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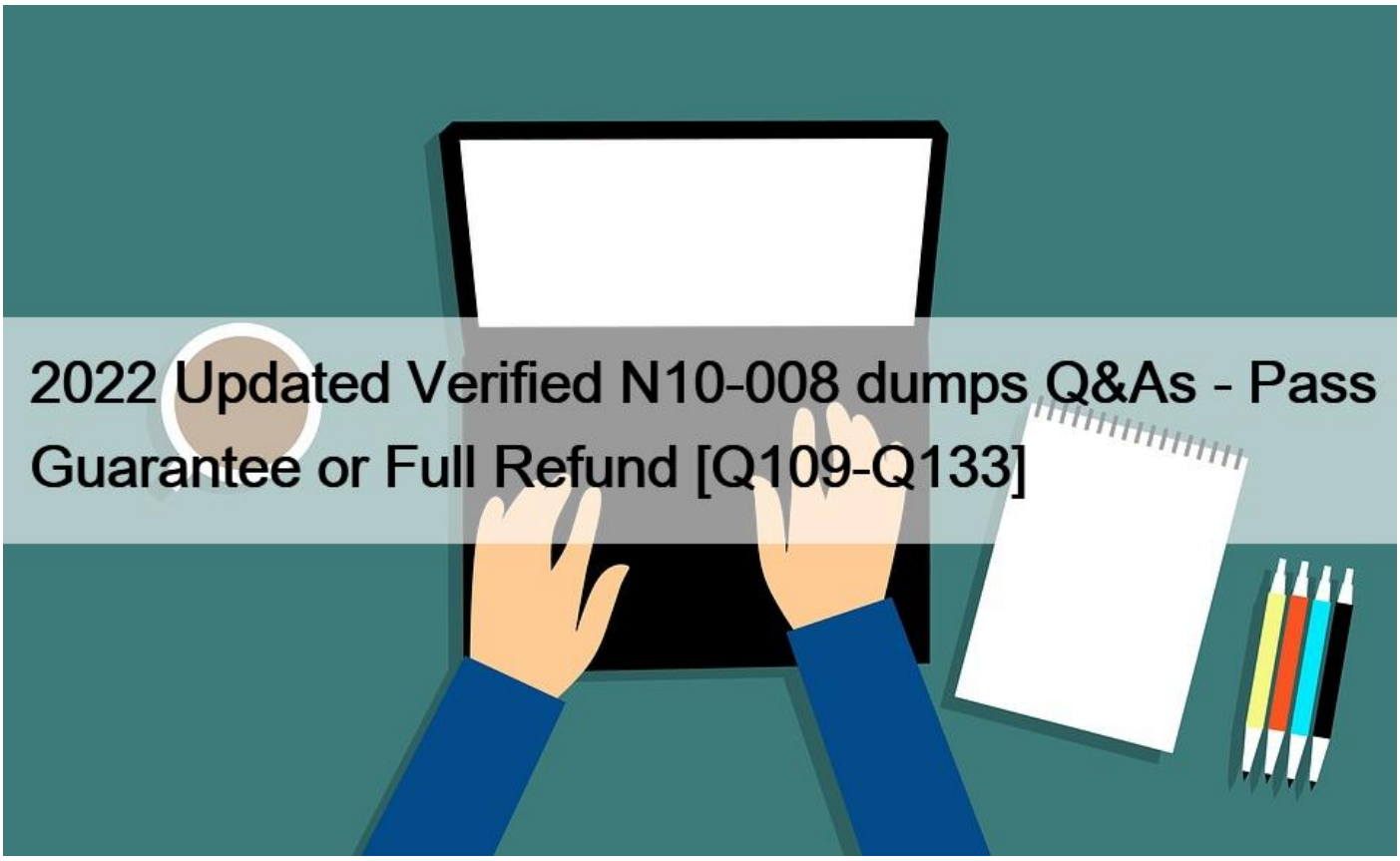

2022 Updated Verified N10-008 dumps Q&As - Pass Guarantee or Full Refund
N10-008 PDF Questions and Testing Engine With 203 Questions

CompTIA N10-008 Exam Syllabus Topics:

TopicDetails

Networking Fundamentals - 24%

Compare and contrast the Open Systems Interconnection (OSI) model layers and encapsulation concepts.- OSI model- Layer 1 ? Physical- Layer 2 ? Data link- Layer 3 ? Network- Layer 4 ? Transport- Layer 5 ? Session- Layer 6 ? Presentation- Layer 7 ? Application - Data encapsulation and decapsulation within the OSI model context- Ethernet header- Internet Protocol (IP) header- Transmission Control Protocol (TCP)/User Datagram Protocol (UDP) headers- TCP flags- Payload- Maximum transmission unit (MTU)Explain the characteristics of network topologies and network types.- Mesh

- Star/hub-and-spoke

- Bus

- Ring

- Hybrid

- Network types and characteristics- Peer-to-peer- Client-server- Local area network (LAN)- Metropolitan area network (MAN)- Wide area network (WAN)- Wireless local area network (WLAN)- Personal area network (PAN)- Campus area network (CAN)- Storage area network (SAN)- Software-defined wide area network (SDWAN)- Multiprotocol label switching (MPLS)- Multipoint generic routing encapsulation (mGRE) - Service-related entry point- Demarcation point- Smartjack - Virtual network concepts- vSwitch- Virtual network interface card (vNIC)- Network function virtualization (NFV)- Hypervisor - Provider links- Satellite- Digital subscriber line (DSL)- Cable- Leased line- Metro-opticalSummarize the types of cables and connectors and explain which is the appropriate type for a solution.- CopperTwisted pair

1. Cat 5

2. Cat 5e

3. Cat 6

4. Cat 6a

5. Cat 7

6. Cat 8- Coaxial/RG-6- TwinaxialTermination standards

1. TIA/EIA-568A

2. TIA/EIA-568B - Fiber- Single-mode- Multimode - Connector typesLocal connector (LC), straight tip (ST), subscriber connector (SC), mechanical transfer (MT), registered jack (RJ)

1. Angled physical contact (APC)

2. Ultra-physical contact (UPC)- RJ11- RJ45- F-type connector- Transceivers/media convertersTransceiver type

1. Small form-factor pluggable (SFP)

2. Enhanced form-factor pluggable (SFP+)

3. Quad small form-factor pluggable (QSFP)

4. Enhanced quad small form-factor pluggable (QSFP+) - Cable management- Patch panel/patch bay- Fiber distribution panel Punchdown block

1. 66

2. 110

3. Krone

4. Bix - Ethernet standardsCopper

1. 10BASE-T

2. 100BASE-TX

3. 1000BASE-T

4. 10GBASE-T

5. 40GBASE-TFiber

1. 100BASE-FX

2 .100BASE-SX

3. 1000BASE-SX

4. 1000BASE-LX

5. 10GBASE-SR

6. 10GBASE-LR

7. Coarse wavelength division multiplexing (CWDM)

8. Dense wavelength division multiplexing (DWDM)

9. Bidirectional wavelength division multiplexing (WDM)Given a scenario, configure a subnet and use appropriate IP addressing schemes.- Public vs. private- RFC1918- Network address translation (NAT)- Port address translation (PAT) - IPv4 vs. IPv6- Automatic Private IP Addressing (APIPA)- Extended unique identifier (EUI-64)- Multicast- Unicast- Anycast- Broadcast- Link local- Loopback- Default gateway - IPv4 subnetting- Classless (variable-length subnet mask)Classful

1. A

2. B

3. C

4. D

5. E - Classless Inter-Domain Routing (CIDR) notation - IPv6 concepts- Tunneling- Dual stack- Shorthand notation- Router advertisement- Stateless address autoconfiguration (SLAAC) - Virtual IP (VIP)

- SubinterfacesExplain common ports and protocols, their application, and encrypted alternatives.- Protocol sand Ports- File Transfer Protocol (FTP) 20/21- Secure Shell (SSH) 22- Secure File Transfer Protocol (SFTP) 22- Telnet 23- Simple Mail Transfer Protocol (SMTP) 25- Domain Name System (DNS) 53- Dynamic Host Configuration Protocol (DHCP) 67/68- Trivial File Transfer Protocol (TFTP) 69- Hypertext Transfer Protocol (HTTP) 80- Post Office Protocol v3 (POP3) 110- Network Time Protocol (NTP) 123- Internet Message Access Protocol (IMAP) 143- Simple Network Management Protocol (SNMP) 161/162- Lightweight Directory Access Protocol (LDAP) 389- Hypertext Transfer Protocol Secure (HTTPS) [Secure Sockets Layer (SSL) 443- HTTPS [Transport Layer Security (TLS) 443- Server Message Block (SMB) 445- Syslog 514- SMTP TLS 587- Lightweight Directory Access Protocol (over SSL) (LDAPS) 636- IMAP over SSL 993- POP3 over SSL 995- Structured Query Language (SQL) Server 1433- SQLnet 1521- MySQL 3306- Remote Desktop Protocol (RDP) 3389- Session Initiation Protocol (SIP) 5060/5061IP protocol types

1. Internet Control Message Protocol (ICMP)

2. TCP

3. UDP

4. Generic Routing Encapsulation (GRE)

5. Internet Protocol Security (IPSec)

- Authentication Header (AH)/Encapsulating Security Payload (ESP) - Connectionless vs. connection-orientedExplain the use and purpose of network services.- DHCP- Scope- Exclusion ranges- Reservation- Dynamic assignment- Static assignment- Lease time- Scope options- Available leases- DHCP relay- IP helper/UDP forwarding - DNSRecord types

1. Address (A vs. AAAA)

2. Canonical name (CNAME)

3. Mail exchange (MX)

4. Start of authority (SOA)

5. Pointer (PTR)

6. Text (TXT)

7. Service (SRV)

8. Name server (NS)Global hierarchy

1. Root DNS servers- Internal vs. external- Zone transfers- Authoritative name servers- Time to live (TTL)- DNS caching- Reverse DNS/reverse lookup/forward lookup- Recursive lookup/iterative lookup - NTP- Stratum- Clients- ServersExplain basic corporate and datacenter network architecture.- Three-tiered- Core- Distribution/aggregation layer- Access/edge - Software-defined networking- Application layer- Control layer- Infrastructure layer- Management plane - Spine and leaf- Software-defined network- Top-of-rack switching- Backbone - Traffic flows- North-South- East-West - Branch office vs. on-premises datacenter vs. colocation

- Storage area networksConnection types

1. Fibre Channel over Ethernet (FCoE)

2. Fibre Channel

3. Internet Small Computer Systems Interface (iSCSI)Summarize cloud concepts and connectivity options.- Deployment models- Public- Private- Hybrid- Community - Service models- Software as a service (SaaS)- Infrastructure as a service (IaaS)- Platform as a service (PaaS)- Desktop as a service (DaaS) - Infrastructure as code- Automation/orchestration - Connectivity options- Virtual private network (VPN)- Private-direct connection to cloud provider - Multitenancy

- Elasticity

- Scalability

- Security implications## Network Implementations - 19%

Compare and contrast various devices, their features, and their appropriate placement on the network.- Networking devices- Layer 2 switch- Layer 3 capable switch- Router- Hub- Access point- Bridge- Wireless LAN controller- Load balancer- Proxy server- Cable modem- DSL modem- Repeater- Voice gateway- Media converter- Intrusion prevention system (IPS)/intrusion detection system (IDS) device- Firewall- VPN headend - Networked devices- Voice over Internet Protocol (VoIP) phone- Printer- Physical access control devices- Cameras- Heating, ventilation, and air conditioning (HVAC) sensorsInternet of Things (IoT)

1. Refrigerator

2. Smart speakers

3. Smart thermostats

4. Smart doorbells- Industrial control systems/supervisory control and data acquisition (SCADA)Compare and contrast routing technologies and bandwidth management concepts.- RoutingDynamic routing

1. Protocols [Routing Internet Protocol (RIP), Open Shortest Path First (OSPF), Enhanced Interior Gateway Routing Protocol (EIGRP), Border Gateway Protocol (BGP)]

2. Link state vs. distance vector vs. hybrid- Static routing- Default route- Administrative distance- Exterior vs. interior- Time to live - Bandwidth management- Traffic shaping- Quality of service (QoS)Given a scenario, configure and deploy common Ethernet switching features.- Data virtual local area network (VLAN)

- Voice VLAN

- Port configurations- Port tagging/802.1QPort aggregation

1. Link Aggregation Control Protocol (LACP)- Duplex- Speed- Flow control- Port mirroring- Port security- Jumbo frames- Auto-medium-dependent interface crossover (MDI-X) - Media access control (MAC) address tables

- Power over Ethernet (PoE)/Power over Ethernet plus (PoE+)

- Spanning Tree Protocol

- Carrier-sense multiple access with collision detection (CSMA/CD)

- Address Resolution Protocol (ARP)

- Neighbor Discovery ProtocolGiven a scenario, install and configure the appropriate wireless standards and technologies.- 802.11 standards- a- b- g- n (WiFi 4)- ac (WiFi 5)- ax (WiFi 6) - Frequencies and range- 2.4GHz- 5GHz - Channels- Regulatory impacts - Channel bonding

- Service set identifier (SSID)- Basic service set- Extended service set- Independent basic service set (Ad-hoc)- Roaming - Antenna types - Omni- Directional - Encryption standards- WiFi Protected Access (WPA)/WPA2 Personal [Advanced Encryption Standard (AES)/Temporal Key Integrity Protocol (TKIP)- WPA/WPA2 Enterprise (AES/TKIP) - Cellular technologies- Code-division multiple access (CDMA)- Global System for Mobile Communications (GSM)- Long-Term Evolution (LTE)- 3G, 4G, 5G - Multiple input, multiple output (MIMO) and multi-user MIMO (MU-MIMO)## Network Operations - 16%

Given a scenario, use the appropriate statistics and sensors to ensure network availability.- Performance

metrics/sensorsDevice/chassis

1. Temperature

2. Central processing unit (CPU) usage

3. MemoryNetwork metrics

1. Bandwidth

2. Latency

3. Jitter - SNMP- Traps- Object identifiers (OIDs)- Management information bases (MIBs) - Network device logsLog reviews

1. Traffic logs

2. Audit logs

3. Syslog- Logging levels/severity levels - Interface statistics/status- Link state (up/down)- Speed/duplex- Send/receive traffic- Cyclic redundancy checks (CRCs)- Protocol packet and byte counts - Interface errors or alerts- CRC errors- Giants- Runts- Encapsulation errors - Environmental factors and sensors- Temperature- Humidity- Electrical- Flooding - Baselines

- NetFlow data

- Uptime/downtime

CompTIA Network+ Exam Certification Details:

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NO.109 A network administrator needs to run a single command-line tool capable of displaying routing table and multicast memberships. Which of the following would BEST help the administrator achieve the requirements?

* arp
* show route
* show config
* netstate

NO.110 A company’s network is set up so all Internet-bound traffic from all remote offices exits through a main datacenter. Which of the following network topologies would BEST describe this setup?

* Bus
* Spine-and-leaf
* Hub-and-spoke
* Mesh

NO.111 A network engineer performs the following tasks to increase server bandwidth:

Connects two network cables from the server to a switch stack

Configure LACP on the switchports

Verifies the correct configurations on the switch interfaces

Which of the following needs to be configured on the server?
* Load balancing
* Multipathing
* NIC teaming
* Clustering

NO.112 A network technician is reviewing an upcoming project’s requirements to implement laaS. Which of the following should the technician consider?
* Software installation processes
* Type of database to be installed
* Operating system maintenance
* Server hardware requirements

NO.113 Which of the following is used to provide networking capability for VMs at Layer 2 of the OSI model?
* VPN
* VRRP
* vSwitch
* VIP

NO.114 Which of the following types of datacenter architectures will MOST likely be used in a large SDN and can be extended beyond the datacenter? (Choose two.)
* iSCSI
* FCoE
* Three-tiered network
* Spine and leaf
* Top-of-rack switching

NO.115 A technician needs to configure a Linux computer for network monitoring. The technician has the following information:

Linux computer details:

Interface	IP address	MAC address
eth0	10.1.2.24	A1:B2:C3:F4:E5:D6

Switch mirror port details:

Interface	IP address	MAC address
eth1	10.1.2.3	A1:B2:C3:D4:E5:F6

After connecting the Linux computer to the mirror port on the switch, which of the following commands should the technician run on the Linux computer?
* ifconfig ecth0 promisc
* ifconfig eth1 up
* ifconfig eth0 10.1.2.3
* ifconfig eth1 hw ether A1:B2:C3:D4:E5:F6

NO.116 Which of the following would MOST likely be used to review previous upgrades to a system?
* Business continuity plan
* Change management
* System life cycle
* Standard operating procedures

NO.117 A network technician reviews an entry on the syslog server and discovers the following message from a switch:

SPANNING-TREE Port 1/1 BLOCKED

Which of the following describes the issue?
* A loop was discovered, and the impact was mitigated.
* An incorrectly pinned cable was disconnected.
* The link-local address on the port is incorrect.
* The port was shut down, and it needs to be reactivated.

NO.118 A network administrator is talking to different vendors about acquiring technology to support a new project for a large company. Which of the following documents will MOST likely need to be signed before information about the project is shared?
* BYOD policy
* NDA
* SLA
* MOU

NO.119 A technician is installing a new fiber connection to a network device in a datacenter. The connection from the device to the switch also traverses a patch panel connection. The chain of connections is in the following order:

Device

LC/LC patch cable

Patch panel

Cross-connect fiber cable

Patch panel

LC/LC patch cable

Switch

The connection is not working. The technician has changed both patch cables with known working patch cables. The device had

been tested and was working properly before being installed. Which of the following is the MOST likely cause of the issue?
* TX/RX is reversed
* An incorrect cable was used
* The device failed during installation
* Attenuation is occurring

NO.120 At the destination host, which of the following OSI model layers will discard a segment with a bad checksum in the UDP header?
* Network
* Data link
* Transport
* Session

NO.121 A company built a new building at its headquarters location. The new building is connected to the company’s LAN via fiber-optic cable. Multiple users in the new building are unable to access the company’s intranet site via their web browser, but they are able to access internet sites. Which of the following describes how the network administrator can resolve this issue?
* Correct the DNS server entries in the DHCP scope
* Correct the external firewall gateway address
* Correct the NTP server settings on the clients
* Correct a TFTP Issue on the company’s server

NO.122 A technician is implementing a new wireless network to serve guests at a local office. The network needs to provide Internet access but disallow associated stations from communicating with each other. Which of the following would BEST accomplish this requirement?
* Wireless client isolation
* Port security
* Device geofencing
* DHCP snooping

NO.123 A technician is troubleshooting a network switch that seems to stop responding to requests intermittently whenever the logging level is set for debugging. Which of the following metrics should the technician check to begin troubleshooting the issue?
* Audit logs
* CPU utilization
* CRC errors
* Jitter

NO.124 Which of the following is a system that is installed directly on a server’s hardware and abstracts the hardware from any guest machines?
* Storage array
* Type 1 hypervisor
* Virtual machine
* Guest QS

NO.125 Which of the following BEST describes a network appliance that warns of unapproved devices that are accessing the network?
* Firewall
* AP
* Proxy server
* IDS

NO.126 Which of the following can be used to centrally manage credentials for various types of administrative privileges on configured network devices?
* SSO
* TACACS+
* Zero Trust
* Separation of duties
* Multifactor authentication

NO.127 According to troubleshooting methodology, which of the following should the technician do NEXT after determining the most likely probable cause of an issue?
* Establish a plan of action to resolve the issue and identify potential effects
* Verify full system functionality and, if applicable, implement preventive measures
* Implement the solution or escalate as necessary
* Test the theory to determine the cause

NO.128 A network engineer is investigating reports of poor network performance. Upon reviewing a report, the engineer finds that jitter at the office is greater than 10ms on the only WAN connection available. Which of the following would be MOST affected by this statistic?
* A VoIP sales call with a customer
* An in-office video call with a coworker
* Routing table from the ISP
* Firewall CPU processing time

NO.129 The network administrator is informed that a user’s email password is frequently hacked by brute-force programs. Which of the following policies should the network administrator implements to BEST mitigate this issue? (Choose two.)
* Role-based access
* Captive portal
* Geofencing
* Two-factor authentication
* Complex passwords
* Explicit deny

NO.130 An ARP request is broadcasted and sends the following request.

”Who is 192.168.1.200? Tell 192.168.1.55”

At which of the following layers of the OSI model does this request operate?
* Application
* Data link
* Transport
* Network
* Session

NO.131 A network administrator is troubleshooting an issue with a new Internet connection. The ISP is asking detailed questions about the configuration of the router that the network administrator is troubleshooting. Which of the following commands is the network administrator using? (Select TWO.)
* tcpdump
* show config
* hostname

* show route
* netstate
* show ip arp

NO.132 A network administrator is required to ensure that auditors have read-only access to the system logs, while systems administrators have read and write access to the system logs, and operators have no access to the system logs. The network administrator has configured security groups for each of these functional categories. Which of the following security capabilities will allow the network administrator to maintain these permissions with the LEAST administrative effort?
* Mandatory access control
* User-based permissions
* Role-based access
* Least privilege

NO.133 A fiber link connecting two campus networks is broken. Which of the following tools should an engineer use to detect the exact break point of the fiber link?
* OTDR
* Tone generator
* Fusion splicer
* Cable tester
* PoE injector