

CYSE-270- Linux System For Cybersecurity

Assignment –10

Networking Basics - Subnetting (100 points)

Understanding subnetting takes time and practice. Using the methods covered during the class, fill in the following tables for **Network, broadcast, first IP, Last IP** and **Max. Hosts in the network**.

The column for IP address should be in Decimal format for each, except number of hosts. (Refer to the examples in the slide for week 10-Networking Basics)

Task-A: (50 Points)

Category	IP Address	Binary Format
Address	192.168.100.4	11000000 . 10101000 . 01100100 . 00000100
Netmask	28	11111111 . 11111111 . 11111111 . 11110000
Network address	192.168.100.0	11000000 . 10101000 . 01100100 . 00000000
Broadcast address	192.168.100.15	11000000 . 10101000 . 01100100 . 00001111
First IP	192.168.100.1	11000000 . 10101000 . 01100100 . 00000001
Last IP	192.168.100.14	11000000 . 10101000 . 01100100 . 00001110
Maximum host in the network	14	

Task-B: (50 points)

Category	IP Address	Binary Format
Address	170.1.0.0	10101010 . 00000000 . 00000000 . 00000000
Netmask	26	11111111 . 11111111 . 11111111 . 11000000
Network address	170.1.0.0	10101010 . 00000000 . 00000000 . 00000000
Broadcast address	170.1.0.63	10101010 . 00000000 . 00000000 . 00111111
First IP	170.1.0.1	10101010 . 00000000 . 00000000 . 00000001
Last IP	170.1.0.62	10101010 . 00000000 . 00000000 . 00111110
Maximum host in the network	62	

Extra Credit (10 points)

Write a bash script to print out 0~10 in shell scripts by using for loop and while loop, respectively? Please submit the screenshot for the script and its output, both.