**Network: 84.8.4.0/24**

**No. nutworks = 5**

**if n = 3:**

**A.B.C.D/m network, borrow n bits**

**2^n subnets = 8 subnets**

**2^(32-m-n) addresses/subnet = 32 addresses per subnet**

**(2^(32-m-n) – 2) usable hosts = 30 hosts per subnet**

NOTE: 55 host problem - may need to split into two subnets as there is a 38 host limit

Admin

| **Specification** | **Value** |
| --- | --- |
| Number of bits in the subnet | 0 |
| New IP mask (decimal) | 255.255.224.0 |
| Number of usable subnets | 8 |
| No. of usable hosts per subnet | 30 |
| Network address | 84.8.0.0/24 |
| First IP Host address | 84.8.0.1/24 |
| Last IP Host address | 84.8.0.254/24 |

Sales

| **Specification** | **Value** |
| --- | --- |
| Number of bits in the subnet |  |
| New IP mask (decimal) |  |
| Number of usable subnets |  |
| No. of usable hosts per subnet | 30 |
| Network address |  |
| First IP Host address |  |
| Last IP Host address |  |

Guest wifi

| **Specification** | **Value** |
| --- | --- |
| Number of bits in the subnet |  |
| New IP mask (decimal) |  |
| Number of usable subnets |  |
| No. of usable hosts per subnet | 30 |
| Network address |  |
| First IP Host address |  |
| Last IP Host address |  |

Employee wifi

| **Specification** | **Value** |
| --- | --- |
| Number of bits in the subnet |  |
| New IP mask (decimal) |  |
| Number of usable subnets |  |
| No. of usable hosts per subnet | 30 |
| Network address |  |
| First IP Host address |  |
| Last IP Host address |  |

Servers

| **Specification** | **Value** |
| --- | --- |
| Number of bits in the subnet |  |
| New IP mask (decimal) |  |
| Number of usable subnets | 30 |
| No. of usable hosts per subnet |  |
| Network address |  |
| First IP Host address |  |
| Last IP Host address |  |