



24 Port Nway Fast Ethernet PoE Web Smart Switch



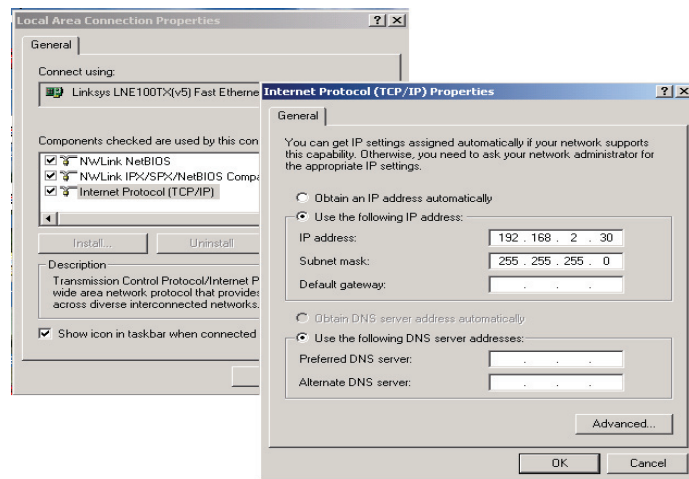
User's Manual DN-95313

Web Smart Switch Configure

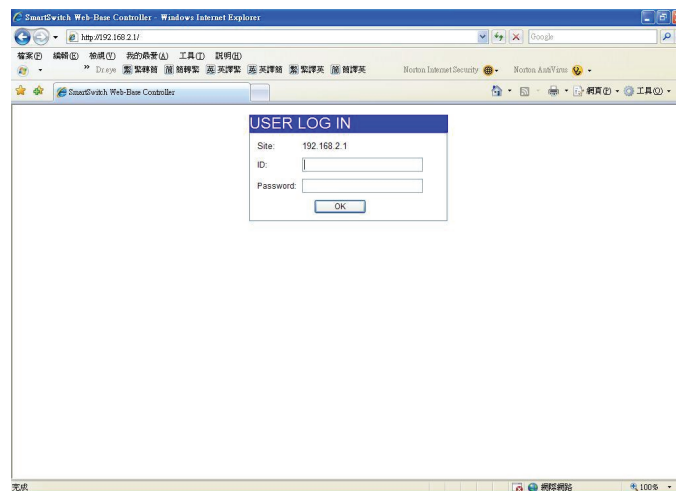
Please follow the steps to configure this Web Smart switch.

Step 1: Use a twisted pair cable to connect this switch to your PC.

Step 2: Set your PC's IP to 192.168.2.xx.



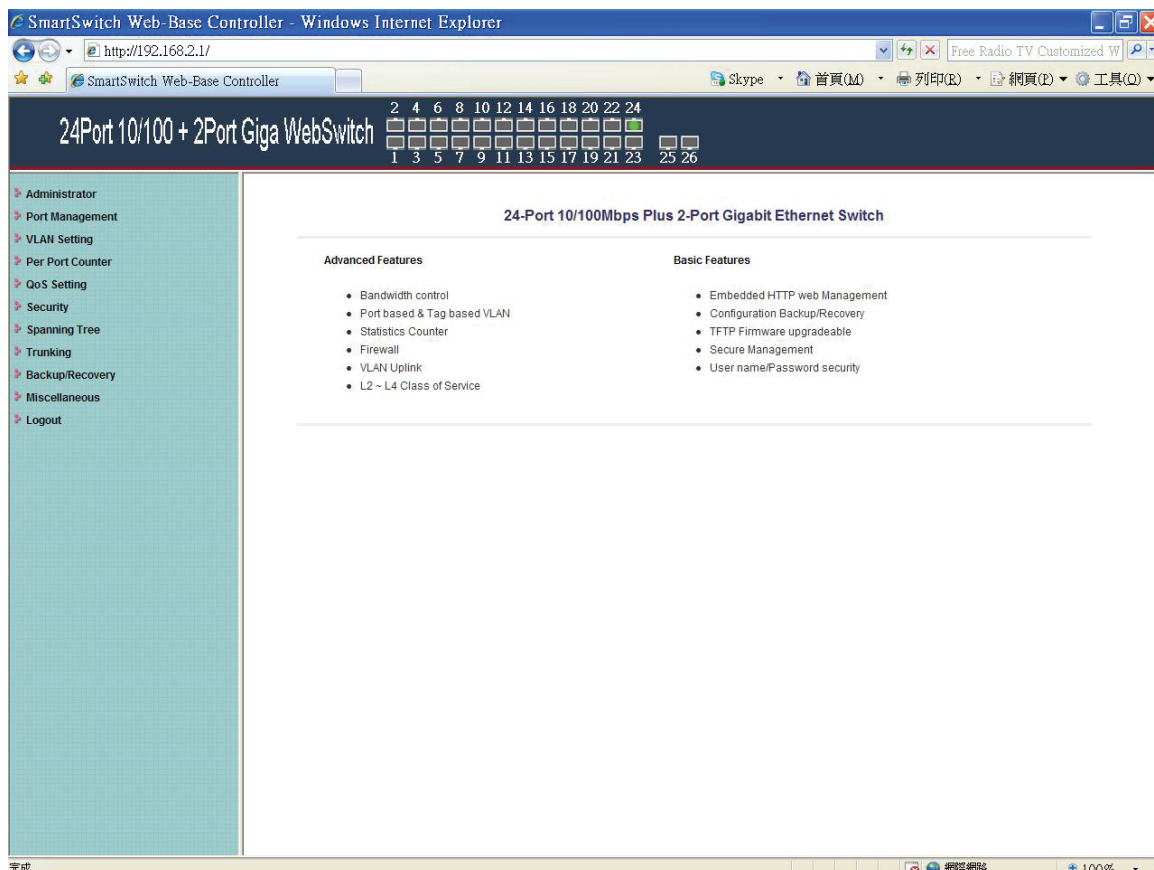
Step 3: Open the web browser (like IE...), and go to 192.168.2.1 Then you will see the login screen.



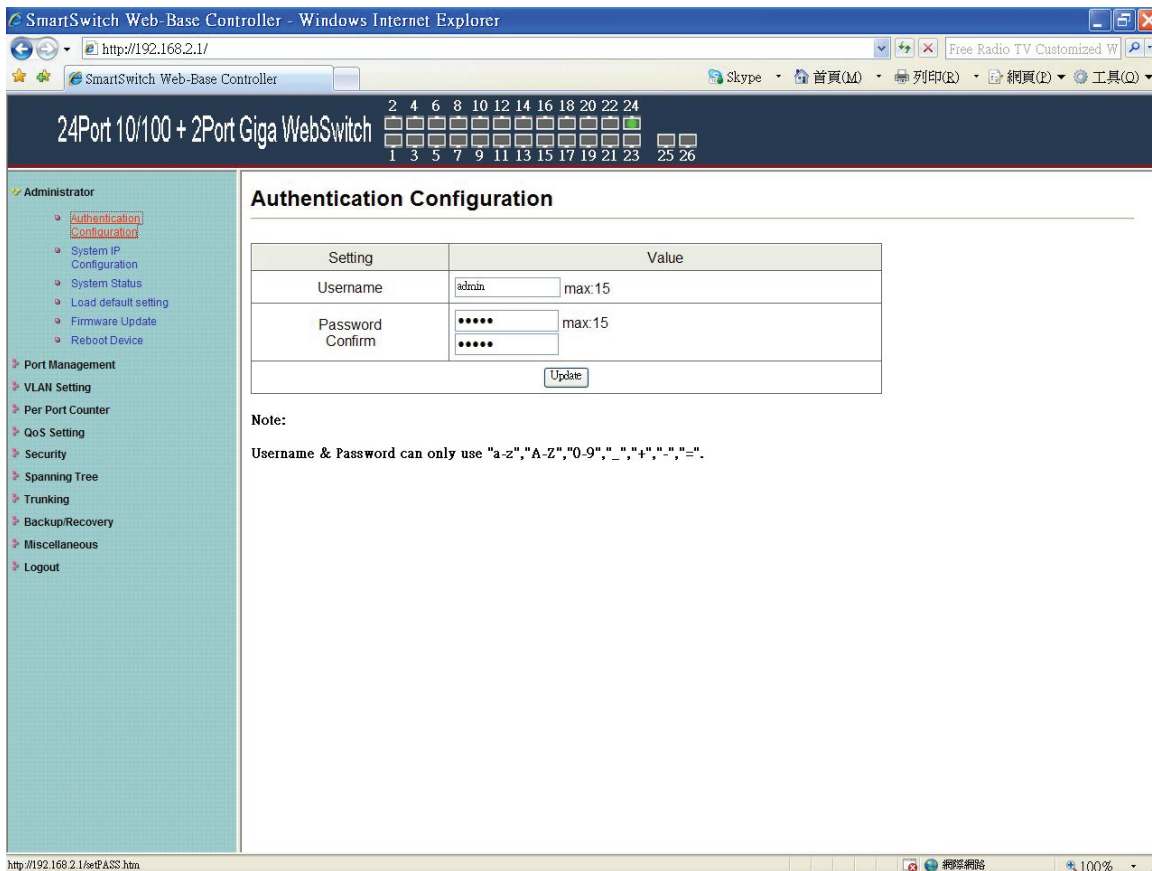
ID and the password: admin

Step 4: After the authentication procedure, the home page shows up. Select one of the configurations by clicking the icon.

- Administrator
- Port Management
- VLAN Setting
- Per Port Counter
- QoS Setting
- Security
- Spanning Tree
- Trunking
- Backup/Recovery
- Miscellaneous
- Logout



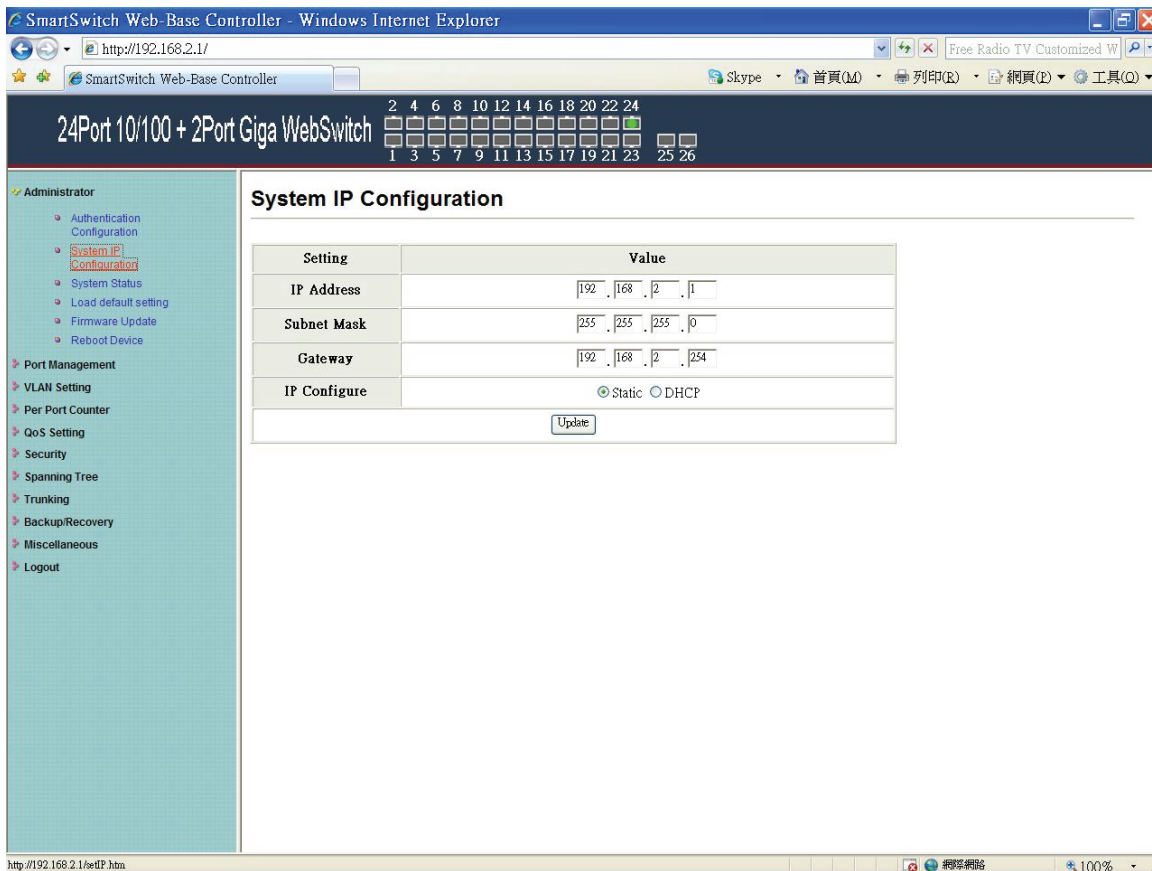
Administrator: Authentication Configuration



1. Change the user name and the password.
2. Click “Update” to confirm the new change.

Now, you can use the new user name and the password.

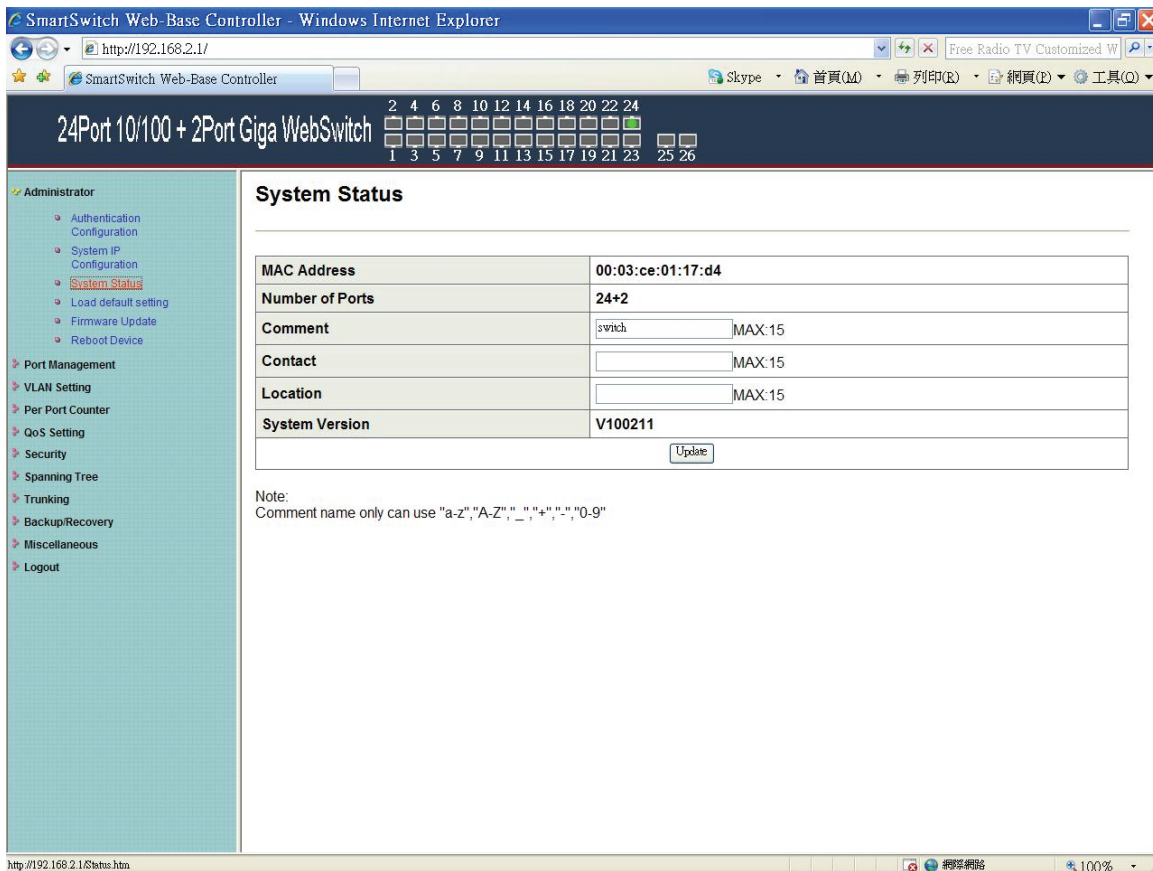
Administrator: System IP Configuration



1. Change the IP address: type the new IP address or select DHCP IP configuration.
2. Click "Update" to confirm the new change.
"Setting Process OK!!" will be shown on the screen.

Now, the setting of "System IP Configuration" is finished.

Administrator: System Status

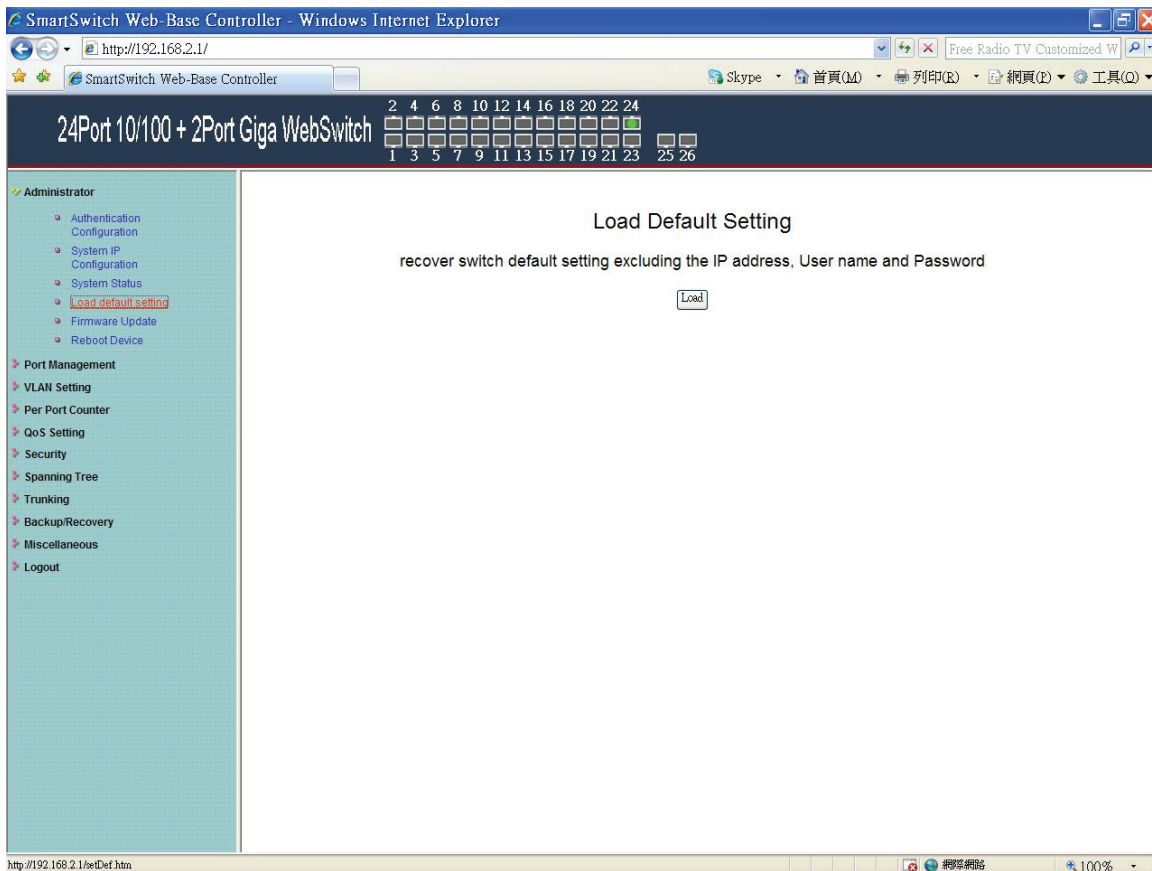


MAC address and system version will be shown on the screen.

1. Change the new comment of this switch by typing the new comment.
2. Click “Update” to confirm the new change.

Now, the setting of “System Status” is finished.

Administrator: Load Default Setting

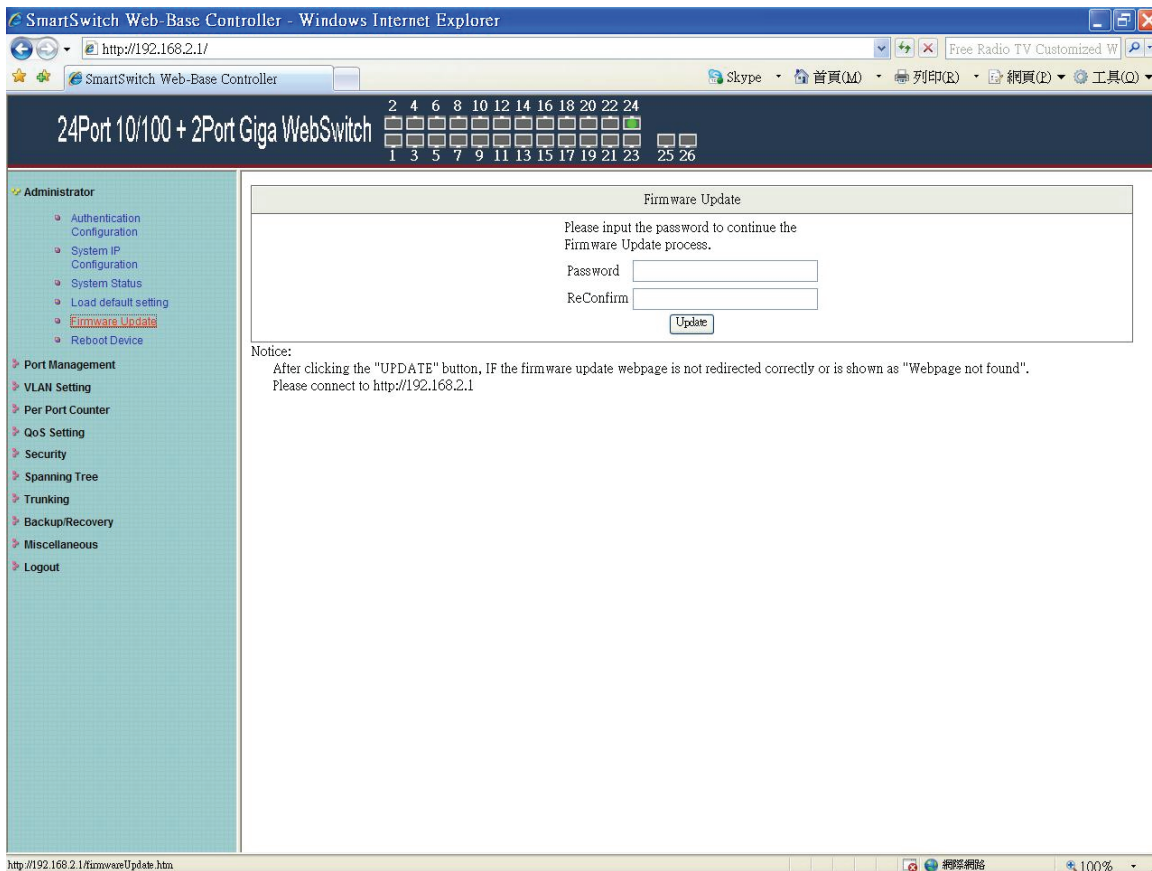


1. Click “Load” to back to the factory default setting.

**Note: Recover switch default setting excluding the IP address, User name and Password.

Now, the default is loaded.

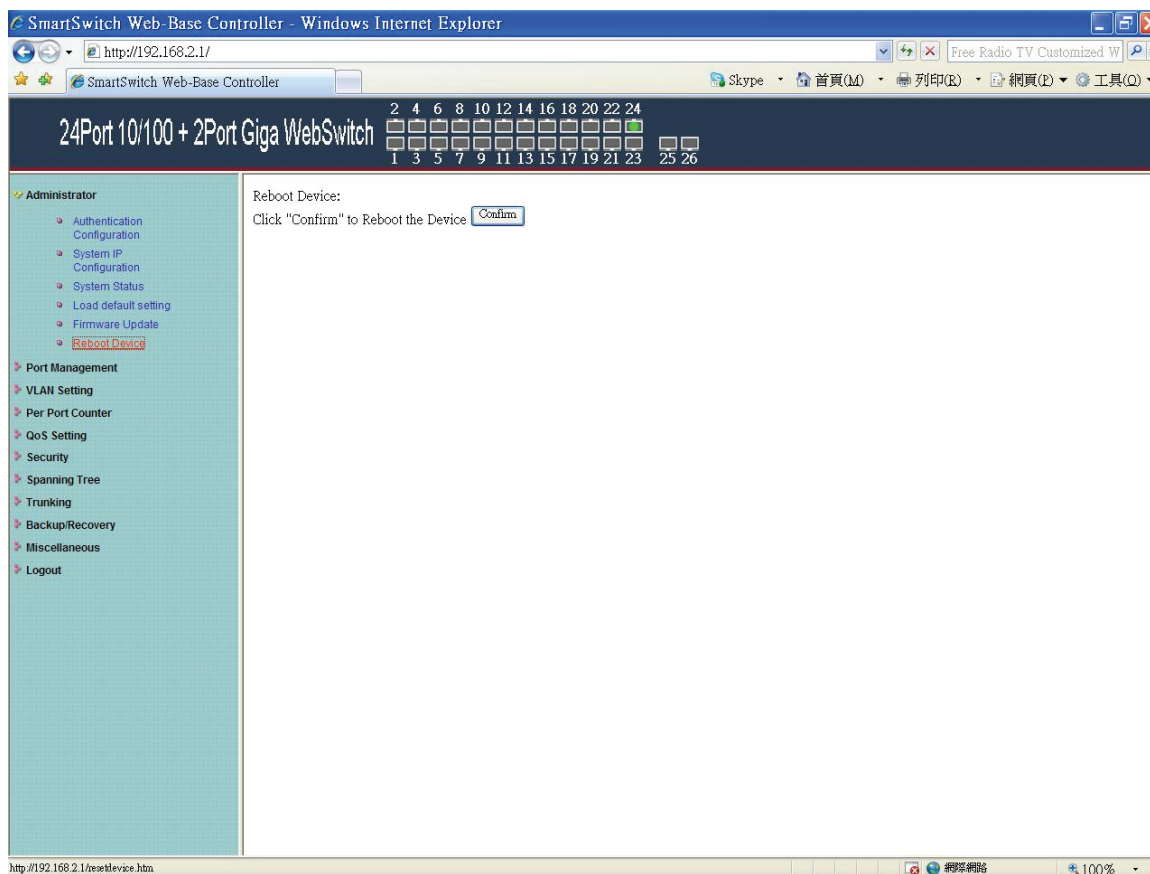
Administrator: Firmware Update



Follow the instruction on the screen to update the new firmware.

Please contact with your sales agents to get the latest firmware information.

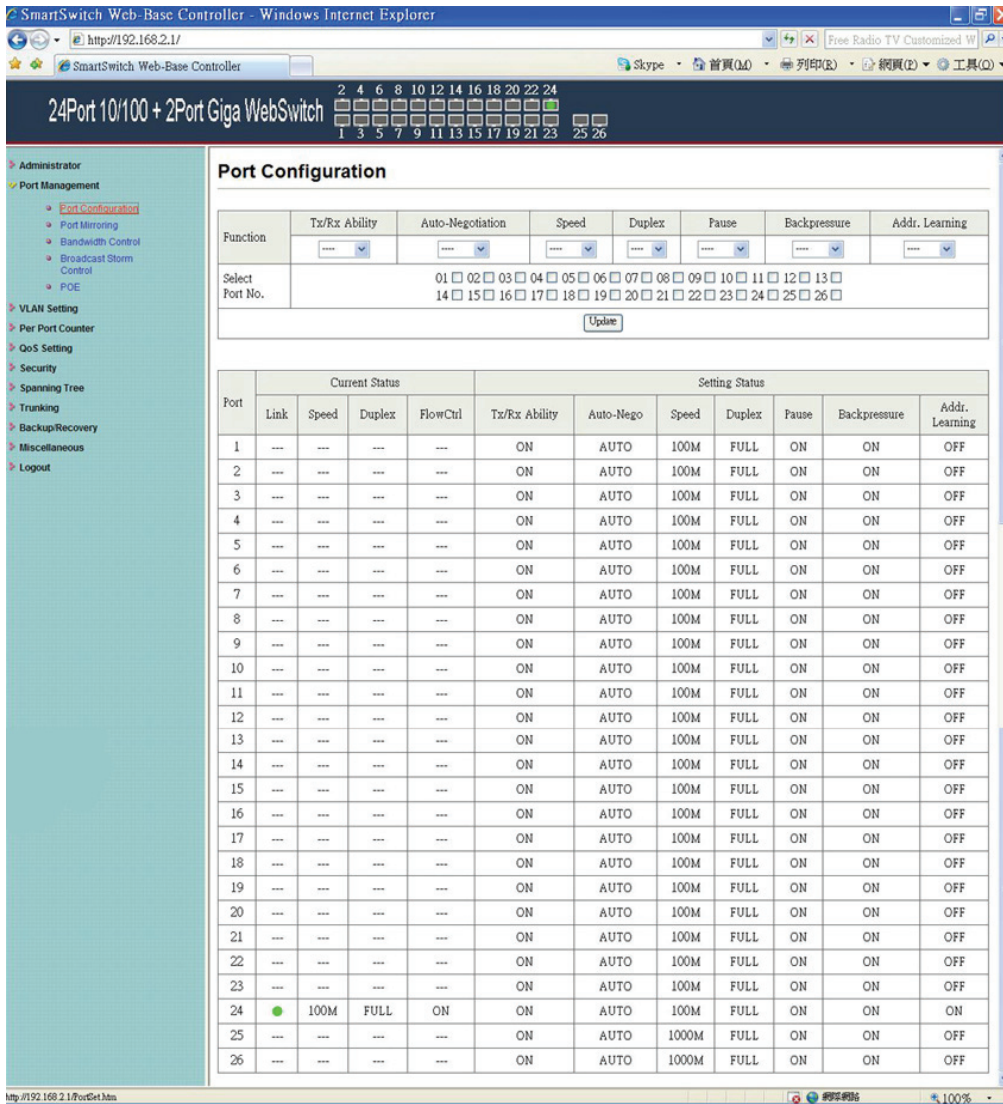
Administrator: Reboot Device



1. Click “Confirm” to reboot the device.

Now, the setting of “Reboot Device” is finished.

Port Management: Port Configuration



Select the “Port No.” - configure the mode below:

1. “Auto” - enable/disable Auto-Negotiation.
2. “Speed” - 10M or 100M mode for the selected port.
3. “Duplex” - Full or Half-Duplex mode for the selected port.
4. “Pause” - enable/disable for the selected port.
5. “Backpressure” - enable/disable for the selected port.
6. “Tx Capability” - enable/disable for the selected port.
7. “Addr. Learning” - enable/disable for the selected port.

Port Management: Port Mirroring

SmartSwitch Web-Base Controller - Windows Internet Explorer

http://192.168.2.1/

SmartSwitch Web-Base Controller

24Port 10/100 + 2Port Giga WebSwitch

Administrator

- Port Management
 - Port Configuration
 - Port Mirroring
 - Bandwidth Control
 - Broadcast Storm Control
 - POE
- VLAN Setting
- Per Port Counter
- QoS Setting
- Security
- Spanning Tree
- Trunking
- Backup/Recovery
- Miscellaneous
- Logout

Port Mirroring

Dest Port	1	2	3	4	5	6	7	8	9	10	11	12	13
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14	15	16	17	18	19	20	21	22	23	24	25	26	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Monitored Packets	Disable												
Source Port	1	2	3	4	5	6	7	8	9	10	11	12	13
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14	15	16	17	18	19	20	21	22	23	24	25	26	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="button" value="Update"/>													
Multi to Multi Sniffer function													

Port Mirroring is used to mirror traffic, RX, TX or TX&RX, from Source port to Destination port for analysis.

1. Select the Destination port: you can choose port 1 to port 26
2. Select the Source port: by clicking the checking box of the port.
3. Click “Update” to save the setting.

Now, the setting of “Port Mirroring” is finished.

Port Management: Bandwidth Control

Bandwidth Control

Port No. Tx Rate (0-255) (0 Full Speed) Rx Rate (0-255) (0 Full Speed)

Speed Base:

Low:
 (1) 32Kbps Tx/Rx bandwidth resolution for port 1~ port 26.
 Actual Tx/Rx bandwidth = Rate value x 32 kbps. The rate value is 1-255.

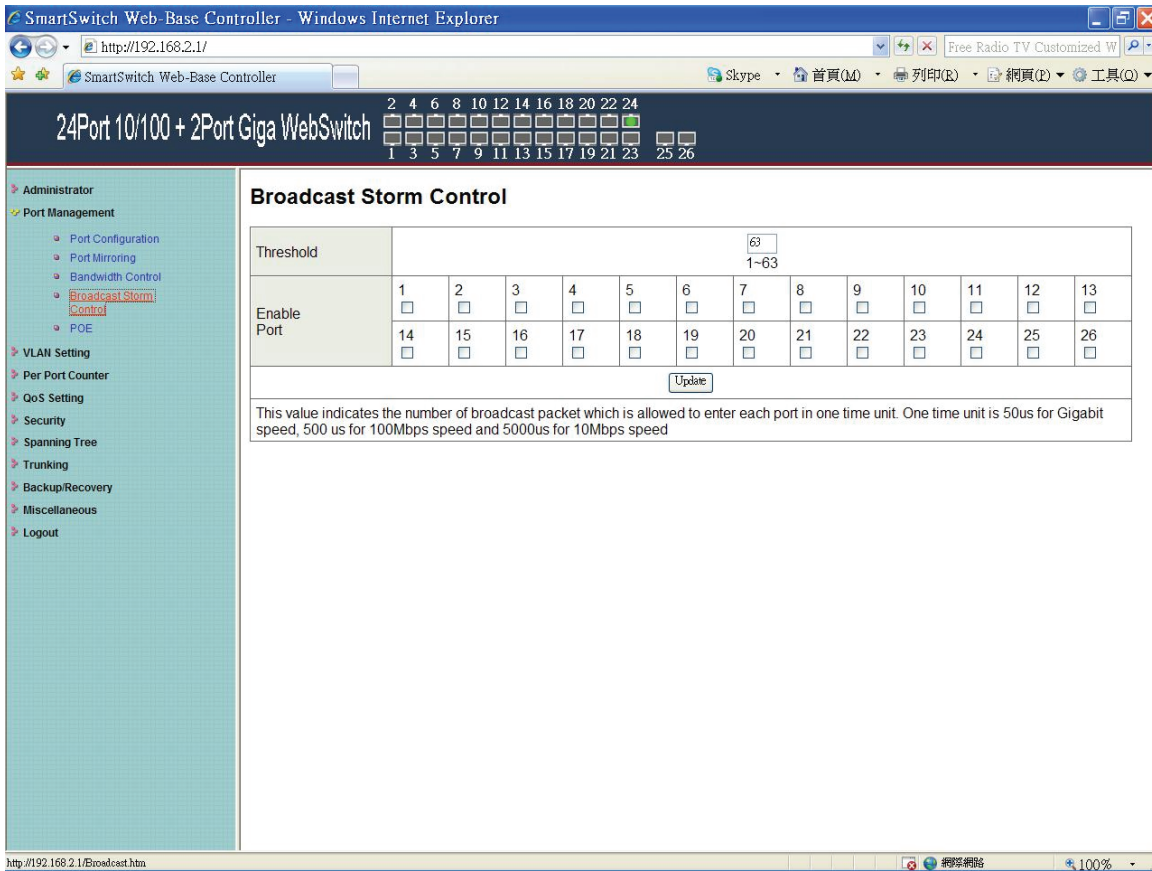
High:
 (1) 256Kbps Tx/Rx bandwidth resolution for port 1~ port 24.
 Actual Tx/Rx bandwidth = Rate value x 256Kbps. The rate value is 1-255.
 When link speed is 10MB. The rate value is 1-39.
 (2) the bandwidth resolution is 2048Kbps for port 25, port 26.
 Actual Tx/Rx bandwidth = Rate value x 2048Kbps. The rate value is 1-255.
 When link speed is 10MB. The rate value is 1-4.
 When link speed is 100MB. The rate value is 1-48.

If the link speed of selected port is lower than the rate that you setting, this system will use the value of link speed as your setting rate.
 If the rate field is shown in red text, it means the link speed is lower than the using bandwidth.

Port No.	Tx Rate	Rx Rate	Link Speed	Port No.	Tx Rate	Rx Rate	Link Speed
1	Full Speed	Full Speed	---	14	Full Speed	Full Speed	---
2	Full Speed	Full Speed	---	15	Full Speed	Full Speed	---
3	Full Speed	Full Speed	---	16	Full Speed	Full Speed	---
4	Full Speed	Full Speed	---	17	Full Speed	Full Speed	---
5	Full Speed	Full Speed	---	18	Full Speed	Full Speed	---
6	Full Speed	Full Speed	---	19	Full Speed	Full Speed	---
7	Full Speed	Full Speed	---	20	Full Speed	Full Speed	---
8	Full Speed	Full Speed	---	21	Full Speed	Full Speed	---
9	Full Speed	Full Speed	---	22	Full Speed	Full Speed	---
10	Full Speed	Full Speed	---	23	Full Speed	Full Speed	---
11	Full Speed	Full Speed	---	24	Full Speed	Full Speed	100M
12	Full Speed	Full Speed	---	25	Full Speed	Full Speed	---
13	Full Speed	Full Speed	---	26	Full Speed	Full Speed	---

1. Select the “Port No.”: you can choose port 1 to port 26
 2. “TX Rate Value”: set the transmission rate of the selected port. (0:Full speed; 1~255:Specified bandwidth.)
 3. “RX Rate Value”: set the receiving rate of the selected port. (0: Full speed; 1~255: Specified bandwidth.)
 4. “Resolution” : Low: 32 kbps / High: 512 kbps
 5. Click “Update” to confirm the setting or “LoadDefault”.
- Now, the setting of “Bandwidth Control” is finished.

Port Management: Broadcast Storm Control



1. "Threshold" - Set the threshold from 1~63.
2. "Enable Port" - per port to define the status of broadcast packets.
3. Click "Update" to confirm the setting.

Now, the setting of "Broadcast Storm Control" is finished.

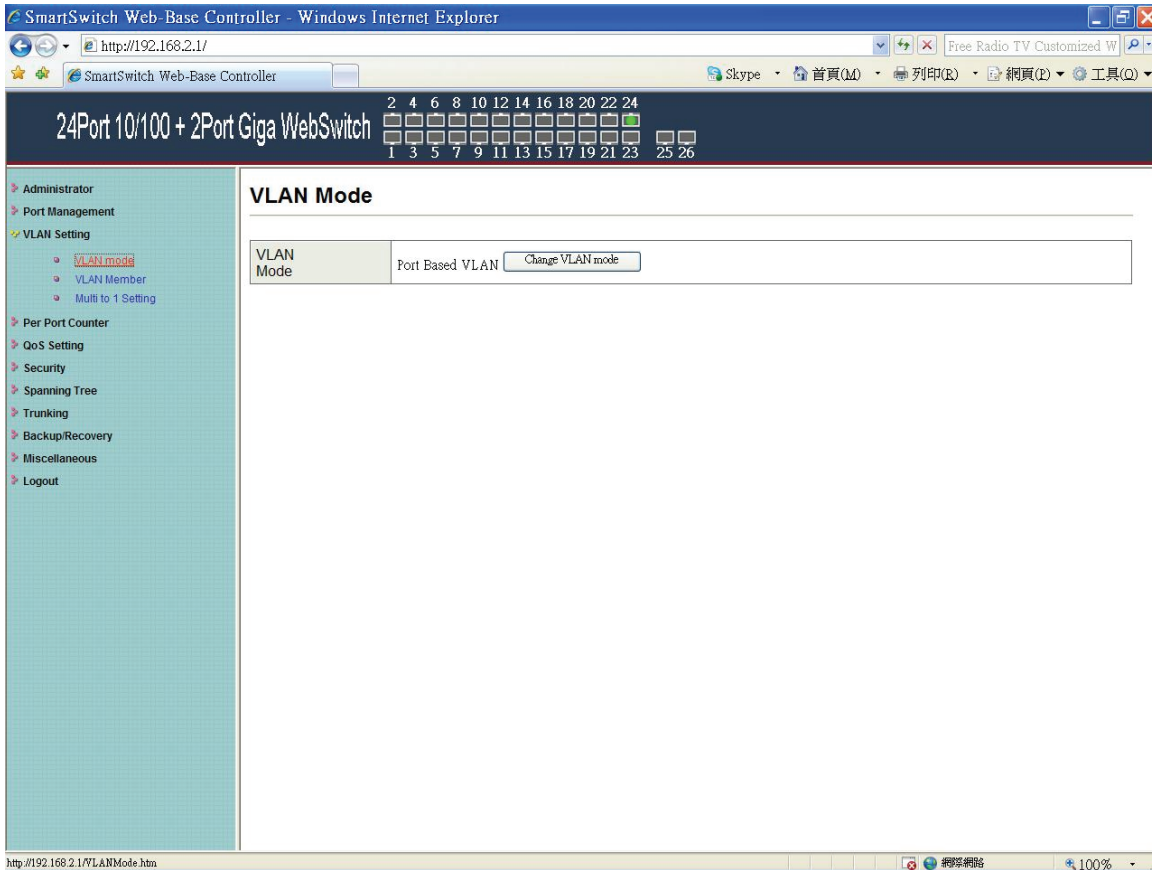
Port Management: PoE Configuration



Remote access and monitor the attached PD (Powered Device) status by using Enable/Disable function.

1. **Enable:** POE of the port is able to supply power to the attached PD (Powered Device)
2. **PSE Current & Minimum Output Power:** The status of the port current and minimum output power.
3. **POE class:** each POE port will detect the class of the attached PD (Powered Device)
4. Click “Update” to confirm and finish the setting.
Now, the setting of “PoE Configuration” is finished.

VLAN Setting: VLAN Mode



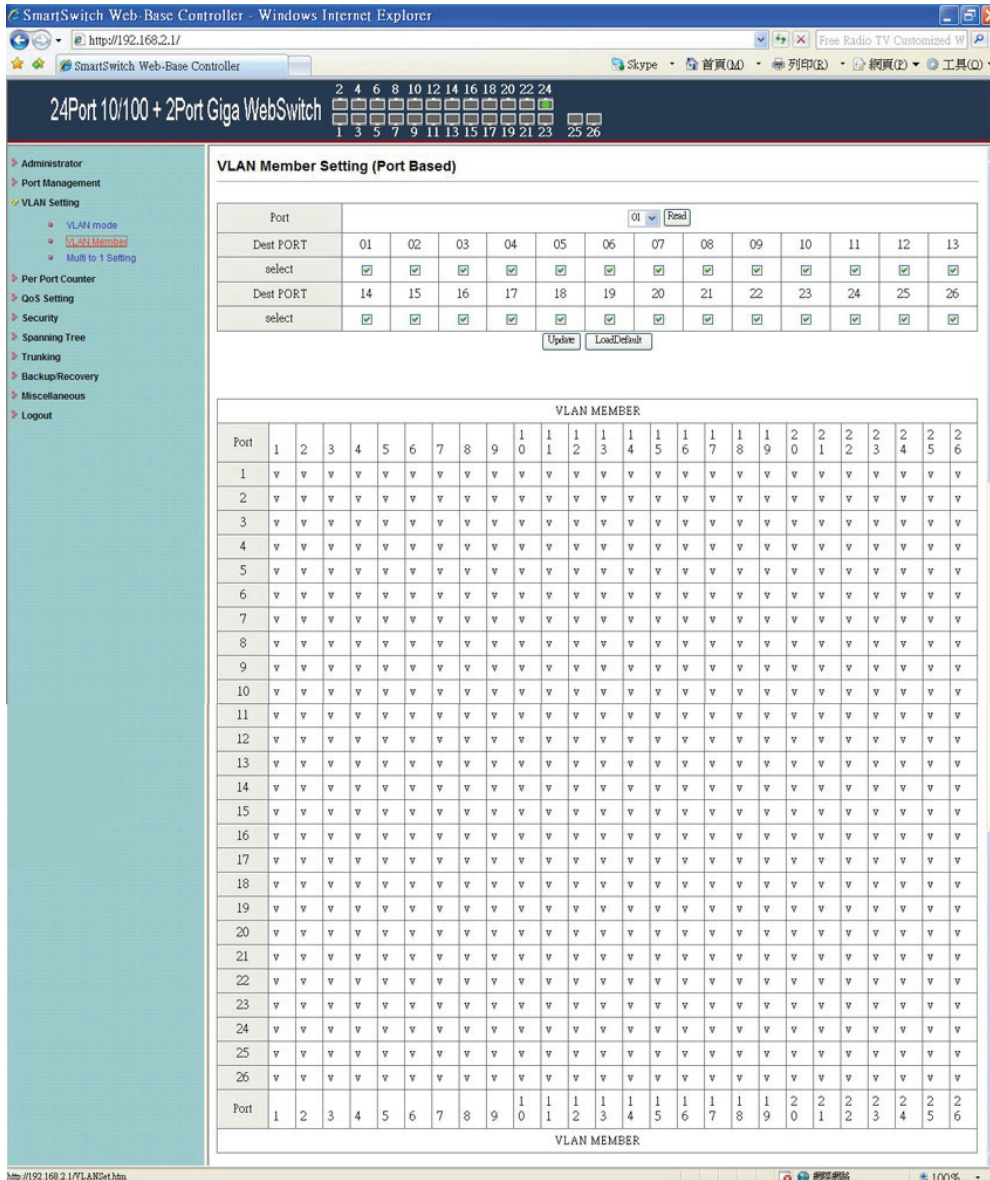
There are two VLAN modes : Port Based VLAN and Tagged VLAN.

Click “Change VLAN mode” to select the mode.

**If the Port Based VLAN function is enabled, Multi to 1 setting and tag Based VLAN will be disabled automatically.

Now, the setting of “VLAN Mode” is finished.

VLAN Setting: VLAN Member Setting (Port Based)



You can select a port group.

1. Click the port numbers: which you want to put them into the selected VLAN group.
2. Click “Update” to confirm and finish the setting.
3. Click “LoadDefault” to back to the original factory setting.

Now, the setting of “VLAN Mode” is finished.

VLAN Setting: Multi to 1 Setting

The screenshot shows the SmartSwitch Web-Base Controller interface. The main content area is titled "Multi to 1 Setting". It features a configuration table with the following structure:

Destination PortNo.	01											
Current Setting	Port:-											
Disable Port	01	02	03	04	05	06	07	08	09	10	11	12
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	13	14	15	16	17	18	19	20	21	22	23	24
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Note: "Disabled port" defines the switch physical port which is disabled.

Update

1. A example for Multi-to-1 structure

2. The original setting of the VLAN Group will be cleared and replaced by this special structure if you enable this function.
 On the other hand, if you set the VLAN Group again, this special structure will be cleared and replaced by your newest setting.
 3. This configuration is port base VLAN only.

This is a special design for easily setting the switch VLAN into “VLAN Per Port“.

1. Choose “Destination Port No”.
2. Choose “Disable Port”
3. “Disable Port” – choose the port which you don’t want to use
4. Click “Update” to confirm and finish the setting.

After this setting, all ports can only connect to destination ports.

Per Port Counter: Counter Category

SmartSwitch Web-Base Controller - Windows Internet Explorer
http://192.168.2.1/

24Port 10/100 + 2Port Giga WebSwitch

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Port Management
VLAN Setting
Per Port Counter
 Port Counter
QoS Setting
Security
Spanning Tree
Trunking
Backup/Recovery
Miscellaneous
Logout

Counter Category

Counter Mode Selection:

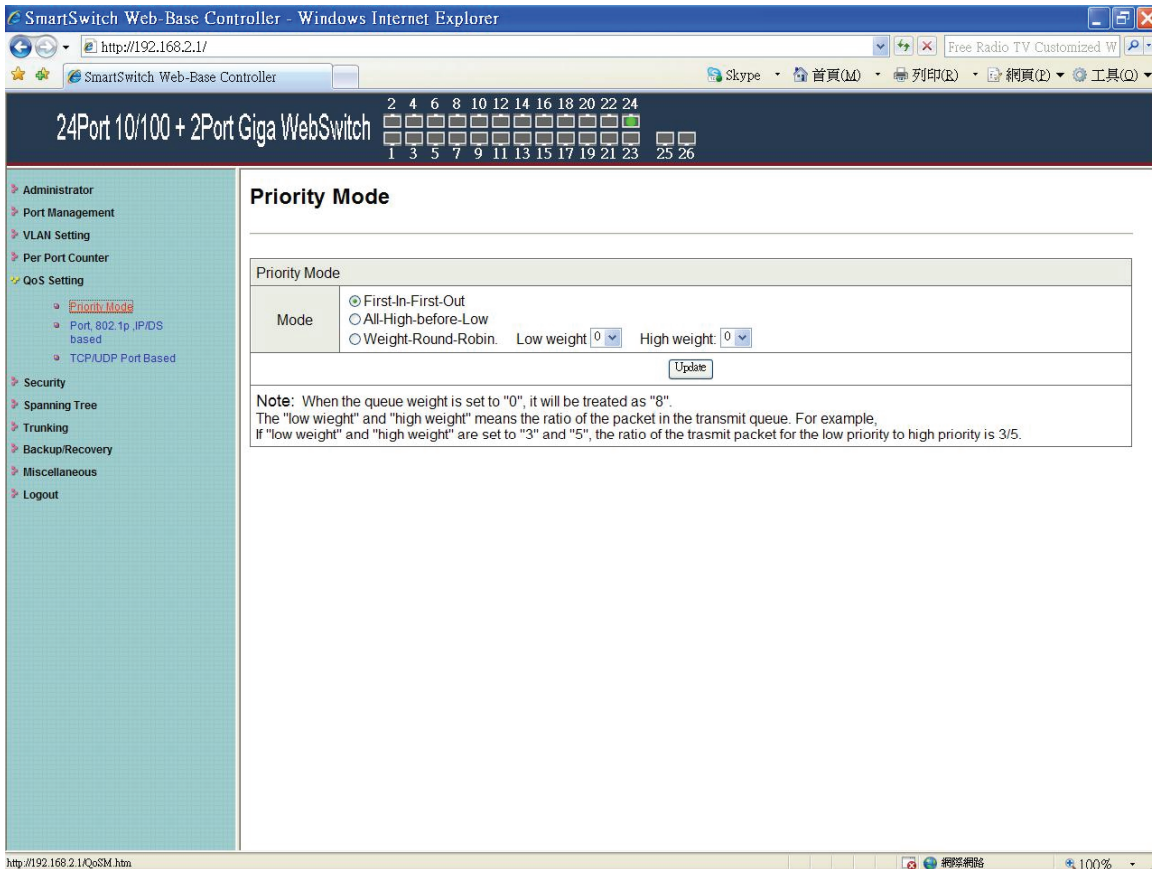
Port	Transmit Packet	Receive Packet
01	0	0
02	0	0
03	0	0
04	0	0
05	0	0
06	0	0
07	0	0
08	0	0
09	0	0
10	0	0
11	0	0
12	0	0
13	0	0
14	0	0
15	0	0
16	0	0
17	0	0
18	0	0
19	0	0
20	0	0
21	0	0
22	0	0
23	0	0
24	900	777
25	0	0
26	0	0

http://192.168.2.1/Counter.htm

You can read the transmitting and receiving packet of the connecting port.

Click “Refresh” or “Clear” the data.

QoS Setting: Priority Mode



There are three Priority Modes to select.

1. "First-in-First-Out" - the first receiving packet will be firstly transmitted.
2. "All-High-before-Low" – All packets will be assigned to either Q2(high) priority queue or Q1(low) priority queue.
3. "Weight-Round-Robin" - set the ratio of the transmitting packet for the low priority to high priority.
4. Click "Update" to confirm and finish the setting.

QoS Setting: Class of Service Configuration

24Port 10/100 + 2Port Giga WebSwitch

Class of Service Configuration

Protocol	Option
FTP(20,21)	F-I-F-O
SSH(22)	F-I-F-O
TELNET(23)	F-I-F-O
SMTP(25)	F-I-F-O
DNS(53)	F-I-F-O
TFTP(69)	F-I-F-O
HTTP(80,8080)	F-I-F-O
POP3(110)	F-I-F-O
NEWS(119)	F-I-F-O
SNTP(123)	F-I-F-O
NetBIOS(137-139)	F-I-F-O
IMAP(143,220)	F-I-F-O
SNMP(161,162)	F-I-F-O
HTTPS(443)	F-I-F-O
MSN(1863)	F-I-F-O
XRD_RDP(3389)	F-I-F-O
QQ(4000,8000)	F-I-F-O
ICQ(5190)	F-I-F-O
Yahoo(5050)	F-I-F-O
BOOTP_DHCP(67,68)	Low
User_Define_a	F-I-F-O
User_Define_b	F-I-F-O
User_Define_c	F-I-F-O
User_Define_d	F-I-F-O

User_Define Port number (1-65535) Mask(0-255)

User_Define_a Port: [] Mask: [0]

User_Define_b Port: [] Mask: [0]

User_Define_c Port: [] Mask: [0]

User_Define_d Port: [] Mask: [0]

Note:The mask defines which bit is ignored within the IP address bit 0 ~ bit 7.
For example, UDP/TCP port = 65535 and mask = 5, this means 65530, 65531, 65534 and 65535 are all taken into account.
UDP/TCP port =65535 and mask=0, this means only 65535 is taken into account.

TCP/UDP port QoS function Not Override

Note:When the "override" item is selected, the Port_based, Tag_based, IP_TOS_based, CoS listed above will be ignored.

The Class of Service for TCP/UDP port number allows the network administrator to assign the specific application to a priority queue.
F-I-F-O: The incoming packet will be forwarded in first-in-first-out scheme.
Discard: The incoming packet will be discarded at the source port.
High: The incoming packet will be forwarded with the high priority.
Low: The incoming packet will be forwarded with the Low priority.

You can set QoS mode of per port by different bases.
 TCP/UDP > TP TPS/DS > 802.1P > Physical port

1. “TCP/UDP Port” – effective for the selected physical port only.
“Drop” option is the global setting for all physical ports.
The packet queue will be transferred based on the number of
“Weight-Round-Robin” on **QoS Setting: Priority Mode**.

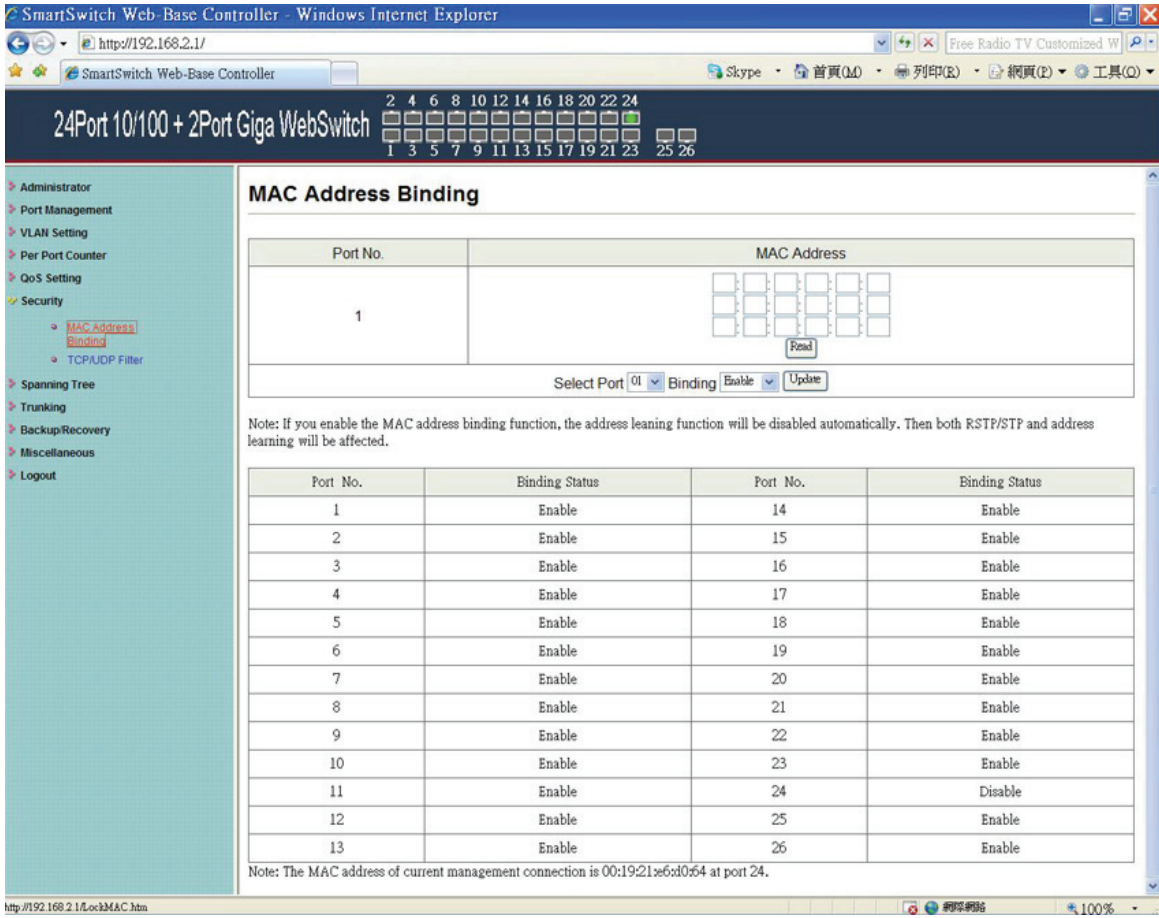
** Weight-Round-Robin – Q1~Q8

**“Drop” - packets will be dropped.

2. “Priority Setting” - It means the packets with special IP will be firstly transmitted.
3. “802.1p” – Priority mapping table as the screen shown.
4. “Physical port” - you can select the port which you want to configure as Q1~Q8 priority.
5. Click “Update” to confirm and finish the setting.

Now, the setting of “Class of Service” is finished.

Security: MAC Address Filter

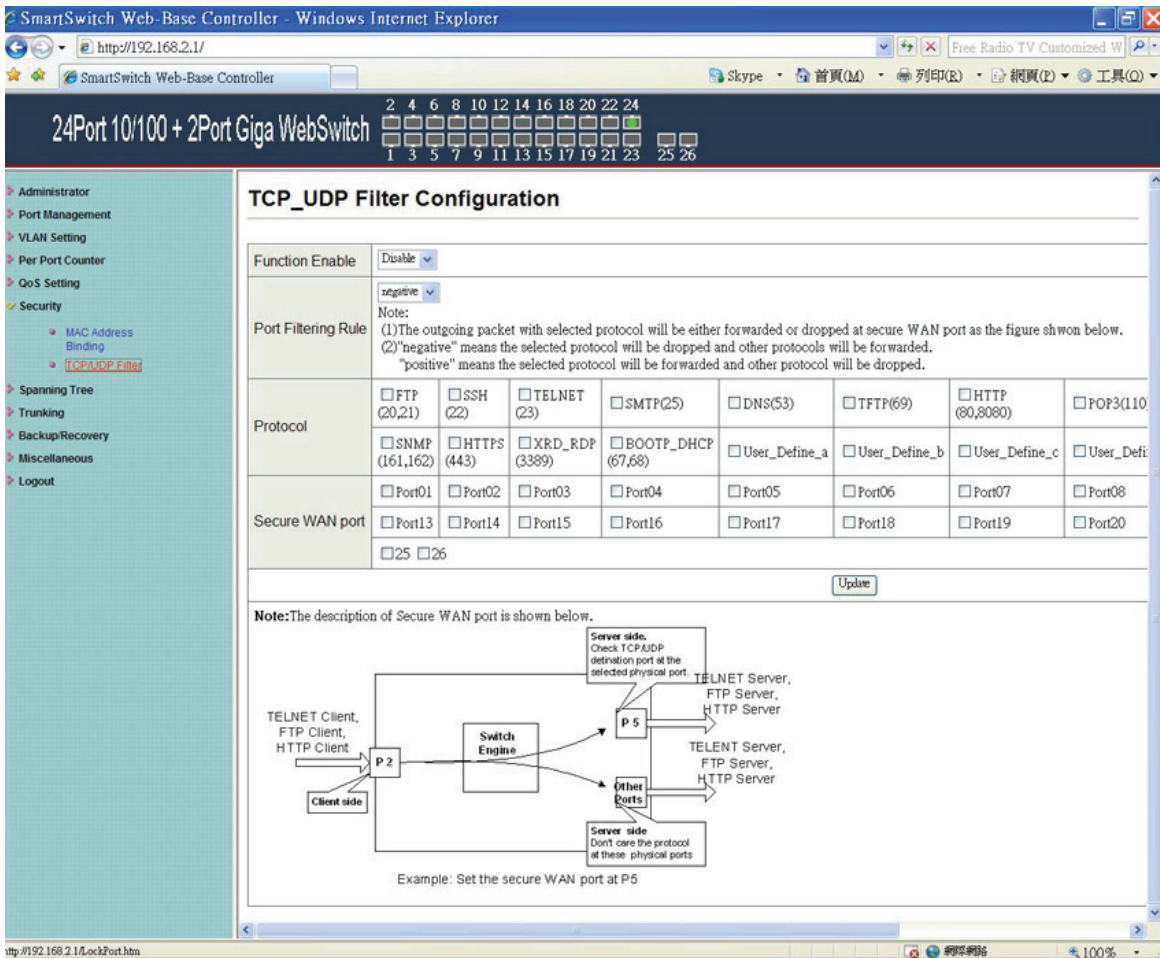


Set special MAC address to activate on the selected port

1. Choose “Select Port” – port 1~26
2. “Binding” – “Enable”: allow the packet with the specified source MAC address to enter this port.
3. Click “Update” to confirm and finish the setting.

Now, the setting of “MAC Address Filter” is finished.

Security: TCP_UDP Filter Configuration



You can enable or disable this function of per port.

If the “Function Enable” is “Enable”, please kindly check the following setting:

1. “Port Filtering Rule” –

“Deny”: the outgoing packets to the selected port with selected protocol will be dropped and other protocols will be forwarded.

“Allow”: the selected protocol will be forwarded and other protocol will be dropped.

2. “Secure Port” – choose secure ports which you want.

**Note 1:

a. The secure WAN port should be set at the physical port which is connected to the server.

b. Once this function is enabled, the switch will check the destination TCP/UTP port number at the outgoing direction of the secure WAN port.

If the condition matches, this packet will be dropped or forwarded.

**Note 2:

The description of Secure WAN port is shown on the bottom of this screen.

3. “Protocol” – choose protocols which you want.

4. Click “Update” to confirm and finish the setting.

Now, the setting of “TCP/UDP Filter Configuration” is finished.

Spanning Tree: STP Bridge Settings

The screenshot shows the SmartSwitch Web-Base Controller interface. The main content area is titled "STP Bridge Settings". It contains two tables and some notes.

STP Bridge Status (Configuration Table)

STP Mode	Bridge Priority (0~61440)	Hello Time (1~10 Sec)	Max Age (6~40 Sec)	Forward Delay (4~30 Sec)
[Dropdown]	[Dropdown]	2	20	15

Note: $2 * (\text{Forward Delay} - 1) > \text{Max Age}$,
 $\text{Max Age} \geq 2 * (\text{Hello Time} + 1)$

STP Bridge Status (Status Table)

STP Mode	Bridge Priority:ID	Hello Time	Max Age	Forward Delay	Root ID
RSTP	32768:00 03 CE 01 17 D4	2	20	15	I'm the root bridge!

This setting is to avoid the loop network.

1. Select the "STP Mode"- choose "Disable", "STP" or "RSTP"
 2. Set the "Bridge Priority" – Set the priority of the Bridge
 3. Set the period of "Hello Time" packet – Provides the time period between root bridge configuration messages.
 4. Set the "Max Age" – Indicates when the current configuration message should be deleted.
 5. Set the "Forward Delay" time – Provides the length of time that bridges should wait before transitioning to a new state after a topology change. (If a bridge transitions too soon, not all network links might be ready to change their state, and loops can result.)
 6. Click "Update" to confirm and finish the setting.
- Now, the setting of "STP Bridge Settings" is finished.

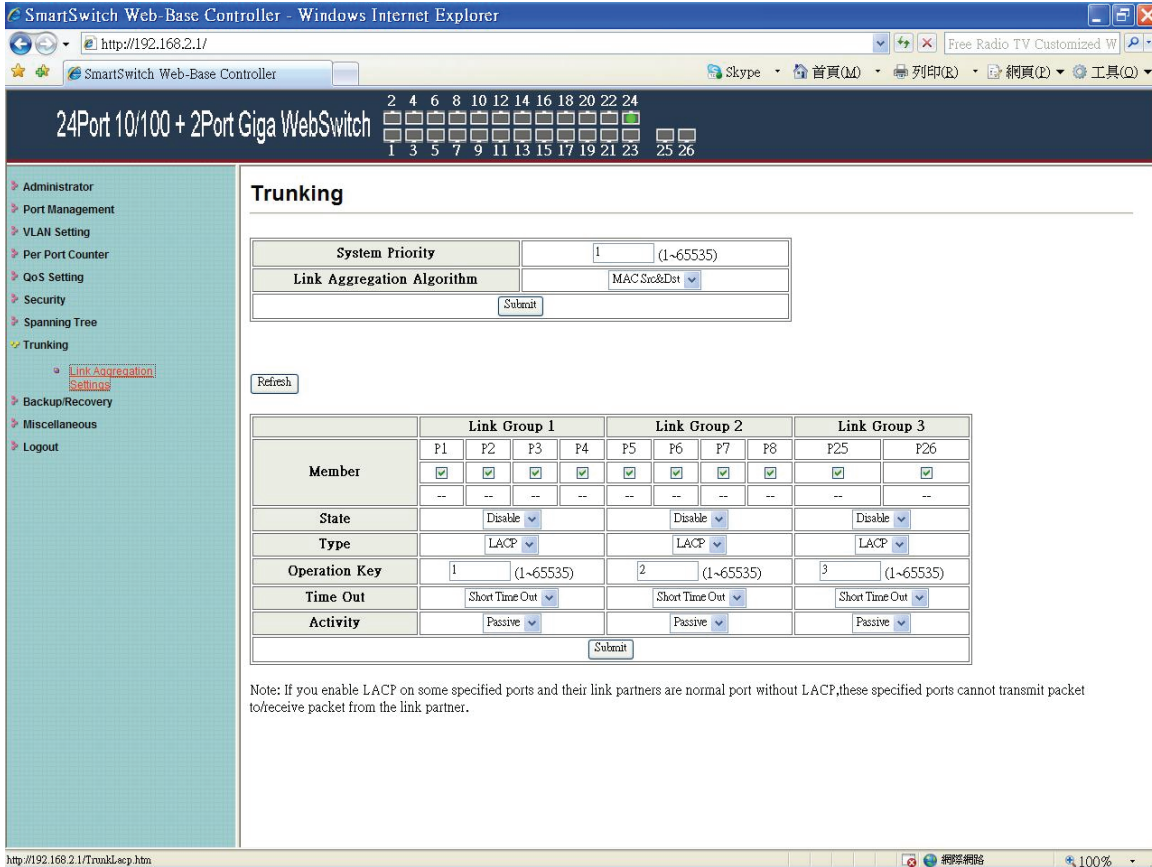
Spanning Tree: STP Port Settings

The screenshot shows the SmartSwitch Web Base Controller interface. The main content area displays the 'STP Port Settings' configuration page. At the top, there is a header for '24Port 10/100 + 2Port Giga WebSwitch' with a port status indicator showing ports 1-23 as disabled and 24-26 as active. Below this is a navigation menu on the left with 'Spanning Tree' expanded to 'STP Port Settings'. The main configuration area has a form with three columns: 'Port No.', 'Priority (0~240)', and 'RPC (Root Path Cost) (1~20000000)'. The RPC value is set to '0=AUTO'. Below the form is a 'Submit' button. At the bottom, there is a table titled 'STP Port Status' showing the configuration for all 26 ports.

Port No.	RPC	Priority	State	Status	Designated Bridge	Designated Port
1	Auto:0	128	--	Disable	--	--
2	Auto:0	128	--	Disable	--	--
3	Auto:0	128	--	Disable	--	--
4	Auto:0	128	--	Disable	--	--
5	Auto:0	128	--	Disable	--	--
6	Auto:0	128	--	Disable	--	--
7	Auto:0	128	--	Disable	--	--
8	Auto:0	128	--	Disable	--	--
9	Auto:0	128	--	Disable	--	--
10	Auto:0	128	--	Disable	--	--
11	Auto:0	128	--	Disable	--	--
12	Auto:0	128	--	Disable	--	--
13	Auto:0	128	--	Disable	--	--
14	Auto:0	128	--	Disable	--	--
15	Auto:0	128	--	Disable	--	--
16	Auto:0	128	--	Disable	--	--
17	Auto:0	128	--	Disable	--	--
18	Auto:0	128	--	Disable	--	--
19	Auto:0	128	--	Disable	--	--
20	Auto:0	128	--	Disable	--	--
21	Auto:0	128	--	Disable	--	--
22	Auto:0	128	--	Disable	--	--
23	Auto:0	128	--	Disable	--	--
24	Auto:200000	128	Designated Port	Forwarding	--	--
25	Auto:0	128	--	Disable	--	--
26	Auto:0	128	--	Disable	--	--

1. Choose "Port No." : Port 1 ~ Port 26
2. Choose "Priority": 0~ 240
3. "RPC" = Root Path Cost: 0 = AUTO. When the loop is found, the STP/RSTP will calculate the cost of its path.

Trunking: Link Aggregation Settings



There are two groups to choose and max. for each group is 4 ports.
 **Link Group 3: combo port - Port 25/Port 26

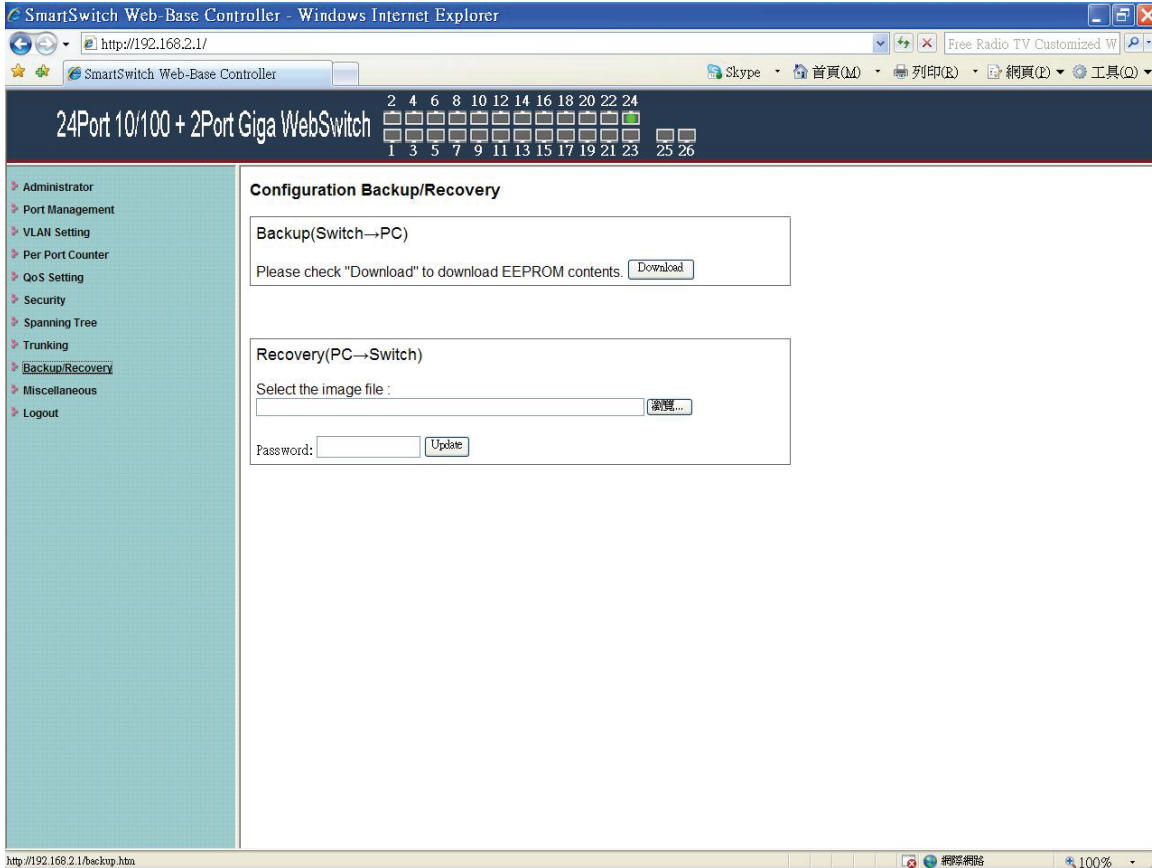
Click “Submit” to confirm and finish the setting.

“State” – Enable / Disable

“Type” – LACP/ Static

“Activity” – Active/Passive: **Both switches use “LACP” to configure the Trunk, at least one of them should be “Active”.**

Backup/Recovery

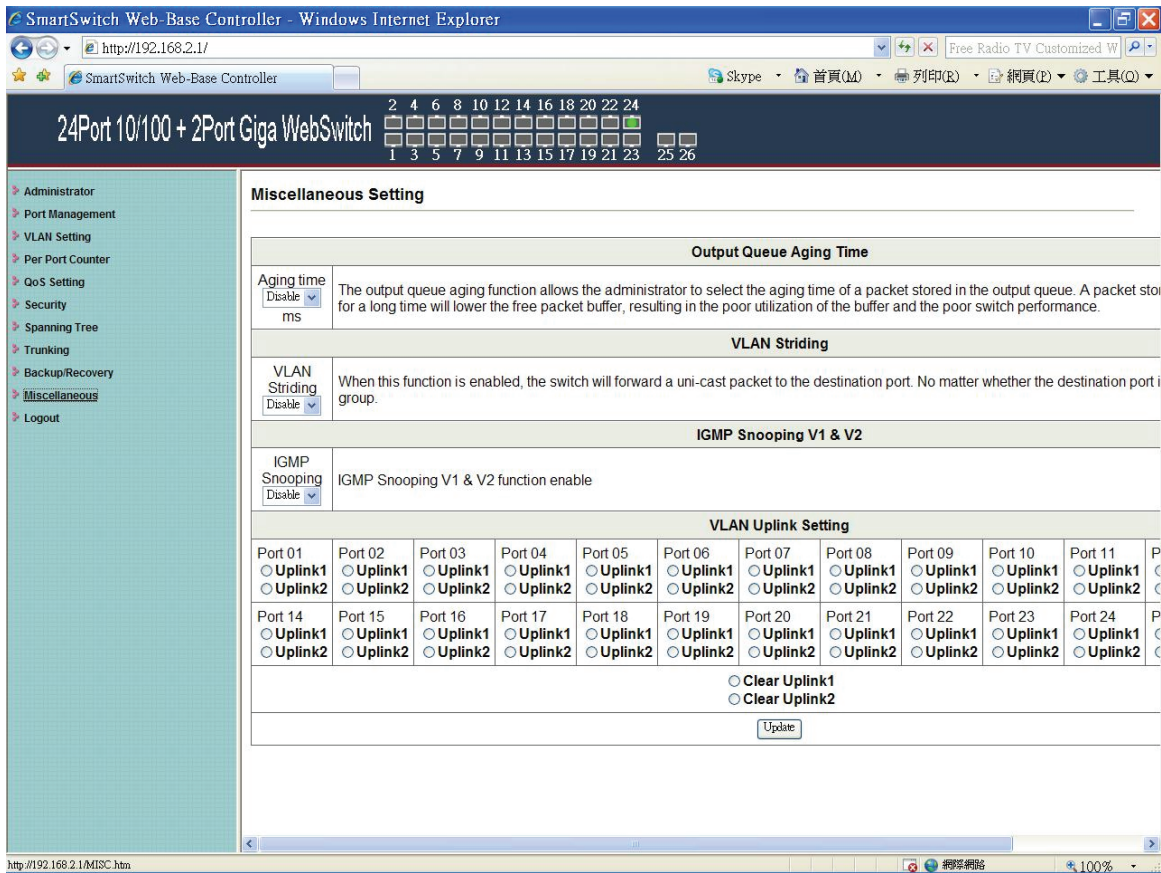


Follow the instruction on the screen to update the original setting.

“Backup” - Click “Download” to confirm the setting.

“Recovery” – select a file and key in the password → Click “Update” to confirm the setting.

Miscellaneous: Miscellaneous Setting



1. “Output Queue Aging Time” - You can set queue aging time into different milliseconds or disable this function.
2. VLAN Striding” – You can enable/disable this function.
3. “IGMP Snooping V1 & V2” – You can enable/disable this function.
4. “VLAN Uplink Setting” – Set “uplink1 or uplink2” or “Clear uplink1” or “Clear uplink2”
5. Click “Update” to confirm and finish the setting.

Logout: You can click “Logout” to logout.

