**Nastavni predmet** RAČUNALNE MREŽE

**Naslov cjeline** Djelovanje u mrežnom sloju

**Naslov jedinice** Vježba 7: Statičko usmjeravanje

**Ime i prezime učenika:** Matija Kovač 3.C

**PRIPREMA**

**Unos informacija o putanji u usmjerničku tablicu kod statičkog usmjeravanja:**

- Statičko usmjeravanje uključuje ručno konfiguriranje usmjerničke tablice, gdje administrator mreže direktno specificira putanje do određenih odredišta. Informacije o putanjama se unose ručno, i to obično pomoću naredbi na mrežnim uređajima.

ip route <odredište_mreže> <maska_mreže> <sljedeći_hop>

**odredište_mreže:** Ciljna IP adresa odredišne mreže.

**maska_mreže:** Maska podmreže koja identificira raspon adresa odredišne mreže.

**sljedeći_hop:** IP adresa sljedećeg usmjerničkog čvora prema kojem će paketi biti proslijeđeni kako bi stigli do odredišta.

**Primjer konkretnog unosa:**

1. ip route 192.168.1.0 255.255.255.0 10.0.0.1
2. up route add –net 192.168.1.0 255.255.255.0 gw 10.0.01

**IZVOĐENJE VJEŽBE**



Tablica adresa

| Uređaj | Adresa fastethernet sučelja | Oznaka sučelja | Mrežna maska | Oznaka Serijskog sučelja | Tip serijskog sučelja | Adresa serijskog sučelja | Mrežna maska | Default gateway |
|---|---|---|---|---|---|---|---|---|
| R1 | 192.168.20.193 | 0/0 | 255.255.255.192 | S2/0 | DCE | 172.16.30.1 | 255.255.255.252 | |
| | 192.168.80.65 | 1/0 | 255.255.255.192 | | | | | |
| R2 | | | | S2/0 | DTE | 172.16.30.2 | 255.255.255.252 | |
| PC1 | 192.168.20.194 | | | | | | | 192.168.20.193 |
| PC2 | 192.168.20.195 | | | | | | | 192.168.20.193 |
| PC3 | 192.168.80.66 | | | | | | | 192.168.80.65 |
| PC4 | 192.168.80.67 | | | | | | | 192.168.80.65 |

```
Router>enable
Router#
Router#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#interface Serial2/0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface Serial3/0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface Serial3/0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface FastEthernet0/0
Router(config-if)#ip addr 192.168.20.193 255.255.255.192
Router(config-if)#no shutdown

Router(config-if)#
%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up
exit
Router(config)#interface FastEthernet1/0
Router(config-if)#ip addr 192.168.80.65 255.255.255.192
Router(config-if)#no shutdown

Router(config-if)#
%LINK-5-CHANGED: Interface FastEthernet1/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet1/0, changed state to up
exit
Router(config)#
```

```
Router(config)#interface serial2/0
Router(config-if)#ip addr 172.16.30.1 255.255.255.2
Bad mask 0xFFFFFF02 for address 172.16.30.1
Router(config-if)#ip addr 172.16.30.1 255.255.255.252
Router(config-if)#clock rat 6400
Unknown clock rate
Router(config-if)#clock rat 64000
This command applies only to DCE interfaces
Router(config-if)#no shutdown

%LINK-5-CHANGED: Interface Serial2/0, changed state to down
Router(config-if)#
```

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.20.194

Pinging 192.168.20.194 with 32 bytes of data:

Reply from 192.168.20.194: bytes=32 time=5ms TTL=128
Reply from 192.168.20.194: bytes=32 time<1ms TTL=128
Reply from 192.168.20.194: bytes=32 time=2ms TTL=128
Reply from 192.168.20.194: bytes=32 time=4ms TTL=128

Ping statistics for 192.168.20.194:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 5ms, Average = 2ms

C:\>
```

```
C:\>ping 192.168.20.193

Pinging 192.168.20.193 with 32 bytes of data:

Reply from 192.168.20.193: bytes=32 time<1ms TTL=255
Reply from 192.168.20.193: bytes=32 time<1ms TTL=255
Reply from 192.168.20.193: bytes=32 time<1ms TTL=255
Reply from 192.168.20.193: bytes=32 time<1ms TTL=255

Ping statistics for 192.168.20.193:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

```
show ip route
Codes: C - connected, S - static, I - IGRP, 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

     172.16.0.0/30 is subnetted, 1 subnets
C       172.16.30.0 is directly connected, Serial2/0
     192.168.20.0/26 is subnetted, 1 subnets
C       192.168.20.192 is directly connected, FastEthernet0/0
     192.168.80.0/26 is subnetted, 1 subnets
C       192.168.80.64 is directly connected, FastEthernet1/0
show ip route
Codes: C - connected, S - static, I - IGRP, 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

     172.16.0.0/30 is subnetted, 1 subnets
C       172.16.30.0 is directly connected, Serial2/0
```

```
Router#enable
Router#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#ip route 192.168.20.192 255.255.255.192 172.16.30.1
Router(config)#ip route 192.168.20.64 255.255.255.192 172.16.30.1
Router(config)#
```