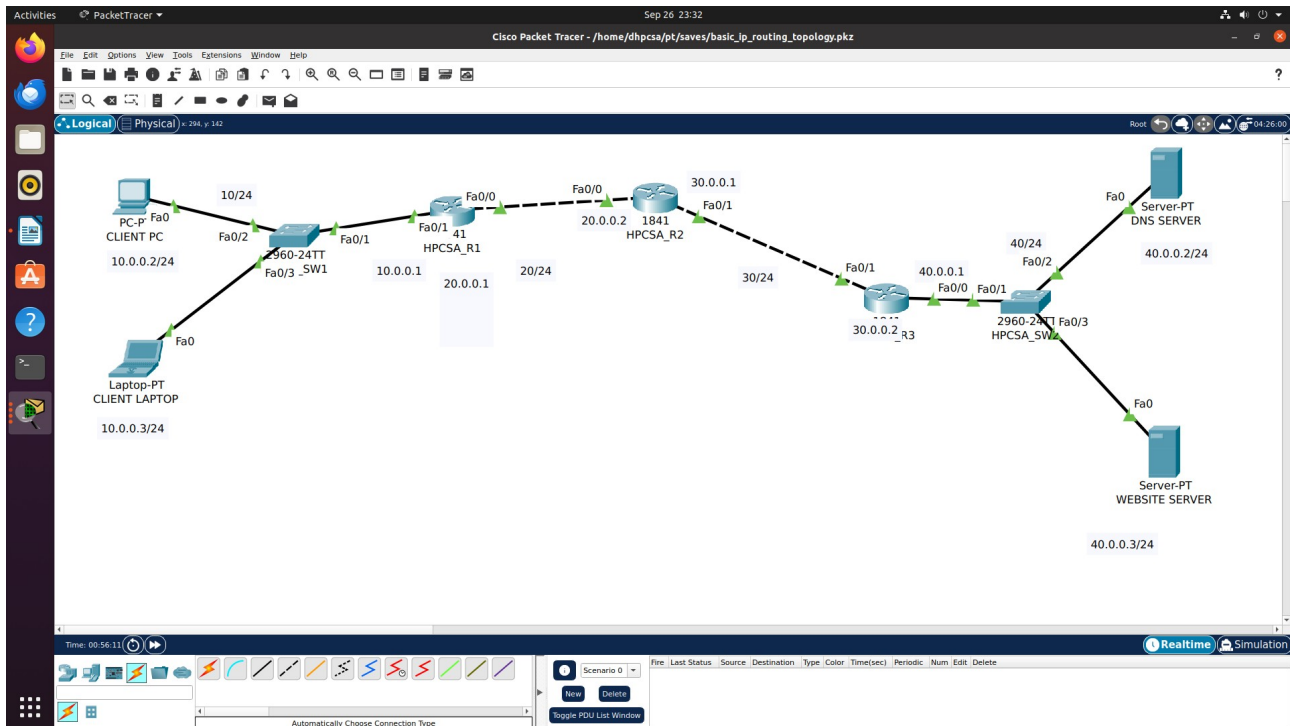


STATIC ROUTING

BASIC TOPOLOGY



Router R1 COMMANDS (IP ADDRESSES)

Router>en

Router#

Router#configure terminal

Router(config)#

Router(config)#hostname HPCSA_R1

HPCSA_R1(config)#

```
HPCSA_R1(config)#interface fastEthernet  
0/0
```

```
HPCSA_R1(config-if)#ip address 20.0.0.1  
255.255.255.0
```

```
HPCSA_R1(config-if)#no shutdown
```

```
HPCSA_R1(config)#interface fastEthernet  
0/1
```

```
HPCSA_R1(config-if)#ip address 10.0.0.1  
255.255.255.0
```

```
HPCSA_R1(config-if)#no shutdown
```

to up

Router R2 COMMANDS (IP ADDRESSES)

```
R2(config)#interface FastEthernet0/0
```

```
R2(config-if)#ip address 20.0.0.2 255.255.255.0
```

```
R2(config-if)#no shutdown
```

```
R2(config)#interface FastEthernet0/1
```

```
R2(config-if)#ip address 30.0.0.1 255.255.255.0  
R2(config-if)#no shutdown
```

Router R3 COMMANDS (IP ADDRESSES)

```
R3(config)#interface FastEthernet0/1  
R3(config-if)#ip address 30.0.0.2 255.255.255.0  
R3(config-if)#no shutdown  
R3(config)#interface FastEthernet0/1  
R3(config-if)#ip address 40.0.0.1 255.255.255.0  
R3(config-if)#no shutdown
```

save all

R1#WRITE

R2#WRITE

R3#WRITE

HPCSA_R1#sh ip route

(to get routing table)

Codes: C - connected, S - static, I - IGRP, R - RIP, M - mobile, B - BGP
D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area
* - candidate default, U - per-user static route, o - ODR
P - periodic downloaded static route

Gateway of last resort is not set

10.0.0.0/24 is subnetted, 1 subnets
C 10.0.0.0 is directly connected, FastEthernet0/1
20.0.0.0/24 is subnetted, 1 subnets
C 20.0.0.0 is directly connected, FastEthernet0/0

CONFIGURE STATIC ROUTING

HPCSA_R1(config)#ip route

<destination_missing_network_address>

<destination_subnet_mask>

<next_hop_router_ip_address>

Router R1 STATIC ROUTING

```
HPCSA_R1(config)#ip route 30.0.0.0  
255.255.255.0 20.0.0.2
```

```
HPCSA_R1(config)#ip route 40.0.0.0  
255.255.255.0 20.0.0.2
```

Router R2 STATIC ROUTING

```
HPCSA_R2(config)#ip route 10.0.0.0  
255.255.255.0 20.0.0.1
```

```
HPCSA_R2(config)#ip route 40.0.0.0  
255.255.255.0 30.0.0.2
```

Router R3 STATIC ROUTING

```
HPCSA_R3(config)#ip route 10.0.0.0  
255.255.255.0 30.0.0.1
```

```
HPCSA_R3(config)#ip route 20.0.0.0  
255.255.255.0 30.0.0.1
```

HPCSA_R1#show ip route

Codes: C - connected, S - static, I - IGRP, R - RIP, M - mobile, B - BGP
D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area
* - candidate default, U - per-user static route, o - ODR
P - periodic downloaded static route

Gateway of last resort is not set

10.0.0.0/24 is subnetted, 1 subnets

C 10.0.0.0 is directly connected,

FastEthernet0/1

20.0.0.0/24 is subnetted, 1 subnets

C 20.0.0.0 is directly connected,

FastEthernet0/0

30.0.0.0/24 is subnetted, 1 subnets

S 30.0.0.0 [1/0] via 20.0.0.2

40.0.0.0/24 is subnetted, 1 subnets

S 40.0.0.0 [1/0] via 20.0.0.2

HPCSA_R2#sh ip route

Codes: C - connected, S - static, I - IGRP, R - RIP, M - mobile, B - BGP
D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area
* - candidate default, U - per-user static route, o - ODR
P - periodic downloaded static route

Gateway of last resort is not set

10.0.0.0/24 is subnetted, 1 subnets
S 10.0.0.0 [1/0] via 20.0.0.1
20.0.0.0/24 is subnetted, 1 subnets
C 20.0.0.0 is directly connected, FastEthernet0/0
30.0.0.0/24 is subnetted, 1 subnets
C 30.0.0.0 is directly connected, FastEthernet0/1
40.0.0.0/24 is subnetted, 1 subnets
S 40.0.0.0 [1/0] via 30.0.0.2

HPCSA_R3#sh ip route

Codes: C - connected, S - static, I - IGRP, R - RIP, M - mobile, B - BGP
D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area
* - candidate default, U - per-user static route, o - ODR
P - periodic downloaded static route

Gateway of last resort is not set

10.0.0.0/24 is subnetted, 1 subnets
S 10.0.0.0 [1/0] via 30.0.0.1
20.0.0.0/24 is subnetted, 1 subnets
S 20.0.0.0 [1/0] via 30.0.0.1

30.0.0.0/24 is subnetted, 1 subnets
C 30.0.0.0 is directly connected, FastEthernet0/1
40.0.0.0/24 is subnetted, 1 subnets
C 40.0.0.0 is directly connected, FastEthernet0/0

C:\>tracert 40.0.0.3

Tracing route to 40.0.0.3 over a maximum of 30 hops:

1	0 ms	0 ms	0 ms	10.0.0.1
2	0 ms	1 ms	0 ms	20.0.0.2
3	0 ms	0 ms	0 ms	30.0.0.2
4	0 ms	0 ms	0 ms	40.0.0.3

Trace complete.