Project 2

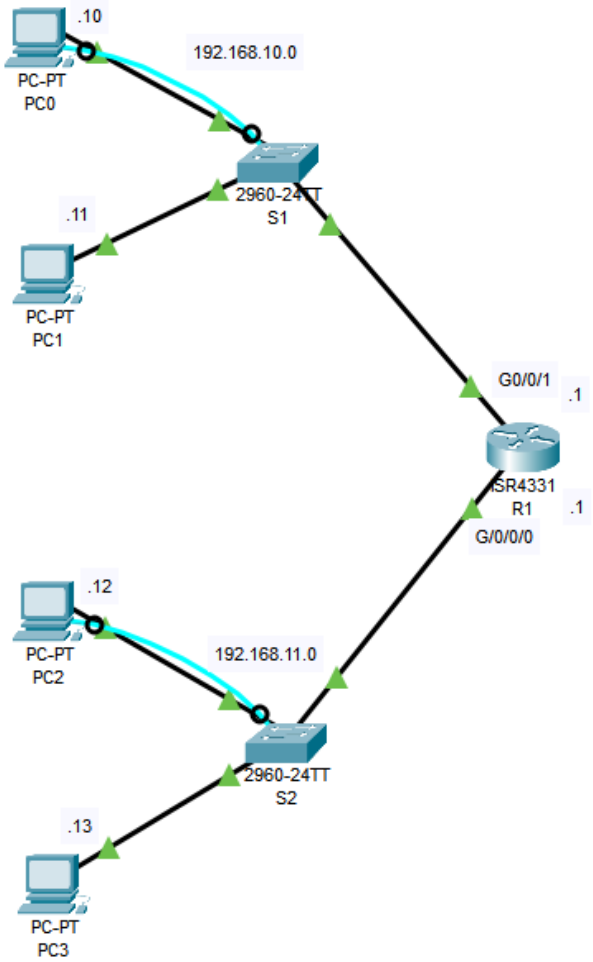
Basic configuration of the router

Project description:

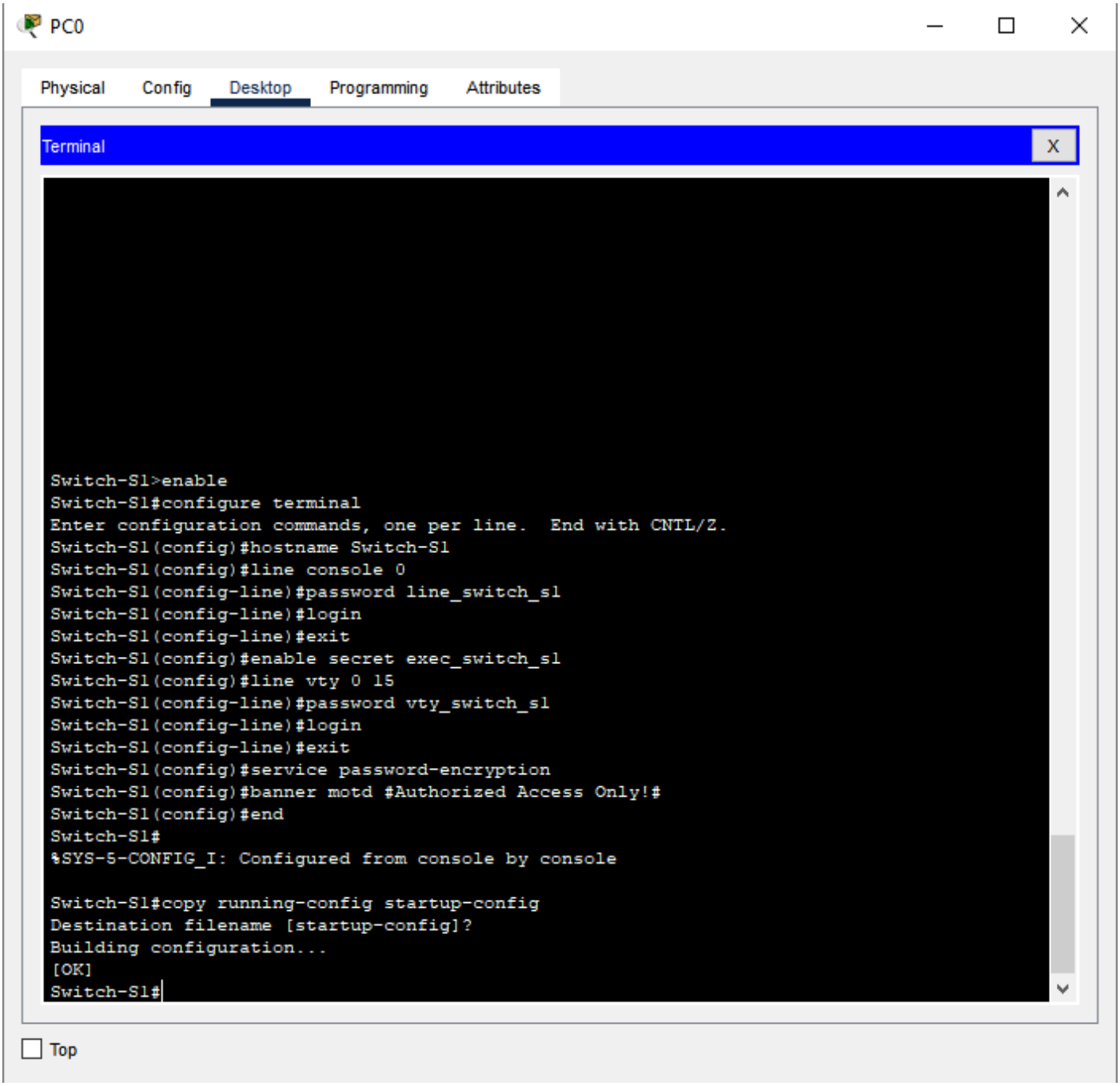
Create LAN and perform basic configuration of router

Steps:

- Create a topology of LAN:

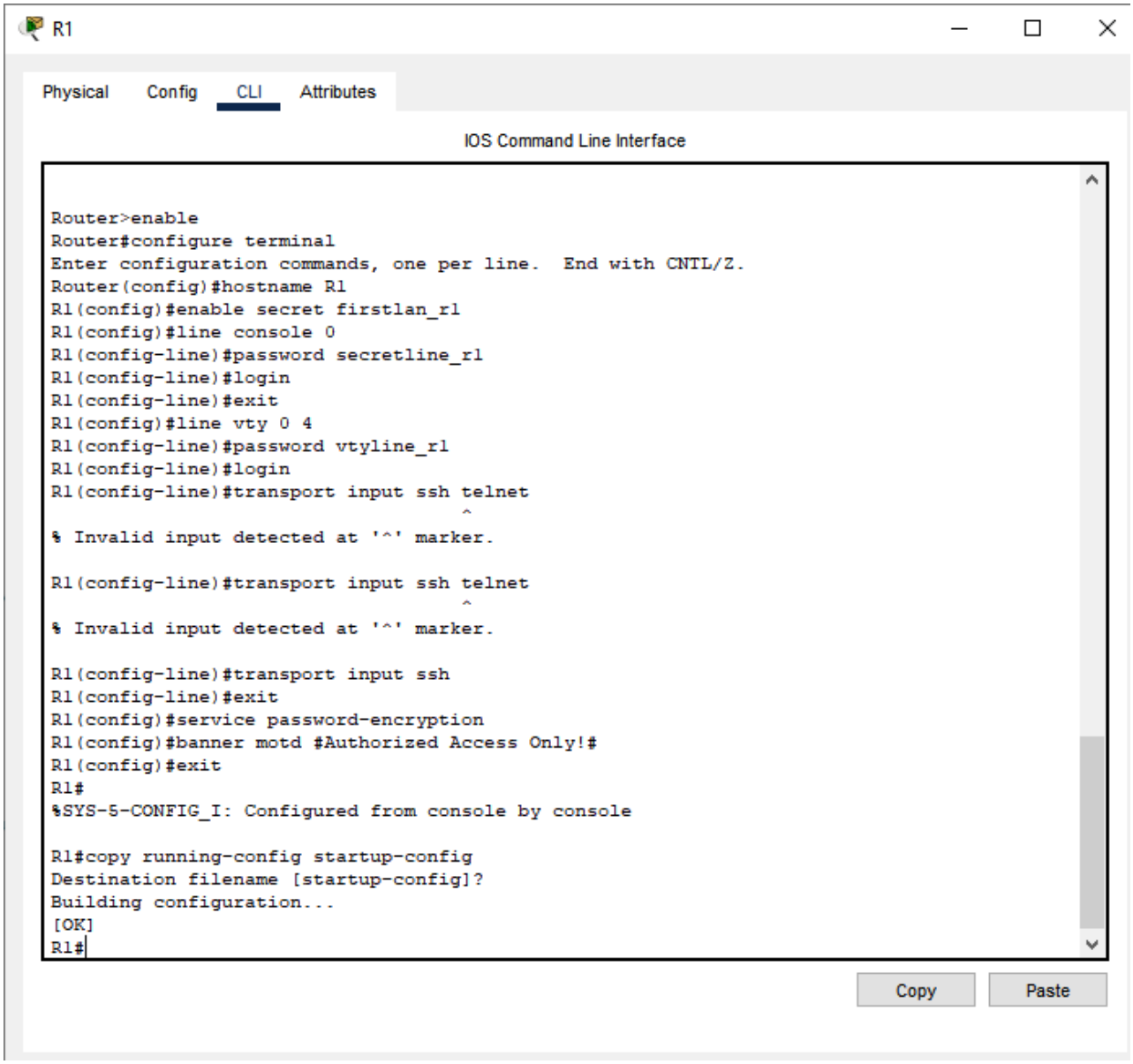


- Basic Switch configuration:
  1. Assign a device name.
  2. Secure user EXEC mode access.
  3. Secure privileged EXEC mode access.
  4. Secure VTY access.
  5. Encrypt all plaintext passwords.
  6. Display a login banner.
  7. Save Configuration

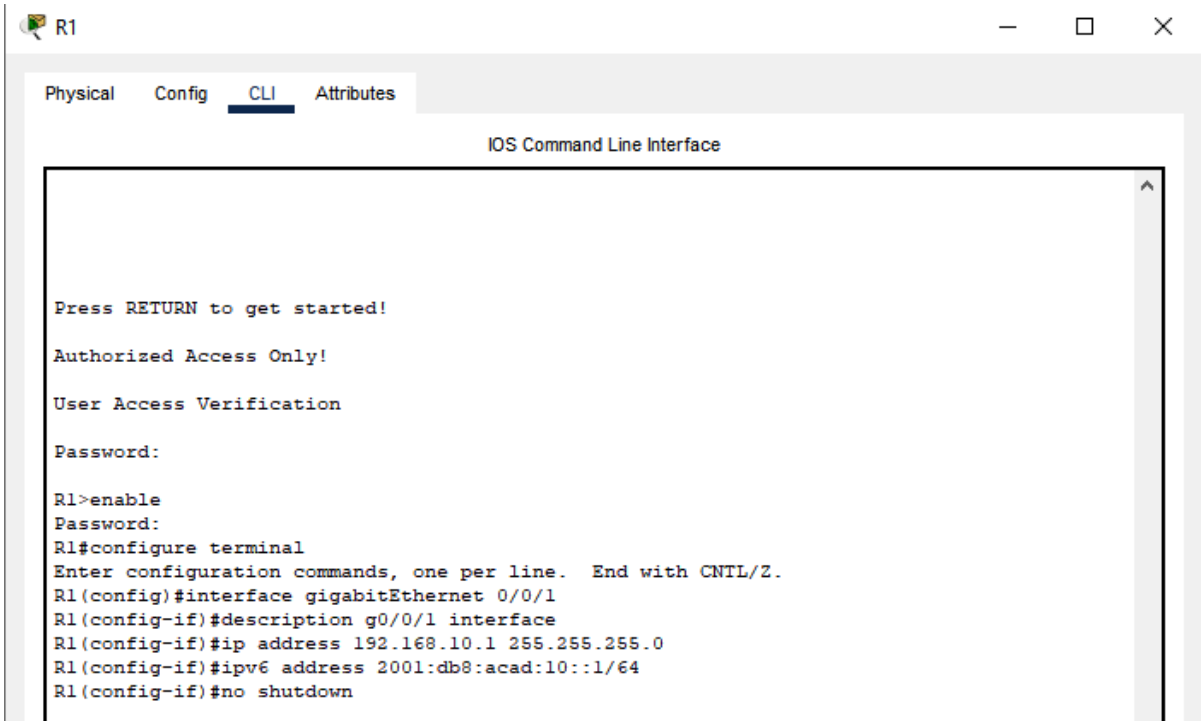


- Configure the basic configuration of router:

1. Configure the device name.
2. Secure the privileged EXEC mode.
3. Secure and enable remote SSH access.
4. Secure all plaintext passwords.
5. Provide legal notification.



- Configure the router interfaces:



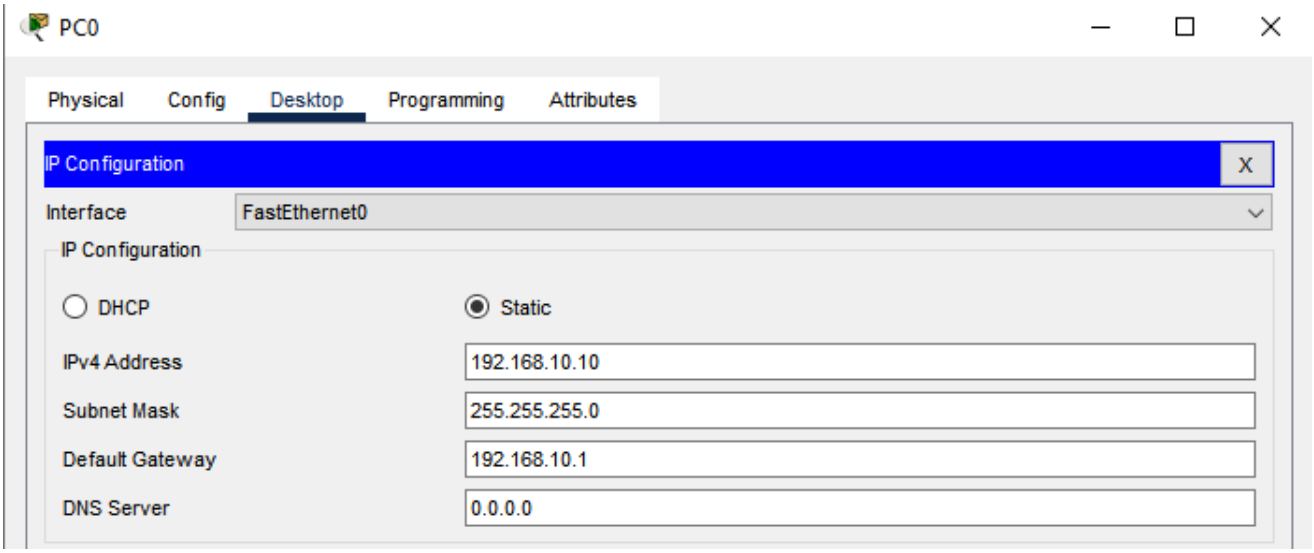

```
R1(config)#interface giga
R1(config)#interface gigabitEthernet 0/0/0
R1(config-if)#description g0/0/0 interface
R1(config-if)#ip address 192.168.11.1 255.255.255.0
R1(config-if)#ipv6 address 2001:db8:feed:224::1/64
R1(config-if)#no shutdown

R1(config-if)#
%LINK-5-CHANGED: Interface GigabitEthernet0/0/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/0/0, changed state to up

R1(config-if)#
```

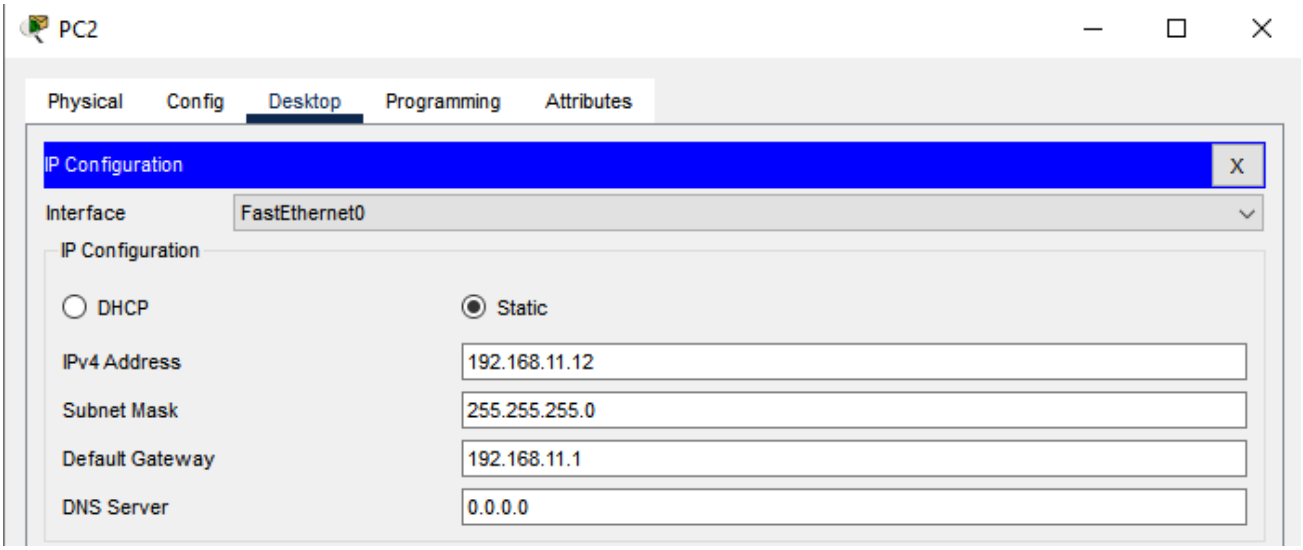
- Configuring the default gateway in Switches:

```
Switch-S1>enable
Password:
Switch-S1#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Switch-S1(config)#ip default-gateway 192.168.10.1
Switch-S1(config)#exit
Switch-S1#
%SYS-5-CONFIG_I: Configured from console by console

Switch-S1#copy runing-co
Switch-S1#copy runing-conf
Switch-S1#copy running-config startup-config
Destination filename [startup-config]?
Building configuration...
[OK]
Switch-S1#
```

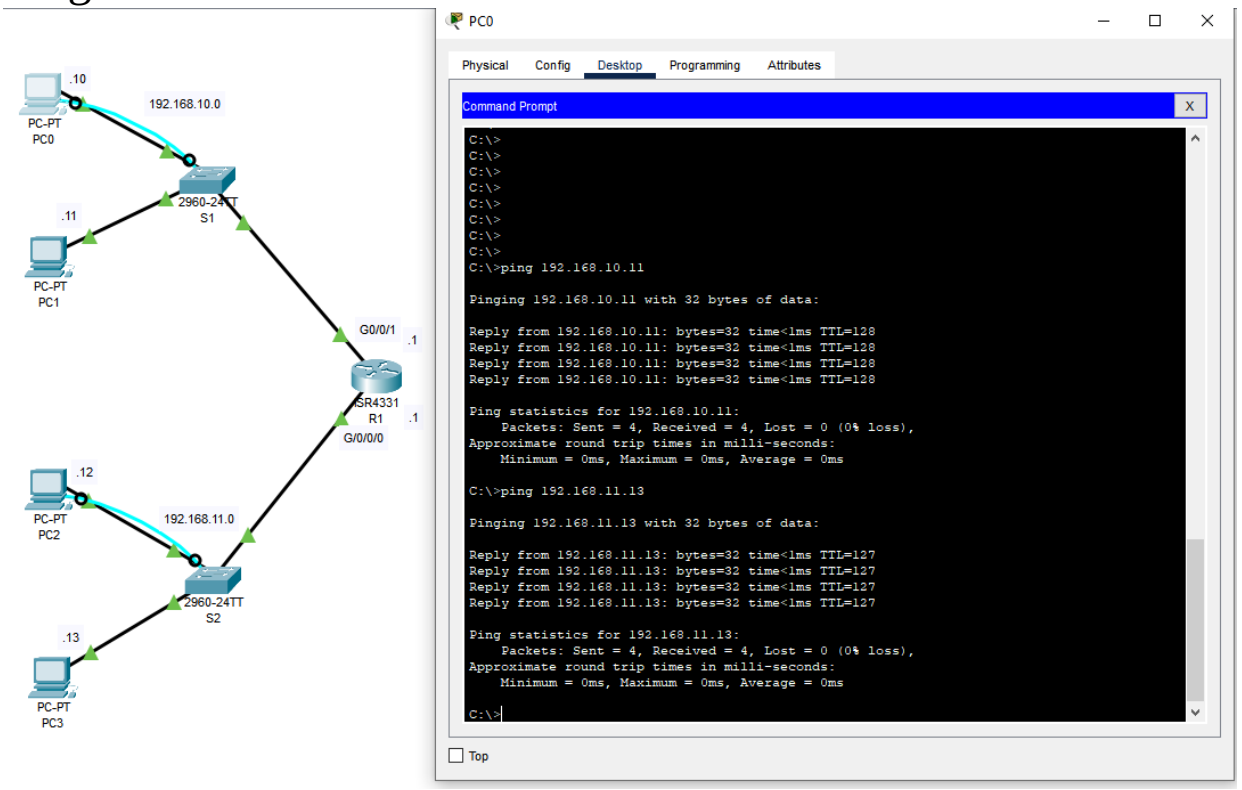
```
Press RETURN to get started!

Authorized Access Only!

User Access Verification

Password:

Switch-S2>enable
Password:
Switch-S2#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Switch-S2(config)#ip default-gateway 192.168.11.1
Switch-S2(config)#exit
Switch-S2#
%SYS-5-CONFIG_I: Configured from console by console

Switch-S2#cop running-config startup-config
Destination filename [startup-config]?
Building configuration...
[OK]
Switch-S2#
```

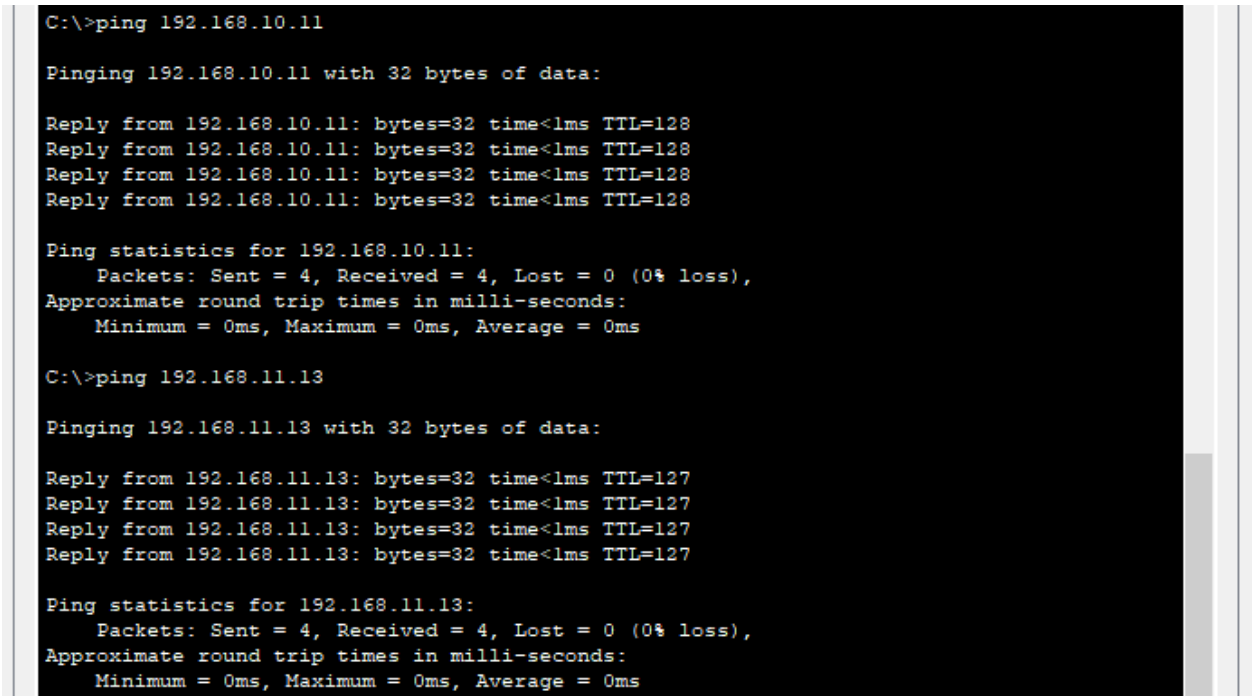
- Configure all ip addresses on hosts:
    1. IPv4 host
    2. Subnet Mask
    3. IPv4 default-gateway





- Check the sending of packets across the entire network using the Ping command:





Summary:

Switches are configured, routers are configured. The network has been created. Packets are successfully moved through the router over the network.