LV03: Subnetiranje pomoću VLSM tehnike

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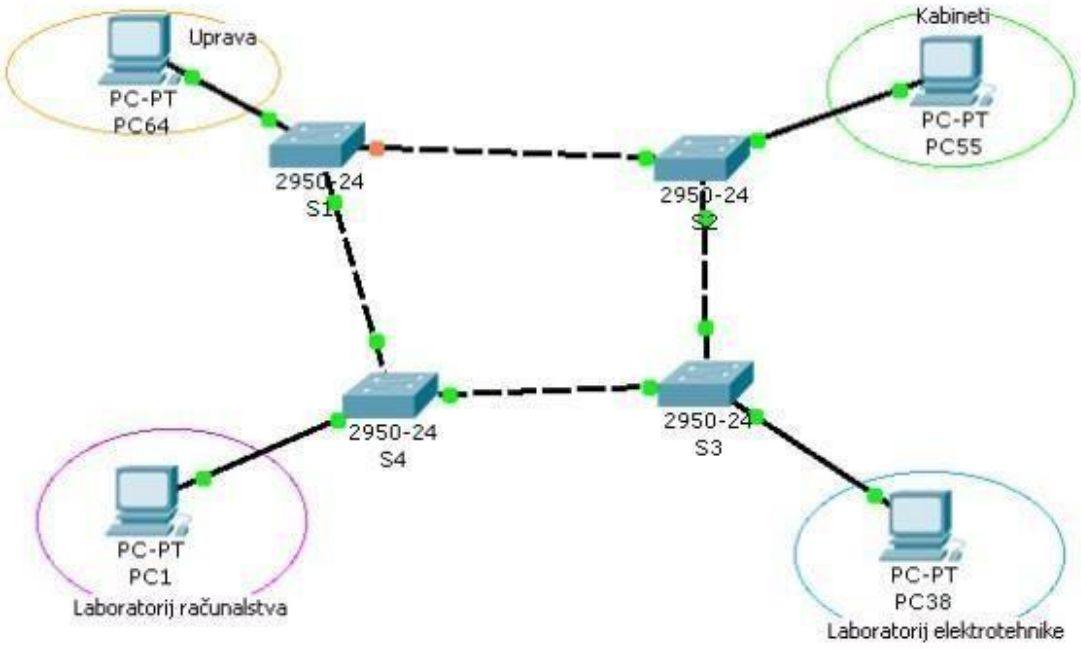
Izvođenje vježbe:

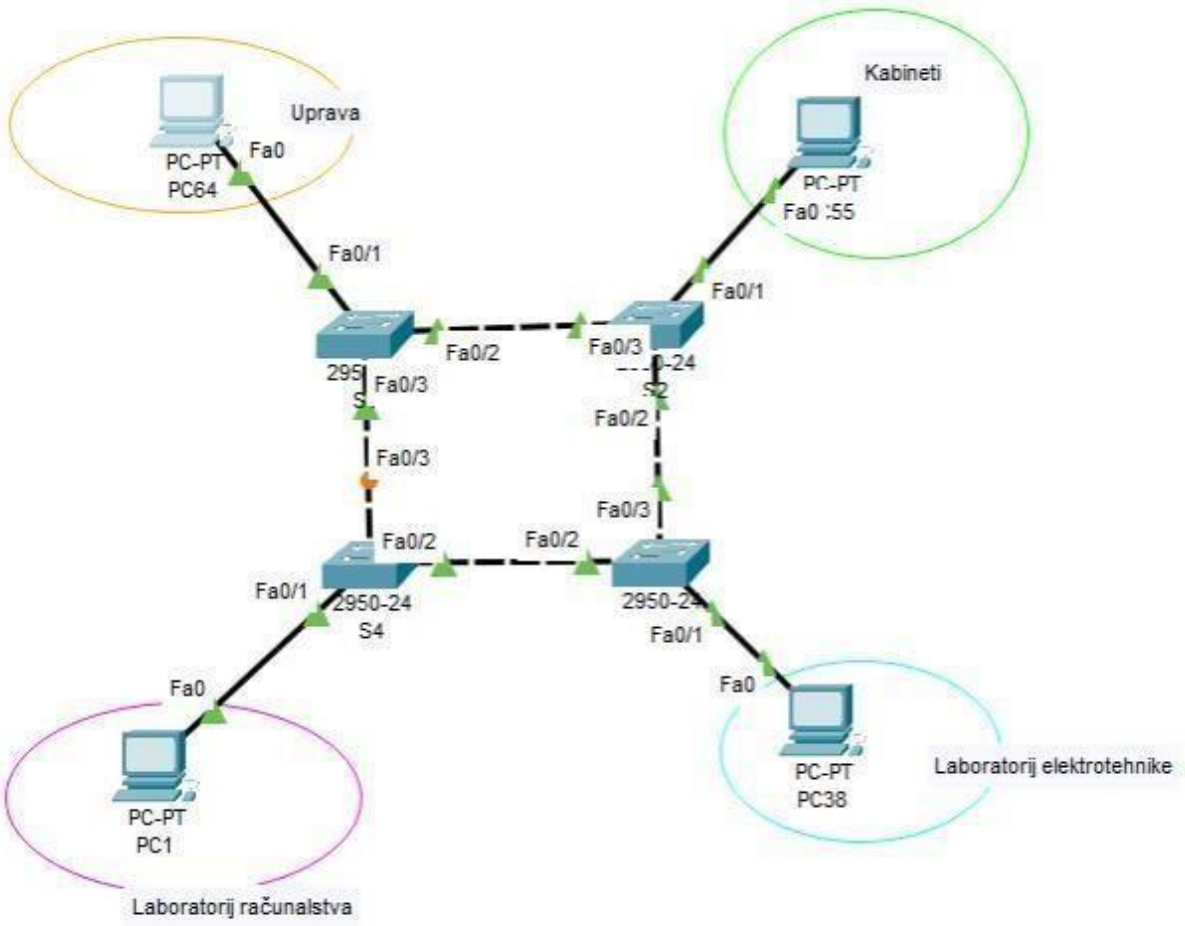
1) U tehničkoj školi je u uporabi 68 računala, prema slijedećem rasporedu:

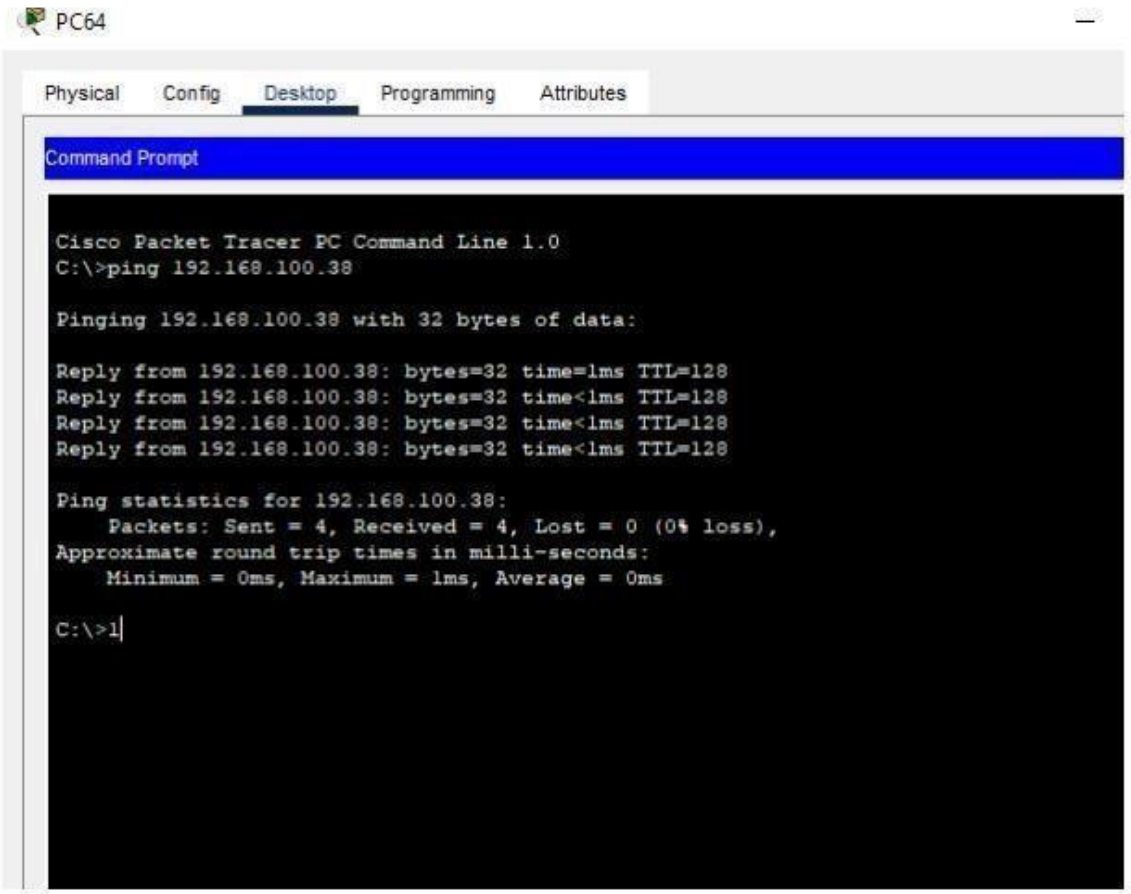
Organizacijska jedinica	**Broj računala**	**Naziv računala**
Laboratorij računarstva	37	PC1 – PC37
Laboratorij elektrotehnike	17	PC38 – PC54
Kabineti	9	PC55 – PC63
Uprava	5	PC64 – PC68

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 kabelom.

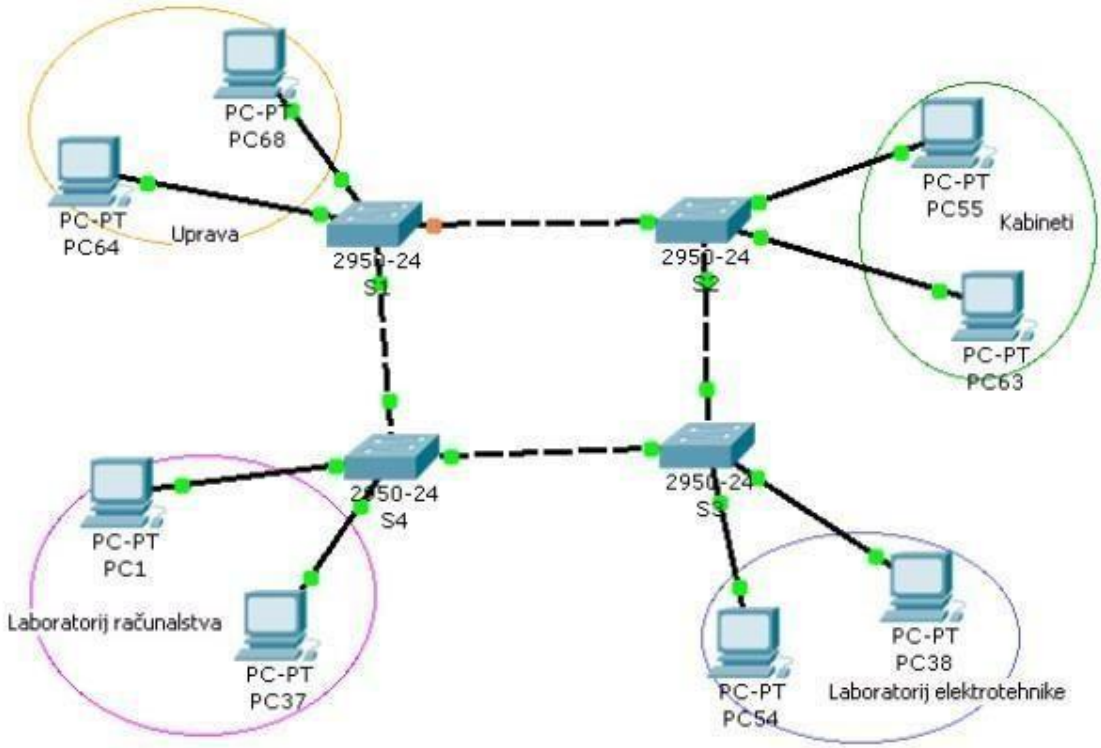


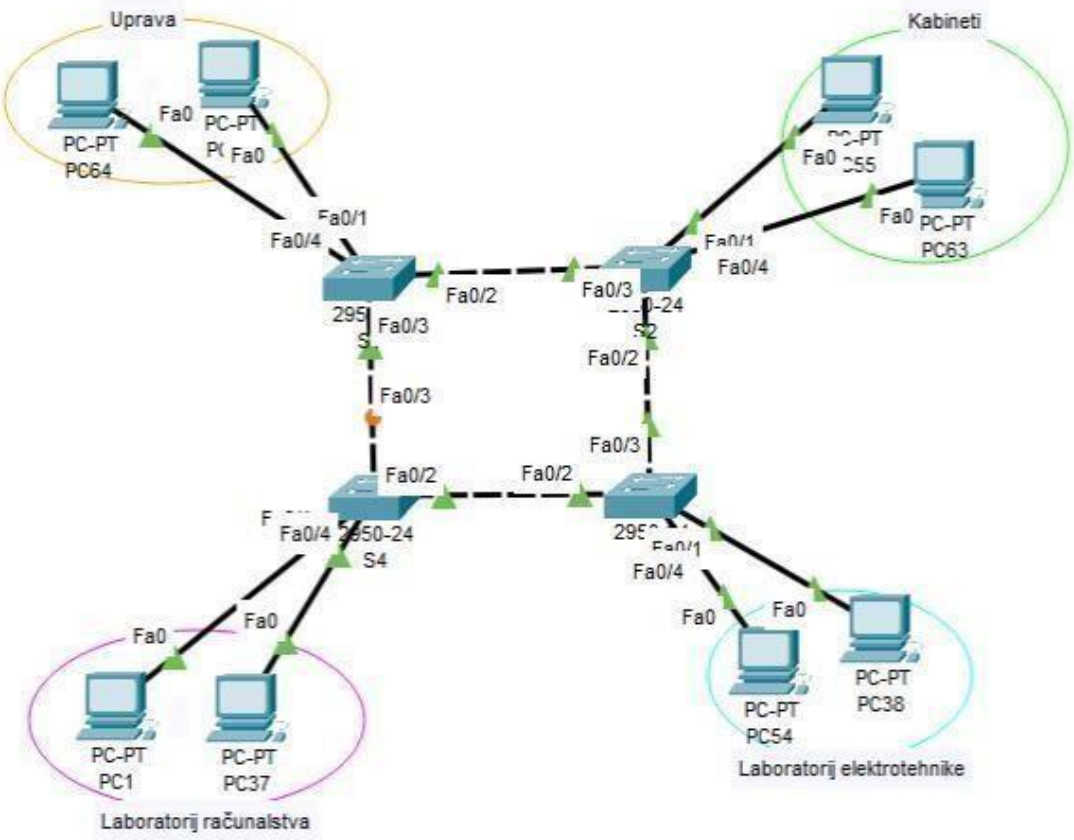
Formiraj LAN prema prikazanoj topologiji i provjeri veze između pojedinih dijelova mreže pinganjem. Zabilježi rezultat.

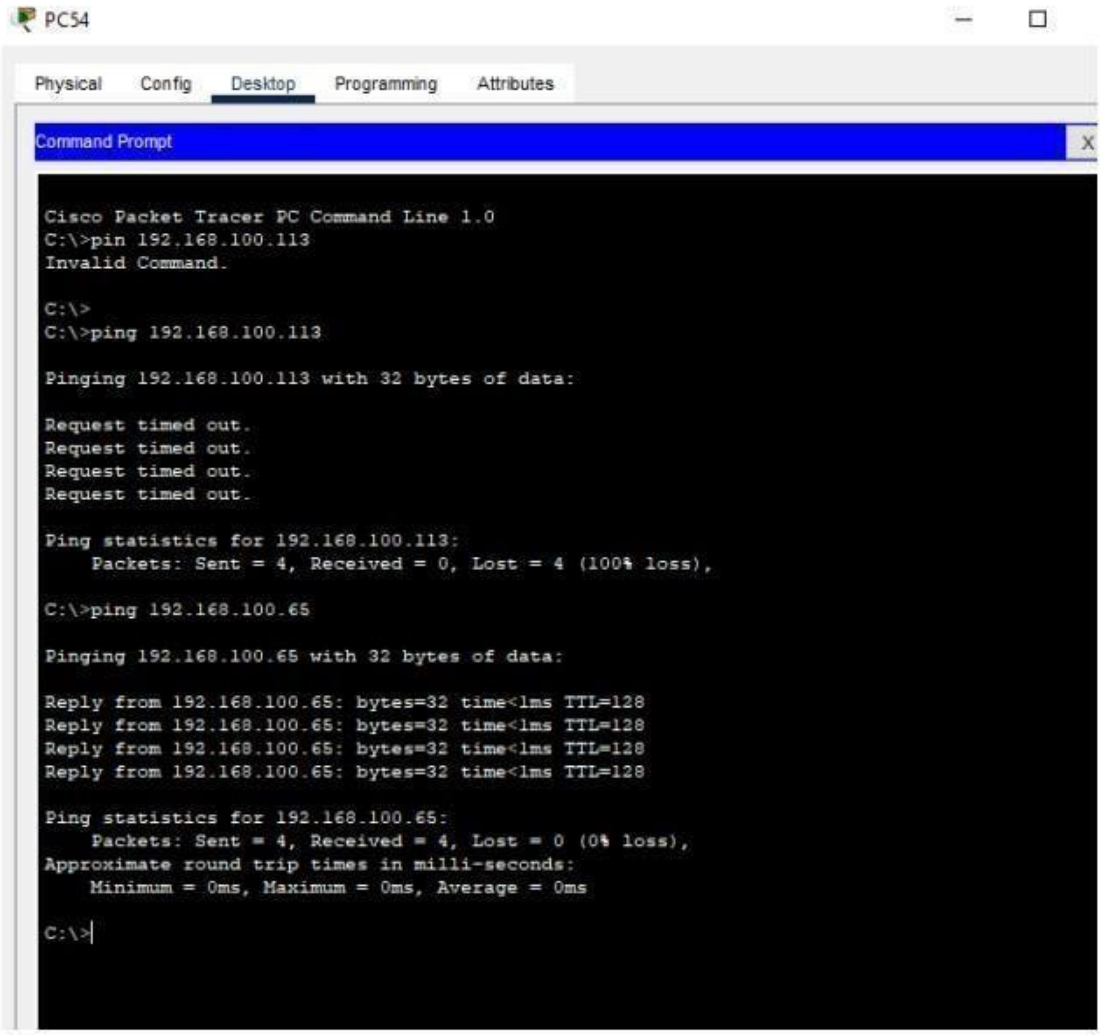

Uprava
PC-PT
PC64
Fa0
Fa0/1
Kabineti
PC-PT
Fa0 :55
Fa0/1
Fa0/2
Fa0/3
Fa0/3
S2
Fa0/2
Fa0/3
Fa0/3
Fa0/2
Fa0/2
Fa0/1
2950-24
S4
Fa0/1
Fa0
Fa0
PC-PT
PC1
PC-PT
PC38
Laboratorij elektrotehnike
Laboratorij računalstva



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.


PC-PT
PC68
PC-PT
PC64
Uprava
2950-24
S1
2950-24
S2
PC-PT
PC55
Kabineti
PC-PT
PC63
2950-24
S4
2950-24
S3
PC-PT
PC1
Laboratorij računalstva
PC-PT
PC37
PC-PT
PC54
PC-PT
PC38
Laboratorij elektrotehnike


Uprava
PC-PT
PC64
Fa0
PC-PT
Fa0
Fa0/1
Fa0/4
Fa0/2
Fa0/3
Fa0/3
Fa0/2
Kabineti
Fa0
Fa0
PC-PT
PC63
Fa0/4
Fa0/3
Fa0/2
Fa0/2
Fa0/3
Fa0/4
Fa0/4
S4
Fa0
Fa0
Fa0
Fa0
PC-PT
PC1
PC-PT
PC37
PC-PT
PC54
PC-PT
PC38
Laboratorij računalstva
Laboratorij elektrotehnike



Subnetting Successful

Major Network: 192.168.100.0/24
Available IP addresses in major network: 254
Number of IP addresses needed: 68
Available IP addresses in allocated subnets: 112
About 47% of available major network address space is used
About 61% of subnetted network address space is used

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