

Vježba 3: Subnetiranje pomoću VLSM tehnike

Izradio: Marko Sesar,3.C

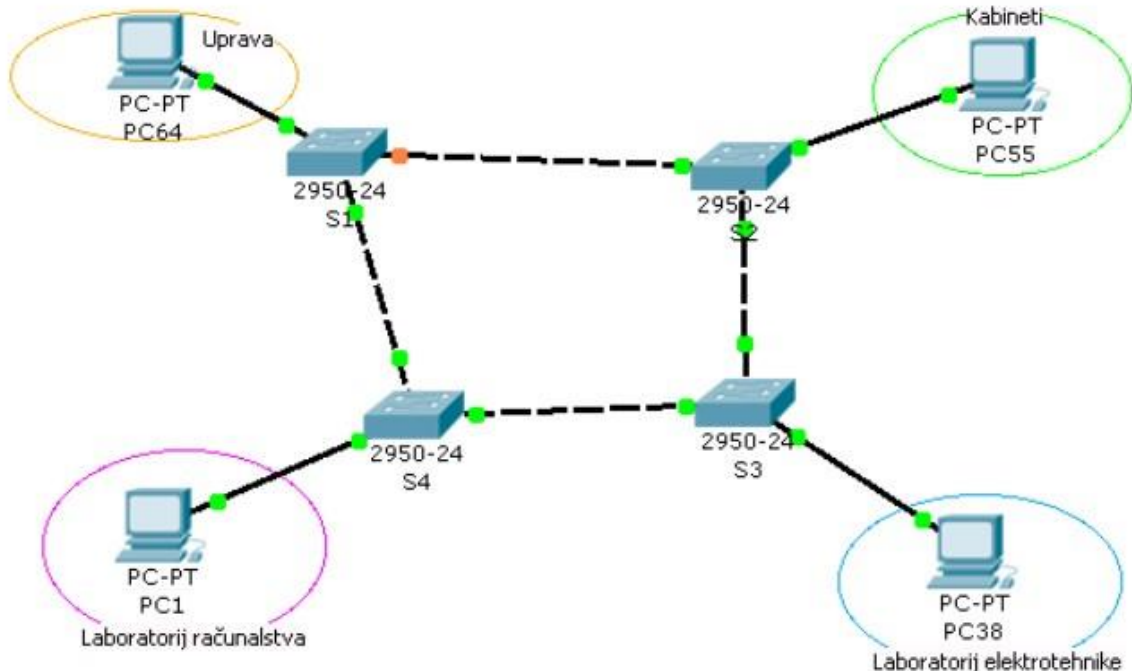
IZVOĐENJE VJEŽBE

Situacija: Za potrebe tehničke škole koristi se 68 računala koja su raspoređena u četiri organizacijske cjeline. Postojeća mreža ne zadovoljava u pogledu efikasnosti pa će je biti potrebno reorganizirati.

1. U tehničkoj školi je u uporabi 68 računala, prema slijedećem rasporedu:

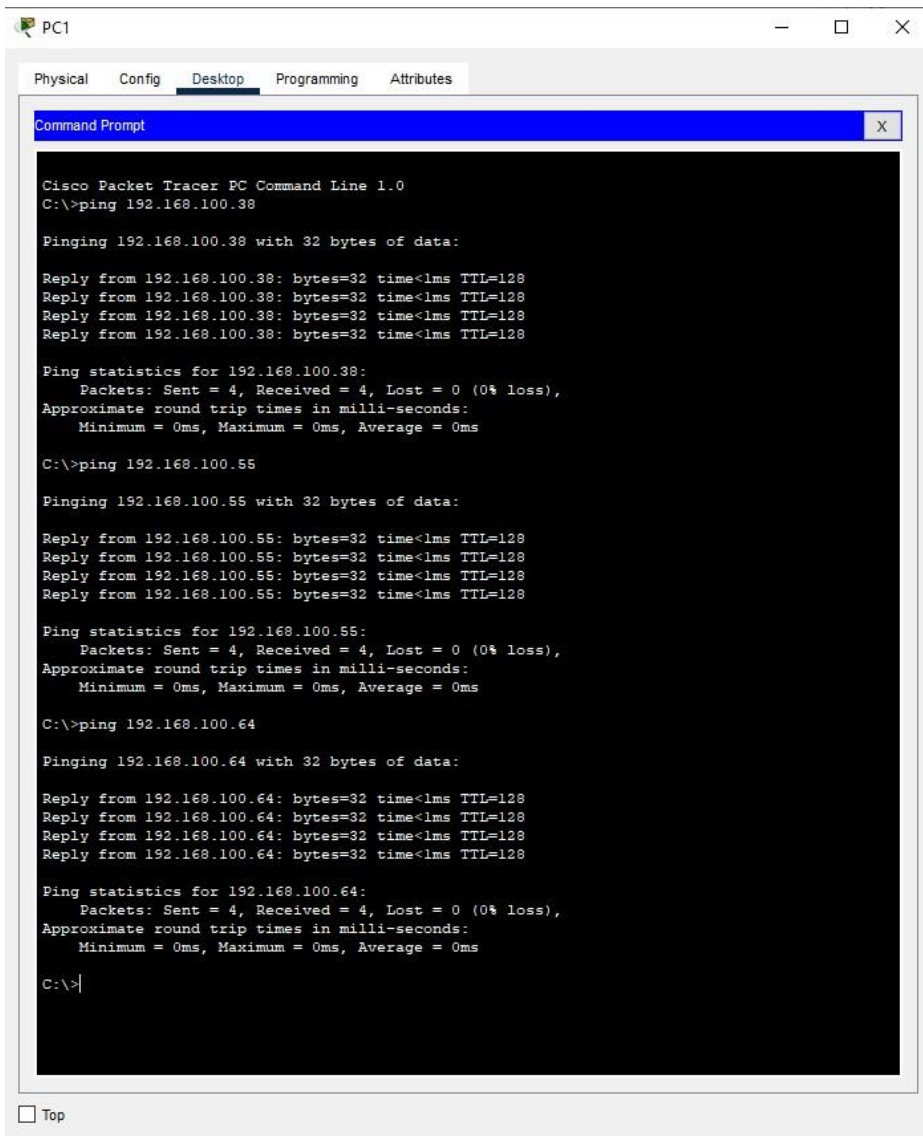
Organizacijska jedinica	Broj računala	Naziv računala
Laboratorij računarstva	37	PC1 – PC37
Laboratorij elektrotehnike	17	PC38 – PC54
Kabineti	9	PC55 – PC63
Uprava	5	PC64 – PC68

Školi je dodijeljen adresni blok 192.168.100.0/24. Svaka organizacijska jedinica u svojem prostoru ima prespojnik. Prespojnici su u zadanoj (default) konfiguraciji i međusobno su povezani Ethernet kablom.



Formiraj LAN prema prikazanoj topologiji i provjeri veze između pojedinih dijelova mreže pinganjem.

Zabilježi rezultat.



```
PC1
Physical Config Desktop Programming Attributes
Command Prompt
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.100.38

Pinging 192.168.100.38 with 32 bytes of data:

Reply from 192.168.100.38: bytes=32 time<lms TTL=128
Reply from 192.168.100.38: bytes=32 time<lms TTL=128
Reply from 192.168.100.38: bytes=32 time<lms TTL=128
Reply from 192.168.100.38: bytes=32 time<lms TTL=128

Ping statistics for 192.168.100.38:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>ping 192.168.100.55

Pinging 192.168.100.55 with 32 bytes of data:

Reply from 192.168.100.55: bytes=32 time<lms TTL=128
Reply from 192.168.100.55: bytes=32 time<lms TTL=128
Reply from 192.168.100.55: bytes=32 time<lms TTL=128
Reply from 192.168.100.55: bytes=32 time<lms TTL=128

Ping statistics for 192.168.100.55:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>ping 192.168.100.64

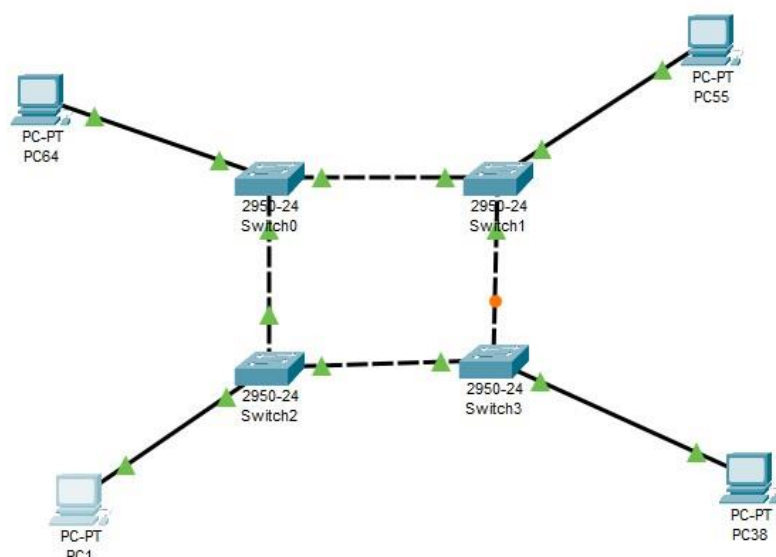
Pinging 192.168.100.64 with 32 bytes of data:

Reply from 192.168.100.64: bytes=32 time<lms TTL=128
Reply from 192.168.100.64: bytes=32 time<lms TTL=128
Reply from 192.168.100.64: bytes=32 time<lms TTL=128
Reply from 192.168.100.64: bytes=32 time<lms TTL=128

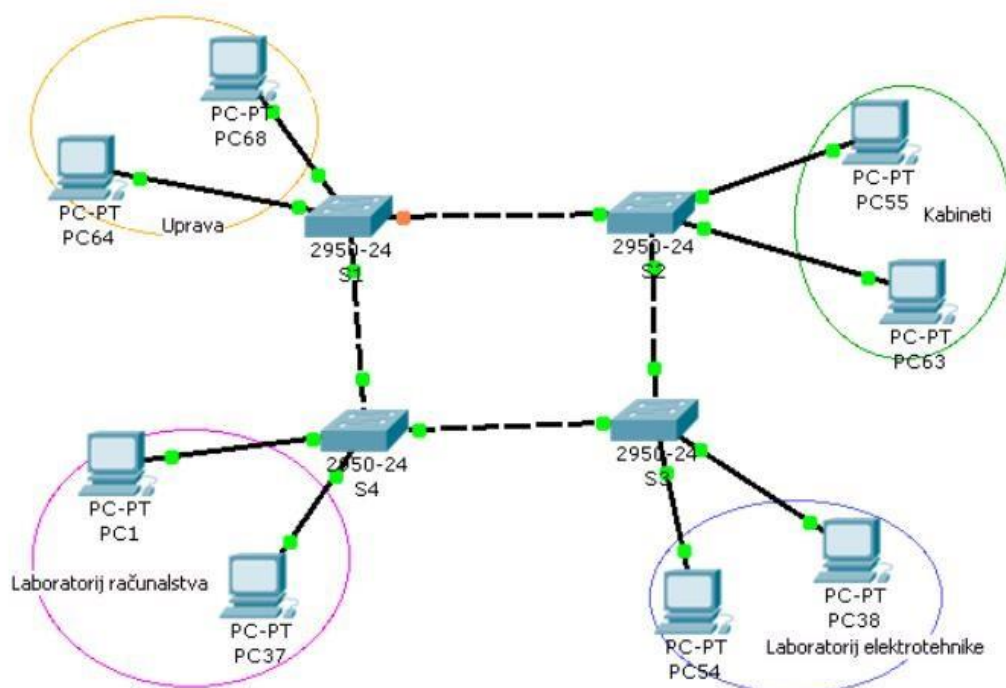
Ping statistics for 192.168.100.64:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>|
```

Top



2. Uprava škole odlučila je da se izvrši subnetiranje postojeće mreže uporabom VLSM, kako bi svaka organizacijska cjelina imala neovisnu mrežu. Tehničari imaju zadatak da nakon subnetiranja prikažu i dokumentiraju novu adresnu shemu, te uporabom Packet Tracera provjere da li su mreže neovisne.



Napomena: U topologiji prikazati po dva računala iz svakog subneta, prvo i zadnje.

Subnet Name	Needed Size	Allocated Size	Address	Mask	Dec Mask	Assignable Range	Broadcast
A	37	62	192.168.100.0	/26	255.255.255.192	192.168.100.1 - 192.168.100.62	192.168.100.63
B	17	30	192.168.100.64	/27	255.255.255.224	192.168.100.65 - 192.168.100.94	192.168.100.95
C	9	14	192.168.100.96	/28	255.255.255.240	192.168.100.97 - 192.168.100.110	192.168.100.111
D	5	6	192.168.100.112	/29	255.255.255.248	192.168.100.113 - 192.168.100.118	192.168.100.119