UNIVERSITY of SAN CARLOS
SCIENTIA • VIRTUS • DEVOTIO

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Lab Activity: Configuring a Switch Management Address

Addressing Table:

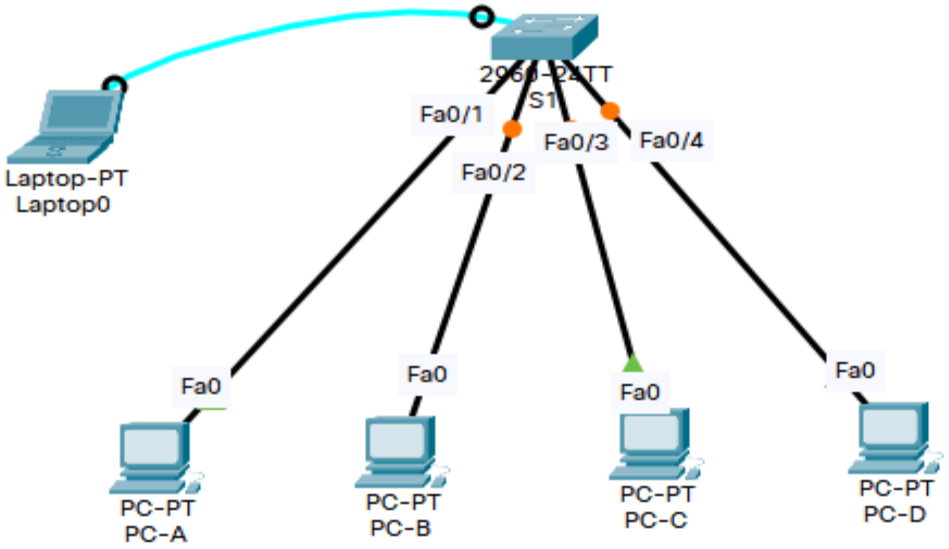
Device	Interface	IP Address	Subnet Mask	Default Gateway
S1	VLAN 1	192.168.1.2	255.255.255.0	N/A
PC-A	NIC	192.168.1.10	255.255.255.0	N/A
PC-B	NIC	192.168.1.11	255.255.255.0	N/A
PC-C	NIC	192.168.1.12	255.255.255.0	N/A
PC-D	NIC	192.168.1.13	255.255.255.0	N/A

Part 1: Configure a Basic Network Device

- **Cable the network as shown in the topology.**
- **Configure basic switch settings including hostname, management address, and Telnet access.**
- **Configure an IP address on the PC.**

Part 2: Verify and Test Network Connectivity

- **Display device configuration.**
- **Test end-to-end connectivity with ping.**
- **Test remote management capability with Telnet.**
- **Save the switch running configuration file.**



1. Verify a clean configuration file with the show running-config privileged EXEC command. If a configuration file was previously saved, it will have to be removed. Depending on the switch model and IOS version, your configuration may look slightly different. However, there should be no configured passwords or IP address set. If your switch does not have a default configuration, ask your instructor for help.

2. Enter global configuration mode and assign the switch hostname.

3.Display the S1 device configuration.

a. **Return to your console connection using Tera Term on PC-A to display and verify your switch configuration by issuing the show run A sample configuration is shown below. The settings you configured are highlighted in yellow. The other configuration settings are IOS defaults.**

```
Switch>ena
Switch#ENAble
Switch#show run
Building configuration...

Current configuration : 1080 bytes
!
version 15.0
no service timestamps log datetime msec
no service timestamps debug datetime msec
no service password-encryption
!
hostname Switch
```

```
interface FastEthernet0/20
!
interface FastEthernet0/21
!
interface FastEthernet0/22
!
interface FastEthernet0/23
!
interface FastEthernet0/24
!
interface GigabitEthernet0/1
!
interface GigabitEthernet0/2
!
interface Vlan1
 no ip address
 shutdown
!
!
!
!
line con 0
!
line vty 0 4
 login
line vty 5 15
 login
!
!
!
!
end
```

```
Switch#config t
Enter configuration commands, one per line.  End with CNTL/Z.
Switch(config)#hostname S1
S1(config)#enable secret class
S1(config)#no ip domain-lookup
S1(config)#banner motd # Warning!!! Your connection on this site is not secure!!! #
S1(config)#exit
S1#
%SYS-5-CONFIG_I: Configured from console by console
exit









S1 con0 is now available




Press RETURN to get started.
```

1. Verify the status of your SVI management interface. Your VLAN 1 interface should be up/up and have an IP address assigned. Notice that switch port F0/6 is also up because PC-A is connected to it. Because all switch ports are initially in VLAN 1, by default, you can communicate with the switch using the IP address you configured for VLAN 1.

```
 Warning!!! Your connection on this site is not secure!!!

S1>
S1>ena
Password:
S1#config t
Enter configuration commands, one per line.  End with CNTL/Z.
S1(config)#interface vlan 1
S1(config-if)#ip address 192.168.1.2 255.255.255.0
S1(config-if)#no shut

S1(config-if)#
%LINK-5-CHANGED: Interface Vlan1, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Vlan1, changed state to up

S1(config-if)#exit
S1(config)#line con 0
S1(config-line)#password cisco
S1(config-line)#login
S1(config-line)#exit
```

```
 Warning!!! Your connection on this site is not secure!!!

S1>
S1>ena
Password:
S1#config t
Enter configuration commands, one per line.  End with CNTL/Z.
S1(config)#interface vlan 1
S1(config-if)#ip address 192.168.1.2 255.255.255.0
S1(config-if)#no shut

S1(config-if)#
%LINK-5-CHANGED: Interface Vlan1, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Vlan1, changed state to up

S1(config-if)#exit
S1(config)#line con 0
S1(config-line)#password cisco
S1(config-line)#login
S1(config-line)#exit
S1(config)#line vty 04
S1(config-line)#password cisco
S1(config-line)#login
S1(config-line)#end
S1#
%SYS-5-CONFIG_I: Configured from console by console
```

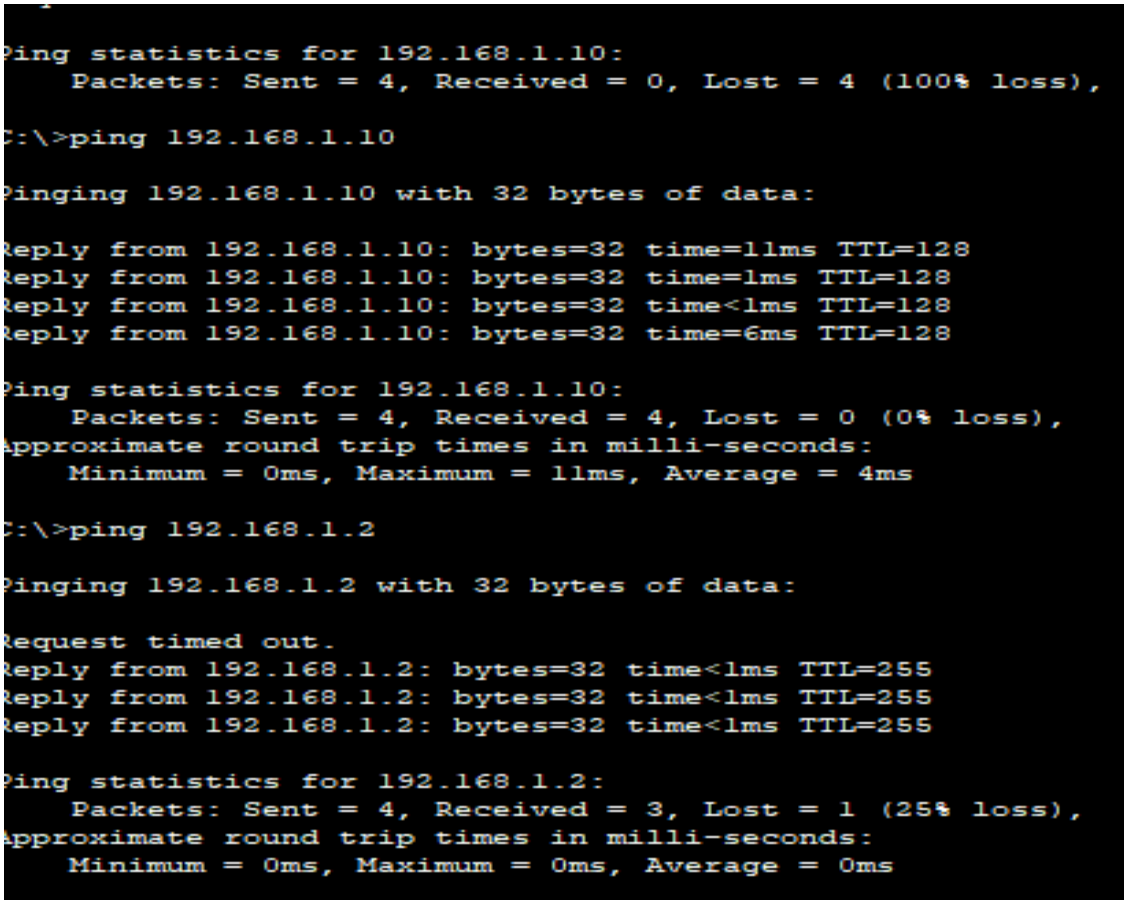
```
interface GigabitEthernet0/1
!
interface GigabitEthernet0/2
!
interface Vlan1
 ip address 192.168.1.2 255.255.255.0
!
banner motd ^C Warning!!! Your connection on this site is not secure!!! ^C
!
!
!
line con 0
 password cisco
 login
!
line vty 0 3
 login
line vty 4
 password cisco
 login
line vty 5 15
 login
!
!
!
!
end
```

S1# **show ip interface brief**

```
S1#show ip interface brief
Interface              IP-Address      OK? Method Status                Protocol
FastEthernet0/1        unassigned      YES manual down                  down
FastEthernet0/2        unassigned      YES manual down                  down
FastEthernet0/3        unassigned      YES manual down                  down
FastEthernet0/4        unassigned      YES manual down                  down
FastEthernet0/5        unassigned      YES manual down                  down
FastEthernet0/6        unassigned      YES manual up                    up
FastEthernet0/7        unassigned      YES manual down                  down
FastEthernet0/8        unassigned      YES manual down                  down
FastEthernet0/9        unassigned      YES manual down                  down
FastEthernet0/10       unassigned      YES manual down                  down
FastEthernet0/11       unassigned      YES manual down                  down
FastEthernet0/12       unassigned      YES manual down                  down
FastEthernet0/13       unassigned      YES manual down                  down
FastEthernet0/14       unassigned      YES manual down                  down
FastEthernet0/15       unassigned      YES manual down                  down
FastEthernet0/16       unassigned      YES manual down                  down
FastEthernet0/17       unassigned      YES manual down                  down
FastEthernet0/18       unassigned      YES manual down                  down
FastEthernet0/19       unassigned      YES manual down                  down
FastEthernet0/20       unassigned      YES manual down                  down
FastEthernet0/21       unassigned      YES manual down                  down
FastEthernet0/22       unassigned      YES manual down                  down
FastEthernet0/23       unassigned      YES manual down                  down
FastEthernet0/24       unassigned      YES manual down                  down
GigabitEthernet0/1     unassigned      YES manual down                  down
GigabitEthernet0/2     unassigned      YES manual down                  down
```

- **Test end-to-end connectivity.**

Open a command prompt window (cmd.exe) on PC-A by clicking the **Windows Start** icon and enter **cmd** into the **Search for programs and files** field. Verify the IP address of PC-A by using the **ipconfig /all** command. This command displays the PC hostname and the IPv4 address information. Ping PC-A's own address and the management address of S1.



- **Test and verify remote management of S1.**

You will now use Telnet to remotely access the switch S1 using the SVI management address. In this lab, PC-A and S1 reside side by side. In a production network, the switch could be in a wiring closet on the top floor while your management PC is located on the ground floor. Telnet is not a secure protocol. However, you will use it in this lab to test remote access. All information sent by Telnet, including passwords and commands, is sent across the session in plain text. In subsequent labs, you will use Secure Shell (SSH) to remotely access network devices.

```
Packet Tracer PC Command Line 1.0
C:\>telnet 192.168.1.2
Trying 192.168.1.2 ...Open Warning!!! Your connection on this site is not secure!!!


User Access Verification

Password:
Password:
S1>enable
Password:
Password:
S1#copy running-config startup-config
Destination filename [startup-config]?
Building configuration...
[OK]
S1#
S1#ping 192.168.1.10

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 192.168.1.10, timeout is 2 seconds:
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 0/3/10 ms

S1#
```

Reflection:

Why must you use a console connection to initially configure the switch? Why not connect to the switch via Telnet or SSH?

Answer: **Because all basic settings must be configured using a console cable. Telnetting to a switch needs an IP address so that you must use a console for you to configure all the basic settings.**