



# CompTIA

## Exam Questions SY0-701

CompTIA Security+ Exam

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**NEW QUESTION 1**

Which of the following methods to secure credit card data is best to use when a requirement is to see only the last four numbers on a credit card?

- A. Encryption
- B. Hashing
- C. Masking
- D. Tokenization

**Answer:** C

**Explanation:**

Masking is a method to secure credit card data that involves replacing some or all of the digits with symbols, such as asterisks, dashes, or Xs, while leaving some of the original digits visible. Masking is best to use when a requirement is to see only the last four numbers on a credit card, as it can prevent unauthorized access to the full card number, while still allowing identification and verification of the cardholder. Masking does not alter the original data, unlike encryption, hashing, or tokenization, which use algorithms to transform the data into different formats.

References: CompTIA Security+ Study Guide: Exam SY0-701, 9th Edition, Chapter 2: Compliance and Operational Security, page 721. CompTIA Security+ Certification Kit: Exam SY0-701, 7th Edition, Chapter 2: Compliance and Operational Security, page 722.

**NEW QUESTION 2**

An engineer needs to find a solution that creates an added layer of security by preventing unauthorized access to internal company resources. Which of the following would be the best solution?

- A. RDP server
- B. Jump server
- C. Proxy server
- D. Hypervisor

**Answer:** B

**Explanation:**

= A jump server is a server that acts as an intermediary between a user and a target system. A jump server can provide an added layer of security by preventing unauthorized access to internal company resources. A user can connect to the jump server using a secure protocol, such as SSH, and then access the target system from the jump server. This way, the target system is isolated from the external network and only accessible through the jump server. A jump server can also enforce security policies, such as authentication, authorization, logging, and auditing, on the user's connection. A jump server is also known as a bastion host or a jump box. References = CompTIA Security+ Certification Exam Objectives, Domain 3.3: Given a scenario, implement secure network architecture concepts. CompTIA Security+ Study Guide (SY0-701), Chapter 3: Network Architecture and Design, page 101. Other Network Appliances – SY0-601 CompTIA Security+ : 3.3, Video 3:03. CompTIA Security+ Certification Exam SY0-701 Practice Test 1, Question 2.

**NEW QUESTION 3**

An administrator assists the legal and compliance team with ensuring information about customer transactions is archived for the proper time period. Which of the following data policies is the administrator carrying out?

- A. Compromise
- B. Retention
- C. Analysis
- D. Transfer
- E. Inventory

**Answer:** B

**Explanation:**

A data retention policy is a set of rules that defines how long data should be stored and when it should be deleted or archived. An administrator assists the legal and compliance team with ensuring information about customer transactions is archived for the proper time period by following the data retention policy of the organization. This policy helps the organization to comply with legal and regulatory requirements, optimize storage space, and protect data privacy and security.

References

? CompTIA Security+ Study Guide: Exam SY0-701, 9th Edition, Chapter 3, Section 3.4, page 1211

? CompTIA Security+ Practice Tests: Exam SY0-701, 3rd Edition, Chapter 3, Question 15, page 832

**NEW QUESTION 4**

An administrator is reviewing a single server's security logs and discovers the following;

Keywords	Date and Time	Source	Event ID	Task Category
Audit	09/16/2022	Microsoft	4625	Logon
Failure	11:13:05 AM	Windows security		
Audit	09/16/2022	Microsoft	4625	Logon
Failure	11:13:07 AM	Windows security		
Audit	09/16/2022	Microsoft	4625	Logon
Failure	11:13:09 AM	Windows security		
Audit	09/16/2022	Microsoft	4625	Logon
Failure	11:13:11 AM	Windows security		
Audit	09/16/2022	Microsoft	4625	Logon
Failure	11:13:13 AM	Windows security		
Audit	09/16/2022	Microsoft	4625	Logon
Failure	11:13:15 AM	Windows security		
Audit	09/16/2022	Microsoft	4625	Logon
Failure	11:13:17 AM	Windows security		
Audit	09/16/2022	Microsoft	4625	Logon
Failure	11:13:19 AM	Windows security		
Audit	09/16/2022	Microsoft	4625	Logon
Failure	11:13:21 AM	Windows security		
Audit	09/16/2022	Microsoft	4625	Logon
Failure	11:13:23 AM	Windows security		
Audit	09/16/2022	Microsoft	4625	Logon
Failure	11:13:25 AM	Windows security		
Audit	09/16/2022	Microsoft	4625	Logon
Failure	11:13:27 AM	Windows security		

Which of the following best describes the action captured in this log file?

- A. Brute-force attack
- B. Privilege escalation
- C. Failed password audit
- D. Forgotten password by the user

**Answer:** A

**Explanation:**

A brute-force attack is a type of attack that involves systematically trying all possible combinations of passwords or keys until the correct one is found. The log file shows multiple failed login attempts in a short amount of time, which is a characteristic of a brute-force attack. The attacker is trying to guess the password of the Administrator account on the server. The log file also shows the event ID 4625, which indicates a failed logon attempt, and the status code 0xC000006A, which means the user name is correct but the password is wrong. These are indicators of compromise (IoC) that suggest a brute-force attack is taking place.

References: CompTIA Security+ Study Guide: Exam SY0-701, 9th Edition, page 215-216 and 223 1

**NEW QUESTION 5**

A security analyst locates a potentially malicious video file on a server and needs to identify both the creation date and the file's creator. Which of the following actions would most likely give the security analyst the information required?

- A. Obtain the file's SHA-256 hash.
- B. Use hexdump on the file's contents.
- C. Check endpoint logs.
- D. Query the file's metadata.

**Answer:** D

**Explanation:**

Metadata is data that describes other data, such as its format, origin, creation date, author, and other attributes. Video files, like other types of files, can contain metadata that can provide useful information for forensic analysis. For example, metadata can reveal the camera model, location, date and time, and software used to create or edit the video file. To query the file's metadata, a security analyst can use various tools, such as MediaInfo1, ffprobe2, or hexdump3, to extract and display the metadata from the video file. By querying the file's metadata, the security analyst can most likely identify both the creation date and the file's creator, as well as other relevant information. Obtaining the file's SHA-256 hash, checking endpoint logs, or using hexdump on the file's contents are other possible actions, but they are not the most appropriate to answer the question. The file's SHA-256 hash is a cryptographic value that can be used to verify the integrity or uniqueness of the file, but it does not reveal any information about the file's creation date or creator. Checking endpoint logs can provide some clues about the file's origin or activity, but it may not be reliable or accurate, especially if the logs are tampered with or incomplete. Using hexdump on the file's contents can show the raw binary data of the file, but it may not be easy or feasible to interpret the metadata from the hex output, especially if the file is large or encrypted.

References: 1: How do I get the meta-data of a video file? 2: How to check if an mp4 file contains malware? 3: [Hexdump - Wikipedia]

**NEW QUESTION 6**

Which of the following describes the process of concealing code or text inside a graphical image?

- A. Symmetric encryption
- B. Hashing
- C. Data masking
- D. Steganography

**Answer:** D

**Explanation:**

Steganography is the process of hiding information within another medium, such as an image, audio, video, or text file. The hidden information is not visible or noticeable to the casual observer, and can only be extracted by using a specific technique or key. Steganography can be used for various purposes, such as concealing secret messages, watermarking, or evading detection by antivirus software<sup>12</sup>

References:

1: CompTIA Security+ Study Guide: Exam SY0-701, 9th Edition, Chapter 5: Cryptography and PKI, page 233 2: CompTIA Security+ Certification Kit: Exam SY0-701, 7th Edition, Chapter 5: Cryptography and PKI, page 235

**NEW QUESTION 7**

A security operations center determines that the malicious activity detected on a server is normal. Which of the following activities describes the act of ignoring detected activity in the future?

- A. Tuning
- B. Aggregating
- C. Quarantining
- D. Archiving

**Answer:** A

**Explanation:**

Tuning is the activity of adjusting the configuration or parameters of a security tool or system to optimize its performance and reduce false positives or false negatives. Tuning can help to filter out the normal or benign activity that is detected by the security tool or system, and focus on the malicious or anomalous activity that requires further investigation or response. Tuning can also help to improve the efficiency and effectiveness of the security operations center by reducing the workload and alert fatigue of

the analysts. Tuning is different from aggregating, which is the activity of collecting and combining data from multiple sources or sensors to provide a comprehensive view of the security posture. Tuning is also different from quarantining, which is the activity of isolating a potentially infected or compromised device or system from the rest of the network to prevent further damage or spread. Tuning is also different from archiving, which is the activity of storing and preserving historical data or records for future reference or compliance. The act of ignoring detected activity in the future that is deemed normal by the security operations center is an example of tuning, as it involves modifying the settings or rules of the security tool or system to exclude the activity from the detection scope.

Therefore, this is the best answer among the given options. References = Security Alerting and Monitoring Concepts and Tools – CompTIA Security+ SY0-701: 4.3, video at

7:00; CompTIA Security+ SY0-701 Certification Study Guide, page 191.

**NEW QUESTION 8**

Which of the following enables the use of an input field to run commands that can view or manipulate data?

- A. Cross-site scripting
- B. Side loading
- C. Buffer overflow
- D. SQL injection

**Answer:** D

**Explanation:**

= SQL injection is a type of attack that enables the use of an input field to run commands that can view or manipulate data in a database. SQL stands for Structured Query Language, which is a language used to communicate with databases. By injecting malicious SQL statements into an input field, an attacker can bypass authentication, access sensitive information, modify or delete data, or execute commands on the server.

SQL injection is one of the most common and dangerous web application

vulnerabilities. References = CompTIA Security+ Study Guide with over 500 Practice Test Questions: Exam SY0-701, 9th Edition, Chapter 5, page 195. CompTIA Security+ SY0-701 Exam Objectives, Domain 1.1, page 8.

**NEW QUESTION 9**

A company prevented direct access from the database administrators' workstations to the network segment that contains database servers. Which of the following should a database administrator use to access the database servers?

- A. Jump server
- B. RADIUS
- C. HSM
- D. Load balancer

**Answer:** A

**Explanation:**

A jump server is a device or virtual machine that acts as an intermediary between a user's workstation and a remote network segment. A jump server can be used to securely access servers or devices that are not directly reachable from the user's workstation, such as database servers. A jump server can also provide audit logs and access control for the remote connections. A jump server is also known as a jump box or a jump host<sup>12</sup>.

RADIUS is a protocol for authentication, authorization, and accounting of network access. RADIUS is not a device or a method to access remote servers, but rather a way to verify the identity and permissions of users or devices that request network access<sup>34</sup>. HSM is an acronym for Hardware Security Module, which is a physical device that provides secure storage and generation of cryptographic keys. HSMs are used to protect sensitive data and applications, such as digital signatures, encryption, and authentication. HSMs are not used to access remote servers, but rather to enhance the security of the data and applications that reside on them<sup>5</sup>.

A load balancer is a device or software that distributes network traffic across multiple servers or devices, based on criteria such as availability, performance, or capacity. A load balancer can improve the scalability, reliability, and efficiency of network services, such as web servers, application servers, or database servers.

A load balancer is not used to access remote servers, but rather to optimize the delivery of the services that run on them. References =

? How to access a remote server using a jump host

? Jump server

? RADIUS

? Remote Authentication Dial-In User Service (RADIUS)



? Hardware Security Module (HSM)  
? [What is an HSM?]  
? [Load balancing (computing)]  
? [What is Load Balancing?]

#### NEW QUESTION 10

Which of the following should a security administrator adhere to when setting up a new set of firewall rules?

- A. Disaster recovery plan
- B. Incident response procedure
- C. Business continuity plan
- D. Change management procedure

**Answer: D**

#### Explanation:

A change management procedure is a set of steps and guidelines that a security administrator should adhere to when setting up a new set of firewall rules. A firewall is a device or software that can filter, block, or allow network traffic based on predefined rules or policies. A firewall rule is a statement that defines the criteria and action for a firewall to apply to a packet or a connection. For example, a firewall rule can allow or deny traffic based on the source and destination IP addresses, ports, protocols, or applications. Setting up a new set of firewall rules is a type of change that can affect the security, performance, and functionality of the network. Therefore, a change management procedure is necessary to ensure that the change is planned, tested, approved, implemented, documented, and reviewed in a controlled and consistent manner. A change management procedure typically includes the following elements:

- ? A change request that describes the purpose, scope, impact, and benefits of the change, as well as the roles and responsibilities of the change owner, implementer, and approver.
- ? A change assessment that evaluates the feasibility, risks, costs, and dependencies of the change, as well as the alternatives and contingency plans.
- ? A change approval that authorizes the change to proceed to the implementation stage, based on the criteria and thresholds defined by the change policy.
- ? A change implementation that executes the change according to the plan and schedule, and verifies the results and outcomes of the change.
- ? A change documentation that records the details and status of the change, as well as the lessons learned and best practices.
- ? A change review that monitors and measures the performance and effectiveness of the change, and identifies any issues or gaps that need to be addressed or improved.

A change management procedure is important for a security administrator to adhere to when setting up a new set of firewall rules, as it can help to achieve the following objectives:

- ? Enhance the security posture and compliance of the network by ensuring that the firewall rules are aligned with the security policies and standards, and that they do not introduce any vulnerabilities or conflicts.
- ? Minimize the disruption and downtime of the network by ensuring that the firewall rules are tested and validated before deployment, and that they do not affect the availability or functionality of the network services or applications.
- ? Improve the efficiency and quality of the network by ensuring that the firewall rules are optimized and updated according to the changing needs and demands of the network users and stakeholders, and that they do not cause any performance or compatibility issues.
- ? Increase the accountability and transparency of the network by ensuring that the firewall rules are documented and reviewed regularly, and that they are traceable and auditable by the relevant authorities and parties.

The other options are not correct because they are not related to the process of setting up a new set of firewall rules. A disaster recovery plan is a set of policies and procedures that aim to restore the normal operations of an organization in the event of a system failure, natural disaster, or other emergency. An incident response procedure is a set of steps and guidelines that aim to contain, analyze, eradicate, and recover from a security incident, such as a cyberattack, data breach, or malware infection. A business continuity plan is a set of strategies and actions that aim to maintain the essential functions and operations of an organization during and after a disruptive event, such as a pandemic, power outage, or civil unrest. References = CompTIA Security+ Study Guide (SY0-701), Chapter 7: Resilience and Recovery, page 325. Professor Messer's CompTIA SY0-701 Security+ Training Course, Section 1.3: Security Operations, video: Change Management (5:45).

#### NEW QUESTION 10

A small business uses kiosks on the sales floor to display product information for customers. A security team discovers the kiosks use end-of-life operating systems. Which of the following is the security team most likely to document as a security implication of the current architecture?

- A. Patch availability
- B. Product software compatibility
- C. Ease of recovery
- D. Cost of replacement

**Answer: A**

#### Explanation:

End-of-life operating systems are those that are no longer supported by the vendor or manufacturer, meaning they do not receive any security updates or patches. This makes them vulnerable to exploits and attacks that take advantage of known or unknown flaws in the software. Patch availability is the security implication of using end-of-life operating systems, as it affects the ability to fix or prevent security issues. Other factors, such as product software compatibility, ease of recovery, or cost of replacement, are not directly related to security, but rather to functionality, availability, or budget. References: CompTIA Security+ Study Guide: Exam SY0-701, 9th Edition, page 29 1

#### NEW QUESTION 11

An administrator notices that several users are logging in from suspicious IP addresses. After speaking with the users, the administrator determines that the employees were not logging in from those IP addresses and resets the affected users' passwords. Which of the following should the administrator implement to prevent this type of attack from succeeding in the future?

- A. Multifactor authentication
- B. Permissions assignment
- C. Access management
- D. Password complexity

**Answer: A**

#### Explanation:

The correct answer is A because multifactor authentication (MFA) is a method of verifying a user's identity by requiring more than one factor, such as something the user knows (e.g., password), something the user has (e.g., token), or something the user is (e.g., biometric). MFA can prevent unauthorized access even if the user's password is compromised, as the attacker would need to provide another factor to log in. The other options are incorrect because they do not address the root cause of the attack, which is weak authentication. Permissions assignment (B) is the process of granting or denying access to resources based on the user's role or identity. Access management © is the process of controlling who can access what and under what conditions. Password complexity (D) is the requirement of using strong passwords that are hard to guess or crack, but it does not prevent an attacker from using a stolen password. References = You can learn more about multifactor authentication and other security concepts in the following resources:

? CompTIA Security+ SY0-701 Certification Study Guide, Chapter 1: General Security Concepts<sup>1</sup>

? Professor Messer's CompTIA SY0-701 Security+ Training Course, Section 1.2: Security Concepts<sup>2</sup>

? Multi-factor Authentication – SY0-601 CompTIA Security+ : 2.43

? TOTAL: CompTIA Security+ Cert (SY0-701) | Udemy, Section 3: Identity and Access Management, Lecture 15: Multifactor Authentication<sup>4</sup>

? CompTIA Security+ Certification SY0-601: The Total Course [Video], Chapter 3: Identity and Account Management, Section 2: Enabling Multifactor Authentication<sup>5</sup>

#### NEW QUESTION 15

A company is adding a clause to its AUP that states employees are not allowed to modify the operating system on mobile devices. Which of the following vulnerabilities is the organization addressing?

- A. Cross-site scripting
- B. Buffer overflow
- C. Jailbreaking
- D. Side loading

**Answer:** C

#### Explanation:

Jailbreaking is the process of removing the restrictions imposed by the manufacturer or carrier on a mobile device, such as an iPhone or iPad. Jailbreaking allows users to install unauthorized applications, modify system settings, and access root privileges. However, jailbreaking also exposes the device to potential security risks, such as malware, spyware, unauthorized access, data loss, and voided warranty. Therefore, an organization may prohibit employees from jailbreaking their mobile devices to prevent these vulnerabilities and protect the corporate data and network. References: CompTIA Security+ Study Guide: Exam SY0-701, 9th Edition, Chapter 10: Mobile Device Security, page 507 2

#### NEW QUESTION 19

An organization disabled unneeded services and placed a firewall in front of a business- critical legacy system. Which of the following best describes the actions taken by the organization?

- A. Exception
- B. Segmentation
- C. Risk transfer
- D. Compensating controls

**Answer:** D

#### Explanation:

Compensating controls are alternative security measures that are implemented when the primary controls are not feasible, cost-effective, or sufficient to mitigate the risk. In this case, the organization used compensating controls to protect the legacy system from potential attacks by disabling unneeded services and placing a firewall in front of it. This reduced the attack surface and the likelihood of exploitation.

References:

? Official CompTIA Security+ Study Guide (SY0-701), page 29

? Security Controls - CompTIA Security+ SY0-701 - 1.1 1

#### NEW QUESTION 24

Which of the following exercises should an organization use to improve its incident response process?

- A. Tabletop
- B. Replication
- C. Failover
- D. Recovery

**Answer:** A

#### Explanation:

A tabletop exercise is a simulated scenario that tests the organization's incident response plan and procedures. It involves key stakeholders and decision-makers who discuss their roles and actions in response to a hypothetical incident. It can help identify gaps, weaknesses, and improvement areas in the incident response process. It can also enhance communication, coordination, and collaboration among the participants. References: CompTIA Security+ Study Guide: Exam SY0-701, 9th Edition, page 525 1

#### NEW QUESTION 28

Which of the following describes a security alerting and monitoring tool that collects system, application, and network logs from multiple sources in a centralized system?

- A. SIEM
- B. DLP
- C. IDS
- D. SNMP

**Answer:** A

#### Explanation:

SIEM stands for Security Information and Event Management. It is a security alerting and monitoring tool that collects system, application, and network logs from multiple sources in a centralized system. SIEM can analyze the collected data, correlate events, generate alerts, and provide reports and dashboards. SIEM can also integrate with other security tools and support compliance requirements. SIEM helps organizations to detect and respond to cyber threats, improve security posture, and reduce operational costs. References: CompTIA Security+ Study Guide: Exam SY0-701, 9th Edition, Chapter 10: Monitoring and Auditing, page 393. CompTIA Security+ Practice Tests: Exam SY0-701, 3rd Edition, Chapter 10: Monitoring and Auditing, page 397.

#### NEW QUESTION 32

A bank insists all of its vendors must prevent data loss on stolen laptops. Which of the following strategies is the bank requiring?

- A. Encryption at rest
- B. Masking
- C. Data classification
- D. Permission restrictions

**Answer: A**

#### Explanation:

Encryption at rest is a strategy that protects data stored on a device, such as a laptop, by converting it into an unreadable format that can only be accessed with a decryption key or password. Encryption at rest can prevent data loss on stolen laptops by preventing unauthorized access to the data, even if the device is physically compromised.

Encryption at rest can also help comply with data privacy regulations and standards that require data protection. Masking, data classification, and permission restrictions are other strategies that can help protect data, but they may not be sufficient or applicable for data stored on laptops. Masking is a technique that obscures sensitive data elements, such as credit card numbers, with random characters or symbols, but it is usually used for data in transit or in use, not at rest. Data classification is a process that assigns labels to data based on its sensitivity and business impact, but it does not protect the data itself. Permission restrictions are rules that define who can access, modify, or delete data, but they may not prevent unauthorized access if the laptop is stolen and the security controls are bypassed. References: CompTIA Security+ Study Guide: Exam SY0-701, 9th Edition, page 17-18, 372-373

#### NEW QUESTION 33

A security consultant needs secure, remote access to a client environment. Which of the following should the security consultant most likely use to gain access?

- A. EAP
- B. DHCP
- C. IPSec
- D. NAT

**Answer: C**

#### Explanation:

IPSec is a protocol suite that provides secure communication over IP networks. IPSec can be used to create virtual private networks (VPNs) that encrypt and authenticate the data exchanged between two or more parties. IPSec can also provide data integrity, confidentiality, replay protection, and access control. A security consultant can use IPSec to gain secure, remote access to a client environment by establishing a VPN tunnel with the client's network. References: CompTIA Security+ Study Guide: Exam SY0-701, 9th Edition, Chapter 8: Secure Protocols and Services, page 385 1

#### NEW QUESTION 38

After a security awareness training session, a user called the IT help desk and reported a suspicious call. The suspicious caller stated that the Chief Financial Officer wanted credit card information in order to close an invoice. Which of the following topics did the user recognize from the training?

- A. Insider threat
- B. Email phishing
- C. Social engineering
- D. Executive whaling

**Answer: C**

#### Explanation:

Social engineering is the practice of manipulating people into performing actions or divulging confidential information, often by impersonating someone else or creating a sense of urgency or trust. The suspicious caller in this scenario was trying to use social engineering to trick the user into giving away credit card information by pretending to be the CFO and asking for a payment. The user recognized this as a potential scam and reported it to the IT help desk. The other topics are not relevant to this situation. References: CompTIA Security+ Study Guide: Exam SY0-701, 9th Edition, page 19 1

#### NEW QUESTION 40

A security analyst is reviewing the following logs:

```
[10:00:00 AM] Login rejected - username administrator - password Spring2023
[10:00:01 AM] Login rejected - username jsmith - password Spring2023
[10:00:01 AM] Login rejected - username guest - password Spring2023
[10:00:02 AM] Login rejected - username cpolk - password Spring2023
[10:00:03 AM] Login rejected - username fmartin - password Spring2023
```

Which of the following attacks is most likely occurring?

- A. Password spraying
- B. Account forgery
- C. Pass-the-hash
- D. Brute-force

**Answer: A**



**Explanation:**

Password spraying is a type of brute force attack that tries common passwords across several accounts to find a match. It is a mass trial-and-error approach that can bypass account lockout protocols. It can give hackers access to personal or business accounts and information. It is not a targeted attack, but a high-volume attack tactic that uses a dictionary or a list of popular or weak passwords<sup>12</sup>.

The logs show that the attacker is using the same password ("password123") to attempt to log in to different accounts ("admin", "user1", "user2", etc.) on the same web server. This is a typical pattern of password spraying, as the attacker is hoping that at least one of the accounts has a weak password that matches the one they are trying. The attacker is also using a tool called Hydra, which is one of the most popular brute force tools, often used in cracking passwords for network authentication<sup>3</sup>.

Account forgery is not the correct answer, because it involves creating fake accounts or credentials to impersonate legitimate users or entities. There is no evidence of account forgery in the logs, as the attacker is not creating any new accounts or using forged credentials.

Pass-the-hash is not the correct answer, because it involves stealing a hashed user credential and using it to create a new authenticated session on the same network. Pass-the-hash does not require the attacker to know or crack the password, as they use the stored version of the password to initiate a new session<sup>4</sup>.

The logs show that the attacker is using plain text passwords, not hashes, to try to log in to the web server.

Brute-force is not the correct answer, because it is a broader term that encompasses different types of attacks that involve trying different variations of symbols or words until the correct password is found. Password spraying is a specific type of brute force attack that uses a single common password against multiple accounts<sup>5</sup>. The logs show that the attacker is using password spraying, not brute force in general, to try to gain access to the web server. References = 1:

Password spraying: An overview of password spraying attacks ... - Norton, 2: Security: Credential Stuffing vs. Password Spraying -

Baeldung, 3: Brute Force Attack: A definition + 6 types to know | Norton, 4: What is a Pass-the-Hash Attack? - CrowdStrike, 5: What is a Brute Force Attack? | Definition, Types &

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**NEW QUESTION 41**

A company has begun labeling all laptops with asset inventory stickers and associating them with employee IDs. Which of the following security benefits do these actions provide? (Choose two.)

- A. If a security incident occurs on the device, the correct employee can be notified.
- B. The security team will be able to send user awareness training to the appropriate device.
- C. Users can be mapped to their devices when configuring software MFA tokens.
- D. User-based firewall policies can be correctly targeted to the appropriate laptops.
- E. When conducting penetration testing, the security team will be able to target the desired laptops.
- F. Company data can be accounted for when the employee leaves the organization.

**Answer:** AF

**Explanation:**

Labeling all laptops with asset inventory stickers and associating them with employee IDs can provide several security benefits for a company. Two of these benefits are:

? A. If a security incident occurs on the device, the correct employee can be notified.

An asset inventory sticker is a label that contains a unique identifier for a laptop, such as a serial number, a barcode, or a QR code. By associating this identifier with an employee ID, the security team can easily track and locate the owner of the laptop in case of a security incident, such as a malware infection, a data breach, or a theft. This way, the security team can notify the correct employee about the incident, and provide them with the necessary instructions or actions to take, such as changing passwords, scanning for viruses, or reporting the loss. This can help to contain the incident, minimize the damage, and prevent further escalation.

? F. Company data can be accounted for when the employee leaves the

organization. When an employee leaves the organization, the company needs to ensure that all the company data and assets are returned or deleted from the employee's laptop. By labeling the laptop with an asset inventory sticker and

associating it with an employee ID, the company can easily identify and verify the laptop that belongs to the departing employee, and perform the appropriate data backup, wipe, or transfer procedures. This can help to protect the company data from unauthorized access, disclosure, or misuse by the former employee or any other party.

The other options are not correct because they are not related to the security benefits of labeling laptops with asset inventory stickers and associating them with employee IDs. B. The security team will be able to send user awareness training to the appropriate device. User awareness training is a type of security education that aims to improve the knowledge and behavior of users regarding security threats and best practices. The security team can send user awareness training to the appropriate device by using the email address, username, or IP address of the device, not the asset inventory sticker or the employee ID.

\* C. Users can be mapped to their devices when configuring software MFA tokens. Software MFA tokens are a type of multi-factor authentication that uses a software application to generate a one-time password or a push notification for verifying the identity of a user. Users can be mapped to their devices when configuring software MFA tokens by using the device ID, phone number, or email address of the device, not the asset inventory sticker or the employee ID. D. User-based firewall policies can be correctly targeted to the appropriate laptops. User-based firewall policies are a type of firewall rules that apply to specific users or groups of users, regardless of the device or location they use to access the network. User-based firewall policies can be correctly targeted to the appropriate laptops by using the username, domain, or certificate of the user, not the asset inventory sticker or the employee ID. E. When conducting penetration testing, the security team will be able to target the desired laptops. Penetration testing is a type of security assessment that simulates a real-world attack on a network or system to identify and exploit vulnerabilities. When conducting penetration testing, the security team will be able to target the desired laptops by using the IP address, hostname, or MAC address of the laptop, not

the asset inventory sticker or the employee ID. References = CompTIA Security+ Study Guide (SY0-701), Chapter 1: General Security Concepts, page 17.

Professor Messer's CompTIA SY0-701 Security+ Training Course, Section 1.4: Asset Management, video: Asset Inventory (6:12).

**NEW QUESTION 45**

A company decided to reduce the cost of its annual cyber insurance policy by removing the coverage for ransomware attacks. Which of the following analysis elements did the company most likely use in making this decision?

- A. IMTTR
- B. RTO
- C. ARO
- D. MTBF

**Answer:** C

**Explanation:**

ARO (Annualized Rate of Occurrence) is an analysis element that measures the frequency or likelihood of an event happening in a given year. ARO is often used in risk assessment and management, as it helps to estimate the potential loss or impact of an event. A company can use ARO to calculate the annualized loss expectancy (ALE) of an event, which is the product of ARO and the single loss expectancy (SLE). ALE represents the expected cost of an event per year, and can be used to compare with the cost of implementing a security control or purchasing an insurance policy.

The company most likely used ARO in making the decision to remove the coverage for ransomware attacks from its cyber insurance policy. The company may have estimated the ARO of ransomware attacks based on historical data, industry trends, or threat intelligence, and found that the ARO was low or negligible. The company may have also calculated the ALE of ransomware attacks, and found that the ALE was lower than the cost of the insurance policy. Therefore, the company decided to reduce the cost of its annual cyber insurance policy by removing the coverage for ransomware attacks, as it deemed the risk to be acceptable or manageable.

IMTTR (Incident Management Team Training and Readiness), RTO (Recovery Time Objective), and MTBF (Mean Time Between Failures) are not analysis elements that the company most likely used in making the decision to remove the coverage for ransomware attacks from its cyber insurance policy. IMTTR is a process of preparing and training the incident management team to respond effectively to security incidents. IMTTR does not measure the frequency or impact of an event, but rather the capability and readiness of the team. RTO is a metric that defines the maximum acceptable time for restoring a system or service after a disruption. RTO does not measure the frequency or impact of an event, but rather the availability and continuity of the system or service. MTBF is a metric that measures the average time between failures of a system or component. MTBF does not measure the frequency or impact of an event, but rather the reliability and performance of the system or component.

References = CompTIA Security+ SY0-701 Certification Study Guide, page 97-

98; Professor Messer's CompTIA SY0-701 Security+ Training Course, video 5.2 - Risk Management, 0:00 - 3:00.

#### NEW QUESTION 47

A U.S.-based cloud-hosting provider wants to expand its data centers to new international locations. Which of the following should the hosting provider consider first?

- A. Local data protection regulations
- B. Risks from hackers residing in other countries
- C. Impacts to existing contractual obligations
- D. Time zone differences in log correlation

**Answer:** A

#### Explanation:

Local data protection regulations are the first thing that a cloud-hosting provider should consider before expanding its data centers to new international locations. Data protection regulations are laws or standards that govern how personal or sensitive data is collected, stored, processed, and transferred across borders. Different countries or regions may have different data protection regulations, such as the General Data Protection Regulation (GDPR) in the European Union, the Personal Information Protection and Electronic Documents Act (PIPEDA) in Canada, or the California Consumer Privacy Act (CCPA) in the United States. A cloud-hosting provider must comply with the local data protection regulations of the countries or regions where it operates or serves customers, or else it may face legal penalties, fines, or reputational damage. Therefore, a cloud-hosting provider should research and understand the local data protection regulations of the new international locations before expanding its data centers there. References = CompTIA Security+ Study Guide with over 500 Practice Test Questions: Exam SY0-701, 9th Edition, Chapter 7, page 269. CompTIA Security+ SY0-701 Exam Objectives, Domain 5.1, page 14.

#### NEW QUESTION 52

Which of the following involves an attempt to take advantage of database misconfigurations?

- A. Buffer overflow
- B. SQL injection
- C. VM escape
- D. Memory injection

**Answer:** B

#### Explanation:

SQL injection is a type of attack that exploits a database misconfiguration or a flaw in the application code that interacts with the database. An attacker can inject malicious SQL statements into the user input fields or the URL parameters that are sent to the database server. These statements can then execute unauthorized commands, such as reading, modifying, deleting, or creating data, or even taking over the database server. SQL injection can compromise the confidentiality, integrity, and availability of the data and the system. References: CompTIA Security+ Study Guide: Exam SY0-701, 9th Edition, page 215 1

#### NEW QUESTION 56

A technician wants to improve the situational and environmental awareness of existing users as they transition from remote to in-office work. Which of the following is the best option?

- A. Send out periodic security reminders.
- B. Update the content of new hire documentation.
- C. Modify the content of recurring training
- D. Implement a phishing campaign

**Answer:** C

#### Explanation:

Recurring training is a type of security awareness training that is conducted periodically to refresh and update the knowledge and skills of the users. Recurring training can help improve the situational and environmental awareness of existing users as they transition from remote to in-office work, as it can cover the latest threats, best practices, and policies that are relevant to their work environment. Modifying the content of recurring training can ensure that the users are aware of the current security landscape and the expectations of their roles. References = CompTIA Security+ Study Guide with over 500 Practice Test Questions: Exam SY0-701, 9th Edition, Chapter 5, page 232. CompTIA Security+ (SY0-701) Certification Exam Objectives, Domain 5.1, page 18.

#### NEW QUESTION 57

A newly appointed board member with cybersecurity knowledge wants the board of directors to receive a quarterly report detailing the number of incidents that impacted the organization. The systems administrator is creating a way to present the data to the board of directors. Which of the following should the systems administrator use?

- A. Packet captures
- B. Vulnerability scans
- C. Metadata
- D. Dashboard

**Answer:** D

**Explanation:**

A dashboard is a graphical user interface that provides a visual representation of key performance indicators, metrics, and trends related to security events and incidents. A dashboard can help the board of directors to understand the number and impact of incidents that affected the organization in a given period, as well as the status and effectiveness of the security controls and processes. A dashboard can also allow the board of directors to drill down into specific details or filter the data by various criteria<sup>12</sup>.

A packet capture is a method of capturing and analyzing the network traffic that passes through a device or a network segment. A packet capture can provide detailed information about the source, destination, protocol, and content of each packet, but it is not a suitable way to present a summary of incidents to the board of directors<sup>13</sup>.

A vulnerability scan is a process of identifying and assessing the weaknesses and exposures in a system or a network that could be exploited by attackers. A vulnerability scan can help the organization to prioritize and remediate the risks and improve the security posture, but it is not a relevant way to report the number of incidents that occurred in a quarter<sup>14</sup>.

Metadata is data that describes other data, such as its format, origin, structure, or context. Metadata can provide useful information about the characteristics and properties of data, but it is not a meaningful way to communicate the impact and frequency of incidents to the board of directors. References = 1: CompTIA Security+ SY0-701 Certification Study Guide, page 3722: SIEM Dashboards – SY0-601 CompTIA Security+ : 4.3, video by Professor Messer3: CompTIA Security+ SY0-701 Certification Study Guide, page 3464: CompTIA Security+ SY0-701 Certification Study Guide, page 362. : CompTIA Security+ SY0-701 Certification Study Guide, page 97.

**NEW QUESTION 62**

Which of the following best practices gives administrators a set period to perform changes to an operational system to ensure availability and minimize business impacts?

- A. Impact analysis
- B. Scheduled downtime
- C. Backout plan
- D. Change management boards

**Answer:** B

**Explanation:**

Scheduled downtime is a planned period of time when a system or service is unavailable for maintenance, updates, upgrades, or other changes. Scheduled downtime gives administrators a set period to perform changes to an operational system without disrupting the normal business operations or affecting the availability of the system or service. Scheduled downtime also allows administrators to inform the users and stakeholders about the expected duration and impact of the changes. References: CompTIA Security+ Study Guide: Exam SY0-701, 9th Edition, Chapter 12: Security Operations and Administration, page 579 1

**NEW QUESTION 67**

Which of the following is used to quantitatively measure the criticality of a vulnerability?

- A. CVE
- B. CVSS
- C. CIA
- D. CERT

**Answer:** B

**Explanation:**

CVSS stands for Common Vulnerability Scoring System, which is a framework that provides a standardized way to assess and communicate the severity and risk of vulnerabilities. CVSS uses a set of metrics and formulas to calculate a numerical score ranging from 0 to 10, where higher scores indicate higher criticality. CVSS can help organizations prioritize remediation efforts and compare vulnerabilities across different systems and vendors. The other options are not used to measure the criticality of a vulnerability, but rather to identify, classify, or report them. References: CompTIA Security+ Study Guide: Exam SY0-701, 9th Edition, page 39

**NEW QUESTION 70**

A company's legal department drafted sensitive documents in a SaaS application and wants to ensure the documents cannot be accessed by individuals in high-risk countries. Which of the following is the most effective way to limit this access?

- A. Data masking
- B. Encryption
- C. Geolocation policy
- D. Data sovereignty regulation

**Answer:** C

**Explanation:**

A geolocation policy is a policy that restricts or allows access to data or resources based on the geographic location of the user or device. A geolocation policy can be implemented using various methods, such as IP address filtering, GPS tracking, or geofencing. A geolocation policy can help the company's legal department to prevent unauthorized access to sensitive documents from individuals in high-risk countries<sup>12</sup>.

The other options are not effective ways to limit access based on location:

? Data masking: This is a technique of obscuring or replacing sensitive data with fictitious or anonymized data. Data masking can protect the privacy and confidentiality of data, but it does not prevent access to data based on location<sup>3</sup>.

? Encryption: This is a process of transforming data into an unreadable format using a secret key or algorithm. Encryption can protect the integrity and confidentiality of data, but it does not prevent access to data based on location. Encryption can also be bypassed by attackers who have the decryption key or method<sup>4</sup>.

? Data sovereignty regulation: This is a set of laws or rules that govern the storage, processing, and transfer of data within a specific jurisdiction or country. Data sovereignty regulation can affect the availability and compliance of data, but it does not prevent access to data based on location. Data sovereignty regulation can also vary depending on the country or region.

References = 1: CompTIA Security+ SY0-701 Certification Study Guide, page 972: Account Policies – SY0-601 CompTIA Security+ : 3.7, video by Professor Messer3: CompTIA Security+ SY0-701 Certification Study Guide, page 1004: CompTIA Security+ SY0-701 Certification Study Guide, page 101. : CompTIA Security+ SY0-701 Certification Study Guide, page 102.



#### NEW QUESTION 71

Which of the following would be the best way to block unknown programs from executing?

- A. Access control list
- B. Application allow list.
- C. Host-based firewall
- D. DLP solution

**Answer: B**

#### Explanation:

An application allow list is a security technique that specifies which applications are permitted to run on a system or a network. An application allow list can block unknown programs from executing by only allowing the execution of programs that are explicitly authorized and verified. An application allow list can prevent malware, unauthorized software, or unwanted applications from running and compromising the security of the system or the network<sup>12</sup>.

The other options are not the best ways to block unknown programs from executing:

? Access control list: This is a security technique that specifies which users or groups are granted or denied access to a resource or an object. An access control list can control the permissions and privileges of users or groups, but it does not directly block unknown programs from executing<sup>13</sup>.

? Host-based firewall: This is a security device that monitors and filters the incoming and outgoing network traffic on a single host or system. A host-based firewall can block or allow network connections based on predefined rules, but it does not directly block unknown programs from executing<sup>1</sup>.

? DLP solution: This is a security system that detects and prevents the unauthorized transmission or leakage of sensitive data. A DLP solution can protect the confidentiality and integrity of data, but it does not directly block unknown programs from executing<sup>1</sup>.

References = 1: CompTIA Security+ SY0-701 Certification Study Guide, page 972: Application Whitelisting – CompTIA Security+ SY0-701 – 3.5, video by Professor Messer<sup>3</sup>: CompTIA Security+ SY0-701 Certification Study Guide, page 98. : CompTIA Security+ SY0-701 Certification Study Guide, page 99. : CompTIA Security+ SY0-701 Certification Study Guide, page 100.

#### NEW QUESTION 73

Which of the following is used to protect a computer from viruses, malware, and Trojans being installed and moving laterally across the network?

- A. IDS
- B. ACL
- C. EDR
- D. NAC

**Answer: C**

#### Explanation:

Endpoint detection and response (EDR) is a technology that monitors and analyzes the activity and behavior of endpoints, such as computers, laptops, mobile devices, and servers. EDR can help to detect and prevent malicious software, such as viruses, malware, and Trojans, from infecting the endpoints and spreading across the network. EDR can also provide visibility and response capabilities to contain and remediate threats. EDR is different from IDS, which is a network-based technology that monitors and alerts on network traffic anomalies. EDR is also different from ACL, which is a list of rules that control the access to network resources. EDR is also different from NAC, which is a technology that enforces policies on the network access of devices based on their identity and compliance status. References: CompTIA Security+ Study Guide: Exam SY0-701, 9th Edition, page 256<sup>1</sup>

#### NEW QUESTION 78

During a security incident, the security operations team identified sustained network traffic from a malicious IP address: 10.1.4.9. A security analyst is creating an inbound firewall rule to block the IP address from accessing the organization's network. Which of the following fulfills this request?

- A. access-list inbound deny ig source 0.0.0.0/0 destination 10.1.4.9/32
- B. access-list inbound deny ig source 10.1.4.9/32 destination 0.0.0.0/0
- C. access-list inbound permit ig source 10.1.4.9/32 destination 0.0.0.0/0
- D. access-list inbound permit ig source 0.0.0.0/0 destination 10.1.4.9/32

**Answer: B**

#### Explanation:

A firewall rule is a set of criteria that determines whether to allow or deny a packet to pass through the firewall. A firewall rule consists of several elements, such as the action, the protocol, the source address, the destination address, and the port number. The syntax of a firewall rule may vary depending on the type and vendor of the firewall, but the basic logic is the same. In this question, the security analyst is creating an inbound firewall rule to block the IP address 10.1.4.9 from accessing the organization's network. This means that the action should be deny, the protocol should be any (or ig for IP), the source address should be 10.1.4.9/32 (which means a single IP address), the destination address should be 0.0.0.0/0 (which means any IP address), and the port number should be any. Therefore, the correct firewall rule is:

access-list inbound deny ig source 10.1.4.9/32 destination 0.0.0.0/0

This rule will match any packet that has the source IP address of 10.1.4.9 and drop it. The other options are incorrect because they either have the wrong action, the wrong source address, or the wrong destination address. For example, option A has the source and destination addresses reversed, which means that it will block any packet that has the destination IP address of 10.1.4.9, which is not the intended goal. Option C has the wrong action, which is permit, which means that it will allow the packet to pass through the firewall, which is also not the intended goal. Option D has the same problem as option A, with the source and destination addresses reversed.

References = Firewall Rules – CompTIA Security+ SY0-401: 1.2, Firewalls – SY0-601 CompTIA Security+ : 3.3, Firewalls – CompTIA Security+ SY0-501, Understanding Firewall Rules – CompTIA Network+ N10-005: 5.5, Configuring Windows Firewall – CompTIA A+ 220-1102 – 1.6.

#### NEW QUESTION 82

While troubleshooting a firewall configuration, a technician determines that a “deny any” policy should be added to the bottom of the ACL. The technician updates the policy, but the new policy causes several company servers to become unreachable.

Which of the following actions would prevent this issue?

- A. Documenting the new policy in a change request and submitting the request to change management
- B. Testing the policy in a non-production environment before enabling the policy in the production network
- C. Disabling any intrusion prevention signatures on the 'deny any' policy prior to enabling the new policy
- D. Including an 'allow any' policy above the 'deny any' policy

**Answer:** B

**Explanation:**

A firewall policy is a set of rules that defines what traffic is allowed or denied on a network. A firewall policy should be carefully designed and tested before being implemented, as a misconfigured policy can cause network disruptions or security breaches. A common best practice is to test the policy in a non-production environment, such as a lab or a simulation, before enabling the policy in the production network. This way, the technician can verify the functionality and performance of the policy, and identify and resolve any issues or conflicts, without affecting the live network. Testing the policy in a non-production environment would prevent the issue of the 'deny any' policy causing several company servers to become unreachable, as the technician would be able to detect and correct the problem before applying the policy to the production network. Documenting the new policy in a change request and submitting the request to change management is a good practice, but it would not prevent the issue by itself. Change management is a process that ensures that any changes to the network are authorized, documented, and communicated, but it does not guarantee that the changes are error-free or functional. The technician still needs to test the policy before implementing it.

Disabling any intrusion prevention signatures on the 'deny any' policy prior to enabling the new policy would not prevent the issue, and it could reduce the security of the network. Intrusion prevention signatures are patterns that identify malicious or unwanted traffic, and allow the firewall to block or alert on such traffic. Disabling these signatures would make the firewall less effective in detecting and preventing attacks, and it would not affect the reachability of the company servers.

Including an 'allow any' policy above the 'deny any' policy would not prevent the issue, and it would render the 'deny any' policy useless. A firewall policy is processed from top to bottom, and the first matching rule is applied. An 'allow any' policy would match any traffic and allow it to pass through the firewall, regardless of the source, destination, or protocol. This would negate the purpose of the 'deny any' policy, which is to block any traffic that does not match any of the previous rules. Moreover, an 'allow any' policy would create a security risk, as it would allow any unauthorized or malicious traffic to enter or exit the network. References = CompTIA Security+ SY0-701 Certification Study Guide, page 204- 205; Professor Messer's CompTIA SY0-701 Security+ Training Course, video 2.1 - Network Security Devices, 8:00 - 10:00.

**NEW QUESTION 87**

Which of the following is the most likely outcome if a large bank fails an internal PCI DSS compliance assessment?

- A. Fines
- B. Audit findings
- C. Sanctions
- D. Reputation damage

**Answer:** A

**Explanation:**

PCI DSS is the Payment Card Industry Data Security Standard, which is a set of security requirements for organizations that store, process, or transmit cardholder data. PCI DSS aims to protect the confidentiality, integrity, and availability of cardholder data and prevent fraud, identity theft, and data breaches. PCI DSS is enforced by the payment card brands, such as Visa, Mastercard, American Express, Discover, and JCB, and applies to all entities involved in the payment card ecosystem, such as merchants, acquirers, issuers, processors, service providers, and payment applications.

If a large bank fails an internal PCI DSS compliance assessment, the most likely outcome is that the bank will face fines from the payment card brands. An internal PCI DSS compliance assessment is a self-assessment that the bank performs to evaluate its own compliance with the PCI DSS requirements. The bank must submit the results of the internal assessment to the payment card brands or their designated agents, such as acquirers or qualified security assessors (QSAs). If the internal assessment reveals that the bank is not compliant with the PCI DSS requirements, the payment card brands may impose fines on the bank as a penalty for violating the PCI DSS contract. The amount and frequency of the fines may vary depending on the severity and duration of the non-compliance, the number and type of cardholder data compromised, and the level of cooperation and remediation from the bank. The fines can range from thousands to millions of dollars per month, and can increase over time if the non-compliance is not resolved.

The other options are not correct because they are not the most likely outcomes if a large bank fails an internal PCI DSS compliance assessment. B. Audit findings. Audit findings are the results of an external PCI DSS compliance assessment that is performed by a QSA or an approved scanning vendor (ASV). An external assessment is required for certain entities that handle a large volume of cardholder data or have a history of non-compliance. An external assessment may also be triggered by a security incident or a request from the payment card brands. Audit findings may reveal the gaps and weaknesses in the bank's security controls and recommend corrective actions to achieve compliance. However, audit findings are not the outcome of an internal assessment, which is performed by the bank itself. C. Sanctions. Sanctions are the measures that the payment card brands may take against the bank if the bank fails to pay the fines or comply with the PCI DSS requirements. Sanctions may include increasing the fines, suspending or terminating the bank's ability to accept or process payment cards, or revoking the bank's PCI DSS certification. Sanctions are not the immediate outcome of an internal assessment, but rather the possible consequence of prolonged or repeated non-compliance. D. Reputation damage. Reputation damage is the loss of trust and credibility that the bank may suffer from its customers, partners, regulators, and the public if the bank fails an internal PCI DSS compliance assessment. Reputation damage may affect the bank's brand image, customer loyalty, market share, and profitability. Reputation damage is not a direct outcome of an internal assessment, but rather a potential risk that the bank may face if the non-compliance is exposed or exploited by malicious actors. References = CompTIA Security+ Study Guide (SY0-701), Chapter 8: Governance, Risk, and Compliance, page 388. Professor Messer's CompTIA SY0-701 Security+ Training Course, Section 8.2: Compliance and Controls, video: PCI DSS (5:12). PCI Security Standards Council, PCI DSS Quick Reference Guide, page 4. PCI Security Standards Council, PCI DSS FAQs, question 8. PCI Security Standards Council, PCI DSS FAQs, question 9. [PCI Security Standards Council], PCI DSS FAQs, question 10. [PCI Security Standards Council], PCI DSS FAQs, question 11. [PCI Security Standards Council], PCI DSS FAQs, question 12. [PCI Security Standards Council], PCI DSS FAQs, question 13. [PCI Security Standards Council], PCI DSS FAQs, question 14. [PCI Security Standards Council], PCI DSS FAQs, question 15. [PCI Security Standards Council], PCI DSS FAQs, question 16. [PCI Security Standards Council], PCI DSS FAQs, question 17. [PCI Security Standards Council], PCI DSS FAQs, question 18. [PCI Security Standards Council], PCI DSS FAQs, question 19. [PCI Security Standards Council], PCI DSS FAQs, question 20. [PCI Security Standards Council], PCI DSS FAQs, question 21. [PCI Security Standards Council], PCI DSS FAQs, question 22. [PCI Security Standards Council], PCI DSS FAQs, question 23. [PCI Security Standards Council], PCI DSS FAQs, question 24. [PCI Security Standards Council], PCI DSS FAQs, question 25. [PCI Security Standards Council], PCI DSS FAQs, question 26. [PCI Security Standards Council], PCI DSS FAQs, question 27. [PCI Security Standards Council], PCI DSS FAQs, question 28. [PCI Security Standards Council], PCI DSS FAQs, question 29. [PCI Security Standards Council], PCI DSS FAQs, question 30. [PCI Security Standards Council]

**NEW QUESTION 91**

Which of the following should a systems administrator use to ensure an easy deployment of resources within the cloud provider?

- A. Software as a service
- B. Infrastructure as code
- C. Internet of Things
- D. Software-defined networking

**Answer:** B

**Explanation:**

Infrastructure as code (IaC) is a method of using code and automation to manage and provision cloud resources, such as servers, networks, storage, and



applications. IaC allows for easy deployment, scalability, consistency, and repeatability of cloud environments. IaC is also a key component of DevSecOps, which integrates security into the development and operations processes. References: CompTIA Security+ Study Guide: Exam SY0-701, 9th Edition, Chapter 6: Cloud and Virtualization Concepts, page 294.

**NEW QUESTION 96**

Which of the following is a hardware-specific vulnerability?

- A. Firmware version
- B. Buffer overflow
- C. SQL injection
- D. Cross-site scripting

**Answer:** A

**Explanation:**

Firmware is a type of software that is embedded in a hardware device, such as a router, a printer, or a BIOS chip. Firmware controls the basic functions and operations of the device, and it can be updated or modified by the manufacturer or the user. Firmware version is a hardware-specific vulnerability, as it can expose the device to security risks if it is outdated, corrupted, or tampered with. An attacker can exploit firmware vulnerabilities to gain unauthorized access, modify device settings, install malware, or cause damage to the device or the network. Therefore, it is important to keep firmware updated and verify its integrity and authenticity. References = CompTIA Security+ Study Guide with over 500 Practice Test Questions: Exam SY0-701, 9th Edition, Chapter 2, page 67. CompTIA Security+ SY0-701 Exam Objectives, Domain 2.1, page 10.

**NEW QUESTION 101**

**HOTSPOT**

You are security administrator investigating a potential infection on a network.

Click on each host and firewall. Review all logs to determine which host originated the Infector and then deny each remaining hosts clean or infected.

192.168.10.22

4/17/2019 14:30 Info Scheduled scan initiated

4/17/2019 14:31 Info Checking for update

4/17/2019 14:32 Info No update available

4/17/2019 14:33 Info Checking for definition update

4/17/2019 14:34 Info No definition update available

4/17/2019 14:35 Info Scan type = full

4/17/2019 14:36 Info Scan start

4/17/2019 14:37 Info Scanning system files

4/17/2019 14:38 Info Scanning temporary files

4/17/2019 14:39 Info Scanning services

4/17/2019 14:40 Info Scanning boot sector

4/17/2019 14:41 Info Scan complete

4/17/2019 14:42 Info Files removed: 0

4/17/2019 14:43 Info Files quarantined: 0

4/17/2019 14:44 Info Boot sector: clean

4/17/2019 14:45 Info Next scheduled scan: 4/18/2019 14:30

4/18/2019 2:31 Warn Scheduled scan disabled by process svch0st.exe

4/18/2019 2:32 Warn Scheduled update disabled by process scvh0st.exe

192.168.10.37



```
4/17/2019 14:30 Info Scheduled scan initiated
4/17/2019 14:31 Info Checking for update
4/17/2019 14:32 Info No update available
4/17/2019 14:33 Info Checking for definition update
4/17/2019 14:34 Info No definition update available
4/17/2019 14:35 Info Scan type = full
4/17/2019 14:36 Info Scan start
4/17/2019 14:37 Info Scanning system files
4/17/2019 14:38 Info Scanning temporary files
4/17/2019 14:39 Info Scanning services
4/17/2019 14:40 Info Scanning boot sector
4/17/2019 14:41 Info Scan complete
4/17/2019 14:42 Info Files removed: 0
4/17/2019 14:43 Info Files quarantined: 0
4/17/2019 14:44 Info Boot sector: clean
4/17/2019 14:45 Info Next scheduled scan: 4/18/2019 14:30
4/18/2019 14:30 Info Scheduled scan initiated
4/18/2019 14:31 Info Checking for update
4/18/2019 14:32 Info No update available
4/18/2019 14:33 Info Checking for definition update
4/18/2019 14:34 Info Update available v10.2.3.4440
4/18/2019 14:33 Info Downloading update
4/18/2019 14:35 Info Definition update complete
4/18/2019 14:35 Info Scan type = full
4/18/2019 14:36 Info Scan start
4/18/2019 14:37 Info Scanning system files
4/18/2019 14:37 Warn File found svch0st.exe match definition v10.2.3.4440
4/18/2019 14:37 Warn File quarantined svch0st.exe
4/18/2019 14:38 Info Scanning temporary files
4/18/2019 14:39 Info Scanning services
```

192.168.10.41



```
4/17/2019 14:30 Info Scan start
4/17/2019 14:37 Info Scanning system files
4/17/2019 14:38 Info Scanning temporary files
4/17/2019 14:39 Info Scanning services
4/17/2019 14:40 Info Scanning boot sector
4/17/2019 14:41 Info Scan complete
4/17/2019 14:42 Info Files removed: 0
4/17/2019 14:43 Info Files quarantined: 0
4/17/2019 14:44 Info Boot sector: clean
4/17/2019 14:45 Info Next scheduled scan: 4/18/2019 14:30
4/18/2019 14:30 Info Scheduled scan initiated
4/18/2019 14:31 Info Checking for update
4/18/2019 14:32 Info No update available
4/18/2019 14:33 Info Checking for definition update
4/18/2019 14:34 Error Unable to reach update server
4/18/2019 14:35 Info Scan type = full
4/18/2019 14:36 Info Scan start
4/18/2019 14:37 Info Scanning system files
4/18/2019 14:37 Warn File svch0st.exe match heuristic pattern 0c09488c08d0f3k
4/18/2019 14:37 Error Unable to quarantine file svch0st.exe
4/18/2019 14:38 Info Scanning temporary files
4/18/2019 14:39 Info Scanning services
4/18/2019 14:40 Info Scanning boot sector
4/18/2019 14:41 Info Scan complete
4/18/2019 14:42 Info Files removed: 0
4/18/2019 14:43 Info Files quarantined: 0
4/18/2019 14:43 Warn File quarantine file
4/18/2019 14:44 Info Boot sector: clean
4/18/2019 14:45 Info Next scheduled scan: 4/19/2019 14:30
```

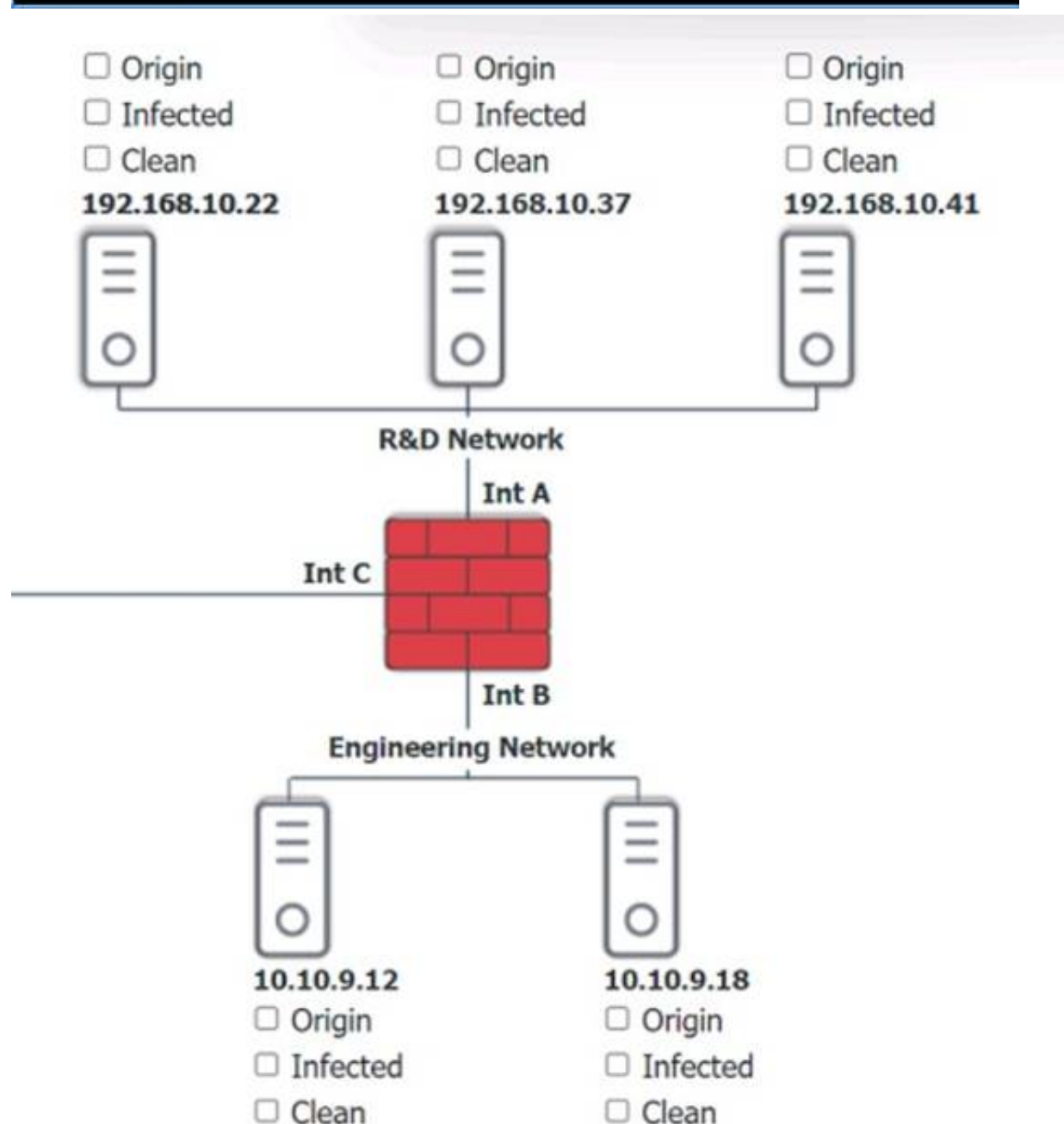


Firewall								
Timestamp	Source	Destination	Destination Port	Application	Action	Client Bytes	Server Bytes	
4/17/2019 16:01:44	10.10.9.18	57.203.54.183	443	ssl	Permit	6953	99427	
4/17/2019 16:01:58	192.168.10.37	57.203.54.221	443	ssl	Permit	9301	199386	
4/17/2019 16:17:06	192.168.10.22	10.10.9.12	135	rpc	Permit	175	1504	
4/17/2019 16:27:36	192.168.10.41	10.10.9.12	445	smbv1	Permit	345	34757	
4/17/2019 16:28:06	10.10.9.12	192.168.10.41	135	rpc	Permit	754	4771	
4/17/2019 16:33:31	10.10.9.18	192.168.10.22	135	rpc	Permit	643	2355	
4/17/2019 16:35:36	192.168.10.37	10.10.9.12	135	smbv2	Permit	649	5644	
4/17/2019 23:58:36	10.10.9.12	192.168.10.41		icmp	Permit	128	128	
4/17/2019 23:58:43	10.10.9.12	192.168.10.22		icmp	Permit	128	128	
4/17/2019 23:58:45	10.10.9.12	192.168.10.37		icmp	Permit	128	128	
4/18/2019 2:31:36	10.10.9.18	192.168.10.41	445	smbv2	Permit	1874	23874	
4/18/2019 2:31:45	192.168.10.22	57.203.55.29	8080	http	Permit	7203	75997	
4/18/2019 2:31:51	10.10.9.18	57.203.56.201	443	ssl	Permit	9953	199730	
4/18/2019 2:31:02	192.168.10.22	57.203.55.234	443	http	Permit	4937	84937	
4/18/2019 2:39:11	192.168.10.41	57.203.53.89	8080	http	Permit	8201	133183	
4/18/2019 2:39:12	10.10.9.18	57.203.55.19	8080	ssl	Permit	1284	9102854	
4/18/2019 2:39:32	192.168.10.37	57.203.56.113	443	ssl	Permit	9341	9938	
4/18/2019 13:37:36	192.168.10.22	10.10.9.18	445	smbv3	Permit	1874	23874	
4/18/2019 13:39:43	192.168.10.22	10.10.9.18	135	rpc	Permit	673	41358	
4/18/2019 13:45:04	10.10.9.18	192.168.10.37	135	rpc	Permit	693	1952	
4/18/2019 13:47:44	10.10.9.12	192.168.10.41	445	smbv3	Permit	482	3505	
4/18/2019 13:52:57	10.10.9.18	192.168.10.22	135	rpc	Permit	545	9063	
4/18/2019 13:53:01	192.168.10.37	10.10.9.12	335	smbv3	Permit	876	8068	
4/18/2019 14:30:04	10.10.9.12	57.203.56.231	443	ssl	Permit	9901	199730	
4/18/2019 14:30:04	192.168.10.37	57.203.56.143	443	ssl	Permit	10092	209938	

10.10.9.12			
4/17/2019 14:30	Info	Scheduled scan initiated	
4/17/2019 14:31	Info	Checking for update	
4/17/2019 14:32	Info	No update available	
4/17/2019 14:33	Info	Checking for definition update	
4/17/2019 14:34	Info	No definition update available	
4/17/2019 14:35	Info	Scan type = full	
4/17/2019 14:36	Info	Scan start	
4/17/2019 14:37	Info	Scanning system files	
4/17/2019 14:38	Info	Scanning temporary files	
4/17/2019 14:39	Info	Scanning services	
4/17/2019 14:40	Info	Scanning boot sector	
4/17/2019 14:41	Info	Scan complete	
4/17/2019 14:42	Info	Files removed: 0	
4/17/2019 14:43	Info	Files quarantined: 0	
4/17/2019 14:44	Info	Boot sector: clean	
4/17/2019 14:45	Info	Next scheduled scan: 4/18/2019 14:30	
4/18/2019 14:30	Info	Scheduled scan initiated	
4/18/2019 14:31	Info	Checking for update	
4/18/2019 14:32	Info	No update available	
4/18/2019 14:33	Info	Checking for definition update	
4/18/2019 14:34	Info	Update available v10.2.3.4440	
4/18/2019 14:33	Info	Downloading update	
4/18/2019 14:35	Info	Definition update complete	
4/18/2019 14:35	Info	Scan type = full	
4/18/2019 14:36	Info	Scan start	
4/18/2019 14:37	Info	Scanning system files	
4/18/2019 14:37	Warn	File found svch0st.exe match definition v10.2.3.4440	
4/18/2019 14:37	Warn	File quarantined svch0st.exe	
4/18/2019 14:38	Info	Scanning temporary files	
4/18/2019 14:39	Info	Scanning services	

```

10.10.9.18
4/17/2019 14:30 Info Scheduled scan initiated
4/17/2019 14:31 Info Checking for update
4/17/2019 14:32 Info No update available
4/17/2019 14:33 Info Checking for definition update
4/17/2019 14:34 Info No definition update available
4/17/2019 14:35 Info Scan type = full
4/17/2019 14:36 Info Scan start
4/17/2019 14:37 Info Scanning system files
4/17/2019 14:38 Info Scanning temporary files
4/17/2019 14:39 Info Scanning services
4/17/2019 14:40 Info Scanning boot sector
4/17/2019 14:41 Info Scan complete
4/17/2019 14:42 Info Files removed: 0
4/17/2019 14:43 Info Files quarantined: 0
4/17/2019 14:44 Info Boot sector: clean
4/17/2019 14:45 Info Next scheduled scan: 4/18/2019 14:30
4/18/2019 14:30 Info Scheduled scan initiated
4/18/2019 14:31 Info Checking for update
4/18/2019 14:32 Info No update available
4/18/2019 14:33 Info Checking for definition update
4/18/2019 14:34 Error Unable to reach update server
4/18/2019 14:35 Info Scan type = full
4/18/2019 14:36 Info Scan start
4/18/2019 14:37 Info Scanning system files
4/18/2019 14:37 Warn File svchost.exe match heuristic pattern 0c09488c08d0f3k
4/18/2019 14:37 Error Unable to quarantine file svchost.exe
4/18/2019 14:38 Info Scanning temporary files
4/18/2019 14:39 Info Scanning services
4/18/2019 14:40 Info Scanning boot sector
4/18/2019 14:41 Info Scan complete
  
```



- A. Mastered
- B. Not Mastered

**Answer:** A

**Explanation:**

Based on the logs, it seems that the host that originated the infection is 192.168.10.22. This host has a suspicious process named svchost.exe running on port 443, which is unusual for a Windows service. It also has a large number of outbound connections to different IP addresses on port 443, indicating that it is part of a



botnet.  
The firewall log shows that this host has been communicating with 10.10.9.18, which is another infected host on the engineering network. This host also has a suspicious process named svchost.exe running on port 443, and a large number of outbound connections to different IP addresses on port 443.  
The other hosts on the R&D network (192.168.10.37 and 192.168.10.41) are clean, as they do not have any suspicious processes or connections.

#### NEW QUESTION 102

After an audit, an administrator discovers all users have access to confidential data on a file server. Which of the following should the administrator use to restrict access to the data quickly?

- A. Group Policy
- B. Content filtering
- C. Data loss prevention
- D. Access control lists

**Answer: D**

#### Explanation:

Access control lists (ACLs) are rules that specify which users or groups can access which resources on a file server. They can help restrict access to confidential data by granting or denying permissions based on the identity or role of the user. In this case, the administrator can use ACLs to quickly modify the access rights of the users and prevent them from accessing the data they are not authorized to see. References: CompTIA Security+ Study Guide: Exam SY0-701, 9th Edition, page 308 1

#### NEW QUESTION 106

A security manager created new documentation to use in response to various types of security incidents. Which of the following is the next step the manager should take?

- A. Set the maximum data retention policy.
- B. Securely store the documents on an air-gapped network.
- C. Review the documents' data classification policy.
- D. Conduct a tabletop exercise with the team.

**Answer: D**

#### Explanation:

A tabletop exercise is a simulated scenario that tests the effectiveness of a security incident response plan. It involves gathering the relevant stakeholders and walking through the steps of the plan, identifying any gaps or issues that need to be addressed. A tabletop exercise is a good way to validate the documentation created by the security manager and ensure that the team is prepared for various types of security incidents. References: CompTIA Security+ Study Guide: Exam SY0-701, 9th Edition, Chapter 6: Risk Management, page 2841. CompTIA Security+ Certification Kit: Exam SY0-701, 7th Edition, Chapter 6: Risk Management, page 2842.

#### NEW QUESTION 107

An enterprise is trying to limit outbound DNS traffic originating from its internal network. Outbound DNS requests will only be allowed from one device with the IP address 10.50.10.25. Which of the following firewall ACLs will accomplish this goal?

- A. Access list outbound permit 0.0.0.0 0 0.0.0.0/0 port 53 Access list outbound deny 10.50.10.25 32 0.0.0.0/0 port 53
- B. Access list outbound permit 0.0.0.0/0 10.50.10.25 32 port 53 Access list outbound deny 0.0.0.0 0 0.0.0.0/0 port 53
- C. Access list outbound permit 0.0.0.0 0 0.0.0.0/0 port 53 Access list outbound deny 0.0.0.0/0 10.50.10.25 32 port 53
- D. Access list outbound permit 10.50.10.25 32 0.0.0.0/0 port 53 Access list outbound deny 0.0.0.0.0.0.0.0/0 port 53

**Answer: D**

#### Explanation:

The correct answer is D because it allows only the device with the IP address 10.50.10.25 to send outbound DNS requests on port 53, and denies all other devices from doing so. The other options are incorrect because they either allow all devices to send outbound DNS requests (A and C), or they allow no devices to send outbound DNS requests (B). References = You can learn more about firewall ACLs and DNS in the following resources:

? CompTIA Security+ SY0-701 Certification Study Guide, Chapter 4: Network Security1

? Professor Messer's CompTIA SY0-701 Security+ Training Course, Section 3.2: Firewall Rules2

? TOTAL: CompTIA Security+ Cert (SY0-701) | Udemy, Section 6: Network Security, Lecture 28: Firewall Rules3

#### NEW QUESTION 110

A security team is reviewing the findings in a report that was delivered after a third party performed a penetration test. One of the findings indicated that a web application form field is vulnerable to cross-site scripting. Which of the following application security techniques should the security analyst recommend the developer implement to prevent this vulnerability?

- A. Secure cookies
- B. Version control
- C. Input validation
- D. Code signing

**Answer: C**

#### Explanation:

Input validation is a technique that checks the user input for any malicious or unexpected data before processing it by the web application. Input validation can prevent cross-site scripting (XSS) attacks, which exploit the vulnerability of a web application to execute malicious scripts in the browser of a victim. XSS attacks can compromise the confidentiality, integrity, and availability of the web application and its users. Input validation can be implemented on both the client-side and the server-side, but server-side validation is more reliable and secure. Input validation can use various methods, such as whitelisting, blacklisting, filtering, escaping, encoding, and sanitizing the input data. References = CompTIA Security+ Study Guide with over 500 Practice Test Questions: Exam SY0-701, 9th Edition, Chapter 2, page 70. CompTIA Security+ (SY0-701) Certification Exam Objectives, Domain 3.2, page 11. Application Security – SY0-601 CompTIA Security+ : 3.2



#### NEW QUESTION 112

Which of the following roles, according to the shared responsibility model, is responsible for securing the company's database in an IaaS model for a cloud environment?

- A. Client
- B. Third-party vendor
- C. Cloud provider
- D. DBA

**Answer:** A

#### Explanation:

According to the shared responsibility model, the client and the cloud provider have different roles and responsibilities for securing the cloud environment, depending on the service model. In an IaaS (Infrastructure as a Service) model, the cloud provider is responsible for securing the physical infrastructure, such as the servers, storage, and network devices, while the client is responsible for securing the operating systems, applications, and data that run on the cloud infrastructure. Therefore, the client is responsible for securing the company's database in an IaaS model for a cloud environment, as the database is an application that stores data. The client can use various security controls, such as encryption, access control, backup, and auditing, to protect the database from unauthorized access, modification, or loss. The third-party vendor and the DBA (Database Administrator) are not roles defined by the shared responsibility model, but they may be involved in the implementation or management of the database security. References = CompTIA Security+ SY0-701 Certification Study Guide, page 263- 264; Professor Messer's CompTIA SY0-701 Security+ Training Course, video 3.1 - Cloud and Virtualization, 5:00 - 7:40.

#### NEW QUESTION 114

An administrator discovers that some files on a database server were recently encrypted. The administrator sees from the security logs that the data was last accessed by a domain user. Which of the following best describes the type of attack that occurred?

- A. Insider threat
- B. Social engineering
- C. Watering-hole
- D. Unauthorized attacker

**Answer:** A

#### Explanation:

An insider threat is a type of attack that originates from someone who has legitimate access to an organization's network, systems, or data. In this case, the domain user who encrypted the files on the database server is an example of an insider threat, as they abused their access privileges to cause harm to the organization. Insider threats can be motivated by various factors, such as financial gain, revenge, espionage, or sabotage. References: CompTIA Security+ Study Guide: Exam SY0-701, 9th Edition, Chapter 1: General Security Concepts, page 251. CompTIA Security+ Certification Kit: Exam SY0- 701, 7th Edition, Chapter 1: General Security Concepts, page 252.

#### NEW QUESTION 118

A cyber operations team informs a security analyst about a new tactic malicious actors are using to compromise networks. SIEM alerts have not yet been configured. Which of the following best describes what the security analyst should do to identify this behavior?

- A. [Digital forensics
- B. E-discovery
- C. Incident response
- D. Threat hunting

**Answer:** D

#### Explanation:

Threat hunting is the process of proactively searching for signs of malicious activity or compromise in a network, rather than waiting for alerts or indicators of compromise (IOCs) to appear. Threat hunting can help identify new tactics, techniques, and procedures (TTPs) used by malicious actors, as well as uncover hidden or stealthy threats that may have evaded detection by security tools. Threat hunting requires a combination of skills, tools, and methodologies, such as hypothesis generation, data collection and analysis, threat intelligence, and incident response. Threat hunting can also help improve the security posture of an organization by providing feedback and recommendations for security improvements. References = CompTIA Security+ Certification Exam Objectives, Domain 4.1: Given a scenario, analyze potential indicators of malicious activity. CompTIA Security+ Study Guide (SY0-701), Chapter 4: Threat Detection and Response, page 153. Threat Hunting – SY0-701 CompTIA Security+ : 4.1, Video 3:18. CompTIA Security+ Certification Exam SY0-701 Practice Test 1, Question 3.

#### NEW QUESTION 119

Which of the following describes the reason root cause analysis should be conducted as part of incident response?

- A. To gather IOCs for the investigation
- B. To discover which systems have been affected
- C. To eradicate any trace of malware on the network
- D. To prevent future incidents of the same nature

**Answer:** D

#### Explanation:

Root cause analysis is a process of identifying and resolving the underlying factors that led to an incident. By conducting root cause analysis as part of incident response, security professionals can learn from the incident and implement corrective actions to prevent future incidents of the same nature. For example, if the root cause of a data breach was a weak password policy, the security team can enforce a stronger password policy and educate users on the importance of password security. Root cause analysis can also help to improve security processes, policies, and procedures, and to enhance security awareness and culture within the organization. Root cause analysis is not meant to gather IOCs (indicators of compromise) for the investigation, as this is a task performed during the identification and analysis phases of incident response. Root cause analysis is also not meant to discover which systems have been affected or to eradicate any trace of malware on the network, as these are tasks performed during the containment and eradication phases of incident response. References = CompTIA Security+ SY0-701 Certification Study Guide, page 424-425; Professor Messer's CompTIA

SY0-701 Security+ Training Course, video 5.1 - Incident Response, 9:55 - 11:18.

#### NEW QUESTION 120

Which of the following security concepts is the best reason for permissions on a human resources fileshare to follow the principle of least privilege?

- A. Integrity
- B. Availability
- C. Confidentiality
- D. Non-repudiation

**Answer: C**

#### Explanation:

Confidentiality is the security concept that ensures data is protected from unauthorized access or disclosure. The principle of least privilege is a technique that grants users or systems the minimum level of access or permissions that they need to perform their tasks, and nothing more. By applying the principle of least privilege to a human resources fileshare, the permissions can be restricted to only those who have a legitimate need to access the sensitive data, such as HR staff, managers, or auditors. This can prevent unauthorized users, such as hackers, employees, or contractors, from accessing, copying, modifying, or deleting the data. Therefore, the principle of least privilege can enhance the confidentiality of the data on the fileshare. Integrity, availability, and non-repudiation are other security concepts, but they are not the best reason for permissions on a human resources fileshare to follow the principle of least privilege. Integrity is the security concept that ensures data is accurate and consistent, and protected from unauthorized modification or corruption. Availability is the security concept that ensures data is accessible and usable by authorized users or systems when needed. Non-repudiation is the security concept that ensures the authenticity and accountability of data and actions, and prevents the denial of involvement or responsibility. While these concepts are also important for data security, they are not directly related to the level of access or permissions granted to users or systems. References: CompTIA Security+ Study Guide: Exam SY0-701, 9th Edition, page 16-17, 372-373

#### NEW QUESTION 121

An organization would like to store customer data on a separate part of the network that is not accessible to users on the main corporate network. Which of the following should the administrator use to accomplish this goal?

- A. Segmentation
- B. Isolation
- C. Patching
- D. Encryption

**Answer: A**

#### Explanation:

Segmentation is a network design technique that divides the network into smaller and isolated segments based on logical or physical boundaries. Segmentation can help improve network security by limiting the scope of an attack, reducing the attack surface, and enforcing access control policies. Segmentation can also enhance network performance, scalability, and manageability. To accomplish the goal of storing customer data on a separate part of the network, the administrator can use segmentation technologies such as subnetting, VLANs, firewalls, routers, or switches. References: CompTIA Security+ Study Guide: Exam SY0-701, 9th Edition, page 308-309 1

#### NEW QUESTION 123

An administrator finds that all user workstations and servers are displaying a message that is associated with files containing an extension of .ryk. Which of the following types of infections is present on the systems?

- A. Virus
- B. Trojan
- C. Spyware
- D. Ransomware

**Answer: D**

#### Explanation:

Ransomware is a type of malware that encrypts the victim's files and demands a ransom for the decryption key. The ransomware usually displays a message on the infected system with instructions on how to pay the ransom and recover the files. The .ryk extension is associated with a ransomware variant called Ryuk, which targets large organizations and demands high ransoms<sup>1</sup>.

References: CompTIA Security+ Certification Kit: Exam SY0-701, 7th Edition, Chapter 1, page 17.

#### NEW QUESTION 124

Which of the following security control types does an acceptable use policy best represent?

- A. Detective
- B. Compensating
- C. Corrective
- D. Preventive

**Answer: D**

#### Explanation:

An acceptable use policy (AUP) is a set of rules that govern how users can access and use a corporate network or the internet. The AUP helps companies minimize their exposure to cyber security threats and limit other risks. The AUP also serves as a notice to users about what they are not allowed to do and protects the company against misuse of their network. Users usually have to acknowledge that they understand and agree to the rules before accessing the network<sup>1</sup>.

An AUP best represents a preventive security control type, because it aims to deter or stop potential security incidents from occurring in the first place. A preventive control is proactive and anticipates possible threats and vulnerabilities, and implements measures to prevent them from exploiting or harming the system or the data. A preventive control can be physical, technical, or administrative in nature<sup>2</sup>.

Some examples of preventive controls are:

? Locks, fences, or guards that prevent unauthorized physical access to a facility or a device

? Firewalls, antivirus software, or encryption that prevent unauthorized logical access to a network or a system  
 ? Policies, procedures, or training that prevent unauthorized or inappropriate actions or behaviors by users or employees  
 An AUP is an example of an administrative preventive control, because it defines the policies and procedures that users must follow to ensure the security and proper use of the network and the IT resources. An AUP can prevent users from engaging in activities that could compromise the security, performance, or availability of the network or the system, such as:  
 ? Downloading or installing unauthorized or malicious software  
 ? Accessing or sharing sensitive or confidential information without authorization or encryption  
 ? Using the network or the system for personal, illegal, or unethical purposes  
 ? Bypassing or disabling security controls or mechanisms  
 ? Connecting unsecured or unapproved devices to the network  
 By enforcing an AUP, a company can prevent or reduce the likelihood of security breaches, data loss, legal liability, or reputational damage caused by user actions or inactions.  
 References = 1: How to Create an Acceptable Use Policy - CoreTech, 2: [Security Control Types: Preventive, Detective, Corrective, and Compensating], 3: Why You Need A  
 Corporate Acceptable Use Policy - CompTIA

## NEW QUESTION 125

### HOTSPOT

Select the appropriate attack and remediation from each drop-down list to label the corresponding attack with its remediation.

### INSTRUCTIONS

Not all attacks and remediation actions will be used.

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

Attack Description	Target	Attack Identified	BEST Preventative or Remediation Action
An attacker sends multiple SYN packets from multiple sources.	Web server	<div> <div></div> <div>                     Botnet                      RAT                      Logic Bomb                      Backdoor                      Virus                      Spyware                      Worm                      Adware                      Ransomware                      Keylogger                      Phishing                 </div> </div>	<div> <div></div> <div>                     Enable DDoS protection                      Patch vulnerable systems                      Disable vulnerable services                      Change the default system password                      Update the cryptographic algorithms                      Change the default application password                      Implement 2FA using push notification                      Conduct a code review                      Implement application fuzzing                      Implement a host-based IPS                      Disable remote access services                 </div> </div>
The attack establishes a connection, which allows remote commands to be executed.	User	<div> <div></div> <div>                     Botnet                      RAT                      Logic Bomb                      Backdoor                      Virus                      Spyware                      Worm                      Adware                      Ransomware                      Keylogger                      Phishing                 </div> </div>	<div> <div></div> <div>                     Enable DDoS protection                      Patch vulnerable systems                      Disable vulnerable services                      Change the default system password                      Update the cryptographic algorithms                      Change the default application password                      Implement 2FA using push notification                      Conduct a code review                      Implement application fuzzing                      Implement a host-based IPS                      Disable remote access services                 </div> </div>
The attack is self propagating and compromises a SQL database using well-known credentials as it moves through the network.	Database server	<div> <div></div> <div>                     Botnet                      RAT                      Logic Bomb                      Backdoor                      Virus                      Spyware                      Worm                      Adware                      Ransomware                      Keylogger                      Phishing                 </div> </div>	<div> <div></div> <div>                     Enable DDoS protection                      Patch vulnerable systems                      Disable vulnerable services                      Change the default system password                      Update the cryptographic algorithms                      Change the default application password                      Implement 2FA using push notification                      Conduct a code review                      Implement application fuzzing                      Implement a host-based IPS                      Disable remote access services                 </div> </div>
The attacker uses hardware to remotely monitor a user's input activity to harvest credentials.	Executive	<div> <div></div> <div>                     Botnet                      RAT                      Logic Bomb                      Backdoor                      Virus                      Spyware                      Worm                      Adware                      Ransomware                      Keylogger                      Phishing                 </div> </div>	<div> <div></div> <div>                     Enable DDoS protection                      Patch vulnerable systems                      Disable vulnerable services                      Change the default system password                      Update the cryptographic algorithms                      Change the default application password                      Implement 2FA using push notification                      Conduct a code review                      Implement application fuzzing                      Implement a host-based IPS                      Disable remote access services                 </div> </div>
The attacker embeds hidden access in an internally developed application that bypasses account login.	Application	<div> <div></div> <div>                     Botnet                      RAT                      Logic Bomb                      Backdoor                      Virus                      Spyware                      Worm                      Adware                      Ransomware                      Keylogger                      Phishing                 </div> </div>	<div> <div></div> <div>                     Enable DDoS protection                      Patch vulnerable systems                      Disable vulnerable services                      Change the default system password                      Update the cryptographic algorithms                      Change the default application password                      Implement 2FA using push notification                      Conduct a code review                      Implement application fuzzing                      Implement a host-based IPS                      Disable remote access services                 </div> </div>

A. Mastered  
 B. Not Mastered

**Answer: A**



**Explanation:**

Web serverBotnet Enable DDoS protectionUser RAT Implement a host-based IPS Database server Worm Change the default application passwordExecutive KeyloggerDisable vulnerable servicesApplication Backdoor Implement 2FA using push notification

Attack Description	Target	Attack Identified	BEST Preventative or Remediation Action
An attacker sends multiple SYN packets from multiple sources.	Web server	Botnet	Enable DDoS protection
The attack establishes a connection, which allows remote commands to be executed.	User	RAT	Implement a host-based IPS
The attack is self propagating and compromises a SQL database using well-known credentials as it moves through the network.	Database server	Worm	Change the default application password
The attacker uses hardware to remotely monitor a user's input activity to harvest credentials.	Executive	Keylogger	Disable vulnerable services
The attacker embeds hidden access in an internally developed application that bypasses account login.	Application	Backdoor	Implement 2FA using push notification

A screenshot of a computer program  
Description automatically generated with low confidence

**NEW QUESTION 128**

An analyst is evaluating the implementation of Zero Trust principles within the data plane. Which of the following would be most relevant for the analyst to evaluate?

- A. Secured zones
- B. Subject role
- C. Adaptive identity
- D. Threat scope reduction

**Answer:** A

**Explanation:**

Secured zones are a key component of the Zero Trust data plane, which is the layer where data is stored, processed, and transmitted. Secured zones are logical or physical segments of the network that isolate data and resources based on their sensitivity and risk. Secured zones enforce granular policies and controls to prevent unauthorized access and lateral movement within the network1.  
References: CompTIA Security+ Certification Kit: Exam SY0-701, 7th Edition, Chapter 5, page 255.

**NEW QUESTION 129**

A network manager wants to protect the company's VPN by implementing multifactor authentication that uses:

- . Something you know
- . Something you have
- . Something you are

Which of the following would accomplish the manager's goal?

- A. Domain name, PKI, GeoIP lookup
- B. VPN IP address, company ID, facial structure
- C. Password, authentication token, thumbprint
- D. Company URL, TLS certificate, home address

**Answer:** C

**Explanation:**

The correct answer is C. Password, authentication token, thumbprint. This combination of authentication factors satisfies the manager's goal of implementing multifactor authentication that uses something you know, something you have, and something you are.  
? Something you know is a type of authentication factor that relies on the user's knowledge of a secret or personal information, such as a password, a PIN, or a security question. A password is a common example of something you know that can be used to access a VPN12  
? Something you have is a type of authentication factor that relies on the user's possession of a physical object or device, such as a smart card, a token, or a smartphone. An authentication token is a common example of something you have that can be used to generate a one-time password (OTP) or a code that can be used to access a VPN12  
? Something you are is a type of authentication factor that relies on the user's biometric characteristics, such as a fingerprint, a face, or an iris. A thumbprint is a common example of something you are that can be used to scan and verify the user's identity to access a VPN12  
References:  
1: CompTIA Security+ Study Guide: Exam SY0-701, 9th Edition, Chapter 4: Identity and Access Management, page 177 2: CompTIA Security+ Certification Kit: Exam SY0-701, 7th Edition, Chapter 4: Identity and Access Management, page 179

**NEW QUESTION 133**

A systems administrator set up a perimeter firewall but continues to notice suspicious connections between internal endpoints. Which of the following should be set up in order to mitigate the threat posed by the suspicious activity?

- A. Host-based firewall
- B. Web application firewall
- C. Access control list
- D. Application allow list

**Answer:** A

**Explanation:**

A host-based firewall is a software application that runs on an individual endpoint and filters the incoming and outgoing network traffic based on a set of rules. A host-based firewall can help to mitigate the threat posed by suspicious connections between internal endpoints by blocking or allowing the traffic based on the source, destination, port, protocol, or application. A host-based firewall is different from a web application firewall, which is a type of firewall that protects web applications from common web-based attacks, such as SQL injection, cross-site scripting, and session hijacking. A host-based firewall is also different from an access control list, which is a list of rules that control the access to network resources, such as files, folders, printers, or routers. A host-based firewall is also different from an application allow list, which is a list of applications that are authorized to run on an endpoint, preventing unauthorized or malicious applications from executing. References: CompTIA Security+ Study Guide: Exam SY0-701, 9th Edition, page 254

**NEW QUESTION 138**

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