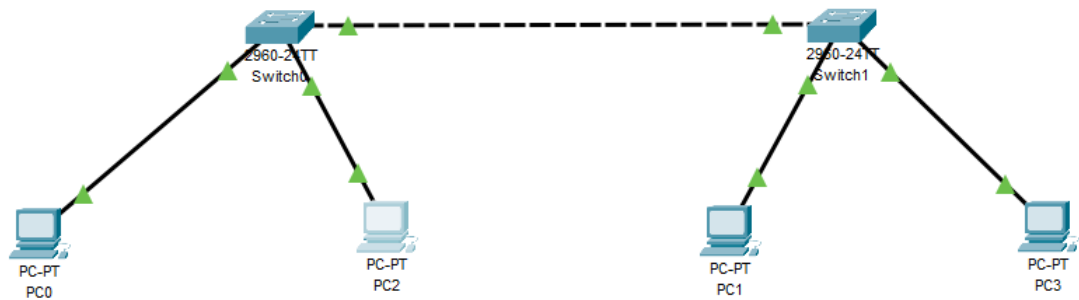


6. Change the native VLAN on a trunk port. Test for VLAN mismatches and troubleshoot.

Network Topology :



Pc0 and pc1 : vlan 10

Pc2 and pc3: vlan 20

Making two switches connected via a trunk link :

Switch 1 with : configuring with VLAN 99

Switch 2 with : Default native vlan

```
Switch0
Physical Config CLI Attributes
IOS Command Line Interface

Switch>enable
Switch#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#vlan 10
Switch(config-vlan)#name HR
Switch(config-vlan)#exit
Switch(config)#vlan 20
Switch(config-vlan)#name Sales
Switch(config-vlan)#exit
Switch(config)#interface FastEthernet0/1
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 10
Switch(config-if)#exit
Switch(config)#interface FastEthernet0/2
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 20
Switch(config-if)#exit
Switch(config)#interface FastEthernet0/3
Switch(config-if)#switchport mode trunk
Switch(config-if)#switchport trunk native vlan 99
Switch(config-if)#exit
Switch(config)#interface GigabitEthernet0/1
Switch(config-if)#switchport mode trunk

Switch(config-if)#
%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/1, changed state to down

%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/1, changed state to up

Switch(config-if)#switchport trunk native vlan 99
Switch(config-if)#exit
```

Switch1

Physical Config CLI Attributes

IOS Command Line Interface

```
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1, changed state to up
%LINK-5-CHANGED: Interface FastEthernet0/2, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/2, changed state to up
%LINK-5-CHANGED: Interface GigabitEthernet0/1, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/1, changed state to up

Switch>enable
Switch#config terminal
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#vlan 10
Switch(config-vlan)#name HR
Switch(config-vlan)#exit
Switch(config)#vlan 20
Switch(config-vlan)#name Sales
Switch(config-vlan)#exit
Switch(config)#
Switch(config)#interface FastEthernet0/1
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 10
Switch(config-if)#exit
Switch(config)#interface FastEthernet0/2
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 20
Switch(config-if)#exit
Switch(config)#interface GigabitEthernet0/1
%SPANTREE-2-RECV_PVID_ERR: Received 802.1Q BPDU on non
trunk GigabitEthernet0/1 VLAN1.

%SPANTREE-2-BLOCK_PVID_LOCAL: Blocking GigabitEthernet0/1 on VLAN0001. Inconsistent port type.

%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/1, changed state to down
%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/1, changed state to up
```

Errors because vlan mismatch :

```
%CDP-4-NATIVE_VLAN_MISMATCH: Native VLAN mismatch discovered on GigabitEthernet0/1 (99), with
Switch GigabitEthernet0/1 (1).

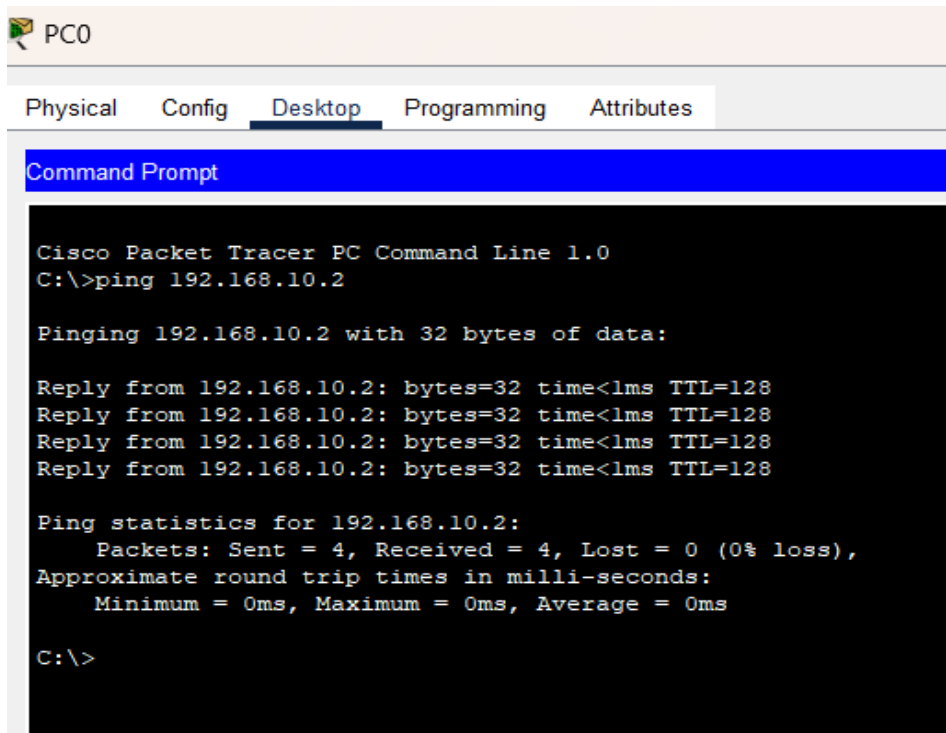
%CDP-4-NATIVE_VLAN_MISMATCH: Native VLAN mismatch discovered on GigabitEthernet0/1 (99), with
Switch GigabitEthernet0/1 (1).

%CDP-4-NATIVE_VLAN_MISMATCH: Native VLAN mismatch discovered on GigabitEthernet0/1 (99), with
Switch GigabitEthernet0/1 (1).
```

Now troubleshooting the vlans in the switch 2 to VLAN 99 :

```
Switch(config)#interface GigabitEthernet0/1
Switch(config-if)#switchport trunk native vlan 99
Switch(config-if)#exit
```

PINGING FROM pc0 to pc1 of vlan 10 :



The screenshot shows the 'PC0' window in Cisco Packet Tracer. The 'Desktop' tab is selected, displaying a 'Command Prompt' window. The text in the command prompt is as follows:

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.10.2

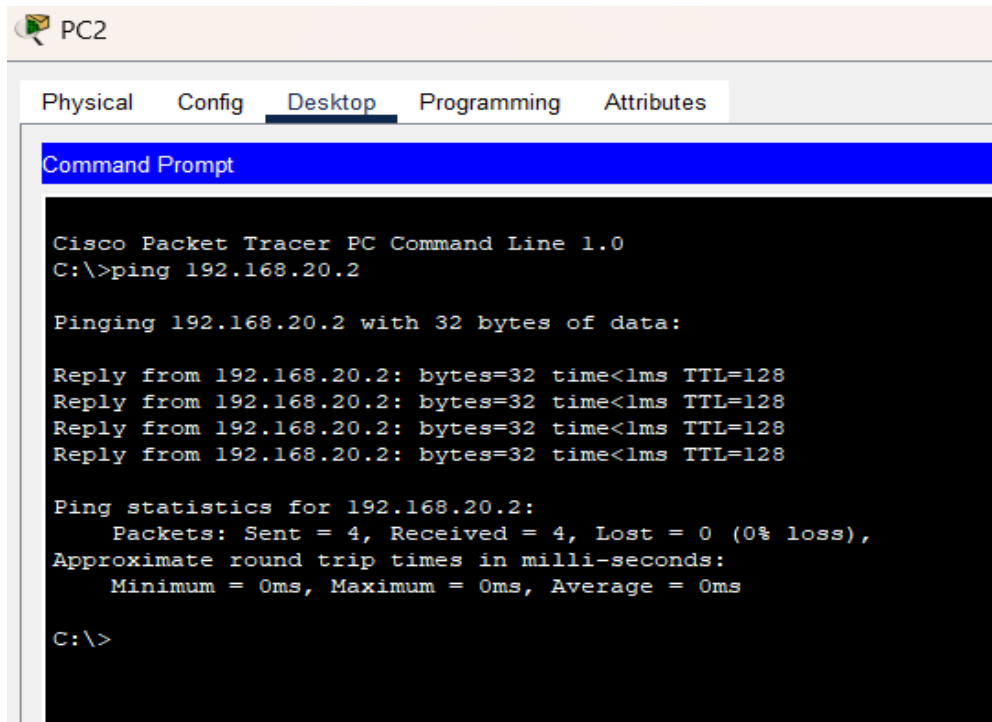
Pinging 192.168.10.2 with 32 bytes of data:

Reply from 192.168.10.2: bytes=32 time<1ms TTL=128
Reply from 192.168.10.2: bytes=32 time<1ms TTL=128
Reply from 192.168.10.2: bytes=32 time<1ms TTL=128
Reply from 192.168.10.2: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.10.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>
```

Pinging from pc 2 to pc3 of vlan 20 :



The screenshot shows the 'PC2' window in Cisco Packet Tracer. The 'Desktop' tab is selected, displaying a 'Command Prompt' window. The text in the command prompt is as follows:

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.20.2

Pinging 192.168.20.2 with 32 bytes of data:

Reply from 192.168.20.2: bytes=32 time<1ms TTL=128
Reply from 192.168.20.2: bytes=32 time<1ms TTL=128
Reply from 192.168.20.2: bytes=32 time<1ms TTL=128
Reply from 192.168.20.2: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.20.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>
```

Final learnings :

Native VLAN mismatch disrupts trunk links

Ensure both switches use the **same native VLAN** to avoid errors