

CompTIA

Exam Questions N10-008

CompTIA Network+Exam



NEW QUESTION 1

- (Topic 1)

Branch users are experiencing issues with videoconferencing. Which of the following will the company MOST likely configure to improve performance for these applications?

- A. Link Aggregation Control Protocol
- B. Dynamic routing
- C. Quality of service
- D. Network load balancer
- E. Static IP addresses

Answer: C

Explanation:

To improve performance for videoconferencing, the company should configure Quality of Service (QoS). This technology allows for the prioritization of network traffic, ensuring that videoconferencing traffic is given higher priority and therefore better performance. Link Aggregation Control Protocol (LACP), Dynamic routing, Network load balancer, and Static IP addresses are not directly related to improving performance for videoconferencing.

References:

? Network+ N10-007 Certification Exam Objectives, Objective 2.6: Given a scenario, implement and configure the appropriate wireless security and implement the appropriate QoS concepts.

NEW QUESTION 2

- (Topic 1)

Which of the following BEST describes a network appliance that warns of unapproved devices that are accessing the network?

- A. Firewall
- B. AP
- C. Proxy server
- D. IDS

Answer: D

Explanation:

IDS stands for intrusion detection system, which is a network appliance that monitors network traffic and alerts administrators of any suspicious or malicious activity. An IDS can warn of unapproved devices that are accessing the network by detecting anomalies, signatures, or behaviors that indicate unauthorized access attempts or attacks. References: [https://partners.comptia.org/docs/default-source/resources/comptia-network-n10-008-exam-objectives-\(2-0\)](https://partners.comptia.org/docs/default-source/resources/comptia-network-n10-008-exam-objectives-(2-0)), <https://www.cisco.com/c/en/us/products/security/what-is-an-intrusion-detection-system-ids.html>

NEW QUESTION 3

- (Topic 1)

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?

- A. Audit logs
- B. CPU utilization
- C. CRC errors
- D. Jitter

Answer: B

Explanation:

CPU utilization is a metric that measures the percentage of time a CPU spends executing instructions. When the logging level is set for debugging, the router may generate a large amount of logging data, which can increase CPU utilization and cause the router to stop responding to requests intermittently. References: ? Network+ N10-008 Objectives: 2.1 Given a scenario, troubleshoot common physical connectivity issues.

NEW QUESTION 4

- (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

Explanation:

A broadcast storm is most likely occurring when connecting multiple unmanaged Layer 2 switches with multiple connections between each pair. A broadcast storm is a situation where broadcast packets flood a network segment and consume all the available bandwidth. It can be caused by loops in the network topology, where broadcast packets are endlessly forwarded by switches without any loop prevention mechanism. Unmanaged switches do not support features such as Spanning Tree Protocol (STP) or Rapid Spanning Tree Protocol (RSTP) that can detect and block loops. References: <https://www.cisco.com/c/en/us/support/docs/lan-switching/spanning-tree-protocol/10556-16.html>

NEW QUESTION 5

- (Topic 1)

The following configuration is applied to a DHCP server connected to a VPN concentrator:

IP address: 10.0.0.1
Subnet mask: 255.255.255.0
Gateway: 10.0.0.254

There are 300 non-concurrent sales representatives who log in for one hour a day to upload reports, and 252 of these representatives are able to connect to the VPN without any issues. The remaining sales representatives cannot connect to the VPN over the course of the day. Which of the following can be done to resolve the issue without utilizing additional resources?

- A. Decrease the lease duration
- B. Reboot the DHCP server
- C. Install a new VPN concentrator
- D. Configure a new router

Answer: A

Explanation:

Decreasing the lease duration on the DHCP server will cause clients to renew their IP address leases more frequently, freeing up IP addresses for other clients to use. References: CompTIA Network+ Certification Study Guide, Chapter 3: IP Addressing.

NEW QUESTION 6

- (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

Explanation:

East-West traffic refers to data flows between servers or devices within the same datacenter. When a hosted virtual server is duplicated to another physical server for redundancy, it generates significant East-West traffic as the data is replicated between the two servers. References: ? Network+ N10-008 Objectives: 3.3 Given a scenario, implement secure network architecture concepts.

NEW QUESTION 7

- (Topic 1)

An administrator is writing a script to periodically log the IPv6 and MAC addresses of all the devices on a network segment. Which of the following switch features will MOST likely be used to assist with this task?

- A. Spanning Tree Protocol
- B. Neighbor Discovery Protocol
- C. Link Aggregation Control Protocol
- D. Address Resolution Protocol

Answer: B

Explanation:

The switch feature that is most likely to be used to assist with logging IPv6 and MAC addresses of devices on a network segment is Neighbor Discovery Protocol (NDP). NDP is used by IPv6 to discover and maintain information about other nodes on the network, including their IPv6 and MAC addresses. By periodically querying NDP, the administrator can log this information for auditing purposes. References: ? CompTIA Network+ Certification Study Guide, Exam N10-007, Fourth Edition, Chapter 2: The OSI Model and Networking Protocols, Objective 2.1: Compare and contrast TCP and UDP ports, protocols, and their purposes.

NEW QUESTION 8

- (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

Explanation:

802.11ax is the latest WiFi standard that improves WiFi performance in densely populated environments and supports both 2.4 GHz and 5 GHz bands. 802.11ac is the previous standard that only supports 5 GHz band. 802.11g and 802.11n are older standards that support 2.4 GHz band only or both bands respectively. References: [https://partners.comptia.org/docs/default-source/resources/comptia-network-n10-008-exam-objectives-\(2-0\)](https://partners.comptia.org/docs/default-source/resources/comptia-network-n10-008-exam-objectives-(2-0)), <https://www.techtarget.com/searchnetworking/tip/Whats-the-difference-between-80211ax-vs-80211ac>

NEW QUESTION 9

- (Topic 1)

Which of the following types of devices can provide content filtering and threat protection,

and manage multiple IPSec site-to-site connections?

- A. Layer 3 switch
- B. VPN headend
- C. Next-generation firewall
- D. Proxy server
- E. Intrusion prevention

Answer: C

Explanation:

Next-generation firewalls can provide content filtering and threat protection, and can manage multiple IPSec site-to-site connections. References: CompTIA Network+ Certification Study Guide, Chapter 5: Network Security.

NEW QUESTION 10

- (Topic 1)

Which of the following factors should be considered when evaluating a firewall to protect a datacenter's east-west traffic?

- A. Replication traffic between an on-premises server and a remote backup facility
- B. Traffic between VMs running on different hosts
- C. Concurrent connections generated by Internet DDoS attacks
- D. VPN traffic from remote offices to the datacenter's VMs

Answer: B

Explanation:

When evaluating a firewall to protect a datacenter's east-west traffic, it is important to consider traffic between VMs running on different hosts. This type of traffic is referred to as east-west traffic and is often protected by internal firewalls. By implementing firewalls, an organization can protect their internal network against threats such as lateral movement, which can be caused by attackers who have breached a perimeter firewall. References: Network+ Certification Study Guide, Chapter 5: Network Security

NEW QUESTION 10

- (Topic 1)

A network engineer configured new firewalls with the correct configuration to be deployed to each remote branch. Unneeded services were disabled, and all firewall rules were applied successfully. Which of the following should the network engineer perform NEXT to ensure all the firewalls are hardened successfully?

- A. Ensure an implicit permit rule is enabled
- B. Configure the log settings on the firewalls to the central syslog server
- C. Update the firewalls with current firmware and software
- D. Use the same complex passwords on all firewalls

Answer: C

Explanation:

Updating the firewalls with current firmware and software is an important step to ensure all the firewalls are hardened successfully, as it can fix any known vulnerabilities or bugs and provide new features or enhancements. Enabling an implicit permit rule is not a good practice for firewall hardening, as it can allow unwanted traffic to pass through the firewall. Configuring the log settings on the firewalls to the central syslog server is a good practice for monitoring and auditing purposes, but it does not harden the firewalls themselves. Using the same complex passwords on all firewalls is not a good practice for password security, as it can increase the risk of compromise if one firewall is breached. References: CompTIA Network+ Certification Exam Objectives Version 2.0 (Exam Number: N10-006), Domain 3.0 Network Security, Objective 3.3 Given a scenario, implement network hardening techniques.

NEW QUESTION 12

- (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

Explanation:

Tailgating is a physical security attack where an unauthorized person follows an authorized person into a restricted area without proper identification or authorization. The network administrator prevented this attack by stopping and directing the person to the security desk. References: CompTIA Network+ Certification Exam Objectives Version 2.0 (Exam Number: N10-006), Domain 3.0 Network Security, Objective 3.1 Compare and contrast risk-related concepts.

NEW QUESTION 17

- (Topic 1)

Which of the following ports is commonly used by VoIP phones?

- A. 20
- B. 143
- C. 445
- D. 5060

Answer: D

Explanation:

TCP/UDP port 5060 is commonly used by VoIP phones. It is the default port for SIP (Session Initiation Protocol), which is a signaling protocol that establishes, modifies, and terminates multimedia sessions over IP networks. SIP is widely used for VoIP applications such as voice and video calls. References: <https://www.voip-info.org/session-initiation-protocol/>

NEW QUESTION 18

- (Topic 1)

A network device is configured to send critical events to a syslog server; however, the following alerts are not being received: Severity 5 LINK-UPDOWN: Interface 1/1, changed state to down Severity 5 LINK-UPDOWN: Interface 1/3, changed state to down Which of the following describes the reason why the events are not being received?

- A. The network device is not configured to log that level to the syslog server
- B. The network device was down and could not send the event
- C. The syslog server is not compatible with the network device
- D. The syslog server did not have the correct MIB loaded to receive the message

Answer: A

Explanation:

The reason why the alerts are not being received is that the network device is not configured to log that level to the syslog server. The severity level for the events may need to be adjusted in order for them to be sent to the syslog server. References: Network+ Certification Study Guide, Chapter 8: Network Troubleshooting

NEW QUESTION 20

- (Topic 1)

An engineer is configuring redundant network links between switches. Which of the following should the engineer enable to prevent network stability issues?

- A. 802.1Q
- B. STP
- C. Flow control
- D. CSMA/CD

Answer: B

Explanation:

Spanning Tree Protocol (STP) should be enabled when configuring redundant network links between switches. STP ensures that only one active path is used at a time, preventing network loops and stability issues.

References:

? CompTIA Network+ Certification Study Guide

NEW QUESTION 22

- (Topic 1)

Which of the following would be BEST to use to detect a MAC spoofing attack?

- A. Internet Control Message Protocol
- B. Reverse Address Resolution Protocol
- C. Dynamic Host Configuration Protocol
- D. Internet Message Access Protocol

Answer: B

Explanation:

Reverse Address Resolution Protocol (RARP) is a protocol that allows a device to obtain its MAC address from its IP address. A MAC spoofing attack is an attack where a device pretends to have a different MAC address than its actual one. RARP can be used to detect a MAC spoofing attack by comparing the MAC address obtained from RARP with the MAC address obtained from other sources, such as ARP or DHCP. References: [https://partners.comptia.org/docs/default-source/resources/comptia-network-n10-008-exam-objectives-\(2-0\)](https://partners.comptia.org/docs/default-source/resources/comptia-network-n10-008-exam-objectives-(2-0)), <https://www.techopedia.com/definition/25597/reverse-address-resolution-protocol-rarp>

NEW QUESTION 24

- (Topic 1)

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+ (Terminal Access Controller Access Control System Plus) can be used to centrally manage credentials for various types of administrative privileges on configured network devices. This protocol separates authentication, authorization, and accounting (AAA) functions, providing more granular control over access to network resources.

References:

? Network+ N10-007 Certification Exam Objectives, Objective 4.2: Given a scenario, implement secure network administration principles.

NEW QUESTION 26

- (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

Explanation:

CVE stands for Common Vulnerabilities and Exposures, which is a list of publicly disclosed cybersecurity vulnerabilities that is free to search, use, and incorporate into products and services. CVE provides a standardized identifier and description for each vulnerability, as well as references to related sources of information. CVE helps to track and document various types of known vulnerabilities and facilitates communication and coordination among security professionals. References: [https://partners.comptia.org/docs/default-source/resources/comptia-network-n10-008-exam-objectives-\(2-0\)](https://partners.comptia.org/docs/default-source/resources/comptia-network-n10-008-exam-objectives-(2-0)), <https://cve.mitre.org/cve/>

NEW QUESTION 28

- (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

Explanation:

NIC teaming is a technique that combines two or more network interface cards (NICs) on a server into a single logical interface that can increase bandwidth, provide redundancy, and balance traffic. NIC teaming can be configured with different modes and algorithms depending on the desired outcome. Link Aggregation Control Protocol (LACP) is a protocol that enables NIC teaming by dynamically bundling multiple links between two devices into one logical link. References: [https://partners.comptia.org/docs/default-source/resources/comptia-network-n10-008-exam-objectives-\(2-0\)](https://partners.comptia.org/docs/default-source/resources/comptia-network-n10-008-exam-objectives-(2-0)), <https://docs.microsoft.com/en-us/windows-server/networking/technologies/nic-teaming/nic-teaming>

NEW QUESTION 31

- (Topic 1)

An engineer notices some late collisions on a half-duplex link. The engineer verifies that the devices on both ends of the connection are configured for half duplex. Which of the following is the MOST likely cause of this issue?

- A. The link is improperly terminated
- B. One of the devices is misconfigured
- C. The cable length is excessive
- D. One of the devices has a hardware issue

Answer: C

Explanation:

In a half-duplex link, devices can only send or receive data at one time, not simultaneously. Late collisions occur when devices transmit data at the same time after waiting for a clear channel. One of the causes of late collisions is excessive cable length, which increases the propagation delay and makes it harder for devices to detect collisions. The link termination, device configuration, and device hardware are not likely to cause late collisions on a half-duplex link.

NEW QUESTION 34

- (Topic 1)

Which of the following provides redundancy on a file server to ensure the server is still connected to a LAN even in the event of a port failure on a switch?

- A. NIC teaming
- B. Load balancer
- C. RAID array
- D. PDUs

Answer: A

Explanation:

NIC teaming, also known as network interface card teaming or link aggregation, allows multiple network interface cards to be grouped together to provide redundancy and increased throughput. In the event of a port failure on a switch, NIC teaming ensures that the file server remains connected to the LAN by automatically switching to another network interface card.

References: CompTIA Network+ Certification Study Guide, Sixth Edition by Glen E. Clarke

NEW QUESTION 36

- (Topic 1)

A network technician is installing new software on a Windows-based server in a different geographical location. Which of the following would be BEST for the technician to use to perform this task?

- A. RDP
- B. SSH
- C. FTP
- D. DNS

Answer: A

Explanation:

RDP (Remote Desktop Protocol) is the best option for a network technician to use when installing new software on a Windows-based server in a different geographical location. This protocol allows the technician to connect to the server remotely and control it as if they were physically present.

References:

? Network+ N10-007 Certification Exam Objectives, Objective 2.2: Given a scenario, implement the appropriate network-based security and troubleshoot common connectivity issues.

NEW QUESTION 40

- (Topic 1)

Several WIFI users are reporting the inability to connect to the network. WLAN users on the guest network are able to access all network resources without any performance issues. The following table summarizes the findings after a site survey of the area in question:

Location	AP 1	AP 2	AP 3	AP 4
SSID	Corp1	Corp1	Corp1/Guest	Corp1/Guest
Channel	2	1	5	11
RSSI	-81dBm	-82dBm	-44dBm	-41dBm
Antenna type	Omni	Omni	Directional	Directional

Which of the following should a wireless technician do NEXT to troubleshoot this issue?

- A. Reconfigure the channels to reduce overlap
- B. Replace the omni antennas with directional antennas
- C. Update the SSIDs on all the APs
- D. Decrease power in AP 3 and AP 4

Answer: B

Explanation:

Based on the site survey table, we can see that AP 2, AP 3, and AP 4 are all broadcasting on the same channel, which can cause interference and affect performance. Therefore, the next step a wireless technician should take to troubleshoot this issue is to reconfigure the channels to reduce overlap. This will help to improve network performance and eliminate any interference.

References:

? Network+ N10-007 Certification Exam Objectives, Objective 2.8: Given a scenario, troubleshoot common wireless problems and perform site surveys.

NEW QUESTION 43

- (Topic 1)

Which of the following is used to prioritize Internet usage per application and per user on the network?

- A. Bandwidth management
- B. Load balance routing
- C. Border Gateway Protocol
- D. Administrative distance

Answer: A

Explanation:

Bandwidth management is used to prioritize Internet usage per application and per user on the network. This allows an organization to allocate network resources to mission-critical applications and users, while limiting the bandwidth available to non- business-critical applications. References: Network+ Certification Study Guide, Chapter 2: Network Operations

NEW QUESTION 45

- (Topic 1)

A technician is writing documentation regarding a company's server farm. The technician needs to confirm the server name for all Linux servers. Which of the following commands should the technician run?

- A. ipconfig
- B. nslookup
- C. arp
- D. route

Answer: B

Explanation:

The nslookup command should be run to confirm the server name for all Linux servers. Nslookup is a tool that queries DNS servers to resolve hostnames to IP addresses or vice versa. It can also provide other information about DNS records, such as MX, NS, SOA, etc. By running nslookup with the IP address of a Linux server, the technician can obtain its hostname. References: <https://www.howtogeek.com/663056/how-to-use-the-nslookup-command-on-linux/>

NEW QUESTION 49

- (Topic 1)

Access to a datacenter should be individually recorded by a card reader even when multiple employees enter the facility at the same time. Which of the following allows the enforcement of this policy?

- A. Motion detection
- B. Access control vestibules
- C. Smart lockers
- D. Cameras

Answer: B

Explanation:

The most effective security mechanism against physical intrusions due to stolen credentials would likely be a combination of several of these options. However, of the options provided, the most effective security mechanism would probably be an access control vestibule. An access control vestibule is a secure area that is located between the outer perimeter of a facility and the inner secure area. It is designed to provide an additional layer of security by requiring that individuals pass through a series of security checks before being allowed access to the secure area. This could include biometric authentication, access card readers, and motion detection cameras.

Access control vestibules allow the enforcement of the policy that access to a datacenter should be individually recorded by a card reader even when multiple employees enter the facility at the same time. An access control vestibule is a physical security device that consists of two doors with an interlocking mechanism. Only one door can be opened at a time, and only one person can pass through each door. This prevents tailgating or piggybacking, where unauthorized persons follow authorized persons into a secure area. An access control vestibule can also be integrated with a card reader or other authentication system to record each individual's access. References: <https://www.boonedam.us/blog/what-are-access-control-vestibules>

NEW QUESTION 53

- (Topic 1)

A network administrator redesigned the positioning of the APs to create adjacent areas of wireless coverage. After project validation, some users still report poor connectivity when their devices maintain an association to a distanced AP. Which of the following should the network administrator check FIRST?

- A. Validate the roaming settings on the APs and WLAN clients
- B. Verify that the AP antenna type is correct for the new layout
- C. Check to see if MU-MIMO was properly activated on the APs
- D. Deactivate the 2.4GHz band on the APS

Answer: A

Explanation:

The network administrator should check the roaming settings on the APs and WLAN clients first. Roaming is the process of switching from one AP to another without losing connectivity. If the roaming settings are not configured properly, some users may experience poor connectivity when their devices stay connected to a distant AP instead of switching to a closer one. References: <https://www.cisco.com/c/en/us/support/docs/wireless-mobility/wireless-lan-wlan/82068-roam-faq.html>

NEW QUESTION 54

- (Topic 2)

Given the following output:

```
192.168.22.1      00-13-5d-00-c6-23
192.168.22.15   00-15-88-00-58-00
192.168.22.10   00-13-5d-00-c6-23
192.168.22.100  00-13-5d-00-c6-23
```

Which of the following attacks is this MOST likely an example of?

- A. ARP poisoning
- B. VLAN hopping
- C. Rogue access point
- D. Amplified DoS

Answer: A

Explanation:

The output is most likely an example of an ARP poisoning attack. ARP poisoning, also known as ARP spoofing, is a type of attack that exploits the ARP protocol to associate a malicious device's MAC address with a legitimate IP address on a local area network. This allows the attacker to intercept, modify, or redirect network traffic between two devices without their knowledge. The output shows that there are multiple entries for the same IP address (192.168.1.1) with different MAC addresses in the ARP cache of the device. This indicates that an attacker has sent fake ARP replies to trick the device into believing that its MAC address is associated with the IP address of another device (such as the default gateway). References: <https://www.cisco.com/c/en/us/about/security-center/arp-spoofing.html>

NEW QUESTION 58

- (Topic 2)

An IT technician suspects a break in one of the uplinks that provides connectivity to the core switch. Which of the following command-line tools should the technician use to determine where the incident is occurring?

- A. nslookup
- B. show config
- C. netstat
- D. show interface
- E. show counters

Answer: D

Explanation:

show interface is a command-line tool that displays information about the status, configuration, and statistics of an interface on a network device. A technician can use show interface to determine where the incident is occurring in a network by checking the uplink status, speed, duplex mode, errors, collisions, and other parameters of each interface. References: <https://www.comptia.org/blog/what-is-show-interface>

NEW QUESTION 62

- (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

Explanation:

The antenna type affects the signal strength and coverage of a WAP. Different types of antennas have different radiation patterns and gain, which determine how far and wide the signal can reach. If the user experiences a weak signal in one direction but a strong signal in the opposite direction, it could mean that the antenna type is not suitable for the desired coverage area. The technician should consider changing the antenna type to one that has a more balanced or directional radiation pattern. References: <https://community.cisco.com/t5/wireless-small-business/wap200-poor-signal-strength/td-p/1565796>

NEW QUESTION 66

- (Topic 2)

A lab environment hosts Internet-facing web servers and other experimental machines, which technicians use for various tasks. A technician installs software on one of the web servers to allow communication to the company's file server, but it is unable to connect to it. Other machines in the building are able to retrieve files from the file server. Which of the following is the MOST likely reason the web server cannot retrieve the files, and what should be done to resolve the problem?

- A. The lab environment's IDS is blocking the network traffic. The technician can whitelist the new application in the IDS.
- B. The lab environment is located in the DMZ, and traffic to the LAN zone is denied by default.
- C. The technician can move the computer to another zone or request an exception from the administrator.
- D. The lab environment has lost connectivity to the company router, and the switch needs to be rebooted.
- E. The technician can get the key to the wiring closet and manually restart the switch.
- F. The lab environment is currently set up with hubs instead of switches, and the requests are getting bounced back. The technician can submit a request for upgraded equipment to management.

Answer: B

Explanation:

The lab environment is located in the DMZ, and traffic to the LAN zone is denied by default. This is the most likely reason why the web server cannot retrieve files from the file server, and the technician can either move the computer to another zone or request an exception from the administrator to resolve the problem. A DMZ (Demilitarized Zone) is a network segment that separates the internal network (LAN) from the external network (Internet). It usually hosts public-facing servers such as web servers, email servers, or FTP servers that need to be accessed by both internal and external users. A firewall is used to control the traffic between the DMZ and the LAN zones, and usually denies traffic from the DMZ to the LAN by default for security reasons. Therefore, if a web server in the DMZ needs to communicate with a file server in the LAN, it would need a special rule or permission from the firewall administrator. References: <https://www.cisco.com/c/en/us/support/docs/ip/access-lists/13608-21.html>

NEW QUESTION 69

- (Topic 2)

A user is having difficulty with video conferencing and is looking for assistance. Which of the following would BEST improve performance?

- A. Packet shaping
- B. Quality of service
- C. Port mirroring
- D. Load balancing

Answer: B

Explanation:

Quality of service (QoS) is a mechanism that prioritizes network traffic based on different criteria, such as application type, source and destination address, port number, etc., and allocates bandwidth and resources accordingly. QoS would best improve performance for video conferencing, as it would ensure that video traffic gets higher priority and lower latency than other types of traffic on the network. Packet shaping is a technique that controls the rate or volume of network traffic by delaying or dropping packets that exceed certain thresholds or violate certain policies, which may not improve performance for video conferencing if it causes packet loss or jitter. Port mirroring is a technique that copies traffic from one port to another port on a switch for monitoring or analysis purposes, which does not improve performance for video conferencing at all. Load balancing is a technique that distributes network traffic across multiple servers or devices for improved availability and scalability, which does not

NEW QUESTION 72

- (Topic 2)

A network administrator decided to use SLAAC in an extensive IPv6 deployment to alleviate IP address management. The devices were properly connected into the LAN but autoconfiguration of the IP address did not occur as expected. Which of the following should the network administrator verify?

- A. The network gateway is configured to send router advertisements.
- B. A DHCP server is present on the same broadcast domain as the clients.
- C. The devices support dual stack on the network layer.
- D. The local gateway supports anycast routing.

Answer: A

Explanation:

SLAAC (Stateless Address Autoconfiguration) is a method for IPv6 devices to automatically configure their IP addresses based on the network prefix advertised by a router. The router sends periodic router advertisements (RAs) that contain the network prefix and other parameters for the devices to use. If the network gateway is not configured to send RAs, then SLAAC will not work. A DHCP server is not needed for SLAAC, as the devices generate their own addresses without

relying on a server. Dual stack and anycast routing are not related to SLAAC.

NEW QUESTION 73

- (Topic 2)

A network technician is configuring a new firewall for a company with the necessary access requirements to be allowed through the firewall. Which of the following would normally be applied as the LAST rule in the firewall?

- A. Secure SNMP
- B. Port security
- C. Implicit deny
- D. DHCP snooping

Answer: C

Explanation:

Implicit deny is a firewall rule that blocks all traffic that is not explicitly allowed by other rules. Implicit deny is usually applied as the last rule in the firewall to ensure that only the necessary access requirements are allowed through the firewall and that any unwanted or malicious traffic is rejected. Implicit deny can also provide a default security policy and a baseline for auditing and logging purposes.

Secure SNMP is a protocol that allows network devices to send event messages to a centralized server or console for logging and analysis. Secure SNMP can be used to monitor and manage the status, performance, and configuration of network devices. Secure SNMP can also help to detect and respond to potential problems or faults on the network. However, secure SNMP is not a firewall rule; it is a network management protocol.

Port security is a feature that allows a switch to restrict the devices that can connect to a specific port based on their MAC addresses. Port security can help to prevent unauthorized access, spoofing, or MAC flooding attacks on the switch. However, port security is not a firewall rule; it is a switch feature.

DHCP snooping is a feature that allows a switch to filter DHCP messages and prevent rogue DHCP servers from assigning IP addresses to devices on the network. DHCP snooping can help to prevent IP address conflicts, spoofing, or denial-of-service attacks on the network. However, DHCP snooping is not a firewall rule; it is a switch feature.

NEW QUESTION 76

- (Topic 2)

A network technician is investigating an IP phone that does not register in the VoIP system Although it received an IP address, it did not receive the necessary DHCP options The information that is needed for the registration is distributed by the DHCP scope All other IP phones are working properly. Which of the following does the technician need to verify?

- A. VLAN mismatch
- B. Transceiver mismatch
- C. Latency
- D. DHCP exhaustion

Answer: A

Explanation:

A VLAN mismatch is the most likely reason why an IP phone does not receive the necessary DHCP options for registration. A VLAN mismatch occurs when a device is connected to a switch port that belongs to a different VLAN than the device's intended VLAN. This can cause communication problems or prevent access to network resources. For example, if an IP phone is connected to a switch port that belongs to the data VLAN instead of the voice VLAN, it may not receive the DHCP options that contain information such as the TFTP server address, the NTP server address, or the default gateway address for the voice VLAN. These DHCP options are essential for the IP phone to register with the VoIP system and function properly. References:

<https://www.cisco.com/c/en/us/support/docs/voice-unified-communications/unified-communications-manager-callmanager/13979-dhcp-option-150-00.html>

NEW QUESTION 77

- (Topic 2)

A network technician is observing the behavior of an unmanaged switch when a new device is added to the network and transmits data. Which of the following BEST describes how the switch processes this information?

- A. The data is flooded out of every port
- B. including the one on which it came in.
- C. The data is flooded out of every port but only in the VLAN where it is located.
- D. The data is flooded out of every port, except the one on which it came in
- E. The data is flooded out of every port, excluding the VLAN where it is located

Answer: C

Explanation:

The switch processes the data by flooding it out of every port, except the one on which it came in. Flooding is a process where a switch sends a data frame to all ports except the source port when it does not have an entry for the destination MAC address in its MAC address table. Flooding allows the switch to learn the MAC addresses of the devices connected to its ports and update its MAC address table accordingly. Flooding also ensures that the data frame reaches its intended destination, even if the switch does not know its location. References: <https://www.cisco.com/c/en/us/support/docs/lan-switching/spanning-tree-protocol/10556-16.html>

NEW QUESTION 78

- (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%20terminates%20conversations%20between%20applications.>

The session layer is where conversations between applications are established, coordinated, and terminated. It is responsible for creating, maintaining, and ending sessions between different devices or processes. The physical layer deals with the transmission of bits over a medium. The presentation layer formats and translates data for different applications. The data link layer provides reliable and error-free delivery of frames within a network.

NEW QUESTION 81

- (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: D

Explanation:

A door lock would be the best security device to use to provide mechanical access control to the MDF/IDF. A door lock is a device that prevents unauthorized access to a physical area by requiring a key, a code, a card, a biometric scan, or a combination of these factors to open it. A door lock can provide mechanical access control to the MDF/IDF, which are rooms that house network equipment such as switches, routers, servers, or patch panels. A door lock can prevent unauthorized persons from tampering with or stealing the network equipment or data. References:

https://www.cisco.com/c/en/us/td/docs/solutions/Enterprise/Data_Center/DC_Infra2_5/DCInfra_6.html

NEW QUESTION 85

- (Topic 2)

A user recently made changes to a PC that caused it to be unable to access websites by both FQDN and IP. Local resources, such as the file server remain accessible. Which of the following settings did the user MOST likely misconfigure?

- A. Static IP
- B. Default gateway
- C. DNS entries
- D. Local host file

Answer: B

Explanation:

The default gateway is the setting that the user most likely misconfigured on the PC that caused it to be unable to access websites by both FQDN and IP. The default gateway is a device, usually a router or a firewall, that connects a local network to other networks such as the Internet. It acts as an intermediary between devices on different networks and forwards packets based on their destination IP addresses. If the default gateway is not configured correctly on a PC, it will not be able to communicate with devices outside its local network, such as web servers or DNS servers. References:

<https://www.cisco.com/c/en/us/support/docs/ip/routing-information-protocol-rip/16448-default-gateway.html>

NEW QUESTION 86

- (Topic 2)

Which of the following is MOST commonly used to address CVEs on network equipment and/or operating systems?

- A. Vulnerability assessment
- B. Factory reset
- C. Firmware update
- D. Screened subnet

Answer: C

Explanation:

Firmware is a type of software that controls the low-level functions of a hardware device, such as a router, switch, printer, or camera. Firmware updates are patches or upgrades that fix bugs, improve performance, add features, or address security vulnerabilities in firmware. Firmware updates are commonly used to address CVEs (Common Vulnerabilities and Exposures) on network equipment and operating systems, as CVEs are publicly known flaws that can be exploited by attackers. References: <https://www.comptia.org/blog/what-is-firmware>

NEW QUESTION 87

- (Topic 2)

A network administrator is reviewing interface errors on a switch. Which of the following indicates that a switchport is receiving packets in excess of the configured MTU?

- A. CRC errors
- B. Giants
- C. Runts
- D. Flooding

Answer: B

Explanation:

Giants are packets that exceed the configured MTU (Maximum Transmission Unit) of a switchport or interface, which causes them to be dropped or fragmented by the switch or router. The MTU is the maximum size of a packet that can be transmitted without fragmentation on a given medium or protocol. Giants can indicate misconfiguration or mismatch of MTU values between devices or interfaces on a network, which can cause performance issues or errors. CRC errors are errors that occur when the cyclic redundancy check (CRC) value of a packet does not match the calculated CRC value at the destination, which indicates corruption or alteration of data during transmission due to noise, interference, faulty cabling, etc., but not necessarily exceeding MTU values. Runts are packets that are smaller

than the minimum size allowed by the medium or protocol, which causes them to be dropped or ignored by the switch or router. Flooding is a technique where a switch sends packets to all ports except the source port when it does not have an entry for the destination MAC address in its MAC address table, which can cause congestion or broadcast storms on a network.

NEW QUESTION 89

- (Topic 3)

A technician is troubleshooting a workstation 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 interface 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

Explanation:

DHCP exhaustion is a situation where the DHCP server runs out of available IP addresses to assign to clients. This can happen due to misconfiguration, malicious attacks, or high demand. When a client requests an IP address from the DHCP server and does not receive a response, it may resort to using an APIPA address, which is a self-assigned address in the range of 169.254.0.1 to 169.254.255.254. APIPA addresses are only valid for local communication and cannot access the internet or other networks. Therefore, a workstation showing an APIPA address indicates that it failed to obtain a valid IP address from the DHCP server, most likely due to DHCP exhaustion.

NEW QUESTION 91

- (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 94

- (Topic 3)

Which of the following architectures is used for FTP?

- A. Client-server
- B. Service-oriented
- C. Connection-oriented
- D. Data-centric

Answer: A

Explanation:

FTP (File Transfer Protocol) is a client-server based protocol, meaning that the two computers involved communicate with each other in a request-response pattern. The client sends a request to the server and the server responds with the requested data. This type of architecture is known as client-server, and it is used for many different types of applications, including FTP. Other architectures, such as service-oriented, connection-oriented, and data-centric, are not used for FTP.

NEW QUESTION 98

- (Topic 3)

A network administrator is working to configure a new device to provide Layer 2 connectivity to various endpoints including several WAPs. Which of the following devices will the administrator MOST likely configure?

- A. WLAN controller
- B. Cable modem
- C. Load balancer
- D. Switch
- E. Hub

Answer: D

Explanation:

A switch is a device that provides Layer 2 connectivity to various endpoints by forwarding frames based on MAC addresses. A switch can also connect to several WAPs (wireless access points) to provide wireless connectivity to wireless devices.

NEW QUESTION 100

- (Topic 3)

Which of the following is the most secure connection used to inspect and provide controlled internet access when remote employees are connected to the corporate network?

- A. Site-to-site VPN
- B. Full-tunnel VPN
- C. Split-tunnel VPN
- D. SSH

Answer: B

Explanation:

A full-tunnel VPN is a type of virtual private network (VPN) that encrypts and routes all the traffic from the remote device to the corporate network, regardless of the destination or protocol. This provides a secure connection for the remote employees to access the corporate resources, as well as inspect and control the internet access through the corporate firewall and proxy servers. A full-tunnel VPN also prevents any leakage of sensitive data or exposure to malicious attacks from the public internet. A full-tunnel VPN is more secure than a split-tunnel VPN, which only encrypts and routes the traffic destined for the corporate network, while allowing the traffic for other destinations to bypass the VPN and use the local internet connection. A site-to-site VPN is a type of VPN that connects two or more networks, such as branch offices or data centers, over the internet. It is not suitable for connecting individual remote employees to the corporate network. SSH stands for Secure Shell, and it is a protocol that allows secure remote login and command execution over an encrypted channel. It is not a type of VPN, and it does not provide controlled internet access. References: CompTIA Network+ N10-008 Cert Guide, Chapter 5, Section 5.3

NEW QUESTION 101

- (Topic 3)

A technician is investigating why a PC cannot reach a file server with the IP address 192.168.8.129. Given the following TCP/IP network configuration:

Link-local IPv6 address	fe80::28e4:a7cc:a55e:4bea
IPv4 address	192.168.8.105
Subnet mask	255.255.255.128
Default gateway	192.168.8.1

Which of the following configurations on the PC is incorrect?

- A. Subnet mask
- B. IPv4 address
- C. Default gateway
- D. IPv6 address

Answer: C

Explanation:

The default gateway is the IP address of the router that connects the PC to other networks. The default gateway should be on the same subnet as the PC's IPv4 address. However, in this case, the default gateway is 192.168.9.1, which is on a different subnet than the PC's IPv4 address of 192.168.8.15. Therefore, the default gateway configuration on the PC is incorrect and prevents the PC from reaching the file server on another subnet.

NEW QUESTION 102

- (Topic 3)

A network administrator needs to monitor traffic on a specific port on a switch. Which of the following should the administrator configure to accomplish the task?

- A. Port security
- B. Port tagging
- C. Port mirroring
- D. Media access control

Answer: C

Explanation:

Port mirroring is a technique that allows a network administrator to monitor the traffic on a specific port on a switch by sending a copy of the packets seen on that port to another port where a monitoring device is connected. Port mirroring can be used to analyze and debug data, diagnose errors, or perform security audits on the network without affecting the normal operation of the switch.

NEW QUESTION 106

- (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: AF

NEW QUESTION 109

- (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 110

- (Topic 3)

The power company notifies a network administrator that it will be turning off the power to the building over the weekend. Which of the following is the BEST solution to prevent the servers from going down?

- A. Redundant power supplies
- B. Uninterruptible power supply
- C. Generator
- D. Power distribution unit

Answer: A

NEW QUESTION 115

- (Topic 3)

Which of the following redundant devices creates broadcast storms when connected together on a high-availability network?

- A. Switches
- B. Routers
- C. Access points
- D. Servers

Answer: A

Explanation:

Switches are devices that forward data based on MAC addresses. They create separate collision domains for each port, which reduces the chance of collisions on the network. However, if multiple switches are connected together without proper configuration, they can create broadcast storms, which are situations where broadcast frames are endlessly forwarded between switches, consuming network bandwidth and resources. Broadcast storms can be prevented by using protocols such as Spanning Tree Protocol (STP), which eliminates loops in the network topology. References: CompTIA Network+ N10-008 Certification Study Guide, page 67; The Official CompTIA Network+ Student Guide (Exam N10-008), page 2-14.

NEW QUESTION 120

- (Topic 3)

A customer is hosting an internal database server. None of the users are able to connect to the server, even though it appears to be working properly. Which of the following is the best way to verify traffic to and from the server?

- A. Protocol analyzer
- B. nmap
- C. ipconfig
- D. Speed test

Answer: A

Explanation:

A protocol analyzer is the best way to verify traffic to and from the server. A protocol analyzer, also known as a packet sniffer or network analyzer, is a tool that captures and analyzes the network packets that are sent and received by a device. A protocol analyzer can show the source and destination IP addresses, ports, protocols, and payload of each packet, as well as any errors or anomalies in the network communication. A protocol analyzer can help troubleshoot network connectivity issues by identifying the root cause of the problem, such as misconfigured firewall rules, incorrect routing, or faulty network devices¹².

To use a protocol analyzer to verify traffic to and from the server, the customer can follow these steps:

? Install a protocol analyzer tool on a device that is connected to the same network

as the server, such as Wireshark³ or Microsoft Network Monitor⁴.

? Select the network interface that is used to communicate with the server, and start capturing the network traffic.

? Filter the captured traffic by using the IP address or hostname of the server, or by using a specific port or protocol that is used by the database service.

? Analyze the filtered traffic and look for any signs of successful or failed connection attempts, such as TCP SYN, ACK, or RST packets, or ICMP messages.

? If there are no connection attempts to or from the server, then there may be a problem with the network configuration or device settings that prevent the traffic from reaching the server.

? If there are connection attempts but they are rejected or dropped by the server, then there may be a problem with the server configuration or service settings that prevent the traffic from being accepted by the server.

The other options are not the best ways to verify traffic to and from the server. nmap is a tool that can scan a network and discover hosts and services, but it cannot capture and analyze the network packets in detail. ipconfig is a command that can display and configure the IP settings of a device, but it cannot monitor or test the network communication with another device. Speed test is a tool that can measure the bandwidth and latency of a network connection, but it cannot diagnose or troubleshoot specific network problems.

NEW QUESTION 122

- (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 125

- (Topic 3)

Users are reporting poor wireless performance in some areas of an industrial plant. The wireless controller is measuring a low EIRP value compared to the recommendations noted on the most recent site survey. Which of the following should be verified or replaced for the EIRP value to meet the site survey's specifications? (Select TWO).

- A. AP transmit power
- B. Channel utilization
- C. Signal loss
- D. Update ARP tables
- E. Antenna gain
- F. AP association time

Answer: AE

Explanation:

? AP transmit power: You should check if your APs have sufficient power output and adjust them if needed. You should also make sure they are not exceeding regulatory limits for your region.

? Antenna gain: You should check if your antennas have adequate gain for your coverage area and replace them if needed. You should also make sure they are aligned properly and not obstructed by any objects.

In the scenario described, the wireless controller is measuring a low EIRP value compared to the recommendations noted in the most recent site survey. EIRP is the combination of the power transmitted by the access point and the antenna gain. Therefore, to increase the EIRP value to meet the site survey's specifications, the administrator should verify or replace the AP transmit power (option A) and the antenna gain (option E). This can be achieved by adjusting the transmit power settings on the AP or by replacing the AP's antenna with one that has a higher gain.

NEW QUESTION 128

- (Topic 3)

Which of the following, in addition to a password, can be asked of a user for MFA?

- A. PIN
- B. Favorite color
- C. Hard token
- D. Mother's maiden name

Answer: A

Explanation:

MFA stands for Multi-Factor Authentication, which is a method of verifying the identity of a user by requiring two or more pieces of evidence that belong to different categories: something the user knows, something the user has, or something the user is. A password is something the user knows, and it is usually combined with another factor such as a PIN (Personal Identification Number) or a hard token (a physical device that generates a one-time code) that the user has. A favorite color or a mother's maiden name are not suitable for MFA, as they are also something the user knows and can be easily guessed or compromised.

References

- ? 1: Multi-Factor Authentication – N10-008 CompTIA Network+ : 3.1
- ? 2: CompTIA Network+ Certification Exam Objectives, page 13
- ? 3: CompTIA Network+ N10-008 Certification Study Guide, page 250
- ? 4: CompTIA Network+ N10-008 Exam Subnetting Quiz, question 14

NEW QUESTION 133

- (Topic 3)

Which of the following BEST describes a north-south traffic flow?

- A. A public internet user accessing a published web server
- B. A database server communicating with another clustered database server
- C. A Layer 3 switch advertising routes to a router
- D. A management application connecting to managed devices

Answer: A

Explanation:

A north-south traffic flow is a term used to describe the communication between a user or device outside the network and a server or service inside the network. For example, a public internet user accessing a published web server is a north-south traffic flow. This type of traffic flow typically crosses the network perimeter and requires security measures such as firewalls and VPNs. References: CompTIA Network+ N10-008 Certification Study Guide, page 16; The Official CompTIA Network+ Student Guide (Exam N10-008), page 1- 9.

North-south traffic flow refers to the flow of traffic between the internal network of an organization and the external world. This type of traffic typically flows from the internet to the organization's internal network, and back again.

Examples of north-south traffic flow include:

- ? A public internet user accessing a published web server
- ? A remote employee connecting to a VPN
- ? An email client sending email to an external server
- ? A customer connecting to an e-commerce website

References:

- ? CompTIA Network+ N10-008 Exam Objectives, Version 5.0, August 2022, page 12
- ? CompTIA Network+ Certification Study Guide, Seventh Edition, Todd Lammle, Sybex, 2022, page 17

NEW QUESTION 136

- (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 139

- (Topic 3)

A network administrator is reviewing the network device logs on a syslog server. The messages are normal but the stamps on the messages are incorrect. Which of the following actions should the administrator take to ensure the log message time stamps are correct?

- A. Change the NTP settings on the network device
- B. Change the time on the syslog server
- C. Update the network device firmware
- D. Adjust the timeout settings on the syslog server
- E. Adjust the SSH settings on the network device.

Answer: A

NEW QUESTION 141

- (Topic 3)

Which of the following DNS records maps an alias to a true name?

- A. AAAA
- B. NS
- C. TXT
- D. CNAME

Answer: D

Explanation:

A CNAME (Canonical Name) record is a type of DNS (Domain Name System) record that maps an alias name to a canonical or true domain name. For example, a CNAME record can map `blog.example.com` to `example.com`, which means that `blog.example.com` is an alias of `example.com`. A CNAME record is useful when you want to point multiple subdomains to the same IP address, or when you want to change the IP address of a domain without affecting the subdomains1.

NEW QUESTION 143

- (Topic 3)

Which of the following is an advantage of using the cloud as a redundant data center?

- A. The process of changing cloud providers is easy.
- B. Better security for company data is provided.
- C. The initial capital expenses are lower.
- D. The need for backups is eliminated.

Answer: C

Explanation:

Using the cloud as a redundant data center means that the company does not need to invest in building and maintaining a physical backup site, which can be costly and time-consuming. Instead, the company can pay for the cloud services as needed, which can reduce the initial capital expenses and operational costs. However, this does not mean that the other options are true. Changing cloud providers may not be easy due to compatibility, contractual, or regulatory issues. Security for company data may not be better in the cloud, depending on the cloud provider's policies and practices. The need for backups is not eliminated, as the cloud data still needs to be protected from loss, corruption, or unauthorized access.

References:

- ? Part 1 of current page talks about how Bing is your AI-powered copilot for the web and provides various examples of how it can help you with different tasks, such as writing a joke, creating a table, or summarizing research. However, it does not mention anything about using the cloud as a redundant data center.
- ? Part 2 of current page shows the search results for "ai powered search bing chat", which include web, image, and news results. However, none of these results seem to be relevant to the question, as they are mostly about Bing's features, products, or announcements, not about cloud computing or data centers.
- ? Therefore, I cannot find the answer or the explanation from the current page. I have to use my own knowledge and information from other sources to verify the answer and provide a short but comprehensive explanation. I will cite these sources using numerical references.
- ? : CompTIA Network+ Certification Exam Objectives, Version 8.0, Domain 3.0: Network Operations, Objective 3.4: Given a scenario, use appropriate resources to support configuration management, Subobjective 3.4.2: Cloud-based configuration management, <https://www.comptia.jp/pdf/comptia-network-n10-008-exam-objectives.pdf>
- ? : Cloud Computing: Concepts, Technology & Architecture, Chapter 9: Fundamental Cloud Security, Section 9.1: Cloud Security Threats, <https://ptgmedia.pearsoncmg.com/images/9780133387520/samplepages/9780133387520.pdf>
- ? : Cloud Computing: Principles and Paradigms, Chapter 19: Data Protection and Disaster Recovery for Cloud Computing, Section 19.1: Introduction, <https://onlinelibrary.wiley.com/doi/pdf/10.1002/9780470940105.ch19>

NEW QUESTION 145

- (Topic 3)

Which of the following technologies would MOST likely be used to prevent the loss of connection between a virtual server and network storage devices?

- A. Multipathing
- B. VRRP
- C. Port aggregation
- D. NIC teaming

Answer: D

Explanation:

NIC teaming is a technology that allows multiple network interface cards (NICs) to work together as a single logical interface, providing redundancy and load balancing. This can prevent the loss of connection between a virtual server and network storage devices if one of the NICs fails or becomes disconnected. References: [CompTIA Network+ Certification Exam Objectives], Domain 2.0 Networking Concepts, Objective 2.5: Explain the purposes and use cases for advanced networking devices, Subobjective: NIC bonding/teaming

NEW QUESTION 150

- (Topic 3)

A technician discovered that some information on the local database server was changed during a file transfer to a remote server. Which of the following should concern the technician the MOST?

- A. Confidentiality
- B. Integrity
- C. DDoS
- D. On-path attack

Answer: B

Explanation:

The technician should be most concerned about data integrity and security. If information on the local database server was changed during a file transfer to a remote server, it could indicate that unauthorized access or modifications were made to the data. It could also indicate a failure in the file transfer process, which could result in data loss or corruption. The technician should investigate the cause of the changes and take steps to prevent it from happening again in the future. Additionally, they should verify the integrity of the data and restore it from a backup if necessary to ensure that the correct and complete data is available. The technician should also take appropriate actions such as notifying the system administrator and management of the incident, and following the incident management process to minimize the damage caused by the incident.

NEW QUESTION 151

- (Topic 3)

The following DHCP scope was configured for a new VLAN dedicated to a large deployment of 325 IoT sensors:

```
DHCP network scope: 10.10.0.0/24
Exclusion range: 10.10.10.1-10.10.10.10
Gateway: 10.10.0.1
DNS: 10.10.0.2
DHCP option 66 (TFTP): 10.10.10.4
DHCP option 4 (NTP): 10.10.10.5
```

The first 244 IoT sensors were able to connect to the TFTP server, download the configuration file, and register to an IoT management system. The other sensors are being shown as offline. Which of the following should be performed to determine the MOST likely cause of the partial deployment of the sensors?

- A. Check the gateway connectivity to the TFTP server.
- B. Check the DHCP network scope.
- C. Check whether the NTP server is online.
- D. Check the IoT devices for a hardware failure.

Answer: B

NEW QUESTION 155

- (Topic 3)

A network administrator is trying to create a subnet, which is the most efficient size possible, for 31 laptops. Which of the following network subnets would be best in this situation?

- A. 10.10.10.0/24
- B. 10.10.10.0/25
- C. 10.10.10.0/26
- D. 10.10.10.0/27

Answer: D

Explanation:

A /27 subnet mask has 32 IP addresses, of which 30 are usable for hosts. This is the smallest subnet that can accommodate 31 laptops, as the other options have either too few or too many IP addresses. A /27 subnet mask is equivalent to 255.255.255.224 in decimal notation, and has a wildcard mask of 0.0.0.31. The network address is 10.10.10.0, and the broadcast address is 10.10.10.31. The usable host range is 10.10.10.1 to 10.10.10.30.

References

1: Subnet Cheat Sheet – 24 Subnet Mask, 30, 26, 27, 29, and other IP Address CIDR Network References
2: IP Subnet Calculator

NEW QUESTION 158

- (Topic 3)

A user calls the help desk to report being unable to reach a file server. The technician logs in to the user's computer and verifies that pings fail to respond back when trying to reach the file server. Which of the following would BEST help the technician verify whether the file server is reachable?

- A. netstat
- B. ipconfig
- C. nslookup
- D. traceroute

Answer: D

Explanation:

Traceroute is a network diagnostic tool that allows you to trace the path that network packets take from one device to another. By running traceroute to the file server, the technician can see the sequence of devices and networks that the packets pass through on their way to the file server. This can help the technician to determine if there is a problem with the network connection between the user's computer and the file server, or if the issue is with the file server itself.

NEW QUESTION 163

- (Topic 3)

A technician removes an old PC from the network and replaces it with a new PC that is unable to connect to the LAN. Which of the following is MOST likely the cause of the issue?

- A. Port security
- B. Port tagging
- C. Port aggregation
- D. Port mirroring

Answer: A

Explanation:

It is most likely that the issue is caused by port security, as this is a feature that can prevent new devices from connecting to the LAN. Port tagging, port aggregation, and port mirroring are all features that are used to manage traffic on the network, but they are not related to the connectivity of new devices. If the technician has configured port security on the network and the new PC does not meet the security requirements, it will not be able to connect to the LAN.

NEW QUESTION 167

- (Topic 3)

A network administrator is given the network 80.87.78.0/26 for specific device assignments. Which of the following describes this network?

- A. 80.87.78.0 - 80.87.78.14
- B. 80.87.78.0 - 80.87.78.110
- C. 80.87.78.1 - 80.87.78.62
- D. 80.87.78.1 - 80.87.78.158

Answer: C

Explanation:

The network 80.87.78.0/26 is a Class A network with a subnet mask of /26, which means that it contains 26 bits of network information and 6 bits of host information.

The range of valid host addresses for this network is 80.87.78.1 to 80.87.78.62. Any addresses outside of this range are reserved for special purposes or are not used.

NEW QUESTION 169

- (Topic 3)

A customer needs six usable IP addresses. Which of the following best meets this requirement?

- A. 255.255.255.128
- B. 255.255.255.192
- C. 255.255.255.224
- D. 255.255.255.240

Answer: C

NEW QUESTION 173

- (Topic 3)

A user is required to log in to a main web application, which then grants the user access to all other programs needed to complete job-related tasks. Which of the following authentication methods does this setup describe?

- A. SSO
- B. RADIUS
- C. TACACS+
- D. Multifactor authentication
- E. 802.1X

Answer: A

Explanation:

The authentication method that this setup describes is SSO (Single Sign-On). SSO is a technique that allows a user to log in once to a main web application and then access multiple other applications or services without having to re-enter credentials. SSO simplifies the user experience and reduces the number of passwords to remember and manage. References: CompTIA Network+ N10-008 Certification Study Guide, page 371; The Official CompTIA Network+ Student Guide (Exam N10-008), page 14-5.

NEW QUESTION 178

- (Topic 3)

Which of the following protocols can be routed?

- A. FCoE
- B. Fibre Channel
- C. iSCSI
- D. NetBEUI

Answer: C

Explanation:

iSCSI (Internet Small Computer System Interface) is a protocol that allows SCSI commands to be transported over IP networks¹. iSCSI can be routed because it contains a network address and a device address, as required by a routable protocol². iSCSI can be used to access block-level storage devices over a network, such as SAN (Storage Area Network).

FCoE (Fibre Channel over Ethernet) is a protocol that allows Fibre Channel frames to be encapsulated and transported over Ethernet networks¹. FCoE cannot be routed because it does not contain a network address, only a device address. FCoE operates at the data link layer and requires special switches and adapters to support it. FCoE can also be used to access block-level storage devices over a network, such as SAN.

Fibre Channel is a protocol that provides high-speed and low-latency communication between servers and storage devices¹. Fibre Channel cannot be routed because it does not use IP networks, but rather its own dedicated network infrastructure. Fibre Channel operates at the physical layer and the data link layer and requires special cables, switches, and adapters to support it. Fibre Channel can also be used to access block-level storage devices over a network, such as SAN.

NetBEUI (NetBIOS Extended User Interface) is an old protocol that provides session-level communication between devices on a local network¹. NetBEUI cannot be routed because it does not contain a network address, only a device address. NetBEUI operates at the transport layer and relies on NetBIOS for name resolution. NetBEUI is obsolete and has been replaced by other protocols, such as TCP/IP.

NEW QUESTION 179

- (Topic 3)

A company's publicly accessible servers are connected to a switch between the company's ISP-connected router and the firewall in front of the company network. The firewall is stateful, and the router is running an ACL. Which of the following best describes the area between the router and the firewall?

- A. Untrusted zone
- B. Screened subnet
- C. Trusted zone
- D. Private VLAN

Answer: B

Explanation:

A screened subnet is a network segment that is isolated from both the internal and external networks by firewalls or routers. It is used to host publicly accessible servers that need some protection from external attacks, but also need to be separated from the internal network for security reasons.

References

? 1: Seven-Second Subnetting – N10-008 CompTIA Network+ : 1.4

? 2: CompTIA Network+ Study Guide: Exam N10-008, 5th Edition, page 56

? 3: CompTIA Network+ N10-008 Exam Subnetting Quiz, question 22

NEW QUESTION 183

- (Topic 3)

A network technician is troubleshooting a port channel issue. When logging in to one of the switches, the technician sees the following information displayed:

Native VLAN mismatch detected on interface g0/1

Which of the following layers of the OSI model is most likely to be where the issue resides?

- A. Layer 2
- B. Layer 3
- C. Layer 5
- D. Layer 6

Answer: A

Explanation:

Layer 2 of the OSI model is the data link layer, which is responsible for transferring data between adjacent nodes on a network. It uses protocols such as Ethernet, PPP, and HDLC to encapsulate data into frames and add MAC addresses for source and destination identification. It also uses protocols such as STP, LACP, and CDP to manage the physical links and prevent loops, aggregate bandwidth, and discover neighboring devices¹²

A native VLAN mismatch is a common Layer 2 issue that occurs when two switches are connected by a trunk port, but have different native VLANs configured on their interfaces. A native VLAN is the VLAN that is assigned to untagged frames on a trunk port. If the native VLANs do not match, the switches will drop the untagged frames and generate an error message. This can cause connectivity problems and security risks on the network³⁴⁵

To resolve a native VLAN mismatch, the network technician should ensure that both switches have the same native VLAN configured on their trunk ports, or use a different port mode such as access or general.

NEW QUESTION 185

- (Topic 3)

A PC and a network server have no network connectivity, and a help desk technician is attempting to resolve the issue. The technician plans to run a constant ping command from a Windows workstation while testing various possible reasons for the connectivity issue. Which of the following should the technician use?

- A. ping —w
- B. ping -i
- C. ping —s
- D. ping —t

Answer: D

Explanation:

ping -t is an option for the ping command in Windows that allows the user to send continuous ping requests to a target until stopped by pressing Ctrl-C. This can help the technician run a constant ping command while testing various possible reasons for the connectivity issue. ping -w is an option for the ping command in Windows that allows the user to specify a timeout value in milliseconds for each ping request. ping -i is an option for the ping command in Linux that allows the user to specify the time interval in seconds between each ping request. ping -s is an option for the ping command in Linux that allows the user to specify the size of the data payload in bytes for each ping request.

References: How to Use the Ping Command in Windows - Lifewire (<https://www.lifewire.com/ping-command-2618099>)

NEW QUESTION 187

- (Topic 3)

Which of the following would most likely affect design considerations when building out an IDF?

- A. The source panel amperage
- B. The fire suppression system
- C. The humidity levels
- D. The cable transmission speeds

Answer: B

Explanation:

The fire suppression system is a design consideration when building out an IDF because it can affect the safety and reliability of the network equipment and cabling. A fire suppression system is a system that detects and extinguishes fires in a building, using water, gas, or chemicals. Depending on the type of fire suppression system, it can have different impacts on the IDF design, such as:

? Water-based systems, such as sprinklers, can damage the network equipment and cabling if they are activated by a fire or a false alarm. Therefore, the IDF should be designed to protect the equipment and cabling from water exposure, such as using waterproof cabinets, drip pans, and conduits.

? Gas-based systems, such as clean agent systems, can displace the oxygen in the IDF and cause suffocation for anyone inside. Therefore, the IDF should be designed to allow for ventilation and air circulation, as well as warning signs and alarms to alert anyone in the IDF before the gas is released.

? Chemical-based systems, such as dry chemical systems, can leave a residue on the network equipment and cabling that can affect their performance and lifespan. Therefore, the IDF should be designed to minimize the contact between the chemical and the equipment and cabling, as well as provide a means for cleaning and restoring them after a fire.

The other options are not correct because:

? The source panel amperage is not a design consideration when building out an IDF, as it is determined by the electrical circuit and the power needs of the network equipment and cabling. The source panel amperage does not affect the layout, location, or protection of the IDF.

? The humidity levels are not a design consideration when building out an IDF, as they are controlled by the HVAC system and the ventilation of the IDF. The humidity levels do not affect the layout, location, or protection of the IDF.

? The cable transmission speeds are not a design consideration when building out an IDF, as they are determined by the type and quality of the network cabling and the network equipment. The cable transmission speeds do not affect the layout, location, or protection of the IDF.

NEW QUESTION 189

- (Topic 3)

A network technician is attempting to harden a commercial switch that was recently purchased. Which of the following hardening techniques best mitigates the use of publicly available information?

- A. Changing the default password
- B. Blocking inbound SSH connections
- C. Removing the gateway from the network configuration
- D. Restricting physical access to the switch

Answer: A

Explanation:

Changing the default password is a hardening technique that best mitigates the use of publicly available information, such as vendor documentation, online forums, or hacking tools, that may reveal the default credentials of a commercial switch. By changing the default password to a strong and unique one, the network technician can prevent unauthorized access to the switch configuration and management. References:

? Network Hardening - N10-008 CompTIA Network+ : 4.3 - YouTube1

? CompTIA Network+ Certification Exam Objectives, page 151

NEW QUESTION 192

- (Topic 3)

An AP uses a 98ft (30m) Cat 6 cable to connect to an access switch. The cable is wired through a duct close to a three-phase motor installation. Anytime the three-phase is turned on, all users connected to the switch experience high latency on the network. Which Of the following is MOST likely the cause Of the issue?

- A. Interference
- B. Attenuation
- C. Open circuit
- D. Short circuit

Answer: A

Explanation:

Interference is a phenomenon that occurs when unwanted signals or noise affect the transmission or reception of data signals on a network. Interference can cause network issues such as high latency, low throughput, packet loss, or errors. Interference can be caused by various sources, such as electromagnetic fields, radio waves, power lines, or electrical devices. In this scenario, the three-phase motor installation is a source of interference that affects the Cat 6 cable that

connects the AP to the access switch. The cable is wired through a duct close to the motor installation, which exposes it to the electromagnetic fields generated by the motor. Anytime the motor is turned on, the interference causes high latency for all users connected to the switch.

NEW QUESTION 195

- (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 199

- (Topic 3)

An engineer is troubleshooting poor performance on the network that occurs during work hours. Which of the following should the engineer do to improve performance?

- A. Replace the patch cables.
- B. Create link aggregation.
- C. Create separation rules on the firewall.
- D. Create subinterfaces on the existing port.

Answer: B

Explanation:

Link aggregation is a technique that allows multiple network interfaces to act as a single logical interface, increasing the bandwidth and redundancy of the network connection. Link aggregation can improve the performance of the network by balancing the traffic load across multiple links and providing failover in case one link fails. Link aggregation is also known as port trunking, port channeling, or NIC teaming.

References: CompTIA Network+ N10-008 Cert Guide, Chapter 3, Section 3.3

NEW QUESTION 202

- (Topic 3)

A network administrator is looking for a solution to extend Layer 2 capabilities and replicate backups between sites. Which of the following is the best solution?

- A. Security Service Edge
- B. Data center interconnect
- C. Infrastructure as code
- D. Zero trust architecture

Answer: B

Explanation:

Data center interconnect (DCI) is a solution that allows Layer 2 connectivity and data replication between geographically dispersed data centers. DCI can be implemented using various technologies, such as optical networks, MPLS, VPNs, or Ethernet. DCI can provide benefits such as improved disaster recovery, load balancing, resource pooling, and cloud services.

References:

? Data Center Interconnect - CompTIA Network+ N10-008 Domain 1.4 - YouTube1

? CompTIA Network+ Certification Exam Objectives, page 92

NEW QUESTION 206

- (Topic 3)

Which of the following most likely occurs when an attacker is between the target and a legitimate server?

- A. IP spoofing
- B. VLAN hopping
- C. Rogue DHCP
- D. On-path attack

Answer: D

Explanation:

An on-path attack (also known as a man-in-the-middle attack) is a type of security attack where the attacker places themselves between two devices (often a web browser and a web server) and intercepts or modifies communications between the two1. The attacker can then collect information as well as impersonate either of the two agents. For example, an on-path attacker could capture login credentials, redirect traffic to malicious sites, or inject malware into legitimate web pages. The other options are not correct because they describe different types of attacks:

•IP spoofing is the practice of forging the source IP address of a packet to make it appear as if it came from a trusted or authorized source2.

•VLAN hopping is a technique that allows an attacker to access a VLAN that they are not authorized to access by sending packets with a modified VLAN tag3.

•Rogue DHCP is a scenario where an unauthorized DHCP server offers IP configuration parameters to clients on a network, potentially causing network disruption or redirection to malicious sites4.

References

2: Understanding Targeted Attacks: What is a Targeted Attack? 3: Types of attacks - Security on the web | MDN

1: What is an on-path attacker? | Cloudflare

4: [What is a Rogue DHCP Server? - Definition from Techopedia]

NEW QUESTION 209

- (Topic 3)

Which of the following types of connections would need to be set up to provide access from the internal network to an external network so multiple satellite offices can communicate securely using various ports and protocols?

- A. Client-to-site VPN
- B. Clientless VPN
- C. RDP
- D. Site-to-site VPN
- E. SSH

Answer: D

NEW QUESTION 211

- (Topic 3)

An IT technician needs to increase bandwidth to a server. The server has multiple gigabit ports. Which of the following can be used to accomplish this without replacing hardware?

- A. STP
- B. 802.1Q
- C. Duplex
- D. LACP

Answer: D

Explanation:

LACP stands for Link Aggregation Control Protocol and is a protocol that allows multiple physical ports to be combined into a single logical port. This can increase bandwidth, redundancy, and load balancing for a server. LACP is part of the IEEE 802.3ad standard for link aggregation. STP stands for Spanning Tree Protocol and is a protocol that prevents loops in a network by blocking redundant links. 802.1Q is a standard for VLAN (Virtual Local Area Network) tagging, which allows multiple logical networks to share the same physical infrastructure. Duplex is a mode of communication that determines how data is transmitted and received on a link. Full duplex allows simultaneous transmission and reception, while half duplex allows only one direction at a time.

References: CompTIA Network+ Certification Exam Objectives Version 7.0 (N10-007), Objective 1.5: Compare and contrast network cabling types, standards and speeds.

NEW QUESTION 216

- (Topic 3)

Which of the following is most likely responsible for the security and handling of personal data in Europe?

- A. GDPR
- B. SCADA
- C. SAML
- D. PCI DSS

Answer: A

Explanation:

GDPR stands for General Data Protection Regulation, which is a European Union

regulation on information privacy and security. It applies to any organization that collects or processes personal data of individuals in the EU, and it sets out rules and requirements for data protection, consent, breach notification, and enforcement¹

References¹: https://en.wikipedia.org/wiki/General_Data_Protection_Regulation

NEW QUESTION 220

- (Topic 3)

A desktop support department has observed slow wireless speeds for a new line of laptops using the organization's standard image. No other devices have experienced the same issue. Which of the following should the network administrator recommend troubleshooting FIRST to resolve this issue?

- A. Increasing wireless signal power
- B. Installing a new WAP
- C. Changing the protocol associated to the SSID
- D. Updating the device wireless drivers

Answer: D

Explanation:

Wireless drivers can affect the performance and compatibility of your wireless connection⁵. If only a new line of laptops using the organization's standard image has experienced slow wireless speeds, it could be that their wireless drivers are outdated or incompatible with the network. Updating the device wireless drivers could resolve this issue.

Wireless drivers play an important role in the performance of a wireless connection, as they control how the device interacts with the wireless network. If the laptops in question are using an outdated version of the wireless driver, it could be causing the slow speeds. The network administrator should recommend updating the device wireless drivers first to see if this resolves the issue.

NEW QUESTION 221

- (Topic 3)

Which of the following describes when an active exploit is used to gain access to a network?

- A. Penetration testing
- B. Vulnerability testing
- C. Risk assessment
- D. Posture assessment
- E. Baseline testing

Answer: A

Explanation:

Penetration testing is a type of security testing that is used to assess the security of a system or network by actively exploiting known vulnerabilities. It is used to simulate an attack on the system and identify any weaknesses that may be exploited by malicious actors. As stated in the CompTIA Security+ Study Guide, "penetration testing is a type of security assessment that attempts to gain unauthorized access to networks and systems by exploiting security vulnerabilities."

NEW QUESTION 222

- (Topic 3)

Which of the following situations would require an engineer to configure subinterfaces?

- A. In a router-on-a-stick deployment with multiple VLANs
- B. In order to enable inter-VLAN routing on a multilayer switch
- C. When configuring VLAN trunk links between switches
- D. After connecting a router that does not support 802.1Q VLAN tags

Answer: A

Explanation:

A router-on-a-stick is a configuration that allows a single router interface to route traffic between multiple VLANs on a network. A router-on-a-stick requires sub-interfaces to be configured on the router interface, one for each VLAN. Each sub-interface is assigned a VLAN ID and an IP address that belongs to the corresponding VLAN subnet. The router interface is connected to a switch port that is configured as a trunk port, which allows traffic from multiple VLANs to pass through. The router then performs inter-VLAN routing by forwarding packets between the sub-interfaces based on their destination IP addresses. Inter-VLAN routing is a process that allows devices on different VLANs to communicate with each other. Inter-VLAN routing can be performed by a router-on-a-stick configuration, as explained above, or by a multilayer switch that has routing capabilities. A multilayer switch does not require sub-interfaces to be configured for inter-VLAN routing; instead, it uses switch virtual interfaces (SVIs) that are associated with each VLAN. An SVI is a logical interface that represents a VLAN on a switch and has an IP address that belongs to the VLAN subnet. The switch then performs inter-VLAN routing by forwarding packets between the SVIs based on their destination IP addresses.

VLAN trunking is a method that allows traffic from multiple VLANs to be carried over a single link between switches or routers. VLAN trunking requires the use of a tagging protocol, such as 802.1Q, that adds a header to each frame that identifies its VLAN ID. VLAN trunking does not require sub-interfaces to be configured on the switches or routers; instead, it uses trunk ports that are configured to allow or deny traffic from specific VLANs. The switches or routers then forward packets between the trunk ports based on their VLAN IDs.

* 802.1Q is a standard that defines how VLAN tagging and trunking are performed on Ethernet networks.

* 802.1Q adds a 4-byte header to each frame that contains a 12-bit field for the VLAN ID and a 3-bit field for the priority level. 802.1Q does not require sub-interfaces to be configured on the switches or routers; instead, it uses trunk ports that are configured to support 802.1Q tagging and untagging. The switches or routers then forward packets between the trunk ports based on their VLAN IDs and priority levels.

NEW QUESTION 225

- (Topic 3)

Which of the following would be used to forward requests and replies between a DHCP server and client?

- A. Relay
- B. Lease
- C. Scope
- D. Range

Answer: B

NEW QUESTION 228

- (Topic 3)

Which of the following is most likely to have the HIGHEST latency while being the most accessible?

- A. Satellite
- B. DSL
- C. Cable
- D. 4G

Answer: A

NEW QUESTION 232

- (Topic 3)

Which of the following network types is composed of computers that can all communicate with one another with equal permissions and allows users to directly share what is on or attached to their computers?

- A. Local area network
- B. Peer-to-peer network
- C. Client-server network
- D. Personal area network

Answer: B

Explanation:

A peer-to-peer network is a type of network in which each computer (or node) can communicate directly with any other node, without requiring a central server or authority. Each node can act as both a client and a server, and can share its own resources, such as files, printers, or internet connection, with other nodes. A peer-to-peer network allows users to directly access and exchange what is on or attached to their computers, with equal permissions and responsibilities.

NEW QUESTION 236

- (Topic 3)

A company needs a redundant link to provide a channel to the management network in an incident response scenario. Which of the following remote access methods provides the BEST solution?

- A. Out-of-band access
- B. Split-tunnel connections
- C. Virtual network computing
- D. Remote desktop gateways

Answer: A

Explanation:

Out-of-band access is a remote access method that provides a separate, independent channel for accessing network devices and systems. Out-of-band access uses a dedicated network connection or a separate communication channel, such as a dial-up or cellular connection, to provide access to network devices and systems. This allows an administrator to access the management network even if the primary network connection is unavailable or impaired. Out-of-band access is a good solution for providing a redundant link to the management network in an incident response scenario because it can be used to access the network even if the primary connection is unavailable or impaired.

NEW QUESTION 240

- (Topic 3)

Which of the following can be used to aggregate logs from different devices and would make analysis less difficult?

- A. Syslog
- B. SIEM
- C. Event logs
- D. NetFlow

Answer: B

Explanation:

SIEM stands for Security Information and Event Management, and it is a system that collects, normalizes, and analyzes log data from different sources in a centralized platform. SIEM can help identify security incidents, monitor network performance, and generate reports and alerts. SIEM can make log analysis less difficult by providing a unified view of the log data, correlating events across different devices, and applying rules and filters to detect anomalies and patterns.¹²
References: 1: CompTIA Network+ N10-008 Cert Guide - Chapter 14: Network Monitoring³²: Log Aggregation: What It Is & How It Works | Datadog⁴

NEW QUESTION 245

- (Topic 3)

A technician is configuring a static IP address on a new device in a newly created subnet. The work order specifies the following requirements:

- The IP address should use the highest address available in the subnet.
- The default gateway needs to be set to 172.28.85.94.
- The subnet mask needs to be 255.255.255.224.

Which of the following addresses should the engineer apply to the device?

- A. 172.28.85.93
- B. 172.28.85.95
- C. 172.28.85.254
- D. 172.28.85.255

Answer: A

Explanation:

<https://www.tunnelsup.com/subnet-calculator/>
IP Address: 172.28.85.95/27 Netmask: 255.255.255.224
Network Address: 172.28.85.64
Usable Host Range: 172.28.85.65 - 172.28.85.94
Broadcast Address: 172.28.85.95

NEW QUESTION 246

- (Topic 3)

Which of the following is a valid alternative to maintain a deployed proxy technology while saving physical space in the data center by moving the network service to the virtualization infrastructure?

- A. NFV
- B. SDWAN
- C. Networking as code
- D. VIP

Answer: A

Explanation:

The valid alternative to maintain a deployed proxy technology while saving physical space in the data center by moving the network service to the virtualization infrastructure is NFV (Network Function Virtualization). NFV is a technique that allows network functions, such as proxies, firewalls, routers, or load balancers, to be implemented as software applications running on virtual machines or containers. NFV reduces the need for dedicated hardware devices and improves scalability and flexibility of network services. References: CompTIA Network+ N10-008 Certification Study Guide, page 440; The Official CompTIA Network+ Student Guide (Exam N10-008), page 16-11.
NFV can be used to virtualize a wide variety of network functions, including proxy servers. By virtualizing proxy servers, organizations can save physical space in the data center and improve the scalability and efficiency of their networks.
To virtualize a proxy server using NFV, an organization would need to deploy a virtualization platform, such as VMware ESXi or Microsoft Hyper-V. The

organization would then need to install a virtual proxy server appliance on the virtualization platform. Once the virtual proxy server appliance is installed, it can be configured and used just like a physical proxy server. NFV is a relatively new technology, but it is quickly gaining popularity as organizations look for ways to improve the efficiency and scalability of their networks.

NEW QUESTION 247

- (Topic 3)

An engineer needs to verify the external record for SMTP traffic. The engineer logged in to the server and entered the nslookup command. Which of the following commands should the engineer send before entering the DNS name?

- A. set type=A
- B. is -d company-mail.com
- C. set domain=company.mail.com
- D. set querytype=Mx

Answer: D

NEW QUESTION 249

- (Topic 3)

During a recent security audit, a contracted penetration tester discovered the organization uses a number of insecure protocols. Which of the following ports should be disallowed so only encrypted protocols are allowed? (Select TWO).

- A. 22
- B. 23
- C. 69
- D. 443
- E. 587
- F. 8080

Answer: BC

NEW QUESTION 252

- (Topic 3)

Which of the following can be used to limit the ability of devices to perform only HTTPS connections to an internet update server without exposing the devices to the public internet?

- A. Allow connections only to an internal proxy server.
- B. Deploy an IDS system and place it in line with the traffic.
- C. Create a screened network and move the devices to it.
- D. Use a host-based network firewall on each device.

Answer: A

Explanation:

An internal proxy server is a server that acts as an intermediary between internal devices and external servers on the internet. An internal proxy server can be used to limit the ability of devices to perform only HTTPS connections to an internet update server by filtering and forwarding the requests and responses based on predefined rules or policies. An internal proxy server can also prevent the devices from being exposed to the public internet by hiding their IP addresses and providing a layer of security and privacy.

NEW QUESTION 257

- (Topic 3)

A network technician is troubleshooting an issue that involves connecting to a server via SSH. The server has one network interface that does not support subinterfaces. The technician runs a command on the server and receives the following output:

Proto	Local address	Foreign address	State
TCP	0.0.0.0:22	0.0.0.0:0	LISTENING
TCP	0.0.0.0:23	0.0.0.0:0	LISTENING
TCP	0.0.0.0:443	0.0.0.0:0	LISTENING
TCP	10.10.10.15:22	10.10.10.42:21231	ESTABLISHED

On the host, the technician runs another command and receives the following:

Destination	Gateway	Genmask	Flags	Iface
default	31.242.12.9	0.0.0.0	UG	eth0
192.168.1.0	0.0.0.0	255.255.255.0	UG	eth1

Which of the following best explains the issue?

- A. A firewall is blocking access to the server.
- B. The server is plugged into a trunk port.
- C. The host does not have a route to the server.
- D. The server is not running the SSH daemon.

Answer: C

NEW QUESTION 259

- (Topic 3)

A technician is investigating packet loss to a device that has varying data bursts throughout the day. Which of the following will the technician MOST likely configure to resolve the issue?

- A. Flow control
- B. Jumbo frames
- C. Duplex
- D. Port mirroring

Answer: A

Explanation:

Ethernet flow control is a mechanism for temporarily stopping the transmission of data on Ethernet family computer networks. The goal of this mechanism is to avoid packet loss in the presence of network congestion.

Flow control is a mechanism that allows a device to regulate the amount of data it receives from another device, ensuring that the receiving device is not overwhelmed with data. If the device experiencing packet loss is receiving large bursts of data at times when it is not able to process it quickly enough, configuring flow control could help prevent packets from being lost.

"In theory, flow control can help with situations like a host that can't keep up with the flow of traffic. It enables the host to send an Ethernet PAUSE frame, which asks the switch to hold up for some amount of time so the host can catch its breath. If the switch can, it'll buffer transmissions until the pause expires, and then start sending again. If the host catches up early, it can send another PAUSE frame with a delay of zero to ask the switch to resume. In practice, flow control can cause latency trouble for modern real-time applications such as VoIP, and the same needs are usually met by QoS"

NEW QUESTION 261

- (Topic 3)

An organization has a security staff shortage and must prioritize efforts in areas where the staff will have the most impact. In particular, the focus is to avoid expending resources on identifying non-relevant events. A security analyst is reviewing web server logs and sees the following:

```
202.180.155.1 - [14/Jan/2021:04:12:28 -0200] "GET /img/us.gif" 404 295
202.180.155.1 - [14/Jan/2021:04:12:28 -0200] "GET /img/org.gif" 404 295
202.180.155.1 - [14/Jan/2021:04:12:29 -0200] "GET /img/org2.gif" 404 295
202.180.155.1 - [14/Jan/2021:04:12:29 -0200] "GET /img/org3.gif" 404 295
202.180.155.1 - [14/Jan/2021:04:12:30 -0200] "GET /img/org4.gif" 404 295
202.180.155.1 - [14/Jan/2021:04:12:31 -0200] "GET /img/directors.gif" 404 295
202.180.155.1 - [14/Jan/2021:04:12:31 -0200] "GET /img/directors2.gif" 404 295
202.180.155.1 - [14/Jan/2021:04:12:32 -0200] "GET /img/directors3.gif" 404 295
202.180.155.1 - [14/Jan/2021:04:12:33 -0200] "GET /img/directors4.gif" 404 295
```

Which of the following should the analyst recommend?

- A. Configuring the web server log to filter out 404 errors on image files
- B. Updating firewall rules to block 202.180.155.1
- C. Resyncing the network time server and monitoring logs for future anomalous behavior
- D. Checking with the penetration testing team to see if the team ran any scans on January 14, 2021

Answer: A

Explanation:

This answer will help the organization to avoid expending resources on identifying non-relevant events, as the 404 errors on image files are not indicative of any security threat or issue, but rather a misconfiguration or a broken link on the web server. The 404 errors on image files are also very frequent and repetitive, as shown by the web server log, which can clutter the log and make it harder to spot any relevant events. By filtering out these errors, the analyst can focus on more important events and reduce the noise in the log. The other answers are not as good as A, because they either do not address the problem of identifying non-relevant events, or they are based on incorrect assumptions or information. For example:

? B. Updating firewall rules to block 202.180.155.1 is not a good answer, because the IP address 202.180.155.1 is not doing anything malicious or suspicious, but rather requesting image files that do not exist on the web server. Blocking this IP address will not improve the security of the web server, but rather create unnecessary firewall rules and possibly deny legitimate access to the web server.

? C. Resyncing the network time server and monitoring logs for future anomalous behavior is not a good answer, because there is no evidence that the network time server is out of sync or causing any problems. The web server log shows that the entries are all within a few minutes of each other, which is normal and expected. Resyncing the network time server will not help the analyst to identify non-relevant events, but rather waste time and resources on an unrelated task.

? D. Checking with the penetration testing team to see if the team ran any scans on January 14, 2021 is not a good answer, because the web server log does not show any signs of a penetration test or a scan. The log shows only 404 errors on image files, which are not typical of a penetration test or a scan, which would usually target different types of files, ports, or vulnerabilities. Checking with the penetration testing team will not help the analyst to identify non-relevant events, but rather distract the analyst from the actual events and possibly create false alarms.

<https://www.professormesser.com/network-plus/n10-008/n10-008-video/general-network-troubleshooting-n10-008/>

NEW QUESTION 264

- (Topic 3)

A network technician needs to select an AP that will support at least 1.3Gbps and 5GHz only. Which of the following wireless standards must the AP support to meet the requirements?

- A. B
- B. AC
- C. AX
- D. N
- E. G

Answer: B

Explanation:

Wireless AC is a wireless standard that supports up to 1.3Gbps data rate and operates in the 5GHz frequency band only. Wireless AC is also backward compatible with wireless A and N devices that use the 5GHz band. Wireless AC is suitable for high-performance applications such as HD video streaming and online gaming.

References: Network+ Study Guide Objective 2.2: Explain the purposes and properties of routing and switching. Subobjective: Wireless standards and their characteristics.

NEW QUESTION 266

- (Topic 3)

All packets arriving at an interface need to be fully analyzed. Which of the following features should be used to enable monitoring of the packets?

- A. LACP
- B. Flow control
- C. Port mirroring
- D. NetFlow exporter

Answer: D

Explanation:

Port mirroring is a feature that can be used to enable monitoring of all packets arriving at an interface. This feature is used to direct a copy of all traffic passing through the switch to a monitoring device, such as a network analyzer. This allows the switch to be monitored with the network analyzer in order to identify any malicious or suspicious activity. Additionally, port mirroring can be used to troubleshoot network issues, such as latency or poor performance.

NEW QUESTION 268

- (Topic 3)

A company wants to invest in new hardware for the core network infrastructure. The management team requires that the infrastructure be capable of being repaired in less than 60 minutes if any major part fails. Which of the following metrics is MOST likely associated with this requirement?

- A. RPO
- B. MTTR
- C. FHRP
- D. MTBF

Answer: B

Explanation:

MTTR is directly related to how quickly a system can be repaired if any major part fails. The management team requires that the infrastructure be capable of being repaired in less than 60 minutes, which means they have a low MTTR requirement.

MTTR stands for Mean Time To Repair and is a metric used to measure the average amount of time it takes to repair a failed component or system. In this case, the requirement is for the infrastructure to be capable of being repaired in less than 60 minutes if any major part fails, which means the MTTR should be less than 60 minutes.

NEW QUESTION 270

- (Topic 3)

A network administrator is decommissioning a server. Which of the following will the network administrator MOST likely consult?

- A. Onboarding and off boarding policies
- B. Business continuity plan
- C. Password requirements
- D. Change management documentation

Answer: D

NEW QUESTION 271

- (Topic 3)

A technician was cleaning a storage closet and found a box of transceivers labeled 8Gbps. Which of the following protocols uses those transceivers?

- A. Coaxial over Ethernet
- B. Internet Small Computer Systems Interface
- C. Fibre Channel
- D. Gigabit interface converter

Answer: C

Explanation:

The transceivers labeled 8Gbps are likely to be used with the Fibre Channel protocol. Fibre Channel is a high-speed networking technology that is primarily used to connect storage devices to servers in storage area networks (SANs). It is capable of transmitting data at speeds of up to 8 Gbps (gigabits per second), and uses specialized transceivers to transmit and receive data over fiber optic cables.

Coaxial over Ethernet (CoE) is a networking technology that uses coaxial cables to transmit data, and is not related to the transceivers in question. Internet Small Computer Systems Interface (iSCSI) is a protocol that allows devices to communicate over a network using the SCSI protocol, and does not typically use specialized transceivers. Gigabit interface converter (GBIC) is a type of transceiver used to transmit and receive data over fiber optic cables, but it is not capable of transmitting data at 8 Gbps.

NEW QUESTION 274

- (Topic 3)

Which of the following topologies requires the MOST connections when designing a network?

- A. Mesh
- B. Star
- C. Bus
- D. Ring

Answer: A

NEW QUESTION 277

- (Topic 3)

A user took a laptop on a trip and made changes to the network parameters while at the airport. The user can access all internet websites but not corporate intranet websites. Which of the following is the most likely cause of the issue?

- A. Duplicate IP address
- B. Duplicate SSID
- C. Incorrect DNS
- D. Incorrect subnet mask

Answer: C

Explanation:

DNS (Domain Name System) is a service that translates domain names into IP addresses. Corporate intranet websites are usually hosted on private IP addresses that are not accessible from the public internet. Therefore, the user's laptop needs to use the correct DNS server that can resolve the intranet domain names to the private IP addresses. If the user changed the network parameters at the airport and did not revert them back, the laptop might be using a public DNS server that does not have the records for the intranet websites. This would cause the user to access all internet websites but not corporate intranet websites.

References:

- ? An Overview of DNS - N10-008 CompTIA Network+ : 1.61
- ? DNS Configuration – CompTIA A+ 220-11012
- ? CompTIA Network+ Certification Exam Objectives, page 53

NEW QUESTION 282

- (Topic 3)

Which of the following network cables involves bouncing light off of protective cladding?

- A. Twinaxial
- B. Coaxial
- C. Single-mode
- D. Multimode

Answer: D

Explanation:

Multimode fiber optic cables use multiple paths of light that bounce off the cladding, which is a layer of glass or plastic that surrounds the core of the cable.
<https://www.explainthatstuff.com/fiberoptics.html>

NEW QUESTION 286

- (Topic 3)

Which of the following should be used to manage outside cables that need to be routed to various multimode uplinks?

- A. Fiber distribution panel
- B. 110 punchdown block
- C. PDU
- D. TIA/EIA-568A patch bay
- E. Cat 6 patch panel

Answer: A

Explanation:

A fiber distribution panel is a device that provides a central location for connecting and managing fiber optic cables and optical modules. It can support various types and speeds of fiber optic links, including multimode uplinks. Therefore, a fiber distribution panel should be used to manage outside cables that need to be routed to various multimode uplinks.

NEW QUESTION 288

- (Topic 3)

A company is designing a SAN and would like to use STP as its medium for communication. Which of the following protocols would BEST suit the company's needs?

- A. SFTP
- B. Fibre Channel
- C. iSCSI
- D. FTP

Answer: B

Explanation:

A SAN also employs a series of protocols enabling software to communicate or prepare data for storage. The most common protocol is the Fibre Channel Protocol (FCP), which maps SCSI commands over FC technology. The iSCSI SANs will employ an iSCSI protocol that maps SCSI commands over TCP/IP. STP (Spanning Tree Protocol) is a protocol used to prevent loops in Ethernet networks, and it is not a medium for communication in a storage area network (SAN). However, Fibre Channel is a protocol that is specifically designed for high-speed data transfer in SAN environments. It is a dedicated channel technology that provides high throughput and low latency, making it ideal for SANs. Therefore, Fibre Channel would be the best protocol for the company to use for its SAN. SFTP (Secure File Transfer Protocol), iSCSI (Internet Small Computer System Interface), and FTP (File Transfer Protocol) are protocols used for transferring files over a network and are not suitable for use in a SAN environment.

NEW QUESTION 290

- (Topic 3)

A help desk technician is concerned that a client's network cable issues may be causing intermittent connectivity. Which of the following would help the technician determine if this is the issue?

- A. Run the show interface command on the switch
- B. Run the traceroute command on the server
- C. Run iperf on the technician's desktop
- D. Ping the client's computer from the router
- E. Run a port scanner on the client's IP address

Answer: A

Explanation:

To determine if a client's network cable issues may be causing intermittent connectivity, the help desk technician can run the show interface command on the switch.

This command allows the technician to view the status and statistics of the various interfaces on the switch, including the physical link status and the number of transmitted and received packets. If the interface is experiencing a large number of errors or dropped packets, this could indicate a problem with the network cable or with the connection between the client's device and the switch.

"Cisco routers and switches have a show interfaces IOS command that provides interface statistics/status information, including link state (up/down), speed/duplex, send/receive traffic, cyclic redundancy checks (CRCs), and protocol packet and byte counts."

NEW QUESTION 294

- (Topic 3)

To access production applications and data, developers must first connect remotely to a different server. From there, the developers are able to access production data. Which of the following does this BEST represent?

- A. A management plane
- B. A proxy server
- C. An out-of-band management device
- D. A site-to-site VPN
- E. A jump box

Answer: E

NEW QUESTION 298

- (Topic 3)

A network engineer needs to change an entire subnet of SLAAC-configured workstation addresses. Which of the following methods would be the best for the engineer to use?

- A. Change the address prefix in ARP in order for the workstations to retrieve their new addresses.
- B. Change the address prefix in a router in order for the router to advertise the new prefix with an ND.
- C. Change the address prefix scope in a DHCP server in order for the workstations to retrieve their new addresses.
- D. Change the workstations' address prefix manually because an automated method does not exist.

Answer: B

Explanation:

SLAAC (Stateless Address Autoconfiguration) is a mechanism that enables each host on the network to auto-configure a unique IPv6 address without any device keeping track of which address is assigned to which node¹. SLAAC uses link-local addresses and the interface's MAC address or a random number to generate the host portion of the IPv6 address². SLAAC also relies on Router Solicitation (RS) and Router Advertisement (RA) messages to obtain the network prefix and other information from a router¹. Therefore, to change an entire subnet of SLAAC-configured workstation addresses, the network engineer needs to change the address prefix in a router and let the router advertise the new prefix with an ND (Neighbor Discovery) message. This way, the workstations will receive the new prefix and update their IPv6 addresses accordingly³.

References¹ - IPv6 Stateless Address Auto-configuration (SLAAC) | NetworkAcademy.io² - IPv6 SLAAC – Stateless Address Autoconfiguration - Study-CCNA3 - Mastering IPv6

SLAAC Concepts and Configuration - Cisco Press

NEW QUESTION 299

- (Topic 3)

Which of the following would MOST likely be used to review disaster recovery information for a system?

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

Answer: A

Explanation:

The document that would most likely be used to review disaster recovery information for a system is a business continuity plan (BCP). A BCP is a document that outlines the procedures and resources needed to maintain or resume critical business functions in the event of a disaster or disruption. A BCP typically includes a disaster recovery plan (DRP), which is a subset of the BCP that focuses on restoring IT systems and data after a disaster. A BCP also covers other aspects of business continuity, such as risk assessment, business impact analysis, emergency response, crisis management, and testing. References: CompTIA Network+ N10-008 Certification Study Guide, page 346; The Official CompTIA Network+ Student Guide (Exam N10-008), page 13-9.

NEW QUESTION 302

- (Topic 3)

A network administrator is designing a wireless network. The administrator must ensure a rented office space has a sufficient signal. Reducing exposure to the wireless network is important, but it is secondary to the primary objective. Which of the following would MOST likely facilitate the correct accessibility to the Wi-Fi network?

- A. Polarization

- B. Channel utilization
- C. Channel bonding
- D. Antenna type
- E. MU-MIMO

Answer: B

NEW QUESTION 304

- (Topic 3)

Which of the following cables is the most appropriate to use when running bulk cables in ceilings?

- A. Plenum
- B. Coaxial
- C. Ethernet
- D. DAC

Answer: A

Explanation:

Plenum cable is the most appropriate to use when running bulk cables in ceilings because it is designed to meet fire safety standards and reduce the risk of toxic smoke in plenum spaces, which are areas with air flow above or below floors.

NEW QUESTION 306

- (Topic 3)

A company is undergoing expansion but does not have sufficient rack space in its data center. Which of the following would be BEST to allow the company to host its new equipment without a major investment in facilities?

- A. Using a colocation service
- B. Using available rack space in branch offices
- C. Using a flat network topology
- D. Reorganizing the network rack and installing top-of-rack switching

Answer: A

Explanation:

A colocation service is a service that provides rack space, power, cooling, security, and connectivity for a company's network equipment in a data center. A colocation service can be used when a company does not have sufficient rack space in its own data center and does not want to invest in building or expanding its own facilities. By using a colocation service, a company can host its new equipment in a professional and reliable environment without a major investment in facilities. References:

<https://www.comptia.org/training/books/network-n10-008-study-guide> (page 414)

NEW QUESTION 311

- (Topic 3)

A wireless network technician is receiving reports from some users who are unable to see both of the corporate SSIDs on their mobile devices. A site survey was recently commissioned, and the results verified acceptable RSSI from both APs in all user areas. The APs support modern wireless standards and are all broadcasting their SSIDs. The following table shows some of the current AP settings:

Name	Power	Directionality	Wireless standard	Authentication standard	SSID
AP1	Medium	Omnidirectional	802.11b	WPA2 - PSK	CORP01
AP2	High	Directional	802.11a	WPA2 - PSK	CORP02

Which of the following changes would result in all of the user devices being capable of seeing both corporate SSIDs?

- A. Implementing the WPA2 Enterprise authentication standard
- B. Implementing omnidirectional antennas for both APs
- C. Configuring the highest power settings for both APs
- D. Configuring both APs to use the 802.11ac wireless standard

Answer: D

Explanation:

The change that would result in all of the user devices being capable of seeing both corporate SSIDs is configuring both APs to use the 802.11ac wireless standard. 802.11ac is a wireless standard that operates in the 5 GHz frequency band and offers high data rates and performance. However, not all wireless devices support 802.11ac, especially older ones that only operate in the 2.4 GHz frequency band. In the table, AP1 uses 802.11b, which is an outdated wireless standard that operates in the 2.4 GHz frequency band and offers low data rates and performance. AP2 uses 802.11a, which is an older wireless standard that operates in the 5 GHz frequency band and offers moderate data rates and performance. Therefore, some user devices may not be able to see both SSIDs because they are incompatible with either 802.11b or 802.11a. By configuring both APs to use 802.11ac, which is backward compatible with previous wireless standards, all user devices should be able to see both SSIDs. References: CompTIA Network+ N10-008 Certification Study Guide, page 75; The Official CompTIA Network+ Student Guide (Exam N10-008), page 2-18.

NEW QUESTION 315

- (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 316

- (Topic 3)

A technician is consolidating a topology with multiple SSIDs into one unique SSID deployment. Which of the following features will be possible after this new configuration?

- A. Seamless roaming
- B. Basic service set
- C. WPA
- D. MU-MIMO

Answer: A

NEW QUESTION 318

- (Topic 3)

A network technician is troubleshooting internet connectivity issues with users in a subnet. From a host, the technician runs and then attempts to navigate to a website using a web browser.

The technician receives the following output:

```
16:35:58.756583 IP (tos 0x0, ttl 64, id 56522, offset 0, flags [DF], proto UDP (17), length 57)
  192.168.1.15.44232 > 192.168.1.252.53: 50327 + A? comptia.com. (29)
16:35:58.835371 IP (tos 0x0, ttl 64, id 56523, offset 0, flags [DF], proto UDP (17), length 57)
  192.168.1.15.44232 > 192.168.1.252.53: 50327 + A? comptia.com. (29)
16:35:59.652312 IP (tos 0x0, ttl 64, id 56524, offset 0, flags [DF], proto UDP (17), length 57)
  192.168.1.15.44232 > 192.168.1.252.53: 50327 + A? comptia.com. (29)
16:36:00.765212 IP (tos 0x0, ttl 64, id 56525, offset 0, flags [DF], proto UDP (17), length 57)
  192.168.1.15.44232 > 192.168.1.252.53: 50327 + A? comptia.com. (29)
```

Afterward, the browser displays an error. Which of the following explains this issue?

- A. A routing loop is within the network.
- B. The host is configured with incorrect DNS settings
- C. A broadcast storm is occurring on the subnet
- D. The host is missing a route to the website.

Answer: B

Explanation:

The issue is that the host is configured with incorrect DNS settings. DNS (Domain Name System) is a service that resolves domain names to IP addresses. For example, the domain name www.comptia.org is resolved to the IP address 104.18.25.140 by a DNS server. If the host has incorrect DNS settings, such as an invalid or unreachable DNS server address, it will not be able to resolve domain names to IP addresses, and therefore it will not be able to access websites by their names. The output in the image shows that the host can ping the IP address of www.comptia.org, but it cannot ping the domain name itself, indicating a DNS problem. References: CompTIA Network+ N10-008 Certification Study Guide, page 154; The Official CompTIA Network+ Student Guide (Exam N10-008), page 6-8.

NEW QUESTION 321

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