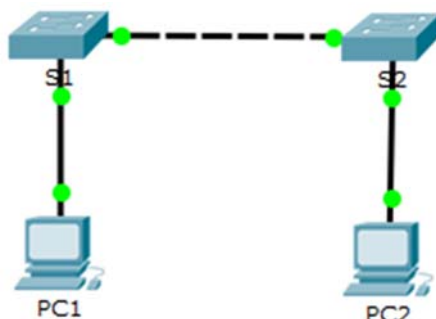


# Packet Tracer - Implement Basic Connectivity

## Topology



## Addressing Table

Device	Interface	IP Address	Subnet Mask
S1	VLAN 1	192.168.1.253	255.255.255.0
S2	VLAN 1	192.168.1.254	255.255.255.0
PC1	NIC	192.168.1.1	255.255.255.0
PC2	NIC	192.168.1.2	255.255.255.0

## Objectives

**Part 1: Perform a Basic Configuration on S1 and S2**

**Part 2: Configure the PCs**

**Part 3: Configure the Switch Management Interface**

## Background

In this activity, you will first perform basic switch configurations. Then you will implement basic connectivity by configuring IP addressing on the switches and PCs. When the IP addressing configuration is complete, you will use various **show** commands to verify configurations and use the **ping** command to verify basic connectivity between devices.

## Part 1: Perform a Basic Configuration on S1 and S2

### Step 1: Configure S1 with a hostname.

- Click **S1**, and then click the **CLI** tab.
- Enter the privileged EXEC mode. Then enter the global configuration mode.  

```
Switch> enable
Switch# configure terminal
```

Enter configuration commands, one per line. End with CNTL/Z.
- Configure the hostname as **S1**.

```
Switch(config)# hostname S1
S1(config)#
```

### Step 2: Configure the console and privileged EXEC mode passwords.

- Configure **cisco** as the console password and enable login.  

```
S1(config)# line console 0
S1(config-line)# password cisco
S1(config-line)# login
S1(config-line)# exit
```
- Use **class** for the encrypted privileged EXEC mode password.  

```
S1(config)# enable secret class
```

### Step 3: Verify the password configurations for S1.

- To verify that the passwords were configured correctly, enter **end** to exit the global configuration mode. Type **exit** to exit the privileged EXEC mode.  

```
S1(config)# end
S1#
%SYS-5-CONFIG_I: Configured from console by console

S1# exit
```
- Press **Enter** and you will be prompted for a password to enter the user EXEC mode.  
What password did you use? \_\_\_\_\_
- Type **enable** to enter the privileged EXEC mode. Enter the password when prompted.  
What password did you use? \_\_\_\_\_
- Enter **configure terminal** to enter global configuration mode.

### Step 4: Configure a message of the day (MOTD) banner.

In this step, you will configure a message of the day banner to warn unauthorized access. The following text is an example:

Authorized access only. Violators will be prosecuted to the full extent of the law.

Use the **banner motd** command with the sample message. You can choose another message.

```
S1(config)# banner motd "Authorized access only. Violators will be prosecuted
to the full extent of the law."
```

### Step 5: Save the configuration file to NVRAM.

- Exit to privileged EXEC mode.  

```
S1(config)# exit
S1#
%SYS-5-CONFIG_I: Configured from console by console
S1#
```
- Enter the **copy running-config startup-config** command to save the configuration.  

```
S1# copy running-config startup-config
```

```
Destination filename [startup-config]?  
Building configuration...  
[OK]
```

**Step 6: Repeat Steps 1 through 5 on S2.**

## Part 2: Configure the PCs

**Step 1: Configure both PCs with IP addresses.**

- Click **PC1**, and then click the **Desktop** tab.
- Click **IP Configuration**. In the **Addressing Table** above, you can see that the IP address for PC1 is supposed to be 192.168.1.1 and the subnet mask 255.255.255.0. Enter this information for PC1 in the **IP Configuration** window.
- Repeat steps 1a and 1b for PC2.

**Step 2: Test connectivity to switches.**

- Click **PC1**. Close the **IP Configuration** window if it is still open. In the **Desktop** tab, click **Command Prompt**.
- Type the **ping** command and the IP address for S1, and press **Enter**.

```
Packet Tracer PC Command Line 1.0
```

```
PC> ping 192.168.1.253
```

Were you successful? Explain.

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## Part 3: Configure the Switch Management Interface

**Step 1: Configure S1 with an IP address.**

Switches can be used without any configurations. Switches forward information from one port to another based on Media Access Control (MAC) addresses. Why does a switch need an IP address?

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- In the global configuration mode, enter the following commands to configure S1 with an IP address in VLAN 1.

```
S1# configure terminal
```

```
Enter configuration commands, one per line. End with CNTL/Z.
```

```
S1(config)# interface vlan 1
```

```
S1(config-if)# ip address 192.168.1.253 255.255.255.0
```

```
S1(config-if)# no shutdown
```

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

```
S1(config-if)#
```

```
S1(config-if)# exit
```

```
S1#
```

What does the **no shutdown** command?

---

- b. Save the configuration.

```
S1# copy running-config startup-config
Destination filename [startup-config]?
Building configuration...
[OK]
S1#
```

- c. Verify the IP address configuration on S1.

```
S1# show ip interface brief
<output omitted>
Vlan1                192.168.1.253    YES manual up
```

### Step 2: Configure S2 with an IP address.

Use the information in the addressing table repeat the same process in Step 1 to configure S2 with an IP address. Remember to save and verify your configurations.

### Step 3: Verify network connectivity.

Network connectivity can be verified using the **ping** command. It is very important that connectivity exists throughout the network.

- Click **PC1**, and then click the **Desktop** tab.
- Open the **Command Prompt**.
  - Ping the IP address for PC2.
  - Ping the IP address for S1.
  - Ping the IP address for S2.
- From PC2, ping the other devices in the network.
- From S1, ping the other devices in the network. The ping to PC1 is displayed below as an example.

```
S1> ping 192.168.1.1
```

```
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 192.168.1.1, timeout is 2 seconds:
!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 0/0/1 ms
```

- From S2, ping the other devices in the network.

All pings should be successful. If your first ping result is 80%, retry; it should now be 100%. You will learn why a ping may fail the first time later in your studies. If you are unable to ping any of the devices, check your configuration for errors.

### Suggested Scoring Rubric

Activity Section	Question Location	Possible Points	Earned Points
Part 1: Perform a Basic Configuration on S1 and S2	Step 3b	2	
	Step 3c	2	
Part 2: Configure the PCs	Step 2b	2	
Part 3: Configure the Switch Management Interface	Step 1, q1	2	
	Step 1, q2	2	
<b>Questions</b>		<b>10</b>	
<b>Packet Tracer Score</b>		<b>90</b>	
<b>Total Score</b>		<b>100</b>	