

Introduction to computer networks

Lab 10 - "IPv4 subnetting-National parks and Nature parks of Croatia"

Your task is to create an address scheme for all national parks and nature parks in Croatia based on the request of the user (Republic of Croatia). All devices in national parks and nature parks will use IP addresses that you specify. The requirements are listed in the table below. After you calculate the address scheme, you will configure the IP addresses on the computers and the routers in the Packet Tracer file that accompanies this exercise (PT file: "Lab 10-IPv4 subnetiranje"). Use the A class of private IP addresses to create the address scheme.

After you correctly configure the IP addresses on the computers and on the Fa0/1 interfaces of all routers in Packet Tracer, all computers should be able to communicate with each other!

**The reason why it is possible for all computers to communicate with each other is the pre-configured OSPF protocol for exchanging network information on all routers in the network.*

National parks are marked in blue, and nature parks are marked in green.

National park/Nature park	Requirement for IP addresses	Network address	First useful (Gateway)	Last useful (PC)	Broadcast address	Subnet Mask decimal
Biokovo	50					
Brijuni	800					
Kopački rit	80					
Kornati	180					
Krka	500					
Lastovsko otočje	5					
Lonjsko polje	60					
Medvednica	40					
Mljet	150					
Paklenica	300					
Papuk	5					
Plitvice	200					
Risnjak	100					
Sjeverni Velebit	120					
Telašćica	30					
Učka	70					
Velebit	90					
Vransko jezero	20					
Žumberak-Samoborsko gorje	10					

SOLUTIONS (zoom in)

National park/Nature park	Requirement for IP addresses	Network address	Subnet Mask decimal	Subnet mask prefix form	First usefull address (Gateway)	Last useful address (PC)	Broadcast address
BRIJUNI	800	10.0.0.0	255.255.252.0	22	10.0.0.1	10.0.3.254	10.0.3.255
KRKA	500	10.0.4.0	255.255.254.0	23	10.0.4.1	10.0.5.254	10.0.5.255
PAKLENICA	300	10.0.6.0	255.255.255.0	23	10.0.6.1	10.0.7.254	10.0.7.255
PLITVICE	200	10.0.8.0	255.255.255.0	24	10.0.8.1	10.0.8.254	10.0.8.255
KORNATI	180	10.0.9.0	255.255.255.0	24	10.0.9.1	10.0.9.254	10.0.9.255
MLJET	150	10.0.10.0	255.255.255.0	24	10.0.10.1	10.0.10.254	10.0.10.255
SJEVERNI VELEBIT	120	10.0.11.0	255.255.255.128	25	10.0.11.1	10.0.11.126	10.0.11.127
RISNJAK	100	10.0.11.128	255.255.255.128	25	10.0.11.129	10.0.11.254	10.0.11.255
VELEBIT	90	10.0.12.0	255.255.255.128	25	10.0.12.1	10.0.12.126	10.0.12.127
KOPAČKI RIT	80	10.0.12.128	255.255.255.128	25	10.0.12.129	10.0.12.254	10.0.12.255
UČKA	70	10.0.13.0	255.255.255.128	25	10.0.13.1	10.0.13.126	10.0.13.127
LOKJSKO POLJE	60	10.0.13.128	255.255.255.192	26	10.0.13.129	10.0.13.190	10.0.13.191
BIOKOVO	50	10.0.13.192	255.255.255.192	26	10.0.13.193	10.0.13.254	10.0.13.255
MEDVEDNICA	40	10.0.14.0	255.255.255.192	26	10.0.14.1	10.0.14.62	10.0.14.63
TELAŠĆICA	30	10.0.14.64	255.255.255.224	27	10.0.14.65	10.0.14.94	10.0.14.95
VRANSKO JEZERO	20	10.0.14.96	255.255.255.224	27	10.0.14.97	10.0.14.126	10.0.14.127
ŽUMBERAK-SAMOBORSKO GORJE	10	10.0.14.128	255.255.255.240	28	10.0.14.129	10.0.14.142	10.0.14.143
PAPUK	5	10.0.14.144	255.255.255.248	29	10.0.14.145	10.0.14.150	10.0.14.151
LASTOVSKO OTOČJE	5	10.0.14.152	255.255.255.248	29	10.0.14.153	10.0.14.158	10.0.14.159