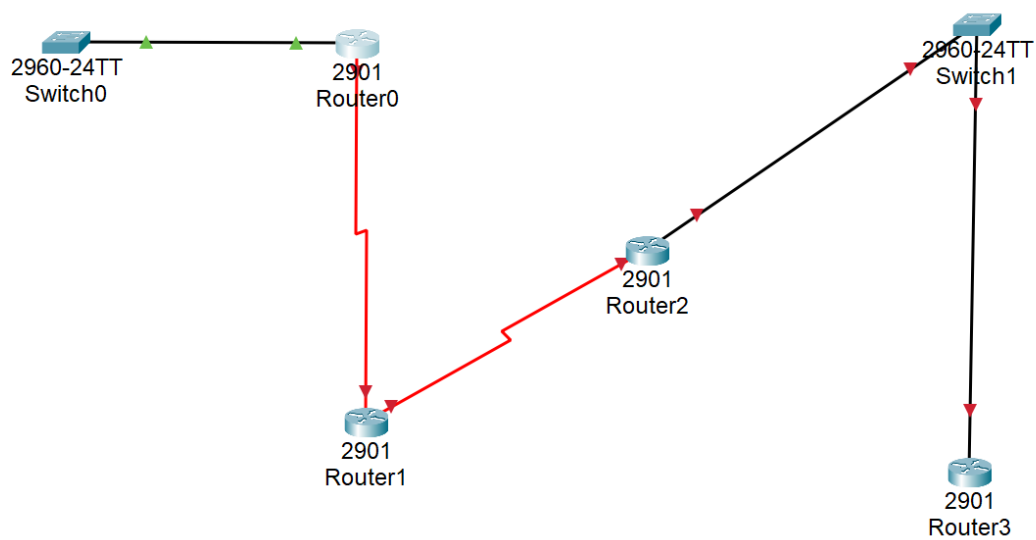


دستورکار سری 7 از شبکه

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(1)



(2) مانند دستورکار سری 6 عمل میکنیم.(مراجعه شود)

```

Router(config)#interface loopback 1

Router(config-if)#
%LINK-5-CHANGED: Interface Loopback1, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Loopback1,
changed state to up

Router(config-if)#ip address 10.10.20.20 255.255.255.255
Router(config-if)#

```

```

Router(config)#interface loopback 3

Router(config-if)#
%LINK-5-CHANGED: Interface Loopback3, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Loopback3,
changed state to up

Router(config-if)#ip address 10.10.40.40 255.255.255.255
Router(config-if)#

```

```

Router(config)#interface loopback 2

Router(config-if)#
%LINK-5-CHANGED: Interface Loopback2, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Loopback2,
changed state to up

Router(config-if)#
Router(config-if)#
Router(config-if)#ip address 10.10.30.30 255.255.255.255
Router(config-if)#

```

```

Router(config-if)#ip address 192.168.100.10 255.255.255.255
Router(config-if)#ex
Router(config)#intr
Router(config)#inter
Router(config)#interface loo
Router(config)#interface loopback 15

Router(config-if)#
%LINK-5-CHANGED: Interface Loopback15, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Loopback15,
changed state to up

Router(config-if)#ip address 192.168.100.100 255.255.255.255
Router(config-if)#ex
Router(config)#inter
Router(config)#interface loo
Router(config)#interface loopback 100

Router(config-if)#
%LINK-5-CHANGED: Interface Loopback100, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Loopback100,
changed state to up

Router(config-if)#ip address 10.10.10.10 255.255.255.255

```

دستور مورد نظر :

```
Router#show running-config
Building configuration...
```

```
!
interface Loopback1
 ip address 10.10.20.20 255.255.255.255
!
interface GigabitEthernet0/0
 no ip address
 duplex auto
 speed auto
!
interface GigabitEthernet0/1
 no ip address
 duplex auto
 speed auto
 shutdown
!
interface Serial0/0/0
 no ip address
 clock rate 2000000
 shutdown
!
interface Serial0/0/1
 no ip address
 clock rate 2000000
 shutdown
!
interface Vlan1
 no ip address
```

```
!
interface Loopback11
 ip address 192.168.100.10 255.255.255.255
!
interface Loopback15
 ip address 192.168.100.100 255.255.255.255
!
interface Loopback100
 ip address 10.10.10.10 255.255.255.255
!
interface GigabitEthernet0/0
 no ip address
 duplex auto
 speed auto
!
interface GigabitEthernet0/1
 no ip address
 duplex auto
 speed auto
 shutdown
!
interface Serial0/0/0
 no ip address
 clock rate 2000000
 shutdown
```

(5)

از روتر 0 به روتر 1 که ping کردیم جواب به صورت زیر شد :

```
Router#ping 192.168.3.2
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 192.168.3.2, timeout is 2
seconds:
.....
Success rate is 0 percent (0/5)
Router#
```

اما به روتر 2 ping نمیدهد.

(6) دسترسی نداشتیم :

```
Router#ping 10.10.20.20
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.10.20.20, timeout is 2
seconds:
.....
Success rate is 0 percent (0/5)
..
```

(7)

```
Gateway of last resort is not set

  10.0.0.0/32 is subnetted, 1 subnets
C       10.10.40.40/32 is directly connected, Loopback3
  192.168.1.0/24 is variably subnetted, 2 subnets, 2 masks
C       192.168.1.0/24 is directly connected,
GigabitEthernet0/0
L       192.168.1.1/32 is directly connected,
GigabitEthernet0/0
  192.168.4.0/24 is variably subnetted, 2 subnets, 2 masks
C       192.168.4.0/24 is directly connected, Serial0/0/0
L       192.168.4.1/32 is directly connected, Serial0/0/0

Router#
Router#
```

```

Gateway of last resort is not set

10.0.0.0/32 is subnetted, 1 subnets
C    10.10.20.20/32 is directly connected, Loopback1
C    192.168.3.0/24 is variably subnetted, 2 subnets, 2 masks
C    192.168.3.0/24 is directly connected, Serial0/0/1
L    192.168.3.1/32 is directly connected, Serial0/0/1
C    192.168.4.0/24 is variably subnetted, 2 subnets, 2 masks
C    192.168.4.0/24 is directly connected, Serial0/0/0
L    192.168.4.3/32 is directly connected, Serial0/0/0

Router#

```

```

Gateway of last resort is not set

10.0.0.0/32 is subnetted, 1 subnets
C    10.10.30.30/32 is directly connected, Loopback2
C    192.168.3.0/24 is variably subnetted, 2 subnets, 2 masks
C    192.168.3.0/24 is directly connected, Serial0/0/0
L    192.168.3.2/32 is directly connected, Serial0/0/0

Router#
Router#

```

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برای هر روتر داریم :

```

Router(config)#router ospf 1
Router(config)#router ospf 1
Router(config-router)#network 192.168.1.0 0.0.0.255 area 0
Router(config-router)#network 192.168.4.0 0.0.0.255 area 0
Router(config-router)#network 10.10.40.40 0.0.0.0 area 0
Router(config-router)#

```

```

Router(config)#router ospf 1
Router(config-router)#network 192.168.4.0 0.0.0.255 area 0
Router(config-router)#network 192.168.3.0 0.0.0.255 area 0

```

```

Router(config-router)#network 10.10.20.20 0.0.0.0 area 0
Router(config-router)#

```

```

Router(config)#router ospf 1
Router(config-router)#
Router(config-router)#network 192.168.5.0 0.0.0.255 area 0
Router(config-router)#network 192.168.100.10 0.0.0.0 area 0
Router(config-router)#network 192.168.100.100 0.0.0.0 area 0
Router(config-router)#network 10.10.10.10 0.0.0.0 area 0
Router(config-router)#

```

(9) دستور را زدیم و پینگ گرفتیم :

```
Router#debug ip ospf adj
OSPF adjacency events debugging is on
Router#ping 10.10.30.30

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.10.30.30, timeout is 2
seconds:
!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max =
9/10/14 ms
```

(10)

تست کردیم و اینبار ارتباط ها برقرار بودند.

(11)

برای روتر 0 :

```
Gateway of last resort is not set

  10.0.0.0/32 is subnetted, 3 subnets
O       10.10.20.20/32 [110/65] via 192.168.4.3, 00:12:08,
Serial0/0/0
O       10.10.30.30/32 [110/129] via 192.168.4.3, 00:10:09,
Serial0/0/0
C       10.10.40.40/32 is directly connected, Loopback3
       192.168.1.0/24 is variably subnetted, 2 subnets, 2 masks
C       192.168.1.0/24 is directly connected,
GigabitEthernet0/0
L       192.168.1.1/32 is directly connected,
GigabitEthernet0/0
O       192.168.3.0/24 [110/128] via 192.168.4.3, 00:12:37,
Serial0/0/0
       192.168.4.0/24 is variably subnetted, 2 subnets, 2 masks
C       192.168.4.0/24 is directly connected, Serial0/0/0
L       192.168.4.1/32 is directly connected, Serial0/0/0

Router#
```

برای روتر 1 :

```

10.0.0.0/32 is subnetted, 3 subnets
C    10.10.20.20/32 is directly connected, Loopback1
O    10.10.30.30/32 [110/65] via 192.168.3.2, 00:10:44,
Serial0/0/1
O    10.10.40.40/32 [110/65] via 192.168.4.1, 00:13:12,
Serial0/0/0
O    192.168.1.0/24 [110/65] via 192.168.4.1, 00:13:12,
Serial0/0/0
192.168.3.0/24 is variably subnetted, 2 subnets, 2 masks
C    192.168.3.0/24 is directly connected, Serial0/0/1
L    192.168.3.1/32 is directly connected, Serial0/0/1
192.168.4.0/24 is variably subnetted, 2 subnets, 2 masks
C    192.168.4.0/24 is directly connected, Serial0/0/0
L    192.168.4.3/32 is directly connected, Serial0/0/0
Router#
Router#

```

برای روتر 2:

```

Router#show ip route
Codes: L - local, 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,
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

10.0.0.0/32 is subnetted, 3 subnets
O    10.10.20.20/32 [110/65] via 192.168.3.1, 00:12:38,
Serial0/0/0
C    10.10.30.30/32 is directly connected, Loopback2
O    10.10.40.40/32 [110/129] via 192.168.3.1, 00:12:38,
Serial0/0/0
O    192.168.1.0/24 [110/129] via 192.168.3.1, 00:12:38,
Serial0/0/0
192.168.3.0/24 is variably subnetted, 2 subnets, 2 masks
C    192.168.3.0/24 is directly connected, Serial0/0/0
L    192.168.3.2/32 is directly connected, Serial0/0/0
O    192.168.4.0/24 [110/128] via 192.168.3.1, 00:12:38,
Serial0/0/0
Router#

```

```

Codes: L - local, 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,
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

    10.0.0.0/32 is subnetted, 1 subnets
C       10.10.10.10/32 is directly connected, Loopback100
    192.168.5.0/24 is variably subnetted, 2 subnets, 2 masks
C       192.168.5.0/24 is directly connected,
GigabitEthernet0/0
L       192.168.5.1/32 is directly connected,
GigabitEthernet0/0
    192.168.100.0/32 is subnetted, 2 subnets
C       192.168.100.10/32 is directly connected, Loopback11
C       192.168.100.100/32 is directly connected, Loopback15
Router#

```

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```
Router#show ip ospf neighbor
```

Neighbor ID	Pri	State	Dead Time	Address
Interface				
10.10.20.20	0	FULL/ -	00:00:31	192.168.4.3
Serial0/0/0				

```
Router#
```

```
Router#show ip ospf neighbor
```

Neighbor ID	Pri	State	Dead Time	Address
Interface				
10.10.40.40	0	FULL/ -	00:00:39	192.168.4.1
Serial0/0/0				
10.10.30.30	0	FULL/ -	00:00:34	192.168.3.2
Serial0/0/1				

```
Router#
```

```
Router#show ip ospf neighbor
Router#show ip ospf neighbor
```

Neighbor ID	Pri	State	Dead Time	Address
Interface				
10.10.20.20	0	FULL/ -	00:00:37	192.168.3.1
Serial0/0/0				

```
Router#
```



```

Neighbor ID      Pri   State           Dead Time   Address
Interface
10.10.20.20      0    FULL/ -         00:00:31    192.168.4.3
Serial0/0/0
Router#sh
Router#show ip ospf
Router#show ip ospf
Routing Process "ospf 1" with ID 10.10.40.40
Supports only single TOS(TOS0) routes
Supports opaque LSA
SPF schedule delay 5 secs, Hold time between two SPFs 10
secs
Minimum LSA interval 5 secs. Minimum LSA arrival 1 secs
Number of external LSA 0. Checksum Sum 0x000000
Number of opaque AS LSA 0. Checksum Sum 0x000000
Number of DCbitless external and opaque AS LSA 0
Number of DoNotAge external and opaque AS LSA 0
Number of areas in this router is 1. 1 normal 0 stub 0 nssa
External flood list length 0
  Area BACKBONE(0)
    Number of interfaces in this area is 3
    Area has no authentication
    SPF algorithm executed 6 times
    Area ranges are
    Number of LSA 3. Checksum Sum 0x01cfbe
    Number of opaque link LSA 0. Checksum Sum 0x000000
    Number of DCbitless LSA 0
    Number of indication LSA 0
    Number of DoNotAge LSA 0
    Flood list length 0

Router#show ip ospf
Routing Process "ospf 1" with ID 10.10.20.20
Supports only single TOS(TOS0) routes
Supports opaque LSA
SPF schedule delay 5 secs, Hold time between two SPFs 10
secs
Minimum LSA interval 5 secs. Minimum LSA arrival 1 secs
Number of external LSA 0. Checksum Sum 0x000000
Number of opaque AS LSA 0. Checksum Sum 0x000000
Number of DCbitless external and opaque AS LSA 0
Number of DoNotAge external and opaque AS LSA 0
Number of areas in this router is 1. 1 normal 0 stub 0 nssa
External flood list length 0
  Area BACKBONE(0)
    Number of interfaces in this area is 3
    Area has no authentication
    SPF algorithm executed 4 times
    Area ranges are
    Number of LSA 3. Checksum Sum 0x01cfbe
    Number of opaque link LSA 0. Checksum Sum 0x000000
    Number of DCbitless LSA 0
    Number of indication LSA 0
    Number of DoNotAge LSA 0
    Flood list length 0

```

```
Router#show ip ospf
Routing Process "ospf 1" with ID 10.10.30.30
Supports only single TOS(TOS0) routes
Supports opaque LSA
SPF schedule delay 5 secs, Hold time between two SPFs 10
secs
Minimum LSA interval 5 secs. Minimum LSA arrival 1 secs
Number of external LSA 0. Checksum Sum 0x000000
Number of opaque AS LSA 0. Checksum Sum 0x000000
Number of DCbitless external and opaque AS LSA 0
Number of DoNotAge external and opaque AS LSA 0
Number of areas in this router is 1. 1 normal 0 stub 0 nssa
External flood list length 0
  Area BACKBONE(0)
    Number of interfaces in this area is 2
    Area has no authentication
    SPF algorithm executed 2 times
    Area ranges are
    Number of LSA 3. Checksum Sum 0x01cfbe
    Number of opaque link LSA 0. Checksum Sum 0x000000
    Number of DCbitless LSA 0
    Number of indication LSA 0
    Number of DoNotAge LSA 0
    Flood list length 0
```