

Nastavni predmet: RAČUNALNE MREŽE

Naslov cjeline: USMJERNIK I USMJERNIČKI PROTOKOLI

Naslov jedinice: Konfiguracija RIPv1 protokola

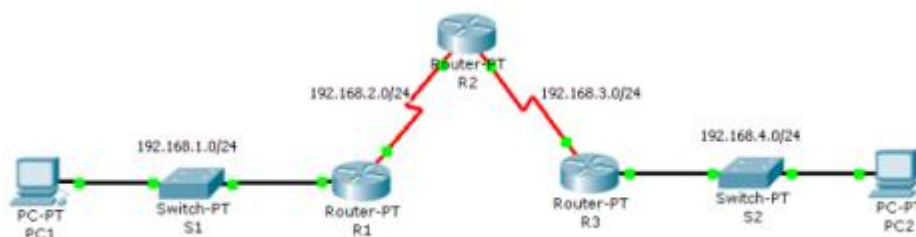
Ime učenika: Marko Gregl, 3.C

PRIPREMA ZA VJEŽBU

1. Koje su karakteristike protokola RIPv1?

Karakteristike protokola RIPv1: ne podražava usmjeravanje u mrežama koje su podijeljene na podmreže; protokol vektora udaljenosti; koristi UDP port 520; klasični protokol (nema podrške za VLSM ili CIDR); metrika je broj skokova usmjerivača; maksimalan broj skokova je 15, nedostupne rute imaju metriku 16; periodična ažuriranja rute emitiraju se svakih 30 sekundi; 25 ruta po RIP poruci.

IZVOĐENJE VJEŽBE



Tablica adresa

Ruter	Adresa Fastethernet sučelja	Mrežna maska	Oznaka ser. sučelja	Tip ser. sučelja	Adresa serijskog sučelja	Mrežna maska	Default gateway
R1	192.168.1.1	255.255.255.0	S2/0	DCE	192.168.2.1	255.255.255.0	
R2			S2/0	DTE	192.168.2.2	255.255.255.0	
R2			S3/0	DTE	192.168.3.1	255.255.255.0	
R3	192.168.4.1	255.255.255.0	S3/0	DCE	192.168.3.2	255.255.255.0	
PC1	192.168.1.10	255.255.255.0					192.168.1.1
PC2	192.168.4.10	255.255.255.0					192.168.4.1

3. Pinganjem provjeri da li postoji povezanost između PC1 i PC2. Obrazloži zašto je tako.

```
C:\>ping 192.168.4.10

Pinging 192.168.4.10 with 32 bytes of data:

Reply from 192.168.1.1: Destination host unreachable.
Reply from 192.168.1.1: Destination host unreachable.
Reply from 192.168.1.1: Destination host unreachable.
Reply from 192.168.1.1: Destination host unreachable.

Ping statistics for 192.168.4.10:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
```

4. Pinganjem provjeri do koje razine postoji povezanost:

PC1 – Fastethernet sučelje 0/0 usmjernika R1

PC1 – Serijsko sučelje 2/0 usmjernika R1

PC1 - Serijsko sučelje 2/0 usmjernika R2

ltd.

Objasni rezultat pinganja.

```
C:\>ping 192.168.1.1

Pinging 192.168.1.1 with 32 bytes of data:

Reply from 192.168.1.1: bytes=32 time<lms TTL=255
Reply from 192.168.1.1: bytes=32 time<lms TTL=255
Reply from 192.168.1.1: bytes=32 time<lms TTL=255
Reply from 192.168.1.1: bytes=32 time<lms TTL=255

Ping statistics for 192.168.1.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

```
C:\>ping 192.168.2.1

Pinging 192.168.2.1 with 32 bytes of data:

Reply from 192.168.2.1: bytes=32 time<lms TTL=255
Reply from 192.168.2.1: bytes=32 time<lms TTL=255
Reply from 192.168.2.1: bytes=32 time<lms TTL=255
Reply from 192.168.2.1: bytes=32 time<lms TTL=255

Ping statistics for 192.168.2.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

```
C:\>ping 192.168.2.2

Pinging 192.168.2.2 with 32 bytes of data:

Request timed out.
Request timed out.
Request timed out.
Request timed out.

Ping statistics for 192.168.2.2:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
```

Zato što nismo podesili tablicu usmjeravanja i RIP protokol, smo dobili takav rezultat.

5. Naredbom show ip route na usmjerniku R1 provjeri stanje usmjerničke tablice. Ispiši koje su mreže navedene u tablici.

C 192.168.1.0/24 is directly connected, FastEthernet0/0

C 192.168.2.0/24 is directly connected, Serial2/0

6. Konfiguriraj dinamičku rutu koja će omogućiti povezanost mreža 192.168.1.0/24 i 192.168.4.0/24, korištenjem RIPv1 protokola, kako slijedi:

R1:

C 192.168.1.0/24 is directly connected, FastEthernet0/0

C 192.168.2.0/24 is directly connected, Serial2/0

R 192.168.3.0/24 [120/1] via 192.168.2.2, 00:00:01, Serial2/0

R 192.168.4.0/24 [120/2] via 192.168.2.2, 00:00:01, Serial2/0

R2:

R 192.168.1.0/24 [120/1] via 192.168.2.1, 00:00:04, Serial2/0

C 192.168.2.0/24 is directly connected, Serial2/0

C 192.168.3.0/24 is directly connected, Serial3/0

R 192.168.4.0/24 [120/1] via 192.168.3.2, 00:00:25, Serial3/0

R3:

R 192.168.1.0/24 [120/2] via 192.168.3.1, 00:00:27, Serial3/0

R 192.168.2.0/24 [120/1] via 192.168.3.1, 00:00:27, Serial3/0

C 192.168.3.0/24 is directly connected, Serial3/0

C 192.168.4.0/24 is directly connected, FastEthernet0/0

7. Pinganjem provjeri povezanost PC1 i PC2.

```
C:\>ping 192.168.4.10

Pinging 192.168.4.10 with 32 bytes of data:

Reply from 192.168.4.10: bytes=32 time=30ms TTL=125
Reply from 192.168.4.10: bytes=32 time=2ms TTL=125
Reply from 192.168.4.10: bytes=32 time=20ms TTL=125
Reply from 192.168.4.10: bytes=32 time=2ms TTL=125

Ping statistics for 192.168.4.10:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 2ms, Maximum = 30ms, Average = 13ms
```