

## NPS LAB EXPERIMENT 2

**Objective:** Configuration of a basic switch setup using a Huawei/Cisco network switch.

### STEPS:

#### 1. Open Cisco Packet Tracer and Set Up the Devices:

- **Add a Switch:** From the left-side panel, under the "Switches" section, drag a 2960 switch to the workspace.
- **Add PCs:** From the "End Devices" section, drag two PCs to the workspace.
- **Connect the PCs to the Switch:** Use the Copper Straight-Through Cable to connect:
  - PC1 to FastEthernet0/1 on the switch.
  - PC2 to FastEthernet0/2 on the switch.

#### 2. Access the Switch CLI:

- Click on the switch.
- Go to the CLI (Command Line Interface) tab.
- Press Enter to start using the switch.

#### 3. Enter Privileged EXEC Mode:

- You'll be presented with the switch prompt. To configure the switch, first, enter Privileged EXEC mode by typing the command to enable configuration. You should see the prompt change from > to #.

#### 4. Enter Global Configuration Mode:

- Next, enter the mode that allows you to configure the switch. You'll now be able to perform configurations like setting a hostname, assigning IP addresses, and managing VLANs.

#### 5. Set a Hostname:

- Give your switch a recognizable name by typing the command to set the hostname. This helps in identifying the switch easily when you have multiple devices in the network.

#### 6. Create and Configure a VLAN (Optional):

- If you want to segment your network, you can create a VLAN (Virtual LAN). You will need to:
  - Create the VLAN.
  - Assign it a name.
  - Apply the VLAN to specific ports (e.g., FastEthernet 0/1).

#### 7. Assign an IP Address to the Switch (VLAN 1 Interface):

- To allow for remote management, assign an IP address to the switch. You'll configure it on the VLAN 1 interface. Ensure the IP address you assign matches the subnet of your PCs.
- For example, set the switch's management IP to 192.168.1.1 with a subnet mask of 255.255.255.0.

## 8. Save the Configuration:

- To save your configuration so it remains even after a reboot, you can use the save command. This will save the running configuration to the startup configuration.

## 9. Configure the PCs with IP Addresses:

- Click on PC1 and PC2.
- Go to the Desktop > IP Configuration on each PC and assign:
  - PC1: IP address 192.168.1.2 and subnet mask 255.255.255.0.
  - PC2: IP address 192.168.1.3 and subnet mask 255.255.255.0.
- No default gateway is needed for this simple setup unless you're using a router.

## 10. Test Connectivity:

- Use the Command Prompt on PC1 and PC2 to run the ping command.
- On PC1, ping PC2's IP address (192.168.1.3). This will test whether the network is working correctly and if the switch is configured properly.



