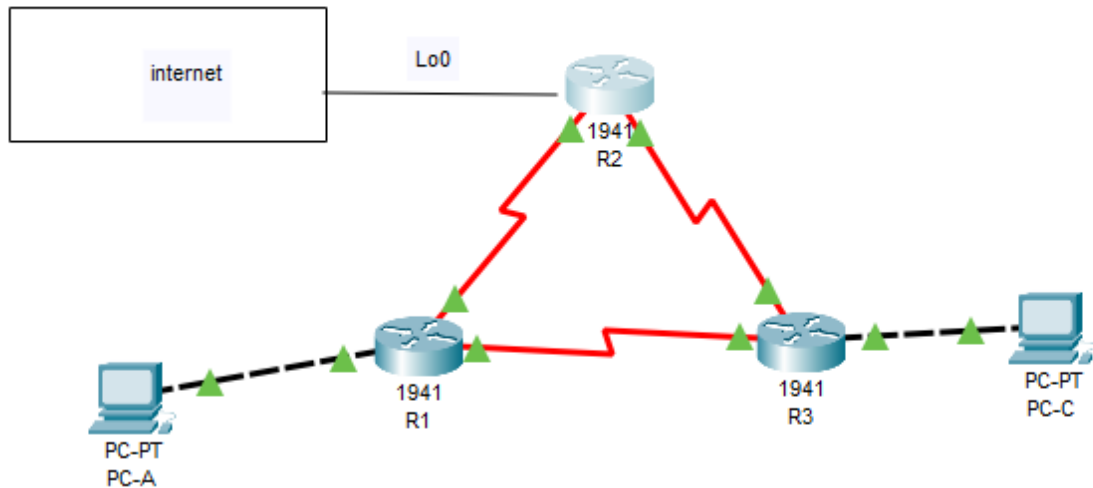


Zadanie 10.1.3.5

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Topologia sieci



Konfiguracja interfejsów

R1

```
R1>show ip interface brief
Interface                IP-Address      OK? Method Status      Protocol
GigabitEthernet0/0       192.168.1.1     YES manual up          up
GigabitEthernet0/1       unassigned      YES unset   administratively down down
Serial0/0/0              192.168.12.1   YES manual up          up
Serial0/0/1              192.168.13.1   YES manual up          up
Vlan1                    unassigned      YES unset   administratively down down
```

R2

```
R2>show ip interface brief
Interface                IP-Address      OK? Method Status      Protocol
GigabitEthernet0/0       unassigned      YES unset   administratively down down
GigabitEthernet0/1       unassigned      YES unset   administratively down down
Serial0/0/0              192.168.12.2   YES manual up          up
Serial0/0/1              192.168.23.1   YES manual up          up
Loopback0                209.165.200.225 YES manual up          up
Vlan1                    unassigned      YES unset   administratively down down
```

R3

```
R3>show ip interface brief
Interface                IP-Address      OK? Method Status      Protocol
GigabitEthernet0/0       192.168.3.1     YES manual up          up
GigabitEthernet0/1       unassigned      YES unset   administratively down down
Serial0/0/0              192.168.13.1   YES manual up          up
Serial0/0/1              192.168.23.1   YES manual up          up
Vlan1                    unassigned      YES unset   administratively down down
```

Konfiguracja ip

R1

```
R1>show ip protocol
```

```
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 1.1.1.1
```

```
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
```

```
192.168.12.0 0.0.0.3 area 0
```

```
192.168.13.0 0.0.0.3 area 0
```

```
Routing Information Sources:
```

Gateway	Distance	Last Update
---------	----------	-------------

1.1.1.1	110	00:06:49
---------	-----	----------

2.2.2.2	110	00:06:45
---------	-----	----------

3.3.3.3	110	00:06:50
---------	-----	----------

```
Distance: (default is 110)
```

```
R1>show ip ospf
```

```
Routing Process "ospf 1" with ID 1.1.1.1
```

```
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 1. Checksum Sum 0x00e0e9
```

```
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 3 times
```

```
Area ranges are
```

```
Number of LSA 3. Checksum Sum 0x00e9a8
```

```
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
```

R2

```
R2>show ip protocol
```

```
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 2.2.2.2
  It is an autonomous system boundary router
  Redistributing External Routes from,
  Number of areas in this router is 1. 1 normal 0 stub 0 nssa
  Maximum path: 4
  Routing for Networks:
    192.168.12.0 0.0.0.3 area 0
    192.168.23.0 0.0.0.3 area 0
  Routing Information Sources:
    Gateway         Distance      Last Update
    1.1.1.1          110          00:07:29
    2.2.2.2          110          00:07:34
    3.3.3.3          110          00:07:34
  Distance: (default is 110)
```

```
R2>show ip ospf
```

```
Routing Process "ospf 1" with ID 2.2.2.2
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 1. Checksum Sum 0x00e0e9
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 0x00e9a8
    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

```
R3>show ip protocol
```

```
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 3.3.3.3
```

```
Number of areas in this router is 1. 1 normal 0 stub 0 nssa
```

```
Maximum path: 4
```

```
Routing for Networks:
```

```
192.168.3.0 0.0.0.255 area 0
```

```
192.168.13.0 0.0.0.3 area 0
```

```
192.168.23.0 0.0.0.3 area 0
```

```
Routing Information Sources:
```

Gateway	Distance	Last Update
---------	----------	-------------

1.1.1.1	110	00:08:02
---------	-----	----------

2.2.2.2	110	00:08:02
---------	-----	----------

3.3.3.3	110	00:08:02
---------	-----	----------

```
Distance: (default is 110)
```

```
R3>show ip ospf
```

```
Routing Process "ospf 1" with ID 3.3.3.3
```

```
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 1. Checksum Sum 0x00e0e9
```

```
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 3 times
```

```
Area ranges are
```

```
Number of LSA 3. Checksum Sum 0x00e9a8
```

```
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
```

Podsumowanie

Głównym zadaniem było skonfigurowanie interfejsów w taki sposób, aby połączyć dwa komputery oraz Internet, jednocześnie zwiększając koszty transmisji danych w taki sposób, aby cały ruch sieciowy był przekierowywany przez router R2.