# **Lab 10**

## Task 1;

**Research about Topics for Project and submit a deliverables document having:**

* **Organization Name**
* **Number of Floors of the Organization**
* **Number of PC / Server in the system**

Engineering and Manufacturing Building:

Engineering and Design: 16

Hosts Network Address: 192.168.0.128/27

Broadcast Address: 192.168.0.159/27

First Usable Address:192.168.0.129/27

Last Usable Address: 192.168.0.158/27

Total Number of Usable Host Addresses: 30

Manufacturing: 22

Hosts Network Address: 192.168.0.64/27

Broadcast Address: 192.168.0.95/27

First Usable Address: 192.168.0.65/27

Last Usable Address: 192.168.0.94/27

Total Number of Usable Host Addresses: 30

Quality Control: 17

Hosts Network Address: 192.168.0.96/27

Broadcast Address: 192.168.0.127/27

First Usable Address:192.168.0.97/27

Last Usable Address: 192.168.0.126/27

Total Number of Usable Host Addresses: 3

Human Resources Building:

Scheduling: 5

Hosts Network Address: 192.168.0.240/29

Broadcast Address: 192.168.0.247/29

First Usable Address: 192.168.0.241/29

Last Usable Address: 192.168.0.246/29

Total Number of Usable Host Addresses: 6

Employee Relations: 10

Hosts Network Address: 192.168.0.208/28

Broadcast Address: 192.168.0.223/28

First Usable Address:192.168.0.209/28

Last Usable Address: 192.168.0.222/28

Total Number of Usable Host Addresses: 16

Payroll: 28 Hosts Network Address: 192.168.0.0/27

Broadcast Address: 192.168.0.31/27

First Usable Address:192.168.0.1/27

Last Usable Address: 192.168.0.30/27

Total Number of Usable Host Addresses: 30

Benefits: 7

Hosts Network Address: 192.168.0.224/28

Broadcast Address: 192.168.0.239/28

First Usable Address: 192.168.0.225/28

Last Usable Address: 192.168.0.238/28

Total Number of Usable Host Addresses: 16

**Connections**

● In general, copper straight-through cables were used to connect devices of different types and copper crossover-cables were used to connect devices of the same type.

● Routers were connected to routers using fiber-optic cable, as the routers were upgraded with HWIC-1GE-SFP and GLC-LH-SMD ports.

VLANs in Engineering and Manufacturing Building

■ ACL 1 - EngineeringAndDesign denies traffic from Inventory and Shipping

■ ACL 2 - Manufacturing denies traffic from Shipping

■ ACL 3 - QualityControl denies traffic from OrderIntake and Shipping

○ VLANs in Order Processing Building

■ ACL 1 - OrderIntake denies traffic from QualityControl

■ ACL 2 - Inventory denies traffic from EngineeringAndDesign

■ ACL 3 - Shipping Denies traffic from EngineeringAndDesign, Manufacturing, QualityControl

○ VLANs in Human Resources Building

■ ACL 1 - Scheduling, Payroll, and Benefits, deny traffic from all networks that are not within the human resources building

■ EmployeeRelations does not implement an ACL, it serves as a point of communication for all employees to reach human resources.

■ Note, all human resources VLANs are able to send traffic to all VLANs, but may not get a response back