

COMPANY

7 offices in different countries

500 hosts/office

Total host: $7 \times 500 = 3500$

At least 7 network

133.86.0.0 /16

133.86.32.0 /16

10000101.01010110.00000000.00000000 -> loopback

10000101.01010110.11111111.11111111 -> b/c

1 x Network $2^{16} - 2 = 65534$

10000101.01010110.00000000.00000000 133.86.0.0 /19

10000101.01010110.00100000.00000000 133.86.32.0 /19

10000101.01010110.01000000.00000000	133.86.64.0	/19
10000101.01010110.01100000.00000000	133.86.96.0	/19
10000101.01010110.10000000.00000000	133.86.128.0	/19
10000101.01010110.10100000.00000000	133.86.160.0	/19
10000101.01010110.11000000.00000000	133.86.192.0	/19
10000101.01010110.11100000.00000000	133.86.224.0	/19

LAN-1

10000101.01010110.00000000.00000000	133.86.0.0	reserved
10000101.01010110.00000000.00000001	133.86.0.1	
10000101.01010110.00000000.00000010	133.86.0.2	
10000101.01010110.00000000.00000011	133.86.0.3	
10000101.01010110.00000000.00000100	133.86.0.4	
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10000101.01010110.00000000.11111110	133.86.0.254	
10000101.01010110.00000000.11111111	133.86.0.255	
10000101.01010110.00000001.00000000	133.86.1.0	
10000101.01010110.00000001.00000001	133.86.1.1	

10000101.01010110.00000001.00000010 133.86.1.2
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10000101.01010110.00000001.11110101 133.86.1.245

10000101.01010110.00011111.11111111 133.86.31.255

LAN-2

10000101.01010110.00100000.00000000 133.86.32.0 loopback

10000101.01010110.00100000.00000001 133.86.32.1

10000101.01010110.00100000.00000010 133.86.32.2

10000101.01010110.00100000.00000011 133.86.32.3

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10000101.01010110.00100000.11111111 133.86.32.255

10000101.01010110.00100001.00000000 133.86.33.0

10000101.01010110.00100001.00000001 133.86.33.1

10000101.01010110.00100001.00000010 133.86.33.2

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10000101.01010110.00100001.11110101 133.86.33.245

10000101.01010110.00111111.11111111 133.86.63.255 b/c

133.86.165.55 subnet mask: 255.255.224.0

11111111.11111111.11100000.00000000 : subnet mask

10000101.01010110.10100101.00110111 133.86.165.55

11111111.11111111.11100000.00000000 255.255.224.0

----- AND

10000101.01010110.10100000.00000000 133.86.160.0

133.86.165.55 - 255.255.224.0

CIDR - Classless InterDomain Routing

133.86.165.55 /19

T T : T

T F : F

F T : F

F F : F

10.1.0.0 /16

10.1.1.0 /24

10.1.2.0 /24

10.1.3.0 /24