

Name: Barathkumar J K

Networking

▼ CIDR Block (Classless Inter Domain Routing):

move
open menu

/16 /17 /18 /19 /20 /21 /22 /23
/24 /25 /26 /27 /28

- Eg1: VPC1 - 10.0.0.0/22 - 1024 IP addresses
- Total Number of BITS IN IPV4 - 32
- Bits in CIDR IP addresses - 22
- $32 - 22 = 10$, $2^{10} = 1024$ IP addresses

/16	- 32 - 16 = 16	$2^{16} = 65536$
/17	- 32 - 17 = 15	$2^{15} = 32768$
/18	- 32 - 18 = 14	$2^{14} = 16384$
/19	- 32 - 19 = 13	$2^{13} = 8192$
/20	- 32 - 20 = 12	$2^{12} = 4096$
/21	- 32 - 21 = 11	$2^{11} = 2048$
/22	- 32 - 22 = 10	$2^{10} = 1024$
/23	- 32 - 23 = 9	$2^9 = 512$
/24	- 32 - 24 = 8	$2^8 = 256$
/25	- 32 - 25 = 7	$2^7 = 128$
/26	- 32 - 26 = 6	$2^6 = 64$
/27	- 32 - 27 = 5	$2^5 = 32$
/28	- 32 - 28 = 4	$2^4 = 16$

- EG1: VPC 1 - 10.0.0.0/24 - 256 IP Addresses
- Total Number of Bits in IPV4 - 32
- Bits in CIDR IP address - 24
- $32 - 24 = 8$, $2^8 = 256$ IP Addresses
- 10.0.0.0, 10.0.0.1, 10.0.0.2, 10.0.0.255
- EG2: VPC2 - 10.0.0.0/23 - 512 IP Addresses
- Total Number of Bits in IPV4 - 32
- Bits in CIDR IP address - 23
- $32 - 23 = 9$, $2^9 = 512$ IP addresses
- 10.0.0.0, 10.0.0.1, 10.0.0.2, 10.0.0.255, 10.0.1.0, 10.0.1.1.....10.0.1.255

10.0.0.0/22 - 1024 IP

- 10.0.0.0 - 256
- 10.0.1.0 - 256
- 10.0.2.0 - 256
- 10.0.3.0 - 256
- First IP will be 10.0.0.0 and last IP will be 10.0.3.255

10.0.0.0/24 - 256

Last IP - 10.0.0.255

+ :: 10.0.0.0/25 - 128

+ :: Last IP - 10.0.0.128

+ :: 10.0.0.0/26 - 64

Last IP - 10.0.0.64

10.0.0.0/27 - 32

Last IP - 10.0.0.32

10.0.0.0/28 - 16

Last IP - 10.0.0.16

- VPC 8 - 10.0.0.0/21 - 2048
 - Last IP 10.0.7.255
- VPC 9 - 10.0.0.0/20 - 4096
 - Last IP 10.0.15.255
- VPC 10 - 10.0.0.0/19 - 8192
 - Last IP 10.0.31.255
- VPC 11 - 10.0.0.0/18 - 16384
 - Last IP 10.0.63.255
- VPC 12 - 10.0.0.0/17 - 32768
 - Last IP 10.0.127.255
- VPC 13 - 10.0.0.0/16 - 65536
 - Last IP 10.0.255.255

- + ☐ 1. 20.15.0.0/22 - 1024 IPs
- First IP: 20.15.0.0
 - Last IP: 20.15.3.255
2. 20.15.0.0/24 - 256 IPs
- First IP: 20.15.0.0
 - Last IP: 20.15.0.255
3. 20.15.0.0/25 - 128 IPs
- First IP: 20.15.0.0
 - Last IP: 20.15.0.127
4. 20.15.0.0/26 - 64 IPs
- First IP: 20.15.0.0
 - Last IP: 20.15.0.63
5. 20.15.0.0/27 - 32 IPs
- First IP: 20.15.0.0
 - Last IP: 20.15.0.31
6. 20.15.0.0/28 - 16 IPs
- First IP: 20.15.0.0
 - Last IP: 20.15.0.15
7. VPC 8 - 20.15.0.0/21 - 2048 IPs
- First IP: 20.15.0.0
 - Last IP: 20.15.7.255
8. VPC 9 - 20.15.0.0/20 - 4096 IPs
- First IP: 20.15.0.0
 - Last IP: 20.15.15.255



9. **VPC 10** - 20.15.0.0/19 - 8192 IPs

- First IP: 20.15.0.0
- Last IP: 20.15.31.255

10. **VPC 11** - 20.15.0.0/18 - 16384 IPs

- First IP: 20.15.0.0
- Last IP: 20.15.63.255

11. **VPC 12** - 20.15.0.0/17 - 32768 IPs

- First IP: 20.15.0.0
- Last IP: 20.15.127.255

12. **VPC 13** - 20.15.0.0/16 - 65536 IPs

- First IP: 20.15.0.0
- Last IP: 20.15.255.255

1. **EG1: VPC1** - 20.15.0.0/24

- Subnet1 - 256 IP'S - 20.15.0.0/24
- Subnet2 - 256 IP's - 20.15.1.0/24
- Subnet3 - 256 IP's -20.15.2.0/24
- Subnet4 - 256 IP's - 20.15.3.0/24



2. **EG2: VPC2** - 20.15.0.0/21

- Subnet1 - 512 IP's - 20.15.0.0/23
- Subnet2 - 512 IP's - 20.15.2.0/23
- Subnet3 - 512 IP's - 20.15.4.0/23
- Subnet4 - 512 IP's - 20.15.6.0/23

- + :: 3. Eg3: VPC3 - 20.15.0.0/20
 - a. Subnet1 - 1024 IP's - 20.15.0.0/22
 - b. Subnet2 - 1024 IP's - 20.15.4.0/22
 - c. Subnet3 - 1024 IP's - 20.15.8.0/22
 - d. Subnet4 - 1024 IP's - 20.15.12.0/22
- 4. EG4 : VPC4 - 20.15.0.0/19
 - a. Subnet1 - 2048 IPs - 20.15.0.0/21
 - b. Subnet2 - 2048 IPs - 20.15.8.0/21
 - c. Subnet3 - 2048 IPs - 20.15.16.0/21
 - d. Subnet4 - 2048 IPs - 20.15.24.0/21
- 5. Eg5: VPC 5 - 20.15.0.0/18
 - a. Subnet1 - 4096 IPS - 20.15.0.0/20
 - b. Subnet2 - 4096 IPS - 20.15.16.0/20
 - c. Subnet3 - 4096 IPS - 20.15.32.0/20
 - d. Subnet4 - 4096 IPS - 20.15.48.0/20
- 6. Eg6: VPC 6 - 20.15.0.0/17
 - a. Subnet1 - 8192 IPs - 20.0.0.0/19
 - b. Subnet2 - 8192 IPs - 20.0.32.0/19
 - c. Subnet3 - 8192 IPs - 20.0.64.0/19
 - d. Subnet4 - 8192 IPs - 20.0.96.0/19
- 7. Eg7: VPC 7 - 20.15.0.0/16
 - a. Subnet1 - 16384 IPs - 20.0.0.0/18
 - b. Subnet2 - 16384 IPs - 20.0.64.0/18
 - c. Subnet3 - 16384 IPs - 20.0.128.0/18

d. Subnet4 - 16384 IPs - 20.0.192.0/18

8. VPC 8 - 20.15.0.0/18

- +  a. Subnet1 - 4096 IP's - 20.15.0.0/20
- +  b. Subnet2 - 2048 IP's - 20.15.16.0/21
- c. Subnet3 - 1024 IP's - 20.15.24.0/22
- d. Subnet4 - 2048 IP's - 20.15.28.0/21
- e. Subnet5 - 1024 IP's - 20.15.44.0/22
- f. Subnet6 - 2048 IP's - 20.15.48.0/21
- g. Subnet7 - 4096 IP's - 20.15.56.0/20

9. Eg9 - VPC 9 - 20.15.0.0/17

- a. Subnet1 - 4096 IPs - 20.15.0.0/20
- b. Subnet2 - 16384 Ips - 20.15.16.0/18
- c. Subnet3 - 4096 IPs - 20.15.80.0/20
- d. Subnet4 - 2048 IPs - 20.15.96.0/21
- e. Subnet5 - 1024 IPs - 20.15.104.0/22
- f. Subnet6 - 8192 IPs - 20.15.108.0/19
- g. Subnet7 - 4096 IPs - 20.15.140.0/20

10. Eg10 - VPC 10 - 20.15.0.0/18

- a. Subnet1 - 2048 IPs - 20.15.0.0/21
- b. Subnet2 - 4096 IPs - 20.15.8.0/20
- c. Subnet3 - 512 IPs - 20.15.24.0/23
- d. Subnet4 - 1024 IPs - 20.15.26.0/22
- e. Subnet5 - 512 IPs - 20.15.30.0/23
- f. Subnet6 - 4096 IPs - 20.15.32.0/20
- g. Subnet7 - 1024 IPs - 20.15.48.0/22
- h. Subnet8 - 2048 IPs - 20.15.52.0/21

11. Eg11 - VPC 11 - 20.15.0.0/17

- a. Subnet1 - 2048 IPs - 20.15.0.0/21
- b. Subnet2 - 8192 IPs - 20.15.8.0/19
- c. Subnet3 - 2048 IPs - 20.15.40.0/21
- d. Subnet4 - 1024 IPs - 20.15.48.0/22
- e. Subnet5 - 512 IPs - 20.15.52.0/23
- f. Subnet6 - 4096 IPs - 20.15.54.0/20
- g. Subnet7 - 512 IPs - 20.15.70.0/23
- h. Subnet8 - 2048 IPs - 20.15.72.0/21

12. Eg12 - VPC12 - 10.0.0.0/16

- a. Subnet1 - 4096 IPs - 10.0.0.0/20
- b. Subnet2 - 1024 IP's - 10.0.16.0/21
- c. Subnet3 - 8192 IP's - 10.0.20.0/19
- d. Subnet4 - 4096 IP's - 10.0.52.0/20
- e. Subnet5 - 2048 IP's - 10.0.68.0/21
- f. Subnet 6 - 4096 IP's - 10.0.76.0/20