Computer Network

IPV4 Addresses

In the original IPV4 scheme, there are 5 classes for IP addresses. NA= Network address, HA = host address. NA = 0 implies local network, HA = 0 implies broadcast, HA = 1 usually for gateways (router @ interface address).

1. **CLASS A** Format: 1-bit ID [0] | 7-bit NA | 3-byte HA ; Range: 1.x.x.x - 126.x.x.x (0.x.x.x & 127.x.x.x reserved) ; Net-Mask: 255.0.0.0
2. **CLASS B** Format: 2-bit ID [10] | 14-bit NA | 2-byte HA ; Range: 128.x.x.x - 191.x.x.x ; Net-Mask: 255.255.0.0
3. **CLASS C** Format: 3-bit ID [110] | 21-bit NA | 1-byte HA ; Range: 192.x.x.x - 223.x.x.x ; Net-Mask: 255.255.255.0
4. **CLASS D** Format: 4-bit ID [1110] | 28-bit multicast address
5. **CLASS E** Format: 5-bit ID [11110] | 27-bit reserved
6. **Private Net Addresses (RFC1918)** Range1: 10.0.0.0 - 10.255.255.255 ; Range2: 172.16.0.0 - 172.31.255.255 ; Range3: 192.168.0.0 - 192.168.255.255

Subnet Mask is a method used to obtain more network groups from existing classes. HA is masked with a *subnet mask* and used as NA.

In the newer IPv4 implementation, masks are no longer fixed - classes are no longer used to define a network. IPV4 notation takes the form of x.x.x.x/y where x is an 8-bit number and y gives the number of bits used to mask out the network address.

IPV6 Addresses

Dumped...

ipv6.txt

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ipv6:
- fe80 is private net
- 2xxx or 3xxx is global unicast address (GUA)! (e.g. 2001)

https://test-ipv6.com/
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