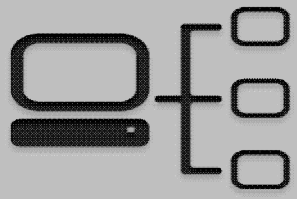
Class B Example #3



Details & Requirements

- Network Address: 155.14.0.0
- Default Subnet Mask: 255.255.0.0
- Requires 8,000 Hosts Per Subnet

How many addresses hosts per subnet?

- 13 host bits Required, 2^{13} = 8,192 Addresses / Subnet
- 2^{13} - 2= 8,190 Addresses / Subnet

How many host bit do we need to borrow?

- 3 host bit, 2^3 = 8 Subnets

New Subnet Mask?

- 11111111.11111111.**111**00000.00000000
- 255.255.224.0 or /19

What are the valid subnets?

- Equation: 256 – Subnet Mask = 256 – 224 = **32**
- 0, 32, 64, 96, 128, 160, 192, 224 in 3rd Octet

Subnet	Network /Subnet Address	Host IP Addresses	Broadcast Address
1	155.14.0.0	155.14.0.1 to .31.254	155.14.31.255
2	155.14.32.0	155.14.32.1 to .63.254	155.14.63.255
3	155.14.64.0	155.14.64.1 to .95.254	155.14. 95.255
4	155.14.96.0	155.14.96.1 to .127.254	155.14.127.255
5	155.14.128.0	155.14.128.1 to .159.254	155.14.159.255
6	155.14.160.0	155.14.160.1 to .191.254	155.14.191.255
7	155.14.192.0	155.14.192.1 to .223.254	155.14.223.255
8	155.14.224.0	155.14.224.1 to .255.254	155.14.255.255