**CAPSTONE PROJECT DOCUMENTATION**

Infrastructure

1 Router

2. Redundant L2 switches

3. 9 L2 switches

4. DNS Server

5. DHCP Server

6. Web Server

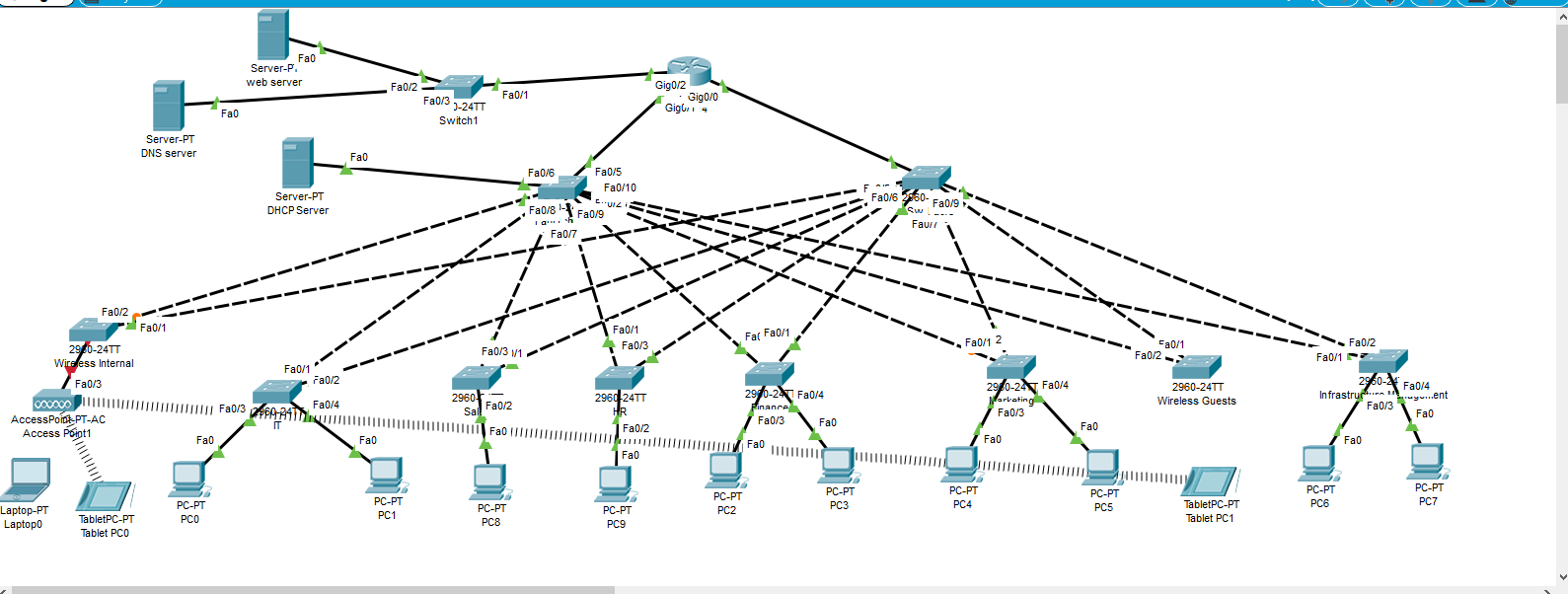


Fig 1.1 Network Image

**Addressing Table**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Device | Interface | Ip Address | Subnet Mask | Default Gateway |
| PC0 | Fa0/3 | DHCP |  | 172.16.0.1 |
| PC1 | Fa0/4 | DHCP |  | 172.16.0.1 |
| PC2 | Fa0/3 | DHCP |  | 172.16.48.1 |
| PC3 | Fa0/4 | DHCP |  | 172.16.48.1 |
| PC4 | Fa0/3 | DHCP |  | 172.16.64.1 |
| PC5 | Fa0/4 | DHCP |  | 172.16.64.1 |
| PC6 | Fa0/3 | 172.16.112.3 | 255.255.240.0 | 172.12.112.1 |
| PC7 | Fa0/4 | 172.16.112.4 | 255.255.240.0 | 172.12.112.1 |
| Wireless Tablet | Wireless0 | DHCP |  |  |
| Web server | Fa0/2 | 172.16.128.5 | 255.255.240.0 | 172.16.128.1 |
| DNS server | Fa0/3 |  |  |  |
| Server DHCP | Fa0/6 | 172.16.128.2 | 255.255.240.0 | 172.16.128.1 |

**SUBNETS**

Address 172.16.0.0 Subnet Mask 255.255.240

Subnets = 2^4= 16

Used 9 subnets

9 VLANS

VLAN 10 address space 172.16.0.0 – 172.16.15.255 (IT department)

VLAN 11 address space 172.16.16.0 –172.16.31.255 (Sales Department)

VLAN 12 address space 172.16.32.0 – 172.16.47.255 (HR)

VLAN 13 address space 172.16.48.0 – 172.16.63.255 (Finance)

VLAN 14 address space 172.16.64.0 – 172.16.79.255 (Marketing)

VLAN 15 address space 172.16.80.0 – 172.16.95.255 (Internal Wireless)

VLAN 16 address space 172.16.96.0 –172.16.111.255 (Guest Wireless)

VLAN 17 address space 172.16.112.0 – 172.16.127.255 ( Infrastructure management)

VLAN 18 address space 172.16.128.0 --172.16. 143.255 (Servers)

Router Password= tricksys