

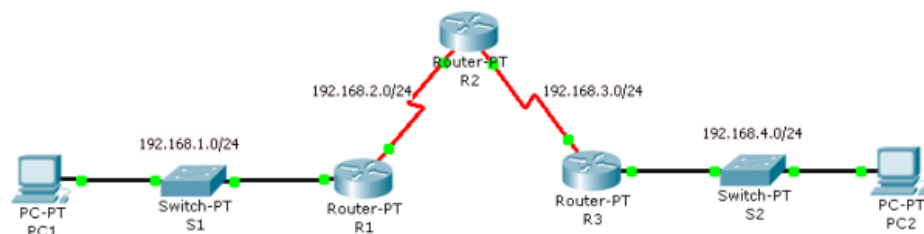
Nastavni predmet	RAČUNALNE MREŽE
Naslov cjeline	USMJERNIK I USMJERNIČKI PROTOKOLI
Naslov jedinice	Konfiguracija RIPv1 protokola
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## PRIPREMA ZA VJEŽBU

### 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<1ms TTL=255
Reply from 192.168.1.1: bytes=32 time<1ms TTL=255
Reply from 192.168.1.1: bytes=32 time<1ms TTL=255
Reply from 192.168.1.1: bytes=32 time<1ms 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<1ms TTL=255
Reply from 192.168.2.1: bytes=32 time<1ms TTL=255
Reply from 192.168.2.1: bytes=32 time<1ms TTL=255
Reply from 192.168.2.1: bytes=32 time<1ms 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
```