

Vlan 10	Subnet 0: 192.168.1.0 /27	Broadcast: 192.168.1.31
Vlan 20	Subnet 1: 192.168.1.32 /27	Broadcast: 192.168.1.63
Vlan 30	Subnet 2: 192.168.1.64 /27	Broadcast: 192.168.1.95
Vlan 40	Subnet 3: 192.168.1.96 /27	Broadcast: 192.168.1.127
Vlan 50	Subnet 4: 192.168.1.128 /27	Broadcast: 192.168.1.159
Vlan 60	Subnet 5: 192.168.1.160 /27	Broadcast: 192.168.1.191
Vlan 70	Subnet 6: 192.168.1.192 /27	Broadcast: 192.168.1.223
Vlan 80	Subnet 7: 192.168.1.224 /27	Broadcast: 192.168.1.255

Steps for Subnetting 192.168.1.0/24 into 8 Subnets:

1. Determine the New Subnet Mask

- Starting with a /24 network, you need to borrow 3 bits from the host portion for subnetting.
- The new subnet mask will be /27, which corresponds to 255.255.255.224.

2. Calculate the Subnets

Borrowing 3 bits from the host portion gives you 8 subnets, each with 32 total addresses (30 usable addresses, since 2 addresses are reserved for the network and broadcast).

The **subnets** for the 192.168.1.0/24 network with a /27 mask are:

Subnet Number	Subnet Address	Usable Host Range	Broadcast Address
1	192.168.1.0/27	192.168.1.1 - 192.168.1.30	192.168.1.31
2	192.168.1.32/27	192.168.1.33 - 192.168.1.62	192.168.1.63
3	192.168.1.64/27	192.168.1.65 - 192.168.1.94	192.168.1.95
4	192.168.1.96/27	192.168.1.97 - 192.168.1.126	192.168.1.127
5	192.168.1.128/27	192.168.1.129 - 192.168.1.158	192.168.1.159
6	192.168.1.160/27	192.168.1.161 - 192.168.1.190	192.168.1.191
7	192.168.1.192/27	192.168.1.193 - 192.168.1.222	192.168.1.223
8	192.168.1.224/27	192.168.1.225 - 192.168.1.254	192.168.1.255