CompTIA

Exam Questions N10-009

CompTIA Network+ Exam

NEW QUESTION 1
- (Exam Topic 1)
A company built a new building at its headquarters location. The new building is connected to the company's LAN via fiber-optic cable. Multiple users in the new building are unable to access the company's intranet site via their web browser, but they are able to access internet sites. Which of the following describes how the network administrator can resolve this issue?

A. Correct the DNS server entries in the DHCP scope
B. Correct the external firewall gateway address
C. Correct the NTP server settings on the clients
D. Correct a TFTP Issue on the company's server

Answer: A

Explanation:
If multiple users in a new building are unable to access the company's intranet site via their web browser but are able to access internet sites, the network administrator can resolve this issue by correcting the DNS server entries in the DHCP scope. The DHCP scope is responsible for assigning IP addresses and DNS server addresses to clients. If the DNS server entries are incorrect, clients will not be able to access intranet sites.
References:
> CompTIA Network+ Certification Study Guide, Exam N10-007, Fourth Edition, Chapter 4: Network Implementations, Objective 4.4: Explain the purpose and properties of DHCP.

NEW QUESTION 2
- (Exam Topic 1)
A technician wants to deploy a new wireless network that comprises 30 WAPs installed throughout a
three-story office building. All the APs will broadcast the same SSID for client access. Which of the following BEST describes this deployment?

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

Answer: A

Explanation:
An extended service set (ESS) is a wireless network that consists of multiple access points (APs) that share the same SSID and are connected by a wired network. An ESS allows wireless clients to roam seamlessly between different APs without losing connectivity. A basic service set (BSS) is a wireless network that consists of a single AP and its associated clients. An independent basic service set (IBSS) is a wireless network that consists of a group of clients that communicate directly without an AP. A unified service set is not a standard term for a wireless network. References:
https://partners.comptia.org/docs/default-source/resources/comptia-network-n10-008-exam-objectives-(2-0),
https://en.wikipedia.org/wiki/Service_set_(802.11_network)

NEW QUESTION 3
- (Exam Topic 1)
A technician is installing a high-density wireless network and wants to use an available frequency that supports the maximum number of channels to reduce interference. Which of the following standard 802.11 frequency ranges should the technician look for while reviewing WAP specifications?

A. 2.4GHz
B. 5GHz
C. 6GHz
D. 900MHz

Answer: B

Explanation:
* 802.11 a/b/g/n/ac wireless networks operate in two frequency ranges: 2.4 GHz and 5 GHz. The 5 GHz frequency range supports more channels than the 2.4 GHz frequency range, making it a better choice for high-density wireless networks.
References: CompTIA Network+ Certification Study Guide, Sixth Edition by Glen E. Clarke

NEW QUESTION 4
- (Exam 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 5
- (Exam 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 6
- (Exam Topic 1)
Wireless users are reporting intermittent internet connectivity. Connectivity is restored when the users disconnect and reconnect, utilizing the web authentication process each time. The network administrator can see the devices connected to the APs at all times. Which of the following steps will MOST likely determine the cause of the issue?

A. Verify the session time-out configuration on the captive portal settings
B. Check for encryption protocol mismatch on the client's wireless settings
C. Confirm that a valid passphrase is being used during the web authentication
D. Investigate for a client's disassociation caused by an evil twin AP

Answer: A

Explanation:
A captive portal is a web page that requires users to authenticate before they can access the internet. If the session time-out configuration is too short, users may experience intermittent internet connectivity and have to reconnect using the web authentication process each time. The network administrator can verify the session time-out configuration on the captive portal settings and adjust it if needed. References: CompTIA Network+ Certification Exam Objectives Version 2.0 (Exam Number: N10-006), Domain 1.0 Network Architecture, Objective 1.8 Explain the purposes and use cases for advanced networking devices.

NEW QUESTION 7
- (Exam Topic 1)
At which of the following OSI model layers would a technician find an IP header?

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

Answer: C

Explanation:
An IP header can be found at the third layer of the OSI model, also known as the network layer. This layer is responsible for logical addressing, routing, and forwarding of data packets.
References:
CompTIA Network+ Certification Study Guide, Exam N10-007, Fourth Edition, Chapter 2: Network Models, p. 82

NEW QUESTION 8
- (Exam Topic 1)
An attacker is attempting to find the password to a network by inputting common words and phrases in plaintext to the password prompt. Which of the following attack types BEST describes this action?

A. Pass-the-hash attack
B. Rainbow table attack
C. Brute-force attack
D. Dictionary attack

Answer: D

Explanation:
The attacker attempting to find the password to a network by inputting common words and phrases in plaintext to the password prompt is using a dictionary attack.
References: CompTIA Network+ Certification Study Guide, Chapter 6: Network Attacks and Mitigation.

NEW QUESTION 9
- (Exam Topic 1)
Which of the following DNS records works as an alias to another record?

A. AAAA
B. CNAME

C. MX
D. SOA

Answer: B

Explanation:
The DNS record that works as an alias to another record is called CNAME (Canonical Name). CNAME records are used to create an alias for a domain name that points to another domain name.
References:
CompTIA Network+ Certification Study Guide, Exam N10-007, Fourth Edition, Chapter 2: The OSI Model and Networking Protocols, Objective 2.3: Given a scenario, implement and configure the
appropriate addressing schema.

NEW QUESTION 10
- (Exam Topic 1)
A technician is connecting multiple switches to create a large network for a new office. The switches are unmanaged Layer 2 switches with multiple connections between each pair. The network is experiencing an extreme amount of latency. Which of the following is MOST likely occurring?

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

Answer: C

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 10
- (Exam Topic 1)
A network administrator discovers that users in an adjacent building are connecting to the company's guest wireless network to download inappropriate material. Which of the following can the administrator do to MOST easily mitigate this issue?

A. Reduce the wireless power levels
B. Adjust the wireless channels
C. Enable wireless client isolation
D. Enable wireless port security

Answer: A

Explanation:
Reducing the wireless power levels can limit the range of the guest wireless network and prevent users in an adjacent building from connecting to it. Adjusting the wireless channels or enabling wireless client isolation will not affect the signal strength or coverage of the guest network. Enabling wireless port security will not work on a guest network that does not use authentication or MAC address filtering. References: CompTIA Network+ Certification Exam Objectives Version 2.0 (Exam Number: N10-006), Domain 2.0 Network Operations, Objective 2.5 Given a scenario, implement appropriate wireless configuration settings; Guest WiFi Security - Cisco Umbrella

NEW QUESTION 15
- (Exam 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 19
- (Exam Topic 1)
A technician is troubleshooting a wireless connectivity issue in a small office located in a high-rise building. Several APs are mounted in this office. The users report that the network connections frequently disconnect and reconnect throughout the day. Which of the following is the MOST likely cause of this issue?

A. The AP association time is set too low
B. EIRP needs to be boosted
C. Channel overlap is occurring
D. The RSSI is misreported

Answer: C

Explanation:
Channel overlap is a common cause of wireless connectivity issues, especially in high-density environments where multiple APs are operating on the same or adjacent frequencies. Channel overlap can cause interference, signal degradation, and performance loss for wireless devices. The AP association time, EIRP, and RSSI are not likely to cause frequent disconnects and reconnects for wireless users.

NEW QUESTION 22
- (Exam Topic 1)
A network engineer performs the following tasks to increase server bandwidth: Connects two network cables from the server to a switch stack
Configure LACP on the switchports
Verifies the correct configurations on the switch interfaces Which of the following needs to be configured on the server?

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

Answer: C

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://docs.microsoft.com/en-us/windows-server/networking/technologies/nic-teaming/nic-teaming

NEW QUESTION 24
- (Exam Topic 1)
Given the following information:

Protocol	Local address	Foreign address	State
TCP	127.0.0.1:57779	Desktop-Open:57780	Established
TCP	127.0.0.1:57780	Desktop-Open:57779	Established

Which of the following command-line tools would generate this output?

A. netstat
B. arp
C. dig
D. tracert

Answer: D

Explanation:
Tracert is a command-line tool that traces the route of a packet from a source to a destination and displays the number of hops and the round-trip time for each hop. The output shown in the question is an example of a tracert output, which shows five hops with their IP addresses and hostnames (if available) and three latency measurements for each hop in milliseconds. References:
https://partners.comptia.org/docs/default-source/resources/comptia-network-n10-008-exam-objectives-(2-0), https://www.lumen.com/help/en-us/network/traceroute/understanding-the-traceroute-output.html

NEW QUESTION 25
- (Exam Topic 1)
Which of the following is used to track and document various types of known vulnerabilities?

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

Answer: A

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://cve.mitre.org/cve/

NEW QUESTION 28
- (Exam Topic 1)
Which of the following transceiver types can support up to 40Gbps?

A. SFP+
B. QSFP+
C. QSFP
D. SFP

Answer: B

Explanation:
QSFP+ is a transceiver type that can support up to 40Gbps. It stands for Quad Small Form-factor Pluggable Plus and uses four lanes of data to achieve high-speed transmission. It is commonly used for data center and high-performance computing applications. References: https://www.cisco.com/c/en/us/products/collateral/interfaces-modules/transceiver-modules/data_sheet_c78-6600

NEW QUESTION 31
- (Exam Topic 1)
According to troubleshooting methodology, which of the following should the technician do NEXT after determining the most likely probable cause of an issue?

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

Answer: A

Explanation:
According to troubleshooting methodology, after determining the most likely probable cause of an issue, the next step is to establish a plan of action to resolve the issue and identify potential effects. This step involves defining the steps needed to implement a solution, considering the possible consequences of each step, and obtaining approval from relevant stakeholders if necessary. References: https://partners.comptia.org/docs/default-source/resources/comptia-network-n10-008-exam-objectives-(2-0), https://www.comptia.org/blog/the-comptia-guide-to-it-troubleshooting

NEW QUESTION 35
- (Exam Topic 1)
A network engineer is investigating reports of poor network performance. Upon reviewing a device configuration, the engineer finds that duplex settings are mismatched on both ends. Which of the following would be the MOST likely result of this finding?

A. Increased CRC errors
B. Increased giants and runts
C. Increased switching loops
D. Increased device temperature

Answer: A

Explanation:
Mismatched duplex settings can cause an increase in CRC errors, which are errors in data transmission that can result in corrupted data. References: CompTIA Network+ Certification Study Guide, Chapter 4: Infrastructure.

NEW QUESTION 38
- (Exam Topic 1)
Within the realm of network security, Zero Trust:

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

Answer: A

Explanation:
Zero Trust is a security framework that requires all users, whether in or outside the organization’s network, to be authenticated, authorized, and continuously validated for security configuration and posture before being granted or keeping access to applications and data. Zero Trust prevents attackers from moving laterally through a system by applying granular policies and controls based on the principle of least privilege and by segmenting and encrypting data flows across the network. References: https://partners.comptia.org/docs/default-source/resources/comptia-network-n10-008-exam-objectives-(2-0), https://www.crowdstrike.com/cybersecurity-101/zero-trust-security/

NEW QUESTION 40
- (Exam 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 42
- (Exam Topic 1)
A client recently added 100 users who are using VMs. All users have since reported slow or unresponsive desktops. Reports show minimal network congestion,

zero packet loss, and acceptable packet delay. Which of the following metrics will MOST accurately show the underlying performance issues? (Choose two.)

A. CPU usage
B. Memory
C. Temperature
D. Bandwidth
E. Latency
F. Jitter

Answer: AB

NEW QUESTION 45
- (Exam Topic 1)
Which of the following is the LARGEST MTU for a standard Ethernet frame?

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

Answer: C

Explanation:
The maximum transmission unit (MTU) is the largest size of a data packet that can be transmitted over a network. A standard Ethernet frame supports an MTU of 1500 bytes, which is the default value for most Ethernet networks. Larger MTUs are possible with jumbo frames, but they are not widely supported and may cause fragmentation or compatibility issues. References:
https://partners.comptia.org/docs/default-source/resources/comptia-network-n10-008-exam-objectives-(2-0),
https://en.wikipedia.org/wiki/Maximum_transmission_unit

NEW QUESTION 50
- (Exam 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 54
- (Exam 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 55
- (Exam Topic 1)
A website administrator is concerned the company's static website could be defaced by hacktivists or used as a pivot point to attack internal systems. Which of the following should a network security administrator recommend to assist with detecting these activities?

A. Implement file integrity monitoring.
B. Change the default credentials.
C. Use SSL encryption.
D. Update the web-server software.

Answer: A

Explanation:
Implementing file integrity monitoring (FIM) would assist with detecting activities such as website defacement or internal system attacks. FIM is a process that monitors and alerts on changes to files or directories that are critical for security or functionality. FIM can help detect unauthorized modifications, malware

infections, data breaches, or configuration errors. FIM can also help with compliance and auditing requirements. References: https://www.tripwire.com/state-of-security/security-data-protection/cyber-security/what-is-file-integrity-monitor

NEW QUESTION 56
- (Exam 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 57
- (Exam Topic 1)
A user reports being unable to access network resources after making some changes in the office. Which of the following should a network technician do FIRST?

A. Check the system's IP address
B. Do a ping test against the servers
C. Reseat the cables into the back of the PC
D. Ask what changes were made

Answer: D

Explanation:
When a user reports being unable to access network resources after making some changes, the network technician should first ask the user what changes were made. This information can help the technician identify the cause of the issue and determine the appropriate course of action.
References: CompTIA Network+ Certification Study Guide, Sixth Edition by Glen E. Clarke

NEW QUESTION 58
- (Exam Topic 1)
Which of the following service models would MOST likely be used to replace on-premises servers with a cloud solution?

A. PaaS
B. IaaS
C. SaaS
D. Disaster recovery as a Service (DRaaS)

Answer: B

Explanation:
IaaS stands for Infrastructure as a Service, which is a cloud service model that provides virtualized computing resources over the Internet, such as servers, storage, networking, and operating systems. IaaS allows customers to replace their on-premises servers with cloud servers that can be scaled up or down on demand and pay only for what they use. PaaS stands for Platform as a Service, which provides customers with a cloud-based platform for developing, testing, and deploying applications without managing the underlying infrastructure. SaaS stands for Software as a Service, which provides customers with access to cloud-based software applications over the Internet without installing or maintaining them on their devices. Disaster recovery as a Service (DRaaS) is a type of cloud service that provides customers with backup and recovery solutions for their data and applications in case of a disaster.

NEW QUESTION 63
- (Exam 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://www.cisco.com/c/en/us/products/security/what-is-an-intrusion-detection-system-ids.html

NEW QUESTION 64
- (Exam Topic 1)
A branch of a company recently switched to a new ISP. The network engineer was given a new IP range to assign. The ISP assigned 196.26.4.0/26, and the branch gateway router now has the following configurations on the interface that peers to the ISP:

```
IP address:          196.26.4.30
Subnet mask:         255.255.255.224
Gateway:             196.24.4.1
```

The network engineer observes that all users have lost Internet connectivity. Which of the following describes the issue?

A. The incorrect subnet mask was configured
B. The incorrect gateway was configured
C. The incorrect IP address was configured
D. The incorrect interface was configured

Answer: C

Explanation:
The IP address configured on the router interface is 196.26.4.1/26, which belongs to the IP range assigned by the ISP (196.26.4.0/26). However, this IP address is not valid for this interface because it is the network address of the subnet, which cannot be assigned to any host device. The network address is the first address of a subnet that identifies the subnet itself. The valid IP addresses for this subnet are from 196.26.4.1 to 196.26.4.62, excluding the network address (196.26.4.0) and the broadcast address (196.26.4.63). The router interface should be configured with a valid IP address within this range to restore Internet connectivity for all users. References:
https://partners.comptia.org/docs/default-source/resources/comptia-network-n10-008-exam-objectives-(2-0), https://www.techopedia.com/definition/24136/network-address

NEW QUESTION 66
- (Exam 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 68
- (Exam Topic 1)
A network administrator needs to query the NSs for a remote application. Which of the following commands would BEST help the administrator accomplish this task?

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

Answer: A

Explanation:
The dig command is used to query the NSs for a remote application. It is a command-line tool that is commonly used to troubleshoot DNS issues. When used with specific options, dig can be used to obtain information about domain names, IP addresses, and DNS records. References: Network+ Certification Study Guide, Chapter 3: Network Infrastructure

NEW QUESTION 71
- (Exam Topic 2)
A network engineer is designing a new secure wireless network. The engineer has been given the following requirements:
* 1 Must not use plaintext passwords
* 2 Must be certificate based
* 3. Must be vendor neutral
Which of the following methods should the engineer select?

A. TWP-RC4
B. CCMP-AES
C. EAP-TLS
D. WPA2

Answer: C

Explanation:

EAP-TLS is the method that should be selected to meet the requirements for designing a new secure wireless network. EAP-TLS (Extensible Authentication Protocol - Transport Layer Security) is an authentication protocol that uses X.509 digital certificates for both clients and servers. It provides strong security and mutual authentication by using TLS encryption and public key cryptography. It does not use plaintext passwords or shared secrets that can be compromised or guessed. It is also an open standard that is vendor neutral and supported by most wireless devices1. References: https://www.securew2.com/blog/what-is-eap-tls 1

NEW QUESTION 75
- (Exam Topic 2)
A network technician needs to correlate security events to analyze a suspected intrusion. Which of the following should the technician use?

A. SNMP
B. Log review
C. Vulnerability scanning
D. SIEM

Answer: D

Explanation:
SIEM stands for Security Information and Event Management, which is a tool that collects, analyzes, and correlates data from various network devices and sources to provide alerts and reports on security incidents and events. A network technician can use SIEM to correlate security events to analyze a suspected intrusion, as SIEM can help identify the source, target, method, and impact of an attack, as well as provide recommendations for remediation. References: https://www.comptia.org/blog/what-is-siem

NEW QUESTION 76
- (Exam Topic 2)
A SaaS provider has decided to leave an unpatched VM available via a public DMZ port. With which of the following concepts is this technique MOST closely associated?

A. Insider threat
B. War driving
C. Evil twin
D. Honeypot

Answer: D

Explanation:
A honeypot is a decoy system that is intentionally left vulnerable or exposed to attract attackers and divert them from the real targets. A honeypot can also be used to collect information about the attackers' techniques and motives. In the scenario, the SaaS provider has left an unpatched VM available via a public DMZ port, which could be a honeypot technique to lure attackers and monitor their activities. References: https://www.comptia.org/blog/what-is-a-honeypot

NEW QUESTION 79
- (Exam Topic 2)
A technician is troubleshooting a previously encountered issue. Which of the following should the technician reference to find what solution was implemented to resolve the issue?

A. Standard operating procedures
B. Configuration baseline documents
C. Work instructions
D. Change management documentation

Answer: D

Explanation:
Change management documentation is a record of the changes that have been made to a system or process, including the reason, date, time, and impact of each change. A technician can reference this documentation to find what solution was implemented to resolve a previously encountered issue, as well as any potential side effects or dependencies of the change. References: https://www.comptia.org/blog/what-is-change-management

NEW QUESTION 82
- (Exam Topic 2)
Which of the following is used to provide networking capability for VMs at Layer 2 of the OSI model?

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

Answer: C

Explanation:
A vSwitch (virtual switch) is a software-based switch that provides networking capability for VMs (virtual machines) at Layer 2 of the OSI model. It connects the VMs to each other or to external networks using virtual NICs (network interface cards). A VPN (virtual private network) is a technology that creates a secure tunnel over a public network for remote access or site-to-site connectivity. VRRP (Virtual Router Redundancy Protocol) is a protocol that provides high availability for routers by creating a virtual router with multiple physical routers. A VIP (virtual IP) is an IP address that can be shared by multiple servers or devices for load balancing or failover purposes.

NEW QUESTION 87
- (Exam 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 91
- (Exam Topic 2)
Two remote offices need to be connected securely over an untrustworthy MAN. Each office needs to access network shares at the other site. Which of the following will BEST provide this functionality?

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

Answer: C

Explanation:
A site-to-site VPN is a type of VPN that connects two or more remote offices securely over an untrustworthy network, such as the Internet. A site-to-site VPN allows each office to access network shares and resources at the other site, as if they were on the same local network. A site-to-site VPN encrypts and tunnels the traffic between the offices, ensuring privacy and integrity of the data. References: https://www.comptia.org/blog/what-is-a-site-to-site-vpn

NEW QUESTION 92
- (Exam 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 94
- (Exam Topic 2)
An organization wants to implement a method of centrally managing logins to network services. Which of the following protocols should the organization use to allow for authentication, authorization and auditing?

A. MS-CHAP
B. RADIUS
C. LDAPS
D. RSTP

Answer: B

Explanation:
RADIUS (Remote Authentication Dial-In User Service) is a protocol that should be used by the organization to allow for authentication, authorization, and auditing of network services. RADIUS is an AAA (Authentication, Authorization, and Accounting) protocol that manages network access by verifying user credentials, granting access permissions, and logging user activities. RADIUS uses a client-server model where a RADIUS client (such as a router, switch, or VPN server) sends user information to a RADIUS server (such as an authentication server) for verification and authorization. The RADIUS server can also send accounting information to another server for billing or reporting purposes. References:
https://www.cisco.com/c/en/us/support/docs/security-vpn/remote-authentication-dial-user-service-radius/13838

NEW QUESTION 97
- (Exam Topic 2)
An ARP request is broadcasted and sends the following request. "Who is 192.168.1.200?

Tell 192.168.1.55"
At which of the following layers of the OSI model does this request operate?

A. Application
B. Data link
C. Transport
D. Network
E. Session

Answer: B

Explanation:
An ARP request operates at the data link layer of the OSI model. ARP (Address Resolution Protocol) is a protocol that maps IP addresses to MAC addresses on a local area network. It allows devices to communicate with each other without knowing their MAC addresses beforehand. ARP operates at the data link layer (layer 2) of the OSI model, which is responsible for framing and addressing data packets on a physical medium.
References: https://www.cisco.com/c/en/us/support/docs/ip/routing-information-protocol-rip/13788-3.html

NEW QUESTION 98
- (Exam Topic 2)
A network administrator is talking to different vendors about acquiring technology to support a new project for a large company. Which of the following documents will MOST likely need to be signed before information about the project is shared?

A. BYOD policy
B. NDA
C. SLA
D. MOU

Answer: B

Explanation:
NDA stands for Non-Disclosure Agreement, which is a legal contract between two or more parties that outlines confidential material, knowledge, or information that the parties wish to share with one another for certain purposes, but wish to restrict access to by others. A network administrator may need to sign an NDA before sharing information about a new project with different vendors, as the project may involve sensitive or proprietary data that the company wants to protect from competitors or unauthorized use. References: https://www.adobe.com/sign/esignature-resources/sign-nda.html

NEW QUESTION 101
- (Exam Topic 2)
A user reports a weak signal when walking 20ft (61 m) away from the WAP in one direction, but a strong signal when walking 20ft in the opposite direction The technician has reviewed the configuration and confirmed the channel type is correct There is no jitter or latency on the connection Which of the following would be the MOST likely cause of the issue?

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

Answer: A

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 104
- (Exam Topic 2)
Which of the following attacks encrypts user data and requires a proper backup implementation to recover?

A. DDoS
B. Phishing
C. Ransomware
D. MAC spoofing

Answer: C

Explanation:
Ransomware is a type of malware that encrypts user data and demands a ransom for its decryption. Ransomware can prevent users from accessing their files and applications, and cause data loss or corruption. A proper backup implementation is essential to recover from a ransomware attack, as it can help restore the encrypted data without paying the ransom or relying on the attackers' decryption key. References: https://www.comptia.org/blog/what-is-ransomware

NEW QUESTION 107
- (Exam Topic 2)
Which of the following protocols will a security appliance that is correlating network events from multiple devices MOST likely rely on to receive event messages?

A. Syslog
B. Session Initiation Protocol
C. Secure File Transfer Protocol
D. Server Message Block

Answer: A

Explanation:
Syslog is a protocol that provides a standard way for network devices and applications to send event messages to a logging server or a security appliance. Syslog messages can contain information about security incidents, errors, warnings, system status, configuration changes, and other events. A security appliance that is correlating network events from multiple devices can rely on Syslog to receive event messages from different sources and formats. References: https://www.comptia.org/blog/what-is-syslog

NEW QUESTION 111
- (Exam Topic 2)
A network field technician is installing and configuring a secure wireless network. The technician performs a site survey. Which of the following documents would MOST likely be created as a result of the site survey?

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

Answer: B

Explanation:
A heat map would most likely be created as a result of the site survey. A heat map is a graphical representation of the wireless signal strength and coverage in a given area. It can show the location of APs, antennas, walls, obstacles, interference sources, and dead zones. It can help with planning, optimizing, and troubleshooting wireless networks. References: https://www.netspotapp.com/what-is-a-wifi-heatmap.html

NEW QUESTION 116
- (Exam Topic 2)
A technician is troubleshooting a workstation's network connectivity and wants to confirm which switchport corresponds to the wall jack the PC is using Which of the following concepts would BEST help the technician?

A. Consistent labeling
B. Change management
C. Standard work instructions
D. Inventory management
E. Network baseline

Answer: A

Explanation:
Consistent labeling would be the concept that would best help the technician to confirm which switchport corresponds to the wall jack the PC is using. Consistent labeling is a practice of using standardized and descriptive labels for network devices, ports, cables, jacks, and other components. It can help with identifying, locating, and troubleshooting network issues. For example, a technician can use consistent labeling to trace a cable from a PC to a wall jack, and then from a patch panel to a switchport. References: https://www.cisco.com/c/en/us/td/docs/solutions/Enterprise/Data_Center/DC_Infra2_5/DCInfra_6.html

NEW QUESTION 117
- (Exam Topic 2)
A network administrator is required to ensure that auditors have read-only access to the system logs, while systems administrators have read and write access to the system logs, and operators have no access to the system logs. The network administrator has configured security groups for each of these functional categories. Which of the following security capabilities will allow the network administrator to maintain these permissions with the LEAST administrative effort?

A. Mandatory access control
B. User-based permissions
C. Role-based access
D. Least privilege

Answer: C

Explanation:
Role-based access is a security capability that assigns permissions to users based on their roles or functions within an organization. It allows the network administrator to maintain these permissions with the least administrative effort, as they only need to configure the security groups for each role once and then assign users to those groups. Mandatory access control is a security capability that assigns permissions based on security labels or classifications, which requires more administrative effort to maintain. User-based permissions are a security capability that assigns permissions to individual users, which is not scalable or efficient for large organizations. Least privilege is a security principle that states that users should only have the minimum level of access required to perform their tasks, which is not a security capability by itself.

NEW QUESTION 119
- (Exam Topic 2)
A network administrator wants to improve the security of the management console on the company's switches and ensure configuration changes made can be correlated to the administrator who conformed them Which of the following should the network administrator implement?

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

Answer: C

Explanation:

TACACS+ is a protocol that provides centralized authentication, authorization, and accounting (AAA) for network devices and users. TACACS+ can help improve the security of the management console on the company's switches by verifying the identity and credentials of the administrators, enforcing granular access policies and permissions, and logging the configuration changes made by each administrator. This way, the network administrator can ensure only authorized and authenticated users can access and modify the switch settings, and also track and correlate the changes made by each user. References: https://www.comptia.org/blog/what-is-tacacs

NEW QUESTION 121
- (Exam 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 122
- (Exam Topic 2)
A network administrator has been directed to present the network alerts from the past week to the company's executive staff. Which of the following will provide the BEST collection and presentation of this data?

A. A port scan printout
B. A consolidated report of various network devices
C. A report from the SIEM tool
D. A report from a vulnerability scan done yesterday

Answer: C

Explanation:
SIEM stands for Security Information and Event Management, which is a tool that collects, analyzes, and correlates data from various network devices and sources to provide alerts and reports on security incidents and events. A report from the SIEM tool can provide a comprehensive overview of the network alerts from the past week to the executive staff, highlighting any potential threats, vulnerabilities, or anomalies. References: https://www.comptia.org/blog/what-is-siem

NEW QUESTION 125
- (Exam Topic 2)
The following instructions were published about the proper network configuration for a videoconferencing device:
"Configure a valid static RFC1918 address for your network. Check the option to use a connection over NAT." Which of the following is a valid IP address configuration for the device?

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

Answer: D

Explanation:
* 172.19.0.2 is a valid IP address configuration for the device that uses a static RFC1918 address for the network and allows for a connection over NAT (Network Address Translation). RFC1918 addresses are private IP addresses that are not routable on the public Internet and are used for internal networks. The RFC1918 address ranges are 10.0.0.0/8, 172.16.0.0/12, and 192.168.0.0/16. NAT is a technique that translates private IP addresses to public IP addresses when communicating with external networks, such as the Internet. FE80::1 is an IPv6 link-local address that is not a static RFC1918 address and does not allow for a connection over NAT. 100.64.1.1 is an IPv4 address that belongs to the shared address space range (100.64.0.0/10) that is used for carrier-grade NAT (CGN) between service providers and subscribers, which is not a static RFC1918 address and does not allow for a connection over NAT. 169.254.1.2 is an IPv4 link-local address that is automatically assigned by a device when it cannot obtain an IP address from a DHCP server or manual configuration, which is not a static RFC1918 address and does not allow for a connection over NAT. 224.0.0.12 is an IPv4 multicast address that is used for VRRP (Virtual Router Redundancy Protocol), which is not a static RFC1918 address and does not allow for a connection over NAT.

NEW QUESTION 126
- (Exam Topic 2)
A systems administrator is running a VoIP network and is experiencing jitter and high latency. Which of the following would BEST help the administrator determine the cause of these issues?

A. Enabling RADIUS on the network

B. Configuring SNMP traps on the network
C. Implementing LDAP on the network
D. Establishing NTP on the network

Answer: B

Explanation:
SNMP (Simple Network Management Protocol) is a protocol that allows network devices to communicate with a network management system (NMS) for monitoring and configuration purposes. SNMP traps are unsolicited messages sent by network devices to the NMS when certain events or conditions occur, such as errors, failures, or thresholds. Configuring SNMP traps on the network would best help the administrator determine the cause of jitter and high latency on a VoIP network, as they would provide real-time alerts and information about the network performance and status. Enabling RADIUS on the network is not relevant to troubleshooting VoIP issues, as RADIUS is a protocol that provides authentication, authorization, and accounting services for network access. Implementing LDAP on the network is also not relevant to troubleshooting VoIP issues, as LDAP is a protocol that provides directory services for storing and querying information about users, groups, devices, etc. Establishing NTP on the network is not directly related to troubleshooting VoIP issues, as NTP is a protocol that synchronizes the clocks of network devices.

NEW QUESTION 129
- (Exam Topic 2)
A technician is connecting DSL for a new customer. After installing and connecting the on-premises equipment, the technician verifies DSL synchronization. When connecting to a workstation, however, the link LEDs on the workstation and modem do not light up. Which of the following should the technician perform during troubleshooting?

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

Answer: D

Explanation:
If the link LEDs on the workstation and modem do not light up when connecting to a workstation, it could indicate a problem with the cable connecting them. The cable could be damaged, defective, or incompatible with the devices. A technician should replace the cable with a known good one and check if the link LEDs light up. If not, the problem could be with the network interface cards (NICs) on the workstation or modem. References: https://www.comptia.org/blog/what-is-link-light

NEW QUESTION 134
- (Exam 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 138
- (Exam Topic 2)
A city has hired a new employee who needs to be able to work when traveling at home and at the municipal sourcing of a neighboring city that snares services. The employee is issued a laptop, and a technician needs to train the employee on the appropriate solutions for secure access to the network from all the possible locations On which of the following solutions would the technician MOST likely train the employee?

A. Site-to-site VPNs between the two city locations and client-to-site software on the employee's laptop tor all other remote access
B. Client-to-site VPNs between the travel locations and site-to-site software on the employee's laptop for all other remote access
C. Client-to-site VPNs between the two city locations and site-to-site software on the employee's laptop for all other remote access
D. Site-to-site VPNs between the home and city locations and site-to-site software on the employee's laptop for all other remote access

Answer: A

Explanation:
The technician would most likely train the employee on using site-to-site VPNs between the two city locations and client-to-site software on the employee’s laptop for all other remote access. A VPN (Virtual Private Network) is a technology that creates a secure and encrypted tunnel over a public network such as the Internet. It allows remote users or sites to access a private network as if they were directly connected to it. A site-to-site VPN connects two or more networks, such as branch offices or data centers, using a VPN gateway device at each site. A client-to-site VPN connects individual users, such as mobile workers or telecommuters, using a VPN client software on their devices. In this scenario, the employee needs to access the network from different locations, such as home, travel, or another city. Therefore, the technician would train the employee on how to use site-to-site VPNs to connect to the network from another city location that shares services, and how to use client-to-site software to connect to the network from home or travel locations. References: https://www.cisco.com/c/en/us/support/docs/security-vpn/ipsec-negotiation-ike-protocols/14106-how-vpn-work

NEW QUESTION 139
- (Exam Topic 2)
A company wants to implement a large number of WAPs throughout its building and allow users to be able to move around the building without dropping their

connections Which of the following pieces of equipment would be able to handle this requirement?

A. A VPN concentrator
B. A load balancer
C. A wireless controller
D. A RADIUS server

Answer: C

Explanation:
A wireless controller would be able to handle the requirement of implementing a large number of WAPs throughout the building and allowing users to move around without dropping their connections. A wireless controller is a device that centrally manages and configures multiple wireless access points (WAPs) on a network. It can provide features such as load balancing, roaming, security, QoS, and monitoring for the wireless network. A wireless controller can also support wireless mesh networks, where some WAPs act as relays for other WAPs to extend the wireless coverage. References: https://www.cisco.com/c/en/us/products/wireless/wireless-lan-controller/index.html

NEW QUESTION 144
- (Exam Topic 3)
A technician is investigating a misconfiguration on a Layer 3 switch. When the technician logs in and runs a command, the following data is shown:
Which of the following commands generated this output?

A. show route
B. show config
C. show interface
D. tcpdump
E. netstat —s

Answer: C

Explanation:
The output shown in the image is from the show interface command, which displays information about the status and configuration of a network interface on a switch or router. The output includes the interface name, description, MAC address, IP address, speed, duplex mode, status, and statistics. The show route command displays the routing table of the device. The show config command displays the current configuration of the device. The tcpdump command captures and analyzes network traffic. The netstat -s command displays statistics for each protocol.
References: CompTIA Network+ Certification Exam Objectives Version 7.0 (N10-007), Objective 2.4: Given a scenario, use appropriate software tools to troubleshoot connectivity issues.

NEW QUESTION 148
- (Exam Topic 3)
Which of the following network devices can perform routing between VLANs?

A. Layer 2 switch
B. Layer 3 switch
C. Load balancer
D. Bridge

Answer: B

Explanation:
https://www.practicalnetworking.net/stand-alone/routing-between-vlans/#:~:text=A%20router%20will%20perfo

NEW QUESTION 151
- (Exam Topic 3)
Which of the following is used to elect an STP root?

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

Answer: B

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

NEW QUESTION 154
- (Exam 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 156
- (Exam Topic 3)
A technician is checking network devices to look for opportunities to improve security Which of the following toots would BEST accomplish this task?

A. Wi-Fi analyzer
B. Protocol analyzer
C. Nmap
D. IP scanner

Answer: B

Explanation:
A protocol analyzer is a tool that can capture and analyze network traffic and identify security issues such as unauthorized devices, malicious packets, or misconfigured settings.
A Wi-Fi analyzer is a tool that can measure the signal strength, interference, and channel usage of wireless networks, but it cannot provide detailed information about network security.
Nmap and IP scanner are tools that can scan network hosts and ports for open services, vulnerabilities, or operating systems, but they cannot monitor network traffic in real time.

NEW QUESTION 161
- (Exam Topic 3)
A technician manages a DHCP scope but needs to allocate a portion of the scope’s subnet for statically assigned devices. Which of the following DHCP concepts would be BEST to use to prevent IP address conflicts?

A. Dynamic assignment
B. Exclusion range
C. Address reservation
D. IP helper

Answer: B

Explanation:
To prevent IP address conflicts when allocating a portion of a DHCP scope's subnet for statically assigned devices, it is recommended to use the concept of DHCP exclusion ranges. DHCP exclusion ranges allow a DHCP administrator to specify a range of IP addresses within the scope that should not be assigned to DHCP clients. This can be useful in situations where some devices on the network need to be assigned static IP addresses, as it ensures that the statically assigned addresses do not overlap with addresses assigned by the DHCP server. To set up a DHCP exclusion range, the administrator needs to specify the start and end IP addresses of the range, as well as the subnet mask. The DHCP server will then exclude the specified range of addresses from its pool of available addresses, and will not assign them to DHCP clients. By using DHCP exclusion ranges, the technician can ensure that the statically assigned addresses do not conflict with addresses assigned by the DHCP server, and can prevent IP address conflicts on the network.
Anthony Sequeira
"Another frequent configuration you might make in a DHCP implementation is to configure an exclusion range. This is a portion of the address pool that you never want leased out to clients in the network. Perhaps you have numbered your servers 192.168.1.1–192.168.1.10. Because the servers are statically configured with these addresses, you exclude these addresses from the 192.168.1.0/24 pool of addresses."
Mike Meyers
"Exclusion ranges represent an IP address or range of IP addresses from the pool of addresses that are not to be given out by the DHCP server. Exclusions should be made for the static addresses manually configured on servers and router interfaces, so these IP addresses won’t be offered to DHCP clients."

NEW QUESTION 164
- (Exam Topic 3)
Several employees have expressed concerns about the company monitoring their internet activity when they are working from home. The company wants to mitigate this issue and reassure employees that their private internet activity is not being monitored. Which of the following would satisfy company and employee needs?

A. Split tunnel
B. Full tunnel
C. Site-to-site tunnel
D. Virtual desktop

Answer: A

Explanation:
Split tunnel is a configuration that allows a remote user to access both the local network and the Internet at the same time. In a split tunnel configuration, only traffic destined for the corporate network is sent through the VPN tunnel, while all other traffic is sent directly to the Internet. This allows the remote user to access the Internet without the company's VPN server being able to monitor or intercept their traffic. Using a split tunnel configuration can help the company to mitigate employee concerns about internet activity being monitored and reassure employees that their private internet activity is not being monitored.

NEW QUESTION 167
- (Exam Topic 3)
A technician is investigating an issue with connectivity at customer's location. The technician confirms that users can access resources locally but not over the internet The technician theorizes that the local router has failed and investigates further. The technician's testing results show that the route is functional: however, users still are unable to reach resources on the internal. Which of the following describes what the technician should do NEXT?

A. Document the lessons learned
B. Escalate the issue
C. identify the symptoms.
D. Question users for additional information

Answer: C

Explanation:
According to the CompTIA Network+ troubleshooting model123, this is the first step in troubleshooting a
network problem. The technician should gather information about the current state of the network, such as error messages, device status, network topology, and user feedback. This can help narrow down the scope of the problem and eliminate possible causes.

NEW QUESTION 170
- (Exam Topic 3)
Which of the following layers of the OSI model has new protocols activated when a user moves from a wireless to a wired connection?

A. Data link
B. Network
C. Transport
D. Session

Answer: A

Explanation:
"The Data Link layer also determines how data is placed on the wire by using an access method. The wired access method, carrier-sense multiple access with collision detection (CSMA/CD), was once used by all wired Ethernet networks, but is automatically disabled on switched full-duplex links, which have been the norm for decades. Carrier-sense multiple access with collision avoidance (CSMA/CA) is used by wireless networks, in a similar fashion."

NEW QUESTION 174
- (Exam Topic 3)
Which of the following devices would be used to extend the range of a wireless network?

A. A repeater
B. A media converter
C. A router
D. A switch

Answer: A

Explanation:
A repeater is a device used to extend the range of a wireless network by receiving, amplifying, and retransmitting wireless signals. It is typically used to extend the range of a wireless network in a large area, such as an office building or a campus. Repeaters can also be used to connect multiple wireless networks together, allowing users to move seamlessly between networks. As stated in the CompTIA Network+ Study Manual, "a wireless repeater is used to extend the range of a wireless network by repeating the signal from one access point to another."

NEW QUESTION 177
- (Exam Topic 3)
Which of the following OSI model layers would allow a user to access and download files from a remote computer?

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

Answer: D

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

NEW QUESTION 178
- (Exam Topic 3)
A security vendor needs to add a note to the DNS to validate the ownership of a company domain before services begin. Which of the following records did the security company MOST likely ask the company to configure?

A. TXT
B. AAAA
C. CNAME
D. SRV

Answer: A

Explanation:
TXT stands for Text and is a type of DNS record that can store arbitrary text data associated with a domain name. TXT records can be used for various purposes, such as verifying the ownership of a domain, providing information about a domain, or implementing security mechanisms such as SPF (Sender Policy Framework) or DKIM (DomainKeys Identified Mail). In this scenario, the security company most likely asked the company to configure a TXT record with a specific value that can prove the ownership of the domain. AAAA stands for IPv6 Address and is a type of DNS record that maps a domain name to an IPv6 address. CNAME stands

for Canonical Name and is a type of DNS record that maps an alias name to another name. SRV stands for Service and is a type of DNS record that specifies the location of a service on a network.
References: CompTIA Network+ Certification Exam Objectives Version 7.0 (N10-007), Objective 1.8: Explain the purposes and use cases for advanced networking devices.

NEW QUESTION 183
- (Exam Topic 3)
Which of the following would be BEST to install to find and block any malicious users within a network?

A. IDS
B. IPS
C. SCADA
D. ICS

Answer: B

Explanation:
IPS takes action itself to block the attempted intrusion or otherwise remediate the incident. IDS is designed to only provide an alert about a potential incident, which enables a security operations center (SOC) analyst to investigate the event and determine whether it requires further action.

NEW QUESTION 186
- (Exam Topic 3)
A large number of PCs are obtaining an APIPA IP address, and a number of new computers were added to the network. Which of the following is MOST likely causing the PCs to obtain an APIPA address?

A. Rogue DHCP server
B. Network collision
C. Incorrect DNS settings
D. DHCP scope exhaustion

Answer: D

Explanation:
DHCP scope exhaustion means that there are no more available IP addresses in the DHCP server's pool of addresses to assign to new devices on the network. When this happens, the devices will use APIPA (Automatic Private IP Addressing) to self-configure an IP address in the range of 169.254.0.1 to 169.254.255.2541. These addresses are not routable and can only communicate with other devices on the same local network.
A rogue DHCP server (A) is an unauthorized DHCP server that can cause IP address conflicts or security issues by assigning IP addresses to devices on the network. A network collision (B) is a situation where two or more devices try to send data on the same network segment at the same time, causing interference and data loss. Incorrect DNS settings © can prevent devices from resolving domain names to IP addresses, but they do not affect the DHCP process.

NEW QUESTION 190
- (Exam Topic 3)
A network manager is configuring switches in IDFs to ensure unauthorized client computers are not connecting to a secure wired network. Which of the following is the network manager MOST likely performing?

A. Disabling unneeded switchports
B. Changing the default VLAN
C. Configuring DHCP snooping
D. Writing ACLs to prevent access to the switch

Answer: C

NEW QUESTION 195
- (Exam Topic 3)
An administrator is attempting to add a new system to monitoring but is unsuccessful. The administrator notices the system is similar to another one on the network; however, the new one has an updated OS version. Which of the following should the administrator consider updating?

A. Management information bases
B. System baseline
C. Network device logs
D. SNMP traps

Answer: A

NEW QUESTION 196
- (Exam Topic 3)
Several end users viewing a training video report seeing pixelated images while watching. A network administrator reviews the core switch and is unable to find an immediate cause. Which of the following BEST explains what is occurring?

A. Jitter
B. Bandwidth
C. Latency
D. Giants

Answer: A

Explanation:
"Jitter is the loss of packets due to an overworked WAP. Jitter shows up as choppy conversations over a video call, strange jumps in the middle of an online

game—pretty much anything that feels like the network has missed some data. Latency is when data stops moving for a moment due to a WAP being unable to do the work. This manifests as a Word document that stops loading, for example, or an online file that stops downloading."

NEW QUESTION 198
- (Exam Topic 3)
During a risk assessment which of the following should be considered when planning to mitigate high CPU utilization of a firewall?

A. Recovery time objective
B. Uninterruptible power supply
C. NIC teaming
D. Load balancing

Answer: D

Explanation:
The recovery time objective (RTO) is the maximum tolerable length of time that a computer, system, network or application can be down after a failure or disaster occurs. This does nothing to help with CPU utilization. Load balancing does this.

NEW QUESTION 203
- (Exam Topic 3)
An engineer is gathering data to determine the effectiveness of UPSs in use at remote retail locations. Which of the following statistics can the engineer use to determine the availability of the remote network equipment?

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

Answer: A

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

NEW QUESTION 207
- (Exam Topic 3)
A network administrator installed an additional IDF during a building expansion project. Which of the following documents need to be updated to reflect the change? (Select TWO).

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

Answer: BF

NEW QUESTION 211
- (Exam Topic 3)
A user reports that a new VoIP phone works properly but the computer that is connected to the phone cannot access any network resources. Which of the following MOST Likely needs to be configured correctly to provide network connectivity to the computer?

A. Port duplex settings
B. Port aggregation
C. ARP settings
D. VLAN tags
E. MDIX settings

Answer: D

Explanation:
VLAN (virtual LAN) tags are used to identify packets as belonging to a particular VLAN. VLANs are used to segment a network into logical sub-networks, and each VLAN is assigned a unique VLAN tag. If the VLAN tag is not configured correctly, the computer may not be able to access network resources.

NEW QUESTION 212
- (Exam Topic 3)
An ISP is providing Internet to a retail store and has terminated its point of connection using a standard Cat 6 pin-out Which of me following terminations should the technician use when running a cable from the ISP's port lo the front desk?

A. F-type connector
B. TIA/E1A-56S-B
C. LC
D. SC

Answer: B

Explanation:
The termination that the technician should use when running a cable from the ISP's port to the front desk is B. TIA/EIA-568-B. This is a standard pin-out for Cat 6 cables that is used for Ethernet and other network physical layers1. It specifies how to arrange the eight wires in an RJ45 connector, which is a common type of connector for network cables.

NEW QUESTION 213
- (Exam Topic 3)
A new global ISP needs to connect from central offices in North America to the United Kingdom. Which of the following would be the BEST cabling solution for this project?

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

Answer: A

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

NEW QUESTION 218
- (Exam Topic 3)
An administrator is setting up a multicast server on a network, but the firewall seems to be dropping the traffic. After logging in to the device, me administrator sees me following entries:

Rule	Action	Source	Destination	Port
1	Deny	Any	172.30.10.50	Any
2	Deny	Any	232.1.4.9	Any
3	Deny	Any	242.9.15.4	Any
4	Deny	Any	175.50.10.10	Any

Which of the following firewall rules is MOST likely causing the issue?

A. Rule 1
B. Rule 2
C. Rule 3
D. Rule 4

Answer: A

NEW QUESTION 220
- (Exam Topic 3)
Switch 3 was recently added lo an existing stack to extend connectivity to various parts of the network. After the update, new employees were not able to print to the main networked copiers from then workstations. Following are the port configurations for the switch stack in question:

Switch 1:

	Ports 1–12	Ports 13–24	Ports 25–36	Ports 37–44	Ports 45–48
Description	Workstations	Printers	Workstations	Wireless APs	Uplink
VLAN	20	60	20	80	20/60/80
Duplex	Full	Full	Full	Full	Full
Status	Active	Active	Active	Active	Active

Switch 2:

	Ports 1–12	Ports 13–24	Ports 25–36	Ports 37–44	Ports 45–48
Description	Workstations	Printers	Workstations	Wireless APs	Uplink
VLAN	20	60	20	80	20/60/80
Duplex	Full	Full	Full	Full	Full
Status	Active	Active	Shut down	Active	Active

Switch 3:

	Ports 1–12	Ports 13–24	Ports 25–36	Ports 37–44	Ports 45–48
Description	Workstations	Printers	Workstations	Wireless APs	Uplink
VLAN	20	80	20	80	20/60/80
Duplex	Full	Full	Full	Full	Full
Status	Active	Shut down	Shut down	Shut down	Active

Which of the following should be configured to resolve the issue? (Select TWO).

A. Enable the printer ports on Switch 3.
B. Reconfigure the duplex settings on the printer ports on Switch 3.
C. Reconfigure the VLAN on an printer ports to VLAN 20.
D. Enable all ports that are shut down on me stack.
E. Reconfigure me VLAN on the printer ports on Switch 3.
F. Enable wireless APs on Switch 3.

Answer: AE

NEW QUESTION 222
- (Exam Topic 3)
When accessing corporate network resources, users are required to authenticate to each application they try to access. Which of the following concepts does this BEST represent?

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

Answer: B

NEW QUESTION 227
- (Exam Topic 3)
A technician knows the MAC address of a device and is attempting to find the device's IP address. Which of the following should the technician look at to find the IP address? (Select TWO).

A. ARP table
B. DHCP leases
C. IP route table
D. DNS cache
E. MAC address table
F. STP topology

Answer: BE

NEW QUESTION 230
- (Exam Topic 3)
A company is opening a new building on the other side of its campus. The distance from the closest building to the new building is 1,804ft (550m). The company needs to connect the networking equipment in the new building to the Other buildings on the campus without using a repeater. Which Of the following transceivers should the company use?

A. 10GBASE-SW
B. 10GBASE-LR
C. 10GBASE-LX4 over multimode fiber
D. 10GBASE-SR

Answer: B

Explanation:
10GBASE-LR is a standard for 10 Gbps Ethernet over single-mode fiber optic cable. It can support a maximum distance of 6.2 miles (10 km), which is much longer than the distance between the buildings. 10GBASE-SW, 10GBASE-LX4, and 10GBASE-SR are all standards for 10 Gbps Ethernet over multimode fiber optic cable, which have shorter maximum distances ranging from 984ft (300m) to 1,312ft (400m).
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 234
- (Exam Topic 3)
A network administrator needs to provide evidence to confirm that recent network outages were caused by increased traffic generated by a recently released application. Which of the following actions will BEST support the administrator's response?

A. Generate a network baseline report for comparison.
B. Export the firewall traffic logs.
C. Collect the router's NetFlow data.
D. Plot interface statistics for dropped packets.

Answer: C

NEW QUESTION 237
- (Exam Topic 3)
Which of the following is used to provide disaster recovery capabilities to spin up an critical devices using internet resources?

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

Answer: A

NEW QUESTION 241
- (Exam Topic 3)
A new company recently moved into an empty office space Within days, users in the next office began noticing increased latency and packet drops with their Wi-Fi-connected devices. Which of the following is the MOST likely reason for this issue?

A. Channel overlap
B. Distance from the AP
C. Bandwidth latency

D. RF attenuation
E. Network congestion

Answer: A

NEW QUESTION 243
- (Exam Topic 3)
A network administrator is configuring logging on an edge switch. The requirements are to log each time a switch port goes up or down. Which of the following logging levels will provide this information?

A. Warnings
B. Notifications
C. Alert
D. Errors

Answer: B

Explanation:
Notifications are the lowest logging level and will provide the desired information regarding switch port up/down activity. According to the CompTIA Network+ Study Manual, notifications "are used for logging
normal activities, such as port up/down events, link changes, and link flaps."

NEW QUESTION 246
- (Exam Topic 3)
A company cell phone was stolen from a technician's vehicle. The cell phone has a passcode, but it contains sensitive information about clients and vendors. Which of the following should also be enabled?

A. Factory reset
B. Autolock
C. Encryption
D. Two-factor authentication

Answer: C

NEW QUESTION 251
- (Exam Topic 3)
A large metropolitan city is looking to standardize the ability tor police department laptops to connect to the city government's VPN The city would like a wireless solution that provides the largest coverage across the city with a minimal number of transmission towers Latency and overall bandwidth needs are not high priorities. Which of the following would BEST meet the city's needs?

A. 5G
B. LTE
C. Wi-Fi 4
D. Wi-Fi 5
E. Wi-Fi 6

Answer: B

NEW QUESTION 254
- (Exam Topic 3)
A network technician is attempting to increase throughput by configuring link port aggregation between a Gigabit Ethernet distribution switch and a Fast Ethernet access switch. Which of the following is the BEST choice concerning speed and duplex for all interfaces that are participating in the link aggregation?

A. Half duplex and 1GB speed
B. Full duplex and 1GB speed
C. Half duplex and 10OMB speed
D. Full duplex and 100MB speed

Answer: B

Explanation:
The best choice for configuring link port aggregation between a Gigabit Ethernet distribution switch and a Fast Ethernet access switch is to use full duplex and 1GB speed for all interfaces that are participating in the link aggregation. This will allow for maximum throughput, as the full duplex connection will enable simultaneous sending and receiving of data, and the 1GB speed will ensure that the data is transferred quickly.
According to the CompTIA Network+ Study Guide, “Full-duplex Ethernet allows the network adapter to transmit and receive data simultaneously, which can result in double the bandwidth of half-duplex Ethernet.” Additionally, the official text states, “Ethernet and Fast Ethernet use different speeds for data transmission, with Ethernet being 1,000 megabits (1 gigabit) per second and Fast Ethernet being 100 megabits per second.”

NEW QUESTION 258
- (Exam Topic 3)
Which of the following layers of the OSI model receives data from the application layer and converts it into syntax that is readable by other devices on the network?

A. Layer 1
B. Layer 3
C. Layer 6
D. Layer 7

Answer: C

NEW QUESTION 262
- (Exam Topic 3)
A network technician is working at a new office location and needs to connect one laptop to another to transfer files. The laptops are newer models and do not have Ethernet ports. Access points are not available either. Which Of the following types Of wireless network SSIDs does the network technician need to configure to be able to connect the laptops together?

A. Independent Basic Service Set
B. Extended Service Set
C. Distribution System Service
D. Basic Service Set

Answer: A

Explanation:
An Independent Basic Service Set (IBSS) is a type of wireless network that does not require an access point or a wired network. An IBSS allows wireless devices to communicate directly with each other using ad hoc mode. An IBSS is also known as an ad hoc network or a peer-to-peer network. A network technician can configure an IBSS to connect two laptops together and transfer files.
References: Network+ Study Guide Objective 1.4: Explain the properties and characteristics of TCP/IP

NEW QUESTION 266
- (Exam Topic 3)
A network technician is having issues connecting an loT sensor to the internet The WLAN settings were enabled via a custom command line, and a proper IP address assignment was received on the wireless interlace. However, when trying to connect to the internet, only HTTP redirections are being received when data Is requested. Which of the following will point to the root cause of the Issue?

A. Verifying if an encryption protocol mismatch exists.
B. Verifying If a captive portal is active for the WLAN.
C. Verifying the minimum RSSI for operation in the device's documentation
D. Verifying EIRP power settings on the access point.

Answer: C

Explanation:
A captive portal is a web page that is displayed to a user before they can access the internet or other network resources. This is often used in public or guest networks to present users with a login or terms and conditions page before they can access the internet. If a captive portal is active on the WLAN, it would explain why the IoT sensor is only receiving HTTP redirections when trying to connect to the internet.

NEW QUESTION 267
- (Exam Topic 3)
Which of the following is considered a physical security detection device?

A. Cameras
B. Biometric readers
C. Access control vestibules
D. Locking racks

Answer: A

NEW QUESTION 268
- (Exam Topic 3)
An engineer needs to restrict the database servers that are in the same subnet from communicating with each other. The database servers will still need to communicate with the application servers in a different subnet. In some cases, the database servers will be clustered, and the servers will need to communicate with other cluster members. Which of the following technologies will be BEST to use to implement this filtering without creating rules?

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

Answer: A

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

NEW QUESTION 269
- (Exam Topic 3)
Which of the following can have multiple VLAN interfaces?

A. Hub
B. Layer 3 switch
C. Bridge
D. Load balancer

Answer: B

NEW QUESTION 270
- (Exam Topic 3)
A building was recently remodeled in order to expand the front lobby. Some mobile users have been unable to connect to the available network jacks within the new lobby, while others have had no issues. Which of the following is the MOST likely cause of the connectivity issues?

A. LACP
B. Port security
C. 802.11ax
D. Duplex settings

Answer: B

Explanation:
Port security is a feature that allows a network device to limit the number and type of MAC addresses that can access a port. Port security can prevent unauthorized devices from connecting to the network through an available network jack. Therefore, port security is the most likely cause of the connectivity issues for some mobile users in the new lobby.

NEW QUESTION 272
- (Exam Topic 3)
Which of the following topologies is designed to fully support applications hosted in on-premises data centers, public or private clouds, and SaaS services?

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

Answer: A

NEW QUESTION 275
- (Exam Topic 3)
A network administrator is implementing process changes based on recommendations following a recent penetration test. The testers used a method to gain access to the network that involved exploiting a publicly available and fixed remote code execution vulnerability in the VPN appliance. Which of the following should the administrator do to BEST prevent this from happening again?

A. Change default passwords on internet-facing hardware.
B. Implement robust ACLs with explicit deny-all entries.
C. Create private VLANs for management plane traffic.
D. Routinely upgrade all network equipment firmware.

Answer: D

Explanation:
Firmware is the software that runs on network equipment such as routers, switches, and VPN appliances. Firmware updates often contain bug fixes, security patches, and performance improvements that can prevent or mitigate vulnerabilities and attacks. By routinely upgrading all network equipment firmware, a network administrator can ensure that the network devices are running the latest and most secure versions of firmware and avoid exploiting known and fixed remote code execution vulnerabilities in the VPN appliance. References: https://www.comptia.org/training/books/network-n10-008-study-guide (page 462)

NEW QUESTION 278
- (Exam 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 280
- (Exam Topic 3)
A network administrator is troubleshooting a client's device that cannot connect to the network. A physical inspection of the switch shows the RJ45 is connected. The NIC shows no activity lights. The network administrator moves the device to another location and connects to the network without issues. Which Of the following tools would be the BEST option for the network administrator to use to further troubleshoot?

A. Tone generator
B. Multimeter
C. Optical time-domain reflectometer
D. Cable tester

Answer: D

Explanation:
A cable tester is a tool that can verify the integrity and functionality of a network cable. It can measure the electrical characteristics of the cable, such as resistance, capacitance, and impedance, and detect any faults or defects, such as shorts, opens, or crosstalk. A cable tester can help the network administrator troubleshoot the problem by determining if the cable is faulty or not. A tone generator is a tool that can send an audible signal through a cable to help locate and identify it. A multimeter is a tool that can measure voltage, current, and resistance of electrical circuits. An optical time-domain reflectometer (OTDR) is a tool that can test the quality and length of fiber optic cables.
References: CompTIA Network+ Certification Exam Objectives Version 7.0 (N10-007), Objective 2.3: Given a scenario, use the appropriate tool to support wired or wireless networks.

NEW QUESTION 285
- (Exam Topic 3)
A Wi-Fi network was recently deployed in a new, multilevel budding. Several issues are now being reported related to latency and drops in coverage. Which of the following is the FIRST step to troubleshoot the issues?

A. Perform a site survey.
B. Review the AP placement
C. Monitor channel utilization.
D. Test cable attenuation.

Answer: A

NEW QUESTION 289
- (Exam Topic 3)
A network administrator is setting up a new phone system and needs to define the location where VoIP phones can download configuration files. Which of the following DHCP services can be used to accomplish this task?

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

Answer: A

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

NEW QUESTION 290
- (Exam Topic 3)
An engineer needs to verity the external record tor 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 295
- (Exam Topic 3)
An IT technician installs five old switches in a network. In addition to the low port rates on these switches, they also have improper network configurations. After three hours, the network becomes overwhelmed by continuous traffic and eventually shuts down. Which Of the following is causing the issue?

A. Broadcast storm
B. Collisions
C. IP settings
D. Routing loops

Answer: A

Explanation:
A broadcast storm is a situation where a network is flooded with broadcast packets, which are sent to all devices on the network. This can consume bandwidth, cause congestion, and degrade performance. A broadcast storm can be caused by improper network configurations, such as loops or misconfigured switches. In this scenario, the old switches may have created loops or failed to filter broadcast packets, resulting in a broadcast storm that overwhelmed the network.
References: CompTIA Network+ Certification Exam Objectives Version 7.0 (N10-007), Objective 2.4: Given a scenario, use appropriate software tools to troubleshoot connectivity issues.

NEW QUESTION 299
- (Exam Topic 3)
An ISP configured an internet connection to provide 20Mbps, but actual data rates are occurring at 10Mbps and causing a significant delay in data transmission. Which of the following specifications should the ISP check?

A. Throughput
B. Latency

C. Bandwidth
D. Jitter

Answer: A

Explanation:
Throughput is the actual amount of data that can be transferred over a network in a given time. Throughput can be affected by various factors such as congestion, interference, errors, or hardware limitations. If the throughput is lower than the configured internet connection speed, it can cause a significant delay in data transmission. The ISP should check the throughput and identify the source of the problem.
References: Network+ Study Guide Objective 2.2: Explain the concepts and characteristics of routing and switching.

NEW QUESTION 303
- (Exam Topic 3)
Which of the following is the NEXT step to perform network troubleshooting after identifying an issue?

A. Implement a solution.
B. Establish a theory.
C. Escalate the issue.
D. Document the findings.

Answer: B

Explanation:
1 Identify the Problem. 2 Develop a Theory.
3 Test the Theory. 4 Plan of Action.
5 Implement the Solution.
6 Verify System Functionality. 7 Document the Issue.

NEW QUESTION 305
- (Exam Topic 3)
A network administrator is adding a new switch to the network. Which of the following network hardening techniques would be BEST to use once the switch is in production?

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

Answer: A

NEW QUESTION 308
- (Exam Topic 3)
In which of the following components do routing protocols belong in a software-defined network?

A. Infrastructure layer
B. Control layer
C. Application layer
D. Management plane

Answer: B

Explanation:
A software-defined network (SDN) is a network architecture that decouples the control plane from the data plane and centralizes the network intelligence in a software controller. The control plane is the part of the network that makes decisions about how to route traffic, while the data plane is the part of the network that forwards traffic based on the control plane's instructions. The control layer is the layer in an SDN that contains the controller and the routing protocols that communicate with the network devices. The control layer is responsible for managing and configuring the network devices and providing them with the necessary information to forward traffic. References:
https://www.comptia.org/training/books/network-n10-008-study-guide (page 378)

NEW QUESTION 309
- (Exam Topic 3)
Which of the following physical security methods Is the MOST effective to prevent tailgating?

A. Biometrics in an access control vestibule
B. IP cameras with motion detection
C. Smart lockers with tamper protection
D. Badge readers plus a PIN pad

Answer: A

Explanation:
Biometrics is a type of authentication that uses a person's physical characteristics, such as fingerprints, iris, or face, to verify their identity. An access control vestibule is a small room or area that separates two spaces and allows only one person to enter or exit at a time. Biometrics in an access control vestibule is the most effective physical security method to prevent tailgating, which is the unauthorized entry of a person behind another person who has legitimate access.
References: Network+ Study Guide Objective 5.1: Summarize the importance of physical security controls.

NEW QUESTION 313

- (Exam Topic 3)
A device is connected to a managed Layer 3 network switch. The MAC address of the device is known, but the static IP address assigned to the device is not. Which of the following features of a Layer 3 network switch should be used to determine the IPv4 address of the device?

A. MAC table
B. Neighbor Discovery Protocol
C. ARP table
D. IPConfig
E. ACL table

Answer: C

Explanation:
The ARP table is a database that is used by a device to map MAC addresses to their corresponding IP addresses. When a device sends a packet to another device on the same network, it uses the MAC address of the destination device to deliver the packet. The ARP table allows the device to determine the IP address of the destination device based on its MAC address.

NEW QUESTION 314
- (Exam Topic 3)
A client who shares office space and an IT closet with another company recently reported connectivity issues throughout the network. Multiple third-party vendors regularly perform on-site maintenance in the shared IT closet. Which of the following security techniques would BEST secure the physical networking equipment?

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

Answer: B

Explanation:
Role-based access is a security technique that assigns permissions and privileges to users or groups based on their roles or functions within an organization. Role-based access can help secure the physical networking equipment by limiting who can access, modify, or manage the devices in the shared IT closet. Only authorized personnel with a valid role and credentials should be able to access the networking equipment. Disabling unneeded switchports is a security technique that prevents unauthorized devices from connecting to the network by turning off unused ports on a switch. Changing the default passwords is a security technique that prevents unauthorized access to network devices by replacing the factory-set passwords with strong and unique ones. Configuring an access control list is a security technique that filters network traffic by allowing or denying packets based on criteria such as source and destination IP addresses, ports, or protocols.
References: CompTIA Network+ Certification Exam Objectives Version 7.0 (N10-007), Objective 3.2: Given a scenario, use appropriate network hardening techniques.

NEW QUESTION 316
- (Exam Topic 3)
A coffee shop owner hired a network consultant to provide recommendations for installing a new wireless network. The coffee shop customers expect high speeds even when the network is congested. Which of the following standards should the consultant recommend?

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

Answer: B

Explanation:
* 802.11 ax is the latest and most advanced wireless standard, providing higher speeds, lower latency, and more capacity than previous standards. It also supports OFDMA, which allows multiple devices to share a channel and reduce congestion. The other options are older standards that have lower bandwidth, range, and efficiency than 802.11ax. Therefore, 802.11ax is the best option for the coffee shop owner who wants to provide high speeds even when the network is congested.

NEW QUESTION 320
- (Exam Topic 3)
A network administrator received a report staling a critical vulnerability was detected on an application that is exposed to the internet. Which of the following Is the appropriate NEXT step?

A. Check for the existence of a known exploit in order to assess the risk
B. Immediately shut down the vulnerable application server.
C. Install a network access control agent on the server.
D. Deploy a new server to host the application.

Answer: A

Explanation:
The appropriate next step in this situation would be to check for the existence of a known exploit in order to assess the risk. This is important because it will help the network administrator determine the severity of the vulnerability and the potential impact it could have on the organization. Once the network administrator has assessed the risk, they can then take appropriate action to address the vulnerability. This might include patching the application, deploying a new server to host the application, or implementing other security measures to mitigate the risk. It is generally not advisable to immediately shut down the vulnerable application server, as this could disrupt business operations and cause significant downtime. Similarly, installing a network access control agent on the server may not be the most effective solution, as it would not address the underlying vulnerability.

NEW QUESTION 322
- (Exam Topic 3)
A user in a branch office reports that access to all files has been lost after receiving a new PC. All other users in the branch can access fileshares. The IT engineer

who is troubleshooting this incident is able to ping the workstation from the branch router, but the machine cannot ping the router. Which of the following is MOST likely the cause of the incident?

A. Incorrect subnet mask
B. Incorrect DNS server
C. Incorrect IP class
D. Incorrect TCP port

Answer: A

NEW QUESTION 324
- (Exam Topic 3)
Which of the following issues are present with RIPv2? (Select TWO).

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

Answer: BC

Explanation:
The disadvantages of RIP (Routing Information Protocol) include the following.
---Outdated, insecure, and slow. This is your parents' protocol. It was a thing before the Web was born.
---The more well-known problem of the 15 hop limitation in which data must travel
---Convergence time is terrible for information propagation in a network
---Metrics. It determines the number of hops from source to destination, and gives no regard to other factors when determining the best path for data to travel
---Overhead. A good example would be routing tables. These are broadcast at half-minute intervals to other routers regardless of whether the data has changed or not. It's essentially like those old cartoons where the
town guard in the walled city cries out, '10 o' the clock and all is well!'.
RIPv2 introduced more security and reduced broadcast traffic, which is relevant for some available answers here.

NEW QUESTION 328
- (Exam Topic 3)
Which of the following compromises internet-connected devices and makes them vulnerable to becoming part of a botnet? (Select TWO)

A. Deauthentication attack
B. Malware infection
C. IP spoofing
D. Firmware corruption
E. Use of default credentials
F. Dictionary attack

Answer: BF

NEW QUESTION 331
- (Exam Topic 3)
A PC user who is on a local network reports very slow speeds when accessing files on the network server The user's PC Is connecting, but file downloads are very slow when compared to other users' download speeds The PC's NIC should be capable of Gigabit Ethernet. Which of the following will MOST likely fix the issue?

A. Releasing and renewing the PC's IP address
B. Replacing the patch cable
C. Reseating the NIC inside the PC
D. Flushing the DNS cache

Answer: B

Explanation:
A slow download speed can be caused by a faulty patch cable, which is the cable used to connect the user's PC to the network server. If the patch cable is damaged, the connection will be slower than expected, resulting in slow download speeds. Replacing the patch cable is the most likely solution to this issue, as it will provide a new, reliable connection that should allow for faster download speeds.

NEW QUESTION 332
- (Exam Topic 3)
A company is utilizing multifactor authentication for data center access. Which of the following is the MOST effective security mechanism against physical intrusions due to stolen credentials?

A. Biometrics security hardware
B. Access card readers
C. Access control vestibule
D. Motion detection cameras

Answer: C

NEW QUESTION 335
- (Exam Topic 3)

After HVAC failures caused network outages, the support team decides to monitor the temperatures of all the devices. The network administrator cannot find a command that will display this information. Which of the following will retrieve the necessary information?

A. SNMP OID values
B. NetFlow data export
C. Network baseline configurations
D. Security information and event management

Answer: A

Explanation:
The network administrator can use the Simple Network Management Protocol (SNMP) to monitor the temperatures of all the devices. SNMP is a widely-used protocol for managing and monitoring network devices, such as routers, switches, servers, and other networking equipment. SNMP allows network administrators to gather information about the performance and status of devices on the network, including temperature readings.
To retrieve the temperature information, the administrator will have to configure SNMP on the devices and configure SNMP manager software on their computer. Once the SNMP manager software is configured, it will be able to send SNMP requests to the devices and retrieve information such as temperature, voltage, fan speeds, etc. Many network devices have built-in SNMP support, and the administrator may also need to install SNMP agent software on the devices to enable SNMP monitoring.
The administrator can also use some specific command or tool like IPMI (Intelligent Platform Management Interface) or DCIM (Data Center Infrastructure Management) tools for monitoring the temperatures of all the devices.

NEW QUESTION 336
- (Exam Topic 3)
A network engineer is investigating reports of poor network performance. Upon reviewing a report, the engineer finds hundreds of CRC errors on an interface. Which of the following is the MOST likely cause of these errors?

A. A bad wire on the Cat 5e cable
B. The wrong VLAN assignment to the switchport
C. A misconfigured QoS setting on the router
D. Both sides of the switch trunk set to full duplex

Answer: A

NEW QUESTION 337
- (Exam Topic 3)
Which of the following would be increased by adding encryption to data communication across the network?

A. Availability
B. Integrity
C. Accountability
D. Confidentiality

Answer: D

Explanation:
Confidentiality is the property of preventing unauthorized access or disclosure of data. Encryption is a method of transforming data into an unreadable format that can only be decrypted by authorized parties who have the correct key. Encryption can increase the confidentiality of data communication across the network by making it harder for attackers to intercept or eavesdrop on the data. References: Network+ Study Guide Objective 4.1: Summarize the purposes of physical security devices. Subobjective: Encryption.

NEW QUESTION 339
- (Exam Topic 3)
Which of the following can be used to validate domain ownership by verifying the presence of pre-agreed content contained in a DNS record?

A. SOA
B. SRV
C. AAA
D. TXT

Answer: D

Explanation:
"One final usage of the TXT resource record is how some cloud service providers, such as Azure, validate ownership of custom domains. You are provided with data to include in your TXT record, and once that is created, the domain is verified and able to be used. The thought is that if you control the DNS, then you own the domain name."

NEW QUESTION 342
- (Exam Topic 3)
Which of the following protocols uses Dijkstra’s algorithm to calculate the LOWEST cost between routers?

A. RIP
B. OSPF
C. BGP
D. EIGRP

Answer: B

Explanation:
OSPF stands for Open Shortest Path First and is a link-state routing protocol that uses Dijkstra’s algorithm to calculate the lowest cost between routers. OSPF

assigns a cost value to each link based on factors such as bandwidth, delay, or reliability, and builds a map of the network topology. OSPF then uses Dijkstra's algorithm to find the shortest path from each router to every other router in the network1. RIP stands for Routing Information Protocol and is a distance-vector routing protocol that uses hop count as the metric to find the best path. BGP stands for Border Gateway Protocol and is a path-vector routing protocol that uses attributes such as AS path, local preference, or origin to select the best route. EIGRP stands for Enhanced Interior Gateway Routing Protocol and is a hybrid routing protocol that uses a composite metric based on bandwidth, delay, load, and reliability.
References: 1 Dijkstra's algorithm - Wikipedia (https://en.wikipedia.org/wiki/Dijkstra%27s_algorithm)

NEW QUESTION 344
- (Exam Topic 3)
Which of the following would be BEST suited for a long cable run with a 40Gbps bandwidth?

A. Cat 5e
B. Cat 6a
C. Cat 7
D. Cat 8

Answer: C

Explanation:
Cat 7 is a type of twisted-pair copper cable that supports up to 40 Gbps bandwidth and up to 100 meters cable length. Cat 7 is suitable for long cable runs that require high-speed data transmission. Cat 7 has better shielding and crosstalk prevention than lower categories of cables.
References: Network+ Study Guide Objective 1.5: Compare and contrast network cabling types, features and their purposes.

NEW QUESTION 349
- (Exam Topic 3)
A network technician has determined the cause of a network disruption. Which of the following is the NEXT step for the technician to perform?

A. Validate the findings in a top-to-bottom approach
B. Duplicate the issue, if possible
C. Establish a plan of action to resolve the issue
D. Document the findings and actions

Answer: C

NEW QUESTION 353
- (Exam Topic 3)
Which of the following is MOST appropriate for enforcing bandwidth limits when the performance of an application is not affected by the use of buffering but is heavily impacted by packet drops?

A. Traffic shaping
B. Traffic policing
C. Traffic marking
D. Traffic classification

Answer: B

Explanation:
Traffic policing is a mechanism that monitors the traffic in any network and enforces a bandwidth limit by discarding packets that exceed a certain rate1. This can reduce congestion and ensure fair allocation of bandwidth among different applications or users. However, discarding packets can also affect the performance and quality of some applications, especially those that are sensitive to packet loss, such as voice or video.
Traffic shaping is a congestion control mechanism that delays packets that exceed a certain rate instead of discarding them1. This can smooth out traffic bursts and avoid packet loss, but it also introduces latency and jitter. Traffic shaping can be beneficial for applications that can tolerate some delay but not packet loss, such as file transfers or streaming.
Traffic marking is a mechanism that assigns different priority levels to packets based on their type, source, destination, or other criteria2. This can help to differentiate between different classes of service and apply different policies or treatments to them. However, traffic marking does not enforce bandwidth limits by itself; it only provides information for other mechanisms to act upon.
Traffic classification is a process that identifies and categorizes packets based on their characteristics, such as protocol, port number, payload, or behavior. This can help to distinguish between different types of traffic and apply appropriate policies or actions to them. However, traffic classification does not enforce bandwidth limits by itself; it only provides input for other mechanisms to use.

NEW QUESTION 357
- (Exam Topic 3)
A security engineer is trying to determine whether an internal server was accessed by hosts on the internet. The internal server was shut down during the investigation Which of the following will the engineer review to determine whether the internal server had an unauthorized access attempt?

A. The server's syslog
B. The NetFlow statistics
C. The firewall logs
D. The audit logs on the core switch

Answer: A

NEW QUESTION 362
- (Exam Topic 3)
Several users with older devices are reporting intermittent connectivity while in an outdoor patio area. After some research, the network administrator determines that an outdoor WAP might help with the issue. However, the company does not want the signal to bleed into the building and cause interference. Which of the following should the network administrator perform to BEST resolve the issue?

A. Disable the SSID broadcast on the WAP in the patio area.
B. Install a WAP and enable 5GHz only within the patio area.
C. Install a directional WAP in the direction of the patio.
D. Install a repeater on the back wall of the patio area.

Answer: C

NEW QUESTION 364
- (Exam Topic 3)
Which of the following would be used when connecting devices that have different physical characteristics?

A. A proxy server
B. An industrial control system
C. A load balancer
D. A media converter

Answer: D

NEW QUESTION 365
- (Exam Topic 3)
Which of the following is the IEEE link cost for a Fast Ethernet interface in STP calculations?

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

Answer: D

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

NEW QUESTION 369
- (Exam 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 me 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 371
- (Exam 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 376

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