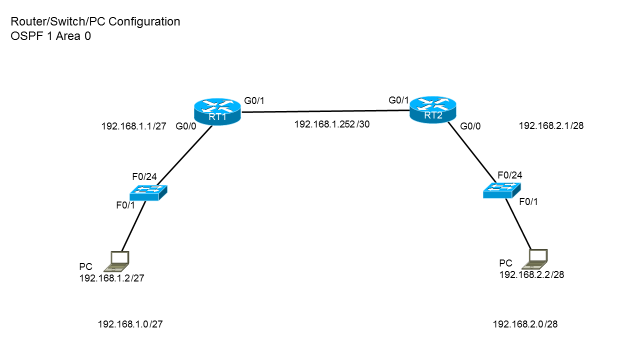
|  |  |
| --- | --- |
| **Command** | **What it Does** |
| ***Many commands on the switch are the same as the router*** | |
| Switch# show run | Displays your current running configuration |
| Switch# copy run start | Copies the current running configuration to memory (saves it!) |
| Switch# write -OR- **wr** | Alternative for **copy run start.** Writes config directly to NVRAM |
| Switch# show version | Shows the current version of IOS, configuration registry number, uptime, MAC address, and other information |
| Switch# erase startup-configuration  Switch# reload | Wipes startup config. Allows you to start with a default configuration. Works on routers and switches |
| Switch# ping 192.168.1.1 | Sends a PING to that IP address |
| exit | Sends you back one level |
| **Keyboard** | **What it Does** |
| CRTL A | Moves the cursor to the beginning of the CLI line |
| CTRL E | Moves the cursor to the end of the CLI line |
| CTRL + SHIFT 6 | Press these keys to stop all unwanted process and return to your prompt |
| CTRL Z | Exits all configuration modes and returns you to privileged exec mode (Switch#) |
| SPACE BAR | Advances the CLI a page at a time scrolling |
| ENTER | Advances the CLI line by line. |

**Network Diagram**



OSPF

**Switch2**

**Switch1**

**Router1**

**Router2**

**PC1**

**PC2**

**Note: The Ethernet interfaces supporting user traffic are in a “No Shut” state by default and will pass traffic automatically upon having a device connected.**

Switch 1 Admin

**Note: Items displayed in** *italics* **are variable, depending on parameters required**

Switch> **enable**

Switch#**configure terminal (** Or **config t**  for short. This enters the global configuration mode)

Switch(config)#**hostname** *Switch1* (sets the hostname to the italicized portion)

Switch1 (config)#**banner motd \*** *This Switch was configured by me.* **\***

Switch1 (config)#**enable password** *cisco* or **enable secret** *cisco*

Switch1 (config)#**no ip domain-lookup**

Switch1 (config)#**line console 0** (enables config mode to configure console line )

Switch1 (config-line)#**password** *cisco*  (where ***cisco*** is the given console password)

Switch1 (config-line)#**login** (tells the Switch or switch to require the password to gain access)

Switch1 (config-line)#**exec-timeout 0 0** (disables your connection from timing out – use only in  
 bench testing, never in a production environment)

Switch1 (config-line)#**logging synchronous** (Stops console messages from interfering, always   
 puts the cursor back to where you were typing)

Switch1 (config-line)# **exit** (drops out of line config mode)

Switch1 (config)#**line vty 0 15** (16 total VTY “lines”, numbered 0 through 4. These allow for   
 remote connections to configure your device)

Switch1 (config-line)#**password** *cisco*  (where ***cisco*** is the given vty password)

Switch1 (config-line)#**login**

Switch1 (config-line)#**transport input** *telnet*(other options are ssh, all or none)

Switch1 (config-line)#**exit** (drops out of line config mode)

Switch 1 VLAN 1 and Default Gateway

Switch1 (config)#**interface vlan 1** (configure the VLAN interface)

Switch1(config-if)#**ip address** *192.168.1.4 255.255.255.224*(2nd IP address of the network, Subnet Mask)

Switch1 (config-if)#**no shut** (turn on the interface)

Switch1 (config-if)#**exit**

Switch1 (config)#**ip default-gateway** *192.168.1.1*(IP address of the router)

Switch1(config)#**exit**

Switch1#**copy run start**  -or- **wr**

Switch 2 Admin

Switch> **enable**

Switch#**configure terminal (** Or **config t**  for short. This enters the global configuration mode)

Switch(config)#**hostname *Switch2*** (sets the hostname to the italicized portion)

Switch2 (config)#**banner motd \*** *This Switch was configured by me.* **\***

Switch2 (config)#**enable password** *cisco* or **enable secret** *cisco*

Switch2 (config)#**no ip domain-lookup**

Switch2 (config)#**line console 0** (enables config mode to configure console line )

Switch2 (config-line)#**password** *cisco*  (where ***cisco*** is the given console password)

Switch2 (config-line)#**login** (tells the Switch or switch to require the password to gain access)

Switch2 (config-line)#**exec-timeout 0 0** (disables your connection from timing out – use only in  
 bench testing, never in a production environment)

Switch2 (config-line)#**logging synchronous** (Stops console messages from interfering, always   
 puts the cursor back to where you were typing)

Switch2 (config-line)# **exit** (drops out of line config mode)

Switch2 (config)#**line vty 0 5** (16 total VTY “lines”, numbered 0 through 4. These allow for   
 remote connections to configure your device)

Switch2 (config-line)#**password** *cisco*  (where ***cisco*** is the given vty password)

Switch2 (config-line)#**login**

Switch2 (config-line)#**transport input** *telnet*(other options are ssh, all or none)

Switch2 (config-line)#**exit** (drops out of line config mode)

Switch 2 VLAN 1 and Default Gateway

Switch2 (config)#**interface vlan 1** (configure the VLAN interface)

Switch2(config-if)#**ip address** *192.168.2.2 255.255.255.240*(2nd IP address of the network, Subnet Mask)

Switch2 (config-if)#**no shut** (turn on the interface)

Switch2 (config-if)#**exit**

Switch2 (config)#**ip default-gateway** *192.168.2.1*(IP address of the router)

Switch2(config)#**exit**

Switch2#**copy run start**  -or- **wr**

**Configure Packet Tracer PCs interface (Do BOTH PCs):**

* Place the PC on the screen
* Select the DESKTOP tab
* Select Interface > Fast Ethernet 0
* Enable the STATIC IP option in IP CONFIGURATION
* Enter the correct **IP Address, Subnet Mask, Default Gateway** per your network diagram

**Setting Your Physical Workstation IP (as needed)**:

* Click on Network Connection on Desktop
* Double-Click Local Connection
* Click Properties
* Scroll to the bottom and double-click Internet Protocol (TCP/IP)
* Replace existing info with your assigned workstation IP, SM, and Default Gateway
* Once information is updated Click on OK then OK again, an hourglass should appear telling you the information is being updated on your NIC.

**Ping the Switch’s VLAN1 interface from your PC:**

* Connect a straight-through cable from your PC’s NIC to an open Ethernet port on the local switch.
* On your PC, double-click on Command Prompt on your desktop.
* At the command prompt, type **ipconfig** to show the IP settings for your workstation.
* Type **ping XXX.XXX.XXX.XXX** (a switch’s VLAN 1 IP address)
* Good: At least 3 *Reply From* lines, Bad: *Destination Host Unreachable*
* If bad, double-check your PC IP Address, your Switch’s IP address, and ensure your cable is in the correct port and firmly seated.

**Ping the Router from your PC:**

* On your PC, double-click on Command Prompt on your desktop.
* At the command prompt, type **ipconfig** to show the IP settings for your workstation.
* Type **ping XXX.XXX.XXX.XXX** (your Gateway, the router’s IP address)
* Good: At least 3 *Replies From* lines, Bad: *Destination Host Unreachable*
* If bad, double-check your PC IP Address, your Switch’s IP address, make sure VLAN 1 is not shut down, and ensure your cable is in the correct port and firmly seated.