Lab Sheet – 10

Title: IPv6 and IPv6 Subnetting

Aim:

IPv6 Subnetting Scheme
Configure IPv6 Subnetting

Task:

- Subnet the IPv6 address
- Assign IPv6 address to Network devices and verify connectivity.

Use "NST21022 Labsheet 10.pka" file

Activities

Exercise 01: Subnet the 2001:db8:1::/48 network into the appropriate subnets.

1. Discuss about link local address.
2. Based on the topology, how many subnets were needed?

Exercise 02: Fill the subnet table.

Subnet Number	Network Address	First Usable Host Address
A		
B		
C		
D		
E		
F		
G		
H		

Exercise 03: Configure IPv6 address according to following criteria.

1. Fill the addressing table using following guidelines:
    a. Assign the first usable IPv6 addresses in each subnet to R1, R2, R3 for the LAN links and R1's WAN links.
    b. Assign the second usable IPv6 addresses in subnet for the WAN links R2 and R3.
    c. Assign the second usable IPv6 address to the PCs in each subnet

Addressing Table

Devices	Interfaces	IPv6 Addresses/Prefix	Default Gateway
R1	G0/0/0		
	G0/0/1		
	S0/1/0		
	S0/1/1		
R2	G0/0/0		
	G0/0/1		
	S0/1/0		
R3	G0/0/0		
	G0/0/1		
	S0/1/1		
PC-1	NIC		
PC-2	NIC		
PC-3	NIC		
PC-4	NIC		
PC-5	NIC		
PC-6	NIC		

2. Assign IPv6 addresses to network devices and verify connectivity