Application Notes

Taurus UCX
Advanced Ethernet Security
Table of Contents

1.1. OVERVIEW ........................................................................................................ 3
1.2. APPLICATION ........................................................................................... 3
1.2.1. Transparent ...................................................................................... 3
1.2.2. Separated BYOD ................................................................................ 3
1.2.3. Dedicated ......................................................................................... 4
1.3. SETTING THE MODE ............................................................................. 4
1.3.1. Setting the Mode Using LDC .............................................................. 4
1.3.2. Setting the Mode Using LW3 .............................................................. 6
1.3.3. Setting the Mode Using the REST API Interface ......................... 6
1.1. Overview

This section offers a brief explanation about the different options available through the Advanced Ethernet Security feature.

**DIFFERENCE:** The advanced ethernet security feature is available only from FW package v1.6.0.

This feature is a port-based VLAN setting, which allows the user to decide which network(s) the USB-C ports are connected to, and thus which network(s) the connected devices can use. This way the connected devices can be separated from the corporate network, increasing network security.

There are three options available, which are the following:

- **Transparent:** this is the default mode, with a network openly used by Taurus and the BYOD devices,
- **Separated BYOD:** the network provided for the BYOD devices is separated from the control network
- **Dedicated:** each connected BYOD device receives an independent network.

1.2. Application

These port diagrams offer a simple breakdown of the different modes of the feature.

**INFO:** Only one mode can be active at the same time.

1.2.1. Transparent

1.2.2. Separated BYOD

1.2.3. Dedicated
1.3. Setting the Mode

This can either be set through the Lightware Device Controller (LDC), LW3 or the REST API interface.

1.3.1. Setting the Mode Using LDC

**ATTENTION!** Make sure that you are connected to the device via the P1 Ethernet port (Secure Control LAN), otherwise you could lose connection to the device.

Step 1. Open the LDC, or download it from our website (www.lightware.com) if you haven't done so yet.

Step 2. Click on the Control menu. By default, the Ethernet tab will appear. You will see a VLAN Presets section under the ports.

Step 3. Here you can choose the desired mode via the diagrams. Default is the Transparent mode, you can choose a different mode by clicking on it, and the click on the **Apply** button. The change is immediate, there is no need for reboot.

**INFO:** You can see which network the USB-C ports are connected to by checking the colored triangles in the lower right corner of the port tiles.

**INFO:** The active VLAN preset will have a green tick in the upper right corner.

**Active VLAN preset is Separated BYOD**

**Transparent is the default VLAN preset**
Activ

Active VLAN preset is Dedicated

Setting the mode in advanced view

Step 1. Navigate to the /V1/MEDIA/ETHERNET node.

Step 2. Here you can find the VLAN preset property, where you can set the ethernet security mode.

The default is Transparent mode.

To separate the BYOD network from the main line, type SeparatedByod.

To provide a separate network for each BYOD device, type Dedicated into the text field.

For more information about the LDC, please see the User's Manual of the device.

1.3.2. Setting the Mode Using LW3

The mode can be set by using the Lightware 3 (LW3) protocol.

Terminal Application

The LW3 protocol commands can be applied to the switcher using a terminal application. You need to install one of them on your control device, for example Putty or CLI.

Establishing Connection

Follow the steps to establish connection to the switcher:

Step 1. Connect the device to a LAN over Ethernet.

Step 2. Open the terminal application (e.g. Putty).

Step 3. Add the IP address of the device (default: DHCP) and the port number (6107).

Step 4. Select the Raw connection type, and open the connection.

Once the terminal window is opened, you can enter the LW3 protocol commands.

Setting the transparent mode

SET /V1/MEDIA/ETHERNET.VlanPreset=Transparent
pw /V1/MEDIA/ETHERNET.VlanPreset=Transparent

Separating the BYOD network from the main line

SET /V1/MEDIA/ETHERNET.VlanPreset=SeparateByod
pw /V1/MEDIA/ETHERNET.VlanPreset=SeparateByod

Creating a separate network for each BYOD device

SET /V1/MEDIA/ETHERNET.VlanPreset=Dedicated
pw /V1/MEDIA/ETHERNET.VlanPreset=Dedicated

For more information about the LW3 interface, please see the User's Manual of the device.
1.3.3. Setting the Mode Using the REST API Interface

REST API interface can be easily accessed via a web browser's plugin, or the REST API requests can be applied to the switcher using a terminal application. You need to install one of them on your control device, for example, Putty, CLI or Curl.

**Curl**

Curl is a command line tool that can also connect to the Taurus REST SERVER and display communication in a terminal window. It supports data transferring with HTTP and HTTPS standards and handles the basic authentication (username and password) in Windows® and Linux operating systems. Multi-line commands are also accepted, so a script can be stored in a .txt file for future reference.

Check if the Curl package is installed on your system. Type into your console: curl. When the answer is 'curl: try 'curl --help' for more information', curl is installed.

Some web browser plugins (e.g. REST Client) display the curl version of the sent request. Once the terminal window is opened, you can enter the commands.

**Setting the Transparent Mode**

```plaintext
POST http://192.168.0.125/api/V1/MEDIA/ETHERNET.VlanPreset HTTP/1.1

body: transparent
```

**Separating the BYOD Network from the Main Line**

```plaintext
POST http://192.168.0.125/api/V1/MEDIA/ETHERNET.VlanPreset HTTP/1.1

body: separate byod
```

**Creating a Separate Network for Each BYOD Device**

```plaintext
POST http://192.168.0.125/api/V1/MEDIA/ETHERNET.VlanPreset HTTP/1.1

body: dedicated
```

For more information about the REST API interface, please see the User’s Manual of the device.