



CompTIA Network+

Part 1 | Networking Fundamentals

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Our Agenda

- ✓ Quick Overview of the Exam
- ✓ Domain 1.0 – Networking Fundamentals
- ✓ What are the Objectives?
- ✓ Summary
- ✓ Closing & Wrap Up
Your Questions and Feedback

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Overview of Networking Fundamentals

- OSI and Encapsulation
- Topologies
- Cables and Connectors
- IPv4 & IPv6
- Ports and Protocols
- Network Services
- Network Architecture
- Cloud



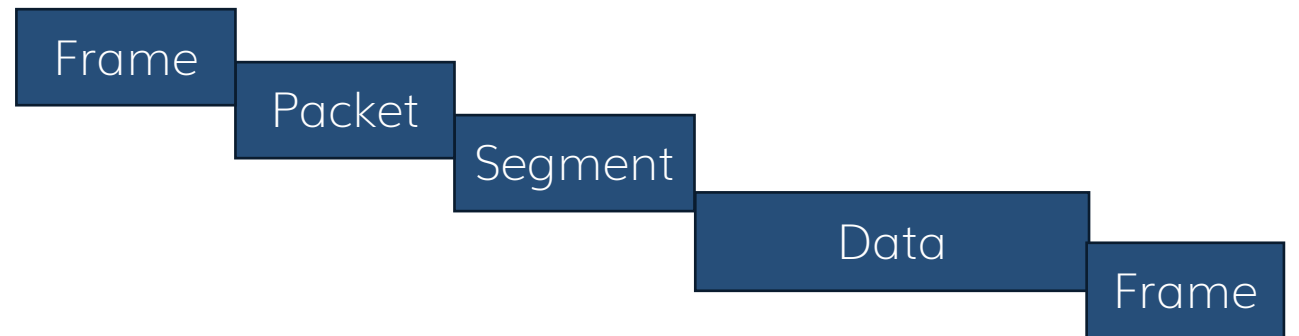
The OSI Model and Encapsulation (1.1)

- OSI Model

- Application
- Presentation
- Session
- Transport
- Network
- Data Link
- Physical

- Encapsulation

- Addition of Headers to the Data
- TCP vs. UDP
- Payload



Topologies (1.2)

- Topology Types

- Mesh
- Star (Hub and Spoke)
- Bus
- Ring
- Hybrid

- Provider Links

- Satellite
- xDSL
- Cable
- Leased Line
- Metro Ethernet

- Network Types

- Peer to Peer
- Client-Server
- LAN
- MAN
- CAN
- SAN
- WAN



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Cables and Connectors (1.3)

- Cables and Connectors
 - Cooper
 - Twisted Pair
 - Coaxial
 - Fiber
 - Single Mode vs. Multimode
 - Connector Types
- Ethernet Standards
 - Copper
 - 1000BASE-T
 - Fiber
 - 100BASE-FX



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IPv4 and IPv6 (1.4)

- IPv4
 - 32 bits
 - Class
 - A, B, C, D, E
 - Subnetting
 - VLSM
 - NAT/PAT
- IPv4 and IPv6
 - Dual Stack
 - CIDR
- IPv6
 - 128 bits
 - Address Type
 - Unicast
 - Multicast
 - Anycast



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Ports and Protocols (1.5)

- TCP
- Connection Oriented
 - HTTP (80)
 - HTTPS (443)
 - FTP (20/21)

3-Way Handshake

- UDP
- Connectionless
 - TFTP (69)
 - DNS (53)
 - SNMP (161/162)

No Handshake



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Network Services (1.6)

- DHCP
 - Discover
 - Offer
 - Request
 - Acknowledge
- NTP
 - Stratum Levels
 - Server
 - Client
- DNS
 - A vs. AAAA
 - MX



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Network Architecture (1.7)

- Three-Tier
 - Core
 - Distribution
 - Access
- Software Defined
- Spine and Leaf



Cloud Concepts (1.8)

- Deployment Models

- Public
- Private
- Hybrid
- Community

- Multitenancy

- Elasticity
- Scalability
- Security Implications

- Service Models

- SaaS
- IaaS
- PaaS
- DaaS



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Summary

✓ Exam Number Recap (N10-008)

✓ 5 Modules of Information

✓ Other Exam Details



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Your Questions



Thank you for attending.

If you have any additional questions, or would like to learn more about our Athena program, please email...

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