

## Subnetting

### *First Floor*

Subnet Name	Subnet Address	First Usable Host	Last Usable Host	Broadcast Address	Subnet Mask
<b>Production</b>	192.168.1.0	192.168.1.1	192.168.1.126	192.168.1.127	255.255.255.128/25
<b>Customer Service</b>	192.168.1.128	192.168.1.129	192.168.1.254	192.168.1.255	

### *Second Floor*

Subnet Name	Subnet Address	First Usable Host	Last Usable Host	Broadcast Address	Subnet Mask
<b>Sales</b>	192.168.2.0	192.168.2.1	192.168.2.126	192.168.2.127	255.255.255.128/25
<b>Marketing</b>	192.168.2.128	192.168.2.129	192.168.2.254	192.168.2.255	

### *Third Floor*

Subnet Name	Subnet Address	First Usable Host	Last Usable Host	Broadcast Address	Subnet Mask
<b>Acc/Finance</b>	192.168.3.0	192.168.3.1	192.168.3.126	192.168.3.127	255.255.255.128/25
<b>HR</b>	192.168.3.128	192.168.3.129	192.168.3.254	192.168.3.255	

### *Fourth Floor*

Subnet Name	Subnet Address	First Usable Host	Last Usable Host	Broadcast Address	Subnet Mask
<b>IT</b>	192.168.4.0	192.168.4.1	192.168.4.126	192.168.4.127	255.255.255.128/25
<b>Server Room</b>	192.168.4.128	192.168.4.129	192.168.4.142	192.168.4.143	255.255.255.240/28

### *Between Routers and Multilayer Switches*

Routers' and Multilayer Switches' Names	Subnet Address	First Usable Host	Last Usable Host	Broadcast Address	Subnet Mask
<b>Core-R1 to Multilayer Switch1</b>	192.168.4.144	192.168.4.145	192.168.4.146	192.168.4.147	255.255.255.252/30
<b>Core-R1 to Multilayer Switch2</b>	192.168.4.148	192.168.4.149	192.168.4.150	192.168.4.151	
<b>Core-R2 to Multilayer Switch1</b>	192.168.4.152	192.168.4.153	192.168.4.154	192.168.4.155	
<b>Core-R2 to Multilayer Switch2</b>	192.168.4.156	192.168.4.157	192.168.4.158	192.168.4.159	

***Four Floors (Each Two Departments)***

Subnet Name	Subnet Address	First Usable Host	Last Usable Host	Broadcast Address	Subnet Mask
<b>Production</b>	192.168.1.0	192.168.1.1	192.168.1.126	192.168.1.127	255.255.255.128/25
<b>Customer Service</b>	192.168.1.128	192.168.1.129	192.168.1.254	192.168.1.255	
<b>Sales</b>	192.168.2.0	192.168.2.1	192.168.2.126	192.168.2.127	
<b>Marketing</b>	192.168.2.128	192.168.2.129	192.168.2.254	192.168.2.255	
<b>Acc/Finance</b>	192.168.3.0	192.168.3.1	192.168.3.126	192.168.3.127	
<b>HR</b>	192.168.3.128	192.168.3.129	192.168.3.254	192.168.3.255	
<b>IT</b>	192.168.4.0	192.168.4.1	192.168.4.126	192.168.4.127	255.255.255.240/28
<b>Server Room</b>	192.168.4.128	192.168.4.129	192.168.4.142	192.168.4.143	

Router and Multilayer Switch Names	Subnet Address	First Usable Host	Last Usable Host	Broadcast Address	Subnet Mask
<b>Core-R1 to Multilayer Switch1</b>	192.168.4.144	192.168.4.145	192.168.4.146	192.168.4.147	255.255.255.252/30
<b>Core-R1 to Multilayer Switch1</b>	192.168.4.148	192.168.4.149	192.168.4.150	192.168.4.151	
<b>Core-R2 to Multilayer Switch1</b>	192.168.4.152	192.168.4.153	192.168.4.154	192.168.4.155	
<b>Core-R2 to Multilayer Switch1</b>	192.168.4.156	192.168.4.157	192.168.4.158	192.168.4.159	

Between Core Routers and ISPs

Router and ISP Names	Subnet Address	First Usable Host	Last Usable Host	Broadcast Address	Subnet Mask
Core-R1 to ISP1	192.0.0.0	192.0.0.1	192.0.0.2	192.0.0.3	255.255.255.252/30
Core-R1 to ISP2	192.0.1.0	192.0.1.1	192.0.1.2	192.0.1.3	
Core-R2 to ISP1	192.0.2.0	192.0.2.1	192.0.2.2	192.0.2.3	
Core-R2 to ISP2	192.0.3.0	192.0.3.1	192.0.3.2	192.0.3.3	

192.168.4.159

192.168.5.0

192.168.5.1

192.168.5.254

192.168.5.255

255.255.255.0 / 24