**IP address Calculation**

We take 2 IP addresses from 2 different subnets.

Sub network is 192.168.25.32/27 Sub network is 192.168.25.96/27

First valid IP is 192.168.25.33/27 First valid IP is 192.168.25.97/27

Last valid IP is 192.168.25.62/27 Last valid IP is 192.168.25.126/27

Broadcast IP is 192.168.25.63/27 Broadcast IP is 192.168.25.127/27

IP 1🡪192.168.25.50 IP 2🡪192.168.25.100

Subnet Mask🡪255.255.255.224 Subnet Mask🡪255.255.255.224

Note:

If Network 1 and Network 2 values are similar, then we don’t need a router for communication else we need a router for communication between them.

Now, we calculate how to find subnetworks,

IP 1🡪192.168.25.50🡪convert to Binary form🡪11000000.10101000.00011001.00110010

SM1🡪255.255.255.224🡪 11111111.11111111.11111111.11100000

11000000.10101000.00011001.00100000

This, Calculation based on AND table. And we get 1st network 192.168.25.32/27.

IP 2🡪192.168.25.100🡪convert to Binary form🡪11000000.10101000.00011001.01100100

SM2🡪255.255.255.224🡪 11111111.11111111.11111111.11100000

11000000.10101000.00011001.01100000

We get 2nd network 192.168.25.96/27

Actually, these Networks also called as subnet IP.

In Real time, we call N/W as subnetworks and subnetworks as N/W as an architect. We using default subnet mask/CIDR, then it is the Network ID else it is the subnet ID.

**Basic Linux Commands**

**ls🡪**List the files in the current directoryls - List the files in the current directory

**mkdir** 🡪 Create a directory

**Pwd** 🡪 Present working directory

**cat** 🡪 Print the files

**Grep** 🡪 ideal for searching file patterns

**rm** 🡪 removing files from directory

**mv** 🡪 Moving files from one to one

**clear** 🡪 clear the commands

**chmod🡪**change mode

R - Read

W - Write

U - user

**touch** 🡪create a new file(empty)

**vi**🡪create and edit that file also

**ls -a** 🡪 show all files in directory

**cd** 🡪 change the directory

**ls -h** 🡪 show the file while showing their size as well

**cp** 🡪 copy the command

**top**🡪view the CPU utilization

**lsblk🡪** view the blocks with details

**cd ..-->**back to thefolder