

# Test

• Network IP: 207.6.150.0

• Mask: 255.255.255.0 (/24)

(32-24 = 8)  $\Rightarrow 2^8$  add reman = 256

Sub networks:

Other networks:

• N1: 60 IP's

• N12: 2 IP's

• M2: 40 IP's

• M1345: 4 IP's

• M3: 12 IP's

• M56: 2 IP's

• M4: 12 IP's

• M5: 4 IP's

•  $M = M + 1 + 2^{NA,BA}$   
ROUTER

•  $M = M + 2^{NA,BA}$

$$2^1 = 2$$

$$2^2 = 4$$

$$2^3 = 8$$

$$2^4 = 16$$

$$2^5 = 32$$

$$2^6 = 64$$

$$2^7 = 128$$

N1: 60 IP's NA: 207.6.150.0 /25

$$62 + 3 = 65 < 2^7 = 128 \quad (32 - 7 = 25)$$

\ mask

N2: 40 IP's NA: 207.6.150.128 /26

$$40 + 3 = 43 < 2^6 = 64 \quad (32 - 6 = 26)$$

M3: 12 IP's NA: 207.6.150.192 /28

$$12 + 3 = 15 < 2^4 = 16 \quad (32 - 4 = 28)$$

M4: 12 IP's NA: 207.6.150.208 /28

$$12 + 3 = 15 < 2^4 = 16 \quad (32 - 4 = 28)$$

M5: 4 IP's NA: 207.6.150.224 /29

$$4 + 3 = 7 < 2^3 = 8 \quad (32 - 3 = 29)$$

M125 4 IP's NA: 207.6.150.232 /29

$$4 + 2 = 6 < 2^3 = 8 \quad (32 - 3 = 29)$$

N12 2 IP's NA: 207.6.150.240 /30

$$2 + 2 = 4 = 2^2 = 4 \quad (32 - 2 = 30)$$

$$\begin{array}{r} 128 + 192 \\ 64 \quad 192 \\ 16 \quad 32 \\ 16 \quad 32 \\ 8 \quad 3 \cdot 8 = 24 \\ 8 \quad 3 \cdot 8 = 24 \\ 4 \quad 3 \cdot 8 = 24 \\ 4 \quad 3 \cdot 8 = 24 \\ \hline 192 + \\ 32 \\ 24 \\ \hline 248 \end{array}$$

$$248 < 256$$

$\Rightarrow$  we have 8 free addresses

N<sub>5w</sub>: 2 IP's NA: 207.6.150.244 /30

$$2+2=4 = 2^2=4 \quad (32-2=30)$$

N<sub>1</sub>: NA: 207.6.150.0 /25 SM: 255.255.255.128 (256-128=128)  
BA: 207.6.150.127

N<sub>2</sub>: NA: 207.6.150.128 /26 SM: 255.255.255.192 (256-64=192)  
BA: 207.6.150.191

N<sub>3</sub>: NA: 207.6.150.192 /28 SM: 255.255.255.240 (256-16=240)  
BA: 207.6.150.207

N<sub>4</sub>: NA: 207.6.150.208 /28 SM: 255.255.255.240  
BA: 207.6.150.223

N<sub>5</sub>: NA: 207.6.150.224 /29 SM: 255.255.255.248 (256-8=248)  
BA: 207.6.150.231

N<sub>45</sub>: NA: 207.6.150.232 /29 SM: 255.255.255.248  
BA: 207.6.150.239

N<sub>12</sub>: NA: 207.6.150.240 /30 SM: 255.255.255.252 (256-4=252)  
BA: 207.6.150.243

N<sub>5w</sub>: NA: 207.6.150.244 /30 SM: 255.255.255.252  
BA: 207.6.150.247

ROUTER PORT: -155 serial for ROUTERS

-10FE FastEthernet for SWITCHES + OTHERS