

**Network: 84.8.4.0/24**

**No. networks = 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	
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	