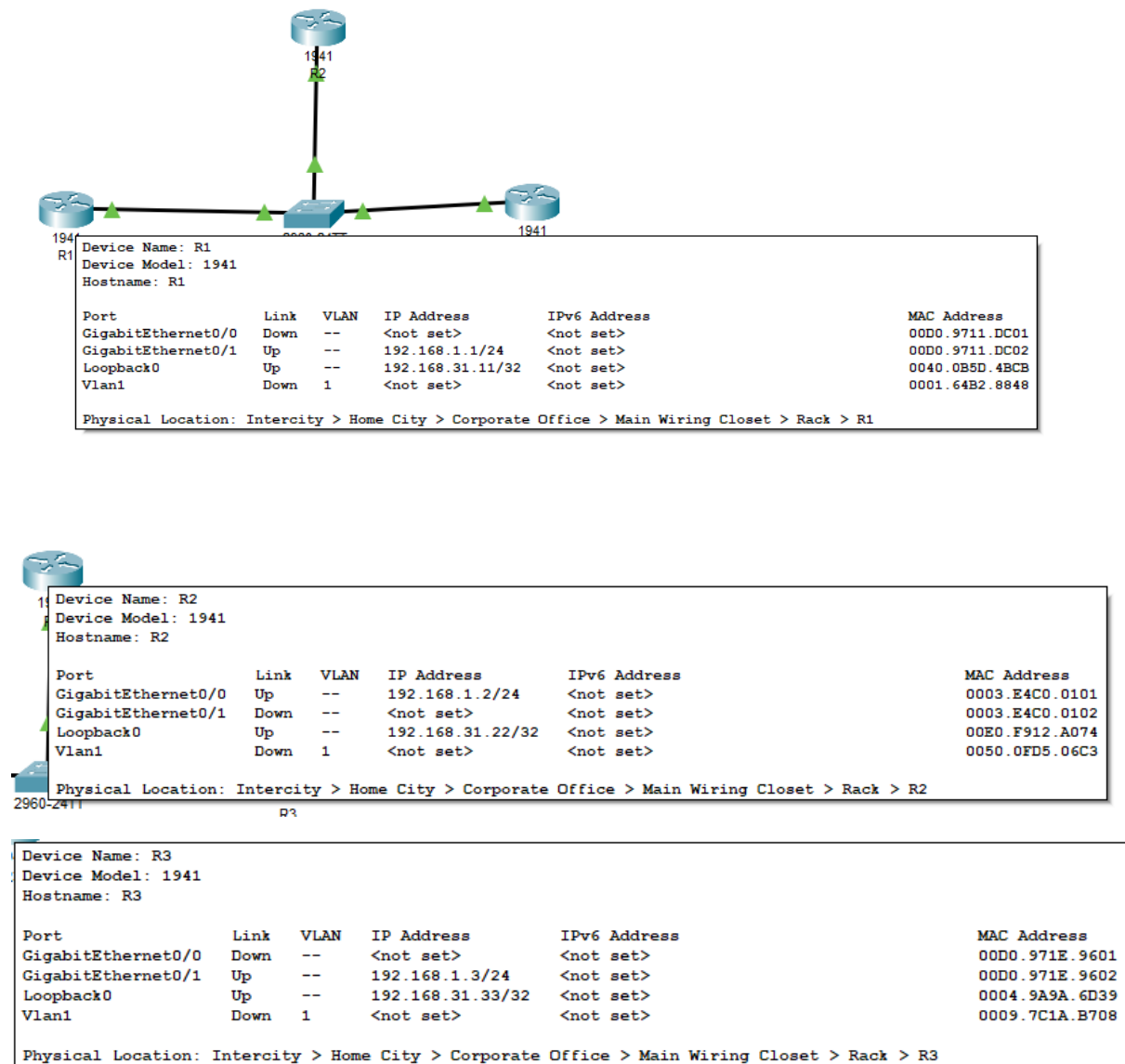


Zad 10.1.1.13

Piotr Boguszewski 63478 inis5_FD



IOS Command Line Interface

```
R1>show ip protocols

Routing Protocol is "ospf 1"
  Outgoing update filter list for all interfaces is not set
  Incoming update filter list for all interfaces is not set
  Router ID 192.168.31.11
  Number of areas in this router is 1. 1 normal 0 stub 0 nssa
  Maximum path: 4
  Routing for Networks:
    192.168.1.0 0.0.0.255 area 0
  Routing Information Sources:
    Gateway         Distance      Last Update
    192.168.31.11    110          00:11:11
    192.168.31.22    110          00:11:11
    192.168.31.33    110          00:11:11
  Distance: (default is 110)

R1>ip ospf
^
% Invalid input detected at '^' marker.

R1>show ip ospf

Routing Process "ospf 1" with ID 192.168.31.11
  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 1
      Area has no authentication
      SPF algorithm executed 2 times
      Area ranges are
        Number of LSA 4. Checksum Sum 0x01ee78
        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

--More--
```

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```
R1>show ip ospf neighbor
```

Neighbor ID	Pri	State	Dead Time	Address	Interface
192.168.31.33	100	FULL/BDR	00:00:34	192.168.1.3	GigabitEthernet0/1
192.168.31.22	0	FULL/DROTHER	00:00:34	192.168.1.2	GigabitEthernet0/1

```
R1>
```

R2

IOS Command Line Interface

```

to FULL, Loading Done

00:00:45: %OSPF-5-ADJCHG: Process 1, Nbr 192.168.31.33 on GigabitEthernet0/0 from LOADING
to FULL, Loading Done

R2>show ip protocols
R2>show ip protocols

Routing Protocol is "ospf 1"
  Outgoing update filter list for all interfaces is not set
  Incoming update filter list for all interfaces is not set
  Router ID 192.168.31.22
  Number of areas in this router is 1. 1 normal 0 stub 0 nssa
  Maximum path: 4
  Routing for Networks:
    192.168.1.0 0.0.0.255 area 0
  Routing Information Sources:
    Gateway         Distance      Last Update
    192.168.31.11    110          00:13:27
    192.168.31.22    110          00:13:27
    192.168.31.33    110          00:13:27
  Distance: (default is 110)

R2>show ip ospf
Routing Process "ospf 1" with ID 192.168.31.22
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 1
    Area has no authentication
    SPF algorithm executed 2 times
    Area ranges are
      Number of LSA 4. Checksum Sum 0x01ee78
      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
--More--

```

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```

R2>show ip ospf neighbor

Neighbor ID    Pri   State           Dead Time   Address        Interface
192.168.31.11  255   FULL/DR         00:00:35   192.168.1.1   GigabitEthernet0/0
192.168.31.33  100   FULL/BDR        00:00:35   192.168.1.3   GigabitEthernet0/0
R2>

```

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R3

Physical Config **CLI** Attributes

IOS Command Line Interface

```
R3>show ip protocols

Routing Protocol is "ospf 1"
  Outgoing update filter list for all interfaces is not set
  Incoming update filter list for all interfaces is not set
  Router ID 192.168.31.33
  Number of areas in this router is 1. 1 normal 0 stub 0 nssa
  Maximum path: 4
  Routing for Networks:
    192.168.1.0 0.0.0.255 area 0
  Routing Information Sources:
    Gateway         Distance      Last Update
    192.168.31.11    110          00:15:20
    192.168.31.22    110          00:15:20
    192.168.31.33    110          00:15:20
  Distance: (default is 110)

R3>show ip ospf

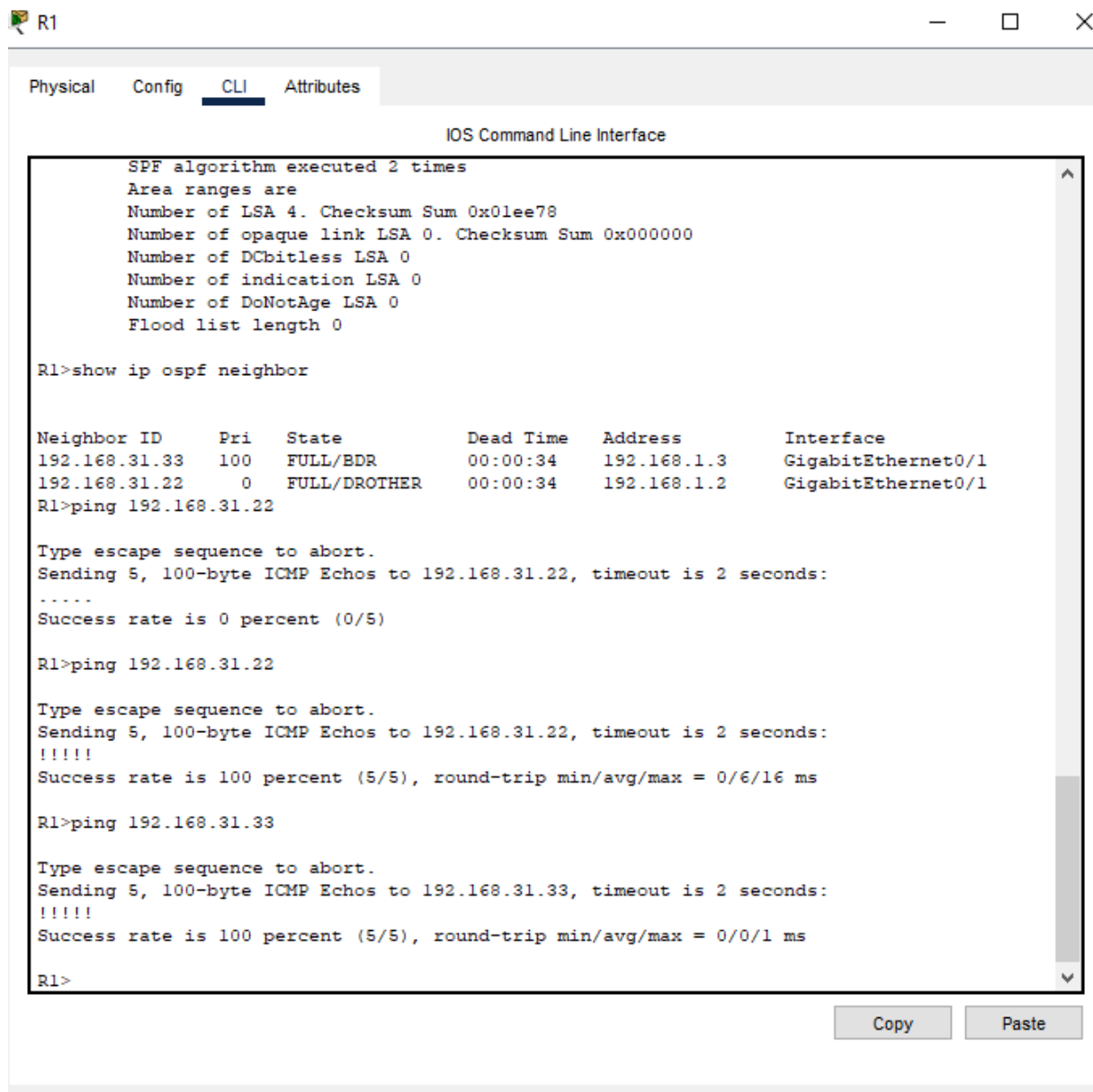
Routing Process "ospf 1" with ID 192.168.31.33
Supports only single TOS(TOS0) routes
Supports opaque LSA
SPF schedule delay 5 secs, Hold time between two SPFs 10 secs
Minimum LSA interval 5 secs. Minimum LSA arrival 1 secs
Number of external LSA 0. Checksum Sum 0x000000
Number of opaque AS LSA 0. Checksum 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 1
    Area has no authentication
    SPF algorithm executed 2 times
    Area ranges are
    Number of LSA 4. Checksum Sum 0x01ee78
    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

R3>show ip ospf neighbor

Neighbor ID      Pri   State           Dead Time   Address        Interface
192.168.31.11    255   FULL/DR         00:00:37    192.168.1.1    GigabitEthernet0/1
192.168.31.22    0     FULL/DROTHER    00:00:37    192.168.1.2    GigabitEthernet0/1
R3>
```

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```
SPF algorithm executed 2 times
Area ranges are
Number of LSA 4. Checksum Sum 0x01ee78
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

R1>show ip ospf neighbor

Neighbor ID      Pri   State           Dead Time   Address        Interface
192.168.31.33    100   FULL/BDR        00:00:34    192.168.1.3    GigabitEthernet0/1
192.168.31.22     0     FULL/DROTHER    00:00:34    192.168.1.2    GigabitEthernet0/1
R1>ping 192.168.31.22

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 192.168.31.22, timeout is 2 seconds:
.....
Success rate is 0 percent (0/5)

R1>ping 192.168.31.22

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 192.168.31.22, timeout is 2 seconds:
!!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 0/6/16 ms

R1>ping 192.168.31.33

Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 192.168.31.33, timeout is 2 seconds:
!!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 0/0/1 ms

R1>
```

Podsumowanie

Efektem zadania jest sieć ze współdzielonymi interfejsami sieciowymi z

automatycznym trasowaniem protokołem OSPFv2

w protokole można ustawić priorytet przechowywania przez routery informacji o sieci, poprzez polecenia

interface [nazwa int]

ip ospf priority [priorytet]

lub według kolejności przyłączania do strefy .

routery same ustawią priorytety i sklasyfikują się DR,BDR,BDO.

W ćwiczeniu struktura została zmieniona z R3 > R2 > R1 na R1 > R3 > R2.

