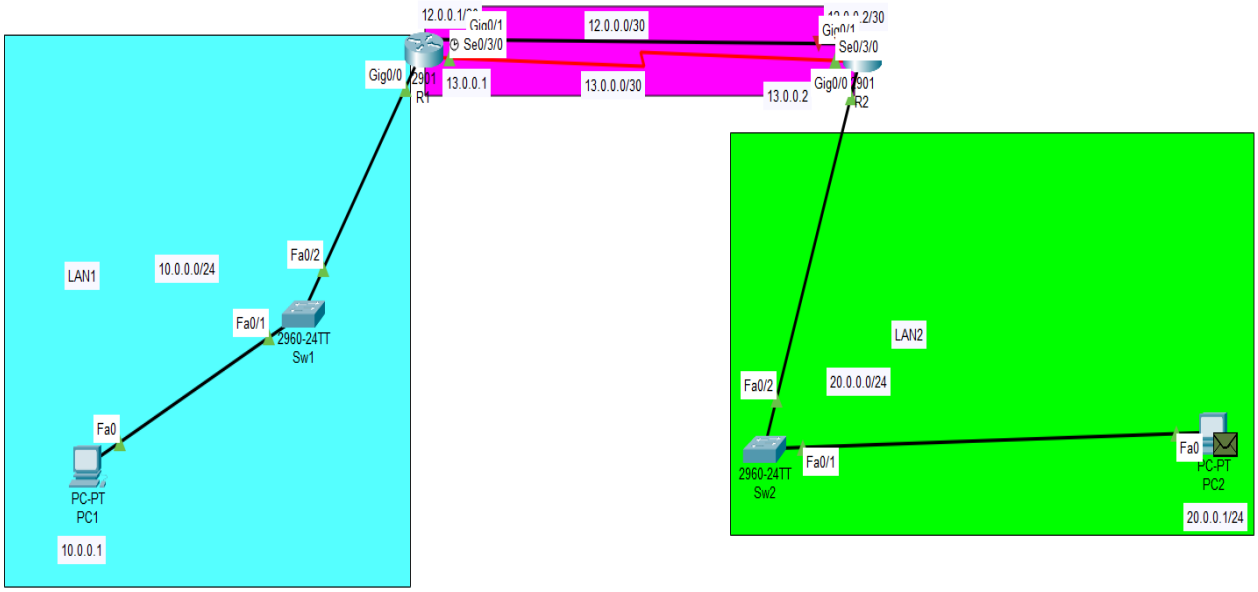
Objective

The objective of this lab is to configure static routing between two routers and verify end-to-end connectivity among the network devices.

Network Topology



IP Addressing

Device	Interface	IP address	Default Gateway
R1	Gig0/0 Se0/3/0 Gig0/1	10.0.0.254/24 13.0.0.1/30 12.0.0.1/30	_ _ _
R2	Gig0/0 Se0/3/0 Gig0/1	20.0.0254/24 13.0.0.2/30 12.0.0.2/30	_ _ _
PC1	NIC	10.0.0.1/24	10.0.0.254
PC2	NIC	20.0.0.1/24	20.0.0.254

Configuration

R1

```
Enable
Configure terminal
hostname R1
interface g0/0
 ip address 10.0.0.254 255.255.255.0
 no shutdown
!
interface g0/1
 ip address 12.0.0.1 255.255.255.252
 no shutdown
!
interface s0/3/0
 ip address 13.0.0.1 255.255.255.252
 clock rate 2000000
 no shutdown
!
ip route 20.0.0.0 255.255.255.0 12.0.0.2
ip route 20.0.0.0 255.255.255.0 13.0.0.2 2
```

R2

Enable

Configure terminal

hostname R2

interface g0/0

ip address 20.0.0.254 255.255.255.0

no shutdown

!

interface g0/1

ip address 12.0.0.2 255.255.255.252

no shutdown

!

interface s0/3/0

ip address 13.0.0.2 255.255.255.252

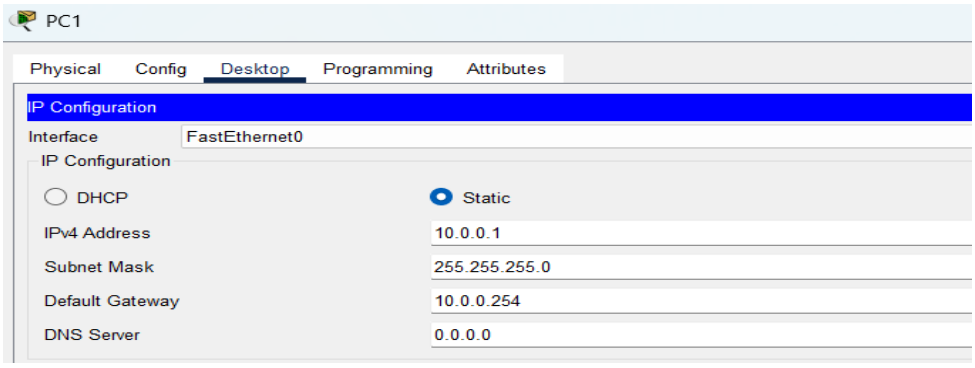
no shutdown

!

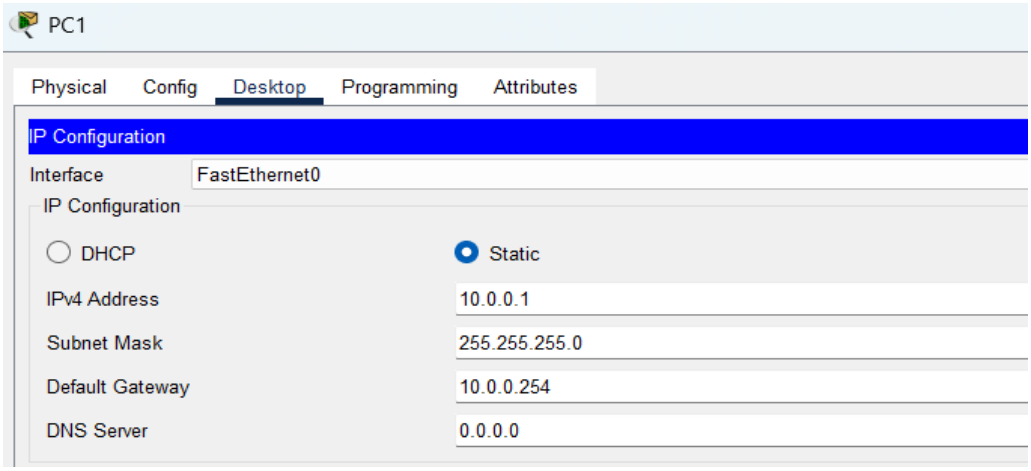
ip route 10.0.0.0 255.255.255.0 12.0.0.1

ip route 10.0.0.0 255.255.255.0 13.0.0.1 2

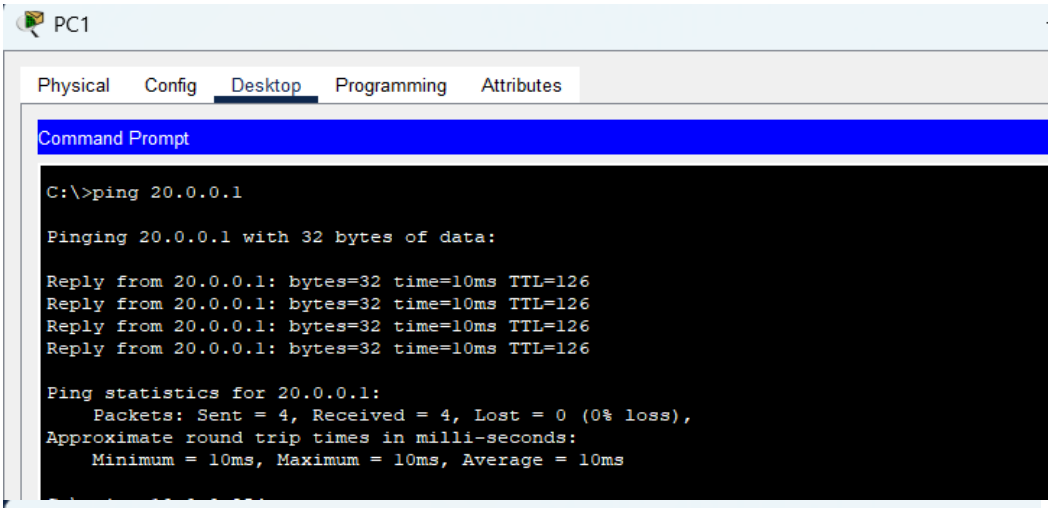
Configure PC1

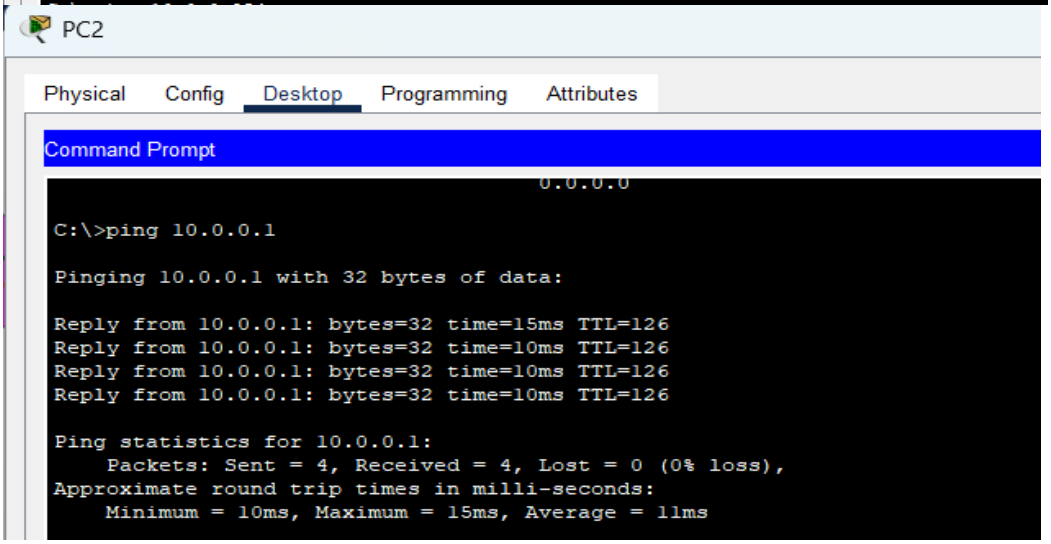


Configure PC2



Testing & Verification (PC1 & PC2)





Conclusion

In this lab, static routing with a backup route was configured between two routers, enabling communication between the two LAN networks.