123 Manual to configure a VLAN in the LP-SGW2400 Switch.

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The following procedure will show you how to configure the VLANs via Web interface and the command lines of the switch. First of all, we will explain in a simple manner what a VLAN is.

What is a VLAN? A VLAN, or Virtual Local Area Network, is the grouping of several switched network equipment into a logical network under specific conditions such as: ports, IP addresses, MAC addresses, or protocols. The VLANs eliminate the physical limitations of the interconnections in physical devices. They also make the network creation easier, without needing more than one computer, as well as allowing the control of the network resources efficiently.

We shall mention that the LP-SGW2400 Switch is designed to configure the VLANs through physical ports. Since the VLANs are configured in a logical manner, they allow an effortless configuration. You have two options to access the setting console:

A.   Through the WEB console (graphic interface).

B.   Through the command interface console, by means of the serial cable provided.

For this first part of the document we will use the option A (through the WEB console). To do this, please connect your equipment to a switch port and locate it in the corresponding segment. Access it with its address by default (192.168.2.1) which you can change by doing the following procedure:

1

Go to the properties of your network card and select **Protocol Internet**, **Propiedades**, as shown in **Figure 1**.
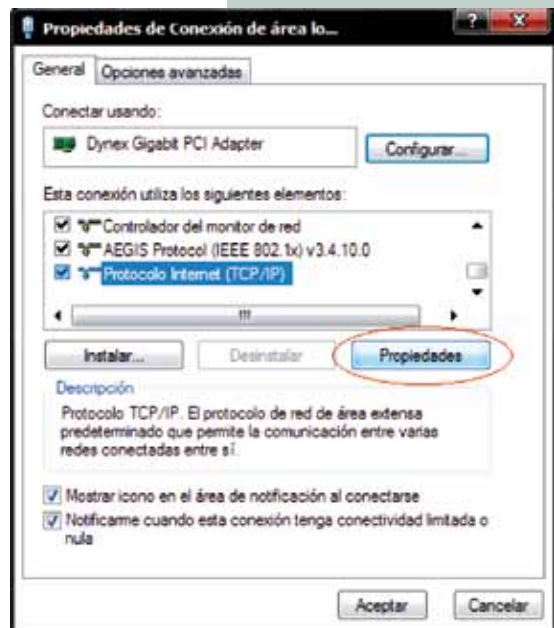

Figure 1

2

Select **Usar la siguiente dirección IP** and enter an IP address in the LP-SGW2400 IP range by default. In this example we have selected the address **192.168.2.24**, the LP-SGW2400 has the default address 192.168.2.1. In **Máscara de subred** type 255.255.255.0, as shown in **Figure 2**.

Figure 2

3

Open the browser of your preference and type the address in the address bar, as shown in **Figure 3**.
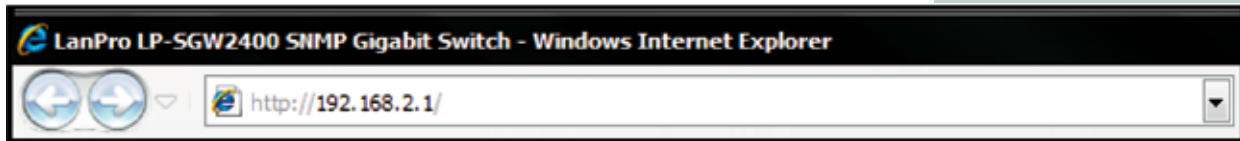

Figure 3

4

The equipment will request your password, which must be left blank by default. Select **Apply**, as shown in **Figure 4**.

Figure 4

5

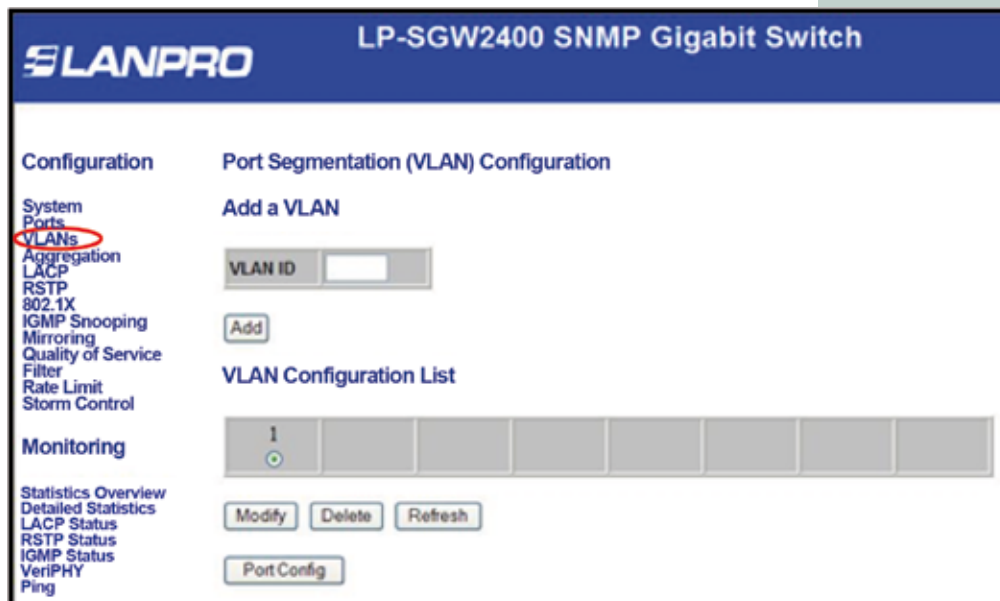Proceed to select **VLANs** in the configuration options, as shown in **Figure 5**.

Figure 5

6

The LP-SGW2400 has a VLAN configured by default, which has all the ports. To create a new VLAN, enter its indicative number (VLAN ID); number **2** for this example. Select **Add**, as shown in **Figure 6**.
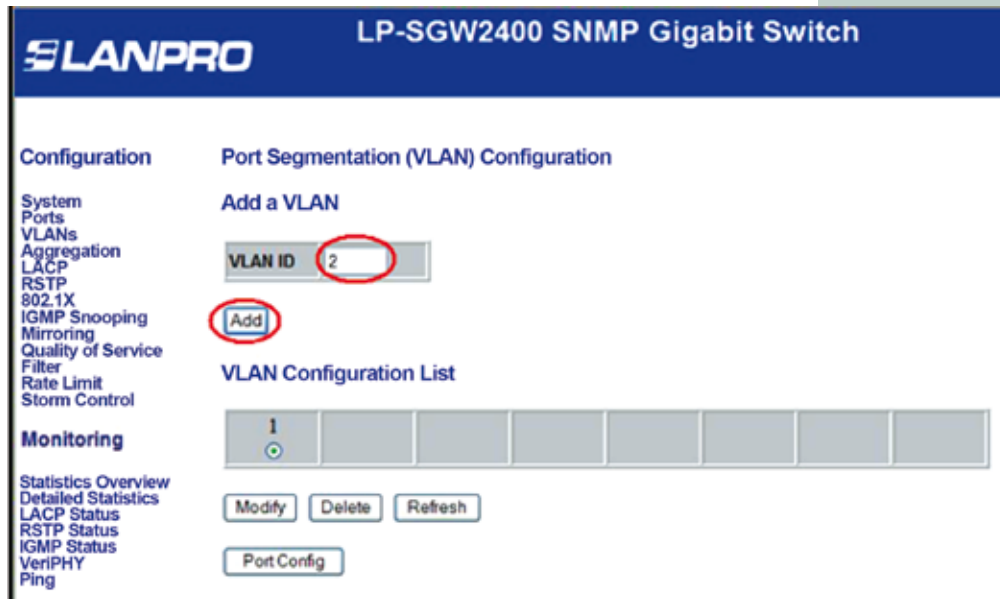
Figure 6

7

A window corresponding to the port assignment will be displayed. Check the ports that will be part of this VLAN. It is important to remember that a port can be part of more than one VLAN. For this example, the ports **1** to **8** will be members of the new VLAN (the number of ports assigned will depend on your requirements). Once you have finished select **Apply**, as shown in **Figure 7**.
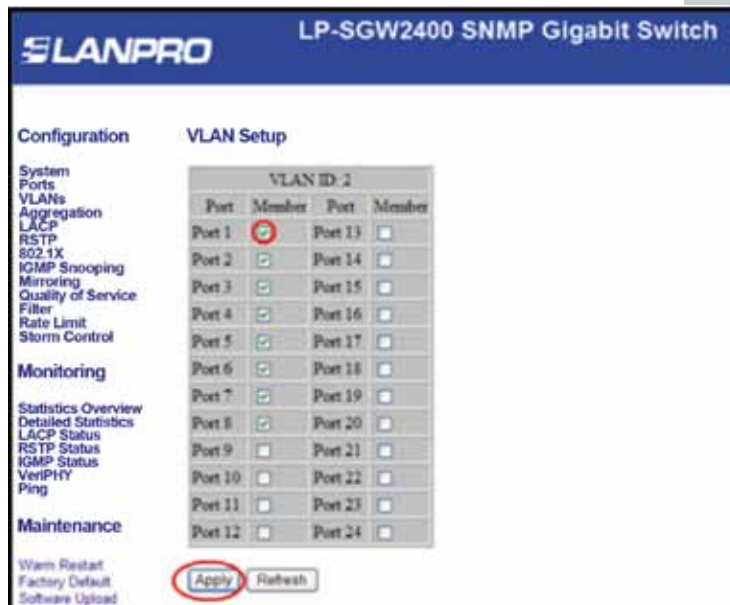
Figure 7

8

Proceed to configure the VLAN ports. Select the corresponding VLAN and click on **Port Config**, as shown in **Figure 8**.
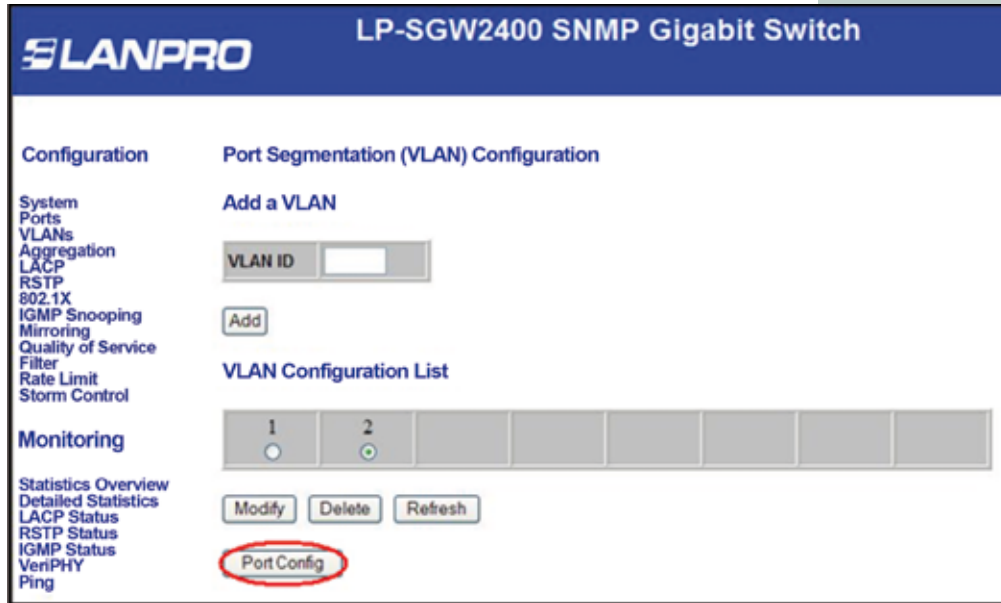
Figure 8

9

In the port configuration window, select the corresponding values depending on your requirements. For this example the TAG of the new VLAN (VLAN 2) is assigned to the frames sent via the ports **1** to **8**. This is possible by clicking the ports in **VLAN aware Enabled** column. Then, in the **Pvid** column select the VLAN which frames will be tagged (remember you may add more than one VLAN), as shown in **Figure 9**.

Figure 9

10

Remember that you must select **Apply** at the end of the **Port Configuration** page or **VLAN Per Port Configuration** in order to apply the configuration.

11

To exit the switch configuration, please select **Logout**, as shown in Figure 11.

Figure 10

Steps to configure the VLANs in the LP-SGW2400 Switch through the command interface console.

In this second part of the document we will use the option B (through the Command Interface Console). You shall connect first your equipment from one of the COM ports to the switch console serial port (COM1 in this example).
Open the program for Telnet connections of your preference, such as Hyper Terminal by Windows, and configure a name for the Telnet connection, as shown in **Figure 1**.

Figure 1

1

Select the COM port by which you are going to make the connection. Next, configure the port parameters for the LanPro LP-SGW2400 Switch (port COM1 is defined in the example), as shown in **Figure 2**.
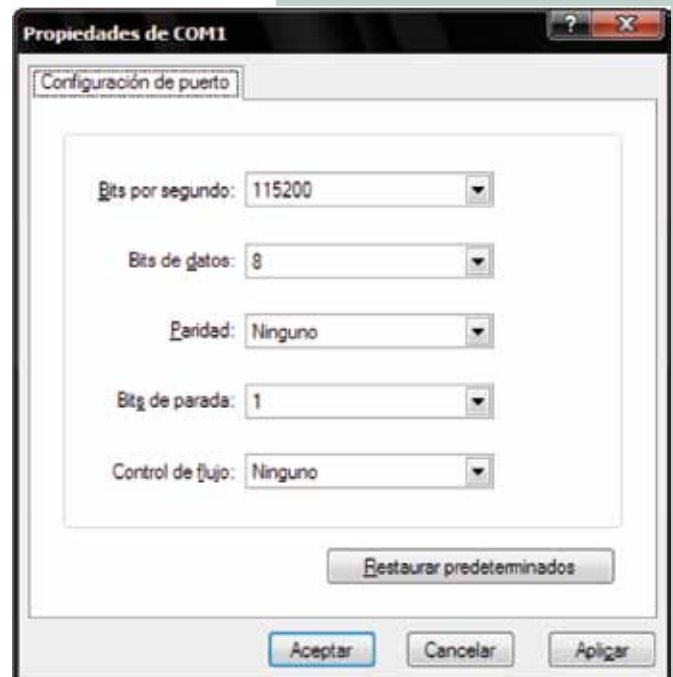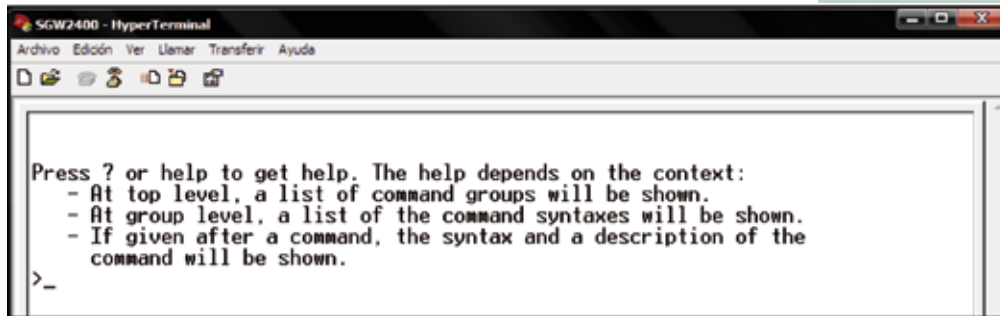
Figure 2

2

By accepting the port configuration parameters, a window for the command interface will be displayed. Press **ENTER** to go to the switch configuration. A window as in **Figure 3** will be shown.
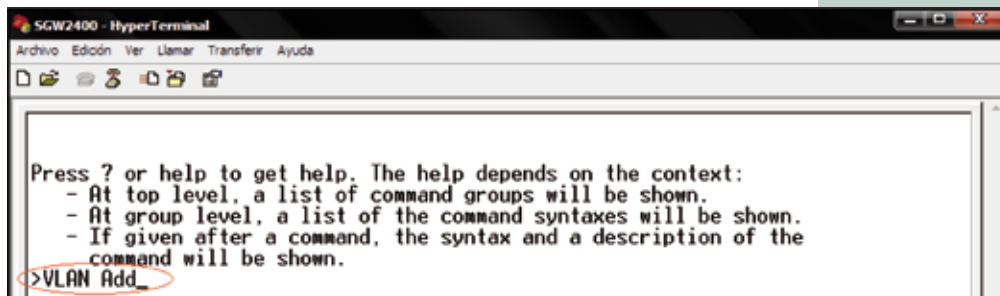
Figure 3

3

Proceed to create a VLAN (different from the VLAN 1 by default). To do so, please use the following command as shown in **Figure 4**.
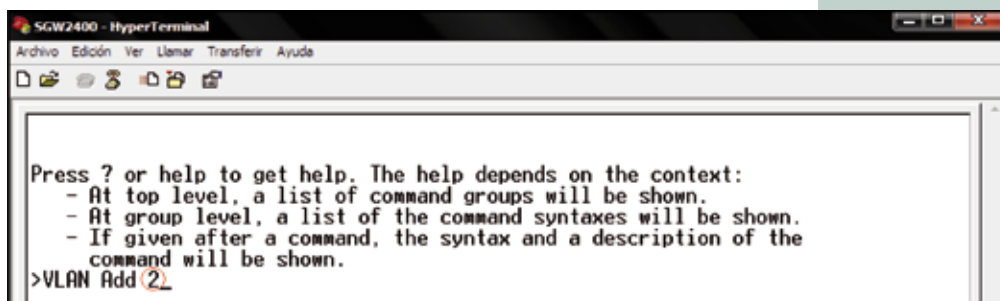

Figure 4

4

After the command **VLAN Add**, type **VLAN ID** for the new VLAN you are going to create. This ID is a number ranging from 1 to 16 (remember that this ID identifies the new VLAN and it must be different from 1 which is the VLAN by default used to manage the switch). Please see **Figure 5**.
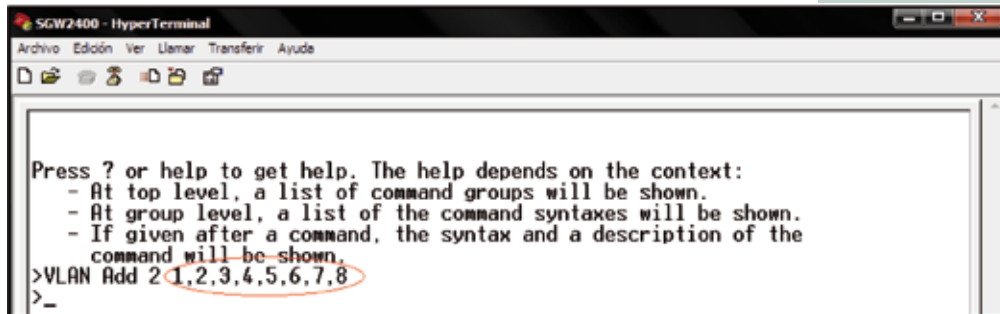
Figure 5

5

In the same command assign the ports that correspond to the new VLAN created (for example: VLAN 2). It is important to remember that you can assign multiple ports to one VLAN; the number of ports will depend on the client requirements. For this example, ports 1 to 8 will be assigned. See **Figure 6**.
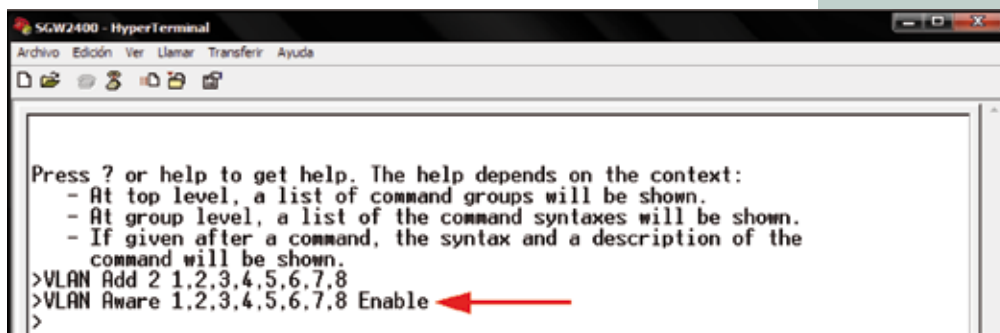

Figure 6

6

To this extend, the configured ports are members of the new VLAN, however, the frames that will be sent through these ports do not have the VLAN TAG which they belong. In order to assign the TAG to the frames, please enter the following command (see **Figure 7**).
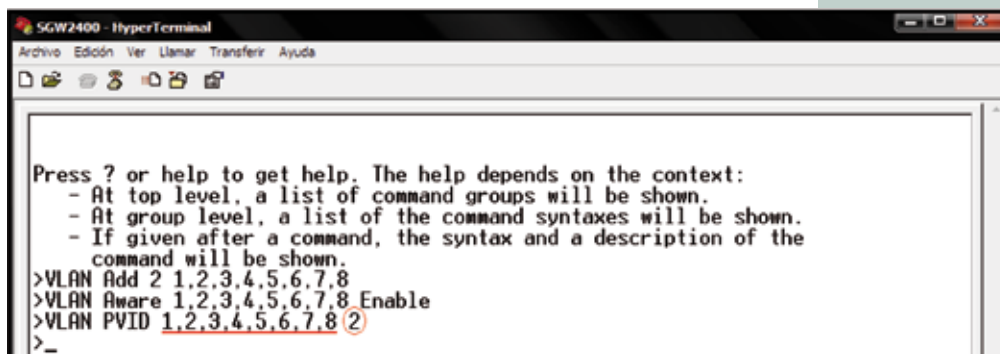

Figure 7

NOTE: Observe that in **Figure 7** the command **VLAN Aware** is used. It is followed by the ports previously assigned as members of the new VLAN (VLAN 2 or VLAN ID 2). The command ends with the word **Enable** to enable the command. In case you want to disable it, use the same syntaxes with the word **Disable**, instead of **Enable**.

7

To this extend, the configured ports are members of the new VLAN, however, the frames that will be sent through these ports do not have the VLAN TAG which they belong. In order to assign the TAG to the frames, please enter the following command (see **Figure 8**).
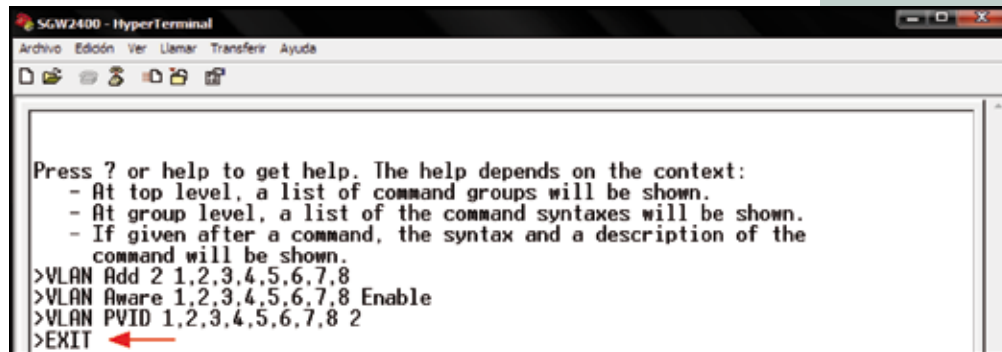

Figure 8

NOTE: Observe that in **Figure 8** the command **VLAN PVID** is used. It is followed by the ports previously defined as members of the new VLAN (VLAN 2). Then, the VLAN ID of the new VLAN is written. For this example, the number 2 indicates the VLAN ID 2 or VLAN 2, as highlighted in the red circle.

8

At this point the VLAN was created and certain numbers of ports were assigned. To exit the switch configuration use the command **EXIT**, as shown in **Figure 9**.

Figure 9