

ATOP Technologies, Inc.

# Network Management Utility

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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

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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<sup>®</sup> 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.



Figure 2.2 Right Click the Network Management Utility<sup>®</sup> Program Icon

	Network Management Utility Setup 2.0.6 Properties	×
	General Compatibility Security Details Previous Versions	
Network	If this program isn't working correctly on this version of Windows, try running the compatibility troubleshooter. Run compatibility troubleshooter How do I choose compatibility settings manually? Compatibility mode	
Manageme	Windows 8	
	Settings Reduced colour mode  8-bit (256) colour Run in 640 x 480 screen resolution Disable full-screen optimisations Run this program as an administrator Change high DPI settings  Change settings for all users	
	OK Cancel Apply	

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 popup 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	Netwo	ork Management Utility Setup	_	×
Manageme		Installing, please wait		

Figure 2.4 An Installing Pop-up Window

## **3** User Interface

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**)

LOG	IN
Username *	
Password *	٥
	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.

🚺 Atop I File Vie	aMU v Help								σ×
>	φ	Ŧ <	: • • • • <del>•</del> •				Group View	adm	in A
Ø									_
Q							SAVE	SORTED GR	ROUPS
m		Please c	create the group.						
		= u	InGrouped (0 devices)						
~									
A									
R									

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 File View Help		- σ ×
> ¢	<b>∓ &lt; ⊕ Φ () □ \$</b> β	Group View admin A
C Disco	NIY	SAVE SORTED GROUPS
	Please create the group.	
~	= unGrouped (0 devices)	* . *
A 10		

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 File View Help	p									- 0 ×
<b>&gt;</b> (	¢ ∓	< 0	o 🖸 😽 🎋	2					CI GI	admin A
0										
٩										SAVE SORTED GROUPS
	9 Ple	ase create the gro	oup.							
~		unGroup	ed (2 devices)							^
R										Q Search X
e		Online	Device Type	Model	IP Address	MAC Address	Hostname	Kernel	Ap	Access
La		•	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 ( $\times$ ). 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



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		- 0 ×
Preferences		×
General Mail Telegram	Network Interface Card default-0000 V	
SNMP Advanced		

Figure 4.2 File  $\rightarrow$  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		
Trefer	ences	
General		
ocheral	Notwork Interface Cord	
	Network Interface Card	
Mail		
Mail	default - 0.0.0.0 V	
Mail Telegram	default - 0.0.0.0 v	
Mail Telegram SNMP	default - 0.0.0.0         V           default - 0.0.0         Intel(R) Ethernet Connection (10) I219-V - 192.168.5.198	
Mail Telegram SNMP	default - 0.0.0.0     V       default - 0.0.0.0     Intel(R) Ethernet Connection (10) I219-V - 192.168.5.198       Microsoft Wi-Fi Direct Virtual Adapter #3 - 0.0.0	
Mail Telegram SNMP Advanced	default - 0.0.0       V         default - 0.0.0       Intel(R) Ethernet Connection (10) I219-V - 192.168.5.198         Microsoft WI-Fi Direct Virtual Adapter #3 - 0.0.0         Microsoft WI-Fi Direct Virtual Adapter #4 - 0.0.0	

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
Prefere	nces	×
General Mail Telegram SNMP Advanced	Mail Service	

Figure 4.4 File  $\rightarrow$  Preferences  $\rightarrow$  Mail

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

Consil	Gmail A	Gmail		Gmail	~	Gmail	~	Gmail	^
Gmail	Cmail	Ginair		Ginai		ontail		SES-LIS-EAST-1	
126	Grindii	Mail.ru	•	Outlook365	1	SES		565 65 6761 1	
163	Godaddy	Maildev		Postmark		SES-US-EAST-1		SES-US-WEST-2	
1und1	GodaddyAsia	Mailgun		QQ		SES-US-WEST-2		SES-EU-WEST-1	
AOL	GodaddyEurope	Mailjet		QQex		SES-EU-WEST-1		Sparkpost	
DebugMail	hot.ee	Mailosaur	۰.	SendCloud	а.	Sparkpost		Yahoo	
DynectEmail	Hotmail	Mandrill		SendGrid		Yahoo		Yandex	
FastMail	iCloud	Naver		SendinBlue		Yandex		Zoho	
GandiMail 🗸	mail.ee	OpenMailBox	-	SendPulse	-	Zoho	-	qiye.aliyun	-



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		
	1		Save Token
ram	Telegram Bot Testing		
)	Telegram test message		Send Message
ced			
	Telegram Users Setting	Telegram Users List	
	Telegram Id	Telegram Name	Telegram Type Action
	Telegram Name		
	Telegram Type 👻	No Data	

Figure 4.6 Configure the Telegram Notification to Receive Offline Event Messages

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.

Network Management Utility		-	٥	×
	5			×
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 ∨			
	Read Community public			
	Write Community private			
	Others			
	Precheck device SNMP feature before specific operate.			

Figure 4.7 SNMP Scan Section View Within File  $\rightarrow$  Preferences  $\rightarrow$  SNMP

In File  $\rightarrow$  Preferences option  $\rightarrow$  SNMP tab, toggle  $\bigcirc$  Enable to enable SNMP scan, and click  $\bigcirc$  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 s	segment.	☑ 10.0.50.101 - 10.0.50.200	×
	CANCEL	ок		🗄 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						
		value					
IP Range List	Start and end IP addresses of devices to scan with SNMP messages	N/A					
SNMP Polling	The period of time between the end of the previous polling's timeout period and start of						
Interval	the next polling, where polling consists of launching remote queries synchronously, either	30 mins					
	actively or on demand.						
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  $\rightarrow$  Preferences  $\rightarrow$  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	private
	its configurations	

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/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.

Network Management U	tility									
- 1	< (	Þ 🕈 <	Ð 🔂	<i>F</i> 2,						Group Vie
₽ Device List										
Event Log	Group	A (1 devices)								^
🛪 Topology								(	<b>Q</b> Search	×
		Basic	Cher	Charling SNMD fasture					~	
			_ chec	King Staten	Teature					

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

MU File View Help						-		×
Toggle Full Screen F11	6	C	J.	£2;	Group View	adn	nin 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. Reselect the option or press F11 again to reduce the window to its original size.

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

🔝 Atop M	IMU				_		×
File View	Help						
>	About Network Management Utility	()	5	Image: Second	adn	nin 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

NMU v Help		- 🗆 X
< \$ 7 4 9 6 Q	🖌 🎊 💶 Group View	admin A
ashboard		
evice List = EHG7xxx (3 devices)		~
vent = unGrouped (3 devices)		~
pology		
sers		
evice con		
evice List		~

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							
Offline							
0							

Figure 5.3 Device Summary

#### **Daily Events**

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

Daily Events						
Information	Warning	Critical				
22	0	15				

Figure 5.4 Daily Events

14010	en Brene Serene	) 14010	
Event	Critical	Warning	Information
Cold Start	$\checkmark$		
Warm Start	$\checkmark$		
Port Link Up			$\checkmark$
Port Link Down	$\checkmark$		
Authentication failure		√	
Power Status: OK			$\checkmark$
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 (<sup>(2)</sup>) button on the upper right corner.



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 (🗭) 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 (<sup>(1)</sup>) 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 192.168.12.71	Warm Start	2021-04-16 19:24:35
EHG7504-2SFP 192.168.12.71	Port Link Up	2021-04-16 19:24:35
EHG7504-2SFP 192.168.12.71	Port Link Up	2021-04-16 19:24:35
EHG7504-2SFP 192.168.12.71	Port Link Up	2021-04-16 16:19:17
EHG7504-2SFP 192.168.12.71	Port Link Down	2021-04-16 16:19:15
EHG7504-2SFP 192.168.12.71	Port Link Up	2021-04-16 16:18:57
EHG7504-2SFP 192.168.12.71	Port Link Down	2021-04-16 16:18:54

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.

🔛 Atop NN File View	1U Help													- 🗆 X
>	Φ	€	<	Ð	0	0		s	£2				Group View	admin A
ø														
٩			un¢	Grou	ped	(1 dev	vices)							^
≣													Q	Search 🗙
¢		=	Onli	ne	Devio	се Туре		Model	IP Address	MAC Address	Hostname	Kernel	Ар	Access
R					Basic			SE5404	192.168.6.179	00:60:E9:88:88:88		3.27	Serial Server V3.50	×
Eq												1-1 of 1 ite	ems < 1 >	10 / page $ \lor $

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.

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	<b>IP</b> 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 $(\times)$ . Users have to
	create a group and add the device to that group first to view it as accessible.

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

#### 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.

I Atop NMU File View Help		- 🗆 X
	< \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$	Group View admin A
② Dashboard	Enter a name, Add New Group	
Q Device List	EHG7xxx (3 devices)	¥
Event	$\equiv$ unGrouped (3 devices)	~
« Topology		
오 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

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.

Q	Group /	A (1 devices)								^	Т
									Q S	earch 🗙	
~	Online	Device Type	Model	IP Address	MAC Addres	ss Hostnan	ie Kerne	і Ар	Acces	15	
	•	Basic			00:60:E9:19:	53:8E			~		
							1-1 of 1 items <	1 >	10 / page $ \lor $	Goto	
	Group I	3 (2 devices)								^	
									Q S	earch 🗙	
	Online	Device Type	Model		IP Address	MAC Address	Hostname	Kernel	Ap Ac	cess	
	•	Basic/SNMP	Managed Switch, EHG	67508-8PoE	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 \vee	Goto	
	unGrou	ped (0 devices)	)								Ī
					(a)						
anagement Util elp	ity									-	٥
φ	₹ <	Ð 🚯									Grou
										O Searc	h
Online	Devi	се Туре	Model		IP Address	MAC Address	Hostname	Kernel	Ap	Access	
	Basi	C				00:60:E9:19:53:8E				~	

Figure 5.13 Lists of Devices (a) in Grouping (b) Without Grouping

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.

work Management	Jtility								-	
ew Help	< (	⊅ ∓ <	•	<i>F</i> 2,						Gro
Device List										
event Log	Group	A (1 devices)								
ಳೆ Topology								Q	Search	×
	Online	Device Type	Model	IP Address	MAC Address	Hostname	Kernel	Ap	Access	
	•	Basic	105202	10.0.50.100	00:60:E9:21:85:3E	System	1.18	IO5202 V1.18	~	
					Edit Group N	1-1 of 1 items	< 1 >	> 10 / page >	Goto	
	unGro	uped (0 device	s)		Remove Gro	oup				

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.

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	Merr
Search		م		Search	
EHG7508	236.67.1.0	00:60:E9:19:53:8B	> Add Member < Remove 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.

Group A - Ec	lit Group Member				
0 item	Non Member		✓ 1/1 item		Membe
Search	م		Search		ې
			MG7508	236.67.1.0	00:60:E9:19:53:8B
No	t Found	> Add Member < Remove Member			
					APF

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

	· _		0						-	
	φ 🕈	< -> 6	12							Grou
ſ										
	Group	A (1 devices)								~
									Q Search	×
	Online	Device Type	Model	IP Address	MAC Address	Hostname	Kernel	Ар	Access	
	•	Basic	EHG7508	236.67.1.0	00:60:E9:19:53:8B	EHG7508	3.11	EHG7508-8PoE Application: V3.	11 🗸	

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.

Network Management	ent Utilit	y									-	
File View Help	<	: ¢	) <b>T</b> < ·	•	<i>F</i> 2,						•	Group View
Device List     Event Log     Topology		Group	A (1 devices)								Q. Search	^ ×
		Online	Device Type	Model	IP Add	lress	MAC Address	Hostname	Kernel	Ар	Access	
		•	Basic	105202	10.0.50	O.100 Open <sup>1</sup> Telnet	00:60:E9:21:85:3E	System	1.18	IO5202 V1.4	18 🗸	
		unGrou	uped (0 devices	6)	© >	Reboo Netwo Device Port In Backu	ot rk Setting e Advanced Setting nformation p 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".

Network Mana	agement Utility								_	
e View Help										
>	\$ ₽	< 🖸 🙆	F2.							Group
Q										
∷	Group	A (1 devices)								^
¢								C	<b>C</b> Search	×
	Online									
		Basic	105202	10.0.50.100	00:60:E9:21:85:3E	System	1.18	IO5202 V1.18	~	
			Ope T Telt ₩	en Web net	Open of O	on OS browser on NUM	ns < 1	> 10 / page -	Goto	
				poot						
			< Net	work Setting						
			Dev Dev	vice Advanced Set	ting					
			Por	t Information						
			Bac	kup And Restore						

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

☐ 10.0.50.100 × + ∨	
$\leftarrow$ $\rightarrow$ X $\textcircled{m}$ $\oplus$ 10.0.50.100/	
	Windows Security Y
	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
	OV Cancel
	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  $\square$  on the upper right corner to close the web configuration and return to the Device List working space.

🔯 Network Management Utility			-		×
File View Help	http://10.0.50.1			~	
	111.0.50.1				
+ Basic + Administration	Basic System Information		Reset ()		
Forwarding     Port     Power Over Ethernet     Trunking	Model name Device Description MAC address	EHG7508-8PoE Managed Switch, EHG7508-8PoE 00:60:E9:19:53:8B		P1 ₽2 ₽	

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

45.75 Centigrade

3.11 root@bs #1 SMP Tue Jul 26 13:41:07 CST 2016 108780K used, 146900K free, 0K buff, 43944K cached

3.11

3.11

#### 5.6.2 **Telnet**

+ Unicast/Multicast MAC + GARP/GVRP/GMRP

+ IP Multicast + SNMP

+ Spanning Tree + VLAN

+ Security + ERPS/Ring + LLDP + PROFINET + EtherNet/IP + IP Routing + Client IP Setting + System

Selecting Telnet will initiate Telnet program.

Kernel Version

Image Build Info Memory

Board Temperature

Application Version

#### 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

I Network M File View ⊢	Vanagement Utility Help		- 🗆 X
>	¢ 🛪 < 🕤 🙆 🎊		Group View
Q			
	Group A (1 devices)		^
æ			Q Search X
	Online Device Type	$\checkmark$	Kernel Ap Access
	Basic		1.18 IO5202 V1.18 🗸
		Success!	< 1 > 10 / page < Goto
		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 Management File View Help	t Utility					_	- 0 ×
	< ¢		Network Setting				
Device List     Event Log     Topology	Group	A (1 devices)					Managed Switch, EHG7508- 8PoE(00:60:E9:19:53:8B) DHCP IP Address 10.0.50.1
	Online	Device Type	Model	IP Address	MAC Address	Hostname	Netmask
	•	Basic/SNMP	Managed Switch, EHG7508-8PoE	10.0.50.1	00.60.E9.19.53.8B	EHG7508 1-1 of 1 item:	Gateway         10.0.0254         Prefered DNS server         0.0.0         Alternate DNS server         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 settngs success!			
							Q	Search 🗙	
Online		Model	IP Address	MAC Address					
	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

Network Ma File View He	anagement Utility							- 🗆 X	(
>	¢ <b>∓</b>	< 🖸 🙆	F2+				Advance Setting		
<b>م</b> ::: چ	Group	A (1 devices)					IO5202(00:60:E9:21:85:3E) Authentication Alarm General		
	Online					Hostname	Username admin		
		Basic	105202	10.0.50.100	00:60:E9:21:85:3E	System	Password	O	
						1-1 of 1 items	SNMP		
							SNMP Version v2c ∨		
							public		
							Write Community		
							С	ancel Apply	Ī

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.

Table 5.3 Descrip	otion of Each Field ir	Device List $\rightarrow$ Advance	ed Settings $\rightarrow$ A	uthentication Tab
1 4010 010 2 00011			a seemes in the	

Sections within	Field Name	Description	Default Value
Advance Setting			
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	public
		similar to a password)	-
	Write community	The community string to config device (concept similar to a	private
		password)	

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

	< ¢	<b>₩ &lt;</b> •		Advance Setting					
List							Managed Switch,	EHG7508-	
og	Group A	A (1 devices)					Authentication	Alarm	
iy 🕴	_						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	<b>~</b>	<b>~</b>
							Port6	<b>~</b>	<b>~</b>
							Port7		
							Port8		
							Power		
							Name	On	Off
							Power1	<b>~</b>	<b>~</b>

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.



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 Main File View He	nagement Utility Ip							- 0 X
>	\$\overline{\Phi} \Box \Box \Box \Box \Box \Box \Box \Box	ሩ 🕤 🙆 ନ୍ୟ						Group View
Q			-		_			
	Group A	(1 devices)	🚫 Check	S Check SNMP feature fail.				^
с¢			Please	check SNMP of this device is en	able.			🔍 Search 🗙
					ОК			
								~
							1 > 10/	



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

work Managemer /iew_Help	nt Utility	-			100.00	-							
X Port	Informa	ition											
Device Information Model Name EH7520-40-4PoE-4SFP IP Address 192.168.5.184 MAC Address 00:60:E9:18:38:38 Kernel 5.30 AP 5.30 Power Power Power1 % Power2 ≸		Real- Port1 Port2 Port3 Port4 Port5 Port7 Port8 150 150	Time Traffic				d m						
Port Statu	s			7	isecage 70	63	55 48	41	34	31 28	21	14	7 cu
portName	portStatus	Speed	Port Mode	inOctets	inErrors	inUcastPkts	inMulticastPkts	inBroadcastPkts	outOctets	outErrors	outUcastPkts	outMultic	enableStatus
Porti	up	100	Copper	0	0	C	0	o	5974965	0	o	o	
Port2	down	0	Copper	0	0	0	0	0	0	0	D	0	
Port3	down	0	Copper	0	0	0	0	0	0	٥	0	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. Backup 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.

	Q Search			
		l An		
	$\checkmark$	3.11	SELECT FOLDER	ms\network-management-utility\backupConfigs\0060E919538B
to	age \vee 🛛 Goto	> 10 / page		
			SELECT FILE	
			SELECT FILE	

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

1 00	):60:E9:19:53:8B - Backup and Restore	×
Backup		
Path:		
C:\Users\u	iser\AppData\Local\Programs\network-management-utility\backupConfigs\0C	SELECT FOLDER
File Name:		
Restore		
C:\Users\u	.ser\AppData\Local\Programs\network-management-utility\backupConfigs\00601	SELECT FILE
RESTORE		
<ul> <li>If Backu</li> <li>→ Netw</li> </ul>	$_{\rm O}$ or Restore fail, please check you select NIC with a real external IP. (File $\rightarrow$ Prefer ork Interface Card)	ences → General

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.

	Ø	Restore co	nfiguration success.
Backup Path: C:\Users\user\AppData\Local\Programs\network-management-utility\backupConfigs\0C File Name:	SELECT	FOLDER	Q Search X Ap Access 3.11 ✓
BACKUP Restore			10 / page \vee 🛛 Goto
File: C:\Users\user\AppData\Local\Programs\network-management-utility\backupConfigs\006 RESTORE	501 SELI	ECT FILE	

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.

Network Mana	gement Utility					- 0	×
File View Help							
م = ح	Event SNMP trap Sys	log					
Ŭ	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		<u> </u>
	2020-05-31 10:56:04	10.0.50.100	IO5202	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	IO5202	00:60:E9:21:85:3E	offline		-
						< 1	>

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.

vent History					>
MAC Address	Start Time ~	End Time 🛱	REFRESH		
Time 🜲	Source IP 🖕	Model	MAC Address	Message	
2020-06-03 21:08:05	236.67.1.0	EHG7508	00:60:E9:19:53:8B	offline	
2020-06-03 20:49:21	236.67.1.0	EHG7508	00:60:E9:19:53:8B	online	
2020-06-03 19:39:28	236.67.1.0	EHG7508	00:60:E9:19:53:8B	offline	
2020-06-03 19:22:24	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.

🔯 Network Mar	nagement Utility							_		×
File View Help	p									
>										
Q	Event SNMP trap Sys	log								
~	HISTORY									
	Time 🌲	Source IP 🌲	Up Time 🌲	GT 🌲	ST 🌲	Version 🌲	Enterprise	Community	Vark	*
				No da	ta					

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	)							
			Ν	1ay 20	20					J	un 202	20		> >>>				
Time 🔺	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa		Enterprise	Community	*
		27				1	2	31	1	2	3	4	5	6	Ŧ	Litterprise	community	Ŧ
	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		6		6	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			

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.

Mana Network Mana	gement Utility							_	~
File View Help									
>									
Q	Event SNMP trap Syst	og							
<b>≞</b> ≪	HISTORY								
	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.

Source IP	Start Time ~	end Time	REFRESH		

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  $\bigotimes$ , 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	NMU Help	-	o ×
>	Group:	All Device V	8
Ø			
Q		Show IP 🗹 Show Model 🗹 Show Hostname 🗋 Physics	NINT
H		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 EHG760A:3FP EHG7604:2PDE-2SFP	
		switch switch	
		L	

Figure 5.47 Working Space for Drawing a Topology: Side Menus → 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 X
Virtual Node           00:60:E9:19:53:8E           Group A ×	From 00:60:E9:19:53:8E Port 1 To 00:60:E9:19:53:8B Port 1
Group A V Cancel OK	Cancel
(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.



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.

Network Management View Help	Utility							-	
	<	¢ 🖬 <	• <b>•</b> <i>b</i>						Group
ク Device List									
Event Log	Group	A (2 devices)	)						^
« Topology								Q Search	×
	Online								s
		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 item	ns < 1	> 10 /	page 🗸 🛛 Goto	

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.

v Help							
	blob:file:///76a281b2-add	)a-4608-abda-cad7a5377dc9			×		
<	← → ~ ↑ 🖡 > Thi	s PC > Downloads >	~ Ū	Search Downloads	٩		
evice List	Organise • New folde	r		§= -	0		
CVICC LISC	Y This PC	Name	Date modified	Туре	Size ^		
vent Log	0 > 1 3D Objects	V Today (1)			E	EXPORT IMAGE	Q FIT VIEW POIN
·	0 > Desktop	b4077d2e-f3ff-4674-973d-63ccc6d786ec	6/6/2020 3:15 PM	TMP File	6		
pology	> 🖹 Documents	<ul> <li>✓ Earlier this week (3)</li> </ul>					
	> 🖊 Downloads	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 ¥		
4	File same all200	-					
	C rite name: all200	(#*)			×		
	Ac Save as type. All File	(".")					
AP				Sava Ca	acel		
Devi	e Hide Folders			Sure	.:		
Gate	vay				· · ·	<b>(</b>	
Host	name						
DHC	P false				00:60	):E9:19:53:8B	
Kern	el			N	10 Janaged Sw	0.0.50.101	PoF
Mode				n	nunayou ow		
Netm	ask	L					

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

V1.4

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.

Network Management Utility		- 🗆 ×
File View Help		
Group: All Device      All Device		
P Device List     Group A		
Event Log         00:60:E9:19:53:8B         236.67	Show IP 🔽 Show Model 🔽 Show Hostname 🔽 Physics	
< Topology	EDIT LAYOUT	
	•	
4		
Device Properties		
	•	
	00:60:E9:19:53:8B	

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

### 5.9 Account Management

🔝 Atop NMU File View Help						- 🗆 ×
	<					admin A
② Dashboard	Add User					
Q Device List	* Username		* Password		* Role	
Event	Atop			Ø	Please select ro	ole v
ᢞ Topology	Hearlist				None Admin	
A Users	User List				Supervisor	
🗟 Device con	Username	User Type	Created By	Date	Operator	7.6001
	admin	Admin	atop	4/9/2021		
	aaa	Admin	admin	4/19/2021		<b>2 0</b>
						< 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					

Edit existing	g accounts:	Click the Edit/Delete icons to modify existing accounts as below.
	🔯 Atop NMU	
	File View Help	

Daabbaard	-	_			_	_			_
) Dashbuaru	Add User		<b>E</b> 1911			100			
Device List	* Username		Edit User		X		* Role		
Event						ø			
			Old Password						0.0
Topology	Hearlist		old password		Ø				Sav
	User List		New Password						
Device con	Lisemame	1156	new password		Ø	te		Action	
Device con	obername	000	Select Role					/ cuon	
	admin	Adı	Admin	$\sim$		9/2021			
	Atop	Ор		Return	Submit	19/2021		0	
									< 1

Figure 5.56 Editing Existing Accounts

#### 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 NMU File View Help		- 0	×
	<	admin R	
② Dashboard	Device Config Comparison		
역 Device List	Choose File No file chosen Choose File No file chosen		
Event			_
< Topology			
유 Users			
Device con			

Figure 5.57 Device Config Comparison

NMU will	highlight any di	ifferences between the two files as	below.	- ø ×
The View Help	<			admin A
② Dashboard	Device Config Comparison			
Q, Device List	Choose File		Choose File test2 txt	
Event	1	# Private Technologies device command file.	1 # Private Technologies device command file.	
< Topology	3 8	# Model Name : EHG7504-2PoE-2SFP	3 # Model Name : EHG7504-2PoE-25FP	
A. Users	4 - 4	# MAC Address : 00:60:E9:1A:3C:DF	4 + # MAC Address : 99 :60:E9:1A:3C:DF	
8 Device con	6 - 1	# Kernel Version : 7.20	6 + # Kernel Version : \$ .20	
	7		7	
	8 .	# This file is generated by device and contains all CLI commands that are	8 # This file is generated by device and contains all CLI commands that are	
	9	# currently running. This file can also be fed to devices through upload	9 # currently running. This file can also be fed to devices through upload	
	10	# scheme to configure devices. The users can modify commands and parameters	10 # scheme to configure devices. The users can modify commands and parameters	
	11 #	# to fit their requirements, the lines starting with '#' are ignored.	11 # to fit their requirements, the lines starting with '#' are ignored.	
	1	Expand 383 lines		

Figure 5.58 Configuration Comparison

#### V1.4

## **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 < Icon

On the most left is an icon  $\checkmark$ . 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  $\checkmark$  icon as shown in Figure 6.2.

Eile View Hel	nagement Utility							-	o ×
>	¢ <b>∓</b>	< 🖸 🖸	<i>R</i>					-	Group View
<b>م</b> ۳	Grou	DB (1 devices)						Q Search	^ ×
	Online	Device Type	Model	IP Address	MAC Address	Hostname	Kernel	Ap Access	
	•	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	
	Group	OA (0 devices)							~

Figure 6.1 Click on > Icon to Expand the Area of the Side Vertical Menu

📓 Network Management	t Utility								-	o ×
File View Help	<	Φ ₹ <	Ð 🚯						<b>)</b> G	iroup View
<ul><li>Device List</li><li>Event Log</li></ul>								٩	Search	×
< Topology	Online									
		Basic	105202	10.0.50.100	00:60:E9:21:85:3E	System	1.18	IO5202 V1.18	×	
						1-1 of 1 iter	ns < 1	> 10 / page >	Goto	

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	Managemen	Utility					-		×
File View	Help								
>	Φ	Ť	<	Ð	6	£2;	•	Group	View
Q									
□							No Data		
~									



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 Help		- 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.

Network Management Utility File View Help ٥  $\times$ > ゆ 🐨 < 🖸 🙆 🎘 Group View Q Group A (1 devices) ~ ^ Group B (2 devices) Q Search  $\times$ ~ Managed Switch, EHG7508-8PoE 10.0.50.101 00:60:E9:19:53:8B 3.11 3.11 Basic/SNMP 00:60:E9:19:53:8E ~ Basic 1-2 of 2 items < 1 > 10 / page > Goto unGrouped (0 devices)

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 ( $\times$ ).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 Main File View He	nagemei elp	nt Utility									-	o ×
>	¢	Ŧ	< 0	<b>△</b> <i>𝒫</i>								Group View
Q		_	_		i Firmware Update	ross OK or Cancel						
		Grou	p A (1 dev	vices)	Select devices and p	ress on or cancel.						~
~		Grou	p B (2 dev	rices)								^
										0	Search	×
			•	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	
		unGr	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			- 0 ×
Firmware Upda	te		
1 Select a firmware file.		2 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
	🔯 Open	×	
	$\leftarrow  \rightarrow  \checkmark  \bigstar  \forall  \clubsuit  \Rightarrow  This \; PC \; \Rightarrow \; USB \; Drive \; (E:) \; \Rightarrow$	V Search USB Drive (E:)	
	Organise • New folder	i≡ - □ <b>(</b>	
	Videos Local Disk (C) DATA (D) USB Drive (E) File name: EH75XX_K516_A516.dld	Date modified     Type     Size       6/6/2020 8:20 PM     File folder       4/18/2019 12:39 AM     DLD File     10.285       V     did     V       Open     Cancel     .t	
< UPDATING			FINISH >

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.

Network Management Utility File View Help ٥ \_  $\times$ **Firmware Update** Select a firmware file. 2 Firmware updating. 3 Finish! New Firmware File E:\EH75XX\_K516\_A516.dld BROWSE IP Addr MAC Ad Managed Switch, EHG7508-8PoE 10.0.50.101 00:60:E9:19:53:8B Upload Image 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				- 0 ×
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%.

letwork Setting	IP Assign			
DHCP	- Start Address 0.0.0.0	CALCU	LATE	
0.0.0.0	Model	MAC Address	IP Address	Progress
Gateway				
0.0.0.0	Managed Switch, EHG7508-8PoE	00:60:E9:19:53:8B	0.0.0.0	0%
Hostname				
Preferred DNS server				
0.0.0.0				
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					×
Network Setting	IP Assig Start Addres 10.0.50.1	<b>n</b> 155	CALCULATE		
Netmask- 255.255.255.0 Gateway- 10.0.50.1	* Network s	setting finish with 0 fa MAC Address	ail. IP Address	Progress	-
Hostname Preferred DNS server	EHG7508	00:60:E9:19:53:8B	10.0.50.101	$\bigcirc$	
Alternate DNS server					
				ST	ſAR

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.



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.

• Reset To Default			×
Model	MAC Address	IP Address	Status
Managed Switch, EHG7508-8PoE	00:60:E9:19:53:8B	10.0.50.1	WAITING
			START

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 in the top right corner to close the window.

Model	MAC Address	IP Address	Status
	00.60-50-10-50-00	10.0 50.1	

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.

🔛 Network Manageme	ent Utility												-	
File View Help														
	<		Φ	1	<	Ð	<b>△</b> <i>𝔅</i>						🥌 G	roup Vie
₽ Device List						í	Backup and Restore							
🗉 Event Log	C	Grou	ıp A (1	1 devi	ces)		Select devices and press OK (This feature only for device	Cor Cancel. with SNMP support.)						^
< Topology												Q	Search 💙	<
				Ва	asic/SNM	Ρ	Managed Switch, EHG7508-8P	oE 10.0.50.1	00:60:E9:19:53:8B	EHG7508	3.11	3.11	~	
									1-1 of 1 items	< 1 >	10 / pa	ige ∨	Goto	

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 R	estore				
Backup V START				Files	
/odel	MAC Address	IP Address	Status		
Nanaged Switch, EHG7508-8PoE	00:60:E9:19:53:8B	10.0.50.1	SUCCESS		

Figure 6.17 Backup Success

Network Management I	Utility						- 0	$\times$
le View Help								
	く ウ 香・	<u></u> 8					Grou	up View
。 Device List	Backup and	Restore				×	<	
<ul> <li>Event Log</li> <li>Topology</li> </ul>	Devices Backup V START				Files		ch 🗙	
	Model	MAC Address	IP Address	Status			cess	
	Managed Switch, EHG7508	8PoE 00:60:E9:19:53:8E	10.0.50.1	ERROR				
	If Backup or Restore fa (File → Preferences →	, please check you select № Seneral → Network Interfa	IIC with a real e ce Card)	xternal IP.			Device Manag IP add MAC a	e offline ged Switch, EHG7508 Iress: 10.0.50.1 address: 00:60:E9:19:

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.

Backup	and Restore			×
evices			Files	
Restore V STA		in Lidena Chatra	✓ 0060E919538B_200603104913	
Managed Switch, EHG	\$7508-8PoE 00:60:E9:19:53:88	10.0.50.1 SUCCESS	000025150009_200000110000	-
If Backup or Rest	tore fail, please check you select !	NIC with a real external IP.		Device offline     Managed Switch, EHG7508-8PoE     IB address: 10.0 50.1
(File $\rightarrow$ Preferences $\rightarrow$ General $\rightarrow$ Network Interface Card)				IP address: 10.0.50.1 MAC address: 00:60:E9:19:53:8B

Figure 6.20 Sucessful Configuration File Restoration



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