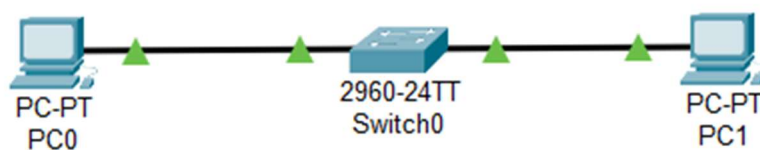


LINUX NETWORKING MODULE 3 AND 4 ASSESSMENT SOLUTIONS

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5. Create a simple LAN setup with two machines connected via a switch.
6. Ping from one machine to the other. If it fails, use ifconfig to ensure the IP addresses are configured correctly.
7. Use traceroute to identify where the packets are being dropped if the ping fails



Devices Used

- 2 PCs (PC0 and PC1) (IP addresses: 192.168.1.10 and 192.168.1.11) (
- 1 Switch (Switch0 2960-24TT)
- Copper Straight-Through Cables

```
PC0
Physical Config Desktop Programming Attributes
Command Prompt
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.1.11

Pinging 192.168.1.11 with 32 bytes of data:

Reply from 192.168.1.11: bytes=32 time=70ms TTL=128
Reply from 192.168.1.11: bytes=32 time=11ms TTL=128
Reply from 192.168.1.11: bytes=32 time<1ms TTL=128
Reply from 192.168.1.11: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.1.11:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 70ms, Average = 20ms

C:\>ipconfig /all

FastEthernet0 Connection:(default port)

    Connection-specific DNS Suffix...:
    Physical Address...: 00E0.8F9D.80DB
    Link-local IPv6 Address...: FE80::2E0:8FFF:FE9D:80DB
    IPv6 Address...: ::
    IPv4 Address...: 192.168.1.10
    Subnet Mask...: 255.255.255.0
    Default Gateway...: ::
    DHCP Servers...: 0.0.0.0
    DHCPv6 IAID...: 0.0.0.0
    DHCPv6 Client DUID...: 00-01-00-01-A4-8A-21-A1-00-E0-8F-9D-80-DB
    DNS Servers...: ::
    DNS Servers...: 0.0.0.0

Bluetooth Connection:

    Connection-specific DNS Suffix...:
    Physical Address...: 000B.BE50.0092
    Link-local IPv6 Address...: ::
    --More--
```

```
C:\>tracert 192.168.1.11

Tracing route to 192.168.1.11 over a maximum of 30 hops:

  1    1 ms    0 ms    3 ms    192.168.1.11

C:\>arp -a
Internet Address      Physical Address      Type
192.168.1.11          00d0.5804.ed18        dynamic
```

If Static IP configured is changed and Traceroute is applied:

```
C:\>tracert 192.168.1.11

Tracing route to 192.168.1.11 over a maximum of 30 hops:

  1    *        *        *        Request timed out.
  2    *        *        *        Request timed out.
  3    *        *        *        Request timed out.
```

At this scenarios ipconfig can be used to identify the IP address of the PC to be connected and can be trouble shooted to ensure connectivity.