Report of Day-7(Router Configuration)

Objectives:

1. IP Assignment on Router Interfaces.
2. Static Routing Principles.

Practical:

1. Create a multi-router network. (Minimum 2)
2. Configure static routes 3. Test Connectivity by pinging.

STATIC ROUTING:

Definition: Static routing is a technique that fixes network routes instead of using a dynamic routing protocol. Typically, static routes are manually configured and updated by an administrator. Because static routes are NOT automatically updated, static routing is less scalable than dynamic routing but can be useful for situations such as defining default routes and meeting certain specific requirements.

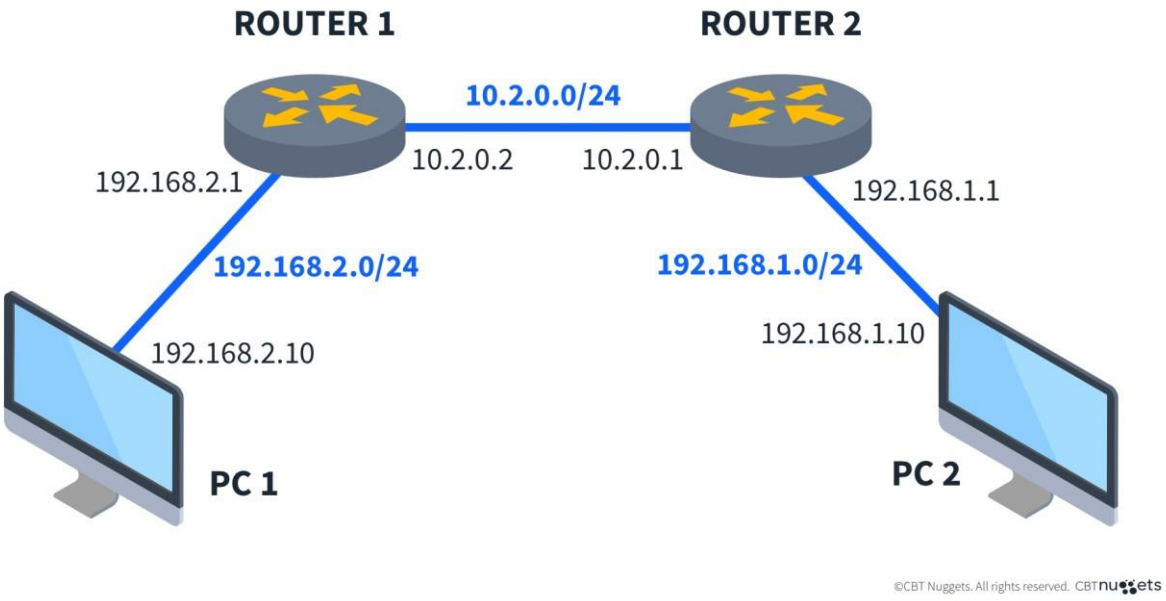
How Static Routing Works?

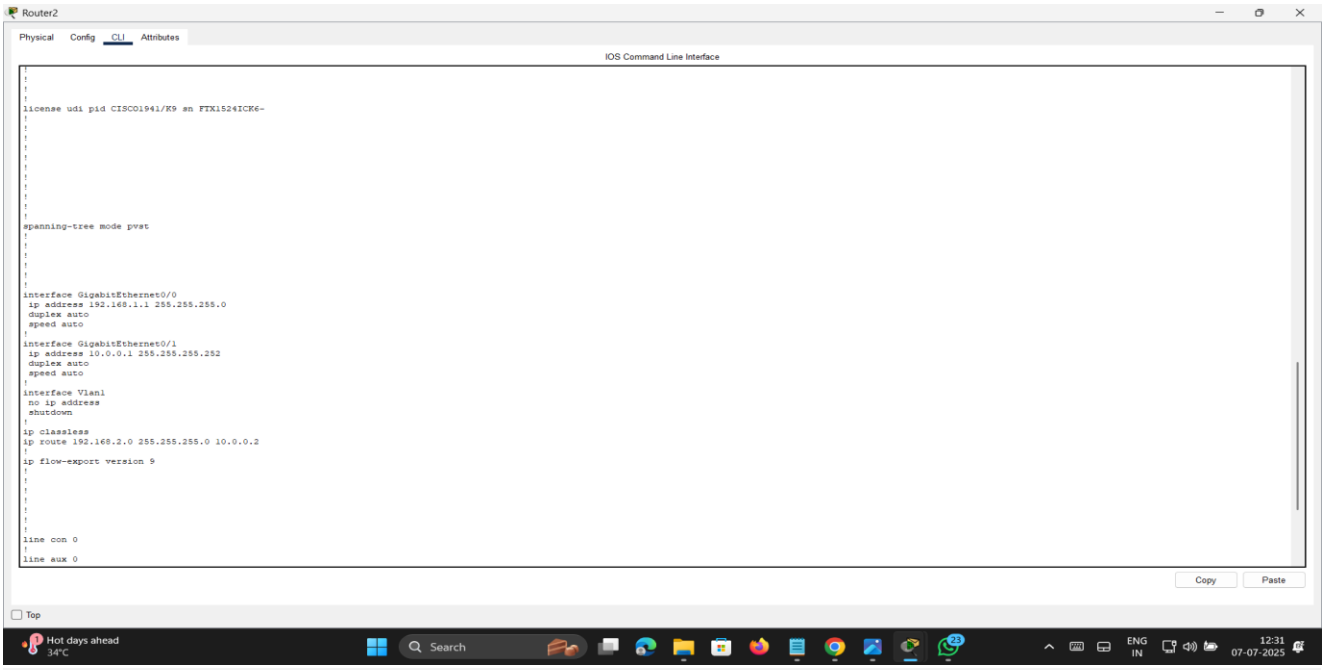
Static routing works by using fixed (i.e., they don't change unless someone changes them) routes to define where network traffic is sent. The simple overview of what that looks like in practice is: An administrator configures static routes on their routing devices

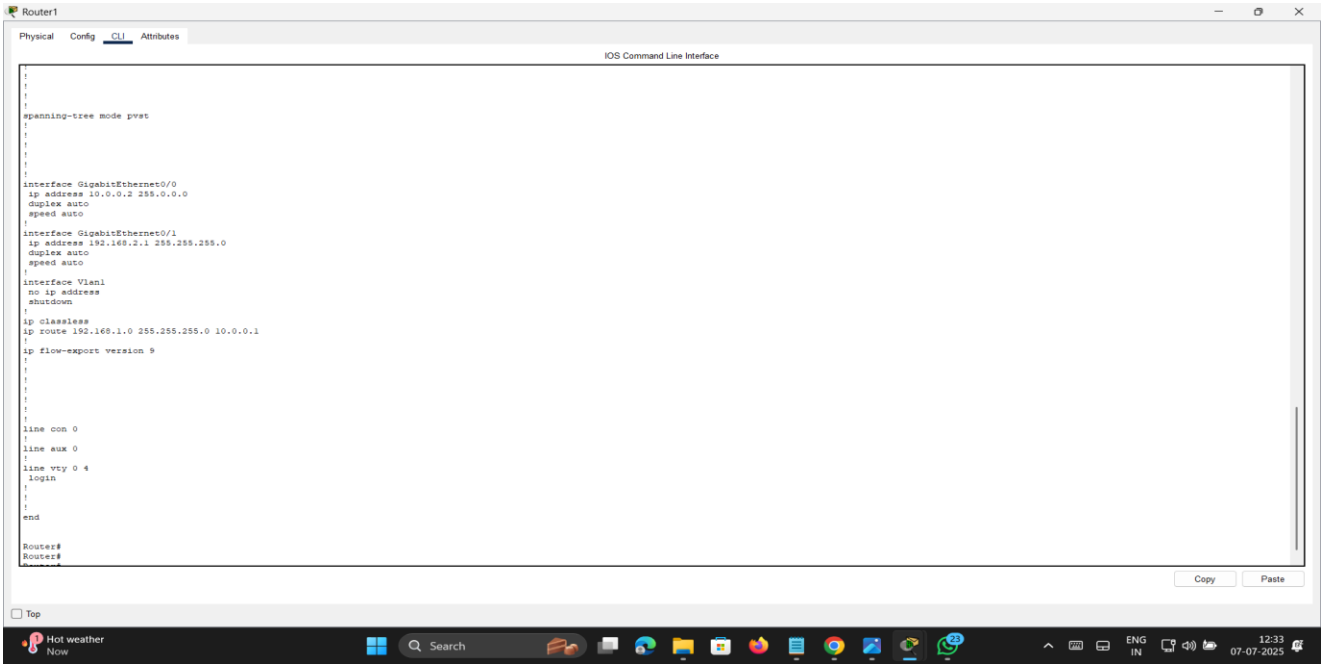
Instead of using a dynamic routing protocol, routers send traffic based on their static routes

If something needs to change, the administrator must update the static routes on the routing devices

In practice, static routes and dynamic routes can both populate a routing table, which makes things more complex. If there are overlapping routes, a routing device will use the most specific path to a destination, and administrative distance acts as a tiebreaker.




Router2
Physical
Config
CLI
Attributes
IOS Command Line Interface
!
!
!
!
license udi pid CISCO1941/K9 sn FTX1524ICK6-
!
!
!
!
!
!
!
!
!
!
spanning-tree mode pvst
!
!
!
!
!
!
interface GigabitEthernet0/0
 ip address 192.168.1.1 255.255.255.0
 duplex auto
 speed auto
!
interface GigabitEthernet0/1
 ip address 10.0.0.1 255.255.255.252
 duplex auto
 speed auto
!
interface Vlan1
 no ip address
 shutdown
!
ip classless
ip route 192.168.2.0 255.255.255.0 10.0.0.2
!
ip flow-export version 9
!
!
!
!
!
!
line con 0
!
line aux 0
Copy
Paste
Top
Hot days ahead
34°C
Search
ENG
IN
12:31
07-07-2025


Router1
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CLI
Attributes
IOS Command Line Interface
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spanning-tree mode pvst
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!
!
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interface GigabitEthernet0/0
 ip address 10.0.0.2 255.0.0.0
 duplex auto
 speed auto
!
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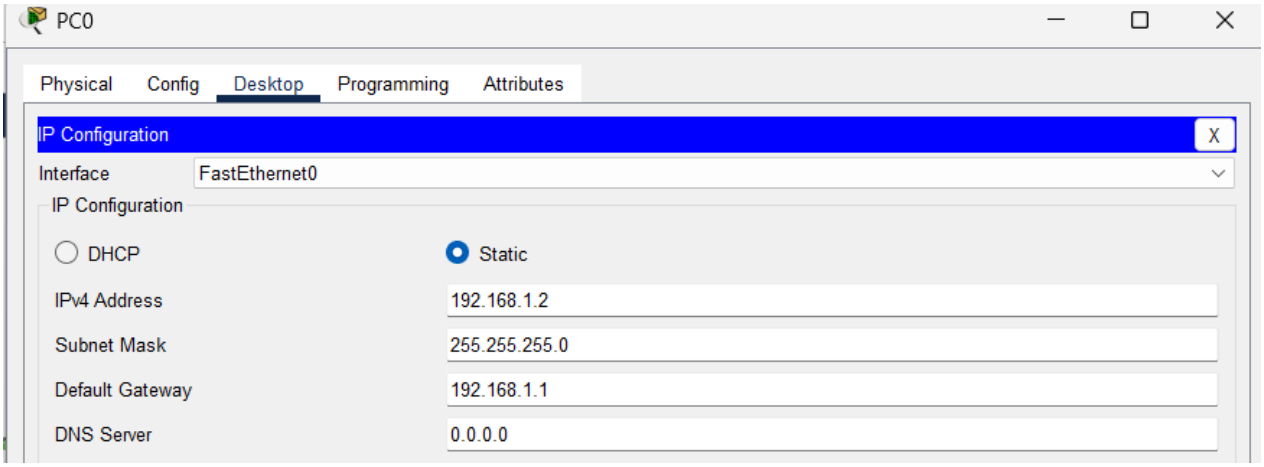
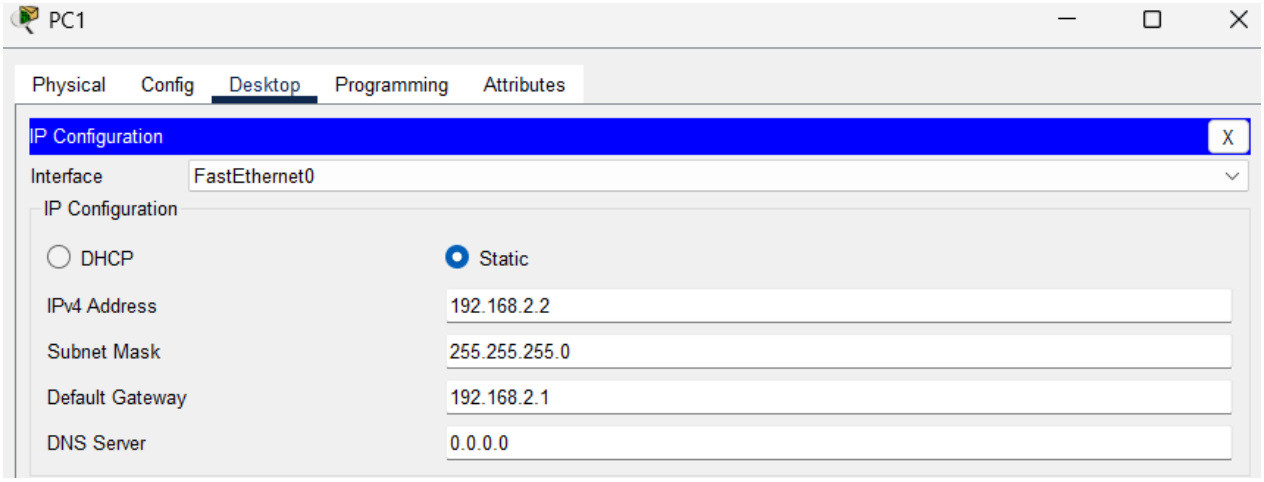
!
!
!
!
!
!
line con 0
!
line aux 0
!
line vty 0 4
 login
!
!
!
end
Router#
Router#
Copy
Paste
Top
Hot weather
Now
Search
ENG
IN
12:33
07-07-2025


PC0
Physical
Config
Desktop
Programming
Attributes
IP Configuration
X
Interface
FastEthernet0
IP Configuration
DHCP
Static
IPv4 Address
192.168.1.2
Subnet Mask
255.255.255.0
Default Gateway
192.168.1.1
DNS Server
0.0.0.0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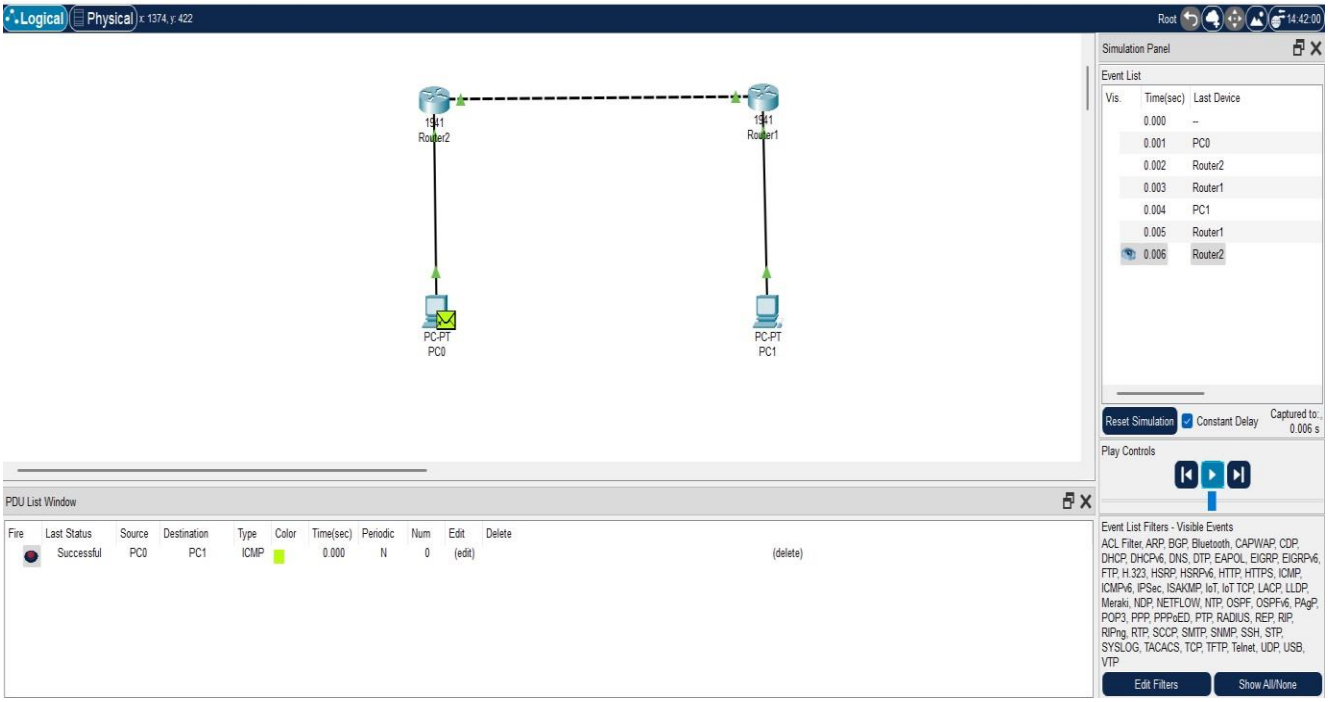


```
C:\>ping 192.168.2.2

Pinging 192.168.2.2 with 32 bytes of data:

Reply from 192.168.2.2: bytes=32 time<1ms TTL=126
Reply from 192.168.2.2: bytes=32 time<1ms TTL=126
Reply from 192.168.2.2: bytes=32 time<1ms TTL=126
Reply from 192.168.2.2: bytes=32 time<1ms TTL=126

Ping statistics for 192.168.2.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.1.2

Pinging 192.168.1.2 with 32 bytes of data:

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