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CN EXPERIMENT NO. 10 (MINI PROJECT)

AIM: To design and simulate a college network scenario using Cisco Packet Tracer.

DESCRIPTION:

This is a network infrastructure of a college which has 4 labs named EXTC Lab, CS Lab, I.T. Lab and Advanced Research Lab, and 2 rooms which are H.O.D Room and Server Room.

There are 12 PCs, 4 Laptops (2 wireless, 2 wires), 3 printers (1 wireless, 2 wired), 5 servers (1 wireless, 4 wired), 5 switches, 3 routers and 1 wireless router.

Labs:

- **EXTC Lab**
There are 4 PCs connected to the switch. This LAN is connected to Router 1
- **CS Lab**
There are 4 PCs connected to the switch. This LAN is connected to Router 2
- **IT Lab**
There are 3 PCs, a server and a printer connected to the switch. This LAN is connected to Router 3
- **Advanced Research Lab**
There are 2 wireless laptops, a printer and a server connected to a wireless router.

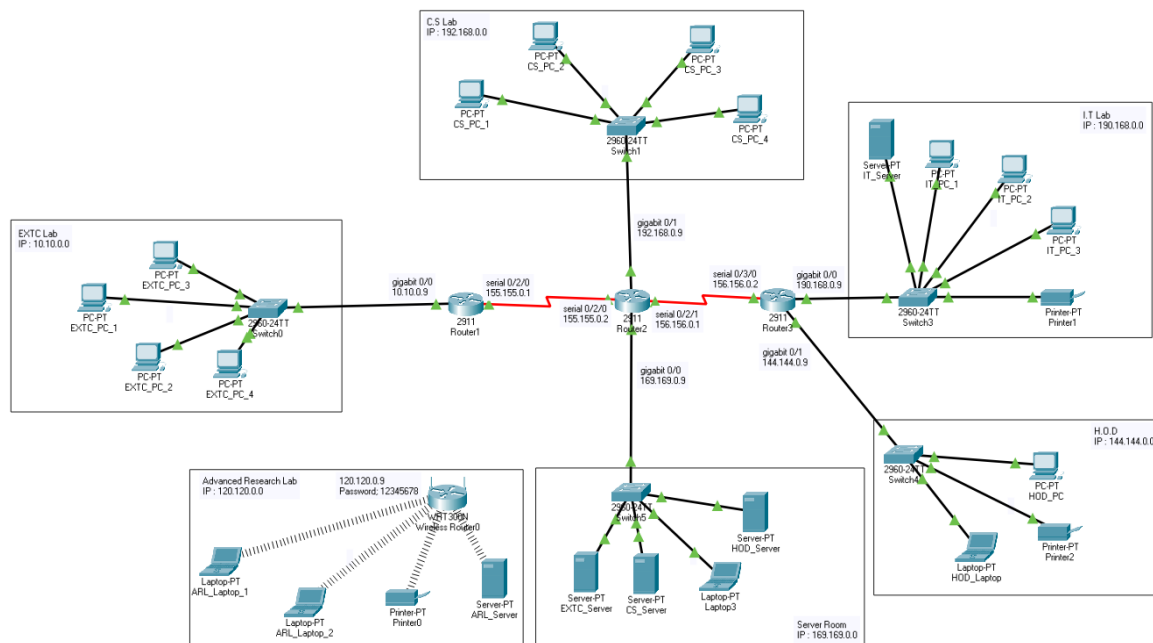
Rooms:

- **H.O.D Room**
There is a laptop, a PC and a printer connected to the switch. This LAN is connected to Router 3
- **Server Room**
There are 3 servers, corresponding to EXTC, CS and IT lab, and a laptop connected to the switch. This LAN is connected to Router 2

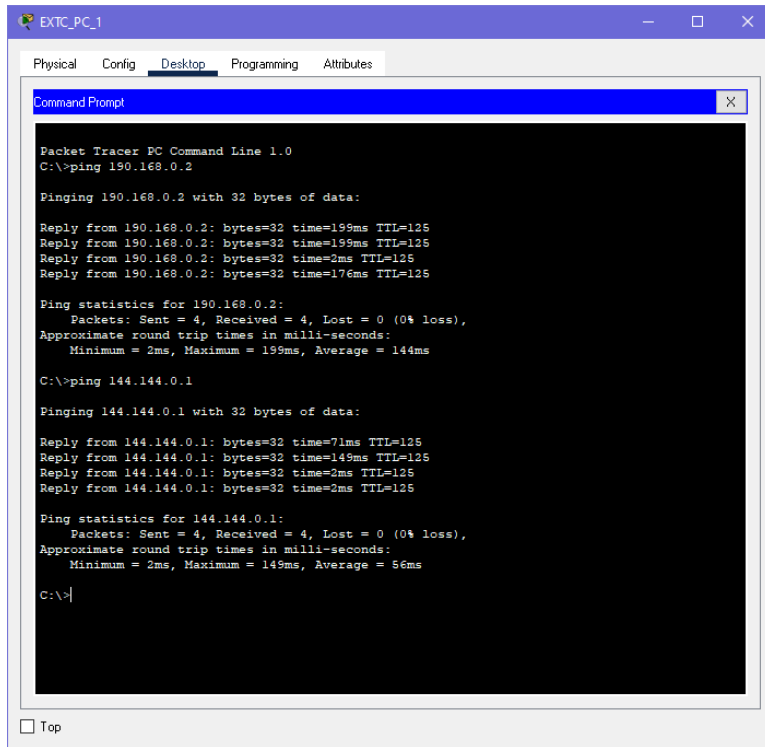
CONCEPTS USED:

- Static IP allocation
- RIP routing protocol
- Subnetting
- SMTP

NETWORK:



Ping IT_PC_2 and HOD_PC from EXTC_PC_1



The screenshot shows a Packet Tracer PC Command Line window for EXTC_PC_1. The window has tabs for Physical, Config, Desktop, Programming, and Attributes. The Desktop tab is active, displaying a Command Prompt. The Command Prompt shows the execution of two ping commands. The first command is 'C:\>ping 190.168.0.2', which results in four successful replies from 190.168.0.2 with 32 bytes of data. The ping statistics for 190.168.0.2 show 4 packets sent, 4 received, 0% loss, and approximate round trip times of 2ms, 199ms, and 176ms. The second command is 'C:\>ping 144.144.0.1', which also results in four successful replies from 144.144.0.1 with 32 bytes of data. The ping statistics for 144.144.0.1 show 4 packets sent, 4 received, 0% loss, and approximate round trip times of 2ms, 149ms, and 56ms. The Command Prompt window has a 'Top' button at the bottom left.

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Packet Tracer PC Command Line 1.0
C:\>ping 190.168.0.2

Pinging 190.168.0.2 with 32 bytes of data:

Reply from 190.168.0.2: bytes=32 time=199ms TTL=125
Reply from 190.168.0.2: bytes=32 time=199ms TTL=125
Reply from 190.168.0.2: bytes=32 time=2ms TTL=125
Reply from 190.168.0.2: bytes=32 time=176ms TTL=125

Ping statistics for 190.168.0.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 2ms, Maximum = 199ms, Average = 144ms

C:\>ping 144.144.0.1

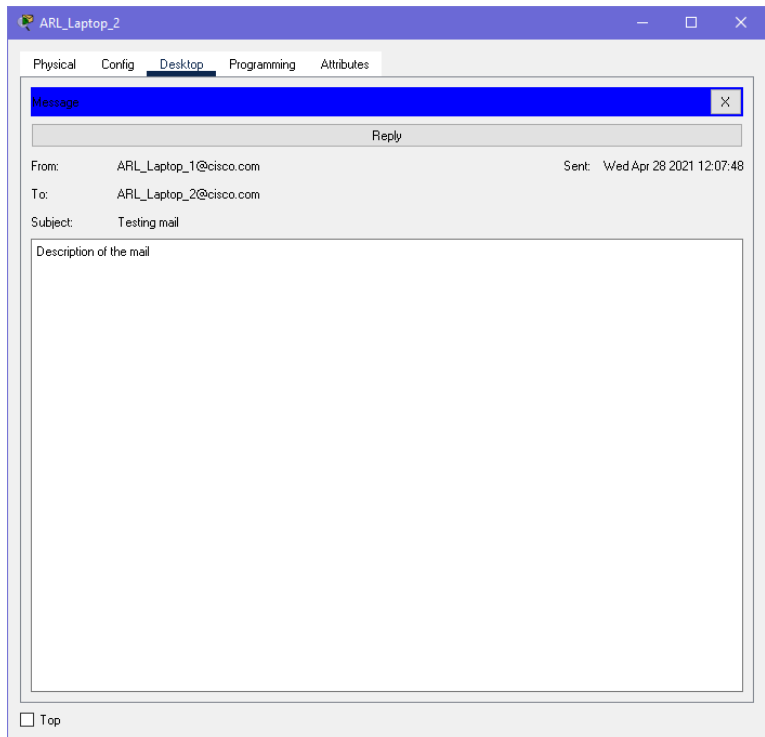
Pinging 144.144.0.1 with 32 bytes of data:

Reply from 144.144.0.1: bytes=32 time=71ms TTL=125
Reply from 144.144.0.1: bytes=32 time=149ms TTL=125
Reply from 144.144.0.1: bytes=32 time=2ms TTL=125
Reply from 144.144.0.1: bytes=32 time=2ms TTL=125

Ping statistics for 144.144.0.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 2ms, Maximum = 149ms, Average = 56ms

C:\>
```

Sending mail from ARL_Laptop_1 to ARL_Laptop_2



Sending mail from IT_PC_1 to IT_PC_3

