CompTIA Network+ (N10-009) – Table of Contents

- CIDR Notation
- Subnet Masks
- Binary Conversion
- IPv6 Addressing & Features

1.5 Network Devices

- Routers
- Switches
- Firewalls
- Access Points
- Load Balancers
- IDS/IPS

1.6 Network Media & Connectors

- Copper Cabling (UTP, STP)
- Fiber Optic Cabling
- Transceivers & Connectors
- Cable Standards (Cat 5e, Cat 6, etc.)

---

2. Network Implementations (≈19%)

2.1 Switching Technologies

- VLANs

- Trunking (802.1Q)
- STP (Spanning Tree Protocol)
- LACP

2.2 Routing Technologies

- Static vs Dynamic Routing
- Routing Protocols (RIP, OSPF, EIGRP, BGP)
- Route Selection (Administrative Distance & Metrics)

2.3 Wireless Technologies

- 802.11 Standards (Wi-Fi Generations)
- Wireless Security (WPA2, WPA3)
- Antennas & RF Concepts

2.4 WAN Technologies

- MPLS
- SD-WAN
- Broadband Technologies
- VPN Technologies

2.5 Cloud & Virtualization Concepts

- IaaS, PaaS, SaaS
- Public, Private, Hybrid Cloud
- Virtual Networking
- NFV & SDN

3. Network Operations (≈16%)

3.1 Monitoring & Performance

- SNMP
- Syslog
- NetFlow
- Performance Metrics

3.2 Documentation & Diagrams

- Logical vs Physical Diagrams
- Rack Diagrams
- Baseline Documentation
- Change Management

3.3 Disaster Recovery & Business Continuity

- Backup Types
- High Availability Concepts
- Redundancy

3.4 Network Services

- DNS
- DHCP
- NTP

- Directory Services

---

4. Network Security (≈19%)

4.1 Security Concepts

- CIA Triad
- Threat Actors
- Social Engineering

4.2 Network Attacks

- DoS / DDoS
- Man-in-the-Middle
- VLAN Hopping
- ARP Poisoning

4.3 Secure Network Design

- Segmentation
- Zero Trust
- Access Control Models
- NAC

4.4 Network Hardening

- Device Hardening
- Patch Management

- Password Policies
- Port Security

4.5 Remote Access Security

- VPN Types
- MFA
- AAA (Authentication, Authorization, Accounting)

---

5. Network Troubleshooting (≈22%)

5.1 Troubleshooting Methodology

- Identify the Problem
- Establish a Theory
- Test the Theory
- Establish a Plan of Action
- Verify & Document

5.2 Common Network Issues

- IP Addressing Problems
- DNS Issues
- DHCP Failures
- Routing Loops
- Broadcast Storms

5.3 Tools & Utilities

- Ping
- Traceroute
- ipconfig / ifconfig
- netstat
- nslookup
- Wireshark
- Cable Testers