

VLAN Configuration

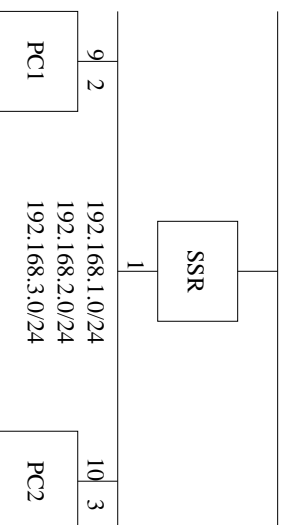
Main Tasks

1. Creating VLANs needed to obtain appropriate network topology
2. Configuring routing between VLANs

SmartSwitch Router 2000 Console

Opening a console: on PC1 run xterm and type tip hardware-a (running program tip in xterm is important)

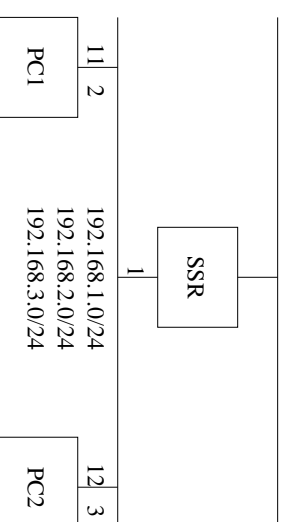
Network Topology - TEAM 1



Command Line Interface Access Modes

- **User** — allows you to display basic information and use basic utilities such as ping. You can tell you are in user mode when the command prompt ends with a “>” character.
- **Enable** — allows you to display SNMP, filter, and access control information as well as all the information you can display in User mode. To enter Enable mode, enter the enable command. When you are in Enable mode, the command prompt ends with a “#” character.
- **Configure** — Allows you to make configuration changes. To enter Configure mode, first enter Enable mode, then enter the configure command from the Enable command prompt. When you are in Configure mode, the command prompt ends with “(config)#”.

Network Topology - TEAM 2



Some commonly used CLI commands

Key sequence	Command
Ctrl+A	Move cursor to beginning of line
Ctrl+B	Move cursor back one character
Ctrl+D	Delete character
Ctrl+E	Move cursor to end of line
Ctrl+F	Move cursor forward one character
Ctrl+N	Scroll to next command in command history
Ctrl+P	Scroll to previous command in command history
Ctrl+U	Erase entire line
Ctrl+X	Erase from cursor to end of line
Ctrl+Z	Exit current access mode to previous access mode

Activating Configuration Changes

The SSR 2000 uses three special configuration files:

- **Active** — The commands from the Startup configuration file and any configuration commands that you have made active from the scratchpad
- **Startup** — The configuration file that the SSR 2000 uses to configure itself when the system is powered on
- **Scratchpad** — The configuration commands you have entered during a management session. These commands do not become active until you explicitly activate them.

To activate the configuration commands in the scratchpad type `save active` in Configure mode.

VLAN Configuration

1. Create VLANs
2. Create trunk ports.
3. Add ports to VLANs
4. Configure virtual interfaces on PCs
5. Configure routing between VLANs

VLAN Commands

- `vlan create vlan-name type id num`
- `vlan make trunk-port port-name`
- `vlan list`
- `vlan add ports port-list to vlan-name`

VLAN Commands

Create a VLAN based on ports or protocol

`vlan create vlan-name type id num`
vlan-name Name of the vlan. String up to 32 characters long

type The type of VLAN you are adding. In this exercise the value `port-based` should be used
num ID of this VLAN. The ID must be unique. You can specify a number from 2 — 4093.

List all VLANs active on the SSR

```
vlan list
```

VLAN Commands

Add ports to a VLAN

vlan add ports *port-list* to *vlan-name*

port-list

The ports you are adding to a VLAN. You can specify a single port or a comma-separated list of ports. Example: *et.1.3,et.(1-3).(4,6-8)*

vlan-name Name of the VLAN to which you are adding ports.

Routing Configuration

1. Create IP interfaces
2. Add static routes
3. Add default route

Some of the Routing Commands

- interface create *ip interface-name* *address-netmask address-netmask vlan name*
- ip add route *address-mask* gateway *IP address*
- ip add route default gateway *IP address*

Routing Commands Creating IP Interface

interface create ip *interface-name* *address-netmask*

address-netmask *vlan name*

interface-name Name of the IP interface, for example eth1

address-mask

IP address and netmask of this interface. You can specify the address and mask using the traditional format (example: 10.1.2.3/255.255.0.0) or the CIDR format (example: 10.1.2.3/16). If you specify an address without mask information, the SSR uses the natural mask for the address (/8 for Class A, /16 for Class B or /24 for Class C)

name

name of the VLAN associated with this interface

Routing Commands

Adding Routes

ip add route *address-mask* gateway *IP address*

ip add route default gateway *IP address*

address-mask

IP address and netmask of the destination. You can specify the address and mask using the traditional format (example: 10.1.2.3/255.255.0.0) or the CIDR format (example: 10.1.2.3/16). If you specify an address without mask information, the SSR uses the natural mask for the address (/8 for Class A, /16 for Class B or /24 for Class C)