part, without the prior explicit written consent of ATOP Technologies, Inc.,
Offenders will be held liable for damages and prosecution.
All rights, including rights created by patent grant or registration of a utility model or design, are reserved.

Disclaimer

We have checked the contents of this manual for agreement with the hardware and the software described. Since deviations cannot be precluded entirely, we cannot guarantee full agreement. However, the data in this manual is reviewed regularly and any necessary corrections will be included in subsequent editions.
Suggestions for improvement are welcome. All other product's names referenced herein are registered trademarks of their respective companies.

Who Should Use This User Manual

This manual is to be used by qualified network personnel or support technicians who are familiar with network operations, and might be useful for system programmers or network planners as well. This manual also provides helpful and handy information for first time users. For any related problems, please contact your local distributor. If they are unable to assist you, please redirect your inquiries to www.atoponline.com .

Warranty Period

There is no warranty for the software. Please rely to the license agreement.

Documentation Control

Author:	Saowanee Saewong
Revision:	1.2
Revision History:	Second release
Creation Date:	19 June 2020
Last Revision Date:	25 September 2020
Product Reference:	Network Management Utility User Manual
Document Status:	Release

Table of Contents

1 Introduction 8

1.1 Purpose of the Manual 8
1.2 Who Should Use This User Manual 8
1.3 Scope 8
1.4 System Requirements 8

2 Getting Started 9

1.1 Installation of Network Management Utility 9
1.2 Installation 10

3 User Interface 11

4 Top Drop-down Menus 13

4.1 File 13
4.1.1 Preference 13
4.1.2 General Sub-left menu 14
4.1.3 Mail Sub-left Menu 14
4.1.4 SNMP Sub-left Menu 15
4.2 View 18
4.3 Help 18

5 Side Vertical Menus 20

5.1 Device List 20
5.2 Add New Group 21
5.3 Group View (Toggle Icon) 22
5.4 Edit groups 23
5.4.1 Edit Group Name 24
5.4.2 Remove Group 24
5.4.3 Edit Member 25
5.5 Perform actions on devices assigned to groups 27
5.5.1 Open Web 28
5.5.2 Telnet 29
5.5.3 Beep 29
5.5.4 Reboot 30
5.5.5 Network Setting 30
5.5.6 Device Advanced Setting 32
5.5.7 Port Information 34
5.5.8 Backup and Restore 35
5.6 Event Log 37
5.6.1 Event Tab 37
5.6.2 SNMP Trap Tab 38
5.7 Topology 41
5.7.1 Drawing Space 41
5.7.1 Top Icon Bar – Horizontal Layer 45

6 Top Horizontal Icon Bar - Device List 47

6.1 > or < Icon 47
6.2 Discovery 48
6.3 Firmware Update 50
6.4 Network Setting 53
6.5 Reset to Default 54
6.6 Backup and Restore 55

Table of Figures

Figure 2.1 Network Management Utility© Program Icon....9
Figure 2.2 Right Click the Network Management Utility© Program Icon....10
Figure 2.3 Right Click Properties → Compatibility Tab → Tick Two Boxes....10
Figure 2.4 An Installing Pop-up Window....10
Figure 3.1 Lunching when Double Click the Network Management Utility Setup....11
Figure 3.2 First-time Launch of Network Management Utility Setup 2.X....11
Figure 3.3 Working Space after Clicking on Discovery Icon....11
Figure 3.4 List of Connected Devices after Clicking Discover Icon....12
Figure 4.1 Submenus within File Menu....13
Figure 4.2 File → Preference Sub-menu....13
Figure 4.3 File → Preference Sub-menu → General Sub-left Menu....14
Figure 4.4 File → Preference Sub-menu → Mail Sub-left Menu....14
Figure 4.5 List of Mail Services Available within File → Preference Sub-menu → Mail Sub-left Menu....15
Figure 4.6 List of SNMP Scan Sub-section Available within File → Preference Sub-menu → SNMP....15
Figure 4.7 SNMP Scan Sub-section within File → Preference Sub-menu → SNMP Sub-left Menu....16
Figure 4.8 Device Type is shown as Basic/SNMP....16
Figure 4.9 Default Community Sub-section within File → Preference Sub-menu → SNMP Sub-left Menu....16
Figure 4.10 Others Sub-section within File → Preference Sub-menu → SNMP Sub-left Menu....17
Figure 4.11 Precheck Device SNMP Feature First before Specific Operations....17
Figure 4.12 Toggle Full Screen Submenus within View Menu....18
Figure 4.13 About Network Management Utility Submenus within Help Menu....18
Figure 4.14 About Network Management Utility Window....19
Figure 5.1 Side Verticle Menus....20
Figure 5.2 List of Connected Devices in Side Vertical Menus → Device List....21
Figure 5.3 Click Add New Group Icon in the Top Horizontal Icon Bar....22
Figure 5.4 Success Window after Successfully Added a New Group....22
Figure 5.5 A List of Devices (a) in grouping (b) without Classifying in a Group....23
Figure 5.6 Right Click on any Space in a Group but outside the Device Table....24
Figure 5.7 Enter a New Name Window....24
Figure 5.8 Confirmation Dialog for User to Remove a Group....24
Figure 5.9 Confirmation on Sucessfully Removing a Group....25
Figure 5.10 Add Member to the Selected Group....26
Figure 5.11 Remove Member from the Selected Group....26
Figure 5.12 Devices Added/Removed to/from Group A....27
Figure 5.13 Drop-down Menu when Right Click on the Device List in any Group....27
Figure 5.14 Drop-down Menu, Right Click, Device List in any Group, Open Web → Open on OS browser....28
Figure 5.15 Login to Web-based Configuration....28
Figure 5.16 Right Click on the Device List in any Group and Select Open Web → Open on NUM....29
Figure 5.17 Select Beep and the Beep Confirm Window is Launched....29
Figure 5.18 Select Reboot and the Restart Confirm Window is Launched....30
Figure 5.19 Notification of the Reboot Success Window....30
Figure 5.20 Network Setting Window After Right Click on the Device List....31
Figure 5.21 Notification of the Success Setting in the Device List Window....31
Figure 5.22 Authentication Tab in Advanced Setting Window After Right Click on the Device List....32
Figure 5.23 Side Vertical Menus-Device List-Right Click on Device List-Advanced Setting-Alarm Tabl....33
Figure 5.24 Notification at the Bottom Right Corner for Alarming (Appear One at a Time)....33
Figure 5.25 Notification of Failure on SNMP Feature....34
Figure 5.26 Selecting Port Information in Side Vertical Menus-Device List-Right Click on Device List....34
Figure 5.27 Backup Part of Vertical Menu-Device List-Right Click on Device List-Backup and Restore....35
Figure 5.28 Restore Part of Vertical Menu-Device List-Right Click on Device List-Backup and Restore....35
Figure 5.29 Confirmation Window for the Restore Part....36
Figure 5.30 Notification on the Success of Configuration Restore....36

Figure 5.31 History Events inside the Side Vertical Menu → Event Log → Event Tab....37
Figure 5.32 History Events inside the Side Vertical Menu → Event Log → Event Tab → HISTORY Button....37
Figure 5.33 History Events inside the Side Vertical Menus → Event Log → SNMP Trap Tab....38
Figure 5.34 History Events Event Log → SNMP Trap Tab → HISTORY Button Selecting Date (a) and Time (b)....39
Figure 5.35 History Events inside the Side Vertical Menus → Event Log → Syslog Tab....39
Figure 5.36 History Events insdie the Side Vertical Menus → Event Log → Syslog Tab → HISTORY Button....40
Figure 5.37 History Events inside the Side Vertical Menus → Topology (SNMP Disabled)....41
Figure 5.38 Working Space for Drawing a Topology: Side Menus → Topology (SNMP Enabled)....42
Figure 5.39 Drawing a Topology in Side Menus → Topology → (a) ADD NODE or (b) ADD LINK....42
Figure 5.40 Topology drawing example....43
Figure 5.41 DELETE Button insider the Side Vertical Menus → Topology....43
Figure 5.42 Device List when Adding a New Device using a MAC Address in Topology....44
Figure 5.43 Notification of Successfully Saving of Topology Layout....44
Figure 5.44 Export Image in the Side Vertical Menus → Topology....45
Figure 5.45 Topology in Group A in the Side Vertical Menus → Topology....46
Figure 6.1 Clicking > Icon to Expand the Area of the Side Vertical Menus....47
Figure 6.2 Clicking < Icon to Shrink the Area of the **Side Vertical Menus**....47
Figure 6.3 First-time Launch of Network Management Utility Setup 2.X....48
Figure 6.4 SNMP Scan is Ongoing....48
Figure 6.5 Devices in the Device Table in each Group....49
Figure 6.6 Click on Firmware Update in the Top Horizontal Icon Bar....50
Figure 6.7 Go Through the File Directory to Select the Firmware File (.dld)....51
Figure 6.8 Go through the File Directory to Select the Firmware File (.dld)....52
Figure 6.9 The Firmware Update is Finished with a Failure (Code E007)....52
Figure 6.10 Click Network Setting Icon in the Top Horizontal Bar of the Device List – Automatic Setting....53
Figure 6.11 Click Network Setting Icon in the Top Horizontal Bar of the Device List – Manual Setting....54
Figure 6.12 Select Devices and Click OK to Reset to Default....54
Figure 6.13 Confirm Window to Reset to Default Setting....55
Figure 6.14 Success to Reset to Default Setting....55
Figure 6.15 Click Backup and Restore in the Top Horizontal Icon Bar....56
Figure 6.16 Backup and Restore Window is Launched after Clicking OK....56
Figure 6.17 Success Backup after Clicking Icon in the Top Horizontal Icon Bar....57
Figure 6.18 Failure Backup after Clicking Icon in the Top Horizontal Icon Bar....57
Figure 6.19 Configuration Files that are Already Backup....58
Figure 6.20 Sucess Restoring the Configuration File....58

List of Tables

Table 4.1 Description of each field in the File-Preference-SNMP Sub-left Menu-SNMP Scan Section....16
Table 4.2 Description of each field in the File-Preference-SNMP Sub-left Menu-Default Community Section....17
Table 5.1 Description of each field in the Side Icon Menu → Device List....21
Table 5.2 Description of each field in Device List-Advanced Setting-Authentication Tab....32
Table 5.3 Description of Each Field in the Side Vertical Menus → Event Log → SNMP Tab Tab....38
Table 5.4 Description of Each Field in the Side Vertical Menus → Event Log → Syslog Tab....39
Table 6.1 Definition of Each Field in the Device Table....49

1 Introduction

1.1 *Purpose of the Manual*

This manual explains the available technical features of the Network Management Utility. During the device configuration, users can follow instructions, examples, and guidelines provided in the manual for a general and advanced network management. Some general technical information is also given to help users manage their devices. A background in general theory is necessary when reading it. Please refer to the Glossary for technical terms and abbreviations.

1.2 *Who Should Use This User Manual*

This manual should be used by qualified network personnel or support technicians who are familiar with network operations. It can be useful for system programmers and network planners. This manual will also come handy for new users. If there are any issues, please reach us at www.atoponline.com.

1.3 *Scope*

Network Management Utility is a software utility developed by ATOP Technologies. It is a special tool for device management and configuration of our products. It can be used for daily management and setting tasks on various Atop's network devices such as:

- Device discovery and listing
- Device grouping
- Login with password
- Network parameter configuration
- Firmware update
- Reset to Default
- Backup and restore configuration

1.4 *System Requirements*

- Windows 7/8
- Windows 2008
- Windows Vista
- Windows Professional 2003
- Windows 2000/Windows NT
- Windows 10 is supported and fully functional; however, some issues related to font-size have been reported.

Note: All figures herein are intended for the illustration purpose only. Certain features of this software work only on some specific ATOP devices.

---

2 Getting Started

1.1 Installation of Network Management Utility

The Network Management Utility can be either installed from the CD that comes in your product package or can be downloaded from www.atoponline.com. Once the installer is available on your PC, proceed to install it by double clicking on the Network Management Utility program icon which has the icon as shown in Figure 2.1.

Figure 2.1 Network Management Utility© Program Icon

For Windows 7 users, it is strongly recommended to allow the program to run in the Compatibility Mode. This can be done by right clicking the **Network Management Utility Setup 2.X** program icon and selecting the **Properties** menu as shown in Figure 2.2. Then, click on the **Compatibility** tab and tick on the **"Run this program in compatibility mode for:"** box and tick on the "**Run this program as an administrator"** box, as shown in Figure 2.3. Finally, click **OK** button and proceed to install the program.

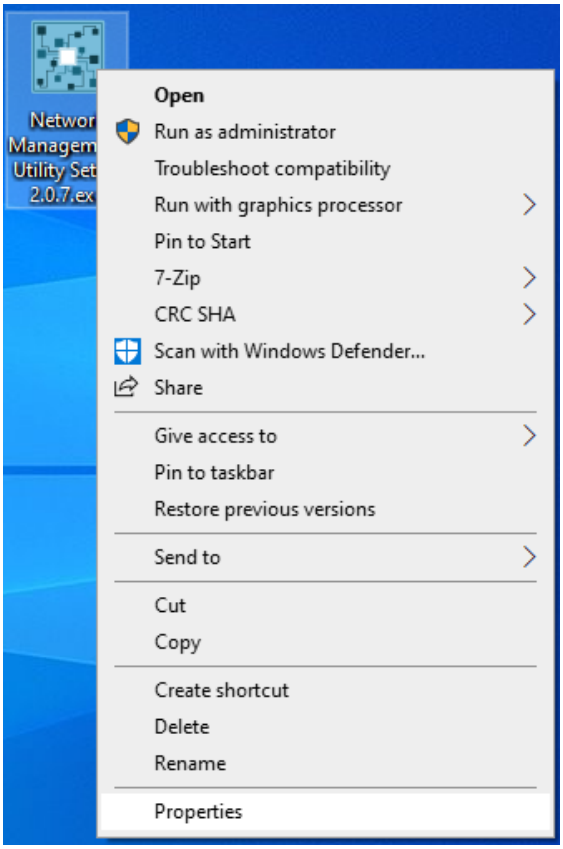


Figure 2.2 Right Click the Network Management Utility© Program Icon

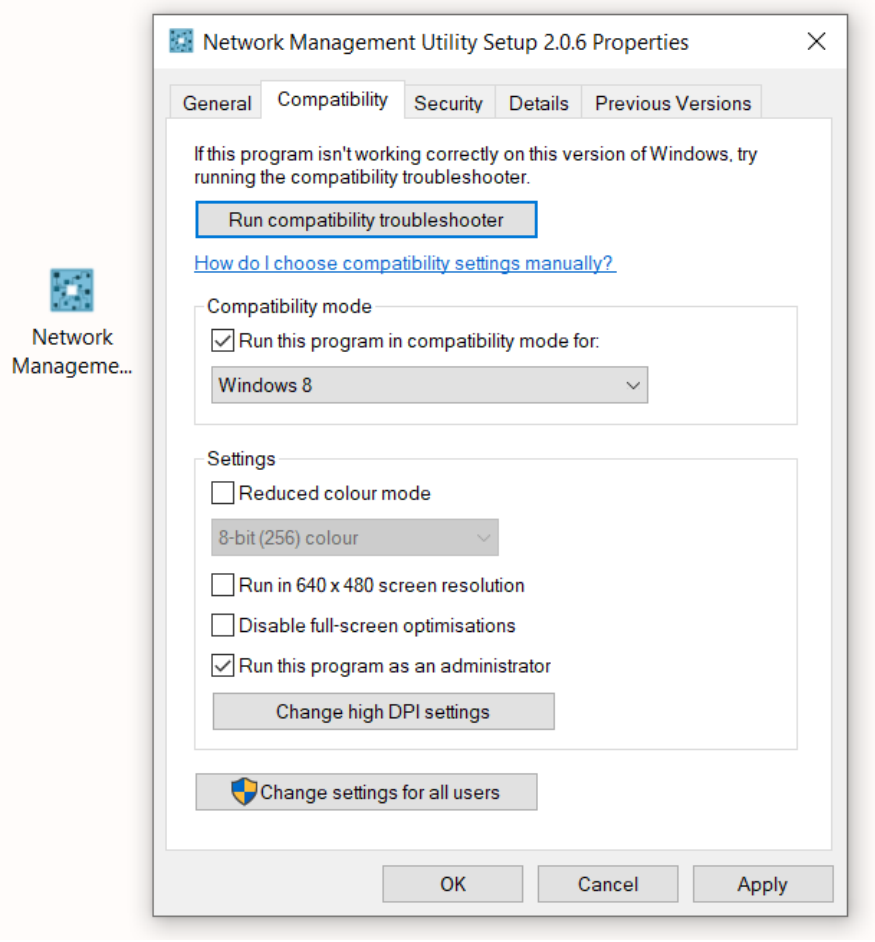


Figure 2.3 Right Click Properties → Compatibility Tab → Tick Two Boxes

1.2 Installation

Click the **OK** button in setup program's properties as shown above. Then, after double click on the setup icon, a pop-up window will be launched, as shown in Figure 2.4. After finishing it, the **Network Management Utility Setup** program is installed into your computer system.

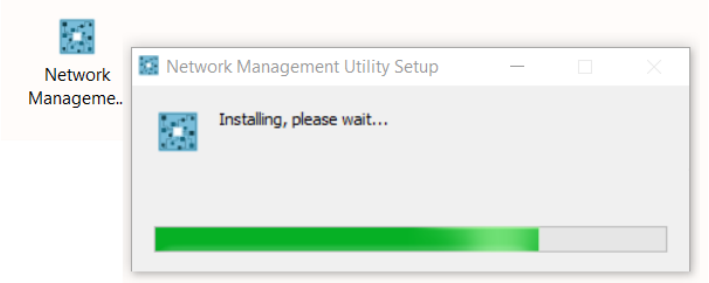


Figure 2.4 An Installing Pop-up Window

3 User Interface

Double click already installed **Network Management Utility Setup 2.X** to launch the program. While loading the program, its logo and version appear as shown in Figure 3.1 below.

Figure 3.1 Lunching when Double Click the Network Management Utility Setup

The user interface (UI) of **Network Management Utility Setup 2.X** is depicted in Figure 3.2. The window consists of the followings: 1) pull-down menus at the top, 2) a vertical left menu, and 3) a working space in the middle of the window. When users click at a vertical left menu, an icon bar (at the second top horizontal layout) will appear for the **Device List** and **Topology** menus. The following chapters will describe each item and its function in details. Here, how to first discover the connected devices will be explained.

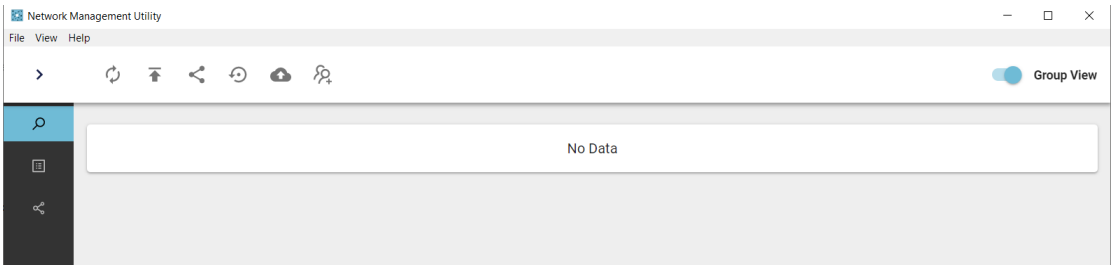


Figure 3.2 First-time Launch of Network Management Utility Setup 2.X

Clicking on the discovery icon at the top icon bar. It will show number of connected devices to the **Network Management Utility Setup 2.X**, as shown in Figure 3.3. If these devices are still not grouped together, number of devices will be showed as unGrouped.

Figure 3.3 Working Space after Clicking on Discovery Icon

Click on the drop-down icon on the right, and the list of the found device(s) is displayed as table with the following columns: **Online**, **Device Type**, **Model**, **IP Address**, **MAC Address**, **Host Name**, **Kernel, AP,** and **Access** as shown in Figure 3.4. When users click at the head of the column, the devices are sorted according to values of devices in that column.

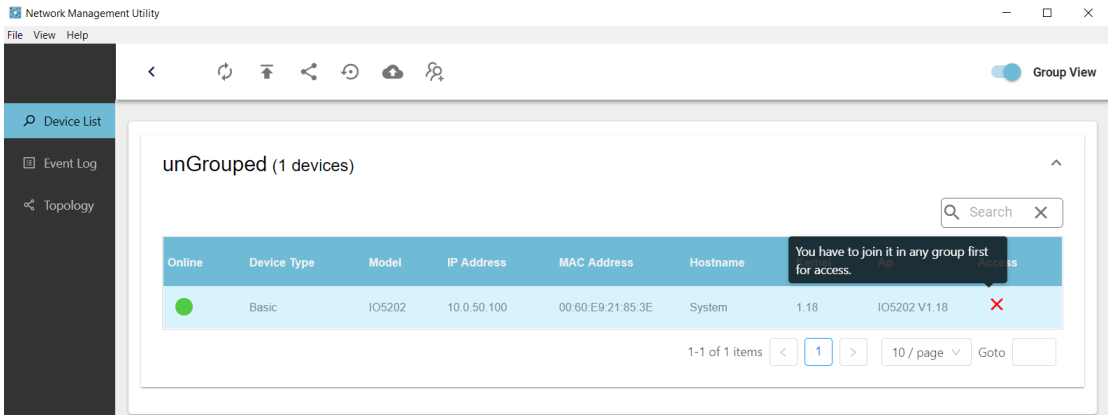


Figure 3.4 List of Connected Devices after Clicking Discover Icon

The first column called **Online** shows the status of each device: active (green dot) or inactive (red dot). The second column called **Device Type**, shows whether it is a basic or an advanced device. The third column is the **Model** number of the found device(s). The fourth column is the **IP Address** of the corresponding device. The fifth column is the **MAC Address** of the device. The sixth column is the **Host Name** of the device. The seventh column is the **Kernel** version of the device. The eighth column is the **AP information** or application version of the device. Note that Atop's firmware of a device generally consists of application version and kernel version. The last column, **Access**, indicates whether the device is already accessible (✓) or not (✕). Users have to join the device in any group first for its accessibility. That is users have to create a group and add the device to that group first to view it as accessible.

4 Top Drop-down Menus

There are three menus on the drop-down menu: **File**, **View**, and **Help**. In the following sections, each sub-menus within each menu are described in details.

4.1 *File*

The first menu on the pull-down menus is the **File**, as shown in Figure 4.1. In this menu, there are four submenus:

- Preference...
- Import Settings...
- Export Settings...
- Quit

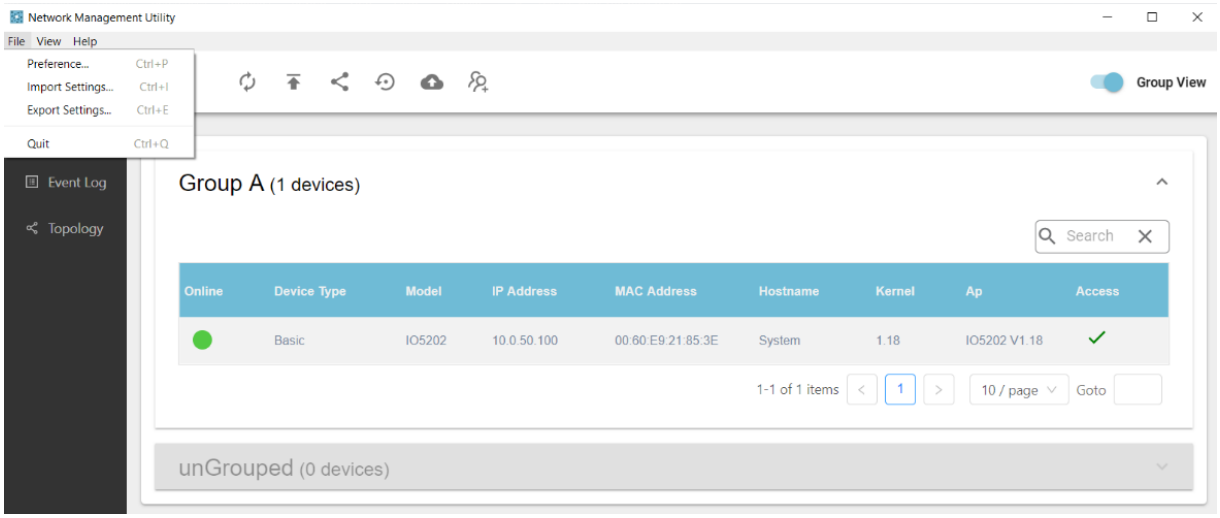


Figure 4.1 Submenus within File Menu

4.1.1 *Preference*

As shown in Figure 4.2 below, four sub-menus are contained within the **Preference** sub-menu under **File** menu: **General**, **Mail, SNMP**, and **Advanced**.

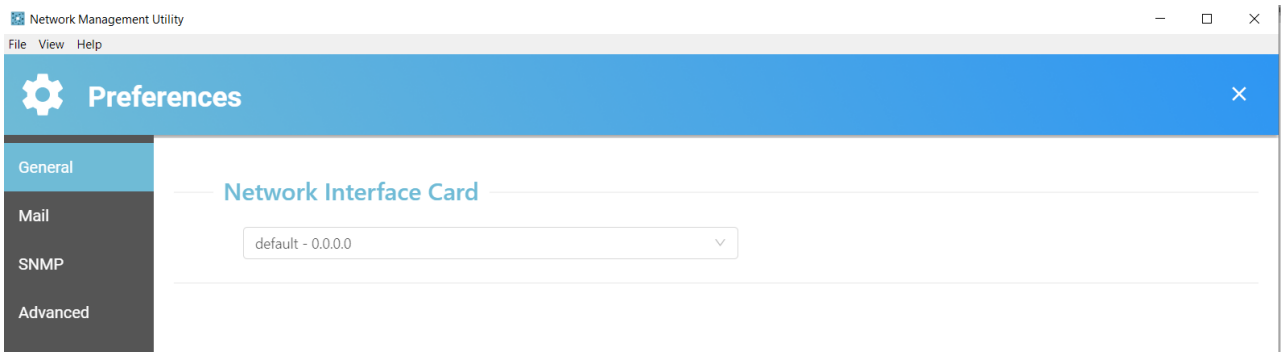


Figure 4.2 File → Preference Sub-menu

4.1.2 *General Sub-left menu*

In this **File → Preference** Sub-menu → **General** Sub-left menu, the **Network Interface Card** are displayed. Here, all interfaces are listed including virtual interface, As shown in Figure 4.3 below.

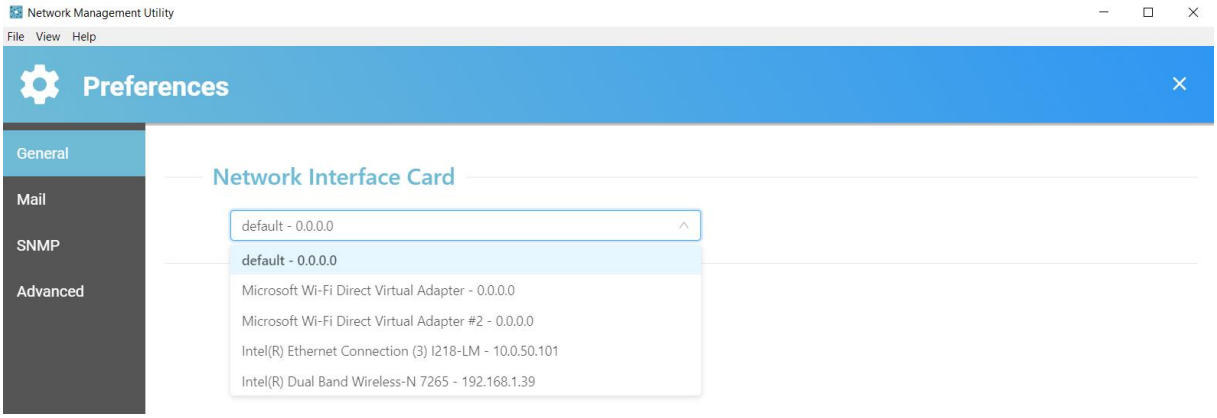


Figure 4.3 File → Preference Sub-menu → General Sub-left Menu

4.1.3 *Mail Sub-left Menu*

In this **File → Preference** Sub-menu → **Mail** Section, users can enable automatic sent-mail notification, as shown in Figure 4.4 below. Click Enable Notification to toggle **Enable Notification** to enable the service, such as Gmail, Hotmail, Yahoo. Select option **Mail Service List** if using mail service from available standard provider; otherwise, select **User Definition** and enter your choice of host mail and port.

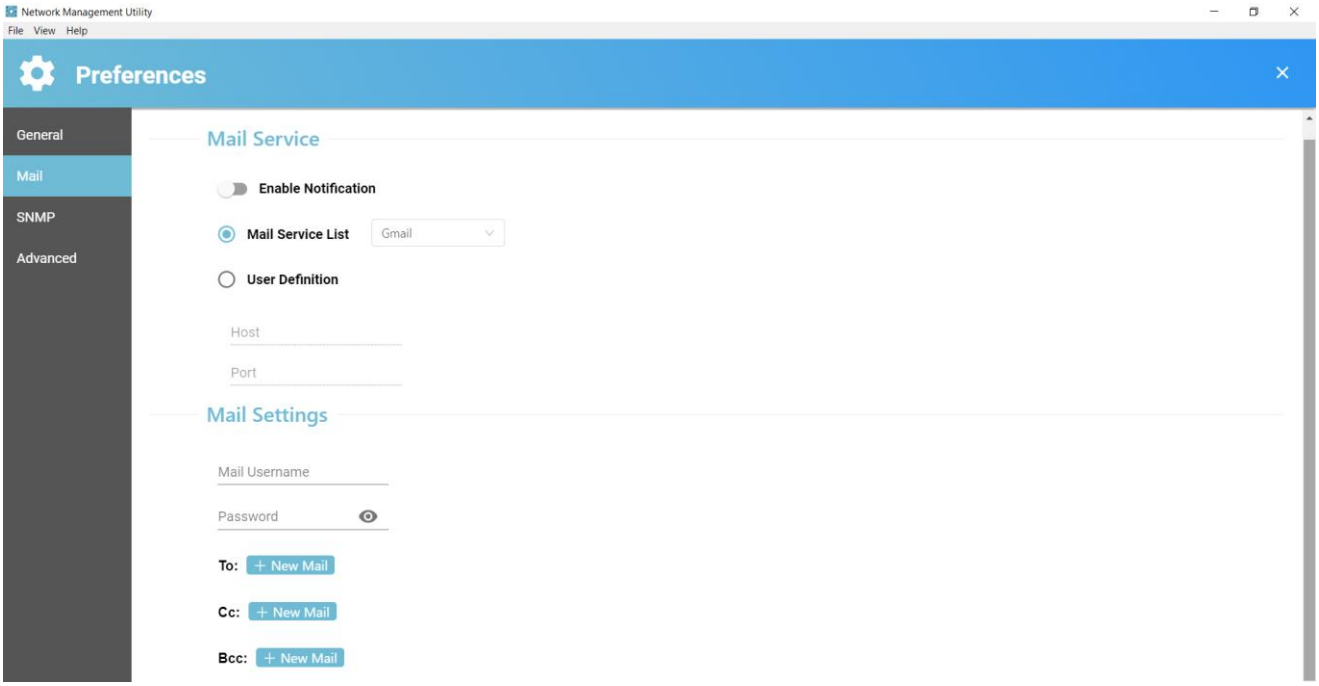


Figure 4.4 File → Preference Sub-menu → Mail Sub-left Menu

Users have many choices of mail services, as shown in Figure 4.5 below.

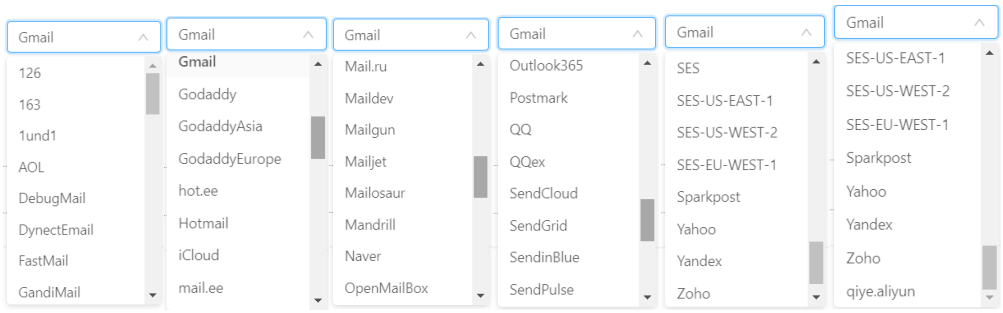


Figure 4.5 List of Mail Services Available within File → Preference Sub-menu → Mail Sub-left Menu

Click + New Mail to enter valid email address of each email header: To:, CC:, and BCC:.

4.1.4 *SNMP Sub-left Menu*

In this **File → Preference** Sub-menu → **SNMP** Sub-left Menu, users can enable SMNP service and configure setting such as SNMP Scan, Default Community, and Others, as shown in below.

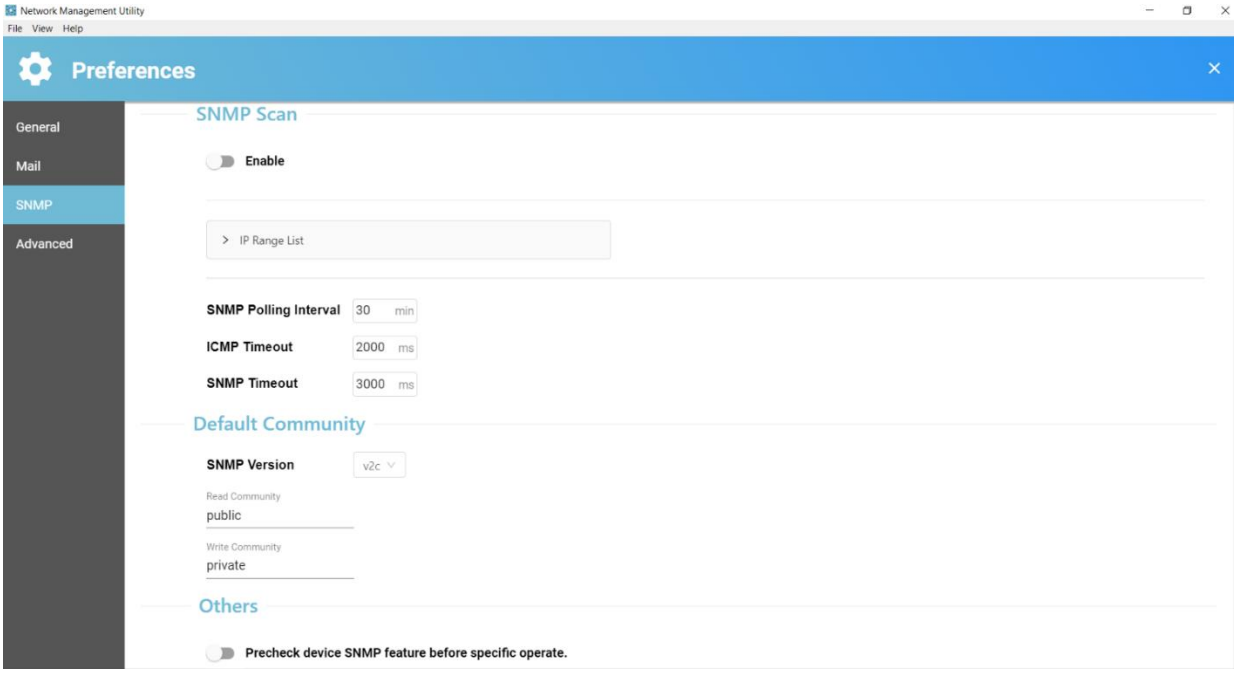


Figure 4.6 List of SNMP Scan Sub-section Available within File → Preference Sub-menu → SNMP

In **File → Preference** Sub-menu → **SNMP** Sub-left Menu, toggle Enable to enable SNMP scan and click ADD to add range of IP addresses in IP Range List, as shown in below.

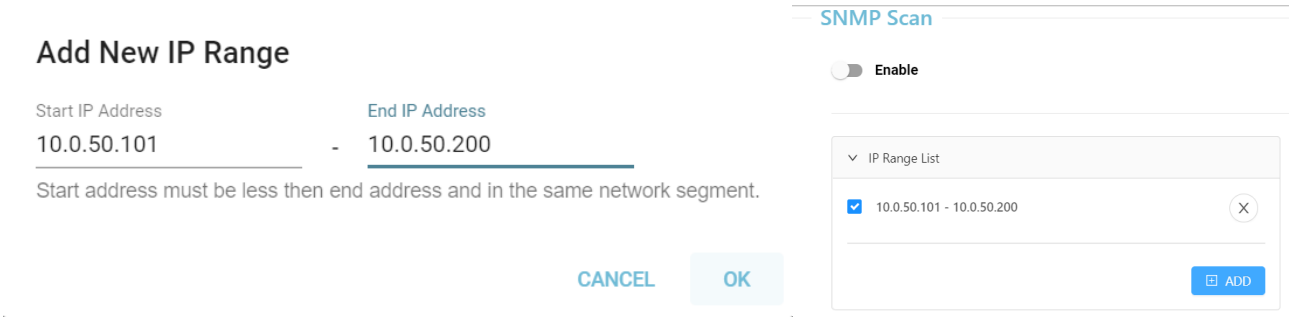


Figure 4.7 SNMP Scan Sub-section within File → Preference Sub-menu → SNMP Sub-left Menu

Please refer to Section 4.1.4 if an SNMP function is not enabled. That is if the software continues notifying that "(This feature only for device with SNMP support.)" and the **"OK"** link cannot be clicked even user already enabled an SNMP function via the **Network Management Utility Setup 2.X.** User should enable an SNMP function via web interface of the device instead. User can follow the instruction in Section 0 to initialize a web configuration page. Note that when the SNMP is enabled, the device type changes from Basic to Basic/SNMP.

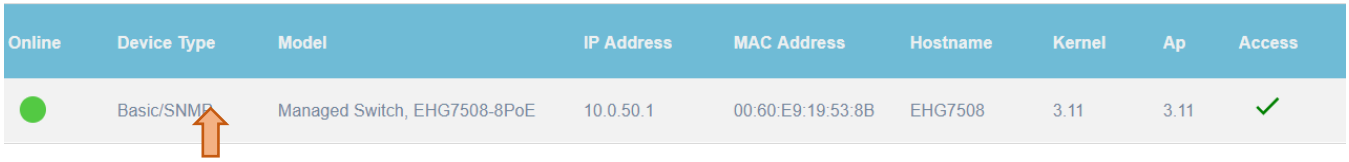


Figure 4.8 Device Type is shown as Basic/SNMP

The description of each field in the File-Preference-SNMP Sub-left Menu-SNMP Scan section is shown in Table 4.1.

Table 4.1 Description of each field in the File-Preference-SNMP Sub-left Menu-SNMP Scan Section

Field Name	Description	Default Value
IP Range List	A start and end IP addresses of devices to scan SNMP message	N/A
SNMP Polling Interval	The period of time between the end of the timeout period of the last polling, where polling consists of launching remote queries synchronously, either actively or on demand.	30 mins
ICMP Timeout	The maximum number of milliseconds before a ICMP response is received	2000 ms
SNMP Timeout	The maximum number of milliseconds before a SNMP response is received	3000 ms

In **File → Preference** Sub-menu → **SNMP** Sub-left Menu, users can set **Default Community**, as shown in Figure 4.9 below.

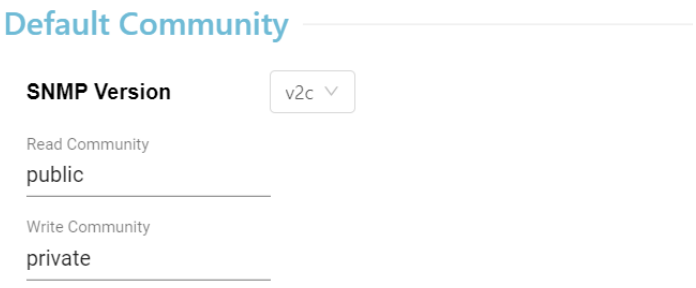


Figure 4.9 Default Community Sub-section within File → Preference Sub-menu → SNMP Sub-left Menu

The description of each field in the File-Preference-SNMP Sub-left Menu-Default Community section is shown in 4.2 below.

Table 4.2 Description of each field in the File-Preference-SNMP Sub-left Menu-Default Community Section

Field Name	Description	Default Value
SNMP Version	Version of SNMP available on SNMPv1 and SNMPv2c (with data encryption)	v2c
Read Community	Community string (in clear text) allows access to a device and read its statistics	public
Write Community	Community string (in clear text) allows access to a device and write its statistics (or edit its configurations)	private

To make the device's information available for public viewing/editing, you can enable the **SNMP** function by toggling the **Enable** option and fill in the two passphrases (or SNMP Community Strings) below it. By filling in the passphrase for the "**Read Community**", the connected device allows other network management software to read its information. By filling in the passphrase for the "**Write Community**", the connected device allows other network management software to read/modify its information. The default device's SNMP Community Strings (or passphrases) for **Read Community** and **Write Community** are "**public**" and "**private**", respectively.

In **File → Preference** Sub-menu → **SNMP** Sub-left Menu → **Others** section, users can precheck device SNMP feature before some specific operations in the **Others** section, as shown in Figure 4.10 below.

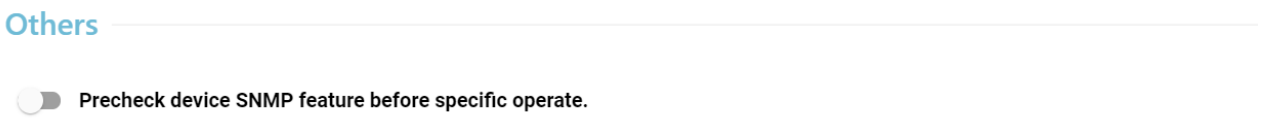


Figure 4.10 Others Sub-section within File → Preference Sub-menu → SNMP Sub-left Menu

When performing some specific setting such as network setting, the program will precheck device SNMP feature first as shown in Figure 4.11 below.

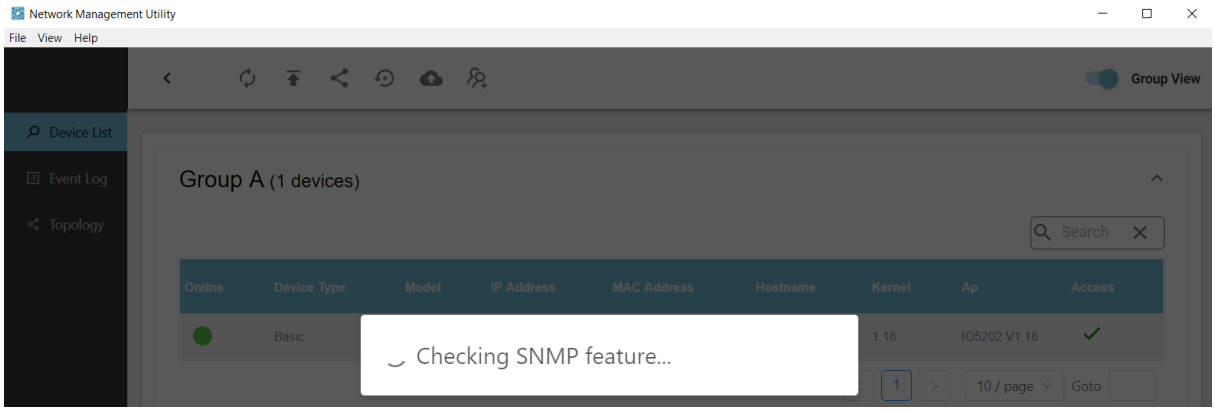


Figure 4.11 Precheck Device SNMP Feature First before Specific Operations

4.2 *View*

The second menu on the pull-down menus is the **View**, as shown in Figure 4.12. In this menu, there is one submenu:

- Toggle to full screen

Figure 4.12 Toggle Full Screen Submenus within View Menu

When selecting **Toggle to Full Screen** or press F11 button, the window will expand to full. When re-selecting it or press F11 button again, the window will be minimized to the original size.

4.3 *Help*

The third menu on the pull-down menus is the **Help**, as shown in Figure 4.13. In this menu, there is one submenu:

- About Network Management Utility

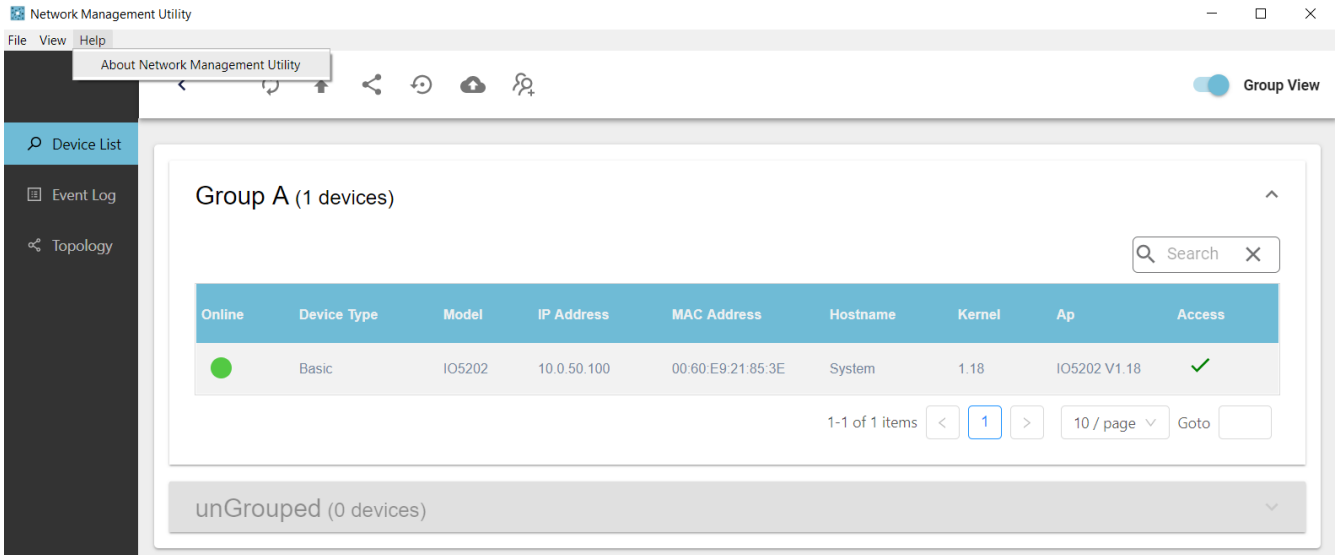


Figure 4.13 About Network Management Utility Submenus within Help Menu

When selecting **About Network Management**, logo and version of the software appear, as shown in Figure 4.14 below.

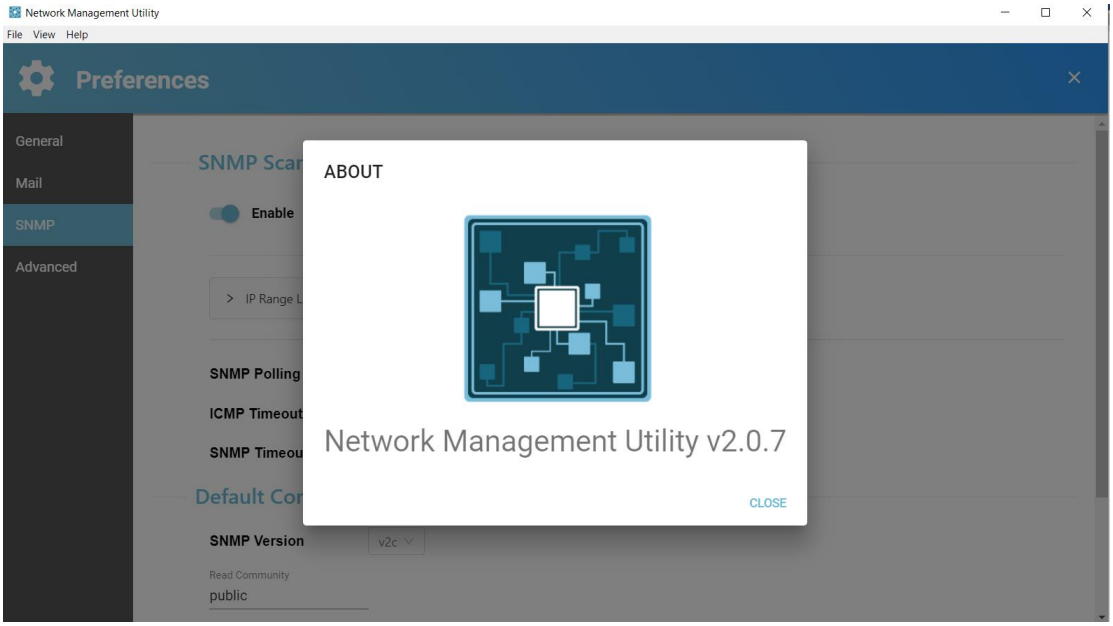


Figure 4.14 About Network Management Utility Window

5 Side Vertical Menus

Side Vertical Menus consists of the followings, as shown in Figure 5.1:

- Device List
- Event Log
- Topology

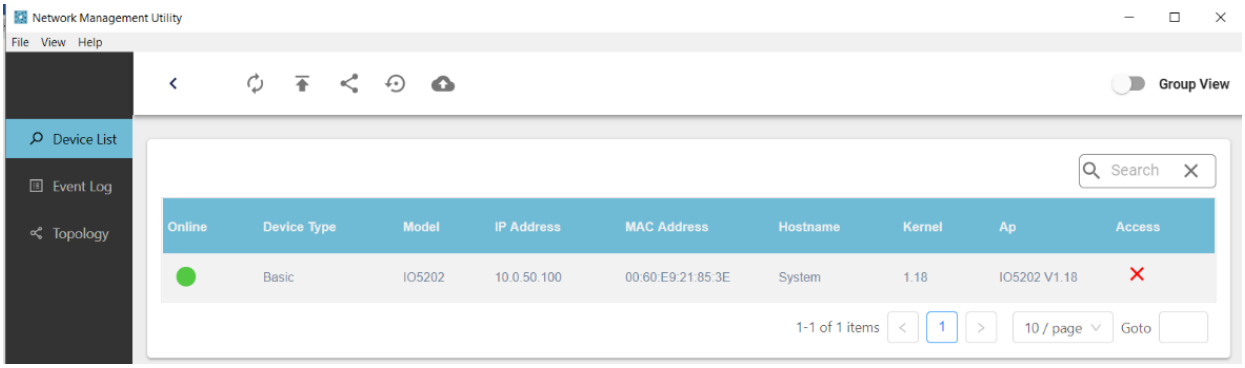


Figure 5.1 Side Verticle Menus

5.1 *Device List*

In the Side Vertical Menus→ **Device List**, it consists of
1) a device table in each device group's working space and
2) the top horizontal icon bar. In this section, only the first part will be described. Details of the second part will be explained in Chapter 6.

In the Side Vertical Menus→ **Device List**, connected devices are listed here according to its group. If any devices were not added to any grouped, these devices will be listed in the unGrouped section as shown in Figure 5.2. As described in Section 3, the list of the found device(s) is displayed as table with the following columns: **Online**, **Device Type**, **Model**, **IP Address**, **MAC Address**, **Host Name**, **Kernel**, **Ap**, and **Access**. When users click at the head of the column, the devices are sorted according to values of devices in that column.

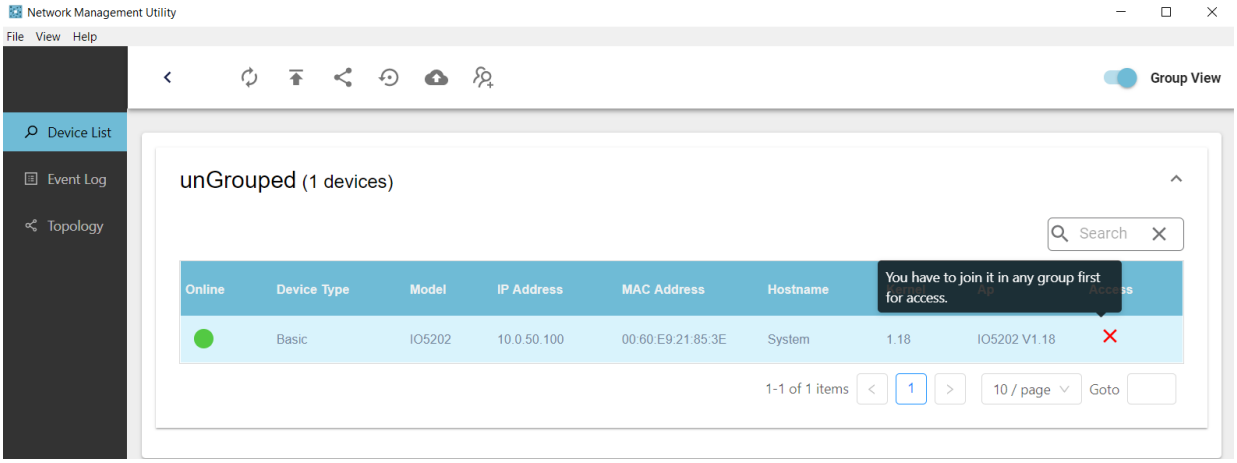


Figure 5.2 List of Connected Devices in Side Vertical Menus → Device List

The description of each field in the Side Icon Menu→Device List is shown in Table 5.1 below.

Table 5.1 Description of each field in the Side Icon Menu → Device List

Field Name	Description
Online	Indicate the status of each device: active (green dot) or inactive (red dot).
Device Type	Indicate whether it is a basic or an advanced device
Model	**Model** number of the found device(s)
IP Address	The **IP Address** of the corresponding device
MAC Address	**MAC Address** of the device
Host Name	**Host Name** of the device
Kernel	**Kernel** version of the device
AP Information	Application version of the device
Access	Indicate whether the device is already accessible (✓) or not (✕). Users have to create a group and add the device to that group first to view it as accessible.

In this **File** → **Preference** Sub-menu → **SNMP** Sub-left Menu, users can enable SMNP service and configure setting such as **SNMP Scan**, **Default Community**, and Others.

5.2 *Add New Group*

As mentioned in Chapter 3, when user would like to access the device, user has to add the device into the group first. To create/add a new group, user can click at **Add New Group** icon on top horizontal icon bar. A new small box will appear to let user enter a group name, as shown in Figure 5.3. After entering a group name, click **APPLY** button.

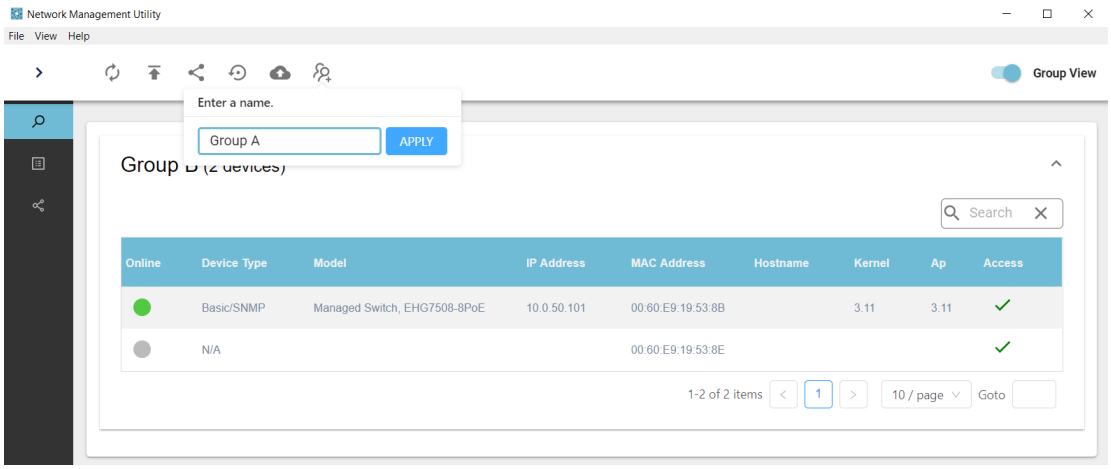


Figure 5.3 Click Add New Group Icon in the Top Horizontal Icon Bar

If the new group is successfully created, the notification window will be launched showing the success message, as shown in Figure 5.4.

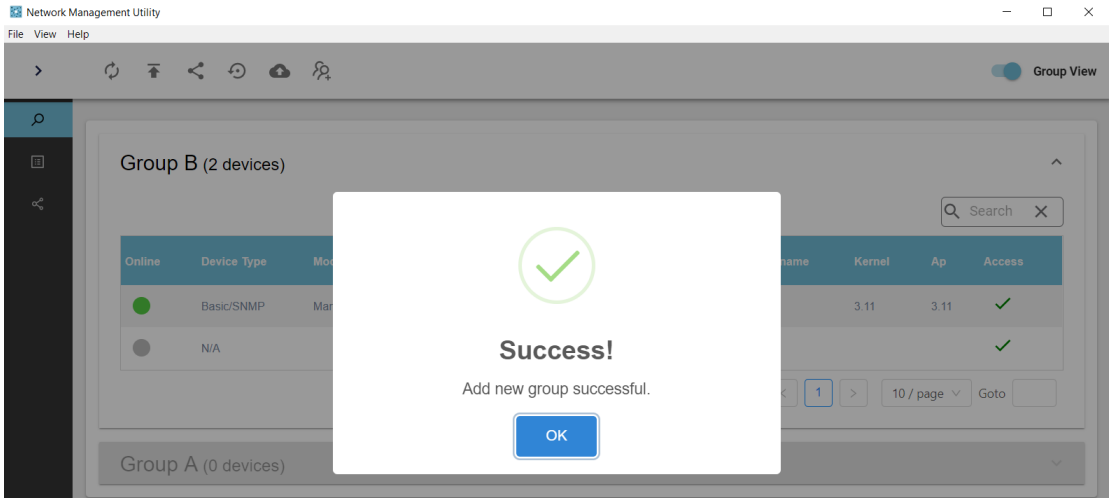
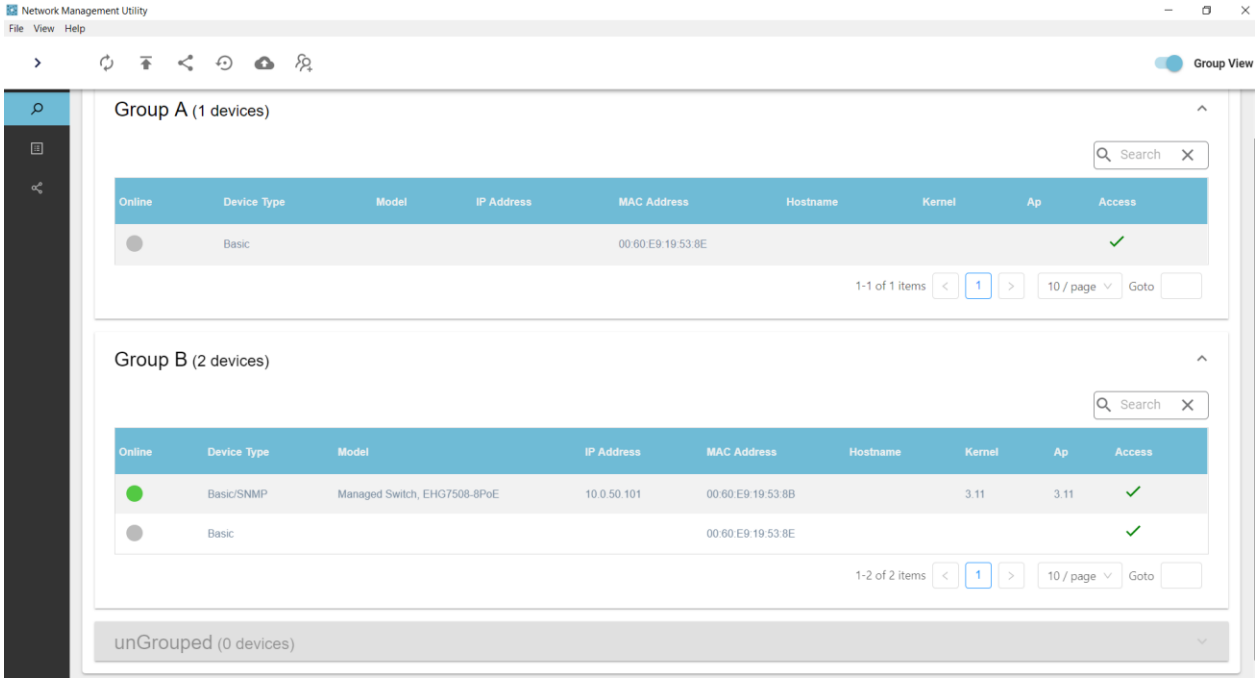


Figure 5.4 Success Window after Successfully Added a New Group

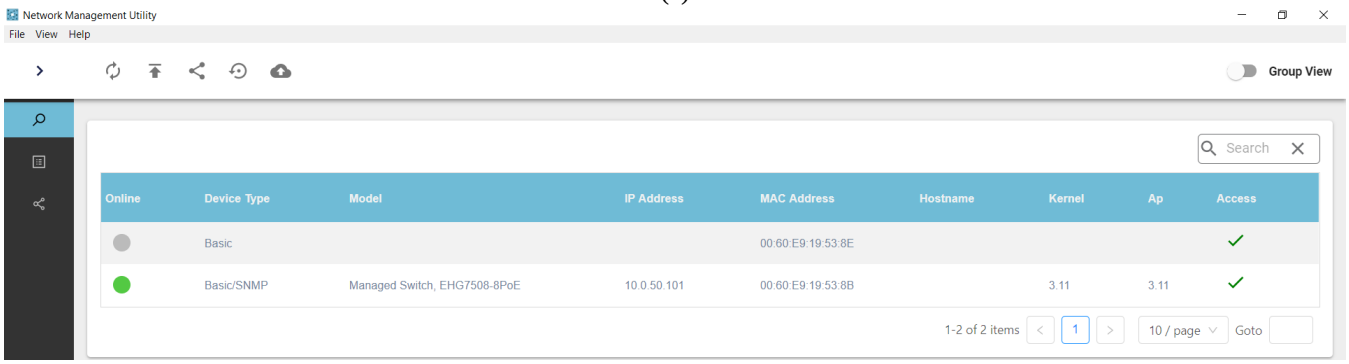
5.3 *Group View (Toggle Icon)*

On the most right, there is a toggle menu

, called **Group View**. If user enables it, it will show active devices in a group view. If not, all connected devices will be displayed in the same working area without classifying them into groups. Figure 5.5-(a) shows a list of devices without classifying it in a group, while Figure 5.5-(b) shows a list of devices in a group. Note that devices have to be added into a group first before; otherwise,
connected devices will be listed in an **unGrouped** section.



(a)



(b)

Figure 5.5 A List of Devices (a) in grouping (b) without Classifying in a Group

5.4 *Edit groups*

In the working space of the device list, if users right click on the area outside the table of device list but still inside a group or right click on any group after minimizing a device list, it will show the following menus: **Edit Group Name**, **Remove Group**, and **Edit Member**, as shown in Figure 5.6. Note that this function is not active in section of upGrouped devices.

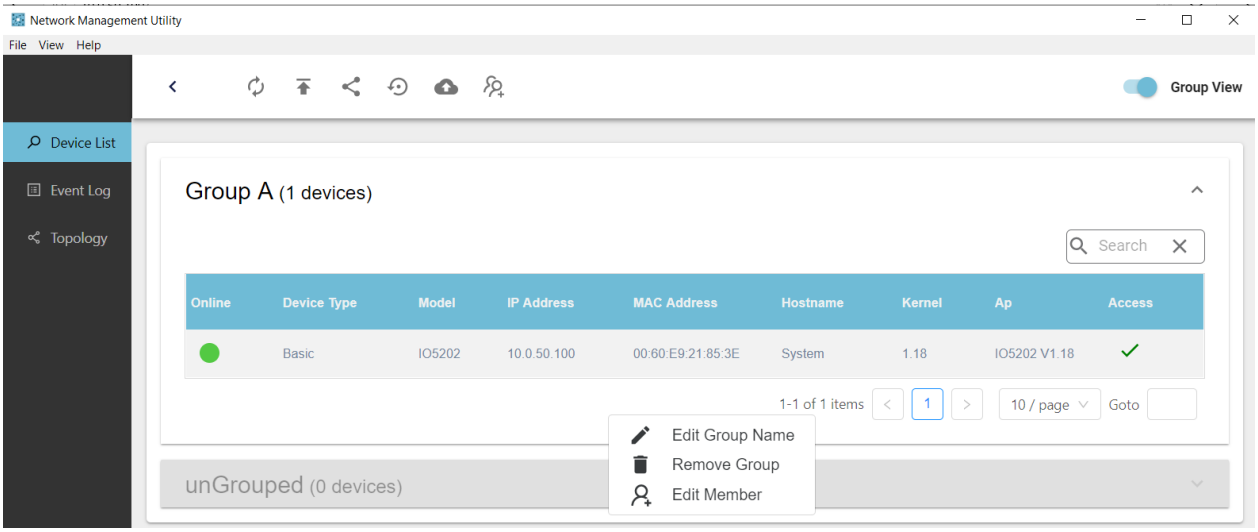


Figure 5.6 Right Click on any Space in a Group but outside the Device Table

5.4.1 *Edit Group Name*

When a user clicks on **Edit Group Name**, a small new window is launched, as shown in Figure 5.7. User can input a new group name and then click **APPLY** button for it to take effect.

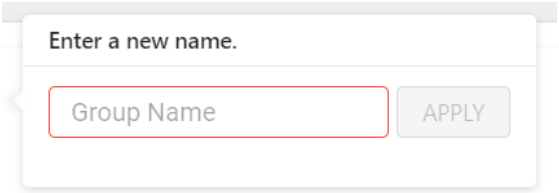


Figure 5.7 Enter a New Name Window

5.4.2 *Remove Group*

When a user clicks on **Remove Group**, a small new window is popped up. User needs to click an **OK** button to confirm the request, as shown in Figure 5.8.

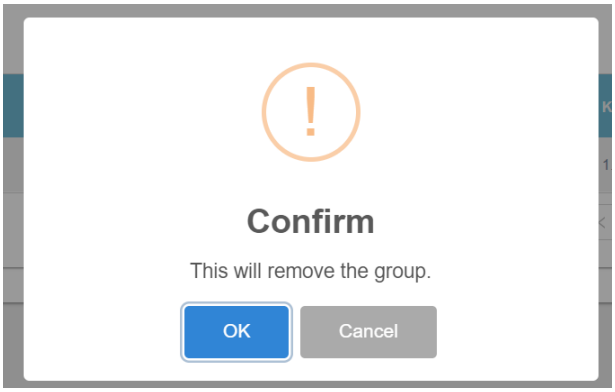


Figure 5.8 Confirmation Dialog for User to Remove a Group

When the selected group is successfully removed, the new window is initialized to notify its success, as show in Figure 5.9 below.

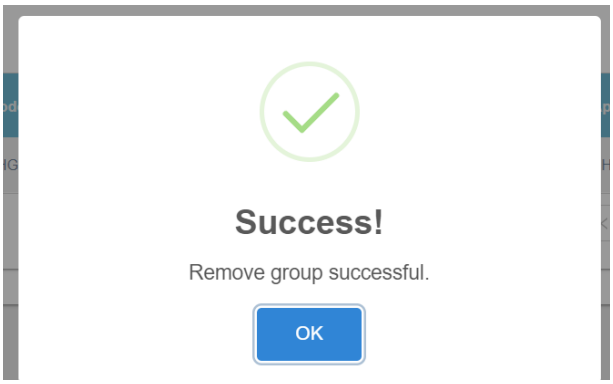


Figure 5.9 Confirmation on Sucessfully Removing a Group

5.4.3 *Edit Member*

When a user clicks on **Edit Member**, a new **Group *x* - Edit Group Member** window is launched. User needs to select devices that are wanted to be added in the **Group *x*** (Group A in this example), and click **> Add Member** button to move devices from the left sub-window into the right sub-window, as shown in Figure 5.10. Note here that one device can be added into more than one group.

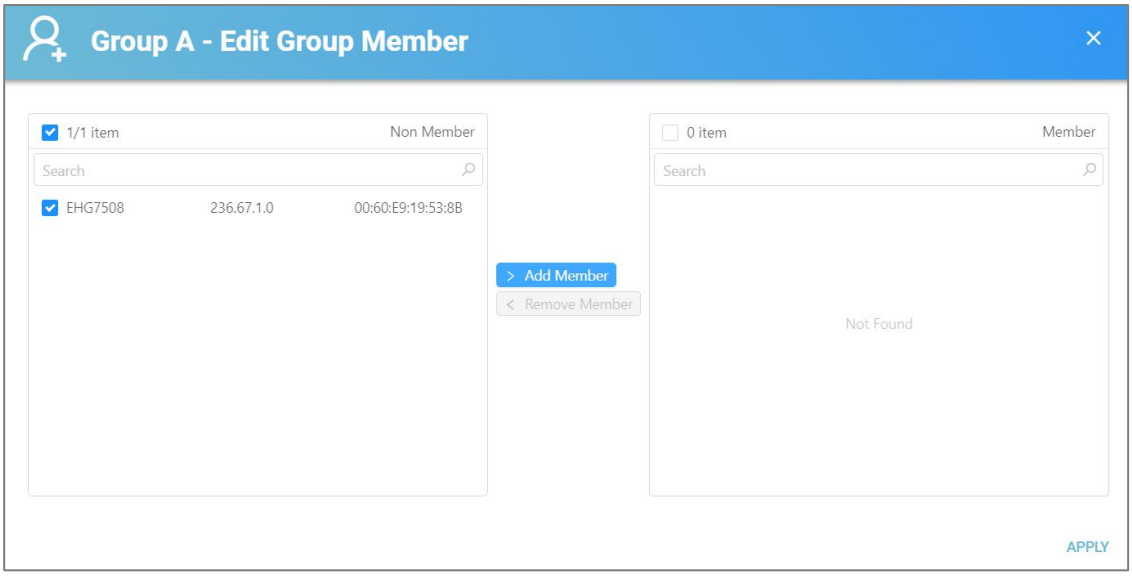


Figure 5.10 Add Member to the Selected Group

If user would like to remove any devices from the selected group (**Group A** in this example), user needs to click on devices that are wanted to be removed, and click **< Remove Member** button to move devices from the right sub-window into the left sub-window, as shown in Figure 5.11.

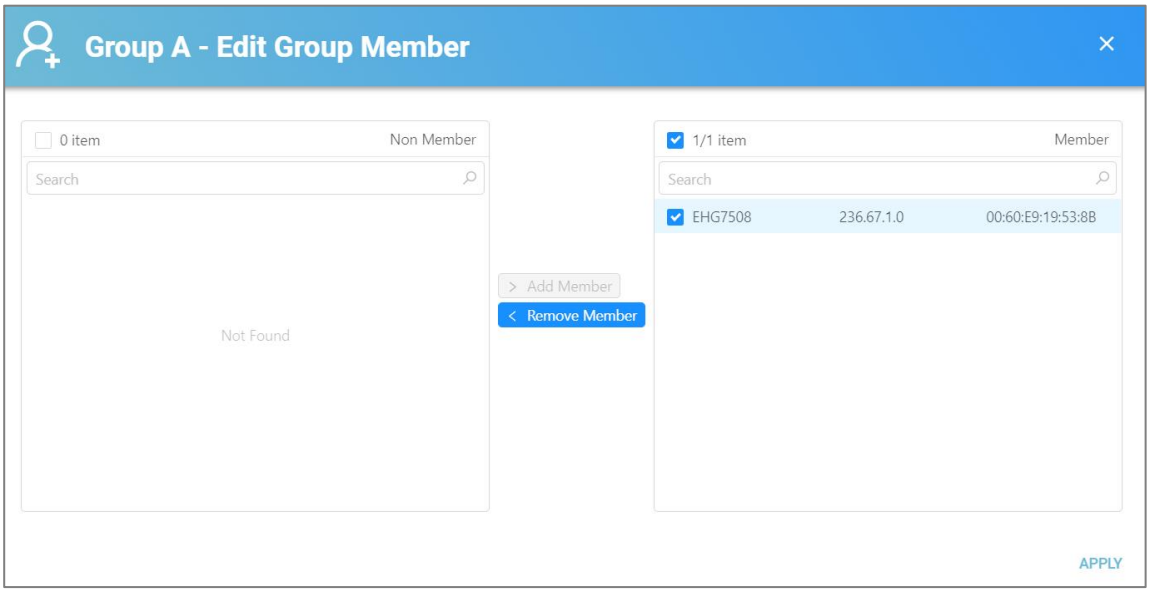


Figure 5.11 Remove Member from the Selected Group

After clicking **APPLY** button, the **Edit Group Member** window is closed and devices in Group A are shown in the device list. A small notification window for **Device Online** appears on the bottom right corner, as shown in Figure 5.12.

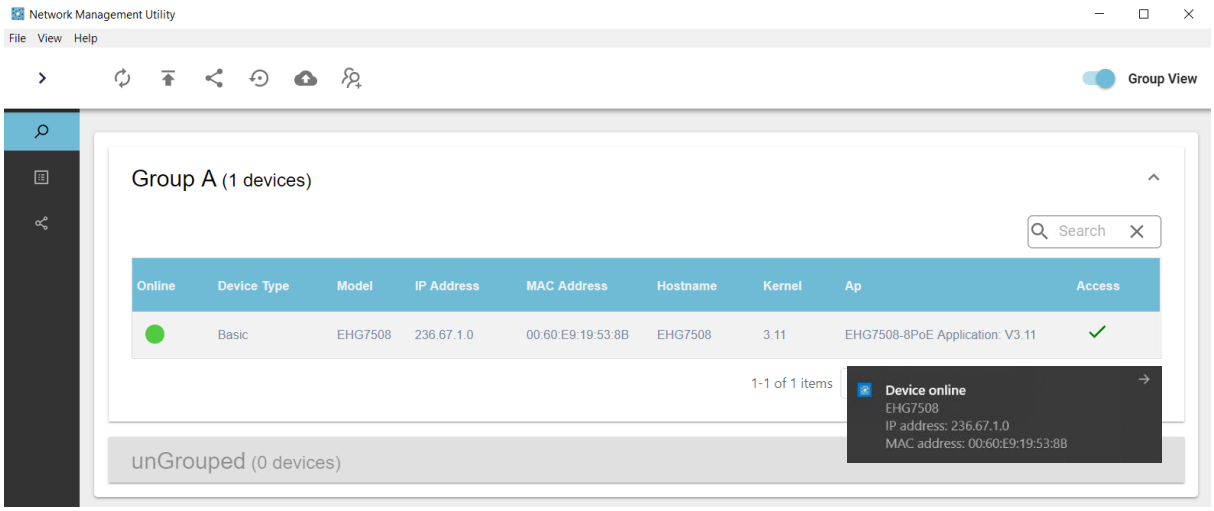


Figure 5.12 Devices Added/Removed to/from Group A

5.5 *Perform actions on devices assigned to groups*

With a right click on the list of devices in any group, the drop-down menu appears as shown in Figure 5.13 below: **Open Web**, **Telnet**, **Beep**, **Reboot**, **Network Setting**, **Device Advanced Setting**, **Port Information**, and **Backup and Restore**. Note that if the connected device is not added into a group, this right click feature is not functional.

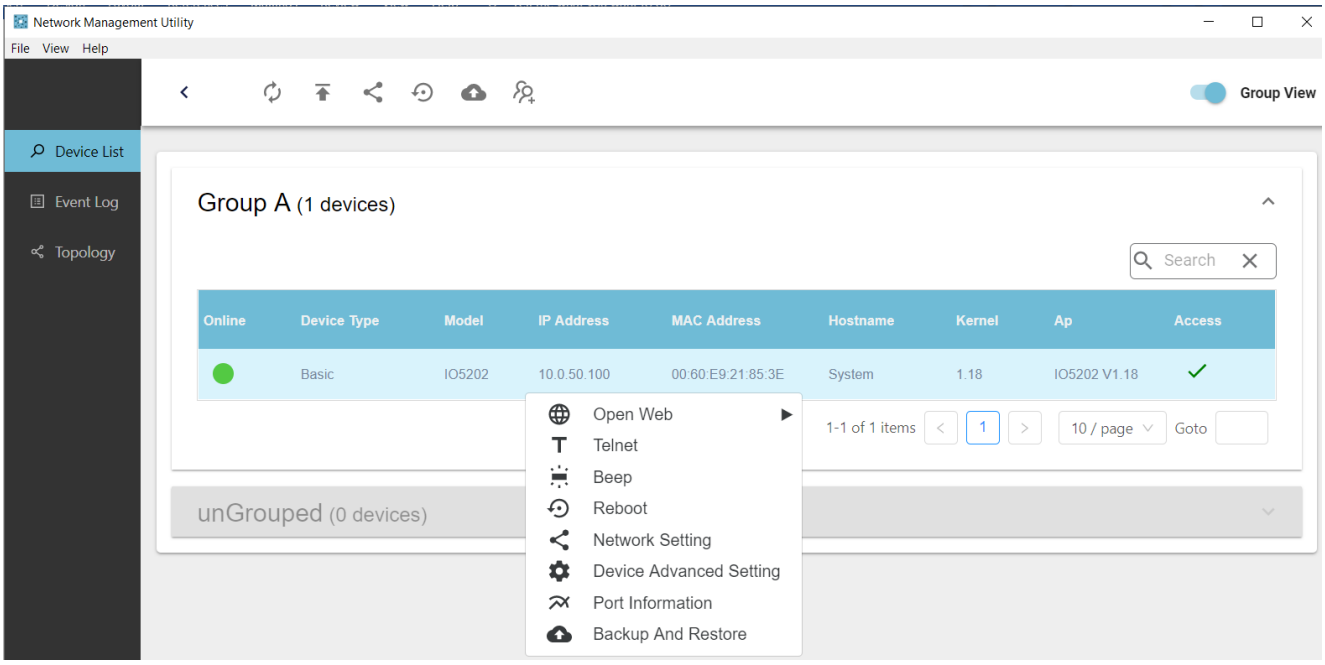


Figure 5.13 Drop-down Menu when Right Click on the Device List in any Group

5.5.1 *Open Web*

Selecting **Open Web → Open on OS browser** will initiate configuration of the device through web-based, as shown in Figure 5.14. User will be prompt with username and password to login, as shown in Figure 5.15. The default username and password are “admin” and “default”.

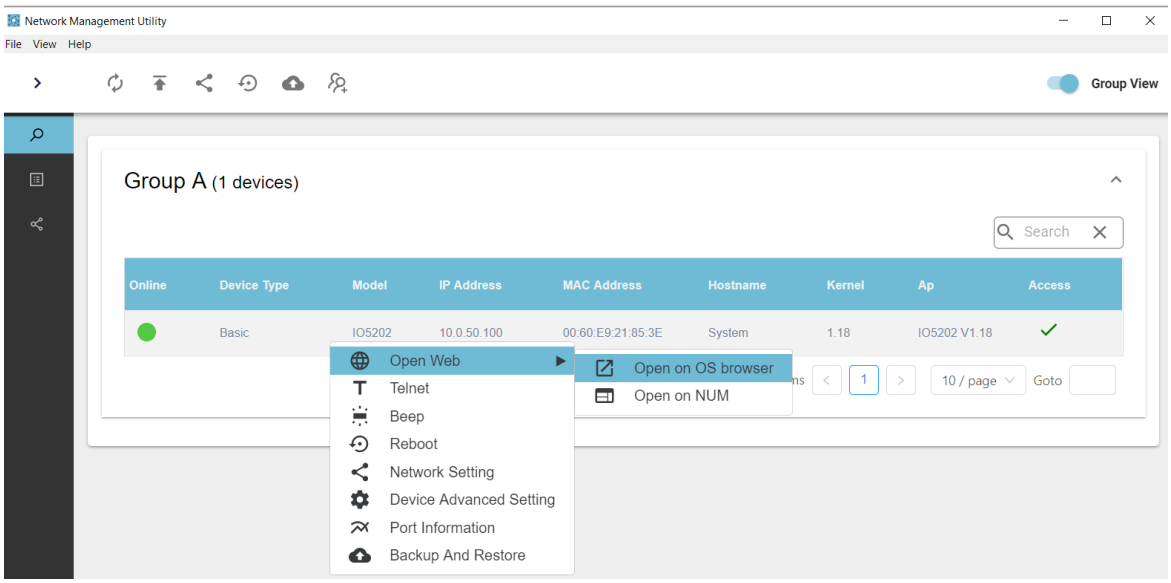


Figure 5.14 Drop-down Menu, Right Click, Device List in any Group, Open Web → Open on OS browser

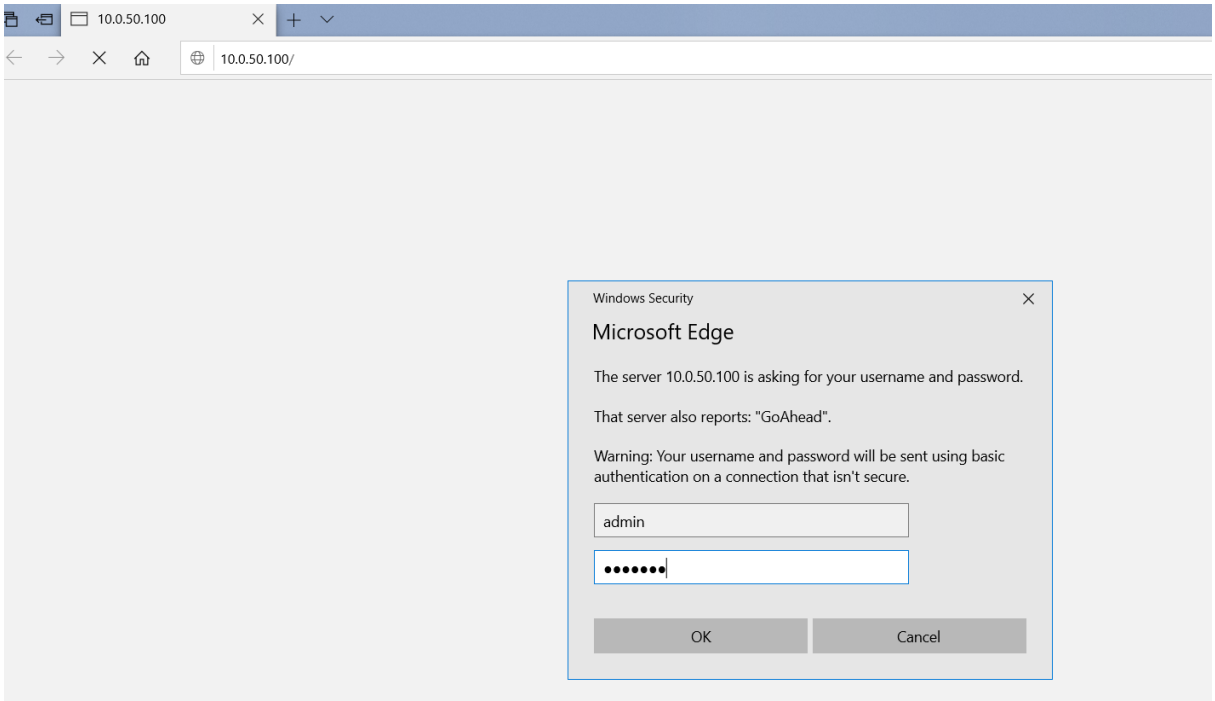


Figure 5.15 Login to Web-based Configuration

Selecting **Open Web → Open on NUM** will initiate web configuration of the device through NUM, as shown in Figure 5.16. Click × to close the web configuration and return to working space of the device list.

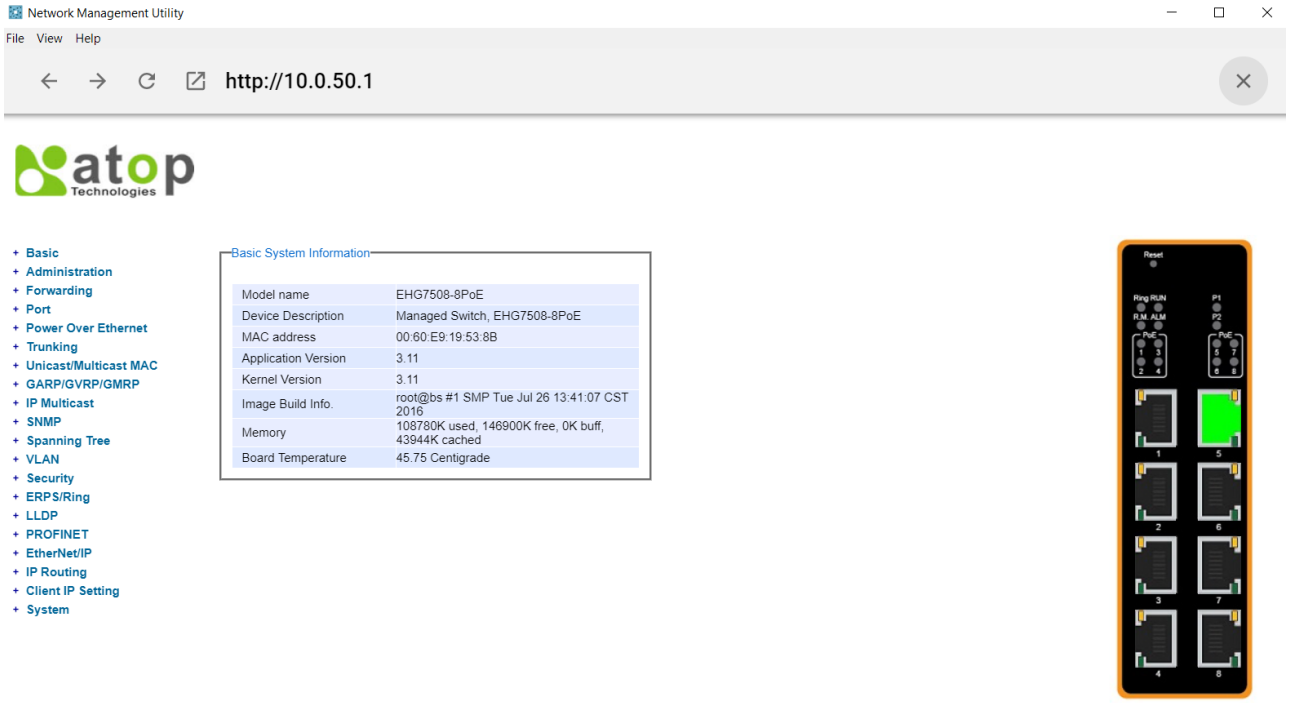


Figure 5.16 Right Click on the Device List in any Group and Select Open Web → Open on NUM

5.5.2 *Telnet*

Selecting **Telnet** will initiate Telnet program.

5.5.3 *Beep*

Selecting **Beep** after right click on the device list will initialize the Beep confirm window, as shown in Figure 5.17 below. Click an ok button and the device will beep two times.

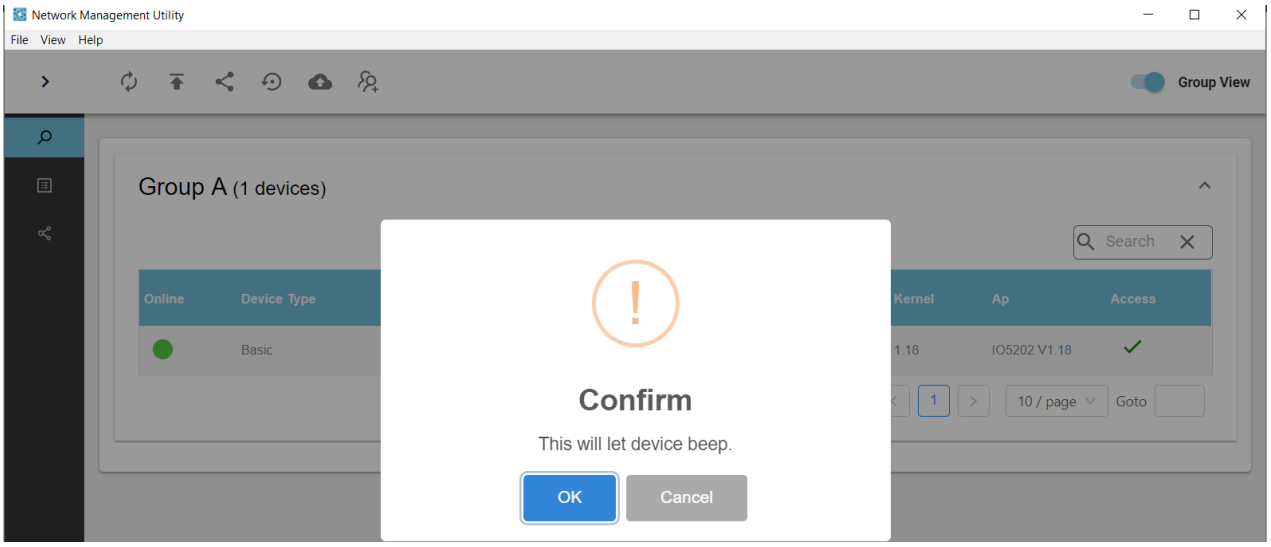


Figure 5.17 Select Beep and the Beep Confirm Window is Launched

5.5.4 *Reboot*

Selecting **Reboot** after right click on the device list will initialize the Reboot confirm window, as shown in Figure 5.18 below. Click an ok button and the device will be rebooted. After the device finished rebooting, the reboot successfully window appears, as shown in Figure 5.19.

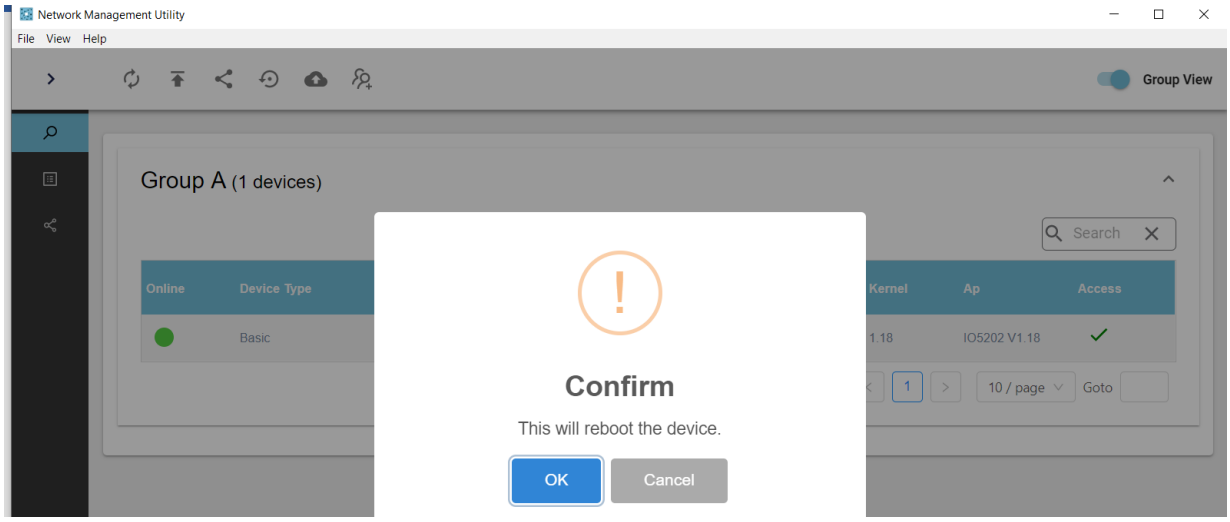


Figure 5.18 Select Reboot and the Restart Confirm Window is Launched

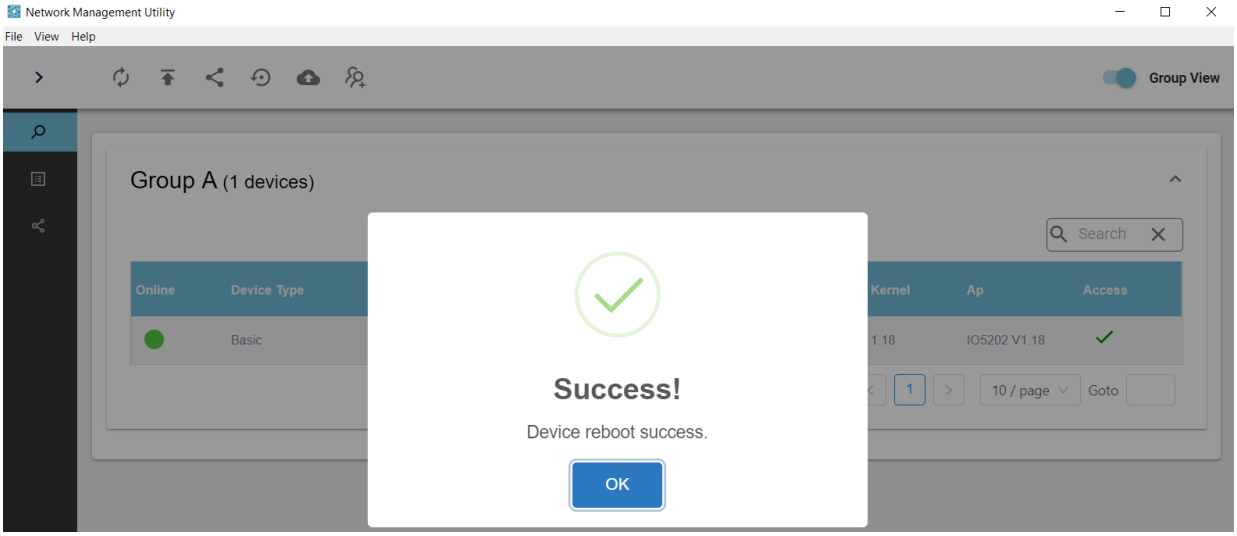


Figure 5.19 Notification of the Reboot Success Window

5.5.5 *Network Setting*

Selecting **Network Setting** after right click on the device list will first **Precheck Device SNMP Feature First before Specific Operations** and then initialize the Network Setting window, as shown in Figure 5.20 below. Here is the summary of network setting which is a bit different from full setting that users can configure through **Network Setting** of the **Top Vertical Icon Bar**.

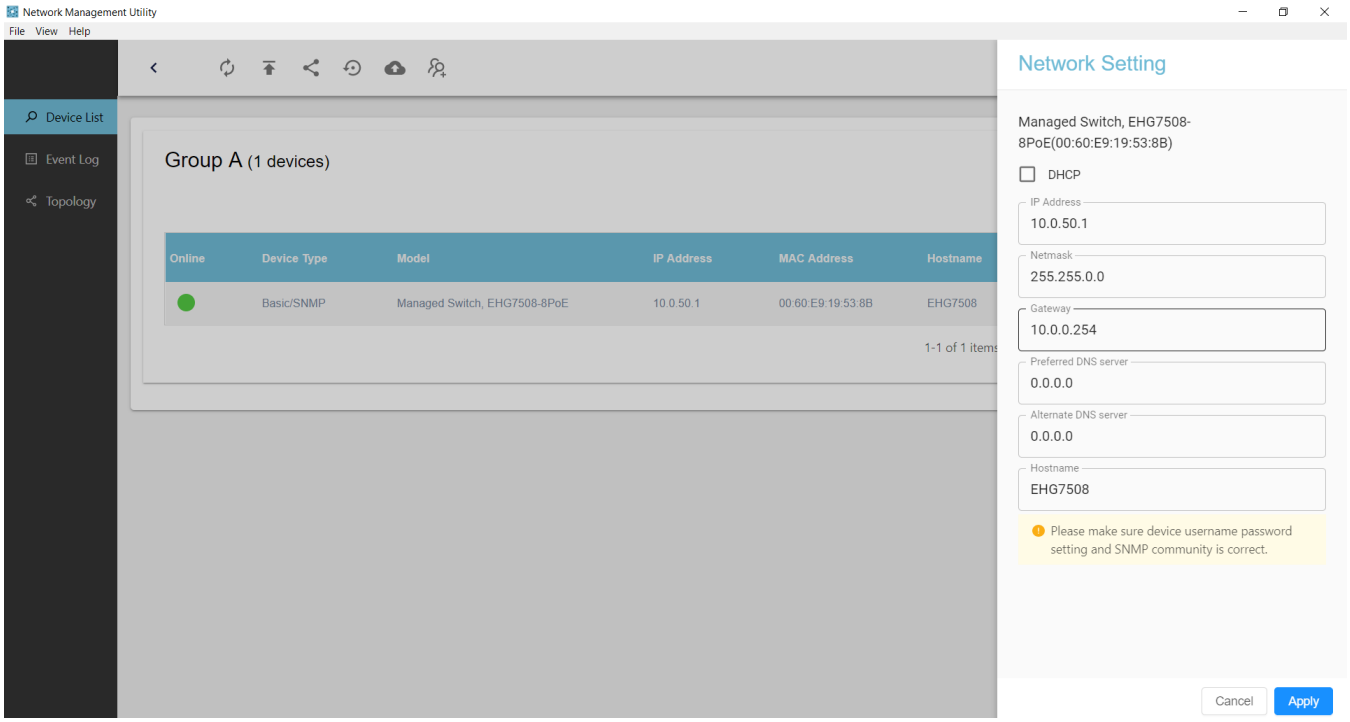


Figure 5.20 Network Setting Window After Right Click on the Device List

You can enable **DHCP** (Dynamic Host Configuration Protocol) in the first option so that the device can retrieve its network setting automatically from a DHCP server, which should be available in your LAN. Consult your local network administrator about DHCP server, if necessary. If the **DHCP** option is checked, the other settings within this **Network Setting** window will be disabled, except **Hostname**. If you did not enable the **DHCP** option, the **IP Address**, **Subnet Mask**, **Default Gateway,** and the **Preferred DNS** and **Alternate DNS** addresses will also be active. You can fill in these settings for LAN interface of the device. After completing all IP network information on this web page, please click on **Apply** button to allow the configuration to take effect. Please make sure the device username and password setting and SNMP community is correct. Then, **Network Setting** window will be closed, and the status of settings will be notified to the user in the **Device List** window, as shown in Figure 5.21 below.

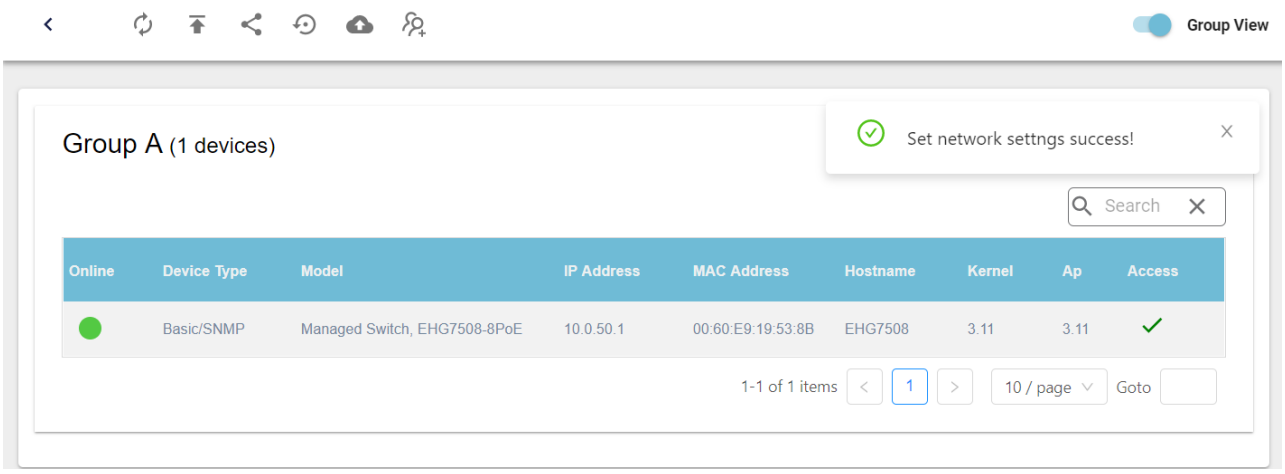


Figure 5.21 Notification of the Success Setting in the Device List Window

5.5.6 *Device Advanced Setting*

Selecting **Device Advanced Setting** after right click on the device list will first **Precheck Device SNMP Feature First before Specific Operations** and then initialize the Advanced Setting window, as shown in Figure 5.22.

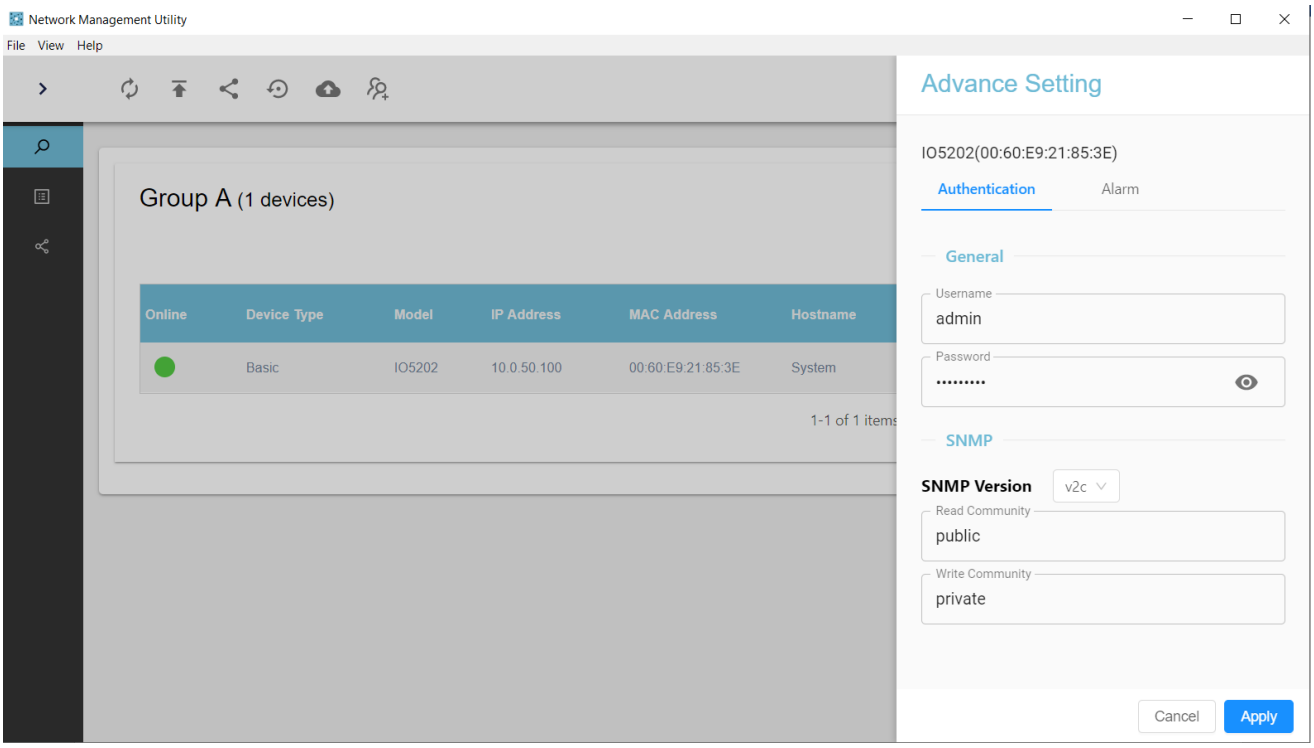


Figure 5.22 Authentication Tab in Advanced Setting Window After Right Click on the Device List

The description of each field in the Side Vertical Menus-Device List-Right Click on Device List-Advanced Setting-Authentication Tab is shown in Table 5.2 below.

Table 5.2 Description of each field in Device List-Advanced Setting-Authentication Tab

Sections within Advance Setting	Field Name	Description	Default Value
General	admin	Username to access the device	admin
	password	Password to access the device	Default
SNMP	SNMP version	Version of SNMP available for the device (v1 and v2c)	v2c
	Read community	The community string for access device statistics (concept similar to a password)	Public
	Write community	The community string for config device (concept similar to a password)	private

Figure 5.23 shows when selecting Alarm tab in the Side Vertical Menus-Device List-Right Click on Device List-Advanced Setting.

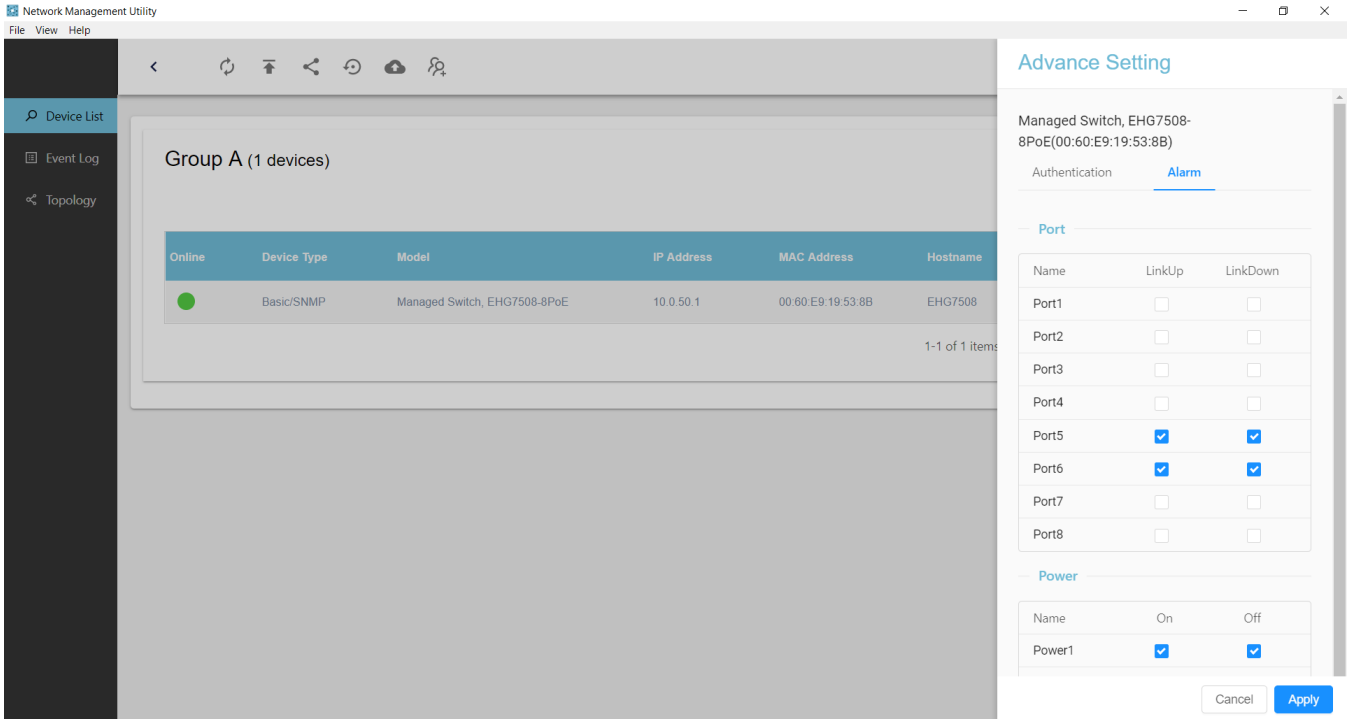


Figure 5.23 Side Vertical Menus-Device List-Right Click on Device List-Advanced Setting-Alarm Tabl

Click check on **LinkUp** or **LinkDown** for any ports to receive their notifications. Similarly, click on **On** and **Off** option for any power source to get the notification on its change. Figure 5.24 shows examples of the notification which will appear at the right bottom corner one at a time when there is a change on the chosen port and power source.

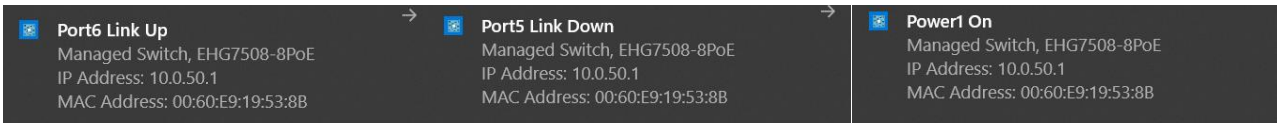


Figure 5.24 Notification at the Bottom Right Corner for Alarming (Appear One at a Time)

5.5.7 *Port Information*

Selecting **Port Information** after right click on the device list in any group will first **Precheck Device SNMP Feature First before Specific Operations** and then initialize the **Port Information** window, as shown in Figure 5.25. If the software notifies that SNMP feature fail, user has to enable SNMP first through NMU or web configuration. Please refer to Section 4.1.4 for detailed settings.

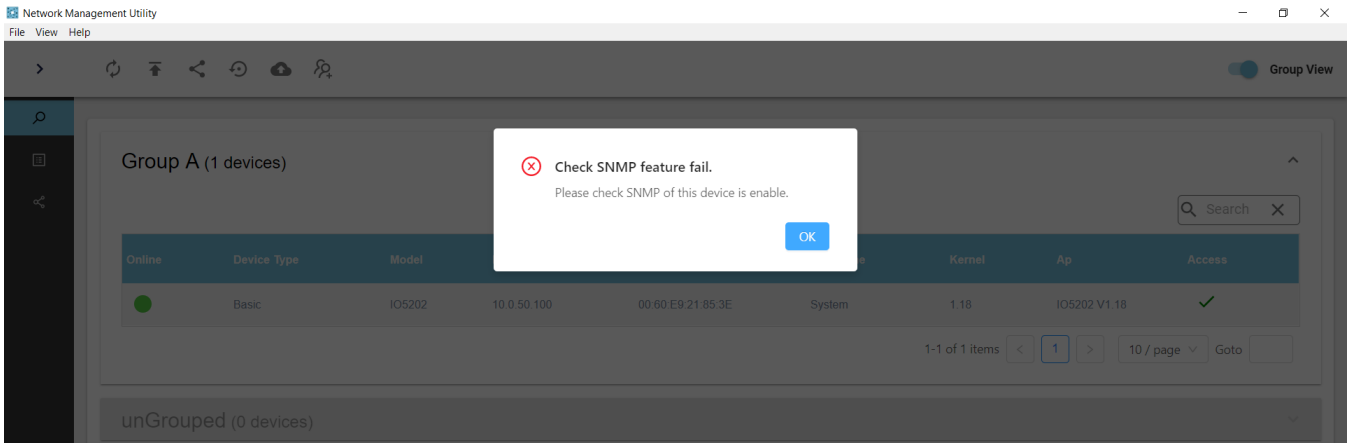


Figure 5.25 Notification of Failure on SNMP Feature

Figure 5.26 shows device information, real-time traffic in graph, and port status when selecting Port Information in the Side Vertical Menus-Device List-Right Click on Device List.

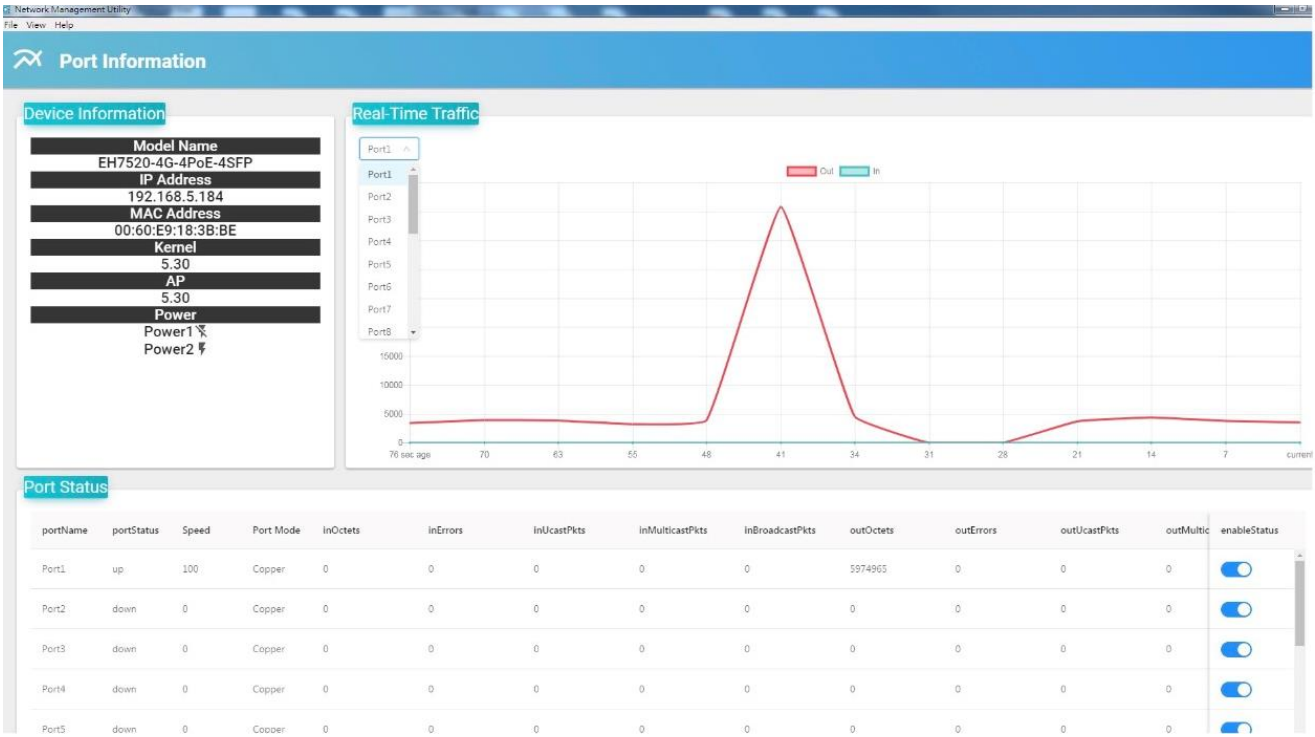


Figure 5.26 Selecting Port Information in Side Vertical Menus-Device List-Right Click on Device List

5.5.8 *Backup and Restore*

Selecting **Backup and Restore** after right click on the device list will initialize **Backup and Restore** window. User can fill in a filename and select the destination folder to back-up the device configuration by clicking on **SELECT FOLDER** button. Then click on the **BACKUP** button to backup the configuration. Please make sure that your selected NIC has a real external IP address by clicking on File → Preferences → General → Network Interface Card. If the backup process is success, the notification will appear, as shown in .

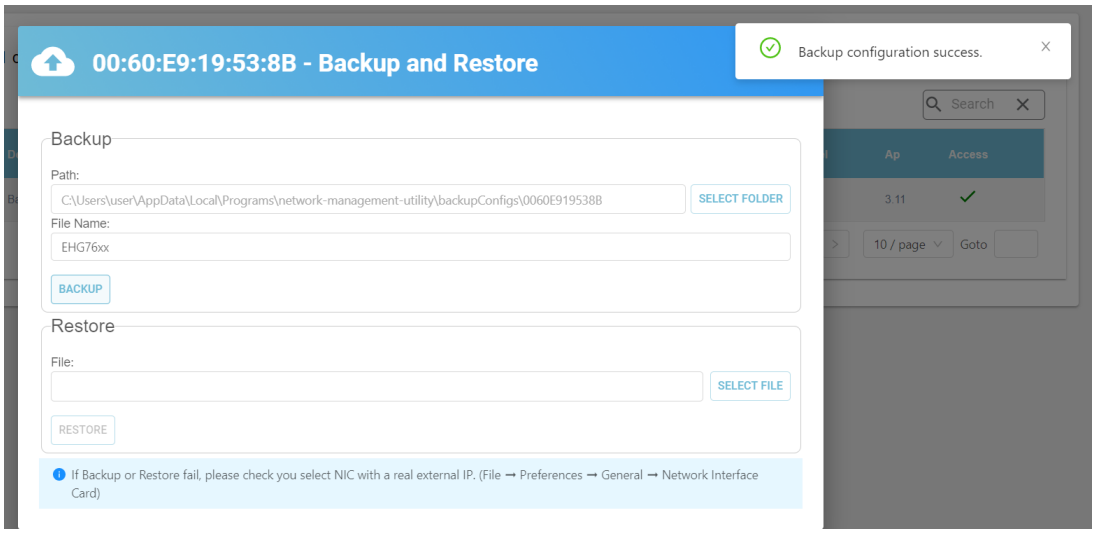


Figure 5.27 Backup Part of Vertical Menu-Device List-Right Click on Device List-Backup and Restore

To restore the configuration, user can select a previously saved configuration filename and then click on the **RESTORE** button to restore the configuration. Again, please make sure that your selected NIC has a real external IP address by clicking on File → Preferences → General → Network Interface Card. Here, new small window will be launched. User need to confirm his/her requirement to restore the configuration by clicking an **OK** button, as shown in

Figure 5.28.

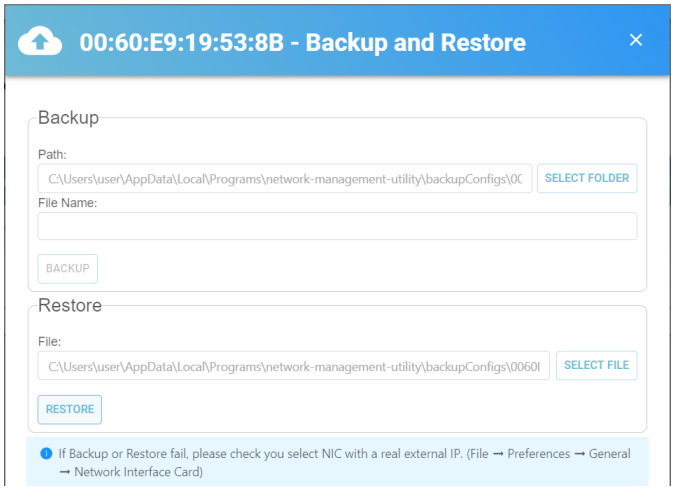


Figure 5.28 Restore Part of Vertical Menu-Device List-Right Click on Device List-Backup and Restore

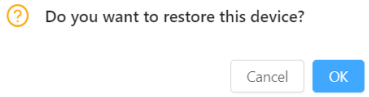


Figure 5.29 Confirmation Window for the Restore Part

If the restoration process is success, the notification will appear, as shown in Figure 5.30. The device automatically restarts afterwards, and user will hear a few beeps sound to indicate its restart. The notifications of the device becoming offline and then online again appear on the bottom right corner.

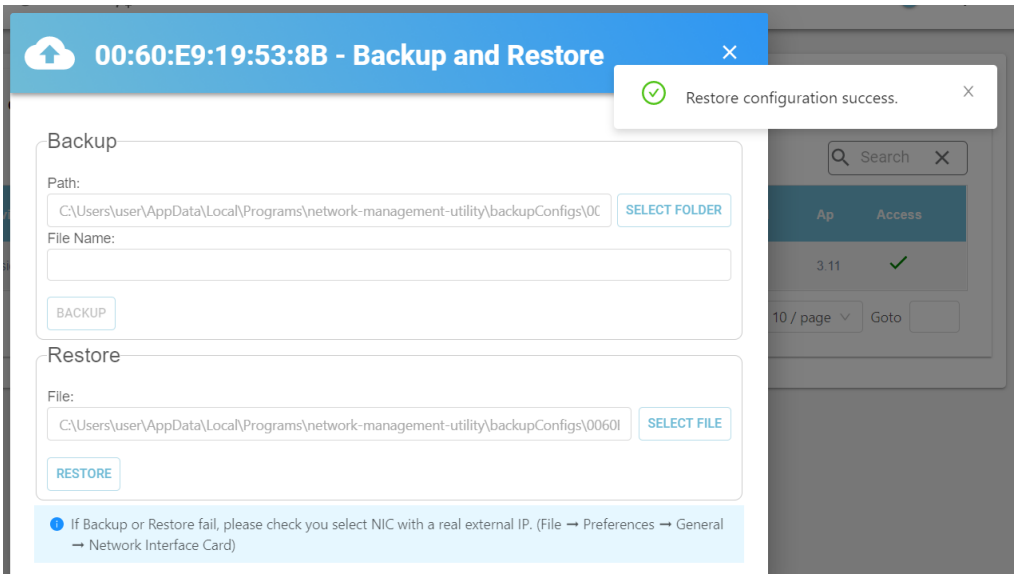


Figure 5.30 Notification on the Success of Configuration Restore

5.6 *Event Log*

When clicking on **Event Log** within the Side Vertical Menus, three sub-tabs are presented: **Event**, **SNMP trap**, and **Syslog**.

5.6.1 *Event Tab*

Figure 5.31 illustrate what inside the **Event** tab. User can see history events listed and can sort them according to **Time** and **SOURCE IP** address. Events can be cleared by clicking on a **CLEAR** button. The history events are listed in a table form, which consists of the following columns: **Time**, **Source IP**, **Mode**, **MAC Address**, and **Message**. **Time** indicates timestamp when the event occurred. **Source IP**, **Model**, and **MAC Address** is the IP address, model, and MAC address of the device. **Message** displays whether the device is online or offline at time the event occurred.

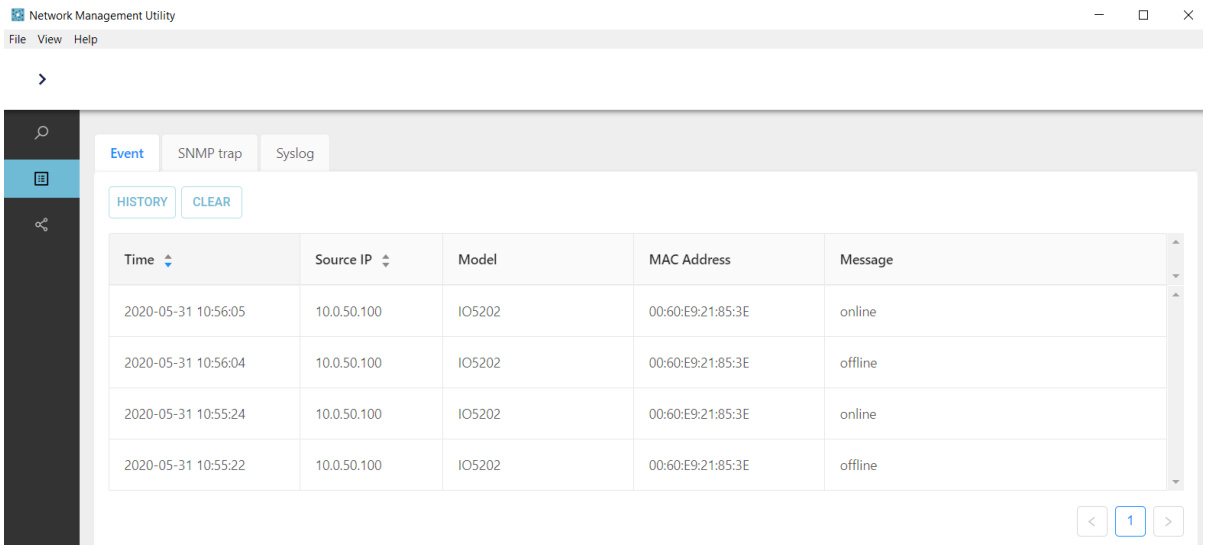


Figure 5.31 History Events inside the Side Vertical Menu → Event Log → Event Tab

When clicking on a **HISTORY** button, a new window is launched, as shown in Figure 5.32. Users can filter out unwanted events by filling in a MAC Address and a Date/Time range of **viewing** events. Make sure that there is no space when entering a MAC address. Click **REFRESH** button to see events that are already filtered out unwanted events.

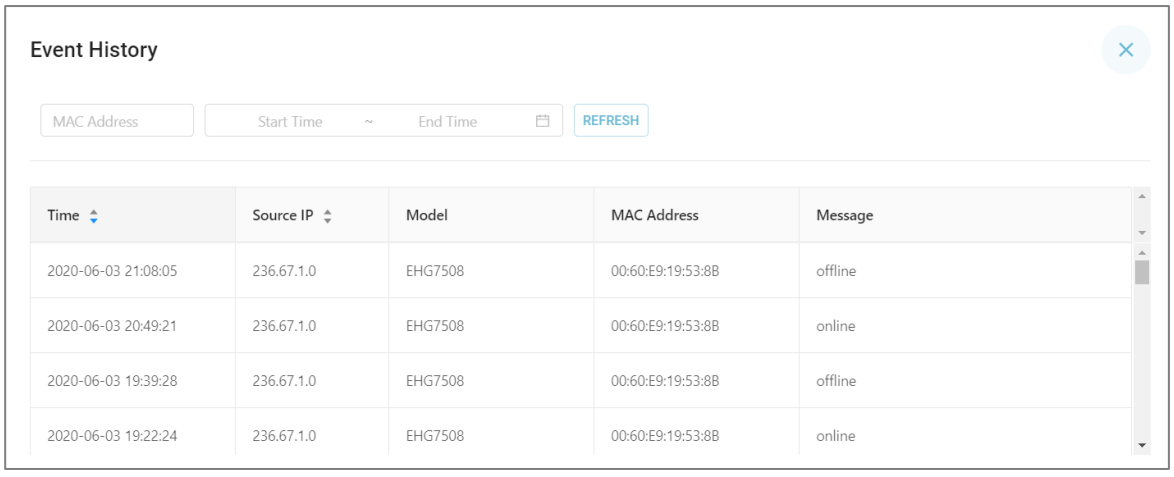


Figure 5.32 History Events inside the Side Vertical Menu → Event Log → Event Tab → HISTORY Button

5.6.2 *SNMP Trap Tab*

Figure 5.31 illustrate what inside the **SNMP Trap** tab. User can see history of SNMP Trap by clicking on a **HISTORY** button, and clear them by clicking on a **CLEAR** button.

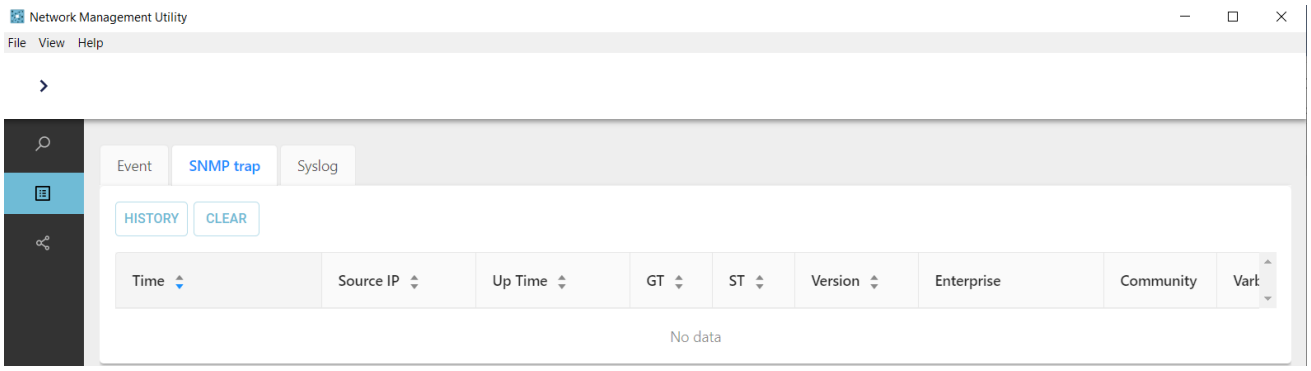


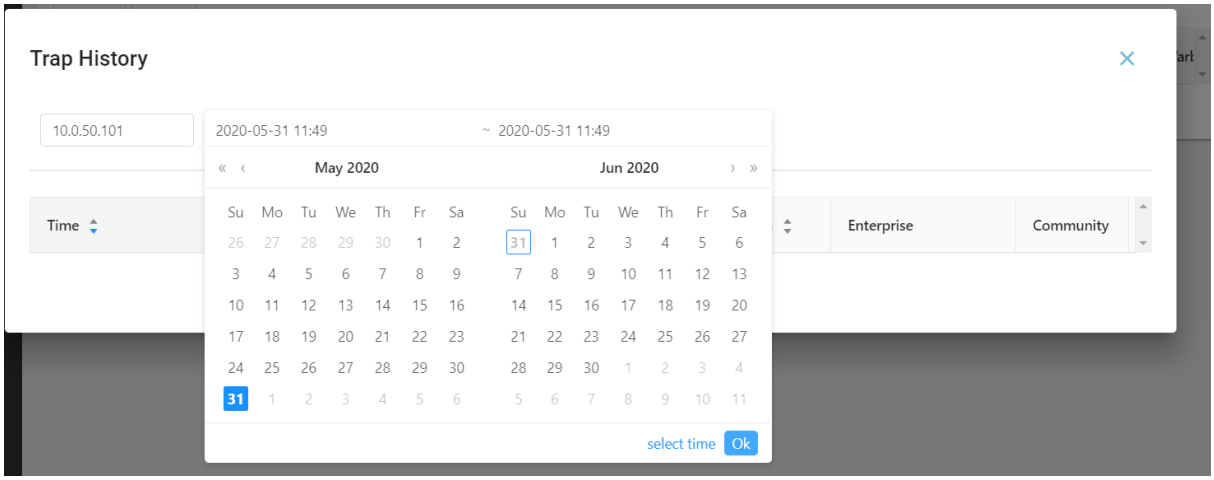
Figure 5.33 History Events inside the Side Vertical Menus → Event Log → SNMP Trap Tab

The history of SNMP Trap is listed in a table form, which consists of the following columns: **Time, Source IP, Up Time, GT, ST, Version, Enterprise, Community, and Varbinds.** The details of each field are described in Table 5.3 below.

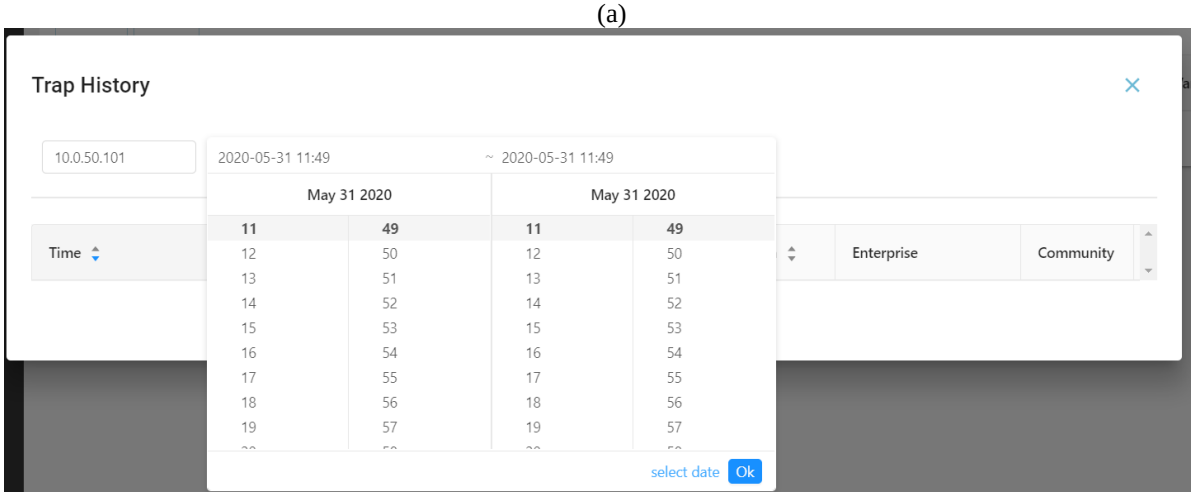
Table 5.3 Description of Each Field in the Side Vertical Menus → Event Log → SNMP Tab Tab

Field in SNMP Trap Tab	Description
Time	Timestamp when the SNMP Trap event occurred.
Source IP	IP address of the device
Up time	The active time of the device
GT	The SNMP generic type
ST	The SNMP specified type
Version	The SNMP version used at the time of SNMP trap.
Enterprise	The SNMP Enterprise OID
Community	The SNMP community
Varbinds	The variable number of values that are included in an SNMP packet.

When clicking on a **HISTORY** button, a new window is launched, as shown in Figure 5.34. Users can filter out unwanted SNMP Trap events by filling in a **SOURCE IP** Address and a Date/Time range of **viewing** events. Make sure that there is no space when entering a SOURCE IP address. Click **REFRESH** button to see events that are already filtered out unwanted events.



(a)



(b)

Figure 5.34 History Events Event Log → SNMP Trap Tab → HISTORY Button Selecting Date (a) and Time (b)

Figure 5.35 illustrate what inside the **Syslog** tab. User can see history of Syslog events by clicking on a **HISTORY** button, and clear them by clicking on a **CLEAR** button.

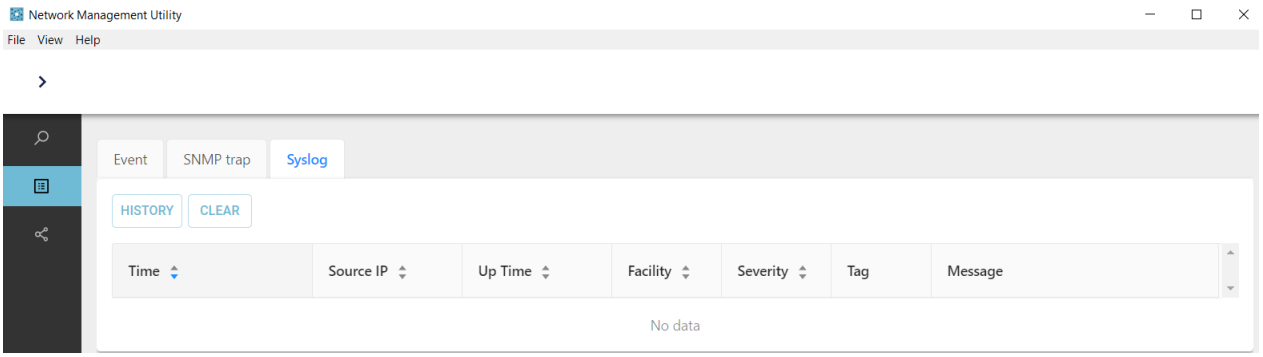


Figure 5.35 History Events inside the Side Vertical Menus → Event Log → Syslog Tab

Description of each field in Syslog table is shown in Table 5.4 below.

Table 5.4 Description of Each Field in the Side Vertical Menus → Event Log → Syslog Tab

Field in Syslog Tab	Description
Time	Timestamp when the Syslog event occurred.
Source IP	IP address of the device
Up time	The active time of the device
Facility	Type of process that created the syslog event, e.g., kernel, mail system, and security/authorization
Severity	Critical level of the information, e.g., emergency and alert
Tag	Name of the program or process that generated the message
Message	Details of the syslog information

When clicking on a **HISTORY** button, a new window is launched, as shown in Figure 5.36. Users can filter out unwanted Syslog events by filling in a **SOURCE IP** Address and a Date/Time range of **viewing** events. Make sure that there is no space when entering a SOURCE IP address. Click **REFRESH** button to see events that are already filtered out unwanted events.

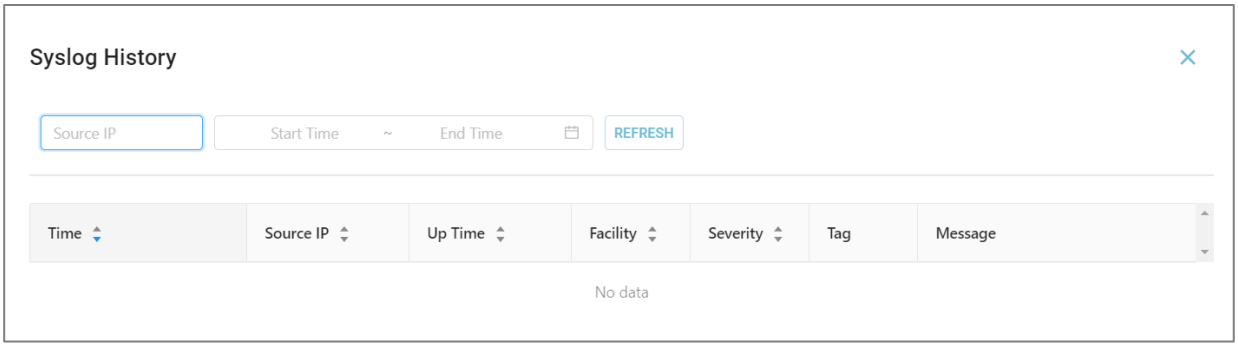


Figure 5.36 History Events insdie the Side Vertical Menus → Event Log → Syslog Tab → HISTORY Button

5.7 *Topology*

There are two parts within the Vertical Menus → Topology: 1) Drawing Space and 2) Top Icon bar – Horizontal layer.

5.7.1 *Drawing Space*

When clicking on the icon of device (e.g., EHG7508 in this picture), the device properties are displayed, as shown in Figure 5.37. If the device icon is in grey colour and mark ⊗ appears, the connected device is not ready to be access and reconfigure its setting. Check in the Device List and see if the device's SNMP is enabled or not. Please refer to Section 4.1.4 if an SNMP function is not enabled. If the problem is persisted, user should enable an SNMP function via web interface of the device instead. Follow the instruction in Section 0 to initialize a web configuration page. Note that when the SNMP is enabled, the device type changes from Basic to Basic/SNMP.

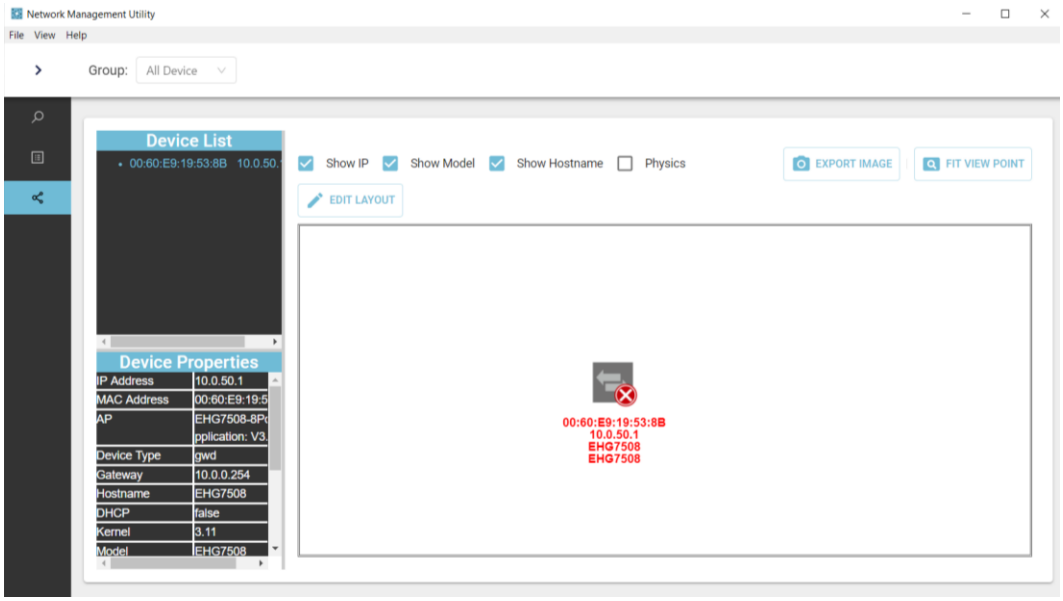


Figure 5.37 History Events inside the Side Vertical Menus → Topology (SNMP Disabled)

After enabled SNMP, the device's icon becomes green-blue colour and text underneath becomes blue colour, as shown in Figure 5.38. User can click **Show IP**, **Show Model**, and **Show Hostname** to display text information on IP address, device's model and device's hostname respectively, underneath the device's icon. When clicking Edit Layout button, new set of icons will appear: Add Node, Add Link, Save, and Cancel, as

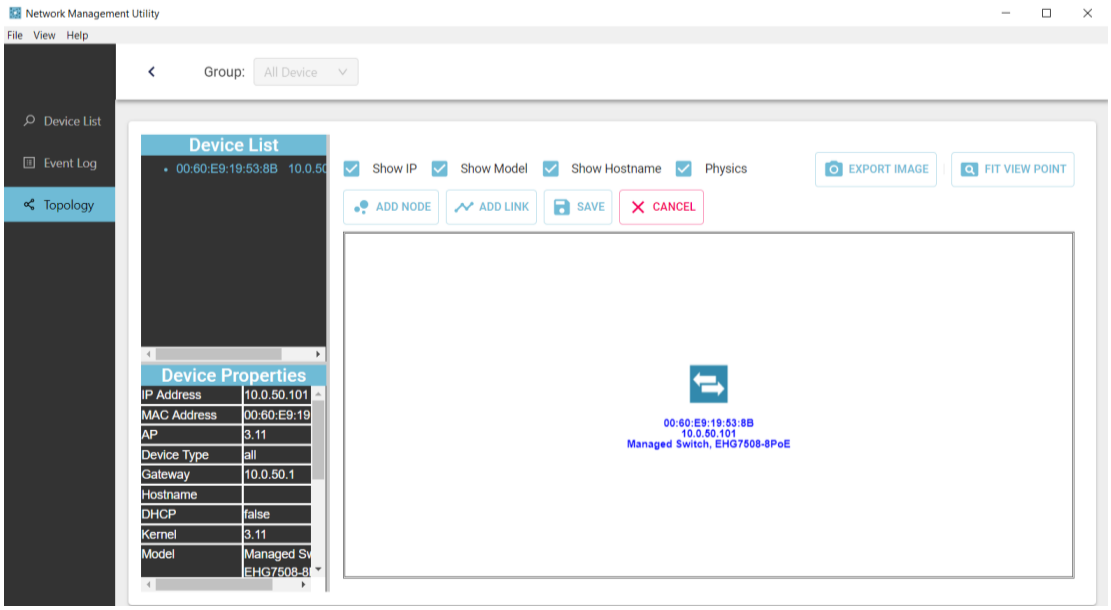
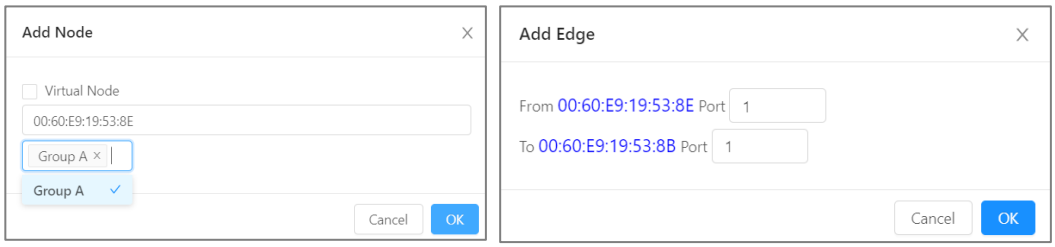


Figure 5.38 Working Space for Drawing a Topology: Side Menus → Topology (SNMP Enabled)

When clicking ADD NODE or ADD LINK button, a new small window is launched, as shown in Figure 5.39. For adding a new node, user can click anywhere on the working space and enter MAC Address for a new node or click on Virtual Node option. For adding a link, user can click on two nodes that the new link will be connected.



(a) (b)

Figure 5.39 Drawing a Topology in Side Menus → Topology → (a) ADD NODE or (b) ADD LINK

The color coding used in the drawing is:

- Blue: User defined match with real.
- Black: Real edge and user without defined.
- Dotted Line: User defined but not exist.
- Red-X: Device offline.

There is a Physics option to illustrate moving simulation so that user can see nodes and edges more clearly. This is shown in Figure 5.40

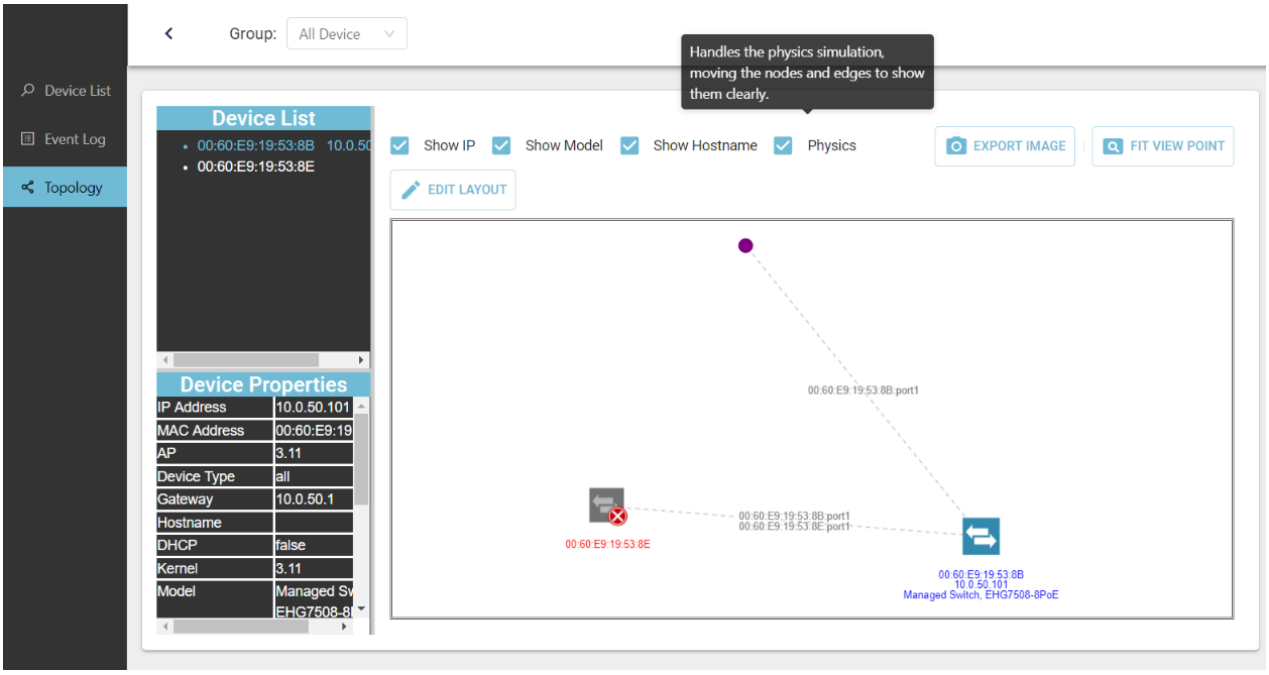


Figure 5.40 Topology drawing example

When clicking on any node or link on the topology's working space, a DELETE button appears, as show in Figure 5.41 below. Here, user has a choice to delete any nodes and links. Click on a CANCEL button to go back to EDIT Layout Button.

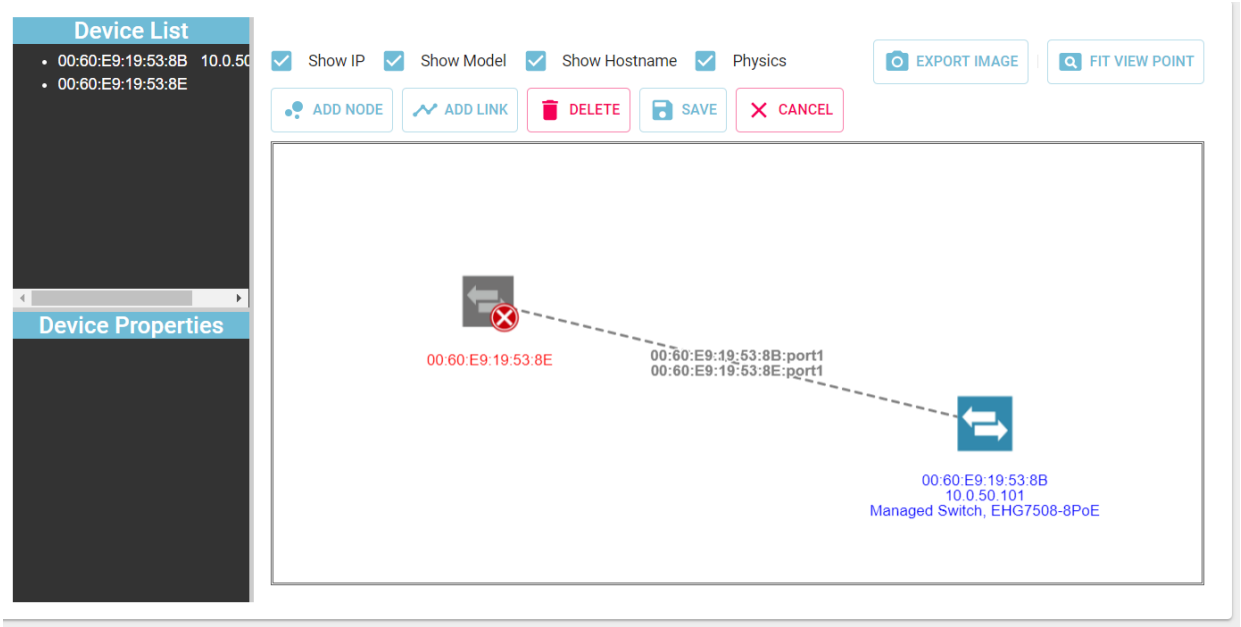


Figure 5.41 DELETE Button insider the Side Vertical Menus → Topology

If a new device is added in any group using a MAC address, user can view its details in the table inside the Device List. However, if a newly added device is a virtual node, nothing will be added in the Device List. In this example, a new device is added using a MAC address in the drawing topology in Group A. Thus, the new device is added in Group A shown in the Device List, as shown in Figure 5.42 below.

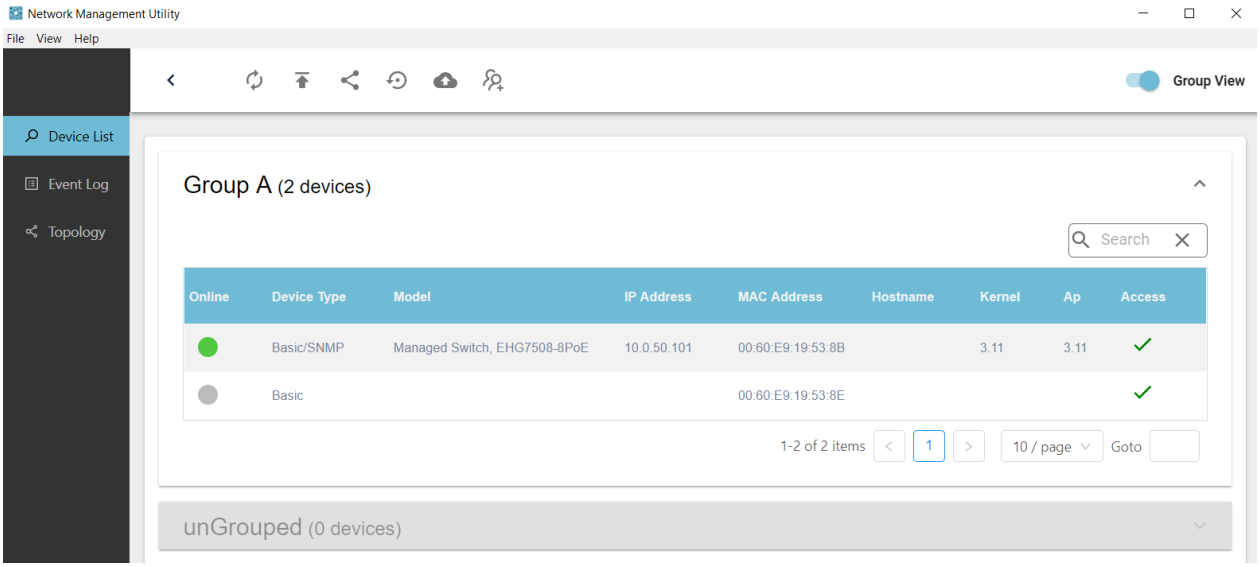


Figure 5.42 Device List when Adding a New Device using a MAC Address in Topology

Here, if user added node and link and would like to leave to other setting page, click on the Save Button to save the work. The drawing topology disappears if visiting other setting page without saving your work first. The notification of successfully saving topology will appear on the top right corner as shown in Figure 5.43.

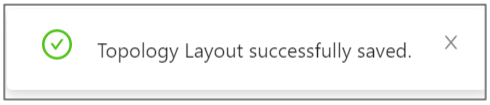


Figure 5.43 Notification of Successfully Saving of Topology Layout

User can also click on the “EXPORT the image” to save the topology. Select the destination folder to save the image file, as shown in Figure 5.44.

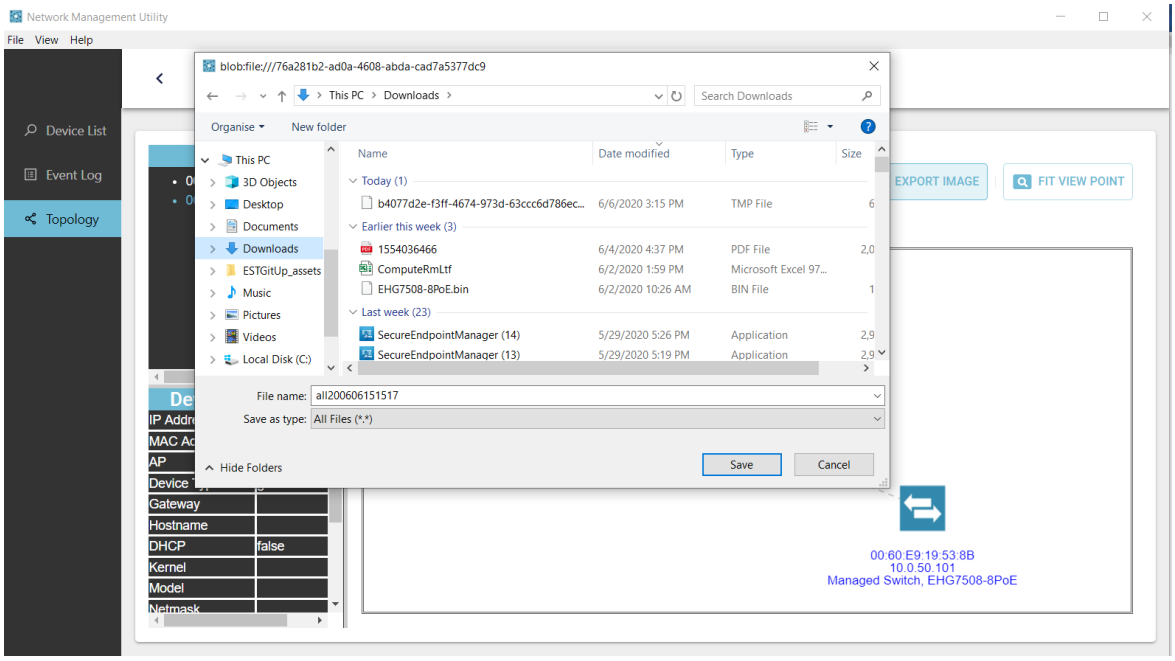


Figure 5.44 Export Image in the Side Vertical Menus → Topology

The export image file is .svg. User can use internet web browser to view it.

5.7.1 *Top Icon Bar – Horizontal Layer*

Menu icons on the **Top Horizonal Icon Bar** of Topology in the **Side Vertical Menu** consists of the followings:

- All Device
- Group x
- …

User can click on each group to create a topology and save for each group, as shown in Figure 5.45.

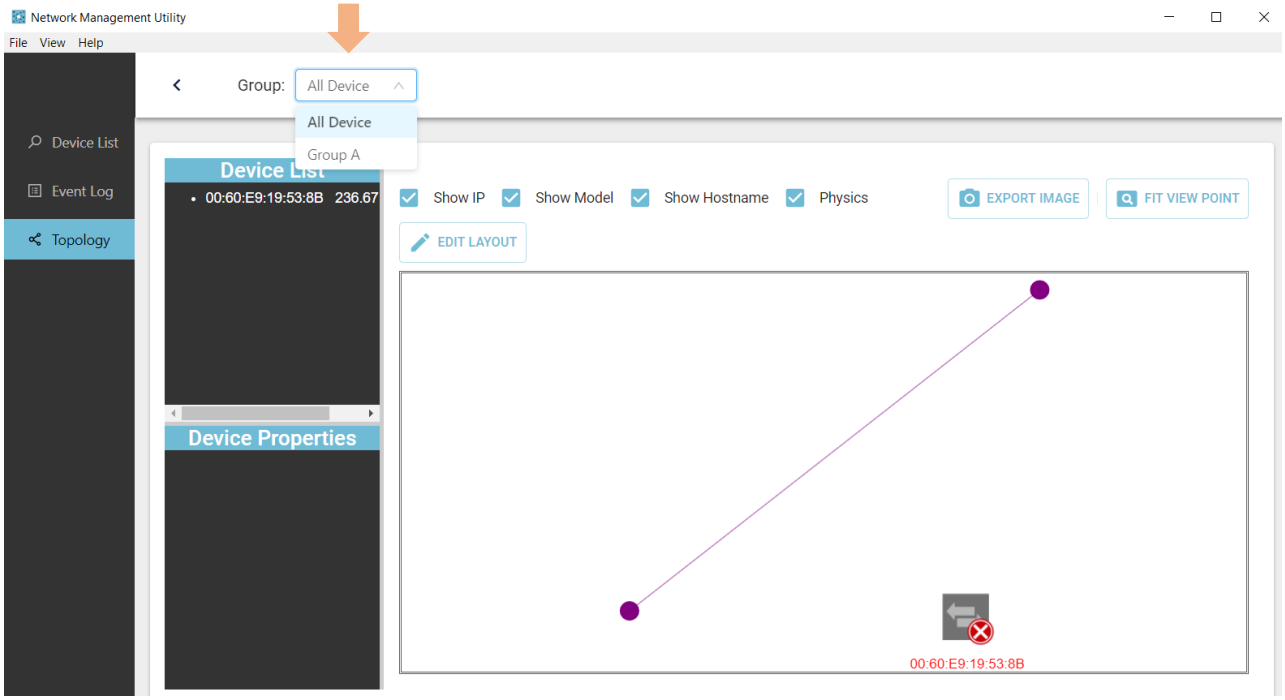


Figure 5.45 Topology in Group A in the Side Vertical Menus → Topology

6 Top Horizontal Icon Bar - Device List

Menu icons on the **Top Horizonal Icon Bar** consists of the followings:

- > or < Icon
- Discovery
- Firmware Update
- Network Setting
- Reset to Default
- Backup and Restore
- Add new group
- Group View

6.1 > *or* < *Icon*

On the most left is an icon >. Here if you click it, it will expand the area of the **Side Vertical Menus** and show name of each icon, as shown in Figure 6.1 below. If you want to shrink the area of the **Side Vertical Menus**, click < icon as shown in Figure 6.2.

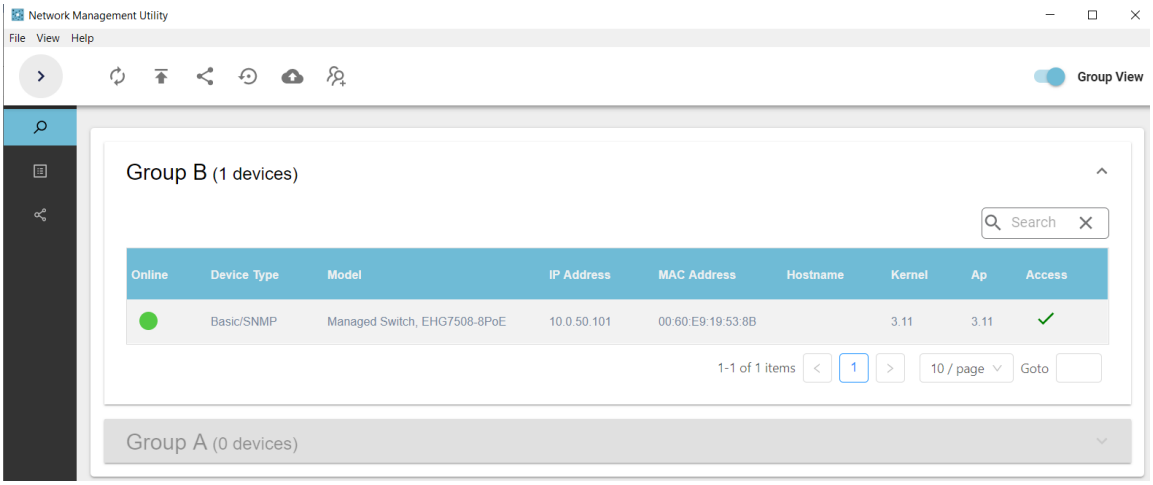


Figure 6.1 Clicking > Icon to Expand the Area of the Side Vertical Menus

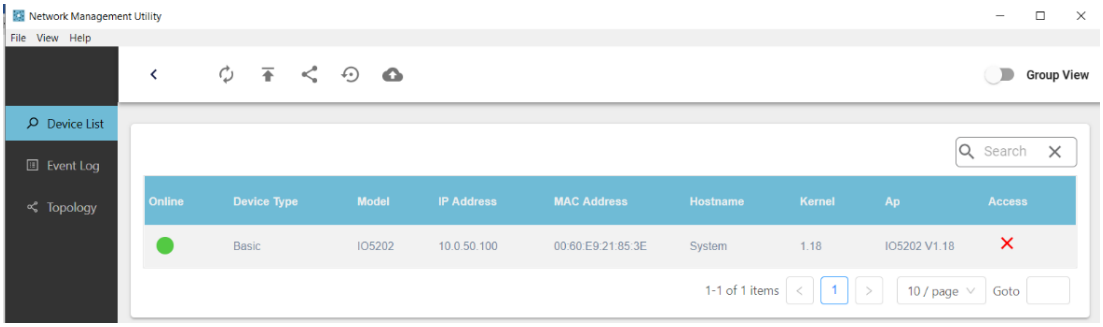


Figure 6.2 Clicking < Icon to Shrink the Area of the Side Vertical Menus

6.2 *Discovery*

Before discover the connected devices, the working space will be as shown in Figure 6.3 below.

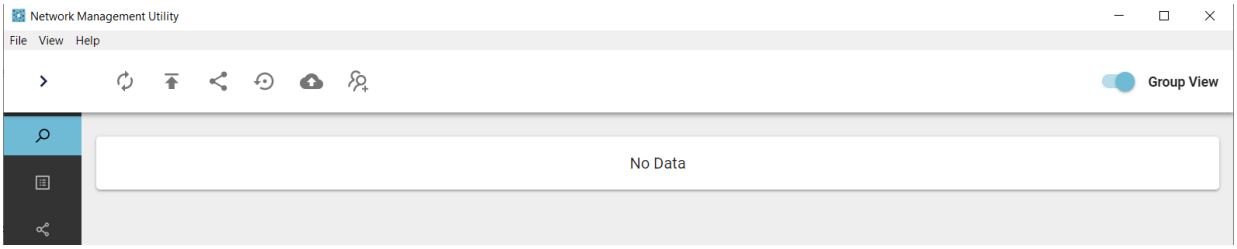


Figure 6.3 First-time Launch of Network Management Utility Setup 2.X

When clicking on the discovery icon at the top icon bar, if the SNMP function is on, the pop-up window will appear to notify that an SNMP Scan is on process as shown in Figure 6.4.

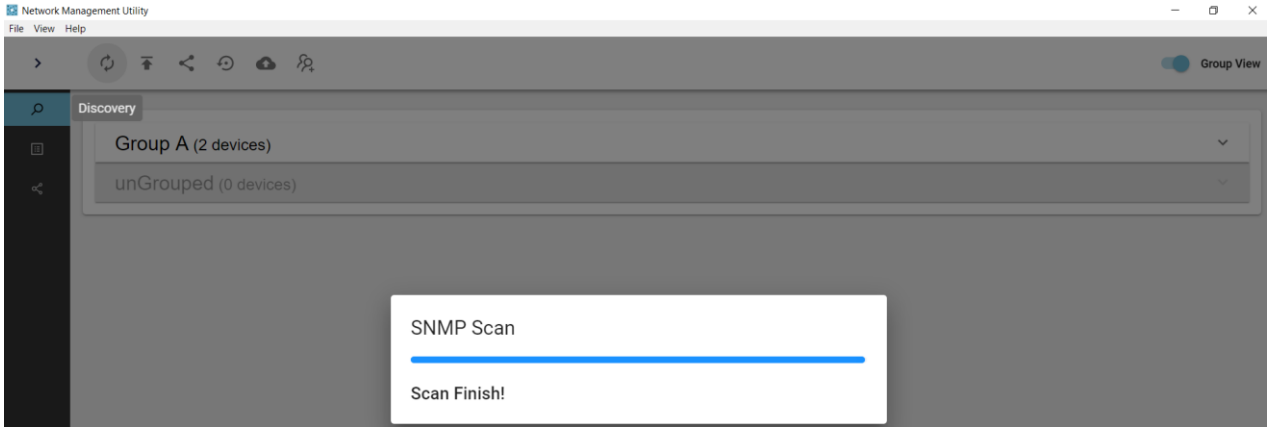


Figure 6.4 SNMP Scan is Ongoing

After finished it, connected devices will be displayed in the Device List, as shown in Figure 6.5. If these devices are still not grouped together, number of devices will be showed as unGrouped. If the device is already added to a group, it will be showed in the device table of that group. Refer to Section 5.2 on how to add a new group and Section **錯誤! 找不到參照來源。** on how to add device into a group. Note that each device can be added to more than one group.

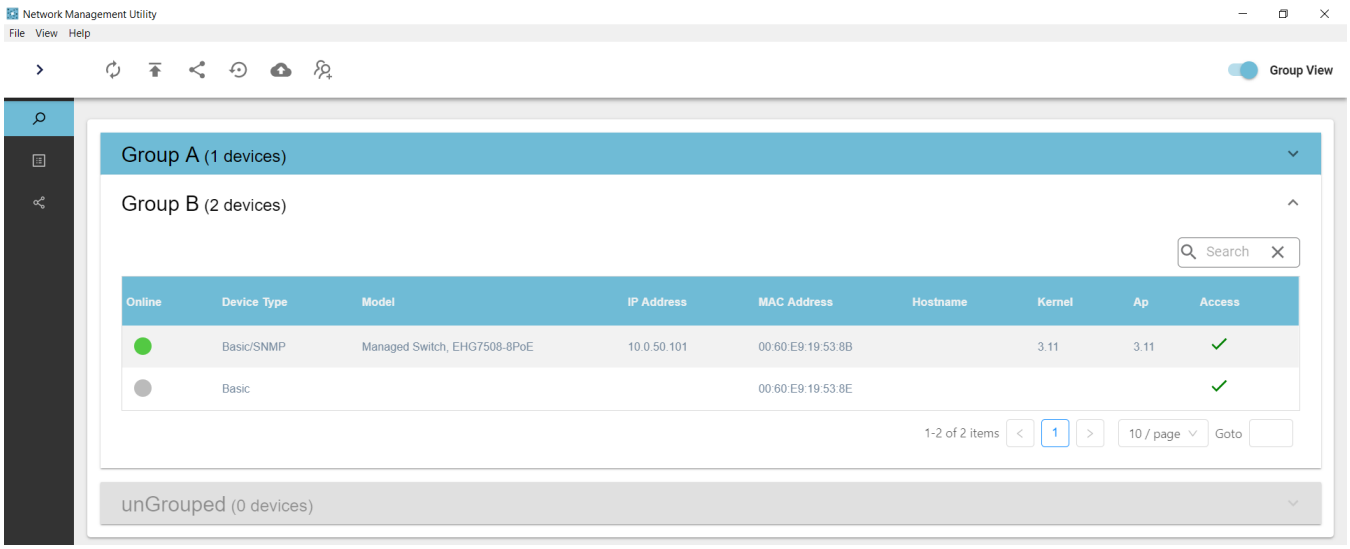


Figure 6.5 Devices in the Device Table in each Group

Table 6.1 below explains each field in the device table in details.

Table 6.1 Definition of Each Field in the Device Table

Field	Description
Online	Status of each device: active (green dot) or inactive (red dot)
Device Type	Basic or Advanced
Model number	The model number of the found device(s).
IP Address	An IP Address of the corresponding device
MAC Address	The MAC Address of the device.
Host Name	The Host Name of the device.
Kernel	The Kernel version of the device
AP Information	The AP information or application version of the device. Note that Atop's firmware of a device generally consists of application version and kernel version.
Access	Indicate whether the device is already accessible (✓) or not (✕). Users have to join the device in any group first for its accessibility. That is users have to create a group and add the device to that group first to view it as accessible.

6.3 *Firmware Update*

When clicking on the **Firmware Update** on the **Top Horizonal Icon Bar**, the notification box will appear on the top of the working space of the Device List of Side Vertical Menus, as shown in Figure 6.6 below.

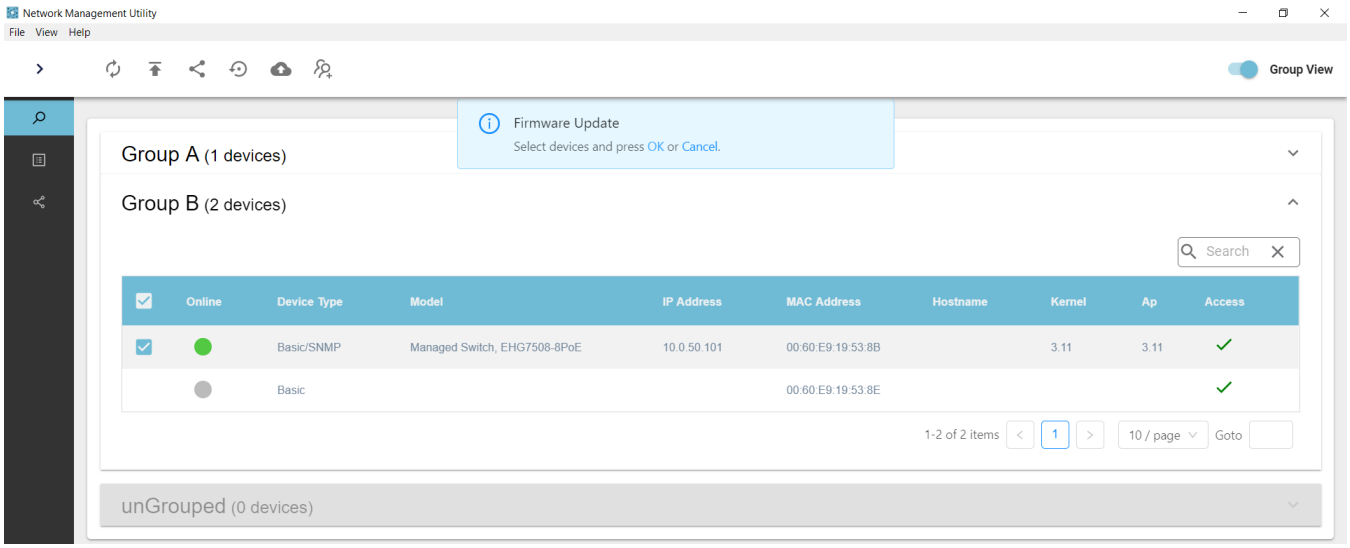


Figure 6.6 Click on Firmware Update in the Top Horizontal Icon Bar

After selecting on the device that you want to update the firmware and click **OK** in the notification box on the top of the window, a new window is launched as shown in Figure 6.7. Here, user can press **BROWSE** button and guide through file directory to select the firmware file (.dld) you want to update.

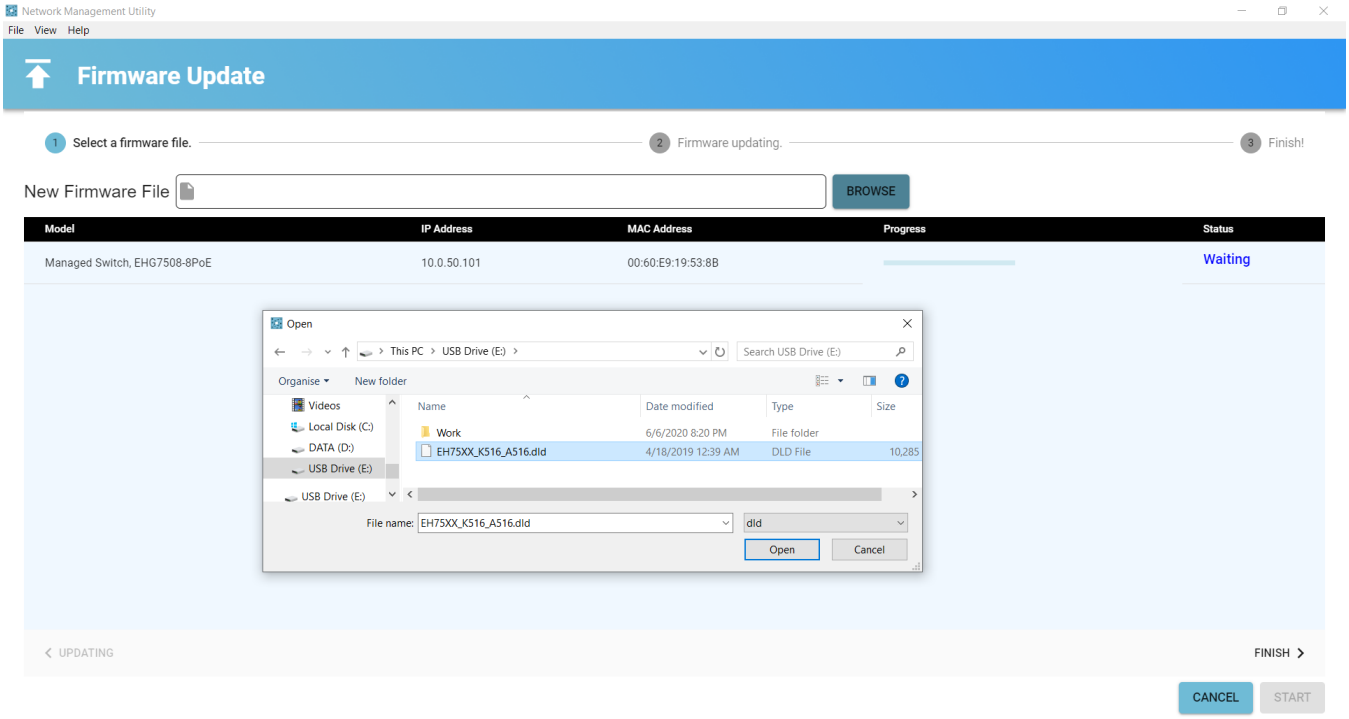


Figure 6.7 Go Through the File Directory to Select the Firmware File (.dld)

Click **Open** button after selecting the firmware file (.dld). Then the **START** button will be activated. User can click the **START** button at the bottom right corner of the Firmware Update window to start updating.
While waiting for the updating firmware to finish, the progress status is displayed in the **Progress** field and the update status is shown in the **Status** field, as shown in Figure 6.8. If user would like to stop updating the firmware, user can press read STOP button on right bottom right corner.

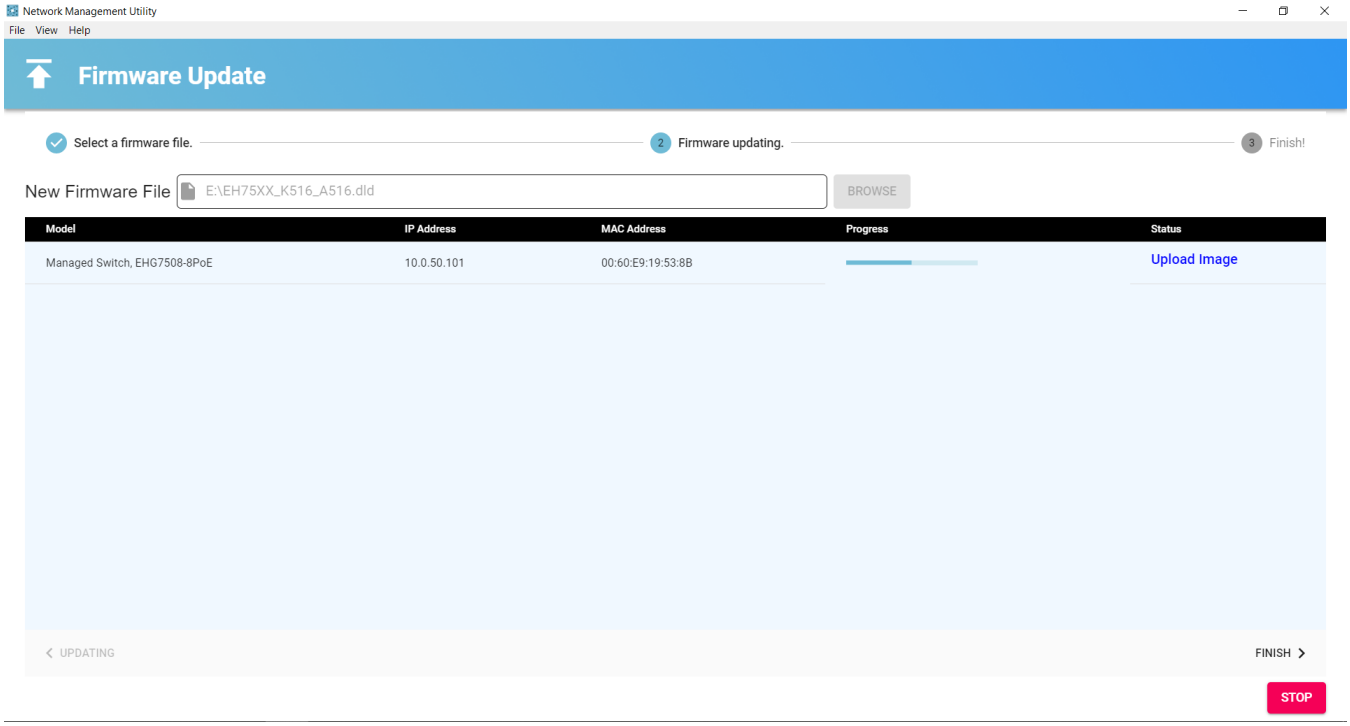


Figure 6.8 Go through the File Directory to Select the Firmware File (.dld)

After the updating process is finished, the moving progress line reaches the final end, and the status will change to Upload Success or Upload Fail. Figure 6.9 illustrate an example when the firmware updating process is finished with failure.

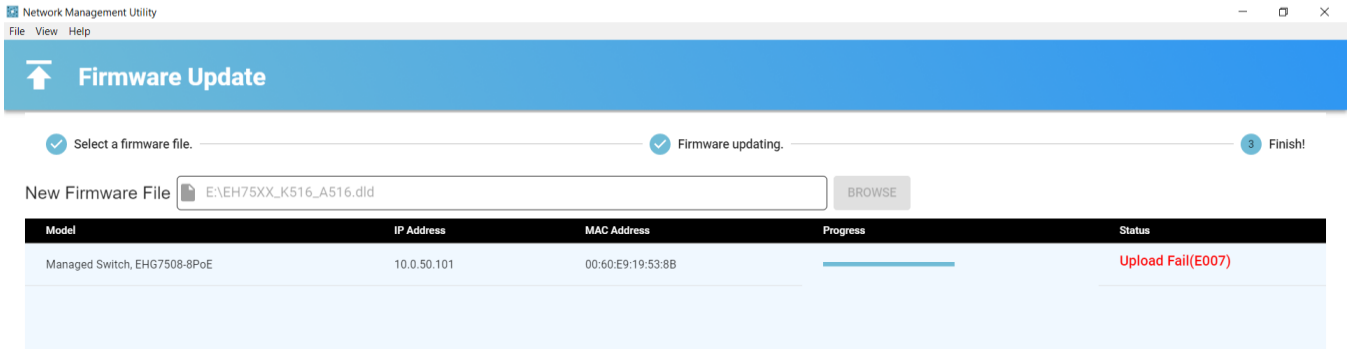


Figure 6.9 The Firmware Update is Finished with a Failure (Code E007)

After clicking FINISH button, the Firmware Update window will be closed and user will go back to the Device List's working space window. In the example, the firmware date is unsuccessful and the error code is E007.

6.4 *Network Setting*

When clicking the **Network Setting** on the **Top Horizonal Icon Bar** of the **Device List**, the new window is launched, as shown in Figure 6.10. Here, on the left side is the Network Setting. User can choose whether to obtain an IP address automatically or manually. By checking the box in front of DHCP (Obtain an IP automatically), your device will set the IP address and other parameters automatically. After checking the DHCP option, user does not need to input IP Assign option on the right side of the window. The START button on the bottom right is activated and ready to begin. Here, the Progress is shown as 0% before clicking START button.

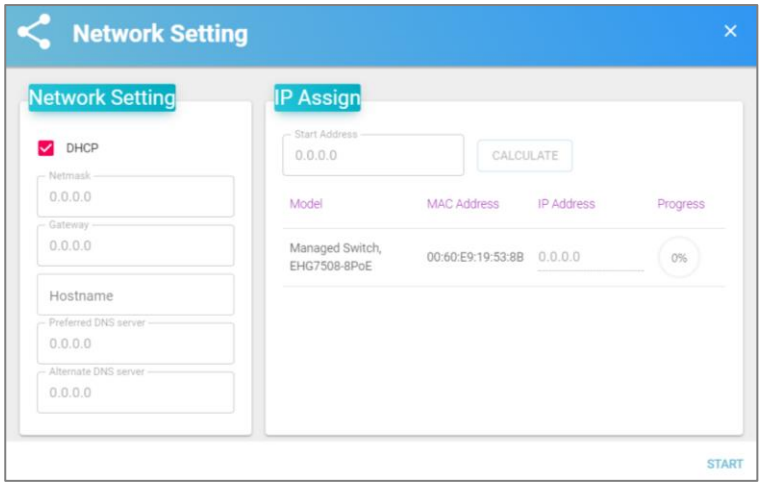


Figure 6.10 Click Network Setting Icon in the Top Horizontal Bar of the Device List – Automatic Setting

If the checking box in front of the DHCP option is unchecked, user has to manually set the network parameters. Figure 6.11 shows the Network Setting when DHCP option is unchecked.

Proceed to fill in the Netmask, Gateway, Hostname, Preferred DNS server, and Alternate DNS server. Also, user need to put in the IP address on the right side of the Network Setting, the IP Assign Part as shown in Figure 6.11. There is an IP address input box named “Start Address”with a CALCULATE button. Press CALCULATE to see if the input IP address is valid. If yes, the START button at the bottom right of the Network Setting Window will be activated. After Clicking the START button, information of the device will be presented, including Model, MAC Address, IP Address, and Progress. If the setting is success, the Progress information will show as a green check sign.

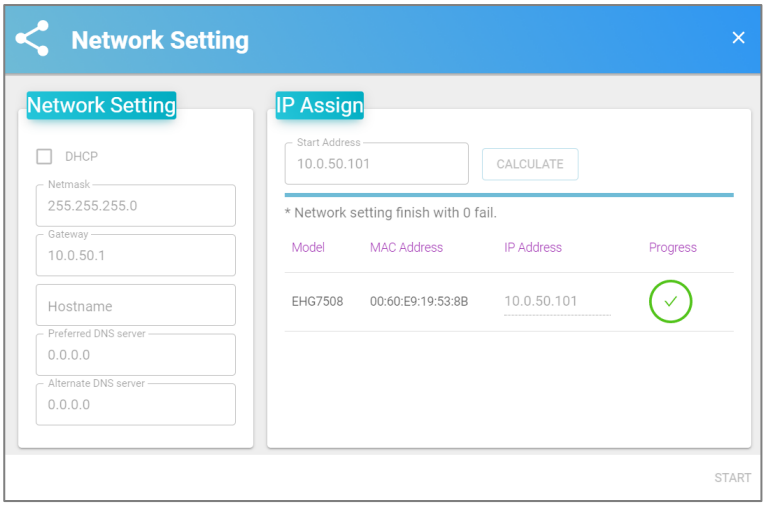


Figure 6.11 Click Network Setting Icon in the Top Horizontal Bar of the Device List – Manual Setting

6.5 *Reset to Default*

In order to reset the configuration setting to the default value, user has to first 1) enable an SNMP function of the connected device, 2) create a group if none is available or if a new group is required for the connected device, and 3) add the device into a newly created group (refer to Section 5.2). If an SNMP function is not enabled yet, please refer to Section 4.1.4. to enable it. If the software continue notifies that "(This feature only for device with SNMP support.)" and the **"OK"** link cannot be clicked even user already enabled an SNMP function via the **Network Management Utility Setup 2.X,** user should enable an SNMP function via web interface instead. User can follow the instruction in Section 0 to initialize a web configuration page.

After the SNMP function is enabled, select connected devices that you want to reset the configuration settings to the factory default and then press **"OK"**, as shown in Figure 6.12 below.

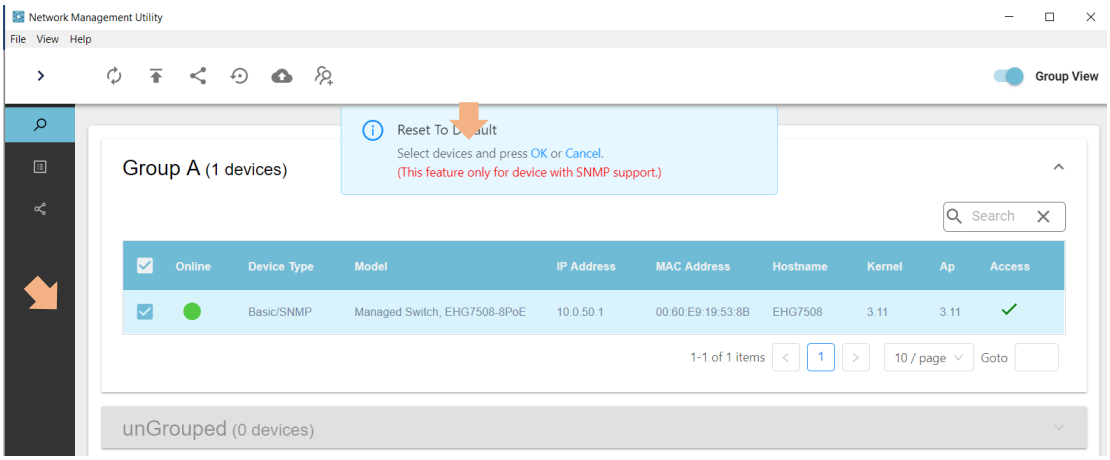


Figure 6.12 Select Devices and Click OK to Reset to Default

New window with the details of devices i.e., Model, MAC address, IP address, and the status appears for the user to re-confirm whether the select device is the correct one, as shown in Figure 6.13. If yes, click START button to start the reset process. Here, the STATUS is WAITING.

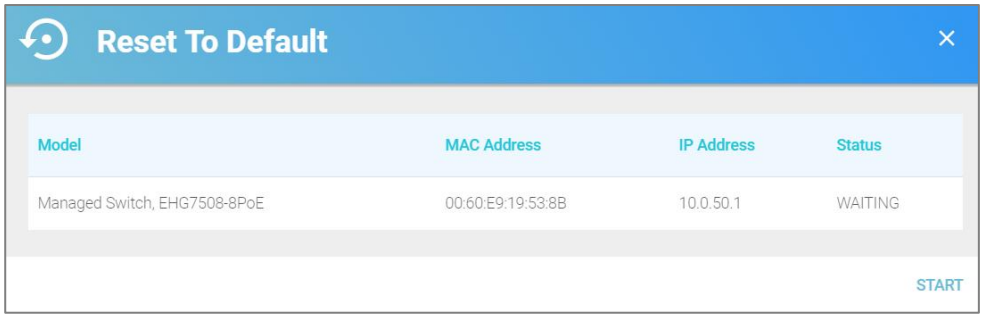


Figure 6.13 Confirm Window to Reset to Default Setting

After clicking START, when the "reset to default" process is finished, the STATUS is changed to SUCCESS, as shown in Figure 6.14. Click to × in the top right corner to close the window.

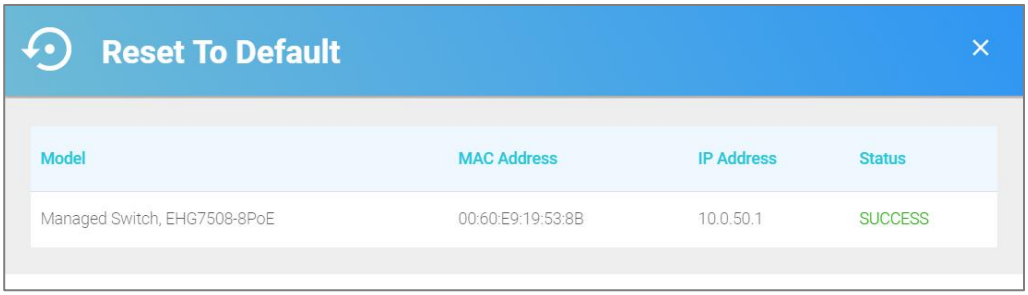


Figure 6.14 Success to Reset to Default Setting

6.6 *Backup and Restore*

Similar to **Reset to Default** function icon, user has to first 1) enable an SNMP function of the connected device, 2) create a group if none is available or if a new group is required for the connected device, and 3) add the device into a newly created group (refer to Section 5.2). If an SNMP function is not enabled yet, please refer to Section 4.1.4 to enable it. If the software continue notifies that "(This feature only for device with SNMP support.)" and the **"OK"** link cannot be clicked even user already enabled an SNMP function via the **Network Management Utility Setup 2.X,** user should enable an SNMP function via web interface instead. User can follow the instruction in Section 0 to initialize a web configuration page.

After the SNMP function is enabled, select connected devices that you want to Backup and Restore the configuration settings to the factory default and then press **"OK",** as shown in Figure 6.15.

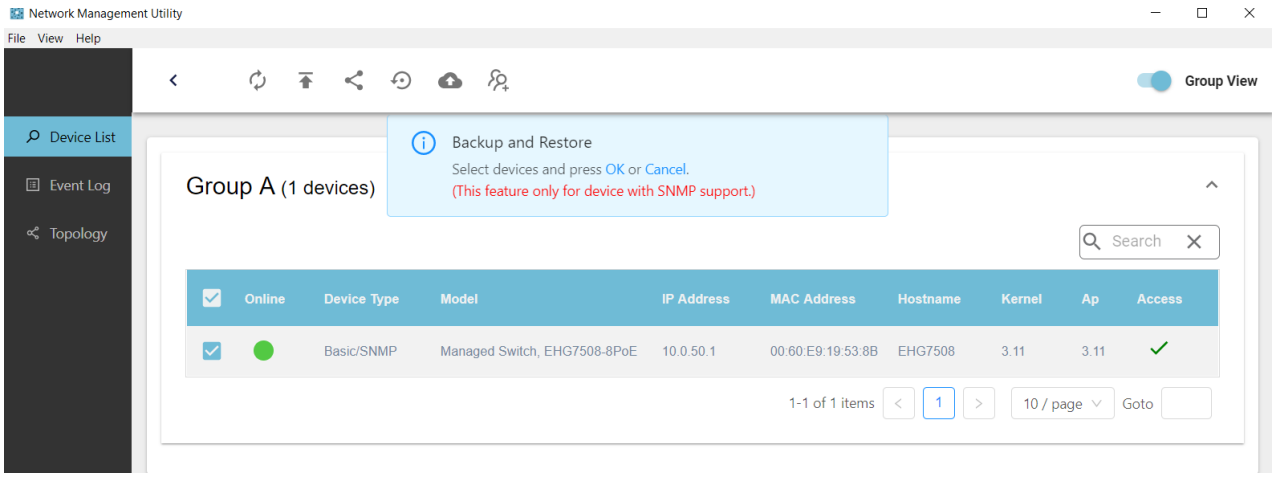


Figure 6.15 Click Backup and Restore in the Top Horizontal Icon Bar

After clicking **OK,** the new **Backup and Restore** window will be launched, as shown in Figure 6.16. Here, the window is divided to two parts, **Devices** and **Files**.

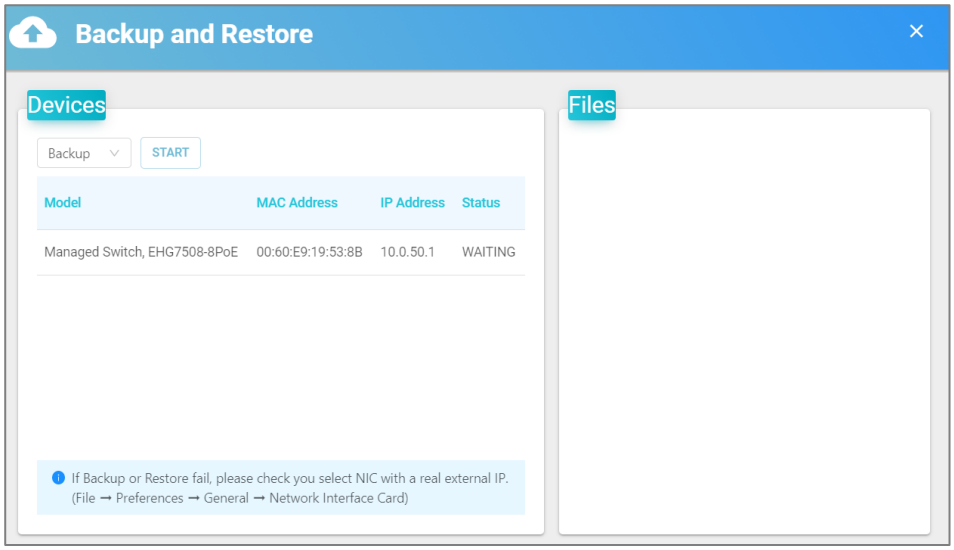


Figure 6.16 Backup and Restore Window is Launched after Clicking OK

If users chose to back-up the configuration, select **Backup** from the drop-down box and click START button. Within this **Devices** part, there is the information of the device such as Model, MAC Address, IP Address, and Status. Before clicking START button, the Backup **Status** is WAITING. Figure 6.17 shows the **Backup and Restore** window after finishing the Backup process and success. The device will be restarted as the user can see the notification window (on the bottom right corner) for the device going offline and online again. If it is failed, make sure that your selected Network Interface Card (NIC) is the one with a real external IP address. Go to File → Preferences → General → Network Interface Card to check on it. Figure 6.18 illustrates what happens when the Backup is failed.

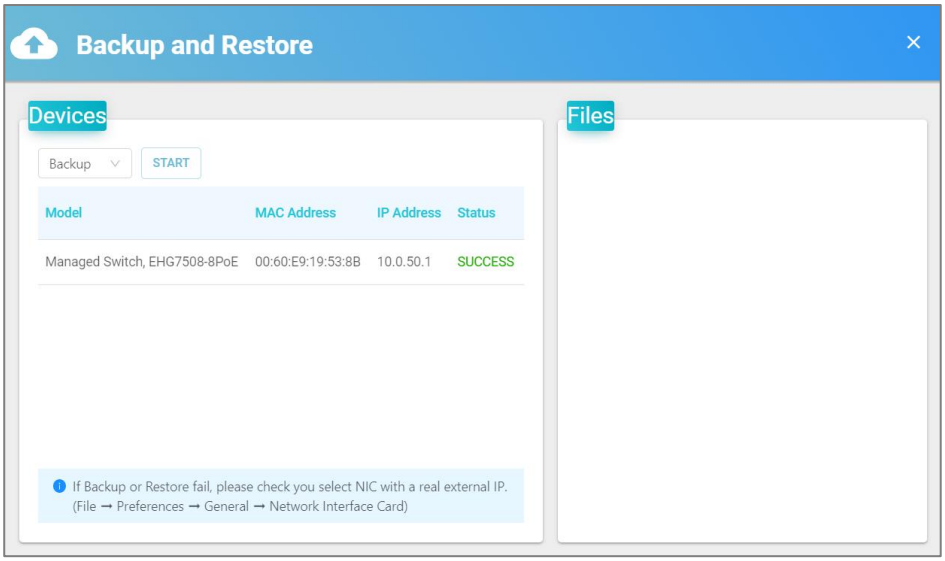


Figure 6.17 Success Backup after Clicking Icon in the Top Horizontal Icon Bar

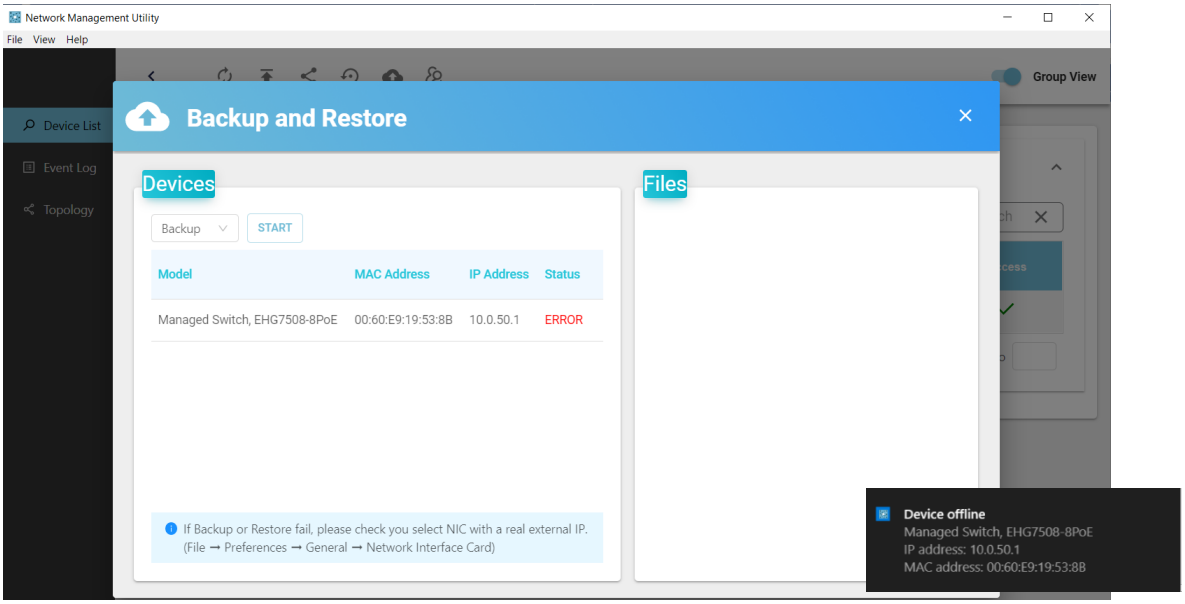


Figure 6.18 Failure Backup after Clicking Icon in the Top Horizontal Icon Bar

By clicking on the device under the Model, MAC Address, IP Address, and Status information, user will see a list of configuration files that are already backup, as shown in Figure 6.19. User can click red × at the end of each file to remove its backup configuration.

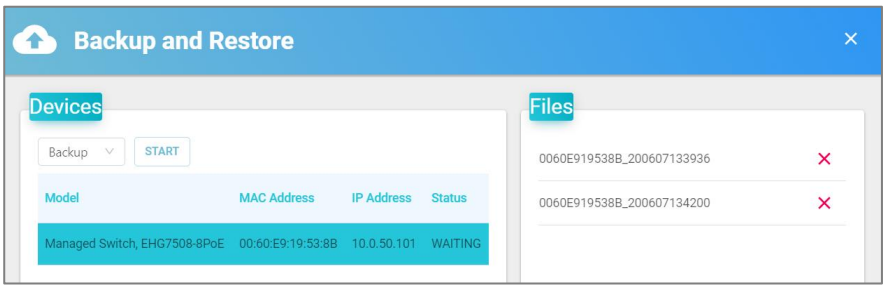


Figure 6.19 Configuration Files that are Already Backup

If user would like to restore the configuration, user has to follow these steps. First, select **Restore** option from the drop-down box. Second, click on the device under the Model, MAC Address, IP Address, and Status information. A list of configuration files will be displayed on the right side of the window. Third, select the configuration file that you want to restore and click **START** button. Before clicking START button, the Backup **Status** is WAITING. Figure 6.20 shows the **Backup and Restore** window after finishing the Restore process and success. After the restore is success, there is a couple of beeps sound from the device and the device will be restarted. The user will see the notification box (on the bottom right of the window) showing that the device is going offline and online again. Similarly, to the Backup configuration process, if it is failed, make sure that your selected Network Interface Card (NIC) is the one with a real external IP address.

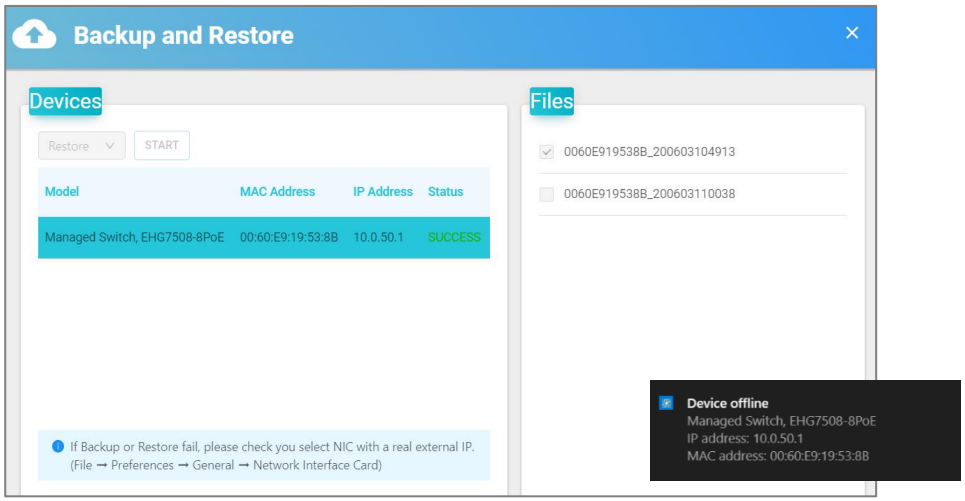


Figure 6.20 Sucess Restoring the Configuration File

Atop Technologies, Inc.

www.atoponline.com

TAIWAN HEADQUARTER and INTERNATIONAL SALES:

2F, No. 146, Sec. 1, Tung-Hsing Rd,
30261 Chupei City, Hsinchu County
Taiwan, R.O.C.
Tel: +886-3-550-8137
Fax: +886-3-550-8131
sales@atop.com.tw

ATOP CHINA BRANCH:

3F, 75th, No. 1066 Building,
Qingzhou North Road,
Shanghai, China
Tel: +86-21-64956231