**Boosting of the Company Network Design**

**IP Addressing**

Base Network: 172.16.1.0

**First Floor**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Department** | **Network Address** | **Subnet Mask** | **Host Address Range** | **Broadcast Address** |
| Sales | 172.16.1.0 | 255.255.255.128/25 | 172.16.1.1 to  172.16.1.126 | 172.16.1.127 |
| HR | 172.16.1.128 | 255.255.255.128/25 | 172.16.1.129 to  172.16.1.254 | 172.16.1.255 |

**Second Floor**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Department** | **Network Address** | **Subnet Mask** | **Host Address Range** | **Broadcast Address** |
| Finance | 172.16.2.0 | 255.255.255.128/25 | 172.16.1.1 to  172.16.1.126 | 172.16.1.127 |
| Admin | 172.16.2.128 | 255.255.255.128/25 | 172.16.1.129 to  172.16.1.254 | 172.16.1.255 |

**Third Floor**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Department** | **Network Address** | **Subnet Mask** | **Host Address Range** | **Broadcast Address** |
| ICT | 172.16.3.0 | 255.255.255.128/25 | 172.16.3.1 to  172.16.3.126 | 172.16.3.127 |
| Server Room | 172.16.3.128 | 255.255.255.240/28 | 172.16.3.129 to  172.16.1.142 | 172.16.3.143 |

**Between the Routers and Layer-3 Switches**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No.** | **Network Address** | **Subnet Mask** | **Host Address Range** | **Broadcast Address** |
| R1-MLSW1 | 172.16.3.144 | 255.255.255.252 | 172.16.3.145 to  172.16.3.146 | 172.16.3.147 |
| R1-MLSW2 | 172.16.3.148 | 255.255.255.252 | 172.16.3.149 to  172.16.3.150 | 172.16.3.151 |
| R2-MLSW1 | 172.16.3.152 | 255.255.255.252 | 172.16.3.153 to  172.16.3.154 | 172.16.3.155 |
| R2-MLSW2 | 172.16.3.156 | 255.255.255.252 | 172.16.3.157 to  172.16.3.158 | 172.16.3.159 |

**Between the routers and the ISPs**

Public IP addresses 195.136.17.0/30, 195.136.17.4/30,195.136.17.8/30 and 195.136.17.12/30