158.24.0.0/20 is fro class B

255.255.0.0 is default subnet mask fro class B

255.255.240.0

11111111.11111111 .0.0

8 + 8 = 16

20 – 16 =4

11111111 .11111111.11110000.00000000

We get 4 bits to borrow

2^4 = 16 subnets

2^12 = 4096 hosts 4096-2=4094 hosts

16-2=14 valid hosts per subnet

128+64+32+16= 240

255.255.240.0 is the default subnet mask of the network

|  |  |  |  |
| --- | --- | --- | --- |
| **Network id** | **First valid ip address** | **Last valid ip address** | **Broadcast id** |
| **158.24.0.0** | **158.24.0.1** | **158.24.15.254** | **158.24.15.255** |
| **158.24.16.0** | **158.24.16.1** | **158.24.31.254** | **158.24.31.255** |
| **158.24.32.0** | **158.24.32.1** | **158.24.48.254** | **158.24.48.255** |
| **158.24.48.0** | **158.24.48.1** | **158.24.63.254** | **158.24.63.255** |
| **158.24.64.0** | **158.24.64.1** | **158.24.79.254** | **158.24.79.255** |
| **158.24.80.0** | **158.24.80.1** | **158.24.96.254** | **158.24.96.255** |