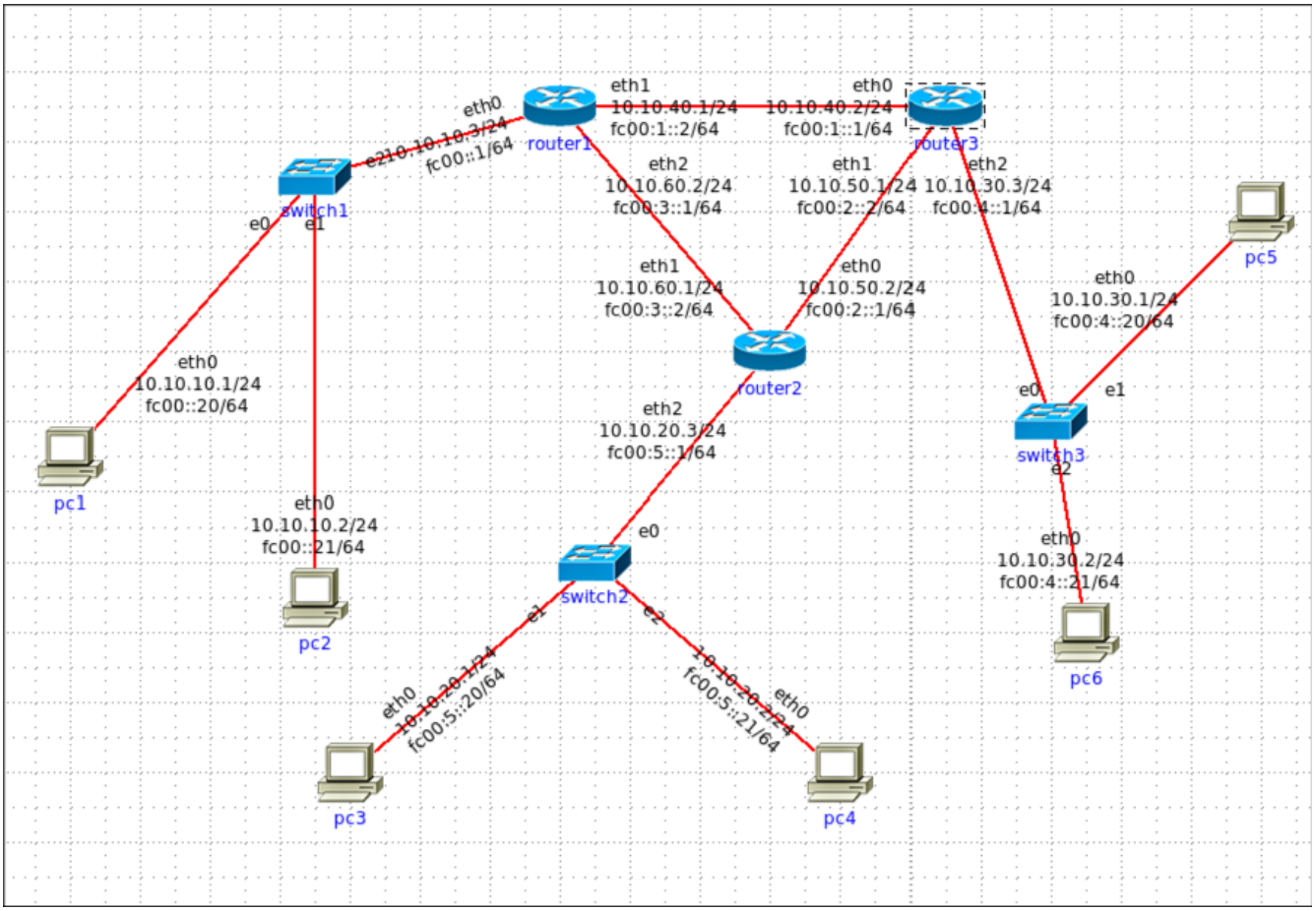


22. zadatak

pc1:

```
n3# netstat -4 -rn
Routing tables

Internet:
Destination        Gateway            Flags     Netif Expire
default            10.10.10.3         UGS        eth0
10.10.10.0/24      link#2             U          eth0
10.10.10.1         link#2             UHS         lo0
127.0.0.1          link#1             UH          lo0
```

pc2:

```
n4# netstat -4 -rn
Routing tables

Internet:
Destination        Gateway            Flags     Netif Expire
10.10.10.0/24      link#2             U          eth0
10.10.10.2         link#2             UHS         lo0
127.0.0.1          link#1             UH          lo0
```

pc3:

```
n5# netstat -4 -rn
Routing tables

Internet:
Destination        Gateway            Flags     Netif Expire
10.10.20.0/24      link#2             U          eth0
10.10.20.1         link#2             UHS         lo0
127.0.0.1          link#1             UH          lo0
```

pc4:

```
n6# netstat -4 -rn
Routing tables

Internet:
Destination        Gateway            Flags     Netif Expire
10.10.20.0/24      link#2             U          eth0
10.10.20.2         link#2             UHS         lo0
127.0.0.1          link#1             UH          lo0
```

pc5:

```
n7# netstat -4 -rn
Routing tables

Internet:
Destination        Gateway            Flags     Netif Expire
10.10.30.0/24      link#2             U          eth0
10.10.30.1         link#2             UHS         lo0
127.0.0.1          link#1             UH          lo0
```

pc6:

```
n8# netstat -4 -rn
Routing tables

Internet:
Destination        Gateway            Flags     Netif Expire
10.10.30.0/24      link#2             U          eth0
10.10.30.2         link#2             UHS         lo0
127.0.0.1          link#1             UH          lo0
```

router1:

```
n0# netstat -4 -rn
Routing tables

Internet:
Destination        Gateway            Flags     Netif Expire
10.10.10.0/24      link#2             U          eth0
10.10.10.3         link#2             UHS         lo0
10.10.20.0/24      10.10.60.1         UGS        eth2
10.10.30.0/24      10.10.40.2         UGS        eth1
10.10.40.0/24      link#3             U          eth1
10.10.40.1         link#3             UHS         lo0
10.10.60.0/24      link#4             U          eth2
10.10.60.2         link#4             UHS         lo0
127.0.0.1          link#1             UH          lo0
```

router2:

```
n2# netstat -4 -rn
Routing tables

Internet:
Destination        Gateway            Flags     Netif Expire
10.10.10.0/24      10.10.60.2         UGS        eth1
10.10.20.0/24      link#4             U          eth2
10.10.20.3         link#4             UHS         lo0
10.10.30.0/24      10.10.50.1         UGS        eth0
10.10.50.0/24      link#2             U          eth0
10.10.50.2         link#2             UHS         lo0
10.10.60.0/24      link#3             U          eth1
10.10.60.1         link#3             UHS         lo0
127.0.0.1          link#1             UH          lo0
```

router3:

```
n1# netstat -4 -rn
Routing tables

Internet:
Destination        Gateway            Flags     Netif Expire
10.10.10.0/24      10.10.40.1         UGS        eth0
10.10.20.0/24      10.10.50.2         UGS        eth1
10.10.30.0/24      link#4             U          eth2
10.10.30.3         link#4             UHS         lo0
10.10.40.0/24      link#2             U          eth0
10.10.40.2         link#2             UHS         lo0
10.10.50.0/24      link#3             U          eth1
10.10.50.1         link#3             UHS         lo0
127.0.0.1          link#1             UH          lo0
```

23. zadatak

pc1:

```
n3# netstat -4 -rn
Routing tables

Internet:
Destination        Gateway            Flags     Netif Expire
default            10.10.10.3         UGS        eth0
10.10.10.0/24      link#2             U          eth0
10.10.10.1         link#2             UHS         lo0
127.0.0.1          link#1             UH          lo0
```

pc2:

```
n4# netstat -4 -rn
Routing tables

Internet:
Destination        Gateway            Flags     Netif Expire
10.10.10.0/24      link#2             U          eth0
10.10.10.2         link#2             UHS         lo0
127.0.0.1          link#1             UH          lo0
```

pc3:

```
n5# netstat -4 -rn
Routing tables

Internet:
Destination        Gateway            Flags     Netif Expire
10.10.20.0/24      link#2             U          eth0
10.10.20.1         link#2             UHS         lo0
127.0.0.1          link#1             UH          lo0
```

pc4:

```
n6# netstat -4 -rn
Routing tables

Internet:
Destination        Gateway            Flags     Netif Expire
10.10.20.0/24      link#2             U          eth0
10.10.20.2         link#2             UHS         lo0
127.0.0.1          link#1             UH          lo0
```

pc5:

```
n7# netstat -4 -rn
Routing tables

Internet:
Destination        Gateway            Flags     Netif Expire
10.10.30.0/24      link#2             U          eth0
10.10.30.1         link#2             UHS         lo0
127.0.0.1          link#1             UH          lo0
```

pc6:

```
n8# netstat -4 -rn
Routing tables

Internet:
Destination        Gateway            Flags     Netif Expire
10.10.30.0/24      link#2             U          eth0
10.10.30.2         link#2             UHS         lo0
127.0.0.1          link#1             UH          lo0
```

router1:

```
n0# netstat -4 -rn
Routing tables

Internet:
Destination        Gateway            Flags     Netif Expire
10.10.10.0/24      link#2             U          eth0
10.10.10.3         link#2             UHS         lo0
10.10.20.0/24      10.10.40.2         UGS        eth1
10.10.30.0/24      10.10.60.1         UGS        eth2
10.10.40.0/24      link#3             U          eth1
10.10.40.1         link#3             UHS         lo0
10.10.60.0/24      link#4             U          eth2
10.10.60.2         link#4             UHS         lo0
127.0.0.1          link#1             UH          lo0
```

router2:

```
n2# netstat -4 -rn
Routing tables

Internet:
Destination        Gateway            Flags     Netif Expire
10.10.10.0/24      10.10.50.1         UGS        eth0
10.10.20.0/24      link#4             U          eth2
10.10.20.3         link#4             UHS         lo0
10.10.30.0/24      10.10.60.2         UGS        eth1
10.10.50.0/24      link#2             U          eth0
10.10.50.2         link#2             UHS         lo0
10.10.60.0/24      link#3             U          eth1
10.10.60.1         link#3             UHS         lo0
127.0.0.1          link#1             UH          lo0
```

router3:

```
n1# netstat -4 -rn
Routing tables

Internet:
Destination        Gateway            Flags     Netif Expire
10.10.10.0/24      10.10.50.2         UGS        eth1
10.10.20.0/24      10.10.40.1         UGS        eth0
10.10.30.0/24      link#4             U          eth2
10.10.30.3         link#4             UHS         lo0
10.10.40.0/24      link#2             U          eth0
10.10.40.2         link#2             UHS         lo0
10.10.50.0/24      link#3             U          eth1
10.10.50.1         link#3             UHS         lo0
127.0.0.1          link#1             UH          lo0
```

24. zadatak

pc ping prema serveru – TTL = 60 prvi put, a onda 61
server ping prema pc-u – TTL = 61

Server za pretpostavljeni usmjeritelj ima router6, zbog čega pri prvom slanju odgovora pc-u odgovor prolazi duljim putem, a kasnije se aurira serverova tablica usmjeravanja pa budući odgovori dolaze do računala pc1 kraćim putem (preko router7)

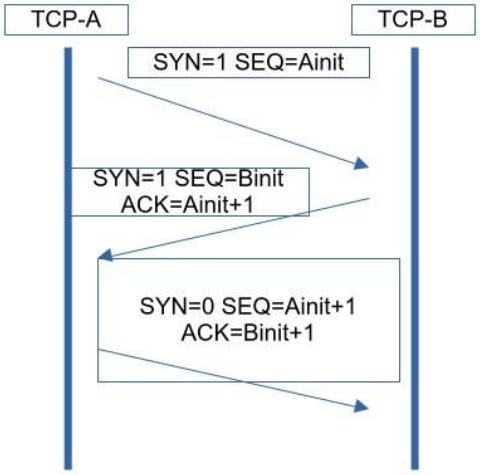
25. zadatak

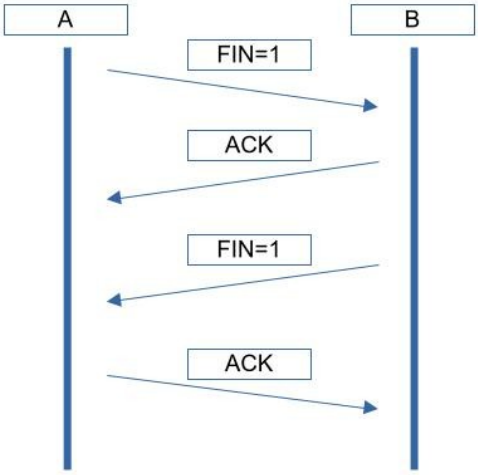
u RIP paketu za svaku je podmrežu zapisan je broj skokova do te podmreže i sljedeći skok u putu do te podmreže

28. zadatak

server: nc -l 100
pc1: nc 10.0.8.10 100

a)



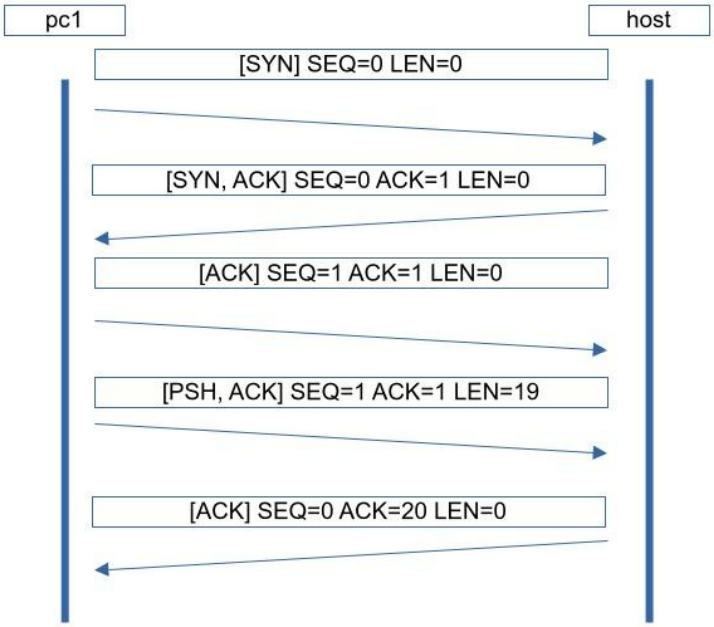


b)

pc1 – IP 10.0.0.21/24 port 63636
server – IP 10.0.8.10/24 port 100

svi segmenti imaju istu četvorku

c)



d)

veličine prozora na početku je bila 65535, a onda se promijenila u 65728

kada protokol TCP odredi optimalnu veličinu prozora s obzirom na zagušenje i brzine prijenosa pošiljatelja i primatelja, veličina prozora se ne mijenja (dok se ne pojavi novo zagušenje)

29. i 30. zadatak

na jednim vratima može slušati samo jedan proces, i to onaj koji je prvi krenuo slušati na vratima, neovisno o tome koristi li se TCP ili UDP protokol

31. zadatak

UDP i TCP spadaju u trnasportni sloj OSI modela jer oba protokola služe prijenosu podataka

32. i 33. zadatak

bez mijenjanja karakteristika poveznica mreže moguće je prouzročiti gubitke segmenata tako što se pošalje poruka veća od veličine prozora

ako se neki segment izgubio, pošiljatelj će primiti dojavu o grešci (TCP ZeroWindow i ACK posljednjeg primljenog segmenta) te će ponovo poslati taj izgubljeni segment