EtherWAN


# eVue Network Configuration and Monitoring Tool

## User's Guide

**Disclaimer of Liability**

The information contained in this document is subject to change without notice. EtherWAN is not liable for any errors or omissions contained herein or for resulting damage in connection with the information provided in this manual.

**Products Supported by this Manual:**

eVue Version 5.00.0x

# Preface

## Audience

This guide is designed for the person who installs, configures, deploys, and maintains the Ethernet network.

## Document Revision Level

This section provides a history of the revision changes to this document.

| Revision | Document Version | Date | Description |
|---|---|---|---|
| A | Version 1 | 07/25/2019 | |
| B | Version 2 | 04/21/2020 | Added eVue Mobile App instructions |
| C | Version 3 | 04/23/2020 | Added remote firmware update info |
| D | Version 1 | 09/14/2021 | 5.00.0x update |

## Changes in this Revision

New features and fixes for 5.01.05.

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# 1 Introduction

The eVue network configuration and monitoring tool simplifies device management, allowing system administrators to monitor and maintain multiple EtherWAN devices on a local or wide area network. With the ability to send notifications by email based on selected levels of severity, eVue provides up to the minute information on critical systems. The software can discover EtherWAN switches and wireless devices on a network and subnets, and display an intuitive visual representation of the network topology.

## Key Features

- GUI (web based graphical user interface)
- Automated network discovery and topology visualization
- Server-Client operation to ensure system scalability, reliability and real time status
- Event handling via polling and SNMP trap
- Notification sent-out via email and SNMP trap
- Device configurations via SNMPv1/v2/v3, Web, Telnet, and SSH

# 2 Installation

## Recommended System Specifications

**CPU**: Intel i5 2.5GHz above

**RAM**: 4 GB or above

**Hard disk**: 1 TB, 7200 RPM, SATA-3Gb/s or higher

**Operating System**: Windows 10 (64-bit)

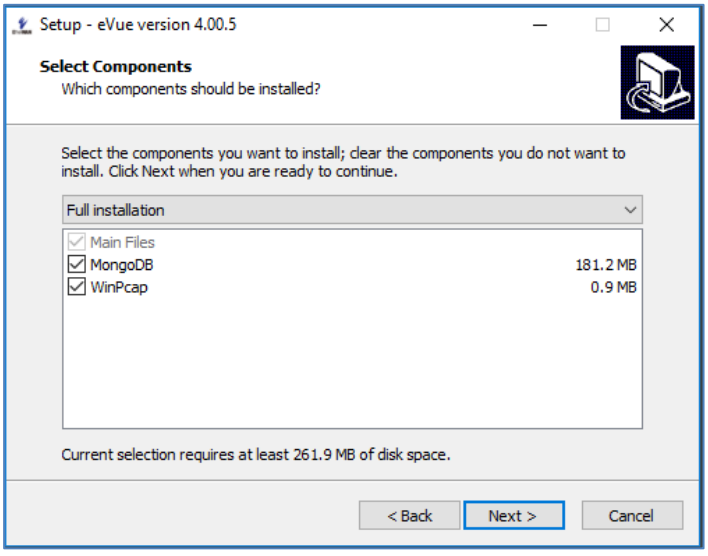
**Supported Browsers**: Microsoft Edge, Chrome version 64 or later, Firefox version 58 or later.

**NOTE:** eVue uses SNMP and LLDP to detect switches on the network. SNMP and LLDP must be enabled for all EtherWAN switches that will be used with eVue. Refer to the Appendix for information on enabling LLDP.

## Install eVue

To install eVue, Double click and run the installer. Click the radio button to accept the License Agreement, and then click **Next**.

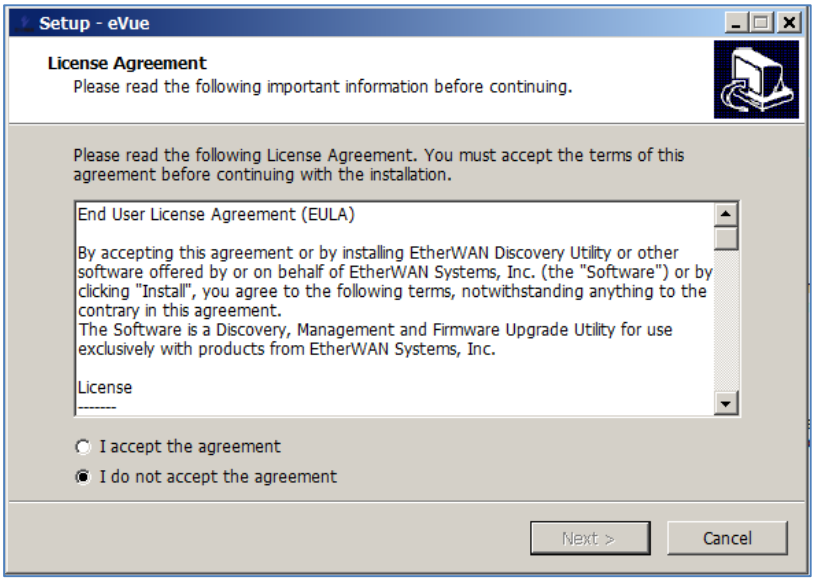
Click **Next** to install MongoDB and WinPcap:



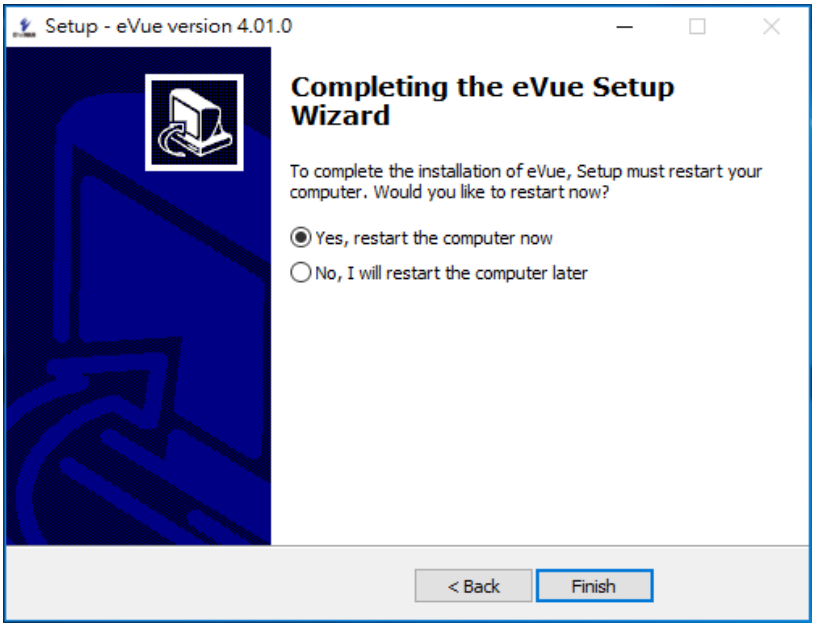

MongoDB is the database used by eVue and mainly stores devices and event information.

WinPcap is the industry-standard tool for link-layer network access, which allows applications to capture and transmit network packets.
Select the location for the program shortcuts, and click **Next** for the installations.
MongoDB and WinPcap are installed sequentially.

Lastly, read and accept the License Agreement for eVue.

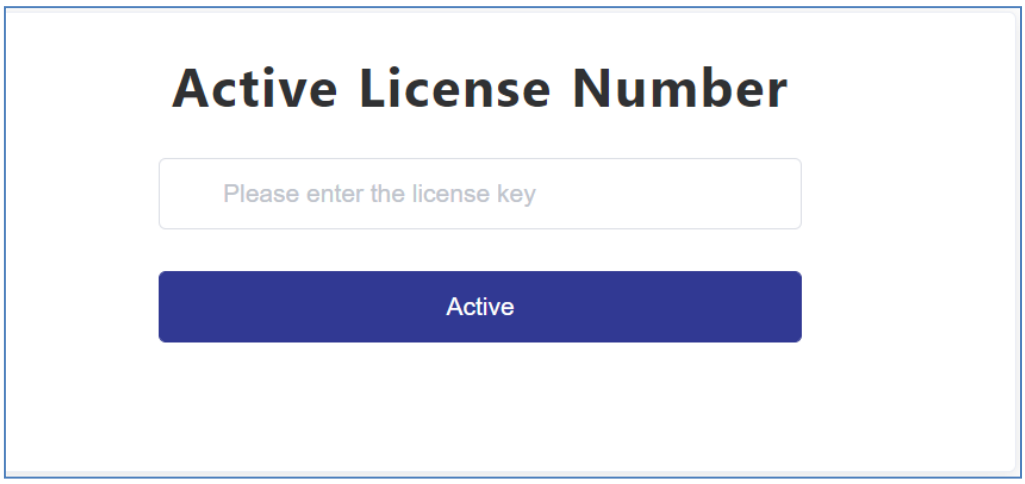



You will be prompted to restart the computer.



## Registration

The first time that you run eVue from **https:localhost:3001**, you will be required to register the software.
Enter the license key provided and click to validate.




**NOTE**: Ensure that these ports are open when using eVue,

Port 22: SSH
Port 69: TFTP
Port 161: SNMP get/set
Port 162: SNMP Trap
Port 3000, 3001: HTTP/HTTPS

**ARP** (Address Resolution Protocol) is used for EtherWAN product initial discovery.

# 3 Using eVue

## Login


In addition to **admin**, there are two other default login options: **technician** and **operator**. Users logged in as **operator** have read rights only (cannot modify any fields).

The default login name is: **admin**
(Login names are case sensitive)
The login password is: **admin**

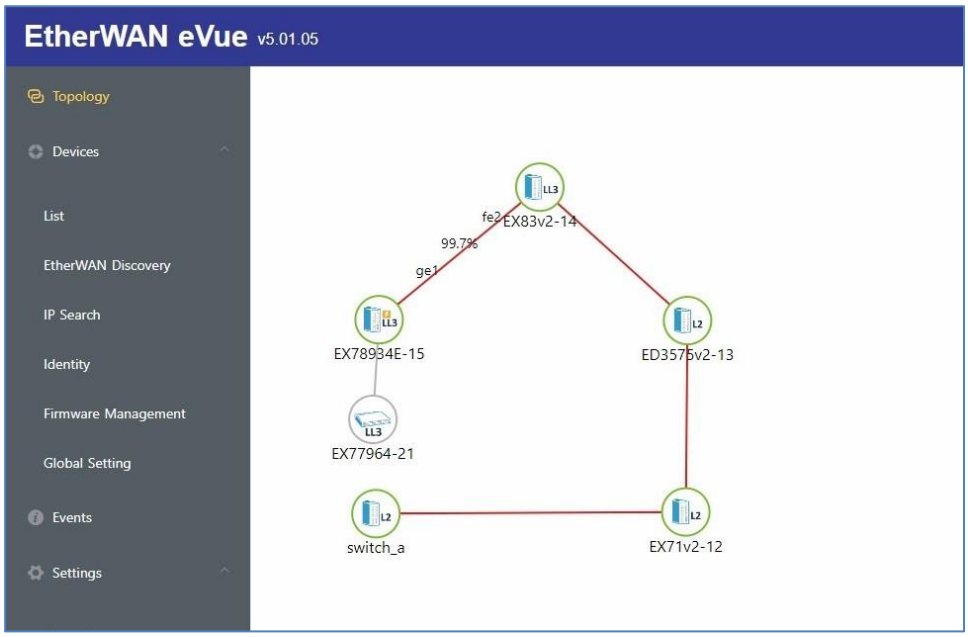
To access the software from the local (server) PC:
1. Open a web browser
2. In the Internet address bar, enter "localhost:3000" and hit Enter

To access the software from a remote (client) PC:

1. Open a web browser
2. In the Internet address bar, enter "<Server_ipaddress>:3000" and hit enter.

   (Example: 192.168.10.100:3000)

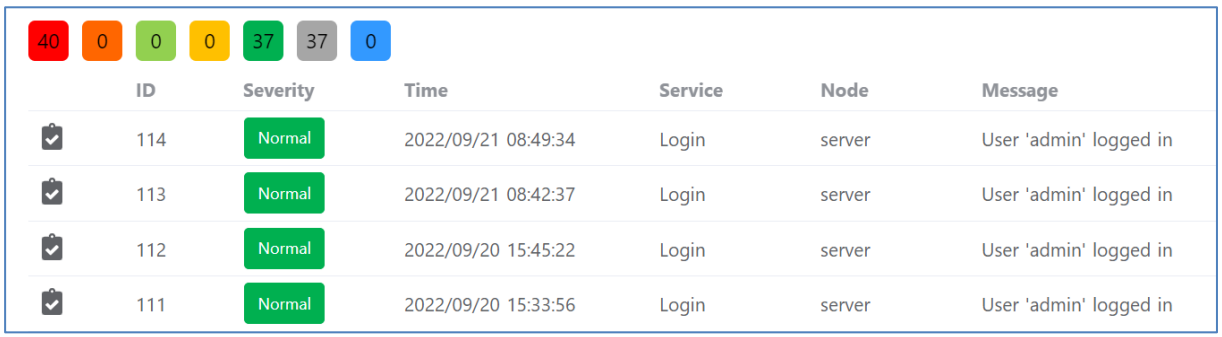
# Configuration and Use



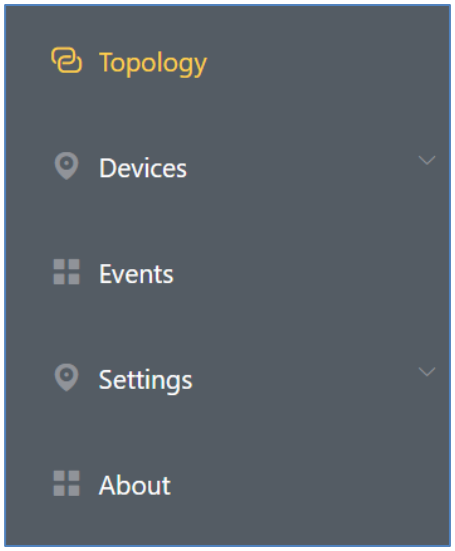

## Start screen

When eVue is launched, the Topology screen will display. The Topology view will be empty the first time eVue is run. The **Topology** view displays all EtherWAN devices that eVue has detected on the network, and have been added using the IP Range Search function. In the Topology view, you can see each device's IP address and device type (L2, LL3, L3, etc.). Dotted lines connecting devices represent blocked ports. Moving the mouse cursor over a specific link will display the real-time port utilization (Port utilization is 99.7% for the upper left link in the example above).

At the bottom of the screen, the **Events** section displays the most recent events by order of occurrence.



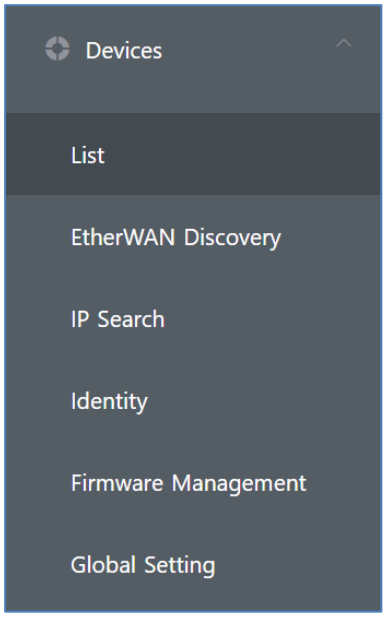
## Navigation




Use the navigation labels at the left of the screen to access specific screens and associated functions.

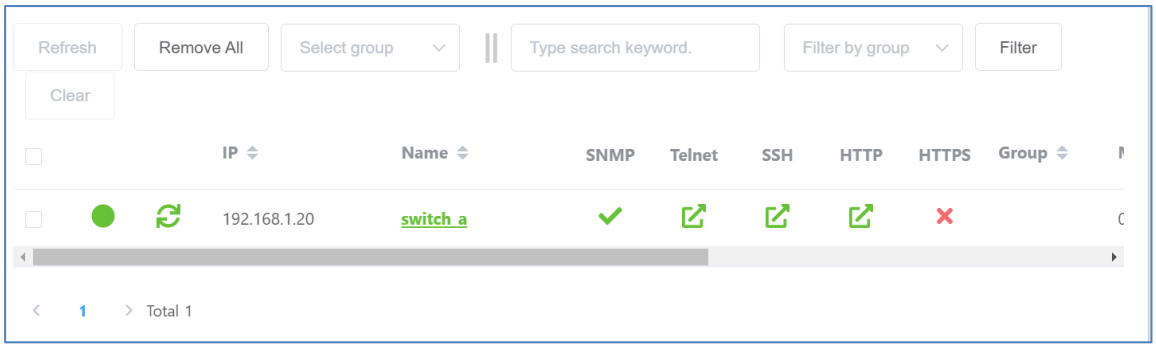
## Devices

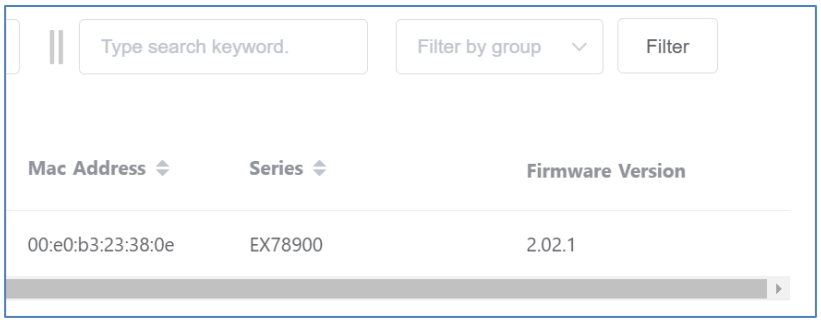
Clicking the **Devices** label opens a drop-down menu for five functions:
List, EtherWAN Discovery, IP Search, Identity, and Firmware Management



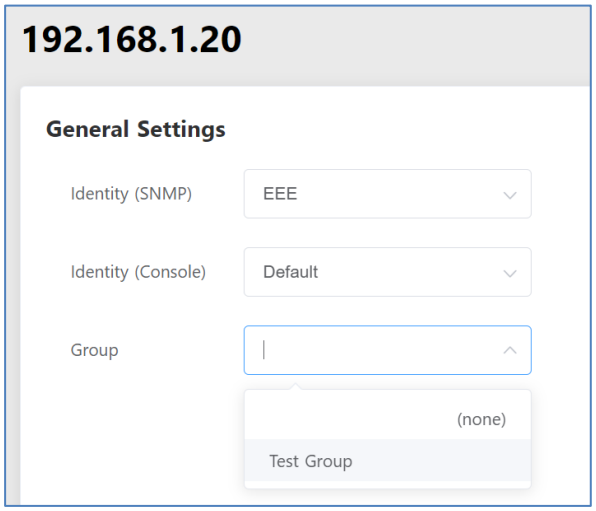
## List

This screen shows all devices currently monitored by eVue. To remove a specific device from the system, select the device by clicking the checkbox on the left, and then click the **Remove** button. Using the **Remove All** button will remove all devices.



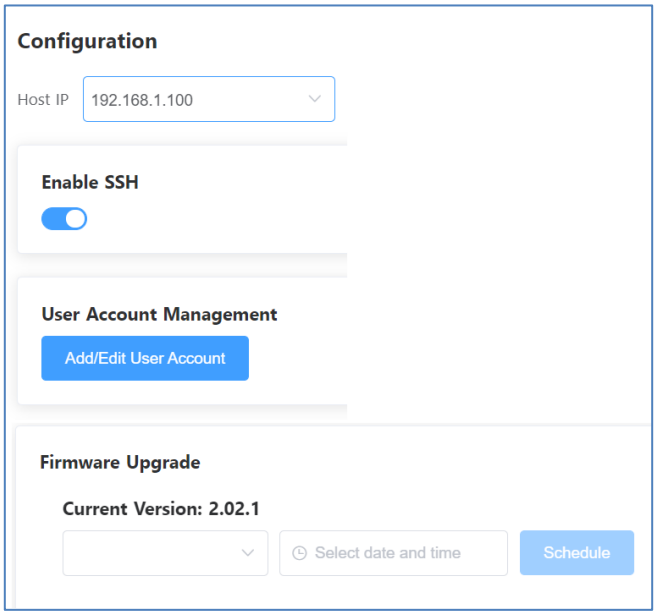

**Groups** – Devices can be assigned to user-defined groups for easier viewing and management. To add a new group, click on **Select group** and then **Add New Group**. Assign the new group a name and color, then click **Confirm**. The new group will be displayed in the **Topology** view. To add a switch to a defined group, click on the switch name. A new window will open with a **General Settings** panel on the left. Select the group from the dropdown list in the Group field. The click the **Update** button. The **List** view can be filtered by group, using the **Filter by group** and **Filter** buttons at the top right.



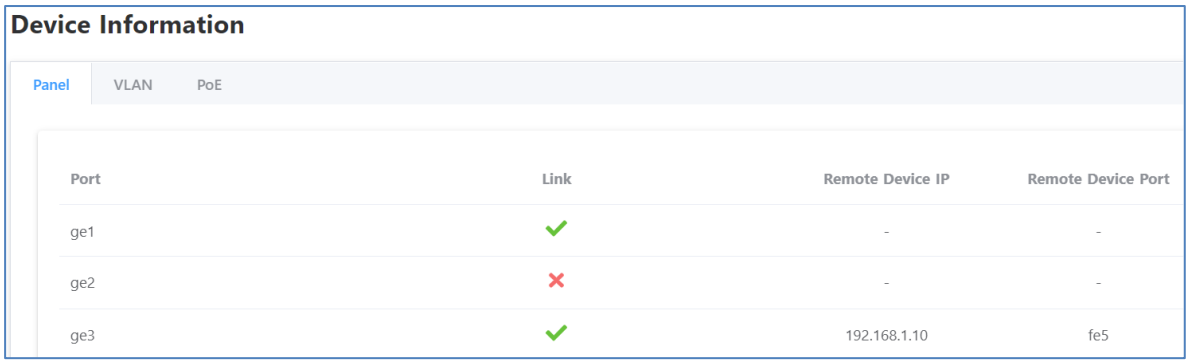
**Filter** – To quickly locate a specific switch, enter an IP address or a host name in the **Type search keyword** field, and click **Filter**. All device that match the search criteria will display

**Telnet, SSH, HTTP, and HTTPS** – You can directly connect to any switch on the list by clicking the icon under the corresponding protocol. An icon indicates that the protocol is not enabled on the device.

**Device Configuration** – Clicking on the device name in the **List** view opens a configuration screen that allows for SSH enabling, User Account Management, and Firmware Upgrade Scheduling functions.



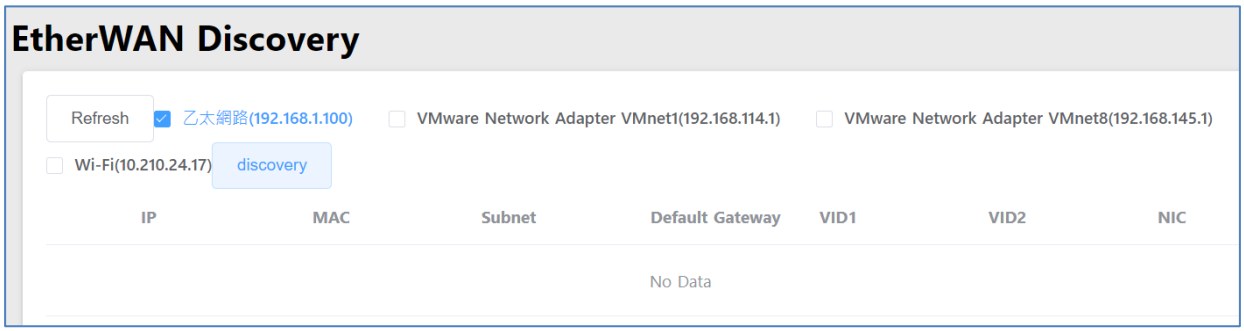

Device information for all known devices is displayed at the bottom of the configuration screen.




## EtherWAN Discovery

**EtherWAN Discovery** can discover all the devices in the same LAN that are not already listed by eVue.

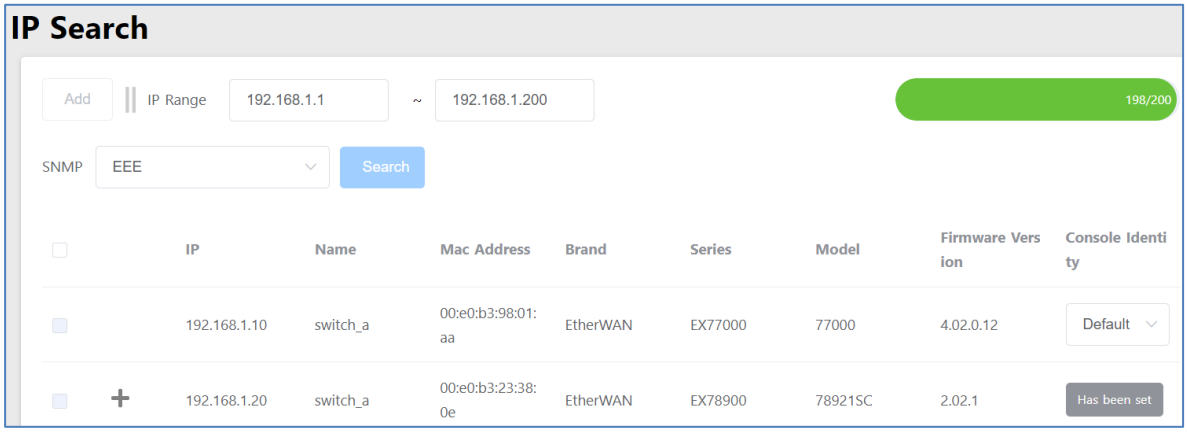
To start EtherWAN Discovery, click the **Refresh** button to show all the current network adaptors for the host machine. If you are running eVue on ***localhost:3000***, then the adaptors on your PC will be displayed.




Select the desired network interface by clicking the corresponding check box, and then click the **Discovery** button. A list of found devices will display, showing the IP address, MAC address, subnet, default gateway, and corresponding NIC.

### IP Search

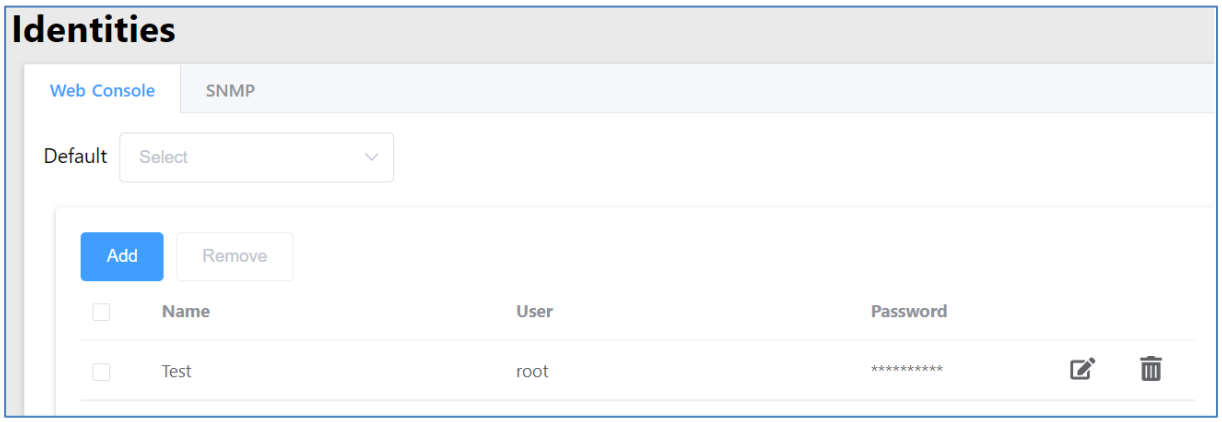
The IP search function can find desired devices from different network segments. To start a search, enter the desired IP range, SNMP identity, and click the **Search** button. The allowable IP range search is 512 nodes.



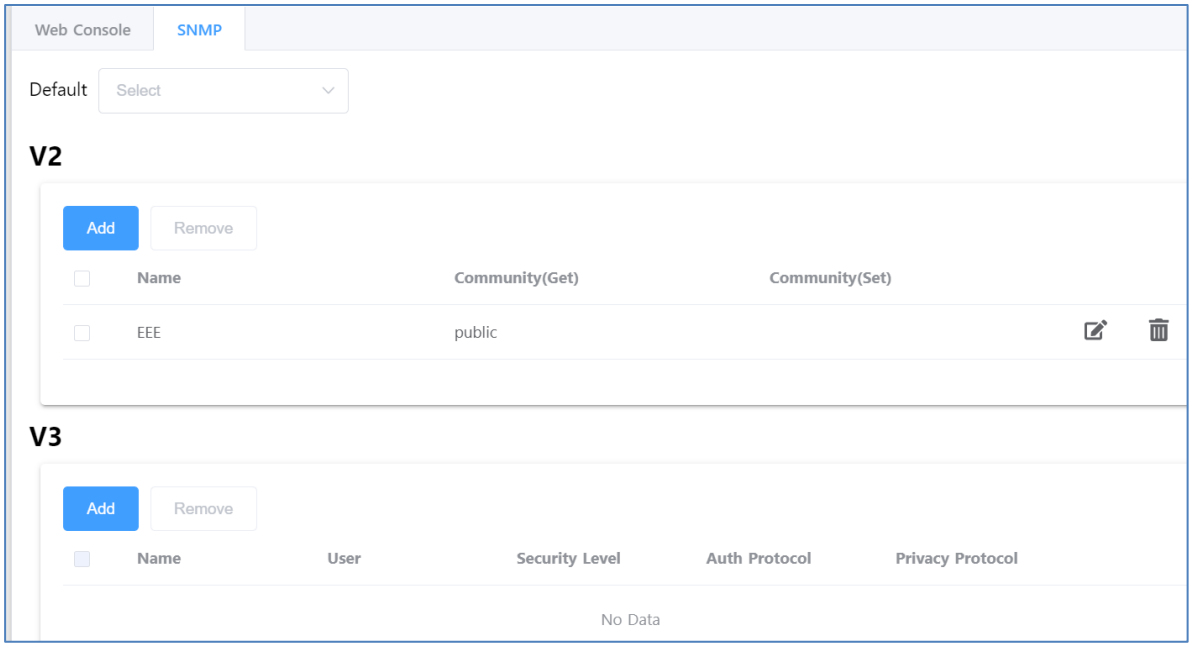

All found devices with SNMP enabled will be displayed. Click the + icon next to a device to set a console identity for that device. After an identity has been set, the device will show in both the **Topology** and **List** views.

### Identity

**Console identity:** Create console identities in order to use remote configuration and firmware upgrade functions. Click the **Add** button, then enter a name for the device identity, and the username and password required to access the device.

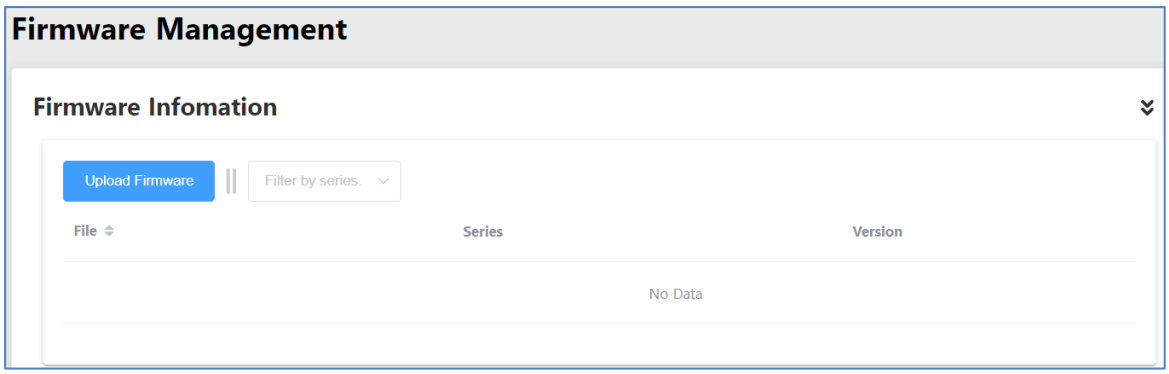



**SNMP identity:** When eVue used for the first time, it is necessary to establish SNMP identities. SNMP version can be v2 or v3 (Community get: public). After SNMP identity is set up, the **IP Search** function will be available. Click the **Add** button, then fill in the Community (Get) and Community (Set) fields.

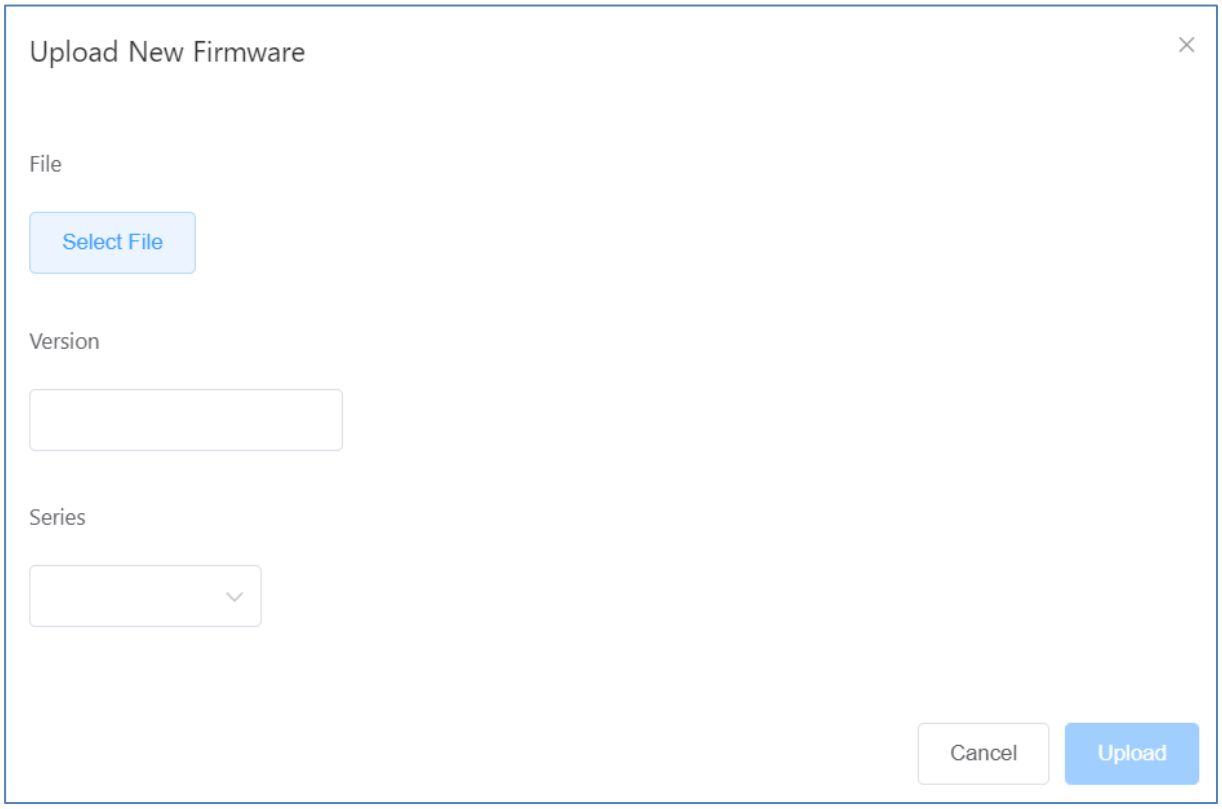



## Firmware Management

On the Firmware Management screen, devices are grouped by model number. Click on the corresponding icon to see information about that device model.

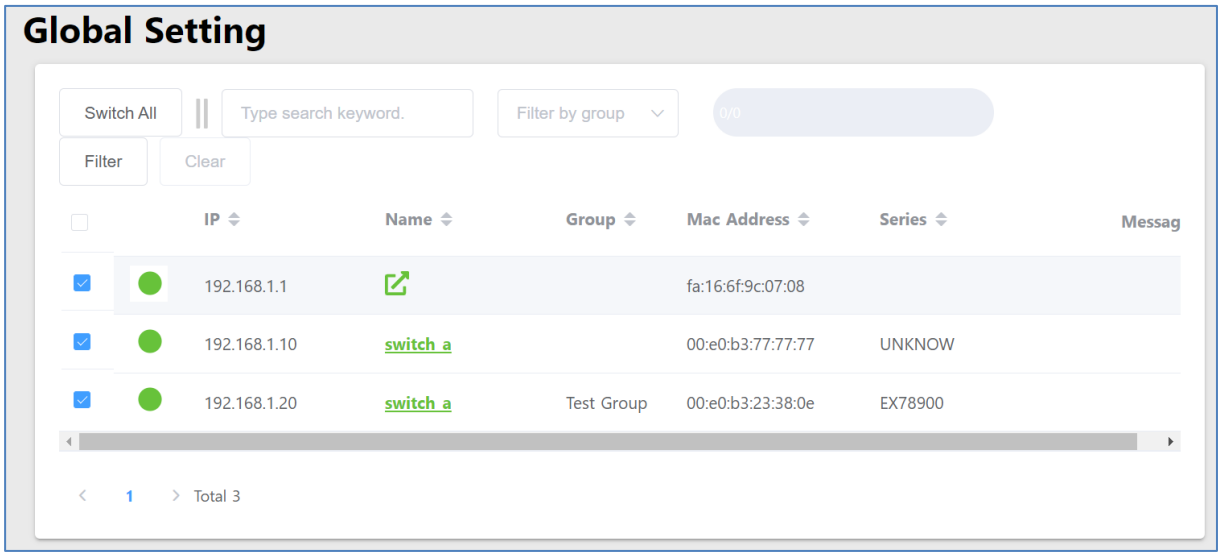



Click the **Upload Firmware** button to upload new firmware to a device. Select the desired firmware file, and fill out the **Version** and **Series** fields. Then click **Upload**.

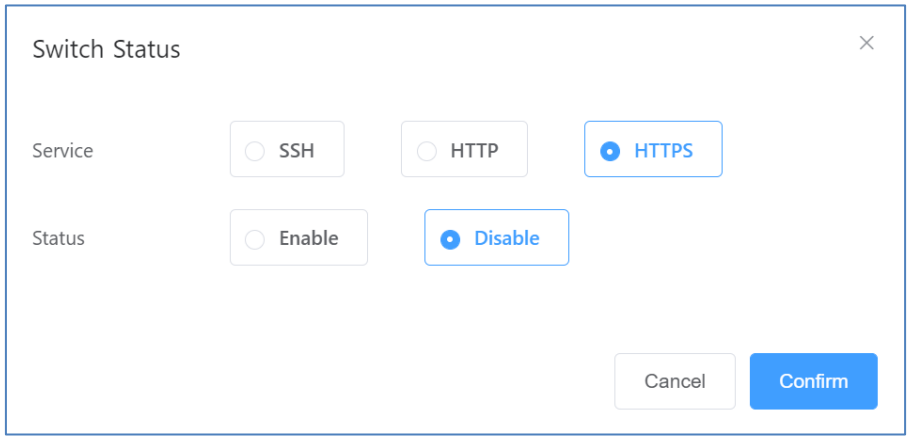


## Global Setting

On this screen, multiple switches can be configured to enable or disable SSH, HTTP, and HTTPS at once. Select the switches to be configured by clicking the check box to the right of the switch name. Then click the **Switch** button.

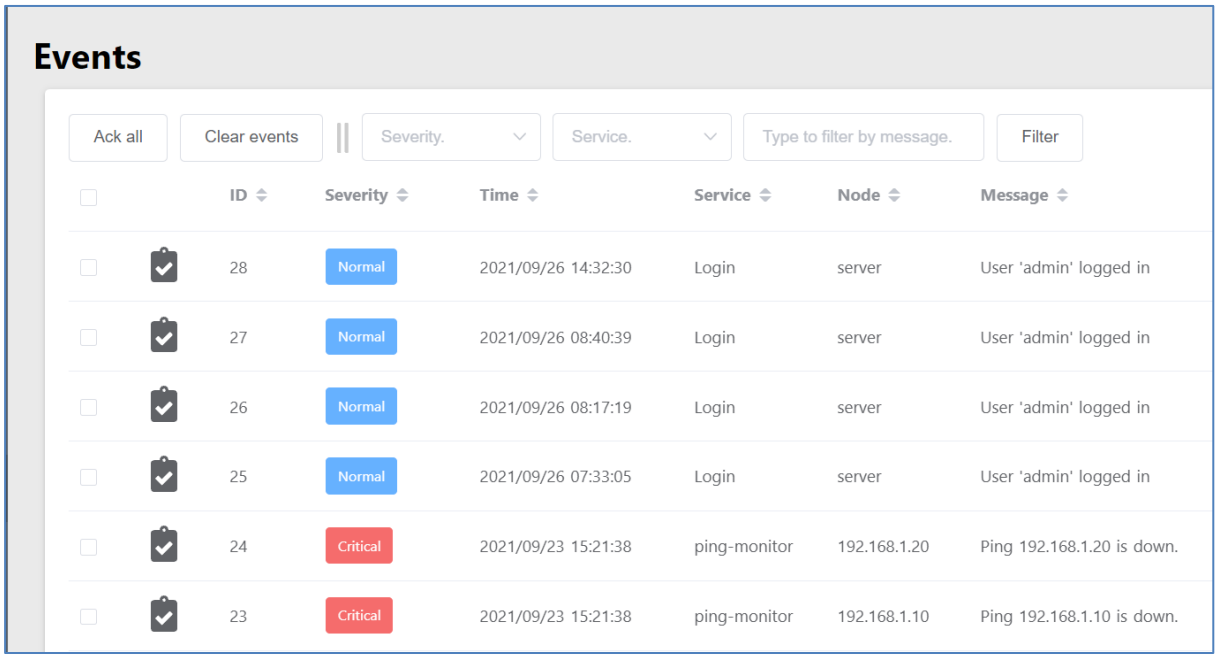



Select the service, then select enable or disable. Click Confirm to apply this configuration to all selected devices.



## Events

The Events screen displays the most recent events. All events can be acknowledged or removed by clicking the **Ack All** button in the upper left corner of the screen. Events can be filtered by severity, service (Ping-monitor, SNMP Monitor, or Login), or text in the Event message. The **Clear All** button allows for the clearing of either all events or events from a week ago.



Events can be sorted by:

1. ID number
2. Severity (All, Unknown, Cleared, Normal, Warning, Major, Critical)
3. Date
4. Service
5. Node
6. Message

Definitions for event severity levels:

**Critical (7)**

This state indicates that numerous devices on the network are affected by the event. Resolving this problem should be a priority for all personnel.

**Major (6)**

A device is completely down or in danger of going down. Attention should be paid to this problem immediately.

**Warning (4)**

An event has occurred that may require action. This severity can also be used to indicate a condition that should be noted (logged) but does not require direct action. An example would be a login failure, or when a link goes up unexpectedly.

**Normal (3)**

Informational message only. No action is required.

**Cleared (2)**

This severity is reserved for use in alarms to indicate that an alarm describes a self-clearing error condition that has been corrected, and service restored.

**Indeterminate (1)**

Severity for this event could not be determined.

The table below shows some example events and their corresponding severity level.

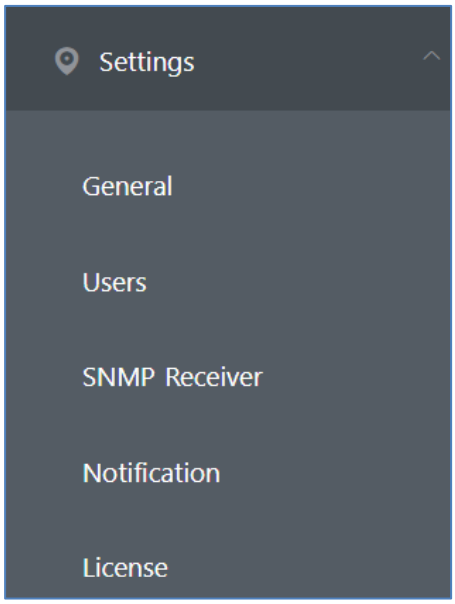
| Traps from Device | Critical | Major | Warning | Normal | Cleared |
|---|---|---|---|---|---|
| **Loopback detect** | | ✓ | | | |
| **MAC Notification** | | | ✓ | | |
| **Alpha-ring topology change** | | ✓ | | | |
| **Digital input (DI 01) is triggered** | | ✓ | | | |
| **Digital input (DI 02) is triggered** | | ✓ | | | |
| **Power up** | | | | ✓ | |
| **Power down** | ✓ | | | | |

| Traps from Device | Critical | Major | Warning | Normal | Cleared |
|---|---|---|---|---|---|
| PoE up | | | | ✓ | |
| PoE down | | ✓ | | | |
| PoE overload | ✓ | | | | |
| PoE system error | ✓ | | | | |
| Alpha-ring coupling topology change | | ✓ | | | |
| Storm detect | | ✓ | | | |
| Loopback detect recovery | | | | | ✓ |
| Dying gasp | ✓ | | | | |
| User login | | | ✓ | | |
| User logout | | | ✓ | | |
| User login failure | | ✓ | | | |
| Temperature over specified range | ✓ | | | | |
| Temperature under specified range | | | | ✓ | |
| Humidity over specified range | ✓ | | | | |
| Humidity under specified range | | | | ✓ | |
| Digital input is triggered | | ✓ | | | |
| Temperature within specified range | | | | | ✓ |
| Humidity within specified range | | | | | ✓ |
| Digital input within specified range | | | | | ✓ |
| Storm detect | | ✓ | | | |
| Storm detect recovery | | | | | ✓ |
| Loopback detect | | ✓ | | | |
| MAC Notification | | | ✓ | | |
| Alpha-ring topology change | | ✓ | | | |
| Digital input (DI 01) is triggered | | ✓ | | | |
| Digital input (DI 02) is triggered | | ✓ | | | |
| Power up | | | | ✓ | |
| Power down | ✓ | | | | |

| Traps from Device | Critical | Major | Warning | Normal | Cleared |
|---|---|---|---|---|---|
| eVue Login | | | | ✓ | |
| eVue Login fail | | | ✓ | | |
| eVue Login fail too many times (account locked) | | ✓ | | | |
| eVue monitoring: Ping up | | | | | ✓ |
| eVue monitoring: Ping down | ✓ | | | | |
| eVue monitoring: Telnet up | | | | | ✓ |
| eVue monitoring: Telnet down | | ✓ | | | |
| eVue monitoring: SSH up | | | | | ✓ |
| eVue monitoring: SSH down | | ✓ | | | |
| eVue monitorin: SNMP up | | | | | ✓ |
| eVue monitoring: SNMP down | | ✓ | | | |

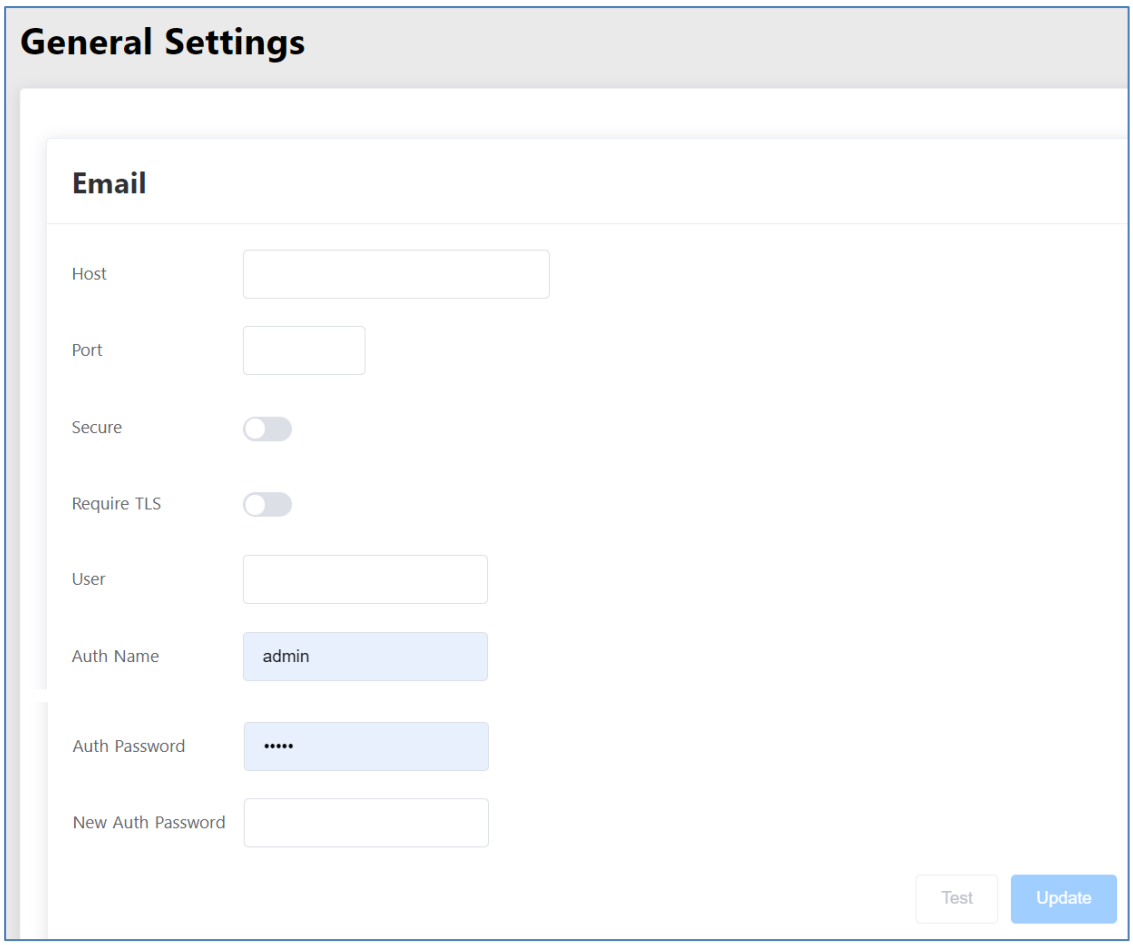
## *Settings*

Clicking the **Settings** label opens a drop-down menu for five functions: General, Users, SNMP Receiver, Notification, and License



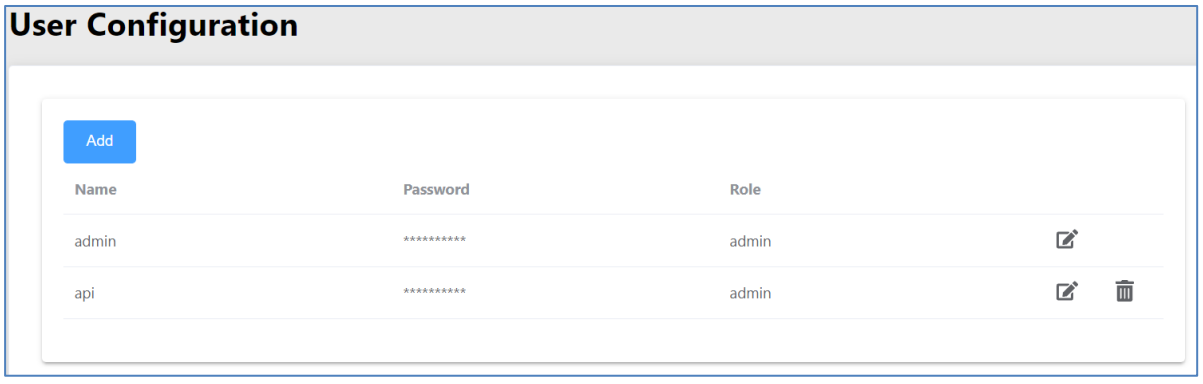

## *General*

Configure e-mail notifications on this screen. Fields are Host, Port, Secure, Require TLS (used to convey a request to ignore recipient-side policy mechanisms), User, Auth Name, and Auth Password.




## *Users*

Three types of user can be set up: Admin, Technician, and Operator. Admins have full read and configuration rights, Technicians only have rights to upgrade firmware, manage configuration files, and acknowledge events. Operators have read rights only.




In the User section, the password, contact email, and interface language can be set for the current user type. You must be logged in as that user type to make changes (Example: User logged in as **admin** can only modify fields related to **admin** user account.) The email account

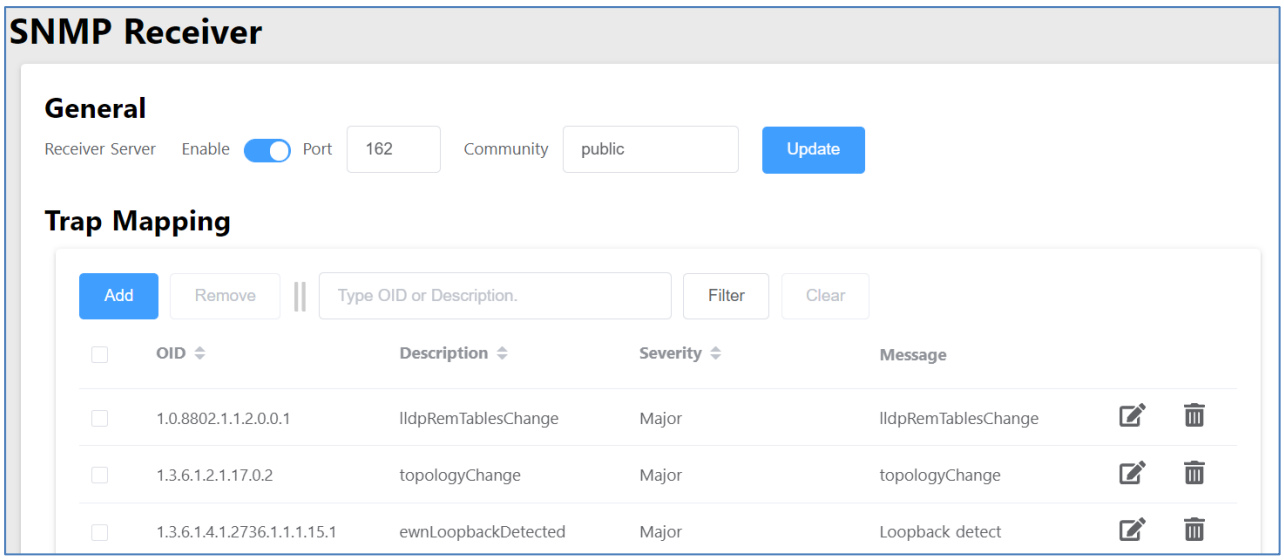
entered here is only used in case of a lost password. You can also set the Auto-logout Timeout.

Password complexity requirements are:

1. Password length is minimum 12 characters and maximum 35 characters, without spaces.
2. The password must contain characters from the following categories:
   - Uppercase English letters, (A to Z)
   - Lowercase English letters, (a to z)
   - Numbers, (0 to 9)
   - Non-alphanumeric characters

## *SNMP Receiver*

Configure the capture, display, and logging of SNMP traps on this screen.

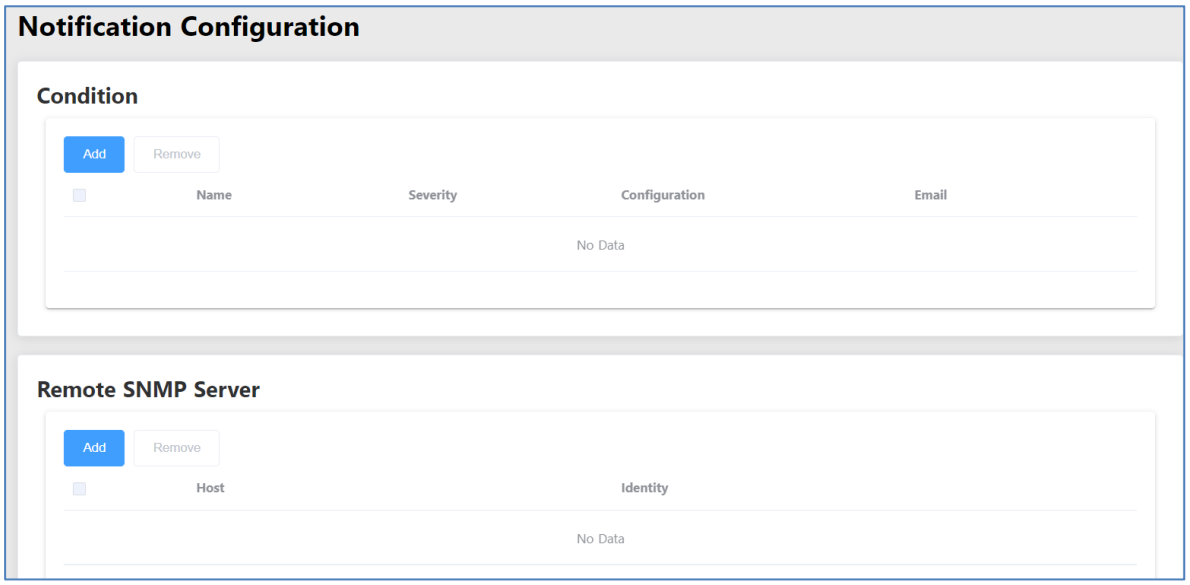


## Notification

**Notification Condition**

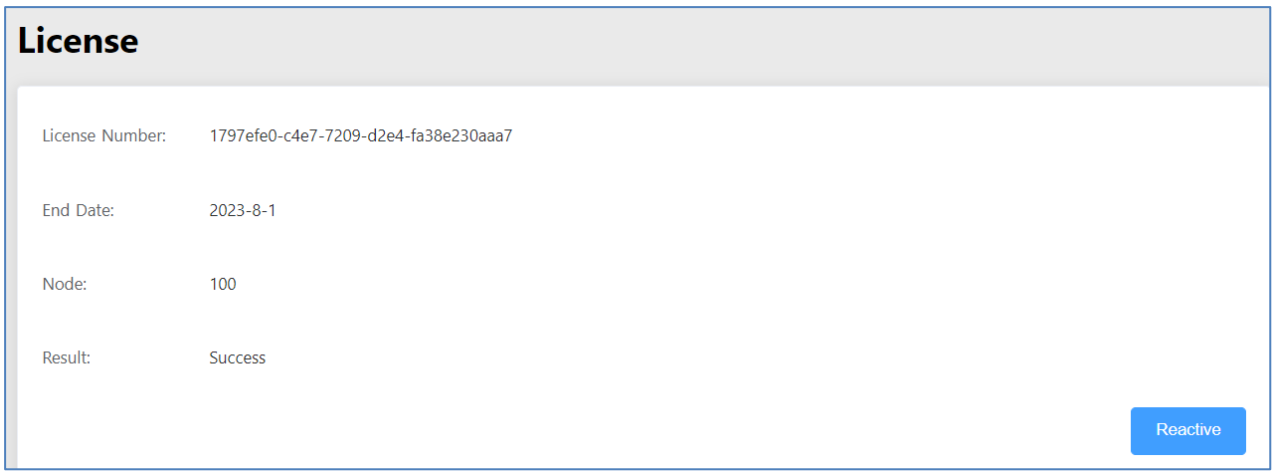
Click **+Add** button to create a new notification condition. Enter a name in the **Condition Name** field, and click **Update**.

In this section, remote SNMP servers can be added and removed. Click **Add** button to create a new remote SNMP server. Enter the IP address and the SNMP community.




## License

This is a read-only screen that displays current licensing information.



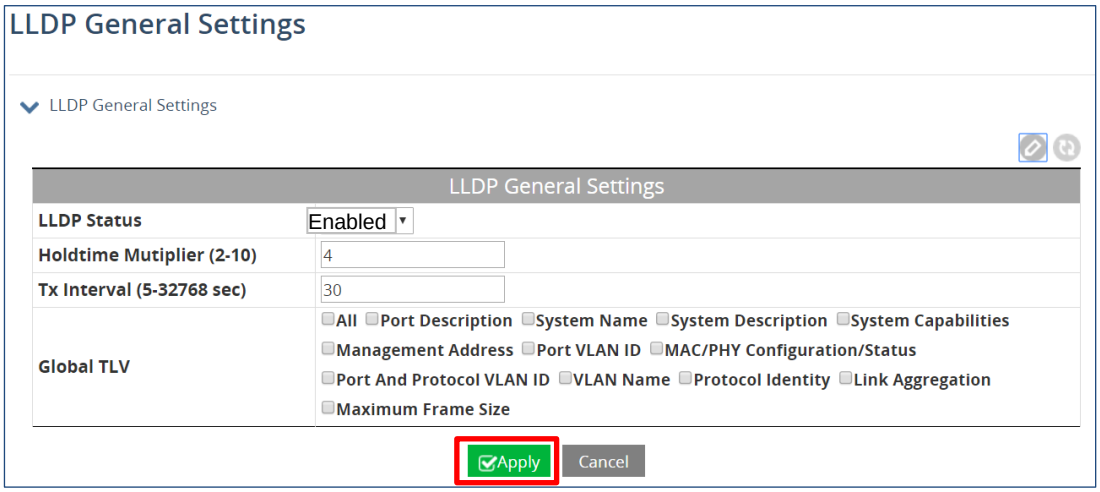
# Appendix I

Command reference for enabling LLDP on EtherWAN switches. (NOTE: Some legacy EtherWAN switches, such as the EX96000 and Espresso series, do not support LLDP, and are incompatible with eVue.

**EG99000 CLI:**

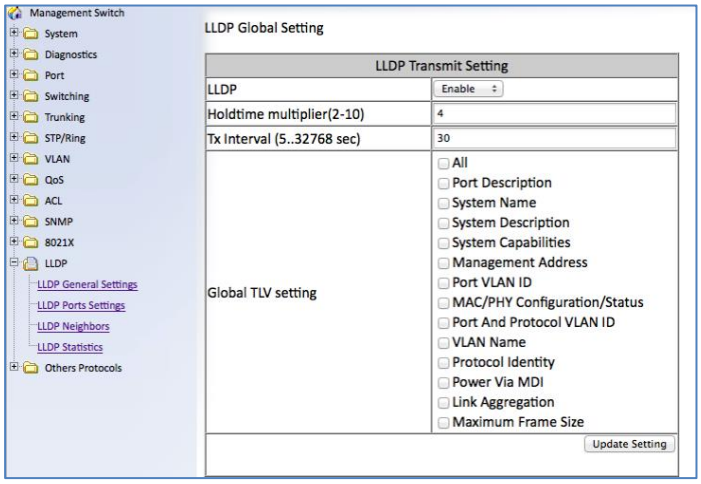
| Command Mode | Global Configuration |
|---|---|
| Syntax | lldp enable |
| Parameters | None |
| Example usage | switch_a(config)# lldp enable |

**EG99000 GUI:**



| | |
|---|---|
| Command Mode | Global Configuration |
| Syntax | lldp enable |
| Parameters | None |
| Example usage | switch_a(config)# lldp enable |

All EX Series Managed Switches GUI



# Contact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