

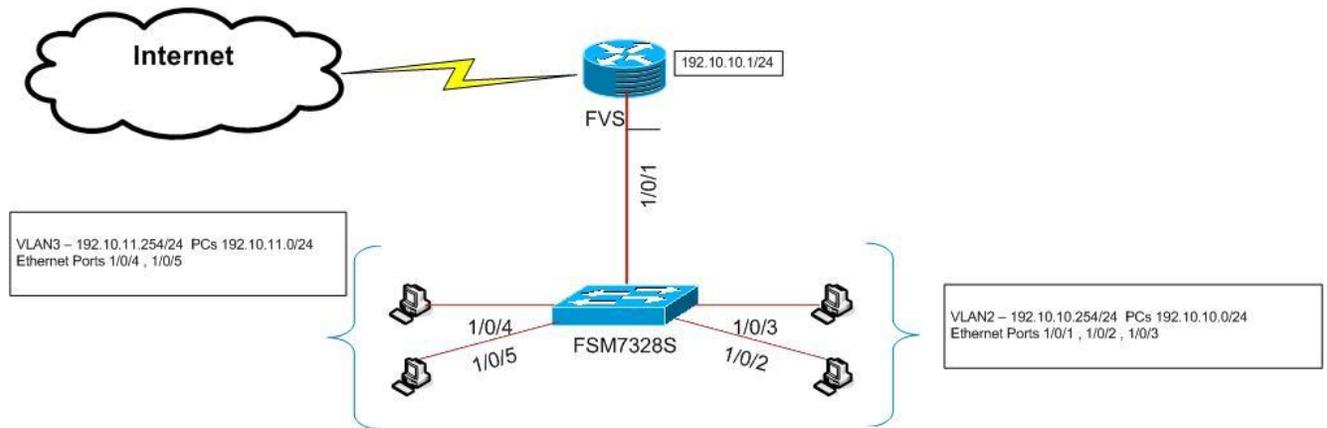
7000 Series (Firmware 6.0.0.15)

Configuring VLANs and Routing

Scenario:

Creation of a 2 VLAN Routed network with access to the Internet via an FVS Router/Firewall.
VLAN 3 being the Users PC domain
VLAN 2 being the Internet domain

Network Diagram:



Physical Setup:

1x FSM7328S Prosafe Layer 3 Managed switch - Firmware 6.0.0.15
4x Windows XP Computers (2x on each VLAN)
1 x FVS___ Prosafe Firewall Router

Logical Setup:

FVS___ : 192.10.10.1/24

VLAN 2 – 192.10.10.0/24

VLAN 3 – 172.10.11.0/24

VLAN2 IP address 192.10.10.254

VLAN3 IP address 192.10.11.254

WORKING INSTRUCTIONS

Set the Management IP address

- 1) Plugged the console cable to the Serial port of the switch and the serial port on the PC
- 2) Open a new Hyper Terminal session (connecting via the COM port) – settings 9600, 8 , None , 1, None
- 3) Power Cycle the switch
- 4) Upon POST the User: prompt will appear
- 5) Username is **admin** , password “**blank**”
- 6) Type **Enable** to access the privileged mode (password “**blank**”)
- 7) Type **network protocol none** to reset the network settings
- 8) Type **network parms <<Management IP>> <<Subnet Mask>> <<Default Gateway IP>>**. For example **network parms 192.168.0.1 255.255.255.0 192.168.0.1**
- 9) User **copy system:running-config nvram:startup-config** to save the configuration
- 10) Check with **show network** if the settings are correct

The switch should now be accessible patching a CAT5 Straight-through cable. The PC NIC must be configured with an IP address within the same subnet used to configure the management IP of the switch (Example: 192.168.0.2 255.255.255.0)

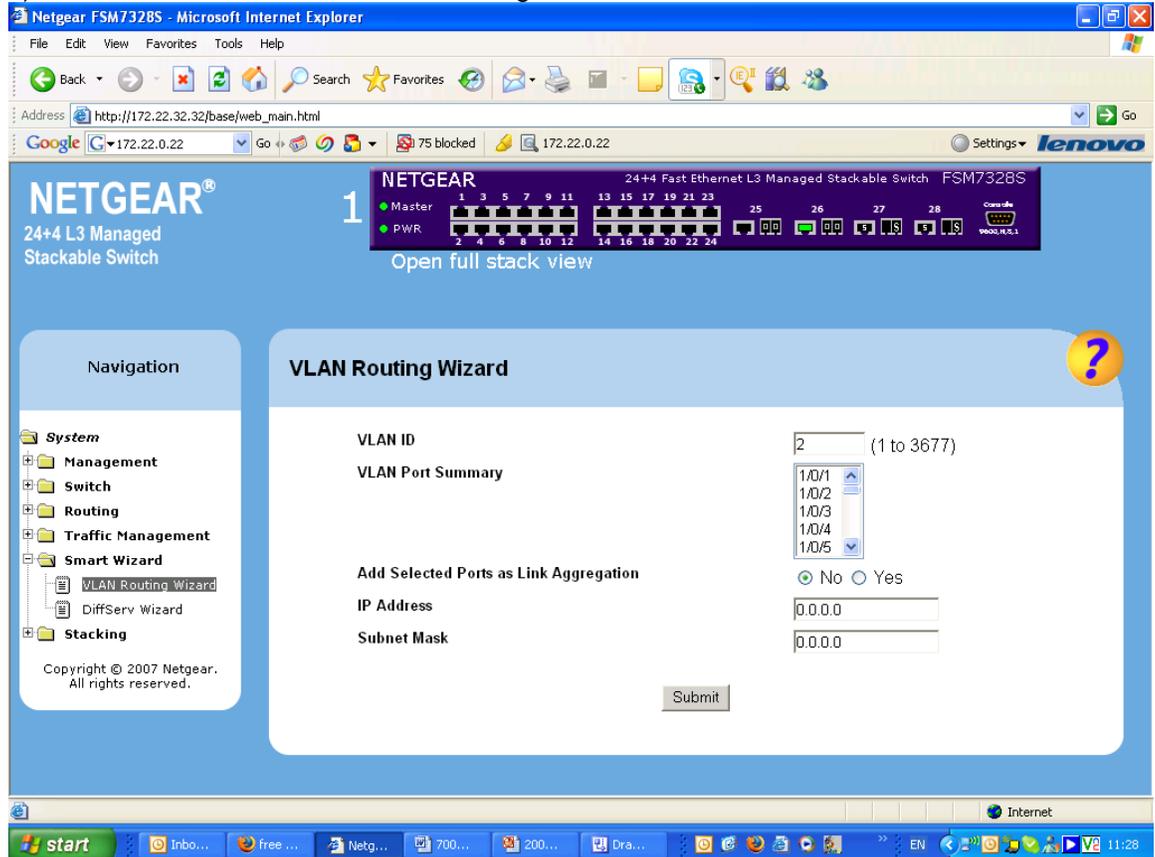
Creating a Routing VLAN2 and Routing VLAN3 via the SmartWizard

- 1) Access the GUI
- 2) Browse to Smart Wizard – VLAN routing Wizard
- 3) Assign the VLAN ID
- 4) Select the port(s) members of the VLAN (Use CTRL to select multiple ports)
- 5) Assign the VLAN IP address and Subnet Mask
- 6) Click on Submit. The UNIT/SLOT/PORT entry will show the Virtual PORT created and associated to the new VLAN.
- 7) Perform point 1-6 to create VLAN3 (with relevant IP address)

WEB GUI instructions

Creating a Routing VLAN2 and Routing VLAN3 via the SmartWizard

- 1) Access the GUI
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- 4) Select the port(s) members of the VLAN (Use CTRL to select multiple ports)
- 5) Assign the VLAN IP address and Subnet Mask

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1
Open full stack view

VLAN Routing Wizard

VLAN ID: 2 (1 to 3677)

VLAN Port Summary: 1/0/1, 1/0/2, 1/0/3, 1/0/4, 1/0/5

Add Selected Ports as Link Aggregation: No Yes

IP Address: 192.10.10.254

Subnet Mask: 255.255.255.0

Submit

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6) Click on Submit. The following statement should be prompted.

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VLAN Routing Wizard - Completed Successfully

VLAN has been added successfully.
RIP and OSPF have been configured for the VLAN.
This VLAN is untagged.
To configure tagging, go to Switch->VLAN->Config page.

View VLAN Config

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7) Perform point 1-6 to create VLAN3 (with relevant IP address)

8) The following summary should be obtained:

Netgear FSM7328S - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Home Search Favorites

Address http://172.22.32.32/base/web_main.html

Google 172.22.0.22 75 blocked 172.22.0.22 Settings lenovo

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1

Open full stack view

VLAN Routing Summary

VLAN ID	Unit/Slot/Port	MAC Address	IP Address	Subnet Mask
2	0/2/1	00:14:6C:EB:4B:BB	192.10.10.254	255.255.255.0
3	0/2/2	00:14:6C:EB:4B:BB	192.10.11.254	255.255.255.0

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Done (3) Internet Explorer Internet 12:57

Checking routing is in place on the switch

- 1) Browse to Routing – RIP – Interface Summary
- 2) The following situation should appear

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Open full stack view

RIP Interface Summary

Unit/Slot/Port	IP Address	Send Version	Receive Version	RIP Admin Mode	Link State
0/2/1	192.10.10.254	RIP-2	Both	Enable	Link Up
0/2/2	192.10.11.254	RIP-2	Both	Enable	Link Up

Refresh

System
Management
Switch
Routing
ARP
IP
BOOTP/DHCP Relay Ac
UDP Relay
RIP
Configuration
Interface Summary
Interface Configuratio
Route Redistribution C
Route Redistribution S
Router
VLAN Routing
Traffic Management

http://172.22.32.32/routing/rip/rip_intf_summ_cfg.html

NOTE: The RIP admin mode will show ENABLE only if at least one active device is patched into a port in the relevant VLAN

NOTA BENE:

Router/Firewall:

If the firewall as in this case is patched into a port in a specific VLAN (VLAN2 here), ensure its static routing table contains a route back to the VLAN IP address for each of the other VLANs on the switch that require Internet access.

For example in this case the FVS Firewall must contain the following route:
192.10.11.0 (Subnet) 255.255.255.0 (Subnet Mask) 192.10.10.254 (Default Gateway).

On the other hand another option would be to run RIP on the Firewall.