

ATOP Technologies, Inc.

Network Management Utility

<u>User Manual</u>

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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 <u>www.atoponline.com</u>.

Warranty Period

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

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1 Introduction

1.1 Purpose of the Manual

This manual explains the available technical features of the Network Management Utility. During device configuration, users can follow instructions, examples, and guidelines provided in the manual for 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 <u>www.atoponline.com</u>.

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 for setting tasks on various ATOP 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 illustrative purposes 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 downloaded from <u>www.atoponline.com</u>. 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.

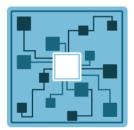


Figure 2.1 Network Management Utility© Program Icon

For Windows 7 users, it is strongly recommended to allow the program to run in 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.

		Open	
Networ Managem	•	Run as administrator	
Utility Set		Troubleshoot compatibility	
2.0.7.ex		Run with graphics processor	>
		Pin to Start	
		7-Zip	>
		CRC SHA	>
	Ð	Scan with Windows Defender	
	È	Share	
		Give access to	>
		Pin to taskbar	
		Restore previous versions	
		Send to	>
		Cut	
		Сору	
		Create shortcut	
		Delete	
		Rename	
		Properties	

Figure 2.2 Right Click the Network Management Utility© Program Icon

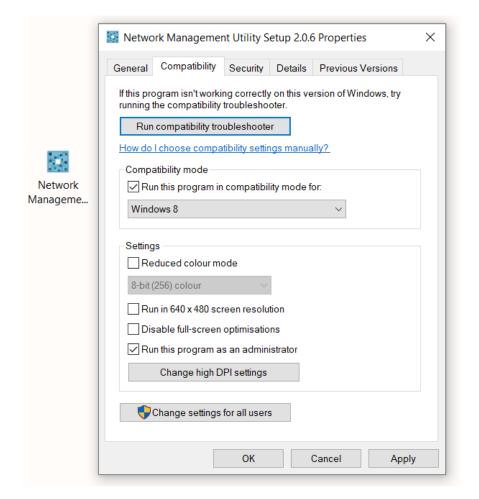


Figure 2.3 Right Click Properties \rightarrow Compatibility Tab \rightarrow Tick Two Boxes

1.2 Installation

After clicking on the **OK** button in the setup program's Properties as shown above, double-click on the setup icon, and a pop-up window will be launched, as shown in Figure 2.4. Once the installation completes, the **Network Management Utility Setup** program is installed into your computer system.

Network	8 Network Management Utility Setup	_	×
Manageme	Installing, please wait		

Figure 2.4 An Installing Pop-up Window

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



Figure 3.1 Launching After Double-clicking the Network Management Utility Setup

Log in to the **Network Management Utility**. When executing the **Network Management Utility** for the first time, log in with the default user name & password. (User Name: **admin**, Password: **admin123**)

LOGI	N
Username *	
Password *	Ø
	LOGIN

Figure 3.2 Log in to the Network Management Utility

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

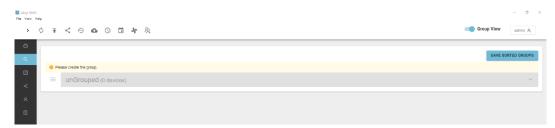


Figure 3.3 First-time Launch of Network Management Utility Setup 2.X

Click on the magnifier icon at the top of the vertical left menu. The number of devices connected to the **Network Management Utility Setup 2.X**. If these devices are not yet grouped together, the number of devices will be showed as unGrouped.

Atop NMU	p	- 0 ×
> <) ∓ < ⊕ @ 0 ⊞ \$ &	Group View admin A
C Disco	overy	SAVE SORTED GROUPS
	Please create the group.	
	≡ unGrouped (0 devices)	*
R		

Figure 3.4 Working Space after Clicking on Magnifier Icon

Click on the drop-down icon on the right, and the list of the found device(s) is displayed as a table with the following columns: **Online**, **Device Type**, **Model**, **IP Address**, **MAC Address**, **Host Name**, **Kernel**, **AP**, and **Access** as shown in Figure 3.5. Click on a column title to sort the devices according to values in that column.

Atop NMU • View Help									- 0
	< 0	🗅 🕓 🖬 🧍 🖗	2					 G	admin A
8									
2	Please create the gro	N/170							SAVE SORTED GROUPS
<	unGroup	ed (2 devices)							^
R									Q Search X
3	Online	Device Type	Model	IP Address	MAC Address	Hostname	Kernel	Ap	Access
a =	٠	Basic/SNMP	EHG7504-2PoE-2SFP	192.168.12.71	00:60:E9:1A:3C:DF	switch	7.20	7.20	×
	•	Basic/SNMP	Managed Switch	192.168.6.199	00:60:E9:19:53:94	switch	80.24	80.24	×
							1	-2 of 2 items <	1 > 10 / page v

Figure 3.5 List of Connected Devices after Clicking on Magnifier 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 device firmware generally consists of an application version and a kernel version. The last column, **Access**, indicates whether the device is already accessible by NMU (\checkmark) or not (\checkmark). An accessible device must belong in a group. 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 drop-down menus in the top menu bar: **File**, **View**, and **Help**. In the following sections, we will describe options within each menu in detail.

4.1 *File*

The first drop-down on the bar is **File**, as shown in Figure 4.1. In this menu, there are four options:

- Preferences...
- Import Settings...
- Export Settings...
- Quit

Atop NMU ile View Hel	lp							- 0 >
Preference Import Settir								admin R
Export Settin	-							
Quit	Ctrl+Q	ary		Daily Events			Event List	
Q		Online	Offline	Information	Warning	Critical	EHG2408	2021-08-24 13:49:14
		0	3	0	0	0	192.168.12.202 link up	
چ ح	Disk Space Ut	lization		Events	last update 09/12/2021 14	L:37 Critical	EHG7504-2PoE-2SFP 192.168.5.72 Port 3 - link up	2021-08-16 18:11:54
Ē		20.80%	Used Free				EHG7504-2PoE-2SFP 192.168.5.72 Port 3 - link down	2021-08-16 18:11:51
				0 12/03 1:	2/04 12/05 12/06 12/07	12/08 12/09	EHG7608-4PoE-4SFP 192.168.5.71 Port 5 - link up	2021-08-16 18:06:22

Figure 4.1 Options within File Menu

4.1.1 Preferences

As shown in Figure 4.2 below, the **Preferences** option under the **File** menu contains five tabs: **General**, **Mail**, **Telegram**, **SNMP**, and **Advanced**.

File View Help		- o ×
🔅 Preferenc	es	×
General Mail Telegram	Network Interface Card	
SNMP Advanced		

Figure 4.2 File → Preferences Sub-menu

4.1.2 General Tab

The File \rightarrow Preferences \rightarrow General tab displays the Network Interface Card. All interfaces, including virtual interfaces, are listed here as shown in Figure 4.3 below.

Atop NMU		- 🗆 ×
File View Help		
🗘 Preferei	nces	×
General	Network Interface Card	
Mail		
	default - 0.0.0.0 V	
Telegram	default - 0.0.0.0	
SNMP	Intel(R) Ethernet Connection (10) I219-V - 192.168.5.198	
	Microsoft Wi-Fi Direct Virtual Adapter #3 - 0.0.0.0	
Advanced	Microsoft Wi-Fi Direct Virtual Adapter #4 - 0.0.0.0	
	Intel(R) Wireless-AC 9560 160MHz - 192.168.6.210	

Figure 4.3 File \rightarrow Preferences \rightarrow General

4.1.3 Mail Tab

Under File \rightarrow Preferences \rightarrow Mail, users can enable automatic mail notifications, as shown in Figure 4.4 below. Toggle Enable Notification to enable the service via providers such as Gmail, Hotmail, or Yahoo. Select option Mail Service List if using mail service from an available standard provider; otherwise, select User Definition and enter your choice of host mail and port.

🔛 Atop NMU File View Help		- 🗆 X
🛱 Preferen	nces	×
General Mail	Mail Service	Î
Telegram SNMP Advanced		
	Mail Settings Mail Username Password To: + New Mail	
	Cc: + New Mail Bcc: + New Mail	

Figure 4.4 File \rightarrow Preferences \rightarrow Mail

The various choices of mail services are as shown in Figure 4.5 below.

Gmail ^) [Gmail	~	Gmail	~	Gmail	~	Gmail	~	Gmail	^
126		Gmail	-	Mail.ru	•	Outlook365	*	SES	-	SES-US-EAST-1	*
163		Godaddy		Maildev		Postmark		SES-US-EAST-1		SES-US-WEST-2	
1und1		GodaddyAsia	I.	Mailgun		QQ		SES-US-WEST-2		SES-EU-WEST-1	
- AOL		GodaddyEurope		Mailjet	i.	QQex		SES-EU-WEST-1		- Sparkpost	
DebugMail		hot.ee		Mailosaur		SendCloud		Sparkpost		Yahoo	
DynectEmail		Hotmail		Mandrill		SendGrid		Yahoo		Yandex	
FastMail		iCloud		Naver		SendinBlue		Yandex		Zoho	- 11
GandiMail	Ŧ	mail.ee	-	OpenMailBox	-	SendPulse	-	Zoho	-	qiye.aliyun	-

Figure 4.5 List of Mail Services Available within File \rightarrow Preferences option \rightarrow Mail tab

Click + New Mail to enter valid email addresses for each email header: **To:**, **CC:**, and **BCC:**.

4.1.4 Telegram Tab

In File \rightarrow Preferences option \rightarrow Telegram tab, users can enable Telegram Notifications and configure settings to receive offline notifications. Functions include:

- Saving Telegram Token ID
- Sending test messages
- Adding new users to receive alarm messages

ral	Telegram Token Setting	
	Telegram Token	Save Token
ram	Telegram Bot Testing	
	Telegram test message	Send Message
nced	Telegram Users Setting	
		Telegram Users List
	Telegram Id	Telegram Name Telegram Type Action
	Telegram Name	
	Telegram Type 👻	No Data
	Submit Reset	

Figure 4.6 Configure the Telegram Notification to Receive Offline Event Messages

o ×

Reference: How to Get Your Telegram Token?

In this tutorial we will look at a quick way to create a bot on Telegram. You can find more detailed information on the **official site**.

You can use your APP, Web or PC version Telegram to complete 4 simple steps to set up your Telegram bot:

Step 1. Find the Telegram bot named "@botfarther", he will help you with creating and managing your bot.



Figure 4.7 Find the BotFather

Step 2. Send the message "/help" and you will see all possible commands that the Botfather can operate.

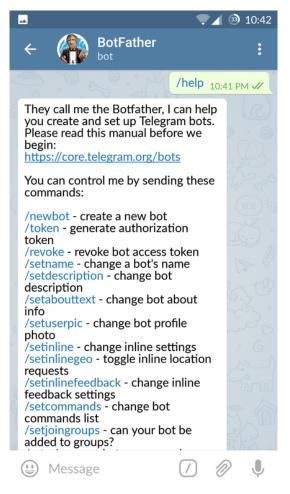


Figure 4.8 Start Telegram Bot Setup

Step 3. To create a new bot, send "/newbot" or click on the Botfather's /newbot link.

Follow the instructions to create a new name for your bot. The name has to be unique, so if you are creating a trial bot only, you can namespace your bot by placing your own name at the start of its username. Screen names can be anything you like.

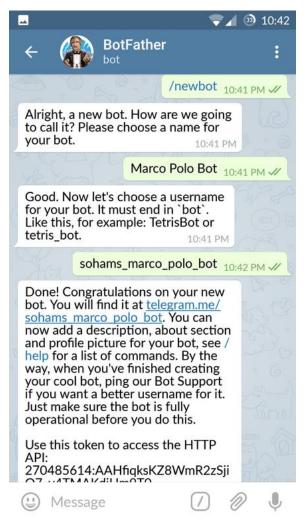


Figure 4.9 Name Your Telegram Bot

Reference: How to get your Telegram ID?

Step1. Start Chat room with your Bot

Step2. Send "/getId" in the chat room

Step3. Your Bot will reply its id, as below "1699644503"

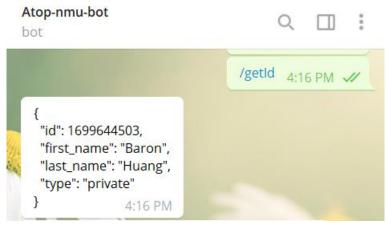


Figure 4.10 Get Telegram ID

4.1.5 SNMP Tab

In the File \rightarrow Preferences option \rightarrow SNMP tab, users can enable SMNP service and configure settings such as SNMP Scan, Default Community, and Others, as shown in below.

Vetwork Management Utility File View Help		o ×
🔅 Preference	s	×
General	SNMP Scan	
Mail	D Enable	
SNMP		
Advanced	> IP Range List	
	SNMP Polling Interval 30 min	
	ICMP Timeout 2000 ms	
	SNMP Timeout 3000 ms	
	Default Community	
	SNMP Version v2c V	
	Read Community public	
	Write Community private	
	Others	
	Precheck device SNMP feature before specific operate.	

Figure 4.7 SNMP Scan Section View Within File → Preferences → SNMP

In **File** \rightarrow **Preferences** option \rightarrow **SNMP** tab, toggle \bigcirc Enable to enable SNMP scan, and click \square ADD to add range of IP addresses in IP Range List, as shown in below.

			SNMP Scan	
Add New IP Rar	nge		Enable	
Start IP Address	End IP Address			
10.0.50.101	- 10.0.50.200		✓ IP Range List	
Start address must be I	ess then end address and in the same network se	egment.	⊻ 10.0.50.101 - 10.0.50.200	×
	CANCEL	ОК		E ADD

Figure 4.8 SNMP Scan Section within File \rightarrow Preferences Sub-menu \rightarrow SNMP

Please refer to Section 4.1.5 if SNMP function cannot be enabled. If the message "This feature only for device with SNMP support" persists, and the "**OK**" link cannot be clicked even when SNMP function is already enabled via the **Network Management Utility Setup 2.X**, the user should enable SNMP function via the device's web interface instead. Follow the instructions in Section 5.6.1 to initialize a web configuration page. Note that when SNMP is enabled, the device type changes from Basic to Basic/SNMP, as shown in Figure 4.9.

Online	Device Type	Model	IP Address	MAC Address		Kernel	Ар	Access
•	Basic/SNMP	Managed Switch, EHG7508-8PoE	10.0.50.1	00:60:E9:19:53:8B	EHG7508	3.11	3.11	~

Figure 4.9 Device Type is shown as Basic/SNMP

The description of each field in the SNMP Scan section is shown in Table 4.1.

Table 4.1 Description of each field in File \rightarrow Preferences \rightarrow SNMP

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

In File \rightarrow Preferences option \rightarrow SNMP tab, users can set the Default Community, as shown in Figure 4.10 below.

Default Community

SNMP Version	v2c ∨
Read Community public	
Write Community private	

Figure 4.10 Default Community section within File \rightarrow Preferences \rightarrow SNMP

The description of each field in the Default Community section is shown in 4.2 below.

Table 4.2 Description of each field in the Default Community Section under File → Preferences → SNMP

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) to allow access to read device data	public
Write Community	Community string (in clear text) to allows access to read and write device data or edit its configurations	private

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

In the File \rightarrow Preferences option \rightarrow SNMP tab \rightarrow Others section, users can select whether to precheck device SNMP features before specific operations, as shown in Figure 4.11 below.

Others

Precheck device SNMP feature before specific operate.

Figure 4.11 Others section within File \rightarrow Preferences \rightarrow SNMP

Before performing specific operations such as network configuration, the program will precheck device SNMP feature, as shown in below Figure 4.12.

	<	\$\overline{\Phi}\$	< • •	<i>Ŷ</i> ₽			Group
₽ Device List							
Event Log	Group	A (1 devic	es)				^
ペ Topology							Q Search X

Figure 4.12 Precheck Device SNMP Feature First before Specific Operations

4.2 View

The second drop-down menu in the top menu bar is **View**, as shown in Figure 4.13. In this menu, there is one option: • Toggle to full screen

Atop NMU File View Help					-		×
Toggle Full Screen F11	•	i i	\$ £Ş.	Group View	ad	min A	

Figure 4.13 Toggle Full Screen Option within View Menu

Once **Toggle to Full Screen** is selected, or when the F11 key is pressed, the NMU window will expand to full screen. Re-select the option or press F11 again to reduce the window to its original size.

4.3 Help

The third drop-down menu on the top menu bar is **Help**, as shown in Figure 4.14. In this menu, there is one option:

About Network Management Utility

S Atop NMU	_		×
File View Help			
> About Network Management Utility Group View	ac	dmin A	

Figure 4.14 About Network Management Utility Submenus within Help Menu

When **About Network Management** is selected, the NMU logo and version number will appear, as shown in Figure 4.15 below.

ABOUT



Figure 4.15 About Network Management Utility Window

5 Side Vertical Menu

The Side Vertical Menu consists of the following items, as shown in Figure 5.1:

- Dashboard
- Device List
- Event Log
- Topology
- Users
- Device Config

File View Help										- 0	×
	<	¢ ∓	\$ 0	6 () (: .	۶ <u>۶</u>		GI	oup View	admin A	
② Dashboard											
Q Device List	=	EHG7	XXX (3 dev	ices)						~	
Event	=	unGro	ouped (3 d	evices)						~	
< Topology											
유 Users											
ରି Device con											

Figure 5.1 Side Verticle Menu

5.1 Dashboard

The Dashboard contains several widgets that provide summary information about your network devices, event highlights, and server disk space utilization. A Device Summary table indicates the quantity of Online/Offline devices.



Figure 5.2 Dashboard

Use the Dashboard to gain a quick overview of your network devices, important system events, and server disk space utilization. The Dashboard displays the following widgets:

- 1) Device Summary
- 2) Daily Events

- 3) Disk Space Utilization
- 4) Events
- 5) SNMP Trap Msg
- 6) Syslog Message
- 7) Event List

Device Summary

The Device Summary table displays the quantity of Online/Offline devices in the Network:

Device Summary	
Online	Offline
0	0

Figure 5.3 Device Summary

Daily Events

The Daily Events table displays the daily number of events in different severities:

Warning	Critical
0	15
	Warning 0

Figure 5.4 Daily Events

I able	5. I Event Severit	ly lable	
Event	Critical	Warning	Information
Cold Start	√		
Warm Start	\checkmark		
Port Link Up			√
Port Link Down	√		
Authentication failure		\checkmark	
Power Status: OK			√
Power Status: Fault	\checkmark		

Table 5.1 Event Severity Table

Disk Space Utilization

The Disk Space Utilization widget displays information about storage capacity available on the NMU server computer.

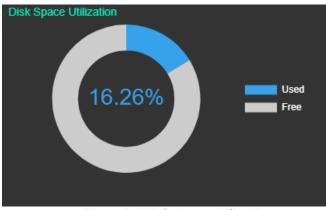


Figure 5.5 Disk Space Utilization

Events

The Events widget displays the number of events issued for your network, and the day on which the events occurred. You can perform the following actions on this widget:

- To view the number of events issued at a site on a specific date, hover over a bar in the widget chart.
- To view additional details about the event on the All Events screen, click a bar on the widget chart.
- To refresh widget data, click the Refresh (



Figure 5.6 Events

SNMP Trap Msg

The SNMP Trap Message widget displays the number of SNMP Trap messages issued for your network, and the date on which the events occurred. You can perform the following actions on this widget:

- To view the number of events issued at a site on a specific date, hover over a bar in the widget chart.
- To view additional details about the event on the All Events screen, click a bar on the widget chart.
- To refresh widget data, click the Refresh (^(C)) button on the upper right corner.

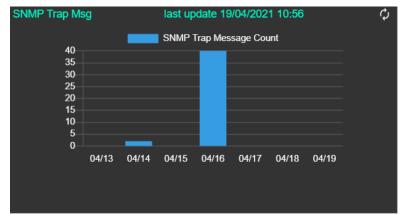


Figure 5.7 SNMP Trap Msg

Syslog Message

The Syslog Message widget displays the number of Syslog messages issued for your network, and the date on which the events occurred. You can perform the following actions on this widget:

- To view the number of events issued at a site on a specific date, hover over a bar in the widget chart.
- To view additional details about the event on the All Events screen, click a bar on the widget chart.
- To refresh widget data, click the Refresh (^(C)) button on the upper right corner.



Figure 5.8 Syslog Message

Event List

The Event List widget displays the latest 30 event messages issued for your network, and the date on which the events occurred. You can view the below event details on this widget:

- •IP/
- Model Name
- Event Message

Date & Time

Severity

Event List		
EHG7504-2SFP		2021-04-16 19:24:35
192.168.12.71		
	Warm Start	
EHG7504-2SFP		2021-04-16 19:24:35
192.168.12.71		
	Port Link Up	
EHG7504-2SFP		2021-04-16 19:24:35
192.168.12.71		
	Port Link Up	
EHG7504-2SFP		2021-04-16 16:19:17
192.168.12.71		
	Port Link Up	
EHG7504-2SFP		2021-04-16 16:19:15
192.168.12.71		
	Port Link Down	
EHG7504-2SFP		2021-04-16 16:18:57
192.168.12.71		
	Port Link Up	
EHG7504-2SFP		2021-04-16 16:18:54
192.168.12.71		
	Port Link Down	

Figure 5.9 Event List

5.2 Device List

The Device List (Magnifier icon) on the Side Vertical Menu consists of:

1) a device table for each device group's working space and

2) a top horizontal icon bar.

In this section, we will only describe the first part. Details of the top horizontal icon bar will be explained in Chapter 6.

In the Side Vertical Menu → **Device List**, connected devices are listed according to its group. Any devices that have not been added to any group will be listed in the unGrouped section, as shown in below. As described in Section 3, the list of found device(s) is displayed as a table with the following columns: **Online**, **Device Type**, **Model**, **IP Address**, **MAC Address**, **Host Name**, **Kernel**, **Ap**, and **Access**. When users click on a column title, the devices are sorted according to values in that column.

				D ₁	\$ 8		6 (Ð	₹ <	¢	>
											9
^						evices	ped (1 d	nGrou	u		۹
Q Search X											
Ap Access	Kernel Ap	Hostname	MAC Address	IP Address	Model	e	Device Ty	nline	C		×
	Kernel	Hostname	MAC Address 00:60:E9:88:88:88	IP Address 192.168.6.179	Model SE5404	e	Device Ty Basic	line			

Figure 5.10 List of Connected Devices in Side Vertical Menu → Device List

The description of each field in the Side Menu \rightarrow Device List is shown in Table 5.2 below.

Table 5.2 Description of each field in the Side Menu \rightarrow Device List

Field Name	Description
Online	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 device
IP Address	IP Address of the 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 (\checkmark) or not (\asymp). Users have
	to create a group and add the device to that group first to view it as accessible.

5.3 Add New Group

As mentioned in Chapter 3, a device must belong in a group before a user can access it. To create/add a new group, click on the **Add New Group** icon on the horizontal icon bar. A new small box will appear for entering a group name, as shown in below. After entering the group name, click on the **APPLY** button.

🔝 Atop NMU File View Help		- 🗆 X
ne new nep	< ¢ 7 < 0 6 3 5 8	Group View admin A
⑦ Dashboard	Enter a name. Add New Group	
Q Device List	EHG7xxx (3 devices)	~
Event	= unGrouped (3 devices)	~
ペ Topology		
우 Users		
Device con		

Figure 5.11 Click Add New Group Icon in the Top Horizontal Icon Bar

Once the new group is successfully created, a notification window will appear with a success message, as shown in below.

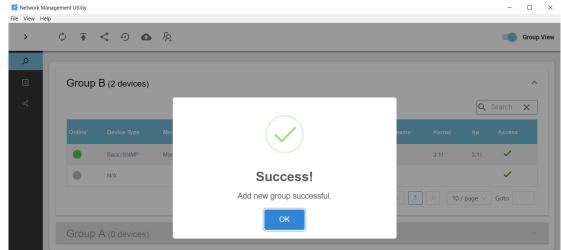


Figure 5.12 Success Window after Successfully Adding a New Group

5.4 Group View (Toggle Icon)

On the upper right corner of the screen, there is a toggle menu ^{Group View}, called **Group View**. If this toggle is enabled, the middle working space will display active devices in group view. If disabled, all connected devices will be displayed in the same working area without classifying into groups. Figure 5.13 (a) shows lists of devices by group, while Figure 5.13 (b) shows a list of devices without grouping. Connected devices that are not yet added to a group will be listed in an **unGrouped** section.

> ¢	5 ₹ •	< 🖸 🗅	£9.							Grou
Q	Group A	(1 devices)								^
									Q Search	×
~	Online									
	•	Basic		00:60:E9:19:5	3:8E				~	
						1-1 of 1 items	: 1 >	10 / page	Goto	
	Group E	(2 devices)								^
									Q Search	×
	Online	Device Type	Model	IP Address	MAC Address	Hostname	Kernel	Ap	Access	
	٠	Basic/SNMP	Managed Switch, EHG7508-8PoE	10.0.50.101	00:60:E9:19:53:8B		3.11	3.11	~	
	•	Basic			00:60:E9:19:53:8E				~	
						1-2 of 2 items	: 1 >	10 / page	∨ Goto	
	unGrou	ped (0 devices	3)							
lanagement Utility	,			(a)						_
Help										
¢ ī		9 🚯								
									C	\ Search
Online		се Туре	Model	IP Address	MAC Address	Hostname	Kerne	el	Ар	Access
	Basic				00:60:E9:19:53:8E					~
	Basic	SNMP	Managed Switch, EHG7508-8PoE	10.0.50.101	00:60:E9:19:53:8B		3.11		3.11	~
						1-2 of 2	tems < 1		10 / page	Goto

5.5	Edit groups		

In the Device List working space, right-click on a group box anywhere outside the device table to display the following menu: **Edit Group Name**, **Remove Group**, and **Edit Member**, as shown in 錯誤! 找不到參照來源。. Note that the unGrouped section does not have this menu available.

ork Management U	Jtility								-	
Help										
	< ¢	Þ ∓ ≺	••	<i>F</i> 2						Gı
evice List										
vent Log	Group	A (1 devices)								
్ గారాంగించి								Q	Search	×
	Online	Device Type	Model	IP Address	MAC Address	Hostname	Kernel	Ар	Access	
	٠	Basic	105202	10.0.50.100	00:60:E9:21:85:3E	System	1.18	IO5202 V1.18	~	
						1-1 of 1 items	< 1 >	10 / page 🗸	Goto	
					🖍 Edit Group N	lame				
					Remove Gro	up				

Figure 5.14 Right Click on Any Space in a Group Box but Outside of the Device Table

5.5.1 Edit Group Name

Clicking on **Edit Group Name** launches a small new window as shown in below. Enter the new group name and then click **APPLY** button to implement.

nter a new name.	
Group Name	APPLY

Figure 5.15 Enter a New Name Window

5.5.2 Remove Group

Clicking on **Remove Group** will cause a small new window to pop up. Click on **OK** to confirm removal, as shown in below.

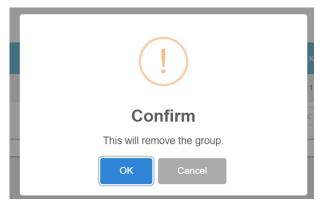


Figure 5.16 Confirmation Dialog for Removing a Group

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

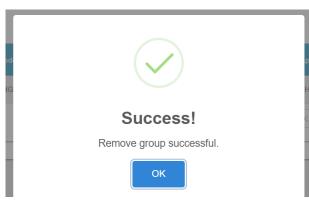


Figure 5.17 Confirmation on Sucessfully Removing a Group

5.5.3 Edit Member

Clicking on **Edit Member** will launch a new **Group** *x* **- Edit Group Member** window. Select devices to add in the **Group** *x* (Group A in this example), and click the **> Add Member** button to move devices from the left sub-window into the right sub-window, as shown in below. Note here that each device can be added into more than one group.

🗹 1/1 item	Non Member		0 item	Mem
Search	م		Search	
✓ EHG7508		> Add Member	Not Found	

Figure 5.18 Add Member to the Selected Group

To remove any devices from the selected group (**Group A** in this example), click on devices to be removed, and then click the **< Remove Member** button to move devices from the right sub-window into the left sub-window, as shown in below.

Q_ Group A - Ed	it Group Member				×
0 item	Non Member		✓ 1/1 item		Member
Search	م		Search		Q
			🗹 EHG7508	236.67.1.0	00:60:E9:19:53:8B
Not	Found	 > Add Member < Remove Member 			
					APP

Figure 5.19 Remove Member from the Selected Group

After clicking the **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** will appear on the bottom right corner, as shown in below

	\$ ₽	< 🖸 🌢) <i>P</i> ₂							Group
)										
	Group	A (1 devices)							^
0								Q	Search	×
	Online	Device Type	Model	IP Address	MAC Address	Hostname	Kernel	Ap	Access	
		Basic	EHG7508	236.67.1.0	00:60:E9:19:53:8B	EHG7508	3.11	EHG7508-8PoE Application: V3.11	~	
							1-1 of 1 items	Device online		÷

Figure 5.20 Devices Added/Removed To/From Group A

5.6 Perform actions on devices assigned to groups

Right click on a device in the device table of any group, and a drop-down menu will appear as shown in below: **Open Web, Telnet, Beep, Reboot, Network Setting, Device Advanced Setting, Port Information**, and **Backup and Restore**. Note that if a connected device does not belong in a group, this right click feature will not function.

etwork Management	Utility								- 0
/iew Help									
	< (Þ ∓ ≺ ∙	•	F2.					Grou
Device List									
Event Log	Group	A (1 devices)							,
Тороlоду		(, , , , , , , , , , , , , , , , , , ,							
lepology								Q	Search 🗙
	Online			IP Address	MAC Address				
	•	Basic	105202	10.0.50.100	00:60:E9:21:85:3E	System	1.18	IO5202 V1.18	~
				<u> </u>	Web 🕨	1-1 of 1 items	< 1 >	10 / page ∨	Goto
				T Telne					
	upCro	uped (0 devices		Beep					
	ungion	uped (0 devices	5)		ork Setting				
					e Advanced Setting				
				Rort I	nformation				
				Back	up And Restore				

Figure 5.21 Drop-down Menu when Right Click on the Device List in any Group

5.6.1 Open Web

Selecting **Open Web** \rightarrow **Open on OS browser** will initiate configuration of the device through a web browser, as shown in below. User will be prompted to log in, as shown in below. The default username and password are "admin" and "default".

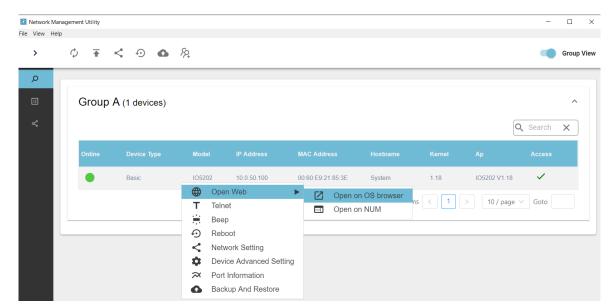


Figure 5.22 Device List \rightarrow Right Clicka Device in Any Group \rightarrow Open Web \rightarrow Open on OS browser

E ← □ 10.0.50.100 × + ~	
\leftrightarrow \rightarrow X \textcircled{O} \textcircled{O} 10.0.50.100/	
	Windows Security X
	Microsoft Edge
	The server 10.0.50.100 is asking for your username and password.
	That server also reports: "GoAhead".
	Warning: Your username and password will be sent using basic authentication on a connection that isn't secure.
	admin
	admin
	••••••
	OK Cancel

Figure 5.23 Log In to Web-based Configuration

Selecting **Open Web** \rightarrow **Open on NMU** will initiate web configuration of the device through NMU, as shown in below. Click the grey circled cross \cong on the upper right corner to close the web configuration and return to the Device List working space.

🔯 Network Management	Utility	– – ×
File View Help		
$\leftrightarrow \rightarrow c$	₩ 🗹 http://10.0.50.1	×
	p	
+ Basic + Administration	Basic System Information-	Reat

Administration		
Forwarding	Model name	EHG7508-8PoE
+ Port	Device Description	Managed Switch, EHG7508-8PoE
 Power Over Ethernet Trunking 	MAC address	00:60:E9:19:53:8B
+ Unicast/Multicast MAC	Application Version	3.11
+ GARP/GVRP/GMRP	Kernel Version	3.11
+ IP Multicast	Image Build Info.	root@bs #1 SMP Tue Jul 26 13:41:07 CST 2016
+ SNMP + Spanning Tree	Memory	108780K used, 146900K free, 0K buff, 43944K cached
+ VLAN	Board Temperature	45.75 Centigrade
+ Security		
+ ERPS/Ring		
+ LLDP		
+ PROFINET		
+ EtherNet/IP		
+ IP Routing		
 Client IP Setting 		



Figure 5.24 Right Click on the Device List in any Group and Select Open Web \rightarrow Open on NUM

5.6.2 Telnet

Selecting Telnet will initiate Telnet program.

5.6.3 Beep

Selecting **Beep** will initialize the Beep confirm window, as shown in below. Click on the OK button and the device will beep twice.

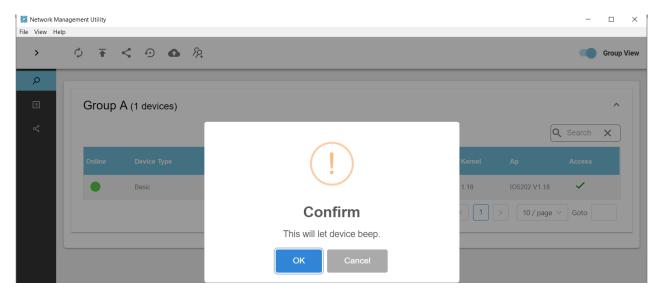


Figure 5.25 Select Beep to Launch the Beep Confirm Window

5.6.4 Reboot

Selecting **Reboot** will initialize the Reboot confirm window, as shown in below. Click on the OK button to reboot the device. After the device finishes rebooting, a reboot success window will appear, as shown in below.

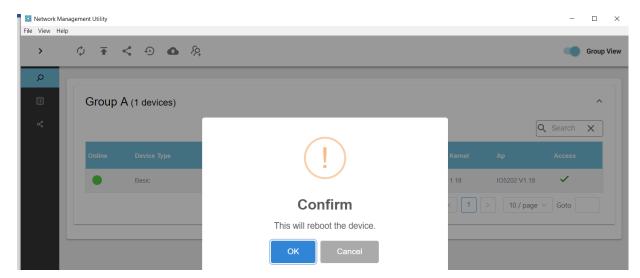


Figure 5.26 Select Reboot to Launch Restart Confirm Window

e View Help		< -> -> -> -> -> -> -> -> -> -> -> -> ->		Grou
۶ ر	·• •			
	Group	A (1 devices)		^
~				Q Search X
	Online	Device Type	\checkmark	Kernel Ap Access
		Basic		1.18 IO5202 V1.18 🗸
			Success!	< 1 > 10 / page < Goto
- 1			Device reboot success.	
			ок	

Figure 5.27 Notification of Reboot Success Window

5.6.5 Network Settings

Once **Network Settings** is selected, NMU will **Precheck Device SNMP Feature First before Specific Operations** and then initialize the Network Settings window, as shown in below. The display here is a summary of network settings, which is a bit different from the full settings that users can configure through **Network Settings** in the **Top Horizontal Icon Bar**.

Network Managemer File View Help	nt Utility						- 0 X
	< ¢	୬ ∓ < ଡ	A 6				Network Setting
Device List Event Log Topology	Group	A (1 devices)					Managed Switch, EHG7508- 8PoE(00:60:E9:19:53:8B) DHCP
	Online					Hostname	Netmask
		Basic/SNMP	Managed Switch, EHG7508-8PoE	10.0.50.1	00.60.E9:19.53.88	EHG7508	Colescience Gateway 10.0.0.254 Preferred DNS server 0.0.0 Alternate DNS server 0.0.0.0 Hostname EHG7508 Image: Please make sure device username password setting and SNMP community is correct.
							Cancel Apply

Figure 5.28 Network Settings Window

Enable DHCP (Dynamic Host Configuration Protocol) in the first option to allow the device to retrieve its network settings 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 selected, the other settings within this Network Settings window will be disabled, except Hostname. If the DHCP option is not selected, the IP Address, Subnet Mask, Default Gateway, and the Preferred DNS and Alternate DNS addresses can be modified. Fill in these settings for LAN interface of the device. After completing all IP network information on this web page, click on the Apply button after making sure that the device username, password and SNMP community settings are correct. The Network Settings window will close and settings will display in the Device List window, as shown in the figure below.

Group	A (1 devices)				🐼 Set	network sett	ngs suco	cess!
							Q	Search 🗙
Online	Device Type	Model	IP Address	MAC Address	Hostname	Kernel	Ар	Access
	Basic/SNMP	Managed Switch, EHG7508-8PoE	10.0.50.1	00:60:E9:19:53:8B	EHG7508	3.11	3.11	~

Figure 5.29 Notification of Successful Settings in the Device List Window

5.6.6 Device Advanced Settings

Once **Device Advanced Settings** is selected, NMU will **Precheck Device SNMP Feature First before Specific Operations** and then initialize the Advanced Settings window, as shown in below

I Network M File View ⊢	Management Utility							- 0	×
>		< 🔈 🛆	<i>F</i> 2 ₄				Advance Setting		
م :::: چ	Group	A (1 devices)					IO5202(00:60:E9:21:85:3E) Authentication Alarm General		
	Online	Device Type	Model	IP Address	MAC Address	Hostname	Usernameadmin		
		Basic	IO5202	10.0.50.100	00:60:E9:21:85:3E	System	Password	Ø	•
						1-1 of 1 items	SNMP		
							SNMP Version v2c v Read Community public Write Community private		
							C	Cancel	Apply

Figure 5.30 Authentication Tab in Advanced Settings Window

The description of each field in the Advanced Setting-Authentication Tab is shown in Table 5.3 below.

Sections within Advance Setting	Field Name	Description	Default Value
General	Username	Username to access the device	admin
	Password	Password to access the device	admin123
SNMP	SNMP version	Version of SNMP available for the device (v1 or v2c)	v2c
	Read community	The community string to access device statistics (concept similar to a password)	public
	Write community	The community string to config device (concept similar to a password)	private

The Alarm tab in Device List \rightarrow Advanced Settings is displayed as below.

🔯 Network Management Utility

< Ç		- '/+				Advance Se		
						Managed Switch, 8PoE(00:60:E9:19		
Group	A (1 devices)					Authentication	Alarm	
						Port		
Online					Hostname	Name	LinkUp	LinkDow
•	Basic/SNMP	Managed Switch, EHG7508-8PoE	10.0.50.1	00:60:E9:19:53:8B	EHG7508	Port1		
					1-1 of 1 items	Port2		
						Port3		
						Port4		
						Port5	~	~
						Port6	~	~
						Port7		
						Port8		
						Power		
						Name	On	Off
						Power1	~	~

Figure 5.31 Right Click on Device List \rightarrow Advanced Settings \rightarrow Alarm Tab

Check the **LinkUp** and **LinkDown** boxes for any port to receive its notifications. Similarly, check the **On** and **Off** boxes for any power source to get notifications on its status change. Below are examples of notifications which will appear individually at the bottom right corner when a change in the chosen port or power source occurs.

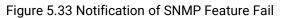
 Port6 Link Up Managed Switch, EHG7508-8PoE IP Address: 10.0.50.1 MAC Address: 00:60:E9:19:53:8B 	→ Port5 Link Down Managed Switch, EHG7508-8PoE IP Address: 10.0.50.1 MAC Address: 00:60:E9:19:53:8B	Power1 On Managed Switch, EHG7508-8PoE IP Address: 10.0.50.1 MAC Address: 00:60:E9:19:53:88
--	--	--

Figure 5.32 Alarm Notifications at the Bottom Right Corner (Appearing One at a Time)

5.6.7 Port Information

Once **Port Information** is selected, NMU will **Precheck Device SNMP Feature First before Specific Operations** and then initialize the **Port Information** window, as shown in below. If the SNMP feature fails, enable SNMP through the NMU or web configuration (refer to Section 4.1.5 for detailed settings).

Network Mar File View He	nagement Utility Ip							- 0 ×
>	¢ ∓ •	< ত 🛆 প্রি						Group View
Q					_			
	Group A	(1 devices)	🚫 Check	SNMP feature fail.				^
~			Please	check SNMP of this device is en				Q Search X
					ОК			
								~
						1-1 of 1 items	1 > 10/p	



The Port Information screen shows device information, graphical real-time traffic, and port status.

vork Managemen iew Help	it Utility	-	-			_	-						
X Port	Informa	ition											
Device Infr	Mode EH7520-40 IP Ar 192.10 MAC 2 00:60:E9 Ke 5	ddress 58.5.184 Address 0:18:3B:B mel .30 AP .30		Port1 Port2 Port3 Port4 Port5 Port6	ime Traffic				i n				
	Pow	ver1 % ver2 ¥			0	63	55 48	41	34	31 28	21	14	7 cum
port Statu	portStatus	Speed	Port Mode	inOctets	inErrors	inUcastPkts	inMulticastPkts	inBroadcastPkts	outOctets	outErrors	outUcastPicts	outMultic	enableStatus
Porti	up	100	Copper	0	0	o	0	0	5974965	0	o	0	
Port2	dawn	0	Copper	0	0	0	0	0	0	0	o	0	
Port3	down	0	Copper	0	0	0	0	0	0	٥	Ð	0	
Port4	down	0	Copper	0	0	0	0	0	0	0	0	0	
Port5	down	0	Copper	0	0	0	0	0	0	0	0	0	



5.6.8 Backup and Restore

Selecting **Backup and Restore** after right clicking on the Device List will initialize the **Backup and Restore** window. Back-up the device configuration by clicking on **SELECT FOLDER** button to select the destination folder, entering a file name, and then clicking on the **BACKUP** button. Make sure that your selected NIC has a real external IP address by clicking on File \rightarrow Preferences \rightarrow General \rightarrow Network Interface Card. If the backup process is successful, a success notification will appear, as shown in below.

00:60:E9:19:53:8B - Backup and Restore	Ø	Backu	ıp configuratio	n success.	>
er toren fanst i Abbe ara froegin til ograms triettionet, man agement, anny toren besters i spoor	CT FOLDER		Ap 3.11	Q Search Access	×
File Name: EHG750x BACKUP Restore			> 10 / page	e 🗸 Goto 🗌	
File:	ELECT FILE				
If Backup or Restore fail, please check you select NIC with a real external IP. (File → Preferences → General → Network Int Card)	erface				

Figure 5.35 Backup View in Backup and Restore

To restore a configuration, select a previously saved configuration filename and then click on the **RESTORE** button. Again, ensure that your selected NIC has a real external IP address by clicking on File \rightarrow Preferences \rightarrow General \rightarrow Network Interface Card. Here, a new small window will be launched. Confirm to restore the configuration by clicking on the **OK** button, as shown in

00:60:E9:19:53:8B - Backup and Restore	×
Backup	
Path:	
C:\Users\user\AppData\Local\Programs\network-management-utility\backupConfigs\0C	SELECT FOLDER
ile Name:	
IIIE: C\Users\user\AppData\Local\Programs\network-management-utility\backupConfigs\0066	DI SELECT FILE
RESTORE	

Figure 5.36 Restore View in Backup and Restore

?	Do you want to restore the	nis device?	
		Cancel	ОК

Figure 5.37 Confirmation Window for the Restore Function

.

If the restoration process is successful, a success notification will appear, as shown in below. The device will then restart automatically, with a few beeps indicating its restart. Notifications will appear on the bottom right corner, alerting of the device becoming offline and then online again.

00:60:E9:19:53:8B - Backup and Restore	Ø	× Restore co	onfiguration s	success.	>
Backup			Q	Search	×
Path:					
C:\Users\user\AppData\Local\Programs\network-management-utility\backupConfigs\0C	SELECT	FOLDER	Ар		
File Name:					
			3.11	\checkmark	
BACKUP			10 / page 🚿	Goto	
Restore					
File:					
$\label{eq:cluser} C\Local\Programs\network-management-utility\backup\Configs\00601$	SELE	CT FILE			
RESTORE					
If Backup or Restore fail, please check you select NIC with a real external IP. (File → Prefer	ences →	General			

Figure 5.38 Configuration Restore Success Notification

5.7 Event Log

Clicking on Event Log within the Side Vertical Menu will present three tabs: Event, SNMP trap, and Syslog.

5.7.1 Event Tab

The **Event** tab displays history events and can be sorted by **Time** or **SOURCE IP** address. Events can be cleared by clicking on the **CLEAR** button. Historic events are listed in a table which consists of the following columns: **Time**, **Source IP**, **Mode**, **MAC Address**, and **Message**. The **Time** column indicates the timestamp when the event occurred. **Source IP**, **Model**, and **MAC Address** list the IP address, model, and MAC address of the device respectively. **Message** displays whether the device is online or offline at time the event occurred.

View Hel	lp					
>						
Q						
_	Event SNMP trap S	yslog				
3	HISTORY					
\$	Time 🌲	Source IP 🌲	Model	MAC Address	Message	
	2020-05-31 10:56:05	10.0.50.100	IO5202	00:60:E9:21:85:3E	online	
	2020-05-31 10:56:04	10.0.50.100	105202	00:60:E9:21:85:3E	offline	
	2020-05-31 10:55:24	10.0.50.100	IO5202	00:60:E9:21:85:3E	online	
	2020-05-31 10:55:22	10.0.50.100	105202	00:60:E9:21:85:3E	offline	

Figure 5.39 Historic Events in the Side Vertical Menu \rightarrow Event Log \rightarrow Event Tab

When the **HISTORY** button is clicked, a new window launches, as shown in below. Filter out unwanted events by entering a MAC Address and a Date/Time range of events to **view**. Make sure that the entered MAC address contains no spaces. Click the **REFRESH** button to see filtered events only.

	End Time 🖽	REFRESH		
Source IP 🛓	Model	MAC Address	Message	
236.67.1.0	EHG7508	00:60:E9:19:53:8B	offline	
236.67.1.0	EHG7508	00:60:E9:19:53:8B	online	
236.67.1.0	EHG7508	00:60:E9:19:53:8B	offline	
	236.67.1.0 236.67.1.0	236.67.1.0 EHG7508 236.67.1.0 EHG7508	236.67.1.0 EHG7508 00:60:E9:19:53:8B 236.67.1.0 EHG7508 00:60:E9:19:53:8B	236.67.1.0 EHG7508 00:60:E9:19:53:8B offline 236.67.1.0 EHG7508 00:60:E9:19:53:8B online

Figure 5.40 Historic Events inside the Side Vertical Menu \rightarrow Event Log \rightarrow Event Tab \rightarrow HISTORY Button

5.7.2 SNMP Trap Tab

Figure 5.41 shows the **SNMP Trap** tab. Click on the **HISTORY** button to see SNMP Trap history, and clear historic events by clicking on the **CLEAR** button.

View Help	р					
>						
م ⊒	Event SNMP trap Sys	log				
~						

Figure 5.41 Historic Events in the Side Vertical Menu \rightarrow Event Log \rightarrow SNMP Trap Tab

The SNMP Trap history is listed in a table which consists of the following columns: **Time, Source IP, Up Time, GT, ST, Version, Enterprise, Community, and Description.** The details of each field are described in Table 5.4 below.

Table 5.4 Description of Each Field in the Side Vertical Menu \rightarrow Event Log \rightarrow SNMP 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
Description	The event description of SNMP packet

When the **HISTORY** button is clicked, a new window launches as shown in below. Filter out unwanted SNMP Trap events by entering a **SOURCE IP** Address and a Date/Time range of events to **view**. Make sure that the entered MAC address contains no spaces. Click the **REFRESH** button to see filtered events only.

10.0.50.101	2020-	05-31	11:49	9				~ 2020-	05-31	11:49								
	« (N	1ay 20	20					J	un 202	20		> >>				
Time 🍦	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	<u>+</u>	Enterprise	Community	
		27				1	2	31	1	2	3	4	5	6	*	Litterprise	Community	-
	3	4	5	6	7	8	9	7	8	9	10	11	12	13				
	10	11	12	13	14	15	16	14	15	16	17	18	19	20				
_	17	18	19	20	21	22	23	21	22	23	24	25	26	27			_	
	24	25	26	27	28	29	30	28	29	30	1	2		4				
	31	1			4					7			10	11				

(a)

10.0.50.101	2020-05-31 11:	49	~ 2020-05-31 11:4	19			
	N	lay 31 2020	N	lay 31 2020			
	11	49	11	49			
Time 🍦	12	50	12	50	*	Enterprise	Community
	13	51	13	51			
	14	52	14	52			
	15	53	15	53			
	16	54	16	54			
	17	55	17	55			
	18	56	18	56			
	19	57	19	57			
				F.0.			

Figure 5.42 Date (a) and Time (b) Selection in the SNMP Trap Tab \rightarrow HISTORY window

Figure 5.43 shows the **Syslog** tab. Click on the **HISTORY** button to see Syslog event history, and clear historic events by clicking on the **CLEAR** button.

🔛 Network Man	agement Utility							-	×
File View Help									
>									
Q	Event SNMP trap Syst	og							
	HISTORY								
Ŭ	Time 🍦	Source IP 🍦	Up Time 🌲	Facility 🌲	Severity 🌲	Tag	Message		*
				No data					

Figure 5.43 Historic Events inside the Side Vertical Menu \rightarrow Event Log \rightarrow Syslog Tab

The description of each field in the Syslog table is shown in Table 5.5 below.

Table 5.5 Description of Each Field in the Side Vertical Menu \rightarrow Event Log \rightarrow Syslog Tab

Field in	Description
Syslog Tab	
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, or security/authorization
Severity	Critical level of the information, e.g., emergency or alert
Tag	Name of the program or process that generated the message
Message	Details of the syslog information

When the **HISTORY** button is clicked, a new window launches as shown in below. Filter out unwanted Syslog events by entering a **SOURCE IP** Address and a Date/Time range of events to **view**. Make sure that the entered MAC address contains no spaces. Click the **REFRESH** button to see filtered events only.

yslog History							
Source IP	Start Time ~	End Time	THE REFRESH				
Time 🌲	Source IP 🛔	Up Time 🍦	Facility 🌲	Severity 🌲	Tag	Message	

Figure 5.44 Historic Events in the Side Vertical Menu \rightarrow Event Log \rightarrow Syslog Tab \rightarrow HISTORY Button

5.8 Topology

There are two parts within the Vertical Menu \rightarrow Topology section: 1) Drawing Space, and 2) Top bar.

5.8.1 Drawing Space

Click on the icon of a device (e.g., EHG7608 in this picture) to display the device properties, as shown in below. If the device icon is in grey colour and displays a cross mark ⁽²⁾, the device is not yet available for accessing and settings reconfiguration. Check the Device List to see if the device's SNMP is enabled (refer to Section 4.1.5 if not). If the problem persists, enable the SNMP function for the device via web interface instead. Follow the instructions in Section 5.6.1 to initialize a web configuration page. Note that when SNMP is enabled, the device type changes from Basic to Basic/SNMP.

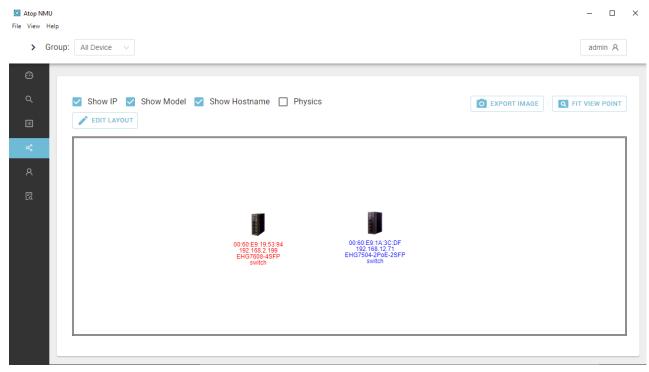


Figure 5.45 Side Vertical Menus → Topology (SNMP Disabled)

After SNMP is enabled, the device's icon becomes green-blue in colour and the text underneath becomes blue, as shown in below. Check the boxes for **Show IP**, **Show Model**, and **Show Hostname** to display text information on IP address, device model name and device hostname respectively, underneath the device's icon. Clicking the Edit Layout button will call up a new set of buttons: Add Node, Add Link, Save, and Cancel, as shown in Figure 5.46.

🔛 Atop N File View			- 0	×
>	Group:	All Device V	admin R	
Ø				
Q		Show IP 🔽 Show Model 🔽 Show Hostname 🗋 Physics	VIEW POINT	
		ADD NODE ADD LINK SAVE CANCEL		
~				
8				
Ē				
		00:60:E9:19:53:94 00:60:E9:1A:3C:DF 192:168:12:199 192:168:12:71 EHG7608:45FP EHG7504:2POE:25FP switch switch		
		EHG/608-45FP End/308-2702-37F switch switch		
				_

Figure 5.47 Working Space for Drawing a Topology: Side Menus \rightarrow Topology (SNMP Enabled)

When the ADD NODE or ADD LINK button is clicked, a new small window is launched, as shown in below. To add a new node, click anywhere on the working space, and enter the MAC address for the new node or check the Virtual Node box. To add a link, click on the two nodes that the new link will connect. Click OK to implement new node or new link addition.

Add Node X	Add Edge ×
Virtual Node 00:60:E9:19:53:8E Group A × Group A ✓	From 00:60:E9:19:53:8E Port 1 To 00:60:E9:19:53:8B Port 1 Cancel OK
(a)	(b)

Figure 5.48 Drawing a Topology in the Side Menu \rightarrow Topology section: (a) ADD NODE and (b) ADD LINK

The color coding used in the drawing is:

- Blue: User defined, matched with actual topology.
- Black: Real edge and user without defined.
- Dotted Line: User defined but does not exist.
- Red-X: Device offline.

Checking the Physics option to illustrate moving simulation so that user can see nodes and edges more clearly. This is shown in below.

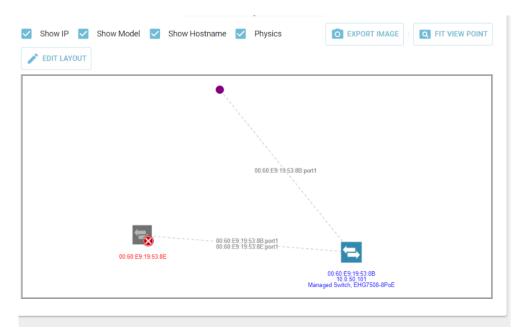


Figure 5.49 Topology Drawing Example

When any node or link on the topology's working space is clicked, a DELETE button will appear, as show in below. Click on the button to delete the node or link. Click on the CANCEL button to return to the EDIT LAYOUT Button.

Show IP 🔽	Show Model 🔽	Show Hostname 🔽	Physics	
• ADD NODE	🖍 ADD LINK	DELETE		
	00:60:E9:19:53:8E	00.60:E9: 00:60:E9:	19:53:8B:port1 19:53:8E:port1	00:60:E9:19:53:8B 10.0.50.101 Managed Switch, EHG7508-8PoE

Figure 5.50 DELETE Button insider the Side Vertical Menu → Topology

If a new device is added in any group using a MAC address, its details are shown 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 the below example, the new device is added using a MAC address in the drawing topology in Group A. Thus, the new device can be seen in Group A in the Device List, as shown in Figure 5.51 below.

anagement Ut Ip	ility							-	
	< (⊅ ∓ <	• 🚯 🎉						Group
List									
Log	Group	A (2 devices)							^
gy							Q :	Search	×
	Online								
		Basic/SNMP	Managed Switch, EHG7508-8PoE	10.0.50.101	00:60:E9:19:53:8B	3.11	3.11	~	
		Basic			00:60:E9:19:53:8E			~	

Figure 5.51 Device List After Adding a New Device using a MAC Address in Topology

When leaving the page after adding nodes and/or links, click on the Save button to save the changes. The drawing topology will disappear if left without first saving. If topology is successfully saved, a notification will appear on the top right corner, as shown in Figure 5.52.



Figure 5.52 Notification of Successfully Saving Topology Layout

You can also click on the EXPORT IMAGE button to save the topology. Select the destination folder to save the image file, as shown in Figure 5.53.

w Help							1	
	<	blob:file:///76a281b2-	ad0a-4608-abda-cad7a5377dc9			×		
	`	$\leftarrow \rightarrow \checkmark \clubsuit \checkmark \clubsuit \checkmark \clubsuit \checkmark \clubsuit \checkmark \clubsuit \checkmark \clubsuit \bullet \bullet \bullet \bullet \bullet \bullet \bullet \bullet \bullet$	This PC > Downloads >	~ Ü	Search Downloads	٩,		
Device List		Organise - New fo	lder		8== ·	• (7)		
		✓ 💄 This PC	^ Name	Date modified	Туре	Size ^		
event Log	• 0	> 🗊 3D Objects	✓ Today (1)			- 1	EXPORT IMAGE	
	• 0	> 📃 Desktop	b4077d2e-f3ff-4674-973d-63ccc6d786ec	6/6/2020 3:15 PM	TMP File	6		
Topology		> 🖹 Documents	✓ Earlier this week (3)					
		> 👆 Downloads	i 1554036466	6/4/2020 4:37 PM	PDF File	2,0		
		> 📜 ESTGitUp_assets	ComputeRmLtf	6/2/2020 1:59 PM	Microsoft Excel 97			
		> 🎝 Music	EHG7508-8PoE.bin	6/2/2020 10:26 AM	BIN File	1		
		> 📧 Pictures	V Last week (23)					
		> 🛃 Videos	SecureEndpointManager (14)	5/29/2020 5:26 PM	Application	2,9		
		> 💺 Local Disk (C:)	SecureEndpointManager (13)	5/29/2020 5:19 PM	Application	2,9 ¥		
	De	File name: all	200606151517			~		
IF	P Addre	Save as type: All	Files (*.*)			~		
N	MAC Ac							
A	P	∧ Hide Folders			Save Ca	incel		
)evice 1	n <u>5</u>						
	Bateway							
	lostnam)HCP	e false						
	Cernel					00:	60:E9:19:53:8B 10.0.50.101	
	lodel				1		Switch, EHG7508-8P	οE
	letmask		-					

Figure 5.53 Export Image function in the Side Vertical Menu \rightarrow Topology

The exported image file format is .svg, and can be viewed on an web browser.

5.8.1 Top Bar

Menu items in the Top Bar of the Topology icon in the Side Vertical Menu consists of the following:

- All Devices
- Group x
- ...

Click on a group to create the topology and save it for each group, as shown in Figure 5.54.

View Help								
_	< Grou	All Device	^					
ク Device List	Devi	Group A						
Event Log		ce List 19:53:8B 236.67	Show IP	Show Model	Show Hostname	Physics	EXPORT IMAGE	IEW POINT
🛠 Topology			P EDIT LAYOU	т				
	✓ Device F	Properties						
				•				
							00:60:E9:19:53:8B	

Figure 5.54 Group Selection Menu in the Side Vertical Menu \rightarrow Topology

5.9 Account Management

View Help	<					admin A
Dashboard	Add User					
Device List	* Username		* Password		* Role	
Event	Atop			Ø	Please select role	~
Topology	_				None Admin	
Users	User List				Supervisor	
Device con	Username	User Type	Created By	Date	Operator	2011
	admin	Admin	atop	4/9/2021		*
	aaa	Admin	admin	4/19/2021		2 🛈
						< 1 >

Create new accounts in the Users section with the appropriate username and password, and select the suitable user role for the account.

Figure 5.55 Creating New Account

Table 5.6 Permissions of Different Roles

No.	Function	Role		
		Admin	Supervisor	Operator
1	Add users	W/R	W/R	R
2	Edit and delete users	W/R	R	R
3	Firmware update	W/R	W/R	R
4	Network configuration	W/R	W/R	R
5	Reset to default	W/R	W/R	R
6	Backup and restore	W/R	W/R	R
7	Schedule backup	W/R	W/R	R
8	Syslog server configuration	W/R	W/R	R
9	Trap server configuration	W/R	W/R	R
10	Add new groups	W/R	W/R	R
11	Edit topology layout	W/R	W/R	R
	**W/R - Write and read permission **R - Read permission only			

🔯 Atop NMU File View Help	<								admin R	×
② Dashboard	Add User	-	_	_	_	-	-	-		É
Q Device List	* Username		Edit User		Х	* (Role			
Event			Old Password			Ø				
< Topology	User List		old password		ø				Save	
A Users			New Password new password		Ø					
🗟 Device con	Username	Ust	Select Role			ite		Action		
	admin	Adı	Admin	~		9/2021				
	Atop	Ор		Return	Submit	19/2021				
									< 1 >	

Edit existing accounts: Click the Edit/Delete icons to modify existing accounts as below.

Figure 5.56 Editing Existing Accounts

ø × admin A

5.10 **Device Config Comparison**

Files exported via Backup and Restore (refer to chapter 5.6.8) can be compared for differences in the Device Config Comparison section.

Select.txt files produced through the backup process. 🔛 Atop NMI

File View Help		- 0 ×
	<	admin A
② Dashboard	Device Config Comparison	
오. Device List	Choose File No file chosen Choose File No file chosen	
Event		
< Topology		
유 Users		
Device con		

Figure 5.57 Device Config Comparison

ile test2.txt # Private Technologies device command file # Private Technologies device command file : EHG7584_2PoF_25E # Model Name EHG7504-2PoE-2SFI # Model Name 4 - # MAC Address : 00:60:E9:1A:3C:DF 4 + # MAC Address : 99:60:E9:1A:3C:DF # App Version : 7.20 5 + # App Version 8.20 # Kernel Version : 7.20 6 + # Kernel Version : 8.20

nds that are

10 11

This file is generated by device and contains all CLI con

currently running. This file can also be fed to devices through upload # scheme to configure devices. The users can modify commands and paramete # to fit their requirements, the lines starting with '#' are ignored.

mands that are

NMU will highlight any differences between the two files as below.

This file is generated by device and contains all CLI con

Expand 383 lines ...

currently running. This file can also be fed to devices through upload # scheme to configure devices. The users can modify commands and paramete # to fit their requirements, the lines starting uith '#' are ignored.

Figure 5.58 Configuration Comparison

V1.5

6 Top Horizontal Icon Bar - Device List

Menu icons on the Top Horizontal Icon Bar consist of the following:

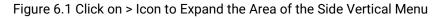
- 🕐 or 🔨 Icon
- Discovery
- Firmware Update
- Network Settings
- Reset to Default
- Backup and Restore
- Add new group
- Group View

6.1 > or < lcon

in Figure 6.2.

On the most left is an icon . Clicking it will expand the area of the **Side Vertical Menu** and show the name of each icon, as shown in Figure 6.1 below. To shrink the area of the **Side Vertical Menu**, click the icon as shown

>	¢ ∓	< 🖸 🗅	F2.					•	Gro
o o									
1	Group	B (1 devices)							
0								Q Search	×
	Online	Device Type	Model	IP Address	MAC Address	Hostname	Kernel	Ap Acces	15
	٠	Basic/SNMP	Managed Switch, EHG7508-8PoE	10.0.50.101	00:60:E9:19:53:8B		3.11	3.11 🗸	
					1-1 of 1 i	tems < 1	> 10	/ page \vee 🛛 Goto	



View Help	<	¢ ∓ <	0 0						Group
O Device List		· · · ·							
Event Log								Q	Search 🗙
\$ Topology	Online								
		Basic	105202	10.0.50.100	00:60:E9:21:85:3E	System	1.18	IO5202 V1.18	×

Figure 6.2 Click on < Icon to Shrink the Area of the Side Vertical Menu

6.2 Discovery

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

Network		nt Utility					- 🗆 X
File View I	Help						
>	φ	Ť	<	Ð	۵	£9.	Group View
Q							
							No Data
~							

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

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

File View	Management Utility		- 0 ×
File View	¢ 7 < 0 & &		Group View
Q	Discovery		
	Group A (2 devices)		~
~¢	unGrouped (0 devices)		~
		SNMP Scan	
		Scan Finish!	

Figure 6.4 SNMP Scan

When the scan finishes, connected devices will be displayed in the Device List, as shown in Figure 6.5. If these devices are not yet grouped together, they will be in the ungrouped section. If the device already belongs to a group, it will be in the device table of that group. Refer to Section 5.3 on how to add a new group and how to add devices into a group. Note that one device can be added to more than one group.

	< • • • 8	*						
Group	A (1 devices)							
Group	B (2 devices)							
								Q Search
Online								
•	Basic/SNMP	Managed Switch, EHG7508-8PoE	10.0.50.101	00:60:E9:19:53:8B		3.11	3.11	~
	Basic			00:60:E9:19:53:8E				~
					1-2 of 2 items	< 1 >		ie 🗸 Goto

Figure 6.5 Devices in the Device Table in Each Group

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

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	The 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 device firmware generally consists of an application version
	and a kernel version.
Access	Indicates whether the device is already accessible (\checkmark) or not ($ imes$).An
	accessible device must belong in a group. 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*

Clicking on the **Firmware Update** icon on the **Top Horizontal Icon Bar** will open a notification box on the top of the working space, as shown in Figure 6.6 below.

Network Mar File View Hel		ent Utility									-	o ×
>	¢	÷ 	< 0	▲ ^k								Group View
Q					i) Firmware Update							
Ⅲ		Grou	p A (1 dev	vices)	Select devices and p	ress OK or Cancel.						~
~		Grou	р В (2 dev	vices)								^
										0	Search	×
			٠	Basic/SNMP	Managed Switch, EHG7508-8PoE	10.0.50.101	00:60:E9:19:53:8B		3.11	3.11	~	
				Basic			00:60:E9:19:53:8E				~	
								1-2 of 2 items <	1 >	10 / page	Goto	
		unGro	ouped (0	devices)								~

Figure 6.6 Firmware Update Notification Box

After selecting the device that you want to update firmware for and clicking **OK** in the notification box, a new window is launched as shown in Figure 6.7. Press the **BROWSE** button and go through your file directory to select the update firmware file (.dld).

🛃 Network Management Utility File View Help			- 🗆 X
Firmware Upda	ite		
1 Select a firmware file.		Firmware updating.	3 Finish!
New Firmware File		BROWSE	
Model	IP Address	MAC Address Progress	Status
Managed Switch, EHG7508-8PoE	10.0.50.101	00:60:E9:19:53:8B	Waiting
	Image: Open Image: Construction of the structure Image: Open Image: Open	× v O Search USB Drive (E) P IIII + III @ Date modified Type Size 6/6/2020 &20 PM File folder 4/18/2019 12:39 AM DLD File 10,285 v dld v v Open Cancel	
< UPDATING			FINISH >
			CANCEL START

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

Click the **Open** button after selecting the correct firmware file. The **START** button at the bottom right corner of the Firmware Update window will then be activated. Click the **START** button to start updating.

Firmware update progress is displayed in the **Progress** field and the update status is shown in the **Status** field, as shown in Figure 6.8. To stop updating the firmware, press the red STOP button in the bottom right corner.

Retwork Management Utility File View Help				- 0 ×
Firmware Update				
Select a firmware file.		2 Firmware upda	iting.	3 Finish!
New Firmware File E:\EH75XX_K516_	A516.dld		BROWSE	
Model Managed Switch, EHG7508-8PoE	IP Address 10.0.50.101	MAC Address 00:60:E9:19:53:8B	Progress	Status Upload Image
✓ UPDATING				FINISH >
				STOP

Figure 6.8 Firmware Updating View

Completion of the updating process is indicated by the moving progress line reaching its end point. The status will display either Upload Success or Upload Fail. Figure 6.9 illustrates an example when the firmware updating process failed on completion. The error code is E007.

Network Management Utility File View Help				- • ×
Firmware Update				
Select a firmware file.		🗸 Firmware u	odating.	3 Finish!
New Firmware File 📔 E:\EH75XX_K51	6_A516.dld		BROWSE	
Model	IP Address	MAC Address	Progress	Status
Managed Switch, EHG7508-8PoE	10.0.50.101	00:60:E9:19:53:8B		Upload Fail(E007)

Figure 6.9 Failed Firmware Update (Code E007)

Click the FINISH button to close the Firmware Update window and return to the Device List's working space.

6.4 *Network Settings*

Clicking the **Network Settings** icon on the **Top Horizontal Icon Bar** of the **Device List** launches a new window, as shown in Figure 6.10. The left side of the window is the Network Settings section, where users can choose whether to obtain a device's IP address automatically or manually. Checking the box for DHCP (Obtain IP automatically) will allow the device to set its IP address and other parameters automatically. If the DHCP option is checked, ignore the IP Assign section on the right side of the window; the START button on the bottom right will be activated for use. Before clicking the START button, Progress will display as 0%.

etwork Setting	IP Assign			
ethork octang				
DHCP	0.0.0		II ATE	
Netmask	0.0.0.0		LATE.	
0.0.0.0	Model	MAC Address	IP Address	Progress
Gateway		mino noureso	ii Piddreaa	riogicaa
0.0.0.0	Managed Switch, EHG7508-8PoE	00:60:E9:19:53:8B	0.0.0.0	0%
Hostname				
Preferred DNS server				
0.0.0				
Alternate DNS server				
0.0.0.0				

Figure 6.10 Network Settings Window – Automatic Setting

If the DHCP option is unchecked, the network parameters must be manually entered. Figure 6.11 shows the Network Settings window when the DHCP option is unchecked.

Fill in the Netmask, Gateway, Hostname, Preferred DNS server, and Alternate DNS server fields. The IP address on the right side (IP Assign) also requires input, as shown in Figure 6.11. Press the CALCULATE button next to the IP address input box named "Start Address" to check if the input IP address is valid. If yes, the START button at the bottom right corner will be activated. Once the START button is clicked, device information will display, including Model, MAC Address, IP Address, and Progress. If the configuration is successful, the Progress field will show a green check sign.

Network Setting				
letwork Setting	IP Assig		CALCULATE	
255.255.255.0	* Network s	setting finish with 0 fa	iil.	
- Gateway	Model	MAC Address	IP Address	Progress
Hostname	EHG7508	00:60:E9:19:53:8B	10.0.50.101	\checkmark
Preferred DNS server 0.0.0.0				
- Alternate DNS server				

Figure 6.11 Network Settings Window – Manual Setting

6.5 Reset to Default

In order to reset device configuration to the default values, 1) enable SNMP function for the connected device, 2) create a group if none are available or if a new group is required for the connected device, 3) add the device into the newly created group (refer to Section 5.3). If the SNMP function is not enabled yet, refer to Section 4.1.4. to enable it. If the message "(This feature only for device with SNMP support.)" persists and the **OK** link cannot be clicked even when SNMP function is already enabled via the **Network Management Utility Setup 2.X**, try enabling the SNMP function via our web interface instead. Follow the instructions in Section 5.6.1 to initialize the web configuration page.

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

Network Ma	lanagem	ent Utility										-		\times
File View He	elp													
>	¢) 🚡	<	•	£9.‡								Group	View
Q						(i) Reset To Default								
		Grou	ıp A (1	devices)		Select devices and press (This feature only for dev		port.)					^	
~											Q Se	earch	×	
			Online	Device T	ype	Model	IP Address	MAC Address	Hostname	Kernel	Ар	Access		
			٠	Basic/SN	MP	Managed Switch, EHG7508-8PoE	10.0.50.1	00:60:E9:19:53:8B	EHG7508	3.11	3.11	~		
								1-1 of 1 items	; < 1	> 10/	page \vee (Goto		
		unG	roupe	d (0 device	es)									

Figure 6.12 Select Devices and Click OK to Reset to Default

A new window displaying device details (i.e., Model, MAC address, IP address, and status) will appear, as shown in Figure 6.13. Before starting, the STATUS will be WAITING. If confirmed that the selected device is the correct one, click the START button to start the reset process.

MAC Address	IP Address	Status
00:60:E9:19:53:8B	10.0.50.1	WAITING

Figure 6.13 Confirm Window to Reset to Default Setting

When the "reset to default" process is finished, the STATUS will change to SUCCESS, as shown in Figure 6.14. Click \times in the top right corner to close the window.

Model	MAC Address	IP Address	Status
Managed Switch, EHG7508-8PoE	00:60:E9:19:53:8B	10.0.50.1	SUCCESS

Figure 6.14 Successful Reset to Default Setting

6.6 Backup and Restore

Similar to the **Reset to Default** function icon, before backing up or restoring configurations, 1) enable SNMP function for the connected device, 2) create a group if none are available or if a new group is required for the connected device, 3) add the device into the newly created group (refer to Section 5.3). If the SNMP function is not enabled yet, refer to Section 4.1.4. to enable it. If the message "(This feature only for device with SNMP support.)" persists and the **OK** link cannot be clicked even when SNMP function is already enabled via the **Network Management Utility Setup 2.X**, try enabling the SNMP function via our web interface instead. Follow the instructions in Section 5.6.1 to initialize the web configuration page.

After enabling the SNMP function, select connected devices that you want to Backup and Restore the configuration for, and then press **"OK"**, as shown in Figure 6.15.

	<	Φ	₹ <							(Grou
Device List Event Log	Gro	up A (1	l devices)	Select devi	nd Restore ces and press OK or (re only for device with						^
Topology										Q Sea	rch 🗙
		Online	Device Ty	pe Model		IP Address	MAC Address	Hostname	Kernel	Ap /	Access
		٠	Basic/SNN	IP Managed Swi	tch, EHG7508-8PoE	10.0.50.1	00:60:E9:19:53:8B	EHG7508	3.11	3.11	~
							1-1 of 1 items		> 10 / p	age ∨ Go	

Figure 6.15 Clicking on the Backup and Restore icon in the Top Horizontal Icon Bar

Once the **OK** button is clicked, a new **Backup and Restore** window will launch, as shown in Figure 6.16. Here, the window is divided to two parts, **Devices** and **Files**.

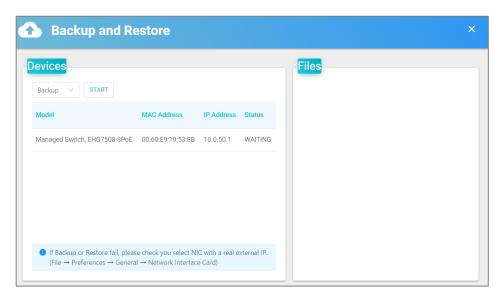


Figure 6.16 Backup and Restore Window

The **Devices** part displays device information such as Model, MAC Address, IP Address, and Status. Before clicking START button, the **Status** is WAITING. To back-up a configuration, select **Backup** from the drop-down box and click the START button. Figure 6.17 shows the **Backup and Restore** window after successfully finishing the Backup process. The device will restart and a notification window will appear on the bottom right corner for the device going offline and online again, respectively. If backup fails, go to File \rightarrow Preferences \rightarrow General \rightarrow Network Interface Card to check if your selected Network Interface Card (NIC) is the one with a real external IP address. Figure 6.18 illustrates the screen when Backup fails.

Backup and Re	estore				
evices				Files	
Backup V START					
Model	MAC Address	IP Address	Status		
Managed Switch, EHG7508-8PoE	00:60:E9:19:53:8B	10.0.50.1	SUCCESS		
 If Backup or Restore fail, pleas (File → Preferences → Genera 			external IP.		
,					

Figure 6.17 Backup Success

etwork Management Utility						-	
view Help							
<	c) 🔻 < 4						Group View
Device List	Backup and Re	estore				×	
Event Log							~
Event Log	evices				Files		
Тороlоду					_	ph	×
	Backup V START						
	Model	MAC Address	IP Address	Status		cess	
						,	
	Managed Switch, EHG7508-8PoE	00:60:E9:19:53:8B	10.0.50.1	ERROR		ľ.	
						2	
	If Backup or Restore fail, pleas	e check you select NI	IC with a real ex	ternal IP.		📓 De	evice offline
	(File → Preferences → Genera						anaged Switch, EHG7508-8F address: 10.0.50.1

Figure 6.18 Backup Fail

Click on a device row in the left side of the Backup and Restore window to see the list of already backed up configuration files in the right side section, as shown in Figure 6.19. Click the red \times at the end of each row to remove that backup configuration.



Figure 6.19 Configuration Files that are Already Backed Up

To restore a configuration, first, select the **Restore** option from the drop-down menu. Second, click on the row of the device to restore configurations for, and its list of configuration files will display on the right side of the window. Third, select the configuration file to restore. The Backup **Status** is will now be WAITING. Last, click the **START** button. Figure 6.20 shows the **Backup and Restore** window after successfully finishing the Restore process. A couple of beeps will sound from the device and the device will restarted. The user will see a notification box appear on the bottom right of the window showing that the device is going offline and online again. Same as for the Backup configuration process, if Restoration fails, check that your selected Network Interface Card (NIC) is the one with a real external IP address.

vices			Files	
estore V START			✓ 0060E919538B_200603104913	
odel	MAC Address	IP Address Status	0060E919538B_200603110038	
anaged Switch, EHG7508-8PoE	00:60:E9:19:53:8B	10.0.50.1 SUCC	285	
			-	
				Device offline Managed Switch, EHG7508-8PoE

Figure 6.20 Sucessful Configuration File Restoration



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