

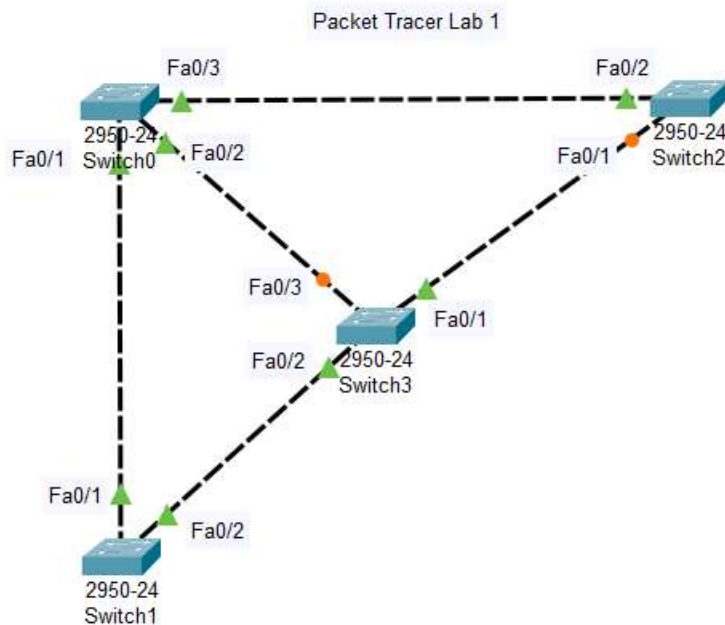
IT1080C Computer Networking

Packet Tracer Lab 1

Linking Switches in Packet Tracer

In Packet Tracer, create a local area network with four switches connected to each other.

1. Use PT-Switch (six interfaces) or Switch 2950-24 (24 interfaces)
2. Connect switches together using Copper Cross-Over cables



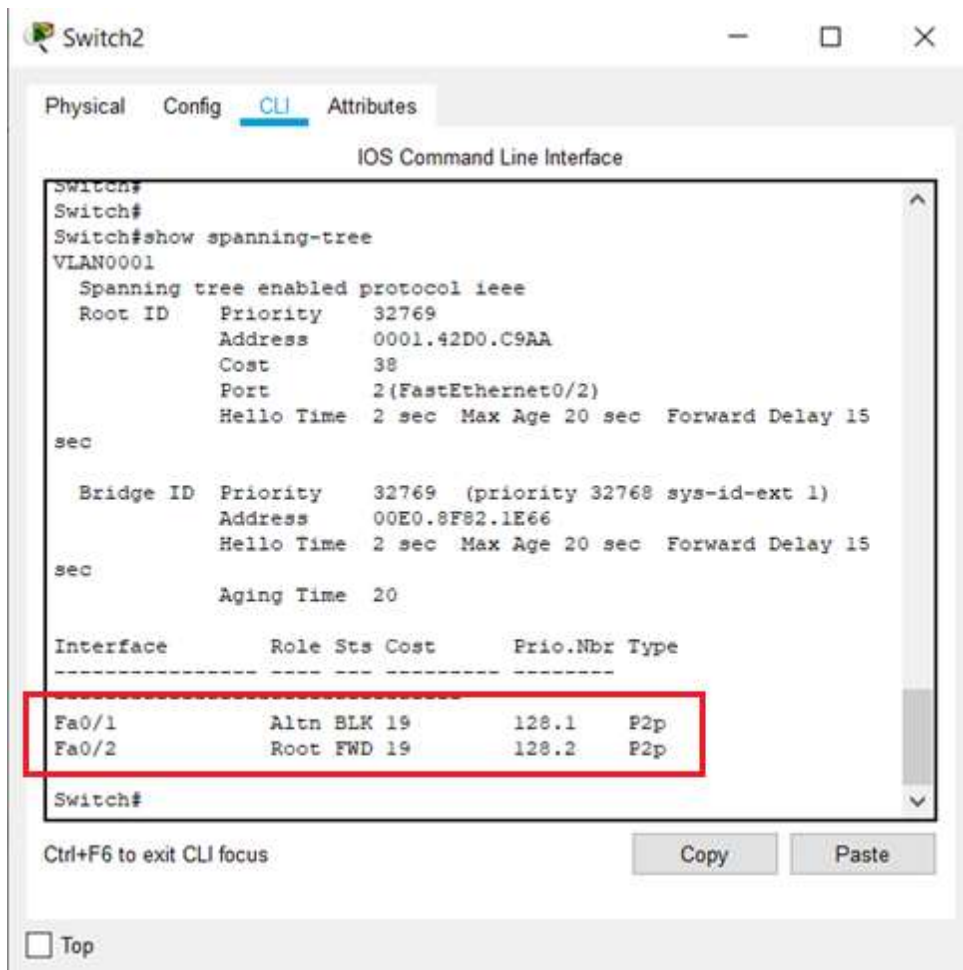
NOTE: Spanning tree protocol blocks one or more ports to prevent loops from forming in the local area network.

Viewing Spanning Tree

Open the CLI (command line interface) on a switch with a blocked port. Run the *showing spanning-tree* command.

On Switch2, open CLI and hit enter. Example from Switch2

```
Switch> (EXEC mode – default mode after booting)
Switch>en (use the enable command to enter the Privileged Exec mode)
Switch# (Privileged Exec mode– accepts command from the user)
Switch#show spanning-tree
```



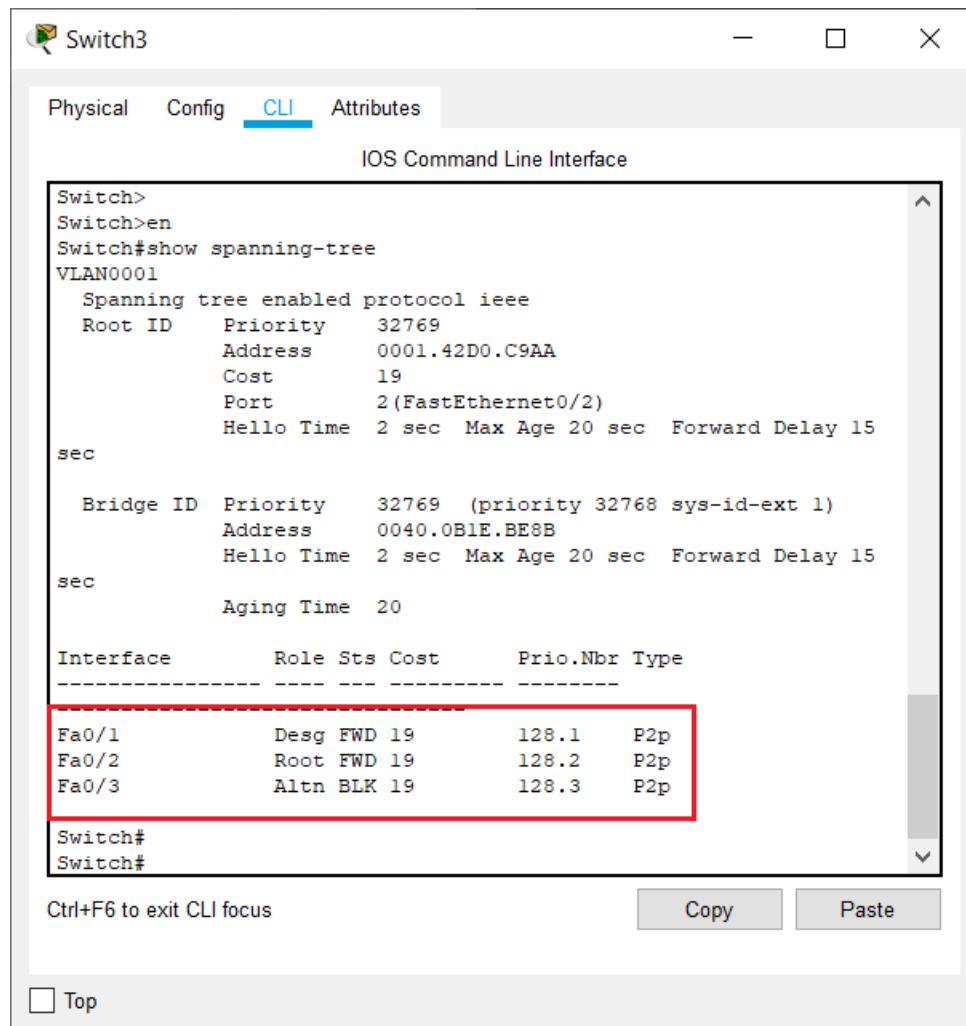
Interface fa0/1 is blocked and fa0/2 is the root port. Notice that the fa0/1 displays an orange light on the network diagram.

From Switch3

Switch>

Switch>en

Switch#show spanning-tree



The screenshot shows the CLI of a switch named 'Switch3'. The 'CLI' tab is selected. The command 'show spanning-tree' has been executed, displaying the following output:

```
Switch>
Switch>en
Switch#show spanning-tree
VLAN0001
  Spanning tree enabled protocol ieee
  Root ID    Priority    32769
            Address     0001.42D0.C9AA
            Cost        19
            Port        2 (FastEthernet0/2)
            Hello Time  2 sec  Max Age 20 sec  Forward Delay 15
sec

  Bridge ID  Priority    32769 (priority 32768 sys-id-ext 1)
            Address     0040.0B1E.BE8B
            Hello Time  2 sec  Max Age 20 sec  Forward Delay 15
sec

            Aging Time  20

Interface    Role Sts Cost      Prio.Nbr Type
-----
Fa0/1        Desg FWD 19       128.1    P2p
Fa0/2        Root FWD 19       128.2    P2p
Fa0/3        Altn BLK 19       128.3    P2p
```

The output is followed by 'Switch#' and 'Switch#'. A red box highlights the interface status table. Below the table, there are buttons for 'Copy' and 'Paste', and a 'Top' link.

Notice that fa0/3 is blocked and has an orange light displayed on the network diagram.