

Network Servers and Infrastructure

Assignment 4

Q1: Suppose that a network has an address 195.185.125.0. This network should be divided into 8 subnets.

Extract the following task for each of the following subnet

1. Subnet ID
2. Broadcast ID for each subnet
3. Range of IP addresses for each subnet

After that determines in which subnet this IP address 195.185.125.180 located.

Ans:

$$2^3 = 8$$

| |
|--------------------------------------|
| 000 00000 000 11111 |
| 001 00000 001 11111 |
| 010 00000 010 11111 |
| 011 00000 011 11111 |
| 100 00000 100 11111 |
| 101 00000 101 11111 |
| 110 00000 110 11111 |

| |
|------------------------------------|
| 11100000 11111111 |
|------------------------------------|

| Subnet | Subnet ID | Broadcast ID | IP range |
|--------|-----------------|-----------------|-----------------------------------|
| 1 | 195.185.125.0 | 195.185.125.31 | 195.185.125.1 -195.185.125.30 |
| 2 | 195.185.125.32 | 195.185.125.63 | 195.185.125.33 - 195.185.125.62 |
| 3 | 195.185.125.64 | 195.185.125.95 | 195.185.125.65 - 195.185.125.94 |
| 4 | 195.185.125.96 | 195.185.125.127 | 195.185.125.97 - 195.185.125.126 |
| 5 | 195.185.125.128 | 195.185.125.159 | 195.185.125.129 - 195.185.125.158 |
| 6 | 195.185.125.160 | 195.185.125.191 | 195.185.125.161 - 195.185.125.190 |
| 7 | 195.185.125.192 | 195.185.125.223 | 195.185.125.193 - 195.185.125.222 |
| 8 | 195.185.125.224 | 195.185.125.255 | 195.185.125.225 - 195.185.125.254 |

**195.185.125.180 is a class c and located at
subnet 6**