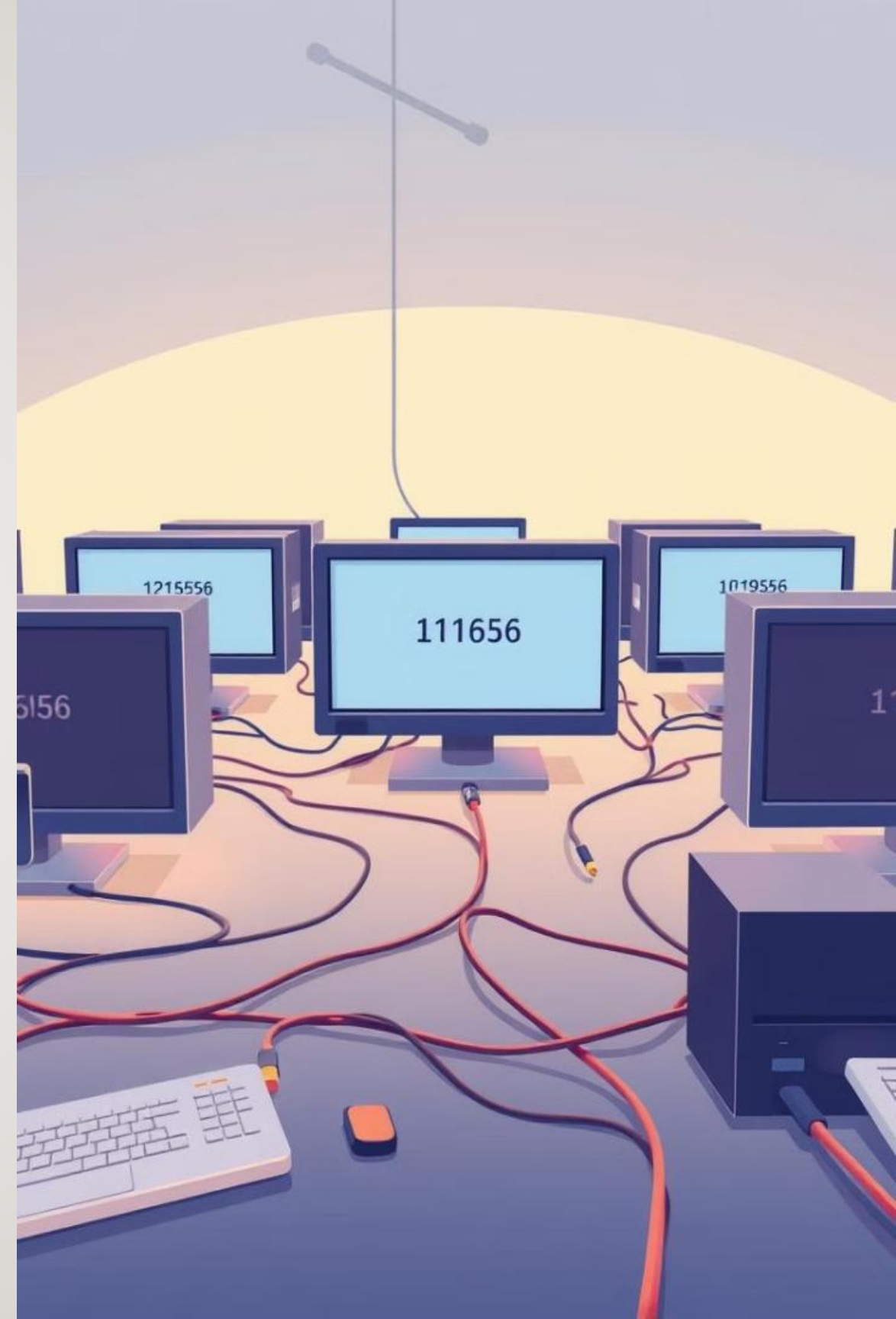# Understanding IP Addresses

IP addresses are a fundamental component of internet communication. They serve as unique identifiers for devices on a network, enabling seamless communication and data transfer between them.

by John Rib A. Cananga

Introduction to IP Addresses

1 **Addressing System**

IP addresses provide a logical addressing system for devices on a network.

2 **Network Communication**

They allow devices to communicate with each other, enabling data exchange and information flow.

3 **Unique Identification**

Each device on a network has a unique IP address, preventing conflicts and ensuring efficient communication.

Class A IP Address

Address Range

1.0.0.0 to 126.255.255.255

Network Mask

255.0.0.0

Network Size

16,777,214 hosts per network

Class A IP Address Details

IP Address	10.0.0.1
Subnet Mask	255.0.0.0
Default Gateway	10.0.0.254

Class B IP Address

Address Range

128.0.0.0 to 191.255.255.255

Network Mask

255.255.0.0

Network Size

65,534 hosts per network

Class B IP Address Details

IP Address	172.16.0.1
Subnet Mask	255.255.0.0
Default Gateway	172.16.0.254

Classs B IP
Hietif
PT.34058.14
C. Default Gatreway

Class C IP Address

Address Range

192.0.0.0 to 223.255.255.255

Network Mask

255.255.255.0

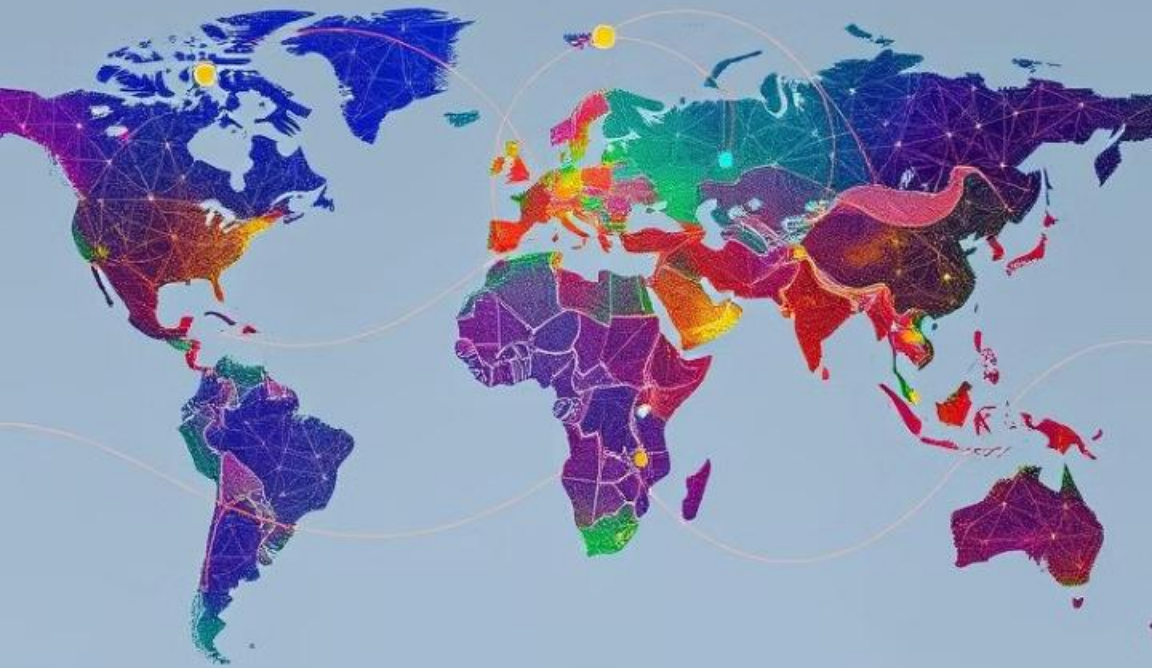**Network Size**

254 hosts per network

Class CIP

192166.1.100
D22225.2556.11.1

Class C IP Address Details

IP Address	192.168.1.1
Subnet Mask	255.255.255.0
Default Gateway	192.168.1.254

Class D IP Address (Multicast)

Address Range

224.0.0.0 to 239.255.255.255

Network Mask

N/A

Purpose

Used for group communication, where a single message is sent to multiple recipients simultaneously.

Conclusion

Understanding IP addresses is essential for anyone working with networks. These addresses are crucial for network communication, identification, and data transfer. Class A, B, C, and D addresses each serve specific purposes and contribute to the efficient functioning of the internet.