

**Troubleshooting  
Vlan Scenario 1**

*CIT 167*

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## Part 1: Test Connectivity between PCs on the Same VLAN

### i) Can PC1 ping PC4

Attempt to ping PC4 from PC1 was unsuccessful. See Fig. 1 a.

### ii) Can pc2 ping pc5

Attempt to ping PC5 from PC2 was unsuccessful. See Fig. 1 b.

### iii) Can pc3 ping pc6

Attempt to ping PC6 from PC3 was unsuccessful. See Fig. 1 c.

```
C:\>ping 172.17.10.24
Pinging 172.17.10.24 with 32 bytes of data:
Request timed out.
Request timed out.
Request timed out.
Request timed out.

Ping statistics for 172.17.10.24:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
    C:\>
```

(a) PC1 pingging PC4

```
C:\>ping 172.17.20.25
Pinging 172.17.20.25 with 32 bytes of data:
Request timed out.
Request timed out.
Request timed out.
Request timed out.

Ping statistics for 172.17.20.25:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
    C:\>
```

(b) PC2 pingging PC5

```
C:\>ping 172.17.30.26
Pinging 172.17.30.26 with 32 bytes of data:
Request timed out.
Request timed out.
Request timed out.
Request timed out.

Ping statistics for 172.17.30.26:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
    C:\>
```

(c) PC3 Pingging PC6

Figure 1: Testing Connections on the same networks

## Part 2: Investigate Connectivity Problems by Gathering Data

### i) Verify Configurations on the PCs

I checked configurations for IP address and subnetmasks on all pcs. PC5 had an incorrect IP address.

### ii& 3) Verify Configs on the Switches

On switch2 vlan for subnet 30 had the 10 and 30 subnets attached to it, so I moved the Fa0/11 interface to 10 faculty/staff. Also on S2, G0/1 was not setup as a trunk.

PC5 appears to be connected on port Fa0/17 when it should be Fa0/18.

Switch3, vlan 20 and vlan 30 are switched on their connections.

## Part 3: Implement the Solution and Test Connectivity

On S2 I ran `int fa 0/11` and then `switchport access vlan 10` to correct the first issue. Then I ran, `int g0/1` and then `switchport mode trunk`.

On S1, I ran `int g0/1` and then `switchport mode trunk`.

On S3, I ran `int f0/18` and then `switchport access vlan 20`. I then ran `int f0/6` and then `switchport access vlan 30`.

I'll now attempt to ping each of the connected networks. All pings were successful. See Fig. 2.

```
C:\>ping 172.17.10.24

Pinging 172.17.10.24 with 32 bytes of data:

Reply from 172.17.10.24: bytes=32 time=12ms TTL=128
Reply from 172.17.10.24: bytes=32 time<1ms TTL=128
Reply from 172.17.10.24: bytes=32 time<1ms TTL=128
Reply from 172.17.10.24: bytes=32 time<1ms TTL=128

Ping statistics for 172.17.10.24:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 12ms, Average = 3ms
```

(a) PC1 ping PC4

```
C:\>ping 172.17.20.25

Pinging 172.17.20.25 with 32 bytes of data:

Reply from 172.17.20.25: bytes=32 time=24ms TTL=128
Reply from 172.17.20.25: bytes=32 time<1ms TTL=128
Reply from 172.17.20.25: bytes=32 time<1ms TTL=128
Reply from 172.17.20.25: bytes=32 time<1ms TTL=128

Ping statistics for 172.17.20.25:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 24ms, Average = 6ms
```

(b) PC2 ping PC5

```
C:\>ping 172.17.30.26

Pinging 172.17.30.26 with 32 bytes of data:

Reply from 172.17.30.26: bytes=32 time=2ms TTL=128
Reply from 172.17.30.26: bytes=32 time<1ms TTL=128
Reply from 172.17.30.26: bytes=32 time<1ms TTL=128
Reply from 172.17.30.26: bytes=32 time<1ms TTL=128

Ping statistics for 172.17.30.26:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 2ms, Average = 0ms
```

(c) PC3 ping PC6

Figure 2: Network connections are now all successful

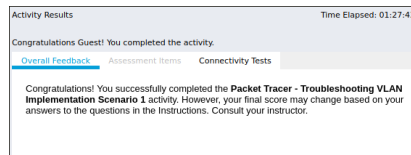


Figure 3: Successful Completion of the Activity