CompTIA Security+ Exam 2024

CompTIA SY0-701

Version Demo

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QUESTION NO: 1 - (HOTSPOT)

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
An attacker sends multiple SYN packets from	10. 8	6. 7	0. % 2. ?
	Web server	7	
multiple sources.	Ollech Centre	Botnet RAT Logic Bomb Backdoor Virus Spyware Worm Adware	Enable DDoS protection Patch vulnerable systems Disable vulnerable services Change the default system password Update the cryptographic algorithms Change the default application passw Implement 2FA using push notification Conduct a code review
		Ransomware Keylogger Phishing	Implement application fuzzing Implement a host-based IPS Disable remote access services
The attack establishes a connection, which allows		7. 70 P.	
remote commands to be executed.	User	Botnet RAT Logic Bomb Backdoor Virus Spyware Worm Adware Ransomware Keylogger Phishing	Enable DDoS protection Patch vulnerable systems Disable vulnerable services Change the default system password Update the cryptographic algorithms Change the default application passwo Implement 2FA using push notification Conduct a code review Implement application fuzzing Implement a host-based IPS Disable remote access services
The attack is self propagating and compromises a			
SQL database using well-known credentials as it moves through the network.	Database server	Botnet RAT Logic Bomb Backdoor Virus Spyware Worm Adware Ransomware Keylogger Phishing	Enable DDoS protection Patch vulnerable systems Disable vulnerable services Change the default system password Update the cryptographic algorithms Change the default application passwo Implement 2FA using push notification Conduct a code review Implement application fuzzing Implement a host-based IPS Disable remote access services
The attacker uses hardware to remotely monitor a	Everythin		
user's input activity to harvest credentials.	Executive	Botnet RAT Logic Bomb Backdoor Virus Spyware Worm Adware Ransomware	Enable DDoS protection Patch vulnerable systems Disable vulnerable services Change the default system password Update the cryptographic algorithms Change the default application passwo Implement 2FA using push notification Conduct a code review Implement application fuzzing

		Worm Adware Ransomware Keylogger Phishing	Implement 2FA using push notification Conduct a code review Implement application fuzzing Implement a host-based IPS Disable remote access services
The attacker embeds hidden access in an	O CO	2	
internally developed application that bypasses account login.	Application	Botnet RAT Logic Bomb	Enable DDoS protection Patch vulnerable systems Disable vulnerable services

Attack Description	Target	Attack Identified		BEST Preventative or Remediation Ad	
An attacker sends multiple SYN packets from multiple sources.	Web server	Botnet	٠	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	, O	Disable vulnerable services	
The attacker embeds hidden access in an internally developed application that bypasses account login.	Application	Backdoor	1	Implement 2FA using push notification	

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Explanation:

Web server Botnet Enable DDoS protection

User RAT Implement a host-based IPS

Database server Worm Change the default application password

Executive Keylogger Disable vulnerable services

Application Backdoor Implement 2FA using push notification

QUESTION NO: 2

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. Reference: CompTIA Security+ Study Guide: Exam SY0-701, 9th Edition, page 308 1

QUESTION NO: 3

An organization recently updated its security policy to include the following statement:

Regular expressions are included in source code to remove special characters such as \$, |, ;. &, `, and ? from variables set by forms in a web application.

Which of the following best explains the security technique the organization adopted by making this addition to the policy?

- A. Identify embedded keys
- B. Code debugging
- C. Input validation
- D. Static code analysis

ANSWER: C

Explanation:

Input validation is a security technique that checks the user input for any malicious or unexpected data before processing it by the application. Input validation can prevent various types of attacks, such as injection, cross-site scripting, buffer overflow, and command execution, that exploit the vulnerabilities in the application code. Input validation can be performed on both the client-side and the server-side, using methods such as whitelisting, blacklisting, filtering, sanitizing, escaping, and encoding. By including regular expressions in the source code to remove special characters from the variables set by the forms in the web application, the organization adopted input validation as a security technique. Regular expressions are patterns that match a specific set of characters or strings, and can be used to filter out any unwanted or harmful input. Special characters, such as \$, |, ;, &, `, and ?, can be used by attackers to inject commands or scripts into the application, and cause damage or data theft. By removing these characters from the input, the organization can reduce the risk of such attacks.

Identify embedded keys, code debugging, and static code analysis are not the security techniques that the organization adopted by making this addition to the policy. Identify embedded keys is a process of finding and removing any hard-coded keys or credentials from the source code, as these can pose a security risk if exposed or compromised. Code debugging is a process of finding and fixing any errors or bugs in the source code, which can affect the functionality or performance of the application. Static code analysis is a process of analyzing the source code without executing it, to identify any vulnerabilities, flaws, or coding standards violations. These techniques are not related to the use of regular expressions to remove special characters from the input.

Reference = CompTIA Security+ SY0-701 Certification Study Guide, page 375-376; Professor Messer?s CompTIA SY0-701 Security+ Training Course, video 4.1 - Vulnerability Scanning, 8:00 - 9:08; Application Security ? SY0-601 CompTIA Security+ : 3.2, 0:00 - 2:00.

QUESTION NO: 4

A security modern may have occurred on the desktop PC of an organization's Chief Executive Officer (CEO) A duplicate copy of the CEO's hard drive must be stored securely to ensure appropriate forensic processes and the chain of custody are followed. Which of the following should be performed to accomplish this task?

- A. Install a new hard drive in the CEO's PC, and then remove the old hard drive and place it in a tamper-evident bag
- **B.** Connect a write blocker to the hard drive Then leveraging a forensic workstation, utilize the dd command m a live Linux environment to create a duplicate copy
- **C.** Remove the CEO's hard drive from the PC, connect to the forensic workstation, and copy all the contents onto a remote fileshare while the CEO watches
- **D.** Refrain from completing a forensic analysts of the CEO's hard drive until after the incident is confirmed, duplicating the hard drive at this stage could destroy evidence

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Explanation:

"To obtain a forensically sound image from nonvolatile storage, you need to ensure that nothing you do alters data or metadata (properties) on the source disk or file system. A write blocker assures this process by preventing any data on the disk or volume from being changed by filtering write commands at the driver and OS level. Data acquisition would normally proceed by attaching the target device to a forensics workstation or field capture device equipped with a write blocker."

For purposes of knowing, https://security.opentext.com/tableau/hardware/details/t8u write blockers like this are the most popular hardware blockers

QUESTION NO: 5

After a recent ransomware attack on a company's system, an administrator reviewed the log files. Which of the following control types did the administrator use?

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

ANSWER: B

Explanation:

Detective controls are security measures that are designed to identify and monitor any malicious activity or anomalies on a system or network. They can help to discover the source, scope, and impact of an attack, and provide evidence for further analysis or investigation. Detective controls include log files, security audits, intrusion detection systems, network monitoring tools, and antivirus software. In this case, the administrator used log files as a detective control to review the ransomware attack on the company?s system. Log files are records of events and activities that occur on a system or network, such as user actions, system errors, network traffic, and security alerts. They can provide valuable information for troubleshooting, auditing, and forensics.

Reference:

Security+ (Plus) Certification | CompTIA IT Certifications, under ?About the exam?, bullet point 3:

?Operate with an awareness of applicable regulations and policies, including principles of governance, risk, and compliance.?

CompTIA Security+ Certification Kit: Exam SY0-701, 7th Edition, Chapter 1, page 14: ?Detective controls are designed to identify and monitor any malicious activity or anomalies on a system or network.?

Control Types? CompTIA Security+ SY0-401: 2.1 - Professor Messer IT?, under? Detective Controls?: ?Detective controls are security measures that are designed to identify and monitor any malicious activity or anomalies on a system or network.?

QUESTION NO: 6

A company is developing a critical system for the government and storing project information on a fileshare. Which of the following describes how this data will most likely be classified? (Select two).

- A. Private
- **B.** Confidential
- C. Public
- D. Operational
- E. Urgent
- F. Restricted

ANSWER: BF

Explanation:

Data classification is the process of assigning labels to data based on its sensitivity and business impact. Different organizations and sectors may have different data classification schemes, but a common one is the following1:

Public: Data that can be freely disclosed to anyone without any harm or risk.

Private: Data that is intended for internal use only and may cause some harm or risk if disclosed. Confidential: Data that is intended for authorized use only and may cause significant harm or risk if disclosed.

Restricted: Data that is intended for very limited use only and may cause severe harm or risk if disclosed.

In this scenario, the company is developing a critical system for the government and storing project information on a fileshare. This data is likely to be classified as confidential and restricted, because it is not meant for public or private use, and it may cause serious damage to national security or public safety if disclosed. The government may also have specific requirements or regulations for handling such data, such as encryption, access control, and auditing2. Reference: 1: CompTIA Security+ Study Guide: Exam SY0-701, 9th Edition, page 16-17 2: Data Classification Practices: Final Project Description Released

QUESTION NO: 7

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. 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.

 Users can be mapped to their devices when configuring software MFA tokens. Software MFA tokens are a type of multifactor 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 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.
- **F.** Company data can be accounted for when the employee leaves the organization.

ANSWER: A F

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. Reference = 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).

QUESTION NO: 8

Several employees received a fraudulent text message from someone claiming to be the Chief Executive Officer (CEO). The message stated:

?I?m in an airport right now with no access to email. I need you to buy gift cards for employee recognition awards. Please send the gift cards to following email address.?

Which of the following are the best responses to this situation? (Choose two).

A. Cancel current employee recognition gift cards.

- B. Add a smishing exercise to the annual company training.
- C. Issue a general email warning to the company.
- **D.** Have the CEO change phone numbers.
- **E.** Conduct a forensic investigation on the CEO's phone.
- F. Implement mobile device management.

ANSWER: B C

Explanation:

This situation is an example of smishing, which is a type of phishing that uses text messages (SMS) to entice individuals into providing personal or sensitive information to cybercriminals. The best responses to this situation are to add a smishing exercise to the annual company training and to issue a general email warning to the company. A smishing exercise can help raise awareness and educate employees on how to recognize and avoid smishing attacks. An email warning can alert employees to the fraudulent text message and remind them to verify the identity and legitimacy of any requests for information or money. Reference = What Is Phishing | Cybersecurity | CompTIA, Phishing ? SY0-

601 CompTIA Security+: 1.1 - Professor Messer IT Certification Training Courses

QUESTION NO: 9

Which of the following would be BEST to establish between organizations to define the responsibilities of each party outline the key deliverables and include monetary penalties for breaches to manage third-party risk?

- A. An ARO
- B. An MOU
- C. An SLA
- D. A BPA

ANSWER: C

Explanation:

Most SLA include a monetary penalty if the vendor is unable to meet the agreed-upon expectations



QUESTION NO: 10

Which of the following would be the best ways to ensure only authorized personnel can access a secure facility? (Select two).

- A. Fencing
- B. Video surveillance
- C. Badge access
- D. Access control vestibule
- E. Sign-in sheet
- F. Sensor

ANSWER: C D

Explanation:

Badge access and access control vestibule are two of the best ways to ensure only authorized personnel can access a secure facility. Badge access requires the personnel to present a valid and authenticated badge to a reader or scanner that grants or denies access based on predefined rules and permissions. Access control vestibule is a physical security measure that consists of a small room or chamber with two doors, one leading to the outside and one leading to the secure area. The personnel must enter the vestibule and wait for the first door to close and lock before the second door can be opened. This prevents tailgating or piggybacking by unauthorized individuals. Reference:

CompTIA Security+ Study Guide: Exam SY0-701, 9th Edition, Chapter 4, pages 197-1981