

C1-2)

Addresses needed for each office:

First Floor: 4 office x 40 = 160

Second Floor: 8 office x 40 = 320

Third Floor: 3 office x 40 = 120

Visitors: 60

(constant = 50):

First Floor: 4 blocks

Second Floor: 7 blocks

Third Floor: 3 blocks

Visitors: 2 blocks

Total blocks = 16 => 4 bit

| IP Block | Number | Range |
|---|--------|---|
| IP Block: 172.16.64.0/21 Net Mask: 255.255.248.0 3rd byte (Netmask): 11111000 NetID LSB value: 8 IP-Range: 172.16.64.1 172.16.95.254 | F1/1 | 172.16.64.0/25 255.255.255.128 1000000(128) 172.16.64.1 - 172.16.64.127 |
| | F1/2 | 172.16.64.128/25 255.255.255.128 1000000(128) 172.16.64.129 - 172.16.64.255 |
| | F1/3 | 172.16.65.0/25 255.255.255.128 1000000(128) 172.16.65.1 - 172.16.64.127 |
| | F1/4 | 172.16.65.128/25 255.255.255.128 1000000(128) 172.16.65.129 - 172.16.64.255 |
| | F2/1 | 172.16.66.0/25 255.255.255.128 1000000(128) 172.16.66.1 - 172.16.64.127 |
| | F2/2 | 172.16.66.128/25 255.255.255.128 1000000(128) 172.16.66.129 - 172.16.64.255 |
| | F2/3 | 172.16.67.0/25 255.255.255.128 1000000(128) 172.16.67.1 - 172.16.64.127 |
| | F2/4 | 172.16.67.128/25 255.255.255.128 1000000(128) 172.16.67.129 - 172.16.64.255 |
| | F2/5 | 172.16.68.0/25 255.255.255.128 1000000(128) 172.16.68.1 - 172.16.64.127 |
| | F2/6 | 172.16.68.128/25 255.255.255.128 1000000(128) 172.16.68.129 - 172.16.64.255 |
| | F2/7 | 172.16.69.0/25 255.255.255.128 1000000(128) 172.16.69.1 - 172.16.69.127 |
| | F3/1 | 172.16.69.128/25 255.255.255.128 1000000(128) 172.16.69.129 - 172.16.64.255 |
| | F3/2 | 172.16.70.0/25 255.255.255.128 1000000(128) 172.16.70.1 - 172.16.64.127 |
| | F3/3 | 172.16.70.128/25 255.255.255.128 1000000(128) 172.16.70.129 - 172.16.64.255 |
| | V/1 | 172.16.71.0/25 255.255.255.128 1000000(128) 172.16.71.1 - 172.16.64.127 |
| | V/2 | 172.16.71.128/25 255.255.255.128 1000000(128) 172.16.71.129 - 172.16.64.255 |

به دلیل کمبود وقت، فقط دفترهای طبقه اول نشان داده شده‌اند:

F1-Office1:

172.16.64.0/27 255.255.255.224

1110000(32)

172.16.64.1 - 172.16.64.31

F1-Office2:

172.16.64.32/27 255.255.255.224

1110000(32)

172.16.64.33 - 172.16.64.63

F1-Office3:

172.16.64.64/27 255.255.255.224

1110000(32)

172.16.64.65 - 172.16.64.95

F1-Office4:

172.16.64.96/27 255.255.255.224

1110000(32)

172.16.64.97 - 172.16.64.127

دفترهای طبقات دیگر به‌طریق مشابه به‌دست می‌آیند.

ب) بر اساس Longest Prefix Matching، آخرین Gateway به‌عنوان گام بعدی انتخاب می‌شود؛ یعنی
127.0.0.1