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

LPSGW2400\_M123\_ENB01W



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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 <b>Protocol</b>	Propiedades de Conexión de área lo
Internet, Propiedades, as shown in Figure 1.	General Opciones avanzadas
	Conectar usando:
	Dynex Gigabit PCI Adapter Configurar
	Esta conexión utiliza los siguientes elementos:
	Controlador del monitor de red  AEGIS Protocol (IEEE 802 tx) v3.4.10.0  Controlador del monitor de red  Controlador internet (TCP/IP)
	•
	Instalar Desinstalar Propiedades
	Descripción Protocolo TCP/IP. El protocolo de red de área extensa predeterminado que permite la comunicación entre varias redes conectadas entre sí.
	<ul> <li>Mostrar icono en el área de notificación al conectarse</li> <li>Notificame cuando esta conexión tenga conectividad limitada o nula</li> </ul>
Figure 1	Aceptar
2	
Select <b>Usar la siguiente dirección IP</b> and enter an IP address in the LP-SGW2400 IP range by default. In this	Propiedades de Protocolo Internet (TCP/
example we have selected the address <b>192.168.2.24</b> , the LP- SGW2400 has the default address 192.168.2.1 In <b>Máscara</b> de subred type 255.255.255.0 as shown in <b>Figure 2</b>	Puede hacer que la configuración IP se asigne automáticamente si au red es compatible con este recurso. De lo contrario, necesita consultar con el administrador de la red cuál es la configuración IP apropiada.
ae subrea type 255.255.255.0, as shown in righte 2.	Obtener una dirección IP automáticamente
	Usar la siguiente dirección IP:
	Dirección IP 192 . 168 . 2 . 25
	Máscara de subred: 255 . 255 . 255 . 0
	Puerta de enlace predeterminada: 192 . 168 2 . 254
	(%) Obtainer ta dimension del secondor DUIS en templementaria
	Usar las siguientes drecciones de servidor DNS:
	Servidor DNS preferido:
	Servidor DNS alternativo:
	Opciones avanzadas
Figure 2	Aceptar Cancela

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<i> [</i> LanPro LP-S	5W2400 SNMP Gigabit Switch - Windows Internet Explorer	
	http://192.168.2.1/	
	Figure 3	
4		

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



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

SLANP	LP-SGW2400 SNMP Gigabit Switch
Configuration System Ports Aggregation LACP RSTP 802.1X IGMP Snooping Mirroring Quality of Service	Port Segmentation (VLAN) Configuration Add a VLAN VLAN ID
Rate Limit Storm Control Monitoring Statistics Overview Detailed Statistics LACP Status RSTP Status IGMP Status VeriPHY Ping	1 Modify Delete Refresh Port Config

Figure 5

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**.

EP-SGW2400 SNMP Gigabit Switch			
Configuration	Port Segmentation (VLAN) Configuration		
System	Add a VLAN		
VLANs Aggregation LACP RSTP	VLAN ID		
802.1X IGMP Snooping Mirroring	Add		
Quality of Service Filter Rate Limit Storm Control	VLAN Configuration List		
Monitoring			
Statistics Overview Detailed Statistics LACP Status RSTP Status	Modify Delete Refresh		
IGMP Status VeriPHY Ping	Port Config		
	Figure 6		

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**.

SLANP	RO	LP-SGW2400 SNMP Gigabit Switch						
Configuration	VLAN S	Setup						
System		VLAN	CID 2					
VLANs Anoregation	Port	Member	Port	Menber				
LACP	Post 1	0	Post 13					
802.1X	Port 2	B	Port 14	Ö				
Mirroring Quality of Service	Port 3	8	Port 15					
Filler Rate Limit	Port 4	8	Port 16	0				
Storm Control	Port 5	0	Port 17	0				
Monitoring	Port 6	5	Port 18					
	Port 7	E	Port 19	0				
Detailed Statistics	Port 8	0	Port 20	0				
RSTP Status	Port 9		Post 21	0				
VeriPHY	Post 10	0	Post 22	0				
	Port 11	0	Port 23					
Maintenance	Port 12		Port 24					

Figure 7

8)

9

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

EP-SGW2400 SNMP Gigabit Switch					
Configuration System Ports VLANS Aggregation LACP RSTP 802.1X IGMP Snooping Mirroring Quality of Service Filter Rate Limit Storm Control Monitoring Statistics Overview Detailed Statistics LACP Status IGMP Sta	Port Segmentation (VLAN) Configuration Add a VLAN VLAN ID Add VLAN Configuration List 1 2 0 0 Modify Delete Refresh Port Config				
	Figure 8				

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**.

ELANPRO						
Configuration	VLAN	Per Port Co	onfiguration			
System Ports VLANs	Port	VLAN aware Enabled	Ingress Filtering Enabled	Packet Type	Pvid	
Aggregation	Port 1	2		All O Tagged Only	2 •	
ISTP 02.1X	Port 2		1 E1:	All O Tagged Only	2 .	
MP Snooping irroring	Port 3	2	(2)	All Tagged Only	2 -	
uality of Service Iter	Port 4			All O Tagged Only	2 .	
ate Limit torm Control	Port 5	1		All O Tagged Only	2 .	
Ionitoring	Port 6			• All Tagged Only	2 .	
Statistics Oceanieur	Port 7		E	All O Tagged Only	2 .	
etailed Statistics	Port 8	3	[ [ <sup>1</sup> ]	All Tagged Only	2 .	
STP Status MP Status	Port 9			All O Tagged Only	1	
eriPHY	Port 10			All O Tagged Only	1	

Figure 9

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.

Monitoring	
Statistics Overview Detailed Statistics LACP Status	Modify Delete Refresh
IGMP Status VeriPHY Ping	Port Config
Maintenance	
Warm Restart Factory Default Software Upload Configuration File Transfer	

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**.

Descripción de la conexión
Nueva conexión
Escriba un nombre y elija un icono para la conexión:
Nombre:
SGW2400
lcono:
Aceptar Cancelar

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**.

<u>Bits por segundo:</u>	115200	
Bits de gatos:	8	
<u>P</u> aridad:	Ninguno	
Bitg de parada:	1	
Control de fjujo:	Ninguno	

Figure 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**.

SGW2400 - HyperTerminal	
Archivo Edición Ver Llamar Transferir Ayuda	
] # ≈ \$ ® B #	
Press ? or help to get help. The help depends on the context: - At top level, a list of command groups will be shown. - At group level, a list of the command syntaxes will be shown. - If given after a command, the syntax and a description of the command will be shown. >VLAN Add_	





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**.





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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**.

SGW2400 - HyperTerminal     Archive Ediclin Ver Llenar Transferir Avuda	
ඩ <i>සි ම</i> ටී මට පී ස්	
Press ? or help to get help. The help depends on the context: - At top level, a list of command groups will be shown. - At group level, a list of the command syntaxes will be shown. - If given after a command, the syntax and a description of the command will be shown. >VLAN Add 2 1,2,3,4,5,6,7,8 >_	
Figure 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**.

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**).

No. 10 SGW2400 - HyperTerminal				
Archivo Edición Ver Llamar Transferir Ayuda				
රිම් මරී මරීම ම්				
Press ? or help to get help. - At top level, a list of - At group level, a list - If given after a comman command will be shown. >VLAN Add 2 1,2,3,4,5,6,7,8 >VLAN Aware 1,2,3,4,5,6,7,8 >VLAN PVID 1,2,3,4,5,6,7,8 2	The help dep command grou of the comman d, the syntax Enable	ends on the co ps will be sho d syntaxes wil and a descrip	ntext: wn. 1 be shown. tion of the	

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