

Networking Fundamentals (IV)

Special Use IPv4 Addresses

- **10.0.0.0/8**, **172.16.0.0/12**, **192.168.0.0/16** - Private network
 - Range: 10.0.0.0 ~ 10.255.255.255, 172.16.0.0 ~ 172.31.255.255, 192.168.0.0 ~ 192.168.255.255
 - Scope: Private network
 - Purpose: Used for **local communications within a private network**
 - Commonly used for home, office, and enterprise networks
 - To **delay IPv4 address exhaustion**
 - May **use without approval from regional Internet registry**
 - Are **not allocated to any specific organization**
 - IP **packets addressed from these** addresses **cannot be transmitted through the public Internet**, and so if such a private network needs to connect to the Internet, it must do so via a network address translator (NAT) gateway, or a proxy server.
- **127.0.0.0/8** - Loopback
 - Range: 127.0.0.0 ~ 127.255.255.255
 - Scope: Host
 - Purpose: Used for **loopback address** to the local host
- REF: https://en.wikipedia.org/wiki/Reserved_IP_addresses
- A complete lists from RFC 5735

Disclaimer: Notes adapted from the textbook and online resources.