



# CompTIA

## Exam Questions N10-008

CompTIA Network+Exam

#### NEW QUESTION 1

- (Exam Topic 1)

Which of the following DNS records works as an alias to another record?

- A. AAAA
- B. CNAME
- C. MX
- D. SOA

**Answer: B**

#### NEW QUESTION 2

- (Exam Topic 1)

A network administrator is designing a new datacenter in a different region that will need to communicate to the old datacenter with a secure connection. Which of the following access methods would provide the BEST security for this new datacenter?

- A. Virtual network computing
- B. Secure Socket Shell
- C. In-band connection
- D. Site-to-site VPN

**Answer: D**

#### NEW QUESTION 3

- (Exam Topic 1)

Which of the following is the LARGEST MTU for a standard Ethernet frame?

- A. 1452
- B. 1492
- C. 1500
- D. 2304

**Answer: C**

#### NEW QUESTION 4

- (Exam Topic 1)

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?

- A. TX/RX is reversed
- B. An incorrect cable was used
- C. The device failed during installation
- D. Attenuation is occurring

**Answer: A**

#### NEW QUESTION 5

- (Exam Topic 1)

Which of the following devices would be used to manage a corporate WLAN?

- A. A wireless NAS
- B. A wireless bridge
- C. A wireless router
- D. A wireless controller

**Answer: D**

#### NEW QUESTION 6

- (Exam Topic 1)

According to troubleshooting methodology, which of the following should the technician do NEXT after determining the most likely probable cause of an issue?

- A. Establish a plan of action to resolve the issue and identify potential effects
- B. Verify full system functionality and, if applicable, implement preventive measures
- C. Implement the solution or escalate as necessary
- D. Test the theory to determine the cause

**Answer: D**

#### NEW QUESTION 7

- (Exam Topic 1)

A technician is connecting multiple switches to create a large network for a new office. The switches are unmanaged Layer 2 switches with multiple connections between each pair. The network is experiencing an extreme amount of latency. Which of the following is MOST likely occurring?

- A. Ethernet collisions
- B. A DDoS attack
- C. A broadcast storm
- D. Routing loops

**Answer: C**

#### NEW QUESTION 8

- (Exam Topic 1)

Which of the following would MOST likely be used to review previous upgrades to a system?

- A. Business continuity plan
- B. Change management
- C. System life cycle
- D. Standard operating procedures

**Answer: B**

#### NEW QUESTION 9

- (Exam Topic 1)

A network technician is manually configuring the network settings for a new device and is told the network block is 192.168.0.0/20. Which of the following subnets should the technician use?

- A. 255.255.128.0
- B. 255.255.192.0
- C. 255.255.240.0
- D. 255.255.248.0

**Answer: C**

#### NEW QUESTION 10

- (Exam Topic 1)

A network administrator walks into a datacenter and notices an unknown person is following closely. The administrator stops and directs the person to the security desk. Which of the following attacks did the network administrator prevent?

- A. Evil twin
- B. Tailgating
- C. Piggybacking
- D. Shoulder surfing

**Answer: B**

#### NEW QUESTION 10

- (Exam Topic 1)

A technician wants to deploy a new wireless network that comprises 30 WAPs installed throughout a three-story office building. All the APs will broadcast the same SSID for client access. Which of the following BEST describes this deployment?

- A. Extended service set
- B. Basic service set
- C. Unified service set
- D. Independent basic service set

**Answer: B**

#### NEW QUESTION 15

- (Exam Topic 1)

An IT organization needs to optimize speeds for global content distribution and wants to reduce latency in high-density user locations. Which of the following technologies BEST meets the organization's requirements?

- A. Load balancing
- B. Geofencing
- C. Public cloud
- D. Content delivery network
- E. Infrastructure as a service

**Answer: D**

#### NEW QUESTION 19

- (Exam Topic 1)

A network administrator discovers that users in an adjacent building are connecting to the company's guest wireless network to download inappropriate material. Which of the following can the administrator do to MOST easily mitigate this issue?

- A. Reduce the wireless power levels

- B. Adjust the wireless channels
- C. Enable wireless client isolation
- D. Enable wireless port security

**Answer:** A

#### NEW QUESTION 24

- (Exam Topic 1)

A network administrator needs to query the NSs for a remote application. Which of the following commands would BEST help the administrator accomplish this task?

- A. dig
- B. arp
- C. show interface
- D. hostname

**Answer:** A

#### NEW QUESTION 25

- (Exam Topic 1)

A systems administrator needs to improve WiFi performance in a densely populated office tower and use the latest standard. There is a mix of devices that use 2.4 GHz and 5 GHz. Which of the following should the systems administrator select to meet this requirement?

- A. 802.11ac
- B. 802.11ax
- C. 802.11g
- D. 802.11n

**Answer:** B

#### NEW QUESTION 29

- (Exam Topic 1)

A technician is assisting a user who cannot connect to a network resource. The technician first checks for a link light. According to troubleshooting methodology, this is an example of:

- A. using a bottom-to-top approach.
- B. establishing a plan of action.
- C. documenting a finding.
- D. questioning the obvious.

**Answer:** D

#### NEW QUESTION 34

- (Exam Topic 1)

Which of the following technologies provides a failover mechanism for the default gateway?

- A. FHRP
- B. LACP
- C. OSPF
- D. STP

**Answer:** A

#### NEW QUESTION 35

- (Exam Topic 1)

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?

- A. Load balancing
- B. Multipathing
- C. NIC teaming
- D. Clustering

**Answer:** C

#### NEW QUESTION 39

- (Exam Topic 1)

Within the realm of network security, Zero Trust:

- A. prevents attackers from moving laterally through a system.
- B. allows a server to communicate with outside networks without a firewall.
- C. block malicious software that is too new to be found in virus definitions.
- D. stops infected files from being downloaded via websites.

**Answer: C**

**NEW QUESTION 42**

- (Exam Topic 1)

Which of the following would need to be configured to ensure a device with a specific MAC address is always assigned the same IP address from DHCP?

- A. Scope options
- B. Reservation
- C. Dynamic assignment
- D. Exclusion
- E. Static assignment

**Answer: B**

**NEW QUESTION 47**

- (Exam Topic 1)

Which of the following is used to track and document various types of known vulnerabilities?

- A. CVE
- B. Penetration testing
- C. Zero-day
- D. SIEM
- E. Least privilege

**Answer: A**

**NEW QUESTION 50**

- (Exam Topic 1)

At which of the following OSI model layers would a technician find an IP header?

- A. Layer 1
- B. Layer 2
- C. Layer 3
- D. Layer 4

**Answer: C**

**NEW QUESTION 55**

- (Exam Topic 1)

You are tasked with verifying the following requirements are met in order to ensure network security. Requirements:

Datacenter

Ensure network is subnetted to allow all devices to communicate properly while minimizing address space usage

Provide a dedicated server to resolve IP addresses and hostnames correctly and handle port 53 traffic

Building A

Ensure network is subnetted to allow all devices to communicate properly while minimizing address space usage

Provide devices to support 5 additional different office users Add an additional mobile user

Replace the Telnet server with a more secure solution Screened subnet

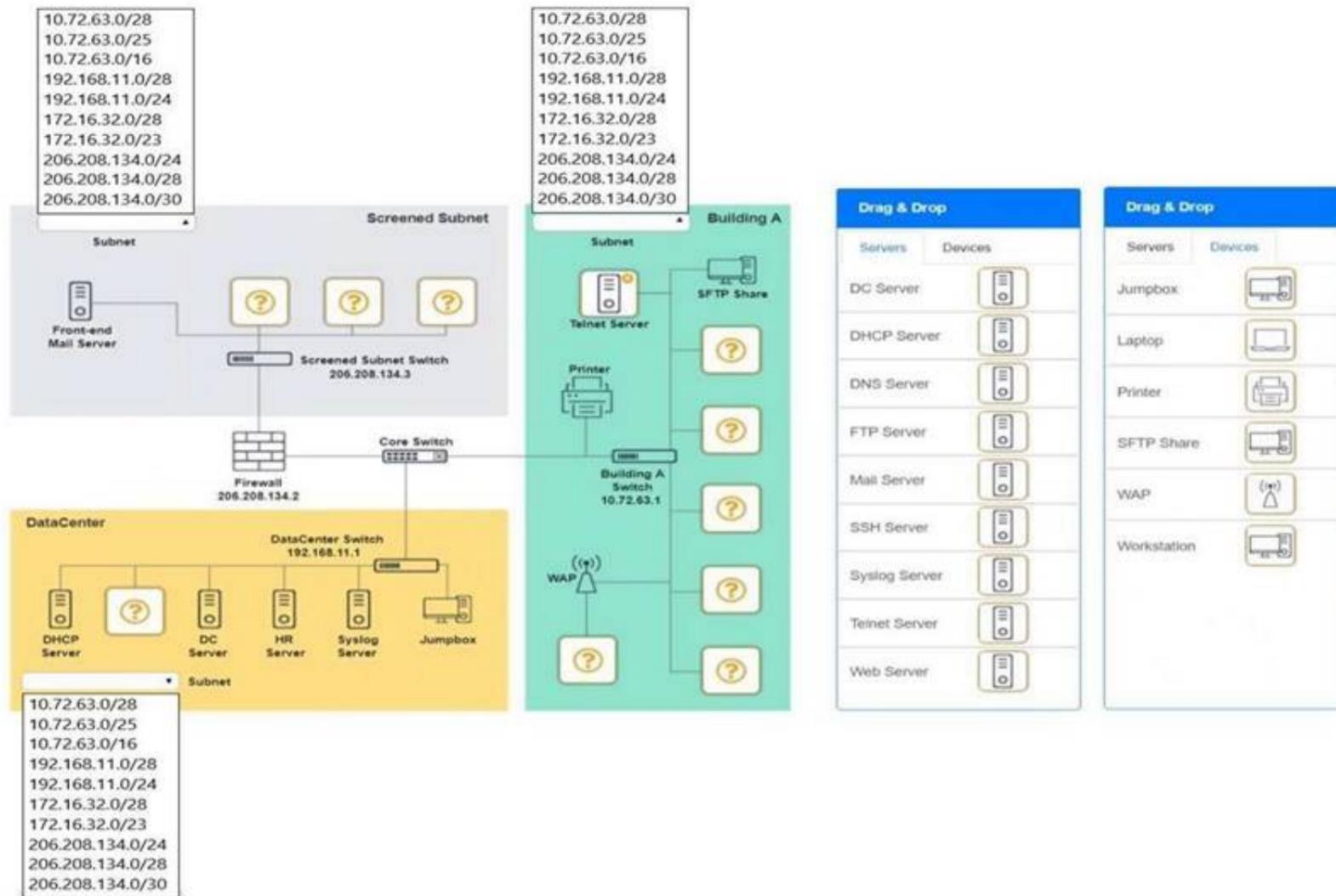
Ensure network is subnetted to allow all devices to communicate properly while minimizing address space usage

Provide a server to handle external 80/443 traffic Provide a server to handle port 20/21 traffic INSTRUCTIONS

Drag and drop objects onto the appropriate locations. Objects can be used multiple times and not all placeholders need to be filled.

Available objects are located in both the Servers and Devices tabs of the Drag & Drop menu.

If at any time you would like to bring back the initial state of the simulation, please click the Reset All button.

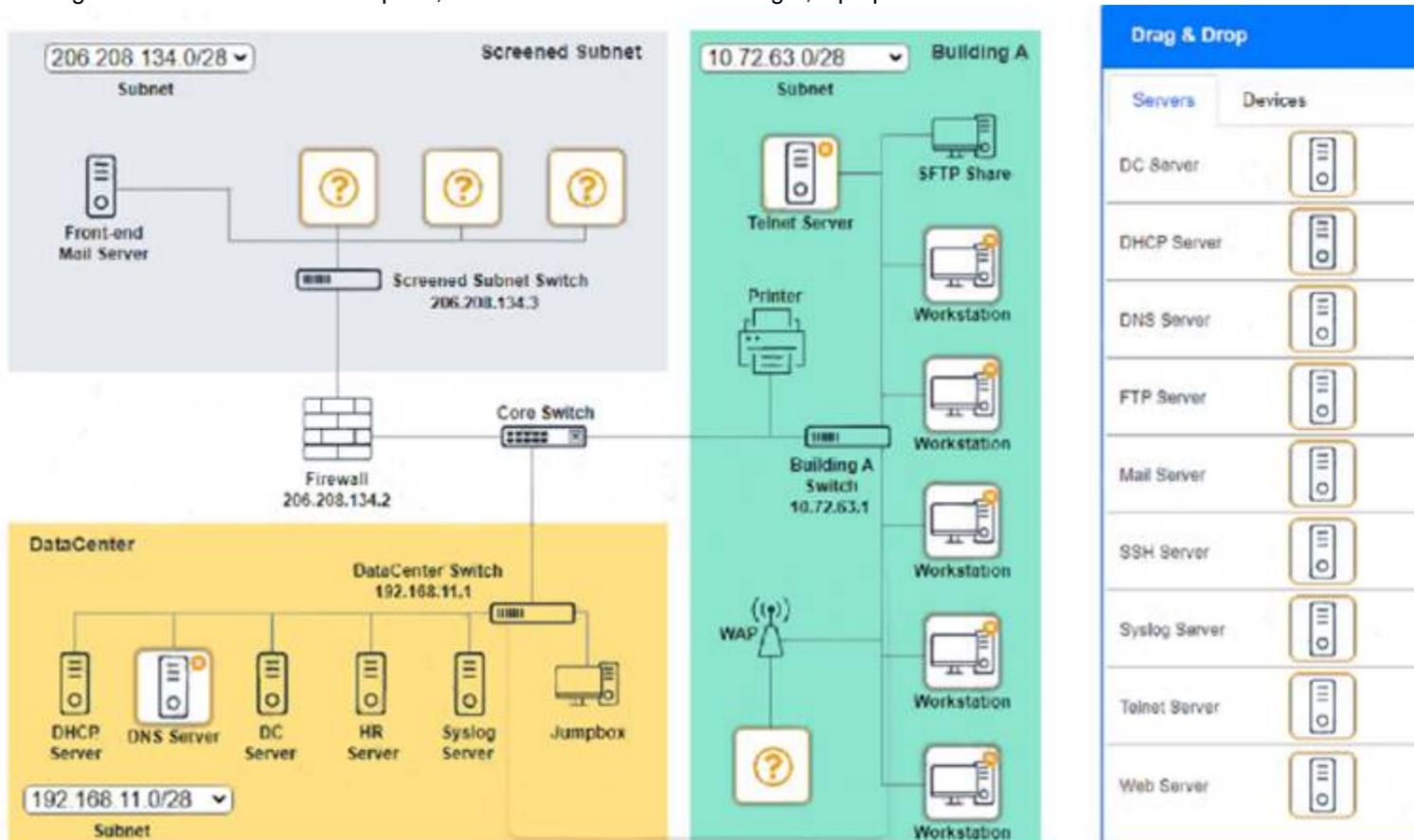


- A. Mastered
- B. Not Mastered

Answer: A

**Explanation:**

Screened Subnet devices – Web server, FTP server  
 Building A devices – SSH server top left, workstations on all 5 on the right, laptop on bottom left  
 DataCenter devices – DNS server.



**NEW QUESTION 57**

- (Exam Topic 1)

Which of the following is MOST likely to generate significant East-West traffic in a datacenter?

- A. A backup of a large video presentation to cloud storage for archival purposes
- B. A duplication of a hosted virtual server to another physical server for redundancy
- C. A download of navigation data to a portable device for offline access
- D. A query from an IoT device to a cloud-hosted server for a firmware update

**Answer:** B

**NEW QUESTION 59**

- (Exam Topic 2)

A network administrator wants to improve the security of the management console on the company's switches and ensure configuration changes made can be correlated to the administrator who conformed them Which of the following should the network administrator implement?

- A. Port security
- B. Local authentication
- C. TACACS+
- D. Access control list

**Answer:** C

**NEW QUESTION 64**

- (Exam Topic 2)

Which of the following is a system that is installed directly on a server's hardware and abstracts the hardware from any guest machines?

- A. Storage array
- B. Type 1 hypervisor
- C. Virtual machine
- D. Guest QS

**Answer:** A

**NEW QUESTION 65**

- (Exam Topic 2)

A systems administrator is running a VoIP network and is experiencing jitter and high latency. Which of the following would BEST help the administrator determine the cause of these issues?

- A. Enabling RADIUS on the network
- B. Configuring SNMP traps on the network
- C. Implementing LDAP on the network
- D. Establishing NTP on the network

**Answer:** B

**NEW QUESTION 69**

- (Exam Topic 2)

The following instructions were published about the proper network configuration for a videoconferencing device:

"Configure a valid static RFC1918 address for your network. Check the option to use a connection over NAT." Which of the following is a valid IP address configuration for the device?

- A. FE80::1
- B. 100.64.0.1
- C. 169.254.1.2
- D. 172.19.0.2
- E. 224.0.0.12

**Answer:** D

**NEW QUESTION 74**

- (Exam Topic 2)

A systems administrator is configuring a firewall using NAT with PAT. Which of the following would be BEST suited for the LAN interface?

- A. 172.15.0.0/18
- B. 172.18.0.0/10
- C. 172.23.0.0/16
- D. 172.28.0.0/8
- E. 172.32.0.0/14

**Answer:** C

**NEW QUESTION 78**

- (Exam Topic 2)

Two remote offices need to be connected securely over an untrustworthy MAN. Each office needs to access network shares at the other site. Which of the following will BEST provide this functionality?

- A. Client-to-site VPN
- B. Third-party VPN service
- C. Site-to-site VPN
- D. Split-tunnel VPN

**Answer:** C

**NEW QUESTION 80**

- (Exam Topic 2)

A rogue AP was found plugged in and providing Internet access to employees in the break room. Which of the following would be BEST to use to stop this from happening without physically removing the WAP?

- A. Password complexity
- B. Port security
- C. Wireless client isolation
- D. Secure SNMP

**Answer: B**

#### NEW QUESTION 84

- (Exam Topic 2)

Which of the following OSI model layers is where conversations between applications are established, coordinated, and terminated?

- A. Session
- B. Physical
- C. Presentation
- D. Data link

**Answer: A**

#### Explanation:

Reference: <https://www.techtarget.com/searchnetworking/definition/OSI#:~:text=The%20session%20layer,and%20termina>

#### NEW QUESTION 86

- (Exam Topic 2)

Which of the following security devices would be BEST to use to provide mechanical access control to the MDF/IDF?

- A. A smart card
- B. A key fob
- C. An employee badge
- D. A door lock

**Answer: B**

#### NEW QUESTION 87

- (Exam Topic 2)

A network technician has multimode fiber optic cable available in an existing IDF. Which of the following Ethernet standards should the technician use to connect the network switch to the existing fiber?

- A. 10GBaseT
- B. 1000BaseT
- C. 1000BaseSX
- D. 1000BaseLX

**Answer: A**

#### NEW QUESTION 88

- (Exam Topic 2)

A SaaS provider has decided to leave an unpatched VM available via a public DMZ port. With which of the following concepts is this technique MOST closely associated?

- A. Insider threat
- B. War driving
- C. Evil twin
- D. Honeytrap

**Answer: D**

#### NEW QUESTION 89

- (Exam Topic 2)

A Chief Information Officer (CIO) wants to improve the availability of a company's SQL database Which of the following technologies should be utilized to achieve maximum availability?

- A. Clustering
- B. Port aggregation
- C. NIC teaming
- D. Snapshots

**Answer: C**

#### NEW QUESTION 91

- (Exam Topic 2)

A user reports a weak signal when walking 20ft (61 m) away from the WAP in one direction, but a strong signal when walking 20ft in the opposite direction The technician has reviewed the configuration and confirmed the channel type is correct There is no jitter or latency on the connection Which of the following would be

the MOST likely cause of the issue?

- A. Antenna type
- B. Power levels
- C. Frequency
- D. Encryption type

**Answer:** A

#### NEW QUESTION 96

- (Exam Topic 2)

A voice engineer is troubleshooting a phone issue. When a call is placed, the caller hears echoes of the receiver's voice. Which of the following are the causes of this issue? (Choose two.)

- A. Jitter
- B. Speed mismatch
- C. QoS misconfiguration
- D. Protocol mismatch
- E. CRC errors
- F. Encapsulation errors

**Answer:** AC

#### NEW QUESTION 98

- (Exam Topic 2)

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?

- A. Wireless client isolation
- B. Port security
- C. Device geofencing
- D. DHCP snooping

**Answer:** A

#### NEW QUESTION 103

- (Exam Topic 2)

A network field technician is installing and configuring a secure wireless network. The technician performs a site survey. Which of the following documents would MOST likely be created as a result of the site survey?

- A. Physical diagram
- B. Heat map
- C. Asset list
- D. Device map

**Answer:** B

#### NEW QUESTION 105

- (Exam Topic 2)

Which of the following is used to provide networking capability for VMs at Layer 2 of the OSI model?

- A. VPN
- B. VRRP
- C. vSwitch
- D. VIP

**Answer:** C

#### NEW QUESTION 106

- (Exam Topic 2)

A technician is connecting DSL for a new customer. After installing and connecting the on-premises equipment, the technician verifies DSL synchronization. When connecting to a workstation, however, the link LEDs on the workstation and modem do not light up. Which of the following should the technician perform during troubleshooting?

- A. Identify the switching loops between the modem and the workstation.
- B. Check for asymmetrical routing on the modem.
- C. Look for a rogue DHCP server on the network.
- D. Replace the cable connecting the modem and the workstation.

**Answer:** D

#### NEW QUESTION 109

- (Exam Topic 3)

Which of the following is an advanced distance vector routing protocol that automates routing tables and also uses some features of link-state routing protocols?

- A. OSPF
- B. RIP

- C. EIGRP
- D. BGP

**Answer:** C

**Explanation:**

EIGRP is an advanced distance vector routing protocol that is able to automatically update routing tables and also uses features of link-state routing protocols, such as the ability to send updates about the current topology of the network. EIGRP also has the ability to use a variety of algorithms to determine the best route for a packet to take, allowing for more efficient routing across the network.

**NEW QUESTION 114**

- (Exam Topic 3)

During the troubleshooting of an E1 line, the point-to-point link on the core router was accidentally unplugged and left unconnected for several hours. However, the network management team was not notified. Which of the following could have been configured to allow early detection and possible resolution of the issue?

- A. Traps
- B. MIB
- C. OID
- D. Baselines

**Answer:** A

**NEW QUESTION 118**

- (Exam Topic 3)

A network technician needs to ensure the company's external mail server can pass reverse lookup checks. Which of the following records would the technician MOST likely configure? (Choose Correct option and give explanation directly from CompTIA Network+ Study guide or documents)

- A. PTR
- B. AAAA
- C. SPF
- D. CNAME

**Answer:** A

**Explanation:**

A PTR (Pointer) record is used to map an IP address to a domain name, which is necessary for reverse lookup checks. Reverse lookup checks are performed by external mail servers to verify the identity of the sender of the email. By configuring a PTR record, the network technician can ensure that the company's external mail server can pass these checks. According to the CompTIA Network+ Study Guide, "A PTR record is used to map an IP address to a domain name, and it is often used for email authentication."

**NEW QUESTION 123**

- (Exam Topic 3)

An organization set up its offices so that a desktop is connected to the network through a VoIP phone. The VoIP vendor requested that voice traffic be segmented separately from non-voice traffic. Which of the following would allow the organization to configure multiple devices with network isolation on a single switch port?

- A. Subinterfaces
- B. Link aggregation
- C. Load balancing
- D. Tunneling

**Answer:** A

**NEW QUESTION 128**

- (Exam Topic 3)

A new office space is being designed. The network switches are up, but no services are running yet. A network engineer plugs in a laptop configured as a DHCP client to a switch. Which of the following IP addresses should be assigned to the laptop?

- A. 10.1.1.1
- B. 169.254.1.128
- C. 172.16.128.128
- D. 192.168.0.1

**Answer:** B

**Explanation:**

When a DHCP client is connected to a network and no DHCP server is available, the client can automatically configure a link-local address in the 169.254.0.0/16 range using the Automatic Private IP Addressing (APIPA) feature. So, the correct answer is option B, 169.254.1.128. This is also known as an APIPA address. Reference: CompTIA Network+ Study Guide, Exam N10-007, Fourth Edition, by Todd Lammle (Chapter 4: IP Addressing)

**NEW QUESTION 129**

- (Exam Topic 3)

When accessing corporate network resources, users are required to authenticate to each application they try to access. Which of the following concepts does this BEST represent?

- A. SSO
- B. Zero Trust
- C. VPN
- D. Role-based access control

**Answer:** B

**NEW QUESTION 131**

- (Exam Topic 3)

Which of the following is a valid and cost-effective solution to connect a fiber cable into a network switch without available SFP ports?

- A. Use a media converter and a UTP cable
- B. Install an additional transceiver module and use GBICs
- C. Change the type of connector from SC to F-type
- D. Use a loopback adapter to make the connection

**Answer:** A

**NEW QUESTION 135**

- (Exam Topic 3)

After rebooting an AP a user is no longer able to connect to the enterprise LAN. A technician plugs a laptop into the same network jack and receives the IP 169.254.0.200. Which of the following is MOST likely causing the issue?

- A. DHCP scope exhaustion
- B. Signal attenuation
- C. Channel overlap
- D. Improper DNS configuration

**Answer:** A

**Explanation:**

DHCP scope exhaustion occurs when the number of available IP addresses to be leased from a DHCP server have been used up. This could be caused by a large number of clients on the network, or a misconfigured

DHCP scope. When this happens, clients will be assigned an IP address from the APIPA range (169.254.0.0 to 169.254.255.255). To resolve this issue, the DHCP scope needs to be expanded or adjusted to accommodate the number of clients on the network.

**NEW QUESTION 137**

- (Exam Topic 3)

Which of the following topologies is designed to fully support applications hosted in on-premises data centers, public or private clouds, and SaaS services?

- A. SDWAN
- B. MAN
- C. PAN
- D. MPLS

**Answer:** A

**NEW QUESTION 139**

- (Exam Topic 3)

A network engineer needs to reduce the overhead of file transfers. Which of the following configuration changes would accomplish that goal?

- A. Link aggregation
- B. Jumbo frames
- C. Port security
- D. Flow control
- E. Lower FTP port

**Answer:** A

**NEW QUESTION 141**

- (Exam Topic 3)

A systems administrator wants to use the least amount of equipment to segment two departments that have cables terminating in the same room. Which of the following would allow this to occur?

- A. A load balancer
- B. A proxy server
- C. A Layer 3 switch
- D. A hub
- E. A Layer 7 firewall
- F. The RSSI was not strong enough on the link

**Answer:** C

**NEW QUESTION 145**

- (Exam Topic 3)

An engineer is gathering data to determine the effectiveness of UPSs in use at remote retail locations. Which of the following statistics can the engineer use to determine the availability of the remote network equipment?

- A. Uptime
- B. NetFlow baseline
- C. SNMP traps
- D. Interface statistics

**Answer:** A

**Explanation:**

Uptime is a statistic that can be used to determine the availability of the remote network equipment. Uptime is the amount of time that a device or system has been running without experiencing any failures or disruptions. It is commonly expressed as a percentage of total time, such as 99.99% uptime. By measuring the uptime of the network equipment at the remote retail locations, the engineer can determine how reliable and available the equipment is.

**NEW QUESTION 146**

- (Exam Topic 3)

An administrator needs to connect two laptops directly to each other using 802.11ac but does not have an AP available. Which of the following describes this configuration?

- A. Basic service set
- B. Extended service set
- C. Independent basic service set
- D. MU-MIMO

**Answer:** C

**NEW QUESTION 149**

- (Exam Topic 3)

A company wants to add a local redundant data center to its network in case of failure at its primary location. Which of the following would give the LEAST amount of redundancy for the company's network?

- A. Cold site
- B. Hot site
- C. Cloud site
- D. Warm site

**Answer:** A

**NEW QUESTION 150**

- (Exam Topic 3)

Network users reported that a recent firmware upgrade to a firewall did not resolve the issue that prompted the upgrade. Which of the following should be performed NEXT?

- A. Reopen the service ticket, request a new maintenance window, and roll back to the anterior firmware version.
- B. Gather additional information to ensure users' concerns are not been caused by a different issue with similar symptoms.
- C. Employ a divide-and-conquer troubleshooting methodology by engaging the firewall vendor's support.
- D. Escalate the issue to the IT management team in order to negotiate a new SLA with the user's manager.

**Answer:** A

**NEW QUESTION 151**

- (Exam Topic 3)

A network administrator needs to configure a server to use the most accurate NTP reference available. Which of the following NTP devices should the administrator select?

- A. Stratum 1
- B. Stratum 2
- C. Stratum 3
- D. Stratum 4

**Answer:** A

**Explanation:**

Stratum 1 devices are the most accurate ntp time sources accessible via a network connection. A Stratum 1 device would normally be synchronised via a Stratum 0 reference clock.

Reference: <https://endruntechnologies.com/products/ntp-time-servers/stratum1>

**NEW QUESTION 156**

- (Exam Topic 3)

A network technician is troubleshooting a specific port on a switch. Which of the following commands should the technician use to see the port configuration?

- A. show route
- B. show interface
- C. show arp
- D. show port

**Answer:** B

**Explanation:**

To see the configuration of a specific port on a switch, the network technician should use the "show interface" command. This command provides detailed information about the interface, including the current configuration, status, and statistics for the interface.

**NEW QUESTION 158**

- (Exam Topic 3)

A company is reviewing ways to cut the overall cost of its IT budget. A network technician suggests removing various computer programs from the IT budget and only providing these programs on an as-needed basis. Which of the following models would meet this requirement?

- A. Multitenancy
- B. IaaS
- C. SaaS
- D. VPN

**Answer: C**

**NEW QUESTION 163**

- (Exam Topic 3)

An IT technician successfully connects to the corporate wireless network at a bank. While performing some tests, the technician observes that the physical address of the DHCP server has changed even though the network connection has not been lost. Which of the following would BEST explain this change?

- A. Server upgrade
- B. Duplicate IP address
- C. Scope exhaustion
- D. Rogue server

**Answer: D**

**Explanation:**

A rogue server is a DHCP server on a network that is not under the administrative control of the network staff. It may provide incorrect IP addresses or other network configuration information to devices on the network, causing them to lose connectivity or be vulnerable to attacks. The physical address of the DHCP server may change if a rogue server takes over the role of assigning IP addresses to devices on the network. This can be detected by monitoring DHCP traffic or using tools such as RogueChecker.

**NEW QUESTION 168**

- (Exam Topic 3)

A network administrator is investigating a network event that is causing all communication to stop. The network administrator is unable to use SSH to connect to the switch but is able to gain access using the serial console port. While monitoring port statistics, the administrator sees the following:

Total Rx (bps)	23,041,464	Total Tx (bps)	621,032
Unicast Rx (Pkts/sec)	102,465	Unicast Tx (Pkts/sec)	66
B/Mcast Rx (Pkts/sec)	21,456.465	B/Mcast Tx (Pkts/sec)	7
Utilization Rx	2.3%	Utilization Tx	0.06%

Which of the following is MOST likely causing the network outage?

- A. Duplicate IP address
- B. High collisions
- C. Asynchronous route
- D. Switch loop

**Answer: B**

**NEW QUESTION 171**

- (Exam Topic 3)

Which of the following is used to elect an STP root?

- A. A bridge ID
- B. A bridge protocol data unit
- C. Interface port priority
- D. A switch's root port

**Answer: B**

**Explanation:**

"Using special STP frames known as bridge protocol data units (BPDUs), switches communicate with other switches to prevent loops from happening in the first place. Configuration BPDUs establish the topology, where one switch is elected root bridge and acts as the center of the STP universe. Each switch then uses the root bridge as a reference point to maintain a loop-free topology."

**NEW QUESTION 172**

- (Exam Topic 3)

A company is considering shifting its business to the cloud. The management team is concerned at the availability of the third-party cloud service. Which of the following should the management team consult to determine the promised availability of the cloud provider?

- A. Memorandum of understanding
- B. Business continuity plan

- C. Disaster recovery plan
- D. Service-level agreement

**Answer:** D

**Explanation:**

A Service-level agreement (SLA) is a document that outlines the responsibilities of a cloud service provider and the customer. It typically includes the agreed-upon availability of the cloud service provider, the expected uptime for the service, and the cost of any downtime or other service interruptions. Consulting the SLA is the best way for the management team to determine the promised availability of the cloud provider. Reference: CompTIA Cloud+ Study Guide, 6th Edition, page 28.

**NEW QUESTION 177**

- (Exam Topic 3)

Which of the following connectors and terminations are required to make a Cat 6 cable that connects from a PC to a non-capable MDIX switch? (Select TWO).

- A. T1A-568-A - TIA-568-B
- B. TIA-568-B - TIA-568-B
- C. RJ11
- D. RJ45
- E. F-type

**Answer:** AD

**NEW QUESTION 178**

- (Exam Topic 3)

Which of the following is a requirement when certifying a network cabling as Cat 7?

- A. Ensure the patch panel is certified for the same category.
- B. Limit 10Gb transmissions to 180ft (55m).
- C. Use F-type connectors on the network terminations.
- D. Ensure the termination standard is TIA/EIA-568-A.

**Answer:** D

**Explanation:**

Category 7 (Cat 7) is a cabling standard that supports 10GBASE-T Ethernet connections up to 100 meters (328 feet). In order for a cabling system to be certified as Cat 7, all components, including the patch panel, must meet the TIA/EIA-568-A standard. This standard requires the use of shielded cables with F-type connectors for the network terminations. Reference: CompTIA Network+ Study Manual, 8th Edition, page 158.

**NEW QUESTION 182**

- (Exam Topic 3)

A technician is troubleshooting a report about network connectivity issues on a workstation. Upon investigation, the technician notes the workstation is showing an APIPA address on the network interface. The technician verifies that the VLAN assignment is correct and that the network interlace has connectivity. Which of the following is MOST likely the issue the workstation is experiencing?

- A. DHCP exhaustion
- B. A rogue DHCP server
- C. A DNS server outage
- D. An incorrect subnet mask

**Answer:** A

**NEW QUESTION 184**

- (Exam Topic 3)

A network administrator is preparing answers for an annual risk assessment that is required for compliance purposes. Which of the following would be an example of an internal threat?

- A. An approved vendor with on-site offices
- B. An infected client that pulls reports from the firm
- C. A malicious attacker from within the same country
- D. A malicious attacker attempting to socially engineer access into corporate offices

**Answer:** A

**Explanation:**

Insider threat= insider threat is defined as the threat that an employee or a contractor will use his or her authorized access, wittingly or unwittingly, to do harm

**NEW QUESTION 188**

- (Exam Topic 3)

Due to space constraints in an IDF, a network administrator can only do a single switch to accommodate three data networks. The administrator needs a configuration that will allow each device to access its expected network without additional connections. The configuration must also allow each device to access the rest of the network. Which of the following should the administrator do to meet these requirements? (Select TWO).

- A. Untag the three VLANs across the uplink
- B. Tag an individual VLAN across the uplink
- C. Untag an individual VLAN per device port
- D. Tag an individual VLAN per device port
- E. Tag the three VLANs across the uplink.
- F. Tag the three VLANs per device port.

**Answer:** AC

**Explanation:**

To achieve this, you should do two things:

- Tag the three VLANs across the uplink port that connects to another switch or router. This will allow data packets from different VLANs to cross over into other networks.
- Untag an individual VLAN per device port that connects to an end device. This will assign each device to its expected network without additional connections.

**NEW QUESTION 192**

- (Exam Topic 3)

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?

- A. arp
- B. show route
- C. show config
- D. netstate

**Answer:** A

**NEW QUESTION 194**

- (Exam Topic 3)

Which of the following OSI model layers would allow a user to access and download files from a remote computer?

- A. Session
- B. Presentation
- C. Network
- D. Application

**Answer:** D

**Explanation:**

The application layer of the OSI model (Open Systems Interconnection) is responsible for providing services to applications that allow users to access and download files from a remote computer. These services include file transfer, email, and web access, as well as other related services. In order for a user to access and download files from a remote computer, the application layer must provide the necessary services that allow the user to interact with the remote computer.

**NEW QUESTION 197**

- (Exam Topic 3)

Which of the following must be functioning properly in order for a network administrator to create an accurate timeline during a troubleshooting process?

- A. NTP
- B. IP helper
- C. Syslog
- D. MySQL

**Answer:** A

**NEW QUESTION 201**

- (Exam Topic 3)

Which of the following describes the ability of a corporate IT department to expand its cloud-hosted VM environment with minimal effort?

- A. Scalability
- B. Load balancing
- C. Multitenancy
- D. Geo-redundancy

**Answer:** A

**Explanation:**

Scalability is the ability of a corporate IT department to expand its cloud-hosted virtual machine (VM) environment with minimal effort. This allows IT departments to quickly and easily scale up their cloud environment to meet increased demand. Scalability also allows for the efficient use of resources, as IT departments can quickly and easily scale up or down as needed.

**NEW QUESTION 205**

- (Exam Topic 3)

A network administrator is adding a new switch to the network. Which of the following network hardening techniques would be BEST to use once the switch is in production?

- A. Disable unneeded ports
- B. Disable SSH service
- C. Disable MAC filtering
- D. Disable port security

**Answer:** A

**NEW QUESTION 206**

- (Exam Topic 3)

A corporate client is experiencing global system outages. The IT team has identified multiple potential underlying causes throughout the enterprise. Each team member has been assigned an area to trouble shoot. Which of the following approaches is being used?

- A. Divide-and-conquer
- B. Top-to-bottom
- C. Bottom-to-top
- D. Determine if anything changed

**Answer:** A

#### NEW QUESTION 207

- (Exam Topic 3)

At which of the following OSI model layers does an IMAP client run?

- A. Layer 2
- B. Layer 4
- C. Layer 6
- D. Layer 7

**Answer:** D

#### NEW QUESTION 208

- (Exam Topic 3)

Users within a corporate network need to connect to the Internet, but corporate network policy does not allow direct connections. Which of the following is MOST likely to be used?

- A. Proxy server
- B. VPN client
- C. Bridge
- D. VLAN

**Answer:** A

#### NEW QUESTION 210

- (Exam Topic 3)

A company has multiple offices around the world. The computer rooms in some office locations are too warm. Dedicated sensors are in each room, but the process of checking each sensor takes a long time. Which of the following options can the company put in place to automate temperature readings with internal resources?

- A. Implement NetFlow.
- B. Hire a programmer to write a script to perform the checks
- C. Utilize ping to measure the response.
- D. Use SNMP with an existing collector server

**Answer:** D

#### Explanation:

SNMP (Simple Network Management Protocol) is a protocol that allows network devices to communicate with a management server. By using SNMP, the company can set up an SNMP agent on each sensor, which will report its temperature readings to an existing collector server. This will enable the company to monitor the temperatures of all their sensors in real-time without the need for manual checks. Additionally, SNMP's scalability means that even if the company adds more rooms or sensors, the existing system can be easily expanded to accommodate them.

#### NEW QUESTION 213

- (Exam Topic 3)

A network administrator would like to purchase a device that provides access ports to endpoints and has the ability to route between networks. Which of the following would be BEST for the administrator to purchase?

- A. An IPS
- B. A Layer 3 switch
- C. A router
- D. A wireless LAN controller

**Answer:** B

#### NEW QUESTION 216

- (Exam Topic 3)

A network administrator is investigating a performance issue on a dual-link connection—VPN and MPLS—to a partner network. The MPLS is the primary path, and the VPN is used as a backup. While communicating, the delay is measured at 18ms, which is higher than the 6ms expected when the MPLS link is operational but lower than the 30ms expected for the VPN connection. Which of the following will MOST likely point to the root cause of the issue?

- A. Checking the routing tables on both sides to ensure there is no asymmetric routing
- B. Checking on the partner network for a missing route pointing to the VPN connection
- C. Running iPerf on both sides to confirm the delay that is measured is accurate
- D. Checking for an incorrect VLAN assignment affecting the MPLS traffic

**Answer:** A

#### Explanation:

Asymmetric routing can occur when two routers have different paths for the same two hosts, resulting in increased latency and possible packet loss. According to the CompTIA Network+ Study Manual, "If the path from the source to the destination is not the same in both directions, the packets will take different routes and the latency can increase significantly." To confirm this, the network administrator should check the routing tables on both sides of the connection and ensure that the same path is used in both directions.

#### NEW QUESTION 219

- (Exam Topic 3)

Which of the following BEST describes hosting several businesses on the same physical infrastructure?

- A. Hybrid
- B. Elasticity
- C. IaaS
- D. Multitenancy

**Answer:** A

#### NEW QUESTION 221

- (Exam Topic 3)

A network administrator wants to check all network connections and see the output in integer form. Which of the following commands should the administrator run on the command line?

- A. netstat
- B. netstat -a
- C. netstat -e
- D. netstat -n

**Answer:** A

#### NEW QUESTION 223

- (Exam Topic 3)

Which of the following security controls indicates unauthorized hardware modifications?

- A. Biometric authentication
- B. Media device sanitization
- C. Change management policy
- D. Tamper-evident seals

**Answer:** A

#### NEW QUESTION 228

- (Exam Topic 3)

A network administrator is troubleshooting a connectivity performance issue. As part of the troubleshooting process, the administrator performs a traceout from the client to the server, and also from the server to the client. While comparing the outputs, the administrator notes they show different hops between the hosts. Which of the following BEST explains these findings?

- A. Asymmetric routing
- B. A routing loop
- C. A switch loop
- D. An incorrect gateway

**Answer:** C

#### NEW QUESTION 231

- (Exam Topic 3)

A Fortune 500 firm is deciding on the kind of data center equipment to install given its five-year budget outlook. The Chief Information Officer is comparing equipment based on the life expectancy of different models.

Which of the following concepts BEST represents this metric?

- A. MTBF
- B. MTRR
- C. RPO
- D. RTO

**Answer:** A

#### NEW QUESTION 232

- (Exam Topic 3)

Which of the following attacks, if successful, would provide a malicious user who is connected to an isolated guest network access to the corporate network?

- A. VLAN hopping
- B. On-path attack
- C. IP spoofing
- D. Evil twin

**Answer:** A

**Explanation:**

The attack which, if successful, would provide a malicious user who is connected to an isolated guest network access to the corporate network is VLAN hopping. VLAN hopping is an attack technique which involves tricking a switch into sending traffic from one VLAN to another. This is done by sending specially crafted packets, which force the switch to send traffic from one VLAN to another, thus allowing the malicious user to gain access to the corporate network. VLAN hopping is an attack technique which involves tricking a switch into sending traffic from one VLAN to another. This is done by sending specially crafted packets, which force the switch to send traffic from one VLAN to another, thus allowing the malicious user to gain access to the corporate network. According to the CompTIA Network+ N10-008 Exam Guide VLAN hopping is a type of attack that is used to gain access to network resources that are not meant to be accessible by a user on a guest network.

#### NEW QUESTION 234

- (Exam Topic 3)

A network administrator is setting up a new phone system and needs to define the location where VoIP phones can download configuration files. Which of the following DHCP services can be used to accomplish this task?

- A. Scope options
- B. Exclusion ranges
- C. Lease time
- D. Relay

**Answer:** A

#### Explanation:

To define the location where VoIP phones can download configuration files, the network administrator can use scope options within the Dynamic Host Configuration Protocol (DHCP) service. Scope options are a set of values that can be configured within a DHCP scope, which defines a range of IP addresses that can be leased to clients on a network. One of the scope options that can be configured is the option for the location of the configuration file server, which specifies the URL or IP address of the server where the configuration files can be downloaded.

<https://pbxbook.com/voip/dhccpfg.html>

#### NEW QUESTION 239

- (Exam Topic 3)

A company just migrated its email service to a cloud solution. After the migration, two-thirds of the internal users were able to connect to their mailboxes, but the connection fails for the other one-third of internal users. Users working externally are not reporting any issues. The network administrator identifies the following output collected from an internal host:

```
c:\user> nslookup newmail.company.com
```

Non-Authoritative answer:

Name: newmail.company.com

IPs: 3.219.13.186, 64.58.225.184, 184.168.131.243

Which of the following verification tasks should the network administrator perform NEXT?

- A. Check the firewall ACL to verify all required IP addresses are included.
- B. Verify the required router PAT rules are properly configured.
- C. Confirm the internal DNS server is replying to requests for the cloud solution.
- D. Validate the cloud console to determine whether there are unlicensed requests.

**Answer:** A

#### NEW QUESTION 243

- (Exam Topic 3)

An auditor assessing network best practices was able to connect a rogue switch into a network Jack and get network connectivity. Which of the following controls would BEST address this risk?

- A. Activate port security on the switchports providing end user access.
- B. Deactivate Spanning Tree Protocol on network interfaces that are facing public areas.
- C. Disable Neighbor Resolution Protocol in the Layer 2 devices.
- D. Ensure port tagging is in place for network interfaces in guest areas

**Answer:** A

#### NEW QUESTION 247

- (Exam Topic 3)

A network administrator installed a new data and VoIP network. Users are now experiencing poor call quality when making calls. Which of the following should the administrator do to increase VoIP performance?

- A. Configure a voice VLAN.
- B. Configure LACP on all VoIP phones.
- C. Configure PoE on the network.
- D. Configure jumbo frames on the network.

**Answer:** A

#### Explanation:

"Benefits of Voice VLAN

It ensures that your VoIP (Voice over Internet Phone) devices do not have to contend directly with all the broadcasts and other traffic from the data VLAN. A voice VLAN can simplify network configuration in some circumstances."

<https://community.fs.com/blog/auto-voip-vs-voice-vlan-what-s-the-difference.html> Jumbo Frames

"When jumbo frames on a VoIP/UC network are enabled, it can cause the same kind of delay to your network transmissions."

"VoIP uses will always not benefit from jumbo frame, as VoIP like gaming, is latency and time sensitive. Jumbo Frame for Internet Purpose: You will not see any performance boost as the files that came across the internet does not support jumbo frame."

<https://www.ankmax.com/newsinfo/1358641.html#:~:text=VoIP%20uses%20will%20always%20not,does%20n>

"To summarize this general best practice guide, you should NOT enable jumbo frame feature as a general home user."

#### NEW QUESTION 248

- (Exam Topic 3)

Which of the following OSI model layers is where a technician would view UDP information?

- A. Physical
- B. Data link
- C. Network
- D. Transport

**Answer: D**

#### NEW QUESTION 253

- (Exam Topic 3)

Which of the following issues are present with RIPv2? (Select TWO).

- A. Route poisoning
- B. Time to converge
- C. Scalability
- D. Unicast
- E. Adjacent neighbors
- F. Maximum transmission unit

**Answer: BC**

#### Explanation:

The disadvantages of RIP (Routing Information Protocol) include the following.

---Outdated, insecure, and slow. This is your parents' protocol. It was a thing before the Web was born.

---The more well-known problem of the 15 hop limitation in which data must travel

---Convergence time is terrible for information propagation in a network

---Metrics. It determines the number of hops from source to destination, and gives no regard to other factors when determining the best path for data to travel

---Overhead. A good example would be routing tables. These are broadcast at half-minute intervals to other routers regardless of whether the data has changed or not. It's essentially like those old cartoons where the town guard in the walled city cries out, '10 o' the clock and all is well!'.  
RIPv2 introduced more security and reduced broadcast traffic, which is relevant for some available answers here.

#### NEW QUESTION 256

- (Exam Topic 3)

Which of the following can be used to centrally manage credentials for various types of administrative privileges on configured network devices?

- A. SSO
- B. TACACS+
- C. Zero Trust
- D. Separation of duties
- E. Multifactor authentication

**Answer: B**

#### Explanation:

TACACS+ is used to authenticate users and authorize access to network resources. This protocol provides greater network security by encrypting the authentication credentials and reducing the risk of unauthorized access. According to the CompTIA Network+ Study Manual, "TACACS+ is an authentication protocol used to centralize authentication and authorization for network devices. It is a more secure alternative to Telnet for handling logins and for granting privileges to users."

#### NEW QUESTION 259

- (Exam Topic 3)

A Network engineer is investigating issues on a Layer 2 Switch. The department typically snares a Switchport during meetings for presentations, but after the first user Shares, no Other users can connect. Which Of the following is MOST likely related to this issue?

- A. Spanning Tree Protocol is enabled on the switch.
- B. VLAN trunking is enabled on the switch.
- C. Port security is configured on the switch.
- D. Dynamic ARP inspection is configured on the switch.

**Answer: C**

#### NEW QUESTION 263

- (Exam Topic 3)

A customer wants to log in to a vendor's server using a web browser on a laptop. Which of the following would require the LEAST configuration to allow encrypted access to the server?

- A. Secure Sockets Layer
- B. Site-to-site VPN
- C. Remote desktop gateway
- D. Client-to-site VPN

**Answer: A**

#### Explanation:

SSL is a widely used protocol for establishing secure, encrypted connections between devices over the Internet. It is typically used to secure communication

between web browsers and servers, and can be easily enabled on a server by installing an SSL certificate.

#### NEW QUESTION 264

- (Exam Topic 3)

A cafeteria is facing lawsuits related to criminal internet access that was made over its guest network. The marketing team, however, insists on keeping the cafeteria phone number as the wireless passphrase. Which of the following actions would improve wireless security while accommodating the marketing team and accepting the terms of use?

- A. Setting WLAN security to use EAP-TLS
- B. Deploying a captive portal for user authentication
- C. Using geofencing to limit the area covered by the WLAN
- D. Configuring guest network isolation

**Answer:** B

#### Explanation:

A captive portal is a web page that is presented to a user before they are allowed to access a network. It is used to authenticate users and to ensure that all users have accepted the terms of use for the network. By deploying a captive portal, the cafeteria can require users to enter their phone number as the passphrase, while still providing an additional layer of security. Reference: CompTIA Network+ Study Guide, 8th Edition, page 182.

#### NEW QUESTION 269

- (Exam Topic 3)

Which of the following is the IEEE link cost for a Fast Ethernet interface in STP calculations?

- A. 2
- B. 4
- C. 19
- D. 100

**Answer:** D

#### Explanation:

The IEEE standard for link cost for a Fast Ethernet interface is 100, and for a Gigabit Ethernet interface is 19. These values are based on the bandwidth of the interface, with lower values indicating a higher-bandwidth interface.

#### NEW QUESTION 273

- (Exam Topic 3)

A network resource was accessed by an outsider as a result of a successful phishing campaign. Which of the following strategies should be employed to mitigate the effects of phishing?

- A. Multifactor authentication
- B. Single sign-on
- C. RADIUS
- D. VPN

**Answer:** A

#### Explanation:

Multifactor authentication is a security measure that requires users to provide multiple pieces of evidence before they can access a network resource. This could include requiring users to enter a username, password, and a code sent to the user's mobile phone before they are allowed access. This ensures that the user is who they say they are, reducing the risk of malicious actors gaining access to network resources as a result of a successful phishing campaign.

#### NEW QUESTION 276

- (Exam Topic 3)

Which of the following bandwidth management techniques uses buffers at the client side to prevent TCP retransmissions from occurring when the ISP starts to drop packets of specific types that exceed the agreed traffic rate?

- A. Traffic shaping
- B. Traffic policing
- C. Traffic marking
- D. Traffic prioritization

**Answer:** D

#### NEW QUESTION 278

- (Exam Topic 3)

A company with multiple routers would like to implement an HA network gateway with the least amount of downtime possible. This solution should not require changes on the gateway setting of the network clients. Which of the following should a technician configure?

- A. Automate a continuous backup and restore process of the system's state of the active gateway.
- B. Use a static assignment of the gateway IP address on the network clients.
- C. Configure DHCP relay and allow clients to receive a new IP setting.
- D. Configure a shared VIP and deploy VRRP on the routers.

**Answer:** D

#### Explanation:

The open standard protocol Virtual Router Redundancy Protocol (VRRP) is similar to HSRP, the differences mainly being in terminology and packet formats. In VRRP, the active router is known as the master, and all other routers in the group are known as backup routers. There is no specific standby router; instead, all backup routers monitor the status of the master, and in the event of a failure, a new master router is selected from the available backup routers based on priority

#### NEW QUESTION 282

- (Exam Topic 3)

A network administrator installed an additional IDF during a building expansion project. Which of the following documents need to be updated to reflect the change? (Select TWO).

- A. Data loss prevention policy
- B. BYOD policy
- C. Acceptable use policy
- D. Non-disclosure agreement
- E. Disaster recovery plan
- F. Physical network diagram

**Answer:** BF

#### NEW QUESTION 283

- (Exam Topic 3)

A network administrator responds to a support ticket that was submitted by a customer who is having issues connecting to a website inside of the company network. The administrator verifies that the customer could not connect to a website using a URL. Which of the following troubleshooting steps would be BEST for the administrator to take?

- A. Check for certificate issues
- B. Contact the ISP
- C. Attempt to connect to the site via IP address
- D. Check the NTP configuration.

**Answer:** C

#### Explanation:

The best option for the administrator to take would be to attempt to connect to the site via IP address. This will help to determine if the issue is related to the website's DNS address or if the site itself is not accessible. Checking for certificate issues may be necessary, but this should be done after the administrator has attempted to connect to the site via IP address. Contacting the ISP is unnecessary since the issue is related to the website inside of the company network, and checking the NTP configuration is not relevant to this issue.

When a customer is having issues connecting to a website using a URL, one of the first troubleshooting steps a network administrator should take is attempting to connect to the site using the IP address of the website. This will help to determine if the issue is related to a DNS resolution problem or a connectivity problem. If the administrator is able to connect to the website using the IP address, then the issue may be related to a DNS problem. However, if the administrator is still unable to connect, then the issue may be related to a connectivity problem. In either case, further troubleshooting steps will be necessary. Checking for certificate issues or NTP configuration, and contacting the ISP would not be the BEST initial steps in this scenario.

#### NEW QUESTION 285

- (Exam Topic 3)

A client who shares office space and an IT closet with another company recently reported connectivity issues throughout the network. Multiple third-party vendors regularly perform on-site maintenance in the shared IT closet. Which of the following security techniques would BEST secure the physical networking equipment?

- A. Disabling unneeded switchports
- B. Implementing role-based access
- C. Changing the default passwords
- D. Configuring an access control list

**Answer:** A

#### NEW QUESTION 286

- (Exam Topic 3)

A technician installed an 8-port switch in a user's office. The user needs to add a second computer in the office, so the technician connects both PCs to the switch and connects the switch to the wall jack. However, the new PC cannot connect to network resources. The technician then observes the following:

- The new computer does not get an IP address on the client's VLAN.
- Both computers have a link light on their NICs.
- The new PC appears to be operating normally except for the network issue.
- The existing computer operates normally.

Which of the following should the technician do NEXT to address the situation?

- A. Contact the network team to resolve the port security issue.
- B. Contact the server team to have a record created in DNS for the new PC.
- C. Contact the security team to review the logs on the company's SIEM.
- D. Contact the application team to check NetFlow data from the connected switch.

**Answer:** A

#### NEW QUESTION 287

- (Exam Topic 3)

A network administrator needs to provide evidence to confirm that recent network outages were caused by increased traffic generated by a recently released application. Which of the following actions will BEST support the administrator's response?

- A. Generate a network baseline report for comparison.
- B. Export the firewall traffic logs.

- C. Collect the router's NetFlow data.
- D. Plot interface statistics for dropped packets.

**Answer:** C

**NEW QUESTION 288**

- (Exam Topic 3)

Which of the following ports are associated with IMAP? (Choose two.)

- A. 25
- B. 110
- C. 143
- D. 587
- E. 993
- F. 995

**Answer:** CE

**Explanation:**

Reference:

<https://billing.precedence.com.au/billing/knowledgebase/70/Mail-Ports-for-POP3-IMAP-and-SMTP.html>

**NEW QUESTION 289**

- (Exam Topic 3)

A network technician is attempting to increase throughput by configuring link port aggregation between a Gigabit Ethernet distribution switch and a Fast Ethernet access switch. Which of the following is the BEST choice concerning speed and duplex for all interfaces that are participating in the link aggregation?

- A. Half duplex and 1GB speed
- B. Full duplex and 1GB speed
- C. Half duplex and 100MB speed
- D. Full duplex and 100MB speed

**Answer:** B

**Explanation:**

The best choice for configuring link port aggregation between a Gigabit Ethernet distribution switch and a Fast Ethernet access switch is to use full duplex and 1GB speed for all interfaces that are participating in the link aggregation. This will allow for maximum throughput, as the full duplex connection will enable simultaneous sending and receiving of data, and the 1GB speed will ensure that the data is transferred quickly.

According to the CompTIA Network+ Study Guide, "Full-duplex Ethernet allows the network adapter to transmit and receive data simultaneously, which can result in double the bandwidth of half-duplex Ethernet." Additionally, the official text states, "Ethernet and Fast Ethernet use different speeds for data transmission, with Ethernet being 1,000 megabits (1 gigabit) per second and Fast Ethernet being 100 megabits per second."

**NEW QUESTION 292**

- (Exam Topic 3)

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. A loop was discovered, and the impact was mitigated.
- B. An incorrectly pinned cable was disconnected.
- C. The link-local address on the port is incorrect.
- D. The port was shut down, and it needs to be reactivated.

**Answer:** A

**NEW QUESTION 296**

- (Exam Topic 3)

A network technician receives a report about a performance issue on a client PC that is connected to port 1/3 on a network switch. The technician observes the following configuration output from the switch:

1/1	Client PC	Connected	Full	1000
1/2	Client PC	Connected	Full	1000
1/3	Client PC	Connected	Full	10

Which of the following is a cause of the issue on port 1/3?

- A. Speed
- B. Duplex
- C. Errors
- D. VLAN

**Answer:** A

**NEW QUESTION 301**

- (Exam Topic 3)

A network administrator is planning a WLAN for a soccer stadium and was advised to use MU-MIMO to improve connection performance in high-density areas. The project requires compatibility with clients connecting using 2.4GHz or 5GHz frequencies. Which of the following would be the BEST wireless standard for this

project?

- A. 80211ac
- B. 802.11ax
- C. 802.11g
- D. 80211n

**Answer: B**

#### NEW QUESTION 302

- (Exam Topic 3)

An engineer needs to restrict the database servers that are in the same subnet from communicating with each other. The database servers will still need to communicate with the application servers in a different subnet. In some cases, the database servers will be clustered, and the servers will need to communicate with other cluster members. Which of the following technologies will be BEST to use to implement this filtering without creating rules?

- A. Private VLANs
- B. Access control lists
- C. Firewalls
- D. Control plane policing

**Answer: A**

#### Explanation:

"Use private VLANs: Also known as port isolation, creating a private VLAN is a method of restricting switch ports (now called private ports) so that they can communicate only with a particular uplink. The private VLAN usually has numerous private ports and only one uplink, which is usually connected to a router, or firewall."

#### NEW QUESTION 305

- (Exam Topic 3)

Which of the following is the MOST cost-effective alternative that provides proper cabling and supports gigabit Ethernet devices?

- A. Twisted cable with a minimum Cat 5e certification
- B. Multimode fiber with an SC connector
- C. Twinaxial cabling using an F-type connector
- D. Cable termination using TIA/EIA-568-B

**Answer: A**

#### Explanation:

twisted cable with a minimum Cat 5e certification is the MOST cost-effective alternative that provides proper cabling and supports gigabit Ethernet devices.

#### NEW QUESTION 309

- (Exam Topic 3)

An employee reports to a network administrator that internet access is not working. Which of the following should the administrator do FIRST?

- A. Establish a theory of probable cause.
- B. Identify symptoms.
- C. Determine if anything has changed.
- D. Ask the user to restart the computer.

**Answer: C**

#### Explanation:

When a user reports that internet access is not working, it is important to first determine if there have been any recent changes to the network or the user's computer that could have caused the issue. This could include changes to the network configuration, the installation of new software or hardware, or other events that could have impacted the user's ability to access the internet. By determining if anything has changed, the administrator can narrow down the possible causes of the issue and focus on addressing the most likely cause.

#### NEW QUESTION 313

- (Exam Topic 3)

An administrator would like to create a fault-tolerant ring between three switches within a Layer 2 network. Which of the following Ethernet features should the administrator employ?

- A. Spanning Tree Protocol
- B. Open Shortest Path First
- C. Port mirroring
- D. An interior gateway protocol

**Answer: A**

#### Explanation:

Spanning Tree Protocol (STP) is a network protocol that ensures a loop-free topology in Ethernet networks by actively blocking certain links and enabling others. STP prevents loops by putting some of the links in a blocking state, effectively creating a loop-free topology. This ensures that there is only one active path between two devices, which helps prevent network loops and the associated problems (such as broadcast storms) that can result from them. STP is used to create a fault-tolerant ring between three switches within a Layer 2 network.

#### NEW QUESTION 316

- (Exam Topic 3)

A company's data center is hosted at its corporate office to ensure greater control over the security of sensitive data. During times when there are increased workloads, some of the company's non-sensitive data is shifted to an external cloud provider. Which of the following cloud deployment models does this describe?

- A. Hybrid
- B. Community
- C. Public
- D. Private

**Answer:** A

#### NEW QUESTION 321

- (Exam Topic 3)

The lack of a formal process to grant network permissions to different profiles of employees and contractors is leading to an increasing number of security incidents. Non-uniform and overly permissive network accesses are being granted. Which of the following would be the MOST appropriate method to improve the security of the environment?

- A. Change the default permissions to implicit deny
- B. Configure uniform ACLs to employees and NAC for contractors.
- C. Deploy an RDP server to centralize the access to the network
- D. Implement role-based access control

**Answer:** D

#### Explanation:

The most appropriate method to improve the security of the environment would be to implement role-based access control (RBAC). With RBAC, users are granted access to the network based on their role within the organization. This allows for more granular access control, as different roles may require different levels of access. Additionally, this ensures that users only have access to the resources they need and no more. This helps to reduce the risk of unauthorized access or misuse of the network. References and further information can be found in the CompTIA Network+ Study Manual, Chapter 8, Access Control.

RBAC is a method of restricting network access based on the roles of individual users within the organization. With RBAC, users are granted access only to the resources they need to perform their specific job functions. This approach reduces the risk of unauthorized access, provides greater visibility into user activity, and simplifies network management.

Changing the default permissions to implicit deny may improve security, but it could also cause issues for legitimate users who require access to specific resources. Configuring uniform ACLs and NAC for contractors is a step in the right direction, but it may not be enough to address the overall lack of a formal process for granting network permissions. Deploying an RDP server to centralize access to the network is not a viable solution, as it would not address the root cause of the security incidents.

Therefore, the most appropriate option is to implement role-based access control. Reference: CompTIA Network+ Study Guide, Fourth Edition, Chapter 7, section 7.4.

#### NEW QUESTION 326

- (Exam Topic 3)

Which of the following would be the MOST likely attack used to bypass an access control vestibule?

- A. Tailgating
- B. Phishing
- C. Evil twin
- D. Brute-force

**Answer:** A

#### Explanation:

Tailgating is when someone follows an authorized person into a restricted area without having the proper credentials. This is usually done by pretending to be with the authorized person, or by offering assistance. Tailgating is a social engineering attack and does not require any technical skill.

#### NEW QUESTION 330

- (Exam Topic 3)

Which of the following is an example of on-demand scalable hardware that is typically housed in the vendor's data center?

- A. DaaS
- B. IaaS
- C. PaaS
- D. SaaS

**Answer:** B

#### NEW QUESTION 331

- (Exam Topic 3)

A malicious user is using special software to perform an on-path attack. Which of the following best practices should be configured to mitigate this threat?

- A. Dynamic ARP inspection
- B. Role-based access
- C. Control plane policing
- D. MAC filtering

**Answer:** A

#### NEW QUESTION 335

- (Exam Topic 3)

A company's web server is hosted at a local ISP. This is an example of:

- A. allocation.
- B. an on-premises data center.
- C. a branch office.
- D. a cloud provider.

**Answer:** D

#### **NEW QUESTION 339**

- (Exam Topic 3)

A new global ISP needs to connect from central offices in North America to the United Kingdom. Which of the following would be the BEST cabling solution for this project?

- A. Single-mode
- B. Coaxial
- C. Cat 6a
- D. Twinaxial

**Answer:** A

#### **Explanation:**

For a new global ISP to connect from central offices in North America to the United Kingdom, the best cabling solution would be single-mode fiber optic cable. Single-mode fiber optic cable is a type of cable that is used to transmit data over long distances using light signals. It is typically used in long-haul communication networks, such as those that connect different countries or continents.

#### **NEW QUESTION 340**

- (Exam Topic 3)

A technician is contracted to install a redundant cluster of devices from the ISP. In case of a hardware failure within the network. Which of the following would provide the BEST redundant solution in Layer 2 devices?

- A. Multiple routers
- B. Multiple switches
- C. Multiple firewalls
- D. Multiple budgets

**Answer:** B

#### **NEW QUESTION 341**

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