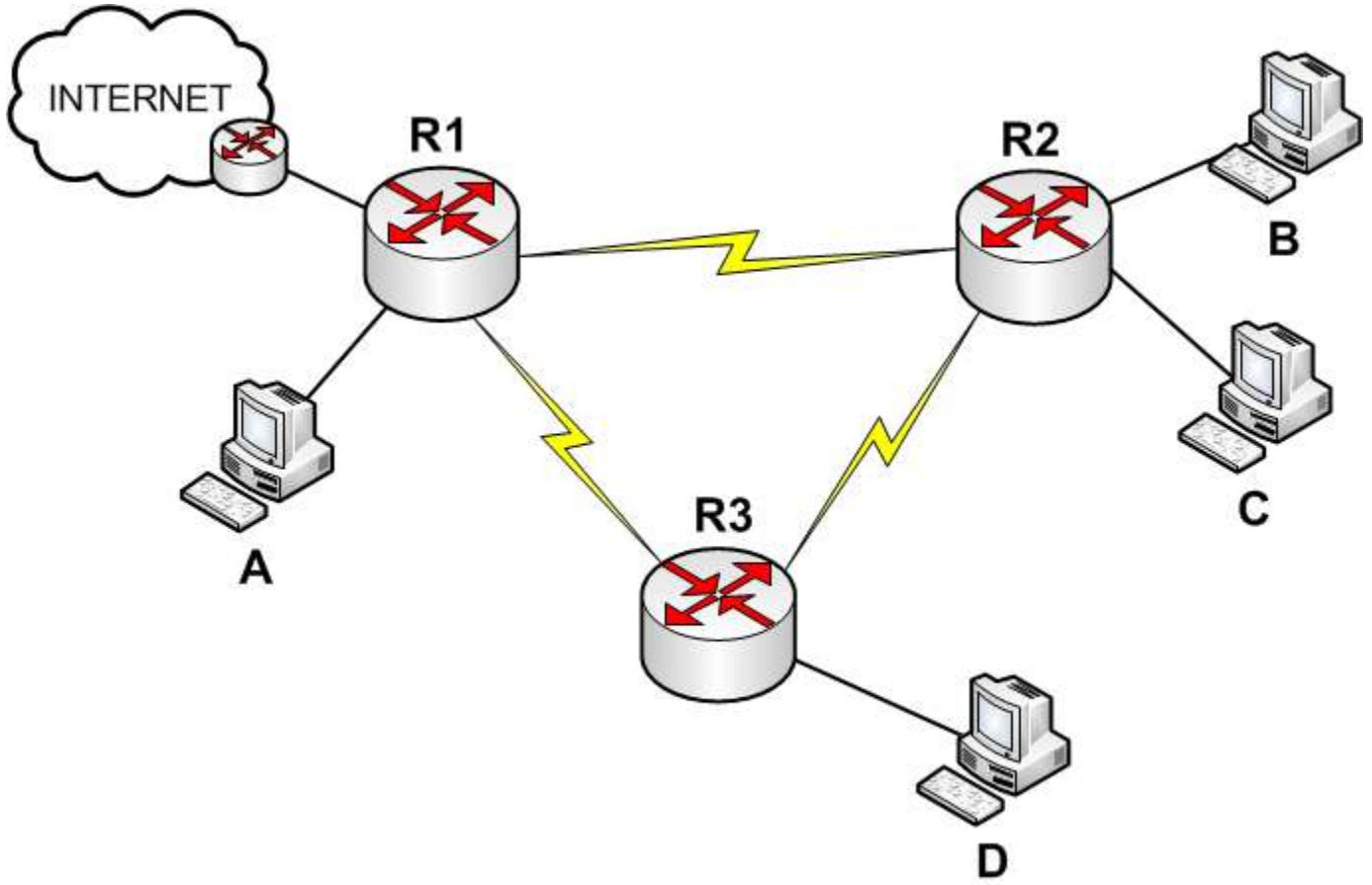
Laboratorium 7

ROUTING STATYCZNY

SPANNING TREE PROTOCOL

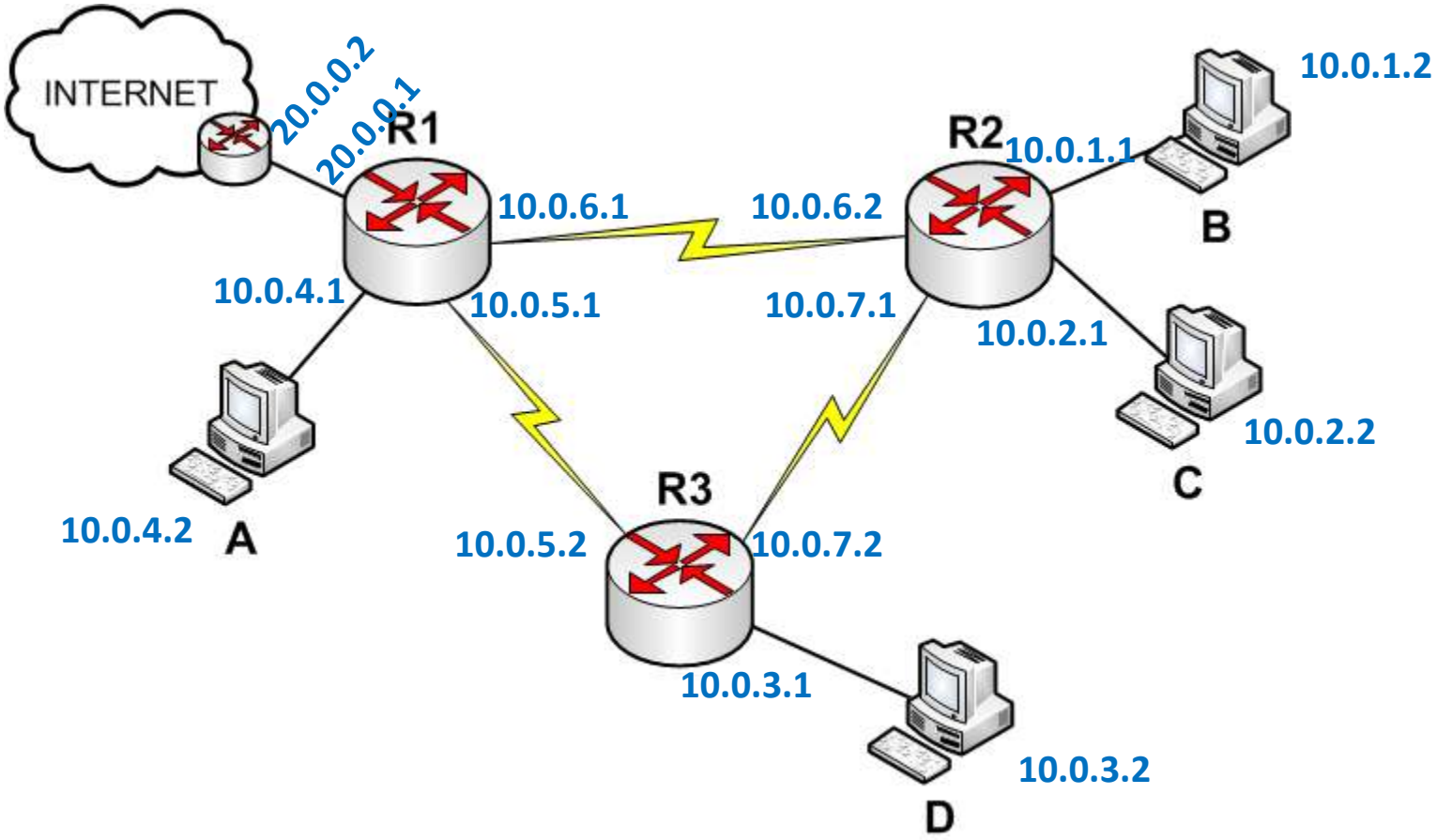
BUDOWANIE DRZEWA

Topologia ćwiczeniowa



10.0.0.0 /maska do wyboru

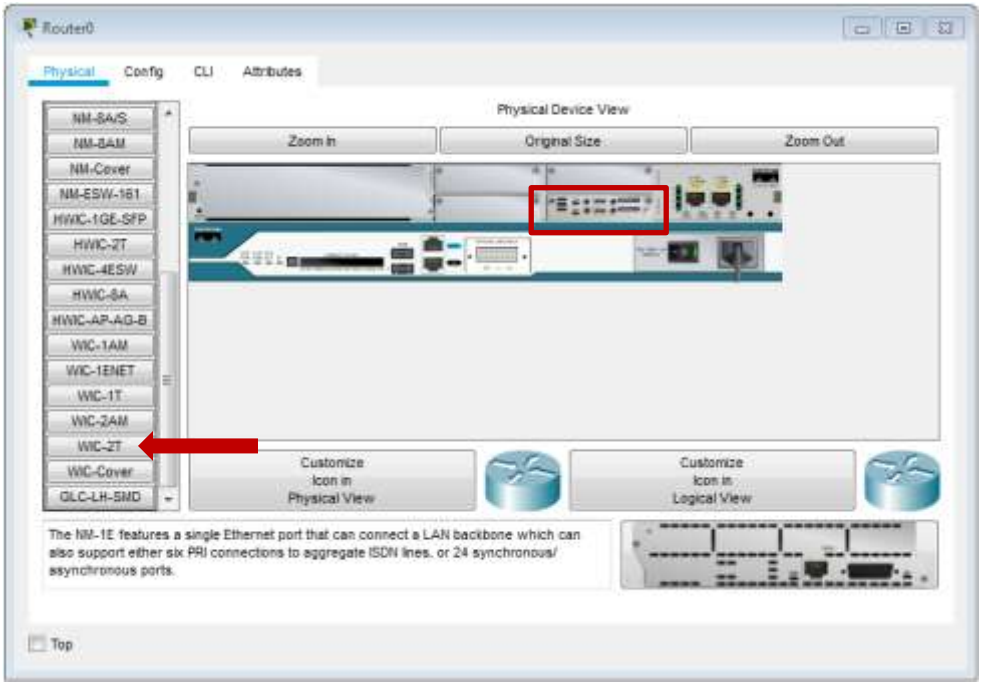
Topologia ćwiczeniowa



10.0.0.0 /24

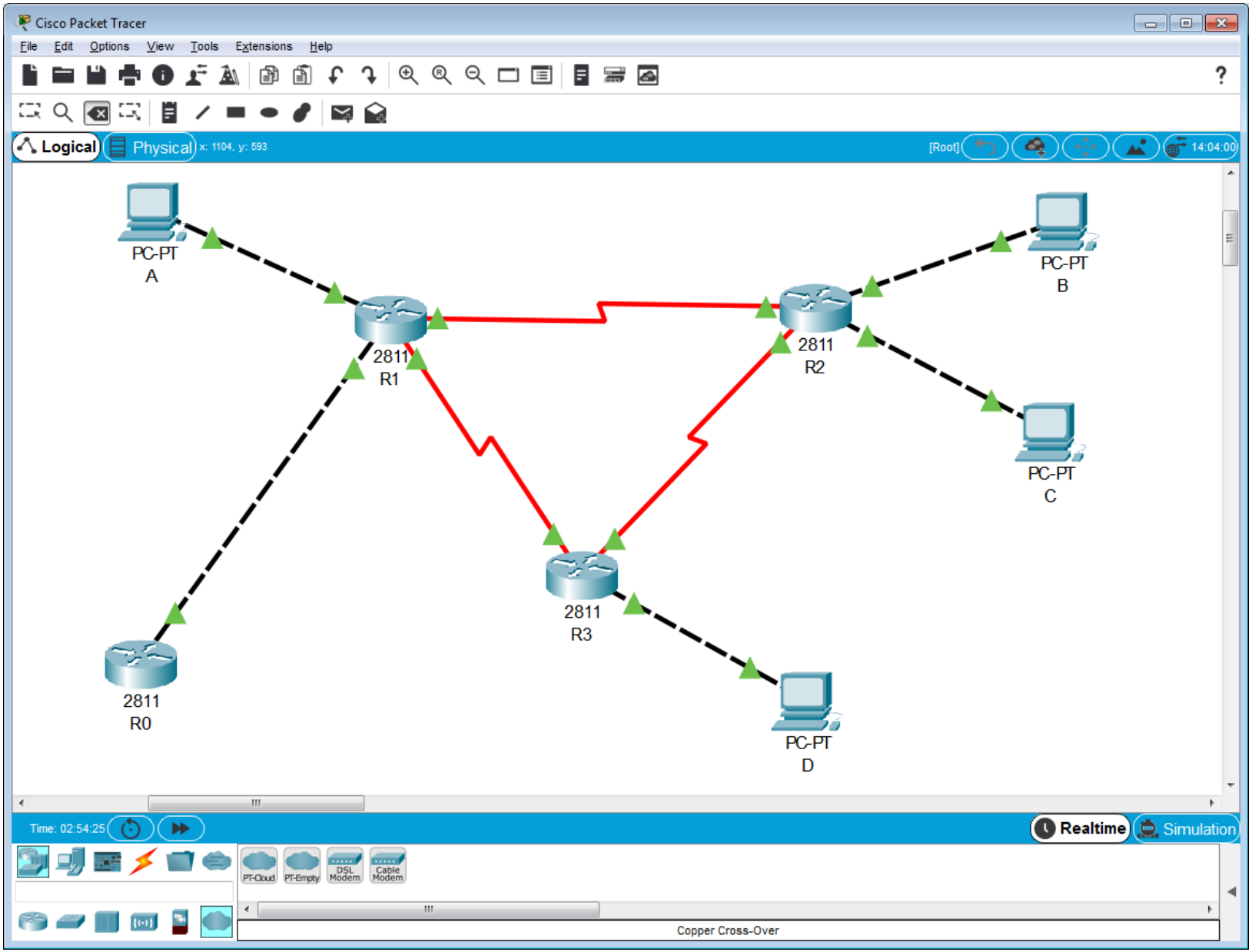
Kabel szeregowy (V35)

Router (2FE + 2S)




```
Router> show ip interface brief
Interface              IP-Address      OK? Method  Status                    Protocol
FastEthernet0/0        unassigned      YES unset   administratively down     down
FastEthernet0/1        unassigned      YES unset   administratively down     down
Serial0/0/0            unassigned      YES unset   administratively down     down
Serial0/0/1            unassigned      YES unset   administratively down     down
Vlan1                  unassigned      YES unset   administratively down     down
Router>
```

Topologia ćwiczeniowa



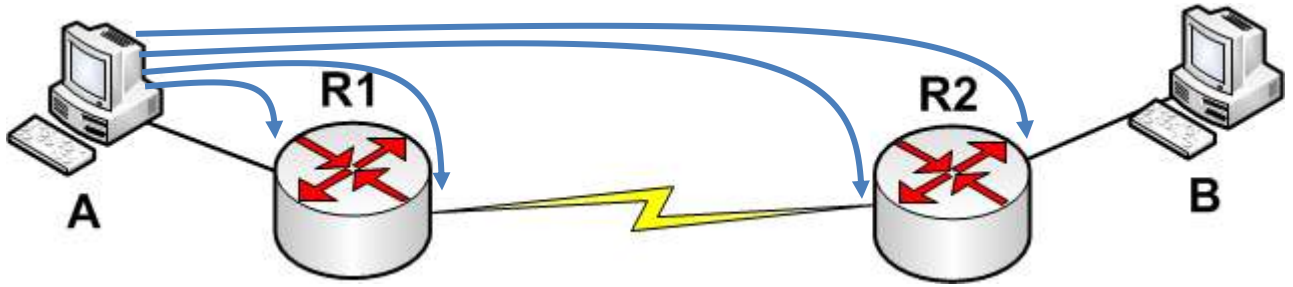
```
router# show ip interface brief
router# show ip route
router# show controllers s0/1
```

```
r# configure terminal
r(conf)# interface f0/1 [g1/0/1 s1/0…]
r(conf-if)# ip address adres maska
r(conf-if)# no shutdown
r(conf-if)# clock rate 64000 [serial DCE!]
```

SPANNING TREE PROTOCOL

ĆWICZENIA

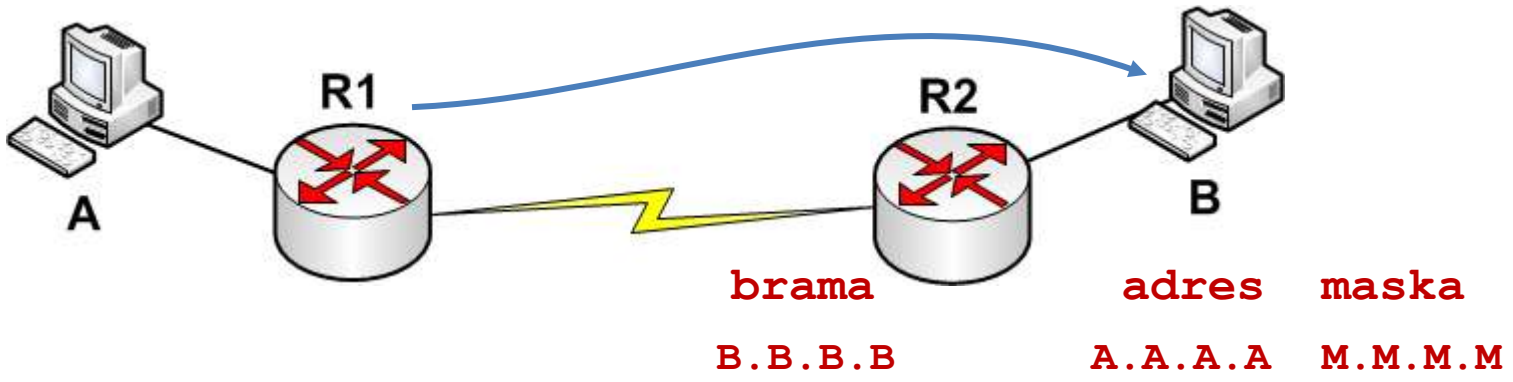
Sprawdzenie łączności



1. Ping kolejnych interfejsów (coraz dalszych od komputera).
2. Który ping nie zadziała?
   Dlaczego?
3. Jaka jest różnica pomiędzy:
   - ping na lewy interfejs R2 a
   - ping na komputer B?

   Dlaczego?

Uzupełnienie tablicy R1




```
R1(conf)# ip route A.A.A.A  M.M.M.M  B.B.B.B
```

Czy ping z komputera A do B zadziała po uzupełnieniu wpisu tylko w R1?

Sprawdzenie tablicy routingu

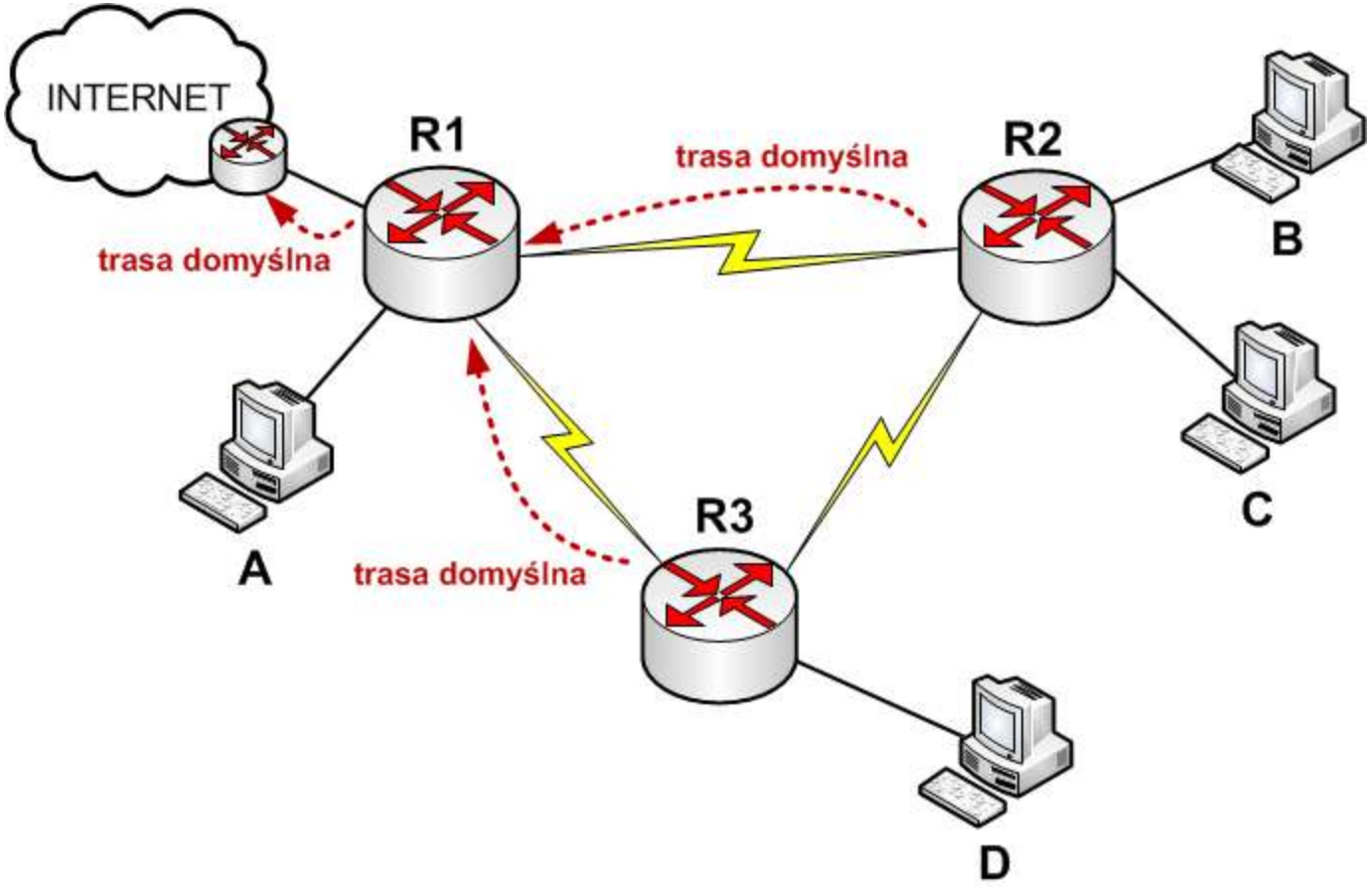
R1# **show ip route**

```
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

10.0.0.0/24 is subnetted, 4 subnets
C 10.0.1.0 is directly connected, FastEthernet0/0
C 10.0.2.0 is directly connected, Serial0/0/0
C 10.0.3.0 is directly connected, Serial0/0/1
S 10.0.4.0 [1/0] via 10.0.2.2
C 20.0.0.0/8 is directly connected, FastEthernet0/1
```

Trasa domyślna




```
r(conf)# ip route 0.0.0.0 0.0.0.0 brama
```

Sprawdzenie tablicy routingu

R2# **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
```

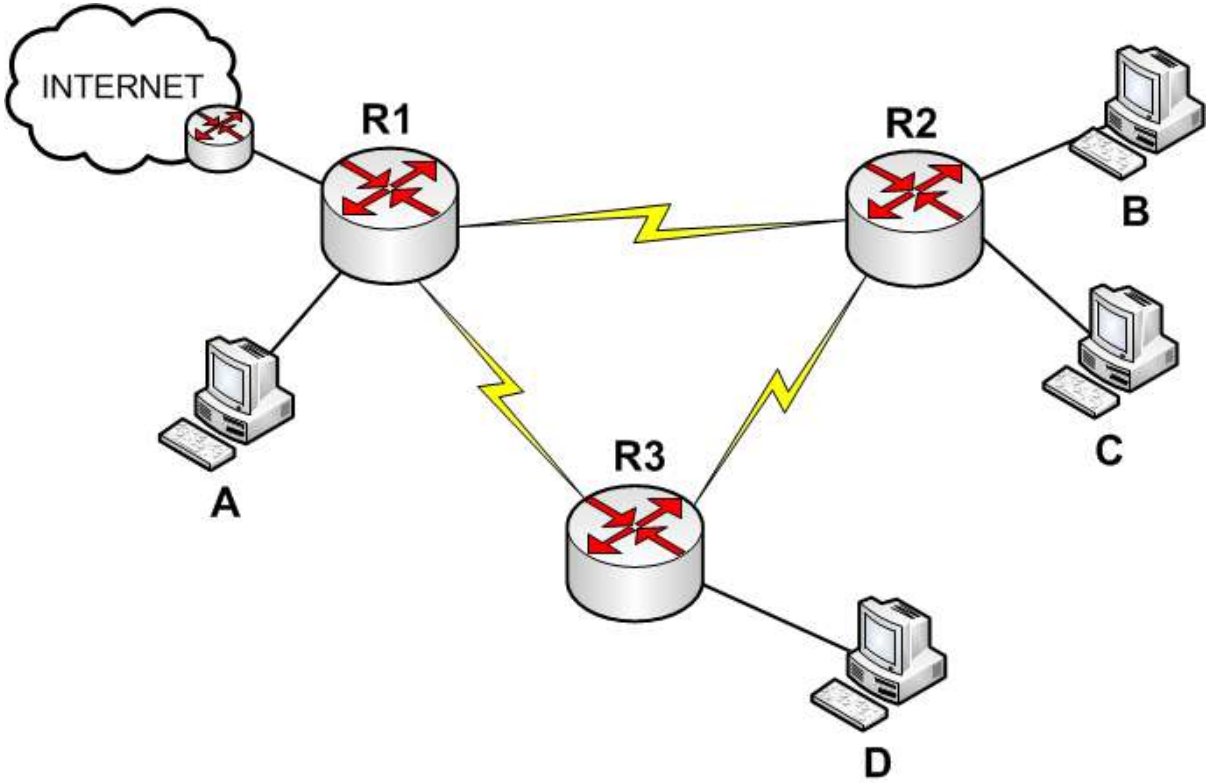
Gateway of last resort is 10.0.2.1 to network 0.0.0.0

```
10.0.0.0/24 is subnetted, 4 subnets
C 10.0.2.0 is directly connected, Serial0/0/0
C 10.0.4.0 is directly connected, FastEthernet0/0
C 10.0.5.0 is directly connected, FastEthernet0/1
C 10.0.6.0 is directly connected, Serial0/0/1
```

S 10.0.1.0 [1/0] via 10.0.2.1

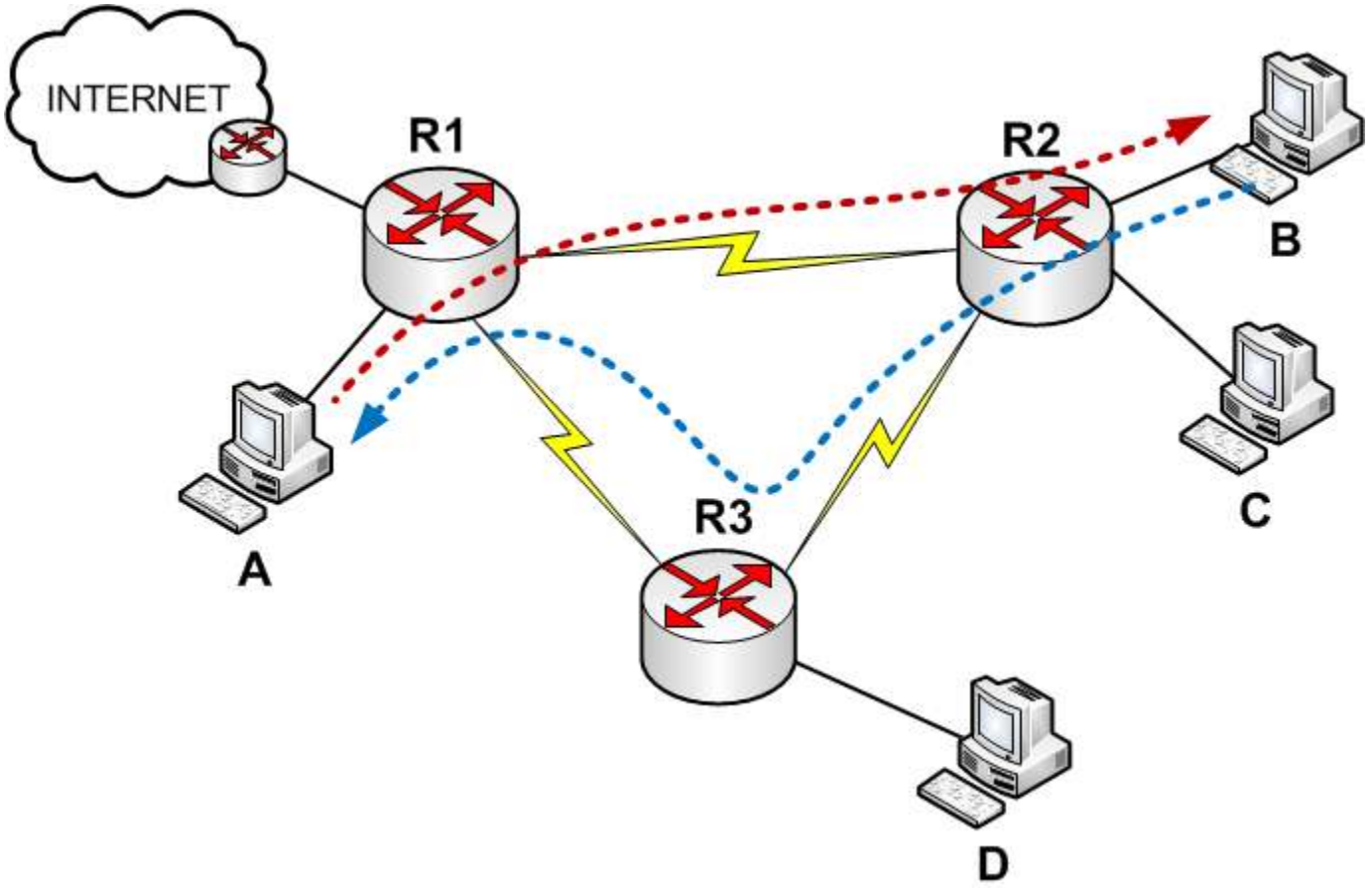
S* 0.0.0.0/0 [1/0] via 10.0.2.1

Uzupełnienie wszystkich tablic Minimalizacja wpisów



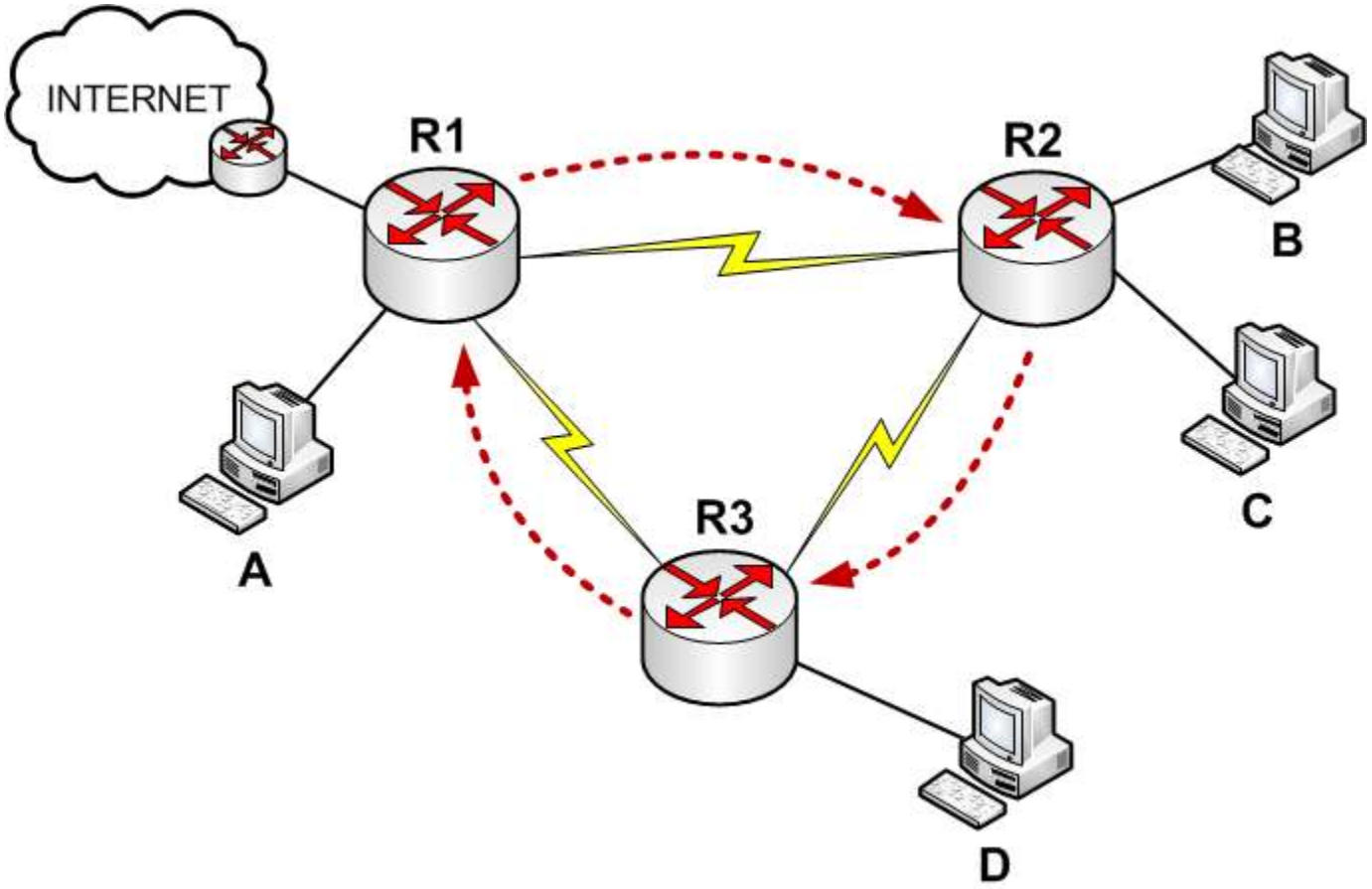
- Dodajemy tylko brakujące wpisy:
  - jeśli trasę obsłuży już wpis domyślny, to nie musimy jej już dodawać.

Inna trasa powrotu



- Co należy zmienić w konfiguracji topologii, by trasa ping C z komputera A biegła jak powyżej?

Pętla



1. Ustawiamy trasę na sieć 200.0.0.0 /24 jak powyżej.
2. Jaka jest reakcja na ping 200.0.0.1 na komputerze A?

DZIĘKUJĘ