

TP OSPF

1. Ping

```
VPCS> ping 12.12.12.10
12.12.12.10 icmp_seq=1 timeout
84 bytes from 12.12.12.10 icmp_seq=2 ttl=62 time=31.443 ms
84 bytes from 12.12.12.10 icmp_seq=3 ttl=62 time=31.237 ms
84 bytes from 12.12.12.10 icmp_seq=4 ttl=62 time=30.941 ms
84 bytes from 12.12.12.10 icmp_seq=5 ttl=62 time=32.535 ms

VPCS> █
```

```
ping 11.11.11.10
11.11.11.10 icmp_seq=1 timeout
84 bytes from 11.11.11.10 icmp_seq=2 ttl=62 time=30.961 ms
84 bytes from 11.11.11.10 icmp_seq=3 ttl=62 time=30.719 ms
84 bytes from 11.11.11.10 icmp_seq=4 ttl=62 time=33.966 ms
84 bytes from 11.11.11.10 icmp_seq=5 ttl=62 time=30.851 ms

VPCS> █
```

2. Les commandes show

2.1 show ip route

2.1.1 Router1

```
R1#show ip route
Codes: C - connected, S - static, 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
        i - IS-IS, su - IS-IS summary, 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

    172.16.0.0/30 is subnetted, 1 subnets
O       172.16.28.0 [110/128] via 192.168.5.1, 00:02:09, Serial0/0
        [110/128] via 10.0.0.2, 00:01:59, Serial0/1
    192.168.5.0/30 is subnetted, 1 subnets
C       192.168.5.0 is directly connected, Serial0/0
    10.0.0.0/30 is subnetted, 1 subnets
C       10.0.0.0 is directly connected, Serial0/1
    11.0.0.0/24 is subnetted, 1 subnets
O       11.11.11.0 [110/74] via 10.0.0.2, 00:01:40, Serial0/1
    12.0.0.0/24 is subnetted, 1 subnets
O       12.12.12.0 [110/74] via 192.168.5.1, 00:02:01, Serial0/0
    13.0.0.0/24 is subnetted, 1 subnets
C       13.13.13.0 is directly connected, FastEthernet0/0
```

2.1.2 Router2

```
R2#show ip route
Codes: C - connected, S - static, 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
       i - IS-IS, su - IS-IS summary, 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

172.16.0.0/30 is subnetted, 1 subnets
C      172.16.28.0 is directly connected, Serial0/1
192.168.5.0/30 is subnetted, 1 subnets
C      192.168.5.0 is directly connected, Serial0/0
10.0.0.0/30 is subnetted, 1 subnets
O      10.0.0.0 [110/128] via 192.168.5.2, 00:02:23, Serial0/0
           [110/128] via 172.16.28.1, 00:02:13, Serial0/1
11.0.0.0/24 is subnetted, 1 subnets
O      11.11.11.0 [110/74] via 172.16.28.1, 00:02:03, Serial0/1
12.0.0.0/24 is subnetted, 1 subnets
C      12.12.12.0 is directly connected, FastEthernet0/0
13.0.0.0/24 is subnetted, 1 subnets
O      13.13.13.0 [110/74] via 192.168.5.2, 00:02:25, Serial0/0
```

2.1.3 Router3

```
R3#show ip route
Codes: C - connected, S - static, 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
       i - IS-IS, su - IS-IS summary, 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

172.16.0.0/30 is subnetted, 1 subnets
C      172.16.28.0 is directly connected, Serial0/0
192.168.5.0/30 is subnetted, 1 subnets
O      192.168.5.0 [110/128] via 172.16.28.2, 00:02:26, Serial0/0
           [110/128] via 10.0.0.1, 00:02:26, Serial0/1
10.0.0.0/30 is subnetted, 1 subnets
C      10.0.0.0 is directly connected, Serial0/1
11.0.0.0/24 is subnetted, 1 subnets
C      11.11.11.0 is directly connected, FastEthernet0/0
12.0.0.0/24 is subnetted, 1 subnets
O      12.12.12.0 [110/74] via 172.16.28.2, 00:02:28, Serial0/0
13.0.0.0/24 is subnetted, 1 subnets
O      13.13.13.0 [110/74] via 10.0.0.1, 00:02:28, Serial0/1
```

2.2 show ip ospf neighbor

2.2.1 Router1

```
13.0.0.0/24 is subnetted, 1 subnets
C      13.13.13.0 is directly connected, FastEthernet0/0
R1#show ip ospf neighbor

Neighbor ID    Pri   State           Dead Time   Address        Interface
3.3.3.3        0     FULL/ -         00:00:30    10.0.0.2       Serial0/1
2.2.2.2        0     FULL/ -         00:00:31    192.168.5.1    Serial0/0
```

2.2.2 Router2

```
R2#show ip ospf neighbor

Neighbor ID    Pri   State           Dead Time   Address        Interface
3.3.3.3        0     FULL/ -         00:00:38    172.16.28.1    Serial0/1
1.1.1.1        0     FULL/ -         00:00:34    192.168.5.2    Serial0/0
```

2.2.3 Router3

```
R3#show ip ospf neighbor
```

Neighbor ID	Pri	State	Dead Time	Address	Interface
1.1.1.1	0	FULL/ -	00:00:34	10.0.0.1	Serial0/1
2.2.2.2	0	FULL/ -	00:00:36	172.16.28.2	Serial0/0

2.3 show ip ospf interface

2.3.1 Router1

```
R1#show ip ospf interface serial0/0
Serial0/0 is up, line protocol is up
  Internet Address 192.168.5.2/30, Area 0
  Process ID 1, Router ID 1.1.1.1, Network Type POINT_TO_POINT, Cost: 10
  Transmit Delay is 1 sec, State POINT_TO_POINT
  Timer intervals configured, Hello 10, Dead 40, Wait 40, Retransmit 5
    oob-resync timeout 40
    Hello due in 00:00:09
  Supports Link-local Signaling (LLS)
  Cisco NSF helper support enabled
  IETF NSF helper support enabled
  Index 1/1, flood queue length 0
  Next 0x0(0)/0x0(0)
  Last flood scan length is 1, maximum is 1
  Last flood scan time is 0 msec, maximum is 4 msec
  Neighbor Count is 0, Adjacent neighbor count is 0
  Suppress hello for 0 neighbor(s)
  Message digest authentication enabled
  Youngest key id is 1
```

```
R1#show ip ospf interface serial0/1
Serial0/1 is up, line protocol is up
  Internet Address 10.0.0.1/30, Area 0
  Process ID 1, Router ID 1.1.1.1, Network Type POINT_TO_POINT, Cost: 10
  Transmit Delay is 1 sec, State POINT_TO_POINT
  Timer intervals configured, Hello 10, Dead 40, Wait 40, Retransmit 5
    oob-resync timeout 40
    Hello due in 00:00:03
  Supports Link-local Signaling (LLS)
  Cisco NSF helper support enabled
  IETF NSF helper support enabled
  Index 2/2, flood queue length 0
  Next 0x0(0)/0x0(0)
  Last flood scan length is 1, maximum is 1
  Last flood scan time is 0 msec, maximum is 0 msec
  Neighbor Count is 0, Adjacent neighbor count is 0
  Suppress hello for 0 neighbor(s)
  Message digest authentication enabled
  Youngest key id is 1
```

```
R1#show ip ospf interface fa0/0
FastEthernet0/0 is up, line protocol is up
  Internet Address 13.13.13.1/24, Area 0
  Process ID 1, Router ID 1.1.1.1, Network Type BROADCAST, Cost: 10
  Transmit Delay is 1 sec, State DR, Priority 1
  Designated Router (ID) 1.1.1.1, Interface address 13.13.13.1
  No backup designated router on this network
  Timer intervals configured, Hello 10, Dead 40, Wait 40, Retransmit 5
    oob-resync timeout 40
    Hello due in 00:00:01
  Supports Link-local Signaling (LLS)
  Cisco NSF helper support enabled
  IETF NSF helper support enabled
  Index 3/3, flood queue length 0
  Next 0x0(0)/0x0(0)
  Last flood scan length is 0, maximum is 0
  Last flood scan time is 0 msec, maximum is 0 msec
  Neighbor Count is 0, Adjacent neighbor count is 0
  Suppress hello for 0 neighbor(s)
```

Activite3

```
R1#show ip ospf interface fa0/1
*Mar  1 01:06:31.275: %SYS-5-CONFIG_I: Configured from console by console
R1#show ip ospf interface fa0/1
FastEthernet0/1 is up, line protocol is up
  Internet Address 192.168.10.2/24, Area 0
  Process ID 1, Router ID 1.1.1.1, Network Type BROADCAST, Cost: 10
  Transmit Delay is 1 sec, State DROTHER, Priority 20
  Designated Router (ID) 3.3.3.3, Interface address 192.168.10.4
  Backup Designated router (ID) 2.2.2.2, Interface address 192.168.10.3
  Timer intervals configured, Hello 10, Dead 40, Wait 40, Retransmit 5
    oob-resync timeout 40
    Hello due in 00:00:03
  Supports Link-local Signaling (LLS)
  Cisco NSF helper support enabled
  IETF NSF helper support enabled
  Index 4/4, flood queue length 0
  Next 0x0(0)/0x0(0)
  Last flood scan length is 1, maximum is 1
  Last flood scan time is 0 msec, maximum is 0 msec
  Neighbor Count is 2, Adjacent neighbor count is 2
    Adjacent with neighbor 2.2.2.2  (Backup Designated Router)
    Adjacent with neighbor 3.3.3.3  (Designated Router)
  Suppress hello for 0 neighbor(s)
R1#
```

2.3.2 Router2

```
R2#show ip ospf interface serial0/1
Serial0/1 is up, line protocol is up
  Internet Address 172.16.28.2/30, Area 0
  Process ID 1, Router ID 2.2.2.2, Network Type POINT_TO_POINT, Cost: 10
  Transmit Delay is 1 sec, State POINT_TO_POINT
  Timer intervals configured, Hello 10, Dead 40, Wait 40, Retransmit 5
    oob-resync timeout 40
    Hello due in 00:00:05
  Supports Link-local Signaling (LLS)
  Cisco NSF helper support enabled
  IETF NSF helper support enabled
  Index 2/2, flood queue length 0
  Next 0x0(0)/0x0(0)
  Last flood scan length is 1, maximum is 1
  Last flood scan time is 0 msec, maximum is 4 msec
  Neighbor Count is 0, Adjacent neighbor count is 0
  Suppress hello for 0 neighbor(s)
  Message digest authentication enabled
  Youngest key id is 1
R2#
```

```
R2#show ip ospf interface serial0/0
Serial0/0 is up, line protocol is up
  Internet Address 192.168.5.1/30, Area 0
  Process ID 1, Router ID 2.2.2.2, Network Type POINT_TO_POINT, Cost: 10
  Transmit Delay is 1 sec, State POINT_TO_POINT
  Timer intervals configured, Hello 10, Dead 40, Wait 40, Retransmit 5
    oob-resync timeout 40
    Hello due in 00:00:06
  Supports Link-local Signaling (LLS)
  Cisco NSF helper support enabled
  IETF NSF helper support enabled
  Index 1/1, flood queue length 0
  Next 0x0(0)/0x0(0)
  Last flood scan length is 1, maximum is 1
  Last flood scan time is 0 msec, maximum is 0 msec
  Neighbor Count is 0, Adjacent neighbor count is 0
  Suppress hello for 0 neighbor(s)
  Message digest authentication enabled
  Youngest key id is 1
R2#
```



```

R2#show ip ospf interface fa0/0
FastEthernet0/0 is up, line protocol is up
  Internet Address 12.12.12.1/24, Area 0
  Process ID 1, Router ID 2.2.2.2, Network Type BROADCAST, Cost: 10
  Transmit Delay is 1 sec, State DR, Priority 1
  Designated Router (ID) 2.2.2.2, Interface address 12.12.12.1
  No backup designated router on this network
  Timer intervals configured, Hello 10, Dead 40, Wait 40, Retransmit 5
    oob-resync timeout 40
    Hello due in 00:00:06
  Supports Link-local Signaling (LLS)
  Cisco NSF helper support enabled
  IETF NSF helper support enabled
  Index 3/3, flood queue length 0
  Next 0x0(0)/0x0(0)
  Last flood scan length is 0, maximum is 0
  Last flood scan time is 0 msec, maximum is 0 msec
  Neighbor Count is 0, Adjacent neighbor count is 0
  Suppress hello for 0 neighbor(s)

```

Activite3

```

R2#show ip ospf interface fa0/1
*Mar  1 01:08:03.627: %SYS-5-CONFIG_I: Configured from console by console
R2#show ip ospf interface fa0/1
FastEthernet0/1 is up, line protocol is up
  Internet Address 192.168.10.3/24, Area 0
  Process ID 1, Router ID 2.2.2.2, Network Type BROADCAST, Cost: 10
  Transmit Delay is 1 sec, State BDR, Priority 20
  Designated Router (ID) 3.3.3.3, Interface address 192.168.10.4
  Backup Designated router (ID) 2.2.2.2, Interface address 192.168.10.3
  Timer intervals configured, Hello 10, Dead 40, Wait 40, Retransmit 5
    oob-resync timeout 40
    Hello due in 00:00:00
  Supports Link-local Signaling (LLS)
  Cisco NSF helper support enabled
  IETF NSF helper support enabled
  Index 4/4, flood queue length 0
  Next 0x0(0)/0x0(0)
  Last flood scan length is 1, maximum is 1
  Last flood scan time is 0 msec, maximum is 0 msec
  Neighbor Count is 2, Adjacent neighbor count is 2
    Adjacent with neighbor 1.1.1.1
    Adjacent with neighbor 3.3.3.3 (Designated Router)
  Suppress hello for 0 neighbor(s)

```

2.3.3 Router3

```

R3#show ip ospf interface serial0/0
Serial0/0 is up, line protocol is up
  Internet Address 172.16.28.1/30, Area 0
  Process ID 1, Router ID 3.3.3.3, Network Type POINT_TO_POINT, Cost: 10
  Transmit Delay is 1 sec, State POINT_TO_POINT
  Timer intervals configured, Hello 10, Dead 40, Wait 40, Retransmit 5
    oob-resync timeout 40
    Hello due in 00:00:01
  Supports Link-local Signaling (LLS)
  Cisco NSF helper support enabled
  IETF NSF helper support enabled
  Index 1/1, flood queue length 0
  Next 0x0(0)/0x0(0)
  Last flood scan length is 1, maximum is 1
  Last flood scan time is 0 msec, maximum is 4 msec
  Neighbor Count is 0, Adjacent neighbor count is 0
  Suppress hello for 0 neighbor(s)
  Message digest authentication enabled
  Youngest key id is 1

```

```
R3#show ip ospf interface serial0/1
Serial0/1 is up, line protocol is up
Internet Address 10.0.0.2/30, Area 0
Process ID 1, Router ID 3.3.3.3, Network Type POINT_TO_POINT, Cost: 10
Transmit Delay is 1 sec, State POINT_TO_POINT
Timer intervals configured, Hello 10, Dead 40, Wait 40, Retransmit 5
  oob-resync timeout 40
  Hello due in 00:00:09
Supports Link-local Signaling (LLS)
Cisco NSF helper support enabled
IETF NSF helper support enabled
Index 2/2, flood queue length 0
Next 0x0(0)/0x0(0)
Last flood scan length is 1, maximum is 1
Last flood scan time is 0 msec, maximum is 0 msec
Neighbor Count is 0, Adjacent neighbor count is 0
Suppress hello for 0 neighbor(s)
Message digest authentication enabled
  Youngest key id is 1
```

```
R3#show ip ospf interface fa0/0
FastEthernet0/0 is up, line protocol is up
Internet Address 11.11.11.1/24, Area 0
Process ID 1, Router ID 3.3.3.3, Network Type BROADCAST, Cost: 10
Transmit Delay is 1 sec, State DR, Priority 1
Designated Router (ID) 3.3.3.3, Interface address 11.11.11.1
No backup designated router on this network
Timer intervals configured, Hello 10, Dead 40, Wait 40, Retransmit 5
  oob-resync timeout 40
  Hello due in 00:00:02
Supports Link-local Signaling (LLS)
Cisco NSF helper support enabled
IETF NSF helper support enabled
Index 3/3, flood queue length 0
Next 0x0(0)/0x0(0)
Last flood scan length is 0, maximum is 0
Last flood scan time is 0 msec, maximum is 0 msec
Neighbor Count is 0, Adjacent neighbor count is 0
Suppress hello for 0 neighbor(s)
```

Activite3

```
R3#show ip ospf interface fa0/1
FastEthernet0/1 is up, line protocol is up
Internet Address 192.168.10.4/24, Area 0
Process ID 1, Router ID 3.3.3.3, Network Type BROADCAST, Cost: 10
Transmit Delay is 1 sec, State DR, Priority 20
Designated Router (ID) 3.3.3.3, Interface address 192.168.10.4
Backup Designated router (ID) 2.2.2.2, Interface address 192.168.10.3
Timer intervals configured, Hello 10, Dead 40, Wait 40, Retransmit 5
  oob-resync timeout 40
  Hello due in 00:00:07
Supports Link-local Signaling (LLS)
Cisco NSF helper support enabled
IETF NSF helper support enabled
Index 4/4, flood queue length 0
Next 0x0(0)/0x0(0)
Last flood scan length is 1, maximum is 1
Last flood scan time is 0 msec, maximum is 0 msec
Neighbor Count is 2, Adjacent neighbor count is 2
  Adjacent with neighbor 1.1.1.1
  Adjacent with neighbor 2.2.2.2 (Backup Designated Router)
Suppress hello for 0 neighbor(s)
```