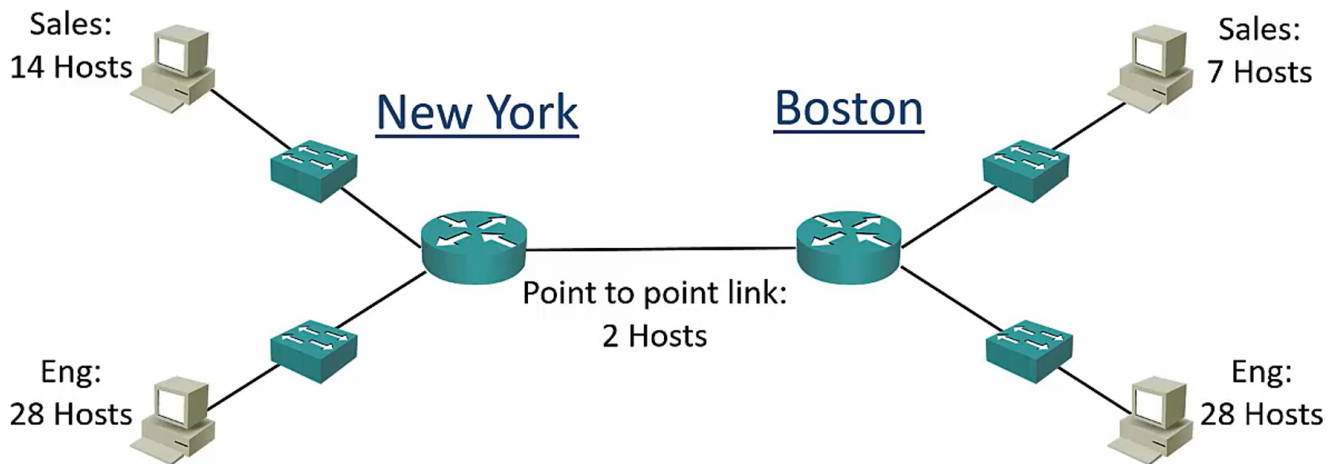


VLSM Subnetting

Subnetting Considerations

- How many locations do we have in the network?
- How many hosts are in each location?
- What are the IP addressing requirements for each location? (Should different departments or types of host be in different subnets?)
- What size is appropriate for each subnet? (Don't waste addresses, but leave room for growth.)

Do VLSM for this network Topology



We've been allocated the Class C network 200.15.10.0/24

Given IP address - 200.15.10.0/24

NewYork

Sales

14 Hosts

/28

Available hosts - $2^4 = 16$

usable hosts - 14

Network address - 200.15.10.64/28
200.15.10.65 - 200.15.10.78
Broadcast address - 200.15.10.79/28

Eng

27 Hosts

/27

Available hosts - $2^5 = 32$
usable hosts - 30

Network address - 200.15.10.0/27
200.15.10.1 - 200.15.10.30
Broadcast address - 200.15.10.31/27

Boston

Sales

7 Hosts

/28

Available hosts - $2^4 = 16$
usable hosts - 14

Network address - 200.15.10.80/28
200.15.10.81 - 200.15.10.94
Broadcast address - 200.15.10.95/28

Eng

28 Hosts

/27

Available hosts - $2^5 = 32$
usable hosts - 30

Network address - 200.15.10.32/27
200.15.10.28 - 200.15.10.57
Broadcast address - 200.15.10.63/27

point to point routers ips

2 Hosts

/30

Available hosts - $2^2 = 4$
usable hosts - 2

Network address - 200.15.10.96/28
200.15.10.97 - 200.15.10.98
Broadcast address - 200.15.10.99/28

Department	Branch	Network Address	Broadcast Address
Sales	New York	200.15.10.64/28	200.15.10.79
Sales	Boston	200.15.10.80/28	200.15.10.95
Engineering	New York	200.15.10.0/27	200.15.10.31
Engineering	Boston	200.15.10.32/27	200.15.10.63