



CompTIA

Exam Questions CAS-005

CompTIA SecurityX Exam

NEW QUESTION 1

A company's help desk is experiencing a large number of calls from the finance department slating access issues to www.bank.com The security operations center reviewed the following security logs:

User	User IP & Subnet	Location	Website	DNS Resolved IP (public)	HTTP Status Code
User12	10.200.2.52/24	Finance	www.bank.com	65.146.76.34	495
User31	10.200.2.213/24	Finance	www.bank.com	65.146.76.34	495
User46	10.200.5.76/24	IT	www.bank.com	98.17.62.78	200
User23	10.200.2.156/24	Finance	www.bank.com	65.146.76.34	495
User51	10.200.4.138/24	Legal	www.bank.com	98.17.62.78	200

Which of the following is most likely the cause of the issue?

- A. Recursive DNS resolution is failing
- B. The DNS record has been poisoned.
- C. DNS traffic is being sinkholed.
- D. The DNS was set up incorrectly.

Answer: C

Explanation:

Sinkholing, or DNS sinkholing, is a method used to redirect malicious traffic to a safe destination. This technique is often employed by security teams to prevent access to malicious domains by substituting a benign destination IP address.

In the given logs, users from the finance department are accessing www.bank.com and receiving HTTP status code 495. This status code is typically indicative of a client certificate error, which can occur if the DNS traffic is being manipulated or redirected incorrectly. The consistency in receiving the same HTTP status code across different users suggests a systematic issue rather than an isolated incident.

? Recursive DNS resolution failure (A) would generally lead to inability to resolve DNS at all, not to a specific HTTP error.

? DNS poisoning (B) could result in users being directed to malicious sites, but again, would likely result in a different set of errors or unusual activity.

? Incorrect DNS setup (D) would likely cause broader resolution issues rather than targeted errors like the one seen here.

By reviewing the provided data, it is evident that the DNS traffic for www.bank.com is being rerouted improperly, resulting in consistent HTTP 495 errors for the finance department users. Hence, the most likely cause is that the DNS traffic is being sinkholed.

References:

? CompTIA SecurityX study materials on DNS security mechanisms.

? Standard HTTP status codes and their implications.

NEW QUESTION 2

Which of the following best explains the business requirement a healthcare provider fulfills by encrypting patient data at rest?

- A. Securing data transfer between hospitals
- B. Providing for non-repudiation data
- C. Reducing liability from identity theft
- D. Protecting privacy while supporting portability.

Answer: D

Explanation:

Encrypting patient data at rest is a critical requirement for healthcare providers to ensure compliance with regulations such as the Health Insurance Portability and Accountability Act (HIPAA). The primary business requirement fulfilled by this practice is the protection of patient privacy while supporting the portability of medical information. By encrypting data at rest, healthcare providers safeguard sensitive patient information from unauthorized access, ensuring that privacy is maintained even if the storage media are compromised. Additionally, encryption supports the portability of patient records, allowing for secure transfer and access across different systems and locations while ensuring that privacy controls are in place.

References:

? CompTIA SecurityX Study Guide: Emphasizes the importance of data encryption for protecting sensitive information and ensuring compliance with regulatory requirements.

? HIPAA Security Rule: Requires healthcare providers to implement safeguards, including encryption, to protect patient data.

? "Health Informatics: Practical Guide for Healthcare and Information Technology Professionals" by Robert E. Hoyt: Discusses encryption as a key measure for protecting patient data privacy and supporting data portability.

NEW QUESTION 3

An organization wants to implement a platform to better identify which specific assets are affected by a given vulnerability. Which of the following components provides the best foundation to achieve this goal?

- A. SASE
- B. CMDB
- C. SBoM
- D. SLM

Answer: B

Explanation:

A Configuration Management Database (CMDB) provides the best foundation for identifying which specific assets are affected by a given vulnerability. A CMDB maintains detailed information about the IT environment, including hardware, software, configurations, and relationships between assets. This comprehensive view allows organizations to quickly identify and address vulnerabilities affecting specific assets. References:

? CompTIA SecurityX Study Guide: Discusses the role of CMDBs in asset management and vulnerability identification.
? ITIL (Information Technology Infrastructure Library) Framework: Recommends the use of CMDBs for effective configuration and asset management.
? "Configuration Management Best Practices" by Bob Aiello and Leslie Sachs: Covers the importance of CMDBs in managing IT assets and addressing vulnerabilities.

NEW QUESTION 4

The identity and access management team is sending logs to the SIEM for continuous monitoring. The deployed log collector is forwarding logs to the SIEM. However, only false positive alerts are being generated. Which of the following is the most likely reason for the inaccurate alerts?

- A. The compute resources are insufficient to support the SIEM
- B. The SIEM indexes are 100 large
- C. The data is not being properly parsed
- D. The retention policy is not properly configured

Answer: C

Explanation:

Proper parsing of data is crucial for the SIEM to accurately interpret and analyze the logs being forwarded by the log collector. If the data is not parsed correctly, the SIEM may misinterpret the logs, leading to false positives and inaccurate alerts. Ensuring that the log data is correctly parsed allows the SIEM to correlate and analyze the logs effectively, which is essential for accurate alerting and monitoring.

NEW QUESTION 5

A company detects suspicious activity associated with external connections Security detection tools are unable to categorize this activity. Which of the following is the best solution to help the company overcome this challenge?

- A. Implement an Interactive honeypot
- B. Map network traffic to known IoCs.
- C. Monitor the dark web
- D. implement UEBA

Answer: D

Explanation:

User and Entity Behavior Analytics (UEBA) is the best solution to help the company overcome challenges associated with suspicious activity that cannot be categorized by traditional detection tools. UEBA uses advanced analytics to establish baselines of normal behavior for users and entities within the network. It then identifies deviations from these baselines, which may indicate malicious activity. This approach is particularly effective for detecting unknown threats and sophisticated attacks that do not match known indicators of compromise (IoCs).

Reference: CompTIA SecurityX Study Guide, Chapter on Advanced Threat Detection and Mitigation, Section on User and Entity Behavior Analytics (UEBA).

NEW QUESTION 6

Users are willing passwords on paper because of the number of passwords needed in an environment. Which of the following solutions is the best way to manage this situation and decrease risks?

- A. Increasing password complexity to require 31 least 16 characters
- B. implementing an SSO solution and integrating with applications
- C. Requiring users to use an open-source password manager
- D. Implementing an MFA solution to avoid reliance only on passwords

Answer: B

Explanation:

Implementing a Single Sign-On (SSO) solution and integrating it with applications is the best way to manage the situation and decrease risks. Here??s why:

- ? Reduced Password Fatigue: SSO allows users to log in once and gain access to multiple applications and systems without needing to remember and manage multiple passwords. This reduces the likelihood of users writing down passwords.
- ? Improved Security: By reducing the number of passwords users need to manage, SSO decreases the attack surface and potential for password-related security breaches. It also allows for the implementation of stronger authentication methods.
- ? User Convenience: SSO improves the user experience by simplifying the login process, which can lead to higher productivity and satisfaction.
- ? References:

NEW QUESTION 7

A user submits a help desk ticket stating then account does not authenticate sometimes. An analyst reviews the following logs for the user: Which of the following best explains the reason the user's access is being denied?

- A. incorrectly typed password
- B. Time-based access restrictions
- C. Account compromise
- D. Invalid user-to-device bindings

Answer: B

Explanation:

The logs reviewed for the user indicate that access is being denied due to time-based access restrictions. These restrictions are commonly implemented to limit access to systems during specific hours to enhance security. If a user attempts to authenticate outside of the allowed time window, access will be denied. This measure helps prevent unauthorized access during non-business hours, reducing the risk of security incidents.

References:

- ? CompTIA SecurityX Study Guide: Covers various access control methods, including time-based restrictions, as a means of enhancing security.
- ? NIST Special Publication 800-53, "Security and Privacy Controls for Information Systems and Organizations": Recommends the use of time-based access

restrictions as part of access control policies.
 ? "Access Control and Identity Management" by Mike Chapple and Aaron French: Discusses the implementation and benefits of time-based access restrictions.

NEW QUESTION 8

A security officer received several complaints from users about excessive MPA push notifications at night The security team investigates and suspects malicious activities regarding user account authentication Which of the following is the best way for the security officer to restrict MI~A notifications"

- A. Provisioning FIDO2 devices
- B. Deploying a text message based on MFA
- C. Enabling OTP via email
- D. Configuring prompt-driven MFA

Answer: D

Explanation:

Excessive MFA push notifications can be a sign of an attempted push notification attack, where attackers repeatedly send MFA prompts hoping the user will eventually approve one by mistake. To mitigate this:

- ? A. Provisioning FIDO2 devices: While FIDO2 devices offer strong authentication, they may not be practical for all users and do not directly address the issue of excessive push notifications.
- ? B. Deploying a text message-based MFA: SMS-based MFA can still be vulnerable to similar spamming attacks and phishing.
- ? C. Enabling OTP via email: Email-based OTPs add another layer of security but do not directly solve the issue of excessive notifications.
- ? D. Configuring prompt-driven MFA: This option allows users to respond to prompts in a secure manner, often including features like time-limited approval windows, additional verification steps, or requiring specific actions to approve. This can help prevent users from accidentally approving malicious attempts. Configuring prompt-driven MFA is the best solution to restrict unnecessary MFA notifications and improve security.

References:

- ? CompTIA Security+ Study Guide
- ? NIST SP 800-63B, "Digital Identity Guidelines"
- ? "Multi-Factor Authentication: Best Practices" by Microsoft

NEW QUESTION 9

A security engineer is developing a solution to meet the following requirements?

- All endpoints should be able to establish telemetry with a SIEM.
- All endpoints should be able to be integrated into the XDR platform.
- SOC services should be able to monitor the XDR platform

Which of the following should the security engineer implement to meet the requirements?

- A. CDR and central logging
- B. HIDS and vTPM
- C. WAF and syslog
- D. HIPS and host-based firewall

Answer: D

Explanation:

To meet the requirements of having all endpoints establish telemetry with a SIEM, integrate into an XDR platform, and allow SOC services to monitor the XDR platform, the best approach is to implement Host Intrusion Prevention Systems (HIPS) and a host-based firewall. HIPS can provide detailed telemetry data to the SIEM and can be integrated into the XDR platform for comprehensive monitoring and response. The host- based firewall ensures that only authorized traffic is allowed, providing an additional layer of security.

References:

- ? CompTIA SecurityX Study Guide: Describes the roles of HIPS and host-based firewalls in endpoint security and their integration with SIEM and XDR platforms.
- ? NIST Special Publication 800-94, "Guide to Intrusion Detection and Prevention Systems (IDPS)": Highlights the capabilities of HIPS for security monitoring and incident response.
- ? "Network Security Monitoring" by Richard Bejtlich: Discusses the integration of various security tools, including HIPS and firewalls, for effective security monitoring.

NEW QUESTION 10

A company's security policy states that any publicly available server must be patched within 12 hours after a patch is released A recent IIS zero-day vulnerability was discovered that affects all versions of the Windows Server OS:

	OS	Externally available?	Behind WAF?	IIS installed?
Host 1	Windows 2019	Yes	Yes	Yes
Host 2	Windows 2008 R2	No	N/A	No
Host 3	Windows 2012 R2	Yes	Yes	Yes
Host 4	Windows 2022	Yes	No	Yes
Host 5	Windows 2012 R2	No	N/A	No
Host 6	Windows 2019	Yes	No	No

Which of the following hosts should a security analyst patch first once a patch is available?

- A. 1

- B. 2
- C. 3
- D. 4
- E. 5
- F. 6

Answer: A

Explanation:

Based on the security policy that any publicly available server must be patched within 12 hours after a patch is released, the security analyst should patch Host 1 first. Here's why:

- ? Public Availability: Host 1 is externally available, making it accessible from the internet. Publicly available servers are at higher risk of being targeted by attackers, especially when a zero-day vulnerability is known.
- ? Exposure to Threats: Host 1 has IIS installed and is publicly accessible, increasing its exposure to potential exploitation. Patching this host first reduces the risk of a successful attack.
- ? Prioritization of Critical Assets: According to best practices, assets that are exposed to higher risks should be prioritized for patching to mitigate potential threats promptly.
- ? References:

NEW QUESTION 10

Which of the following AI concerns is most adequately addressed by input sanitation?

- A. Model inversion
- B. Prompt Injection
- C. Data poisoning
- D. Non-explainable model

Answer: B

Explanation:

Input sanitation is a critical process in cybersecurity that involves validating and cleaning data provided by users to prevent malicious inputs from causing harm. In the context of AI concerns:

- ? A. Model inversion involves an attacker inferring sensitive data from model outputs, typically requiring sophisticated methods beyond just manipulating input data.
 - ? B. Prompt Injection is a form of attack where an adversary provides malicious input to manipulate the behavior of AI models, particularly those dealing with natural language processing (NLP). Input sanitation directly addresses this by ensuring that inputs are cleaned and validated to remove potentially harmful commands or instructions that could alter the AI's behavior.
 - ? C. Data poisoning involves injecting malicious data into the training set to compromise the model. While input sanitation can help by filtering out bad data, data poisoning is typically addressed through robust data validation and monitoring during the model training phase, rather than real-time input sanitation.
 - ? D. Non-explainable model refers to the lack of transparency in how AI models make decisions. This concern is not addressed by input sanitation, as it relates more to model design and interpretability techniques.
- Input sanitation is most relevant and effective for preventing Prompt Injection attacks, where the integrity of user inputs directly impacts the performance and security of AI models.

References:

- ? CompTIA Security+ Study Guide
 - ? "Security of Machine Learning" by Battista Biggio, Blaine Nelson, and Pavel Laskov
 - ? OWASP (Open Web Application Security Project) guidelines on input validation and injection attacks
- Top of Form Bottom of Form

NEW QUESTION 13

An engineering team determines the cost to mitigate certain risks is higher than the asset values The team must ensure the risks are prioritized appropriately. Which of the following is the best way to address the issue?

- A. Data labeling
- B. Branch protection
- C. Vulnerability assessments
- D. Purchasing insurance

Answer: D

Explanation:

When the cost to mitigate certain risks is higher than the asset values, the best approach is to purchase insurance. This method allows the company to transfer the risk to an insurance provider, ensuring that financial losses are covered in the event of an incident. This approach is cost-effective and ensures that risks are prioritized appropriately without overspending on mitigation efforts.

References:

- ? CompTIA SecurityX Study Guide: Discusses risk management strategies, including risk transfer through insurance.
- ? NIST Risk Management Framework (RMF): Highlights the use of insurance as a risk mitigation strategy.
- ? "Information Security Risk Assessment Toolkit" by Mark Talabis and Jason Martin: Covers risk management practices, including the benefits of purchasing insurance.

NEW QUESTION 14

An organization that performs real-time financial processing is implementing a new backup solution Given the following business requirements?

- * The backup solution must reduce the risk for potential backup compromise
- * The backup solution must be resilient to a ransomware attack.
- * The time to restore from backups is less important than the backup data integrity
- * Multiple copies of production data must be maintained

Which of the following backup strategies best meets these requirements?

- A. Creating a secondary, immutable storage array and updating it with live data on a continuous basis

- B. Utilizing two connected storage arrays and ensuring the arrays constantly sync
- C. Enabling remote journaling on the databases to ensure real-time transactions are mirrored
- D. Setting up antitempering on the databases to ensure data cannot be changed unintentionally

Answer: A

Explanation:

? A. Creating a secondary, immutable storage array and updating it with live data on a continuous basis: An immutable storage array ensures that data, once written, cannot be altered or deleted. This greatly reduces the risk of backup compromise and provides resilience against ransomware attacks, as the ransomware cannot modify or delete the backup data. Maintaining multiple copies of production data with an immutable storage solution ensures data integrity and compliance with the requirement for multiple copies.

Other options:

? B. Utilizing two connected storage arrays and ensuring the arrays constantly sync: While this ensures data redundancy, it does not provide protection against ransomware attacks, as both arrays could be compromised simultaneously.

? C. Enabling remote journaling on the databases: This ensures real-time transaction mirroring but does not address the requirement for reducing the risk of backup compromise or resilience to ransomware.

? D. Setting up anti-tampering on the databases: While this helps ensure data integrity, it does not provide a comprehensive backup solution that meets all the specified requirements.

References:

? CompTIA Security+ Study Guide

? NIST SP 800-209, "Security Guidelines for Storage Infrastructure"

? "Immutable Backup Architecture" by Veeam

NEW QUESTION 15

A company hosts a platform-as-a-service solution with a web-based front end, through which customer interact with data sets. A security administrator needs to deploy controls to prevent application-focused attacks. Which of the following most directly supports the administrator's objective'

- A. improving security dashboard visualization on SIEM
- B. Rotating API access and authorization keys every two months
- C. Implementing application load balancing and cross-region availability
- D. Creating WAF policies for relevant programming languages

Answer: D

Explanation:

The best way to prevent application-focused attacks for a platform-as-a-service solution with a web-based front end is to create Web Application Firewall (WAF) policies for relevant programming languages. Here's why:

? Application-Focused Attack Prevention: WAFs are designed to protect web

applications by filtering and monitoring HTTP traffic between a web application and the Internet. They help prevent attacks such as SQL injection, cross-site scripting (XSS), and other application-layer attacks.

? Customizable Rules: WAF policies can be tailored to the specific programming

languages and frameworks used by the web application, providing targeted protection based on known vulnerabilities and attack patterns.

? Real-Time Protection: WAFs provide real-time protection, blocking malicious

requests before they reach the application, thereby enhancing the security posture of the platform.

? References:

NEW QUESTION 17

Users are experiencing a variety of issues when trying to access corporate resources examples include

- Connectivity issues between local computers and file servers within branch offices
- Inability to download corporate applications on mobile endpoints while working remotely
- Certificate errors when accessing internal web applications

Which of the following actions are the most relevant when troubleshooting the reported issues? (Select two).

- A. Review VPN throughput
- B. Check IPS rules
- C. Restore static content on edge CDN.
- D. Enable secure authentication using NAC
- E. Implement advanced WAF rules.
- F. Validate MDM asset compliance

Answer: AF

Explanation:

The reported issues suggest problems related to network connectivity, remote access, and certificate management:

? A. Review VPN throughput: Connectivity issues and the inability to download applications while working remotely may be due to VPN bandwidth or performance issues. Reviewing and optimizing VPN throughput can help resolve these problems by ensuring that remote users have adequate bandwidth for accessing corporate resources.

? F. Validate MDM asset compliance: Mobile Device Management (MDM) systems

ensure that mobile endpoints comply with corporate security policies. Validating MDM compliance can help address issues related to the inability to download applications and certificate errors, as non-compliant devices might be blocked from accessing certain resources.

? B. Check IPS rules: While important for security, IPS rules are less likely to directly address the connectivity and certificate issues described.

? C. Restore static content on the CDN: This action is related to content delivery but does not address VPN or certificate-related issues.

? D. Enable secure authentication using NAC: Network Access Control (NAC) enhances security but does not directly address the specific issues described.

? E. Implement advanced WAF rules: Web Application Firewalls protect web applications but do not address VPN throughput or mobile device compliance.

References:

? CompTIA Security+ Study Guide

? NIST SP 800-77, "Guide to IPsec VPNs"

? CIS Controls, "Control 11: Secure Configuration for Network Devices"

NEW QUESTION 19

A security engineer is given the following requirements:

- An endpoint must only execute Internally signed applications
- Administrator accounts cannot install unauthorized software.
- Attempts to run unauthorized software must be logged Which of the following best meets these requirements?

- A. Maintaining appropriate account access through directory management and controls
- B. Implementing a CSPM platform to monitor updates being pushed to applications
- C. Deploying an EDR solution to monitor and respond to software installation attempts
- D. Configuring application control with blocked hashes and enterprise-trusted root certificates

Answer: D

Explanation:

To meet the requirements of only allowing internally signed applications, preventing unauthorized software installations, and logging attempts to run unauthorized software, configuring application control with blocked hashes and enterprise-trusted root certificates is the best solution. This approach ensures that only applications signed by trusted certificates are allowed to execute, while all other attempts are blocked and logged. It effectively prevents unauthorized software installations by restricting execution to pre- approved applications.

References:

? CompTIA SecurityX Study Guide: Describes application control mechanisms and the use of trusted certificates to enforce security policies.

? NIST Special Publication 800-53, "Security and Privacy Controls for Information Systems and Organizations": Recommends application whitelisting and execution control for securing endpoints.

? "The Application Security Handbook" by Mark Dowd, John McDonald, and Justin Schuh: Covers best practices for implementing application control and managing trusted certificates

NEW QUESTION 20

A security analyst reviews the following report:

	Location	Chassis manufacturer	OS	Application developer	Vendor
Product A	United States	Local company A	Debian 11	Unknown	Charlie Security Consulting
Product B	United States	Global company B	Red Hat Enterprise Linux	Developer B	BigBox Vulnerabilities

Which of the following assessments is the analyst performing?

- A. System
- B. Supply chain
- C. Quantitative
- D. Organizational

Answer: B

Explanation:

The table shows detailed information about products, including location, chassis manufacturer, OS, application developer, and vendor. This type of information is typically assessed in a supply chain assessment to evaluate the security and reliability of components and services from different suppliers.

Why Supply Chain Assessment?

? Component Evaluation: Assessing the origin and security of each component used in the products, including hardware, software, and third-party services.

? Vendor Reliability: Evaluating the security practices and reliability of vendors involved in providing components or services.

? Risk Management: Identifying potential risks associated with the supply chain, such as vulnerabilities in third-party components or insecure development practices.

Other types of assessments do not align with the detailed supplier and component information provided:

? A. System: Focuses on individual system security, not the broader supply chain.

? C. Quantitative: Focuses on numerical risk assessments, not supplier information.

? D. Organizational: Focuses on internal organizational practices, not external suppliers.

References:

? CompTIA SecurityX Study Guide

? NIST Special Publication 800-161, "Supply Chain Risk Management Practices for Federal Information Systems and Organizations"

? "Supply Chain Security Best Practices," Gartner Research

NEW QUESTION 24

SIMULATION

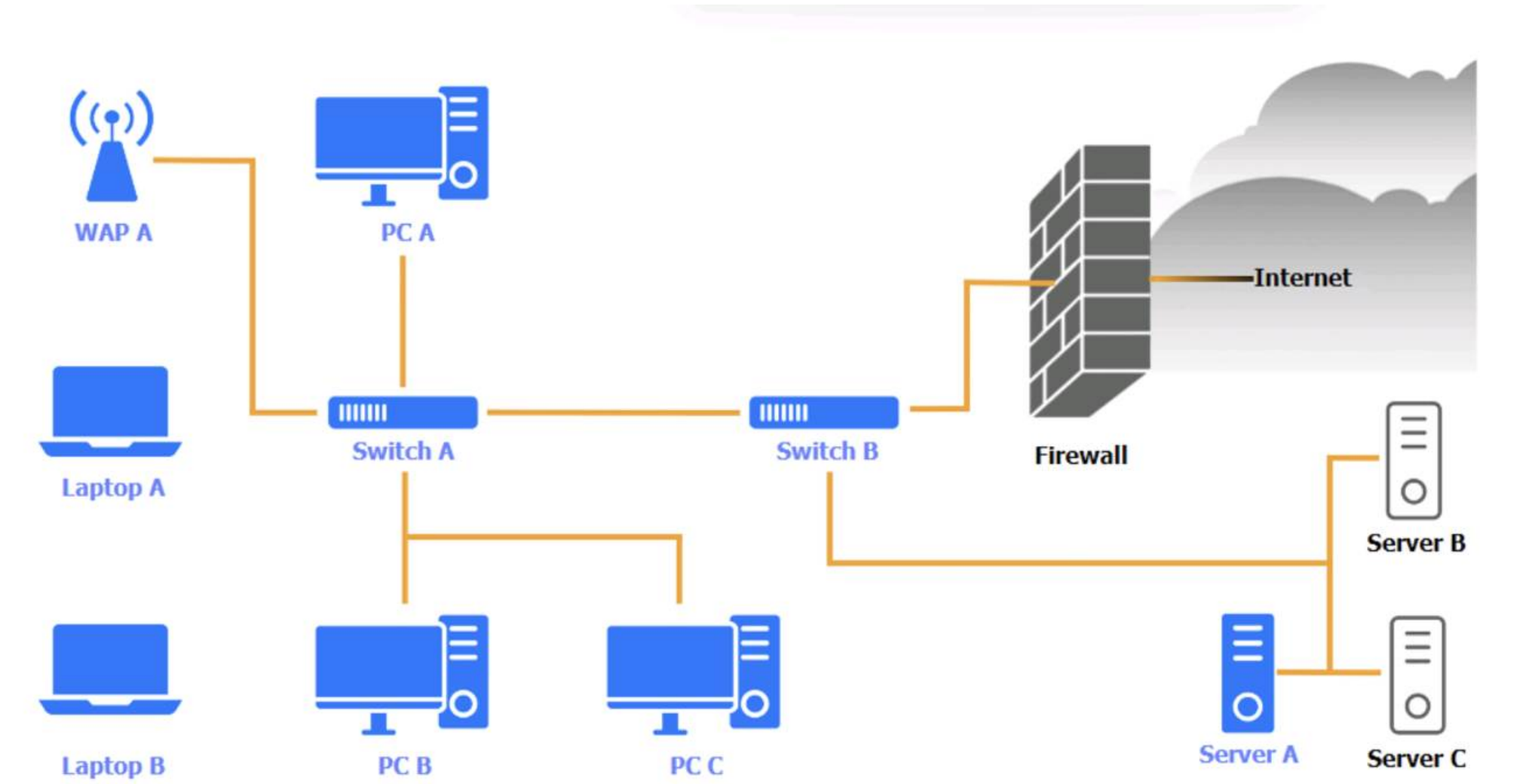
A security engineer needs to review the configurations of several devices on the network to meet the following requirements:

- The PostgreSQL server must only allow connectivity in the 10.1.2.0/24 subnet.
- The SSH daemon on the database server must be configured to listen to port 4022.
- The SSH daemon must only accept connections from a Single workstation.
- All host-based firewalls must be disabled on all workstations.
- All devices must have the latest updates from within the past eight days.
- All HDDs must be configured to secure data at rest.
- Cleartext services are not allowed.
- All devices must be hardened when possible.

Instructions:

Click on the various workstations and network devices to review the posture assessment results. Remediate any possible issues or indicate that no issue is found.

Click on Server A to review output data. Select commands in the appropriate tab to remediate connectivity problems to the pOSTGRESql DATABASE VIA ssh



WAP A		
Finding	Status	Remediation
Firmware	Updated 5 days ago	<input checked="" type="checkbox"/> No issue
Top 5 used ports	22, 80, 443, 123, 53	<input type="checkbox"/> Patch management
SSID broadcast	Disabled	<input type="checkbox"/> Update endpoint protection
Default admin account	Default password has been changed	<input type="checkbox"/> Enabled disk encryption
HTTP server	Disabled	<input type="checkbox"/> Enable port security on network device
		<input type="checkbox"/> Enable password complexity
		<input type="checkbox"/> Enable host-based firewall to block all traffic
		<input type="checkbox"/> Antivirus scan
		<input type="checkbox"/> Change default administrative password
		<input type="checkbox"/> Disable unneeded services
		<input type="checkbox"/> Enable all connectivity settings

PC A

PC A			
OS updates	Updated 2 days ago, last checked 5:08 a.m.	<input checked="" type="checkbox"/> No issue	
Endpoint protection	Last checked 6:11 a.m.	<input type="checkbox"/> Patch management	
Browser version	91.2.5 (7/31/2023)	<input type="checkbox"/> Update endpoint protection	
Disk encryption	Enabled	<input type="checkbox"/> Enabled disk encryption	
Password complexity	Enabled	<input type="checkbox"/> Enable port security on network device	
Host-based firewall	Disabled	<input type="checkbox"/> Enable password complexity	
CPU & memory usage	Normal	<input type="checkbox"/> Enable host-based firewall to block all traffic	
Screensaver	Enabled	<input type="checkbox"/> Antivirus scan	
Top 5 used ports	22, 80, 443, 389, 53	<input type="checkbox"/> Change default administrative password	
Wireless	Disabled	<input type="checkbox"/> Disable unneeded services	
		<input type="checkbox"/> Enable all connectivity settings	

Laptop A


Laptop A			
OS updates	Updated 3 days ago, last checked 6:08 a.m.	<input checked="" type="checkbox"/> No issue	
Endpoint protection	Last checked in 6:13 a.m.	<input type="checkbox"/> Patch management	
Browser version	91.2.5 (7/31/2023)	<input type="checkbox"/> Update endpoint protection	
Disk encryption	Enabled	<input type="checkbox"/> Enabled disk encryption	
Password complexity	Enabled	<input type="checkbox"/> Enable port security on network device	
Host-based firewall	Disabled	<input type="checkbox"/> Enable password complexity	
CPU & memory usage	Medium	<input type="checkbox"/> Enable host-based firewall to block all traffic	
Screensaver	Enabled	<input type="checkbox"/> Antivirus scan	
Top 5 used ports	22, 80, 443, 389, 53	<input type="checkbox"/> Change default administrative password	
Wireless	Enabled	<input type="checkbox"/> Disable unneeded services	
		<input type="checkbox"/> Enable all connectivity settings	

Switch A

Switch A

Firmware	Updated 7 days ago	<input checked="" type="checkbox"/> No issue
Top 5 used ports	22, 80, 443, 123, 53	<input type="checkbox"/> Patch management
Interfaces disabled (out of 12)	4	<input type="checkbox"/> Update endpoint protection
Default admin account	Default password has not been changed	<input type="checkbox"/> Enabled disk encryption
HTTP server	Disabled	<input type="checkbox"/> Enable port security on network device
		<input type="checkbox"/> Enable password complexity
		<input type="checkbox"/> Enable host-based firewall to block all traffic
		<input type="checkbox"/> Antivirus scan
		<input type="checkbox"/> Change default administrative password
		<input type="checkbox"/> Disable unneeded services
		<input type="checkbox"/> Enable all connectivity settings



Switch B:

Switch B			
Firmware	Updated 7 days ago	<input checked="" type="checkbox"/> No issue	<div> <input type="checkbox"/> Patch management </div> <div> <input type="checkbox"/> Update endpoint protection </div> <div> <input type="checkbox"/> Enabled disk encryption </div> <div> <input type="checkbox"/> Enable port security on network device </div> <div> <input type="checkbox"/> Enable password complexity </div> <div> <input type="checkbox"/> Enable host-based firewall to block all traffic </div> <div> <input type="checkbox"/> Antivirus scan </div> <div> <input type="checkbox"/> Change default administrative password </div> <div> <input type="checkbox"/> Disable unneeded services </div> <div> <input type="checkbox"/> Enable all connectivity settings </div>
Top 5 used ports	22, 80, 443, 123, 53	<input type="checkbox"/> Patch management	
Interfaces disabled (out of 6)	1	<input type="checkbox"/> Update endpoint protection	
Default admin account	Default password has been changed	<input type="checkbox"/> Enabled disk encryption	
HTTP server	Disabled	<input type="checkbox"/> Enable port security on network device	
		<input type="checkbox"/> Enable password complexity	
		<input type="checkbox"/> Enable host-based firewall to block all traffic	
		<input type="checkbox"/> Antivirus scan	
		<input type="checkbox"/> Change default administrative password	
		<input type="checkbox"/> Disable unneeded services	
		<input type="checkbox"/> Enable all connectivity settings	

Laptop B

Laptop B			
OS updates	Updated 3 days ago, last checked 8:08 a.m.	<input checked="" type="checkbox"/> No issue	<div> <input type="checkbox"/> Patch management </div> <div> <input type="checkbox"/> Update endpoint protection </div> <div> <input type="checkbox"/> Enabled disk encryption </div> <div> <input type="checkbox"/> Enable port security on network device </div> <div> <input type="checkbox"/> Enable password complexity </div> <div> <input type="checkbox"/> Enable host-based firewall to block all traffic </div> <div> <input type="checkbox"/> Antivirus scan </div> <div> <input type="checkbox"/> Change default administrative password </div> <div> <input type="checkbox"/> Disable unneeded services </div> <div> <input type="checkbox"/> Enable all connectivity settings </div>
Endpoint protection	Last checked in 8:11 a.m.	<input type="checkbox"/> Patch management	
Browser version	81.2.5 (7/31/2023)	<input type="checkbox"/> Update endpoint protection	
Disk encryption	Disabled	<input type="checkbox"/> Enabled disk encryption	
Password Complexity	Enabled	<input type="checkbox"/> Enable port security on network device	
Host-based firewall	Disabled	<input type="checkbox"/> Enable password complexity	
CPU & memory usage	Normal	<input type="checkbox"/> Enable host-based firewall to block all traffic	
Screensaver	Enabled	<input type="checkbox"/> Antivirus scan	
Top 5 used ports	22, 80, 443, 8080, 53	<input type="checkbox"/> Change default administrative password	
Wireless	Enabled	<input type="checkbox"/> Disable unneeded services	
		<input type="checkbox"/> Enable all connectivity settings	

PC B

PC B			
OS updates	Updated 2 days ago, last checked 5:10 a.m.	<input checked="" type="checkbox"/> No issue	
Endpoint protection	Last checked in 6:13 a.m.	<input type="checkbox"/> Patch management	
Browser version	91.2.5 (7/31/2023)	<input type="checkbox"/> Update endpoint protection	
Disk encryption	Enabled	<input type="checkbox"/> Enabled disk encryption	
Password complexity	Enabled	<input type="checkbox"/> Enable port security on network device	
Host-based firewall	Disabled	<input type="checkbox"/> Enable password complexity	
CPU & memory usage	Medium	<input type="checkbox"/> Enable host-based firewall to block all traffic	
Screensaver	Enabled	<input type="checkbox"/> Antivirus scan	
Top 5 used ports	22, 80, 443, 389, 53	<input type="checkbox"/> Change default administrative password	
Wireless	Disabled	<input type="checkbox"/> Disable unneeded services	
		<input type="checkbox"/> Enable all connectivity settings	

PC C

PC C			
OS updates	Updated 22 days ago	<input checked="" type="checkbox"/> No issue	
Endpoint protection	Last checked 6:19 a.m.	<input type="checkbox"/> Patch management	
Browser version	91.2.5 (7/18/2022)	<input type="checkbox"/> Update endpoint protection	
Disk encryption	Enabled	<input type="checkbox"/> Enabled disk encryption	
Password complexity	Enabled	<input type="checkbox"/> Enable port security on network device	
Host-based firewall	Disabled	<input type="checkbox"/> Enable password complexity	
CPU & memory usage	High	<input type="checkbox"/> Enable host-based firewall to block all traffic	
Screensaver	Enabled	<input type="checkbox"/> Antivirus scan	
Top 5 used ports	22, 80, 443, 23, 53	<input type="checkbox"/> Change default administrative password	
Wireless	Disabled	<input type="checkbox"/> Disable unneeded services	
		<input type="checkbox"/> Enable all connectivity settings	

Server A

Server A



Nmap

IP Tables

```
Nmap scan report for psql-srvr.acme.com
Host is up, received arp-response (0.00040s latency).
...
PORT      STATE SERVICE      VERSION
22/tcp    open  ssh          OpenSSH 8.4
80/tcp    closed http
443/tcp   closed ssl/http
1433/tcp  closed mssql
5432/tcp  closed postgresql
...
```

1 2 3 4

```
iptables -R INPUT 1 -p tcp -s 10.1.2.25/32 --sport 4022 -j ACCEPT
iptables -D OUTPUT 1
iptables -A OUTPUT -p udp -d 0/0 -s 10.1.2.0/24 --sport 5432 -m state --state ESTABLISHED -j ACCEPT
iptables -A INPUT -p tcp -d 0/0 -s 10.1.2.0/24 --dport 5432 -m state --state NEW,ESTABLISHED -j ACCEPT
```

1 2 3 4

```
iptables -R INPUT 1 -p tcp -s 10.1.2.0/24 --dport 4022 -j ACCEPT
iptables -D OUTPUT 2
iptables -A OUTPUT -p tcp -d 0/0 -s 10.1.2.0/24 --sport 5432 -m state --state ESTABLISHED -j ACCEPT
iptables -A INPUT -p tcp -d 0/0 -s 10.1.2.0/24 --dport 5432 -m state --state NEW,ESTABLISHED -j ACCEPT
```

1 2 3 4

```
iptables -R OUTPUT 1 -p tcp -s 10.1.2.25/32 --sport 4022 -j ACCEPT
iptables -F OUTPUT
iptables -A OUTPUT -p tcp -d 0/0 -s 10.1.2.0/24 --sport 5432 -m state --state ESTABLISHED -j ACCEPT
iptables -A INPUT -p tcp -d 0/0 -s 10.1.2.0/24 --dport 5432 -m state --state NEW,ESTABLISHED -j ACCEPT
```

1 2 3 4

```
iptables -R INPUT 1 -p tcp -s 10.1.2.25/32 --dport 4022 -j ACCEPT
iptables -D OUTPUT 1
iptables -A OUTPUT -p tcp -d 0/0 -s 10.1.2.0/24 --sport 5432 -m state --state ESTABLISHED -j ACCEPT
iptables -A INPUT -p tcp -d 0/0 -s 10.1.2.0/24 --dport 5432 -m state --state NEW,ESTABLISHED -j ACCEPT
```


Nmap
IP Tables

```
#iptables --list --verbose

Chain INPUT (policy DROP 5 packets, 341 bytes)

pkts bytes target prot opt in out source destination
0 0 ACCEPT tcp -- any any anywhere anywhere tcp spts:login:65535 dpt:ssh state NEW,ESTABLISHED
1 28 DROP all -- any any anywhere anywhere

Chain FORWARD (policy DROP 0 packets, 0 bytes)
```

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

WAP A: No issue found. The WAP A is configured correctly and meets the requirements. PC A = Enable host-based firewall to block all traffic
This option will turn off the host-based firewall and allow all traffic to pass through. This will comply with the requirement and also improve the connectivity of PC A to other devices on the network. However, this option will also reduce the security of PC A and make it more vulnerable to attacks. Therefore, it is recommended to use other security measures, such as antivirus, encryption, and password complexity, to protect PC A from potential threats.

Laptop A: Patch management

This option will install the updates that are available for Laptop A and ensure that it has the most recent security patches and bug fixes. This will comply with the requirement and also improve the performance and stability of Laptop A. However, this option may also require a reboot of Laptop A and some downtime during the update process. Therefore, it is recommended to backup any important data and close any open applications before applying the updates.

Switch A: No issue found. The Switch A is configured correctly and meets the requirements.

Switch B: No issue found. The Switch B is configured correctly and meets the requirements.

Laptop B: Disable unneeded services

This option will stop and disable the telnet service that is using port 23 on Laptop B. Telnet

is a cleartext service that transmits data in plain text over the network, which exposes it to eavesdropping, interception, and modification by attackers. By disabling the telnet service, you will comply with the requirement and also improve the security of Laptop B. However, this option may also affect the functionality of Laptop B if it needs to use telnet for remote administration or other purposes. Therefore, it is recommended to use a secure alternative to telnet, such as SSH or HTTPS, that encrypts the data in transit.

PC B: Enable disk encryption

This option will encrypt the HDD of PC B using a tool such as BitLocker or VeraCrypt. Disk encryption is a technique that protects data at rest by converting it into an unreadable format that can only be decrypted with a valid key or password. By enabling disk encryption, you will comply with the requirement and also improve the confidentiality and integrity of PC B's data. However, this option may also affect the performance and usability of PC B, as it requires additional processing time and user authentication to access the encrypted data. Therefore, it is recommended to backup any important data and choose a strong key or password before encrypting the disk.

PC C: Disable unneeded services

This option will stop and disable the SSH daemon that is using port 22 on PC C. SSH is a secure service that allows remote access and command execution over an encrypted channel. However, port 22 is the default and well-known port for SSH, which makes it a common target for brute-force attacks and port scanning. By disabling the SSH daemon on port 22, you will comply with the requirement and also improve the security of PC C. However, this option may also affect the functionality of PC C if it needs to use SSH for remote administration or other purposes. Therefore, it is recommended to enable the SSH daemon on a different port, such as 4022, by editing the configuration file using the following command:

sudo nano /etc/ssh/sshd_config Server A. Need to select the following:

white screen with white text

1
2
3
4

```
iptables -R INPUT 1 -p tcp -s 10.1.2.0/24 --dport 4022 -j ACCEPT
iptables -D OUTPUT 2
iptables -A OUTPUT -p tcp -d 0/0 -s 10.1.2.0/24 --sport 5432 -m state --state ESTABLISHED -j ACCEPT
iptables -A INPUT -p tcp -d 0/0 -s 10.1.2.0/24 --dport 5432 -m state --state NEW,ESTABLISHED -j ACCEPT
```

NEW QUESTION 28

A company receives reports about misconfigurations and vulnerabilities in a third-party hardware device that is part of its released products. Which of the following solutions is the best way for the company to identify possible issues at an earlier stage?

- A. Performing vulnerability tests on each device delivered by the providers
- B. Performing regular red-team exercises on the vendor production line
- C. Implementing a monitoring process for the integration between the application and the vendor appliance
- D. Implementing a proper supply chain risk management program

Answer: D

Explanation:

Addressing misconfigurations and vulnerabilities in third-party hardware requires a comprehensive approach to manage risks throughout the supply chain. Implementing a proper supply chain risk management (SCRM) program is the most effective solution as it encompasses the following:

- ? Holistic Approach: SCRM considers the entire lifecycle of the product, from initial design through to delivery and deployment. This ensures that risks are identified and managed at every stage.
 - ? Vendor Management: It includes thorough vetting of suppliers and ongoing assessments of their security practices, which can identify and mitigate vulnerabilities early.
 - ? Regular Audits and Assessments: A robust SCRM program involves regular audits and assessments, both internally and with suppliers, to ensure compliance with security standards and best practices.
 - ? Collaboration and Communication: Ensures that there is effective communication and collaboration between the company and its suppliers, leading to faster identification and resolution of issues.
- Other options, while beneficial, do not provide the same comprehensive risk management:
- ? A. Performing vulnerability tests on each device delivered by the providers: While useful, this is reactive and only addresses issues after they have been delivered.
 - ? B. Performing regular red-team exercises on the vendor production line: This can identify vulnerabilities but is not as comprehensive as a full SCRM program.
 - ? C. Implementing a monitoring process for the integration between the application and the vendor appliance: This is important but only covers the integration phase, not the entire supply chain.

References:

- ? CompTIA SecurityX Study Guide
- ? NIST Special Publication 800-161, "Supply Chain Risk Management Practices for Federal Information Systems and Organizations"
- ? ISO/IEC 27036-1:2014, "Information technology — Security techniques — Information security for supplier relationships"

NEW QUESTION 29

A systems administrator wants to introduce a newly released feature for an internal application. The administrator does not want to test the feature in the production environment. Which of the following locations is the best place to test the new feature?

- A. Staging environment
- B. Testing environment
- C. CI/CO pipeline
- D. Development environment

Answer: A

Explanation:

The best location to test a newly released feature for an internal application, without affecting the production environment, is the staging environment. Here's a detailed Explanation

- ? Staging Environment: This environment closely mirrors the production environment in terms of hardware, software, configurations, and settings. It serves as a final testing ground before deploying changes to production. Testing in the staging environment ensures that the new feature will behave as expected in the actual production setup.
 - ? Isolation from Production: The staging environment is isolated from production, which means any issues arising from the new feature will not impact the live users or the integrity of the production data. This aligns with best practices in change management and risk mitigation.
 - ? Realistic Testing: Since the staging environment replicates the production environment, it provides realistic testing conditions. This helps in identifying potential issues that might not be apparent in a development or testing environment, which often have different configurations and workloads.
- ? References:

NEW QUESTION 31

A company that uses containers to run its applications is required to identify vulnerabilities on every container image in a private repository. The security team needs to be able to quickly evaluate whether to respond to a given vulnerability. Which of the following will allow the security team to achieve the objective with the least effort?

- A. SAST scan reports
- B. Centralized SBoM
- C. CIS benchmark compliance reports
- D. Credentialed vulnerability scan

Answer: B

Explanation:

A centralized Software Bill of Materials (SBoM) is the best solution for identifying vulnerabilities in container images in a private repository. An SBoM provides a comprehensive inventory of all components, dependencies, and their versions within a container image, facilitating quick evaluation and response to vulnerabilities. Why Centralized SBoM?

- ? Comprehensive Inventory: An SBoM lists all software components, including their versions and dependencies, allowing for thorough vulnerability assessments.
 - ? Quick Identification: Centralizing SBoM data enables rapid identification of affected containers when a vulnerability is disclosed.
 - ? Automation: SBoMs can be integrated into automated tools for continuous monitoring and alerting of vulnerabilities.
 - ? Regulatory Compliance: Helps in meeting compliance requirements by providing a clear and auditable record of all software components used.
- Other options, while useful, do not provide the same level of comprehensive and efficient vulnerability management:
- ? A. SAST scan reports: Focuses on static analysis of code but may not cover all components in container images.
 - ? C. CIS benchmark compliance reports: Ensures compliance with security benchmarks but does not provide detailed component inventory.
 - ? D. Credentialed vulnerability scan: Useful for in-depth scans but may not be as efficient for quick vulnerability evaluation.

References:

- ? CompTIA SecurityX Study Guide
- ? "Software Bill of Materials (SBoM)," NIST Documentation
- ? "Managing Container Security with SBoM," OWASP

NEW QUESTION 32

A security team is responding to malicious activity and needs to determine the scope of impact the malicious activity appears to affect certain version of an application used by the organization. Which of the following actions best enables the team to determine the scope of impact?

- A. Performing a port scan
- B. Inspecting egress network traffic
- C. Reviewing the asset inventory
- D. Analyzing user behavior

Answer: C

Explanation:

Reviewing the asset inventory allows the security team to identify all instances of the affected application versions within the organization. By knowing which systems are running the vulnerable versions, the team can assess the full scope of the impact, determine which systems might be compromised, and prioritize them for further investigation and remediation.

Performing a port scan (Option A) might help identify open ports but does not provide specific information about the application versions. Inspecting egress network traffic (Option B) and analyzing user behavior (Option D) are important steps in the incident response process but do not directly identify which versions of the application are affected. References:

? CompTIA Security+ Study Guide

? NIST SP 800-61 Rev. 2, "Computer Security Incident Handling Guide"

? CIS Controls, "Control 1: Inventory and Control of Hardware Assets" and "Control 2: Inventory and Control of Software Assets"

NEW QUESTION 34

A company wants to install a three-tier approach to separate the web, database, and application servers. A security administrator must harden the environment. Which of the following is the best solution?

- A. Deploying a VPN to prevent remote locations from accessing server VLANs
- B. Configuring a SASb solution to restrict users to server communication
- C. Implementing microsegmentation on the server VLANs
- D. Installing a firewall and making it the network core

Answer: C

Explanation:

The best solution to harden a three-tier environment (web, database, and application servers) is to implement microsegmentation on the server VLANs. Here's why:

? Enhanced Security: Microsegmentation creates granular security zones within the

data center, allowing for more precise control over east-west traffic between servers. This helps prevent lateral movement by attackers who may gain access to one part of the network.

? Isolation of Tiers: By segmenting the web, database, and application servers, the

organization can apply specific security policies and controls to each segment, reducing the risk of cross-tier attacks.

? Compliance and Best Practices: Microsegmentation aligns with best practices for

network security and helps meet compliance requirements by ensuring that sensitive data and systems are properly isolated and protected.

? References:

NEW QUESTION 35

A systems administrator wants to use existing resources to automate reporting from disparate security appliances that do not currently communicate. Which of the following is the best way to meet this objective?

- A. Configuring an API Integration to aggregate the different data sets
- B. Combining back-end application storage into a single, relational database
- C. Purchasing and deploying commercial off the shelf aggregation software
- D. Migrating application usage logs to on-premises storage

Answer: A

Explanation:

The best way to automate reporting from disparate security appliances that do not currently communicate is to configure an API Integration to aggregate the different data sets. Here's why:

? Interoperability: APIs allow different systems to communicate and share data, even

if they were not originally designed to work together. This enables the integration of various security appliances into a unified reporting system.

? Automation: API integrations can automate the process of data collection, aggregation, and reporting, reducing manual effort and increasing efficiency.

? Scalability: APIs provide a scalable solution that can easily be extended to include additional security appliances or data sources as needed.

? References:

NEW QUESTION 39

A company recently experienced an incident in which an advanced threat actor was able to shim malicious code against the hardware static of a domain controller. The forensic team cryptographically validated that both the underlying firmware of the box and the operating system had not been compromised. However, the attacker was able to exfiltrate information from the server using a steganographic technique within LDAP. Which of the following is the best way to reduce the risk of reoccurrence?

- A. Enforcing allow lists for authorized network ports and protocols
- B. Measuring and attesting to the entire boot chain
- C. Rolling the cryptographic keys used for hardware security modules
- D. Using code signing to verify the source of OS updates

Answer: A

Explanation:

The scenario describes a sophisticated attack where the threat actor used steganography within LDAP to exfiltrate data. Given that the hardware and OS firmware were validated and found uncompromised, the attack vector likely exploited a network communication channel. To mitigate such risks, enforcing allow lists for authorized network ports and protocols is the most effective strategy.

Here's why this option is optimal:

- ? Port and Protocol Restrictions: By creating an allow list, the organization can restrict communications to only those ports and protocols that are necessary for legitimate business operations. This reduces the attack surface by preventing unauthorized or unusual traffic.
 - ? Network Segmentation: Enforcing such rules helps in segmenting the network and ensuring that only approved communications occur, which is critical in preventing data exfiltration methods like steganography.
 - ? Preventing Unauthorized Access: Allow lists ensure that only predefined, trusted connections are allowed, blocking potential paths that attackers could use to infiltrate or exfiltrate data.
- Other options, while beneficial in different contexts, are not directly addressing the network communication threat:
- ? B. Measuring and attesting to the entire boot chain: While this improves system integrity, it doesn't directly mitigate the risk of data exfiltration through network channels.
 - ? C. Rolling the cryptographic keys used for hardware security modules: This is useful for securing data and communications but doesn't directly address the specific method of exfiltration described.
 - ? D. Using code signing to verify the source of OS updates: Ensures updates are from legitimate sources, but it doesn't mitigate the risk of network-based data exfiltration.

References:

- ? CompTIA SecurityX Study Guide
- ? NIST Special Publication 800-41, "Guidelines on Firewalls and Firewall Policy"
- ? CIS Controls Version 8, Control 9: Limitation and Control of Network Ports, Protocols, and Services

NEW QUESTION 44

A central bank implements strict risk mitigations for the hardware supply chain, including an allow list for specific countries of origin. Which of the following best describes the cyberthreat to the bank?

- A. Ability to obtain components during wartime
- B. Fragility and other availability attacks
- C. Physical Implants and tampering
- D. Non-conformance to accepted manufacturing standards

Answer: C

Explanation:

The best description of the cyber threat to a central bank implementing strict risk mitigations for the hardware supply chain, including an allow list for specific countries of origin, is the risk of physical implants and tampering. Here's why:

- ? Supply Chain Security: The supply chain is a critical vector for hardware tampering and physical implants, which can compromise the integrity and security of hardware components before they reach the organization.
 - ? Targeted Attacks: Banks and financial institutions are high-value targets, making them susceptible to sophisticated attacks, including those involving physical implants that can be introduced during manufacturing or shipping processes.
 - ? Strict Mitigations: Implementing an allow list for specific countries aims to mitigate the risk of supply chain attacks by limiting the sources of hardware. However, the primary concern remains the introduction of malicious components through tampering.
- References:

NEW QUESTION 48

An organization is required to

- * Respond to internal and external inquiries in a timely manner
- * Provide transparency.
- * Comply with regulatory requirements

The organization has not experienced any reportable breaches but wants to be prepared if a breach occurs in the future. Which of the following is the best way for the organization to prepare?

- A. Outsourcing the handling of necessary regulatory filing to an external consultant
- B. Integrating automated response mechanisms into the data subject access request process
- C. Developing communication templates that have been vetted by internal and external counsel
- D. Conducting lessons-learned activities and integrating observations into the crisis management plan

Answer: C

Explanation:

Preparing communication templates that have been vetted by both internal and external counsel ensures that the organization can respond quickly and effectively to internal and external inquiries, comply with regulatory requirements, and provide transparency in the event of a breach.

Why Communication Templates?

- ? Timely Response: Pre-prepared templates ensure that responses are ready to be deployed quickly, reducing response time.
- ? Regulatory Compliance: Templates vetted by counsel ensure that all communications meet legal and regulatory requirements.
- ? Consistent Messaging: Ensures that all responses are consistent, clear, and accurate, maintaining the organization's credibility.
- ? Crisis Management: Pre-prepared templates are a critical component of a broader crisis management plan, ensuring that all stakeholders are informed appropriately.

Other options, while useful, do not provide the same level of preparedness and compliance:

- ? A. Outsourcing to an external consultant: This may delay response times and lose internal control over the communication.
- ? B. Integrating automated response mechanisms: Useful for efficiency but not for ensuring compliant and vetted responses.
- ? D. Conducting lessons-learned activities: Important for improving processes but does not provide immediate preparedness for communication.

References:

- ? CompTIA SecurityX Study Guide
- ? NIST Special Publication 800-61 Revision 2, "Computer Security Incident Handling Guide"
- ? ISO/IEC 27002:2013, "Information technology — Security techniques — Code of practice for information security controls"

NEW QUESTION 51

A systems administrator works with engineers to process and address vulnerabilities as a result of continuous scanning activities. The primary challenge faced by the administrator is differentiating between valid and invalid findings. Which of the following would the systems administrator most likely verify is properly

configured?

- A. Report retention time
- B. Scanning credentials
- C. Exploit definitions
- D. Testing cadence

Answer: B

Explanation:

When differentiating between valid and invalid findings from vulnerability scans, the systems administrator should verify that the scanning credentials are properly configured. Valid credentials ensure that the scanner can authenticate and access the systems being evaluated, providing accurate and comprehensive results. Without proper credentials, scans may miss vulnerabilities or generate false positives, making it difficult to prioritize and address the findings effectively.

References:

? CompTIA SecurityX Study Guide: Highlights the importance of using valid credentials for accurate vulnerability scanning.

? "Vulnerability Management" by Park Foreman: Discusses the role of scanning credentials in obtaining accurate scan results and minimizing false positives.

? "The Art of Network Security Monitoring" by Richard Bejtlich: Covers best practices for configuring and using vulnerability scanning tools, including the need for valid credentials.

NEW QUESTION 56

A security analyst needs to ensure email domains that send phishing attempts without previous communications are not delivered to mailboxes The following email headers are being reviewed

Date	Sending domain	Reply-to domain	Subject
April 16	sales.com	sales-mail.com	Updated Security Questions
April 18	vendor.com	vendor.com	New Sales Catalog
April 18	partner.com	partner.com	B2B Sales Increase
April 19	hr-saas.com	hr-saas.com	Employee Payroll Update Request
April 19	vendor.com	vendor.com	Password Requirements Not Met

Which of the following is the best action for the security analyst to take?

- A. Block messages from hr-saas.com because it is not a recognized domain.
- B. Reroute all messages with unusual security warning notices to the IT administrator
- C. Quarantine all messages with sales-mail.com in the email header
- D. Block vendor com for repeated attempts to send suspicious messages

Answer: D

Explanation:

In reviewing email headers and determining actions to mitigate phishing attempts, the security analyst should focus on patterns of suspicious behavior and the reputation of the sending domains. Here??s the analysis of the options provided:

* A. Block messages from hr-saas.com because it is not a recognized domain: Blocking a domain solely because it is not recognized can lead to legitimate emails being missed. Recognition alone should not be the criterion for blocking.

* B. Reroute all messages with unusual security warning notices to the IT administrator: While rerouting suspicious messages can be a good practice, it is not specific to the domain sending repeated suspicious messages.

* C. Quarantine all messages with sales-mail.com in the email header: Quarantining messages based on the presence of a specific domain in the email header can be too broad and may capture legitimate emails.

* D. Block vendor com for repeated attempts to send suspicious messages: This option is the most appropriate because it targets a domain that has shown a pattern of sending suspicious messages. Blocking a domain that repeatedly sends phishing attempts without previous communications helps in preventing future attempts from the same source and aligns with the goal of mitigating phishing risks.

References:

? CompTIA SecurityX Study Guide: Details best practices for handling phishing attempts, including blocking domains with repeated suspicious activity.

? NIST Special Publication 800-45 Version 2, "Guidelines on Electronic Mail Security": Provides guidelines on email security, including the management of suspicious email domains.

? "Phishing and Countermeasures: Understanding the Increasing Problem of Electronic Identity Theft" by Markus Jakobsson and Steven Myers: Discusses effective measures to counter phishing attempts, including blocking persistent offenders.

By blocking the domain that has consistently attempted to send suspicious messages, the security analyst can effectively reduce the risk of phishing attacks.

NEW QUESTION 58

A security analyst Detected unusual network traffic related to program updating processes The analyst collected artifacts from compromised user workstations. The discovered artifacts were binary files with the same name as existing, valid binaries but. with different hashes which of the following solutions would most likely prevent this situation from reoccurring?

- A. Improving patching processes
- B. Implementing digital signature
- C. Performing manual updates via USB ports
- D. Allowing only dies from internal sources

Answer: B

Explanation:

Implementing digital signatures ensures the integrity and authenticity of software binaries. When a binary is digitally signed, any tampering with the file (e.g., replacing it with a malicious version) would invalidate the signature. This allows systems to verify the origin and integrity of binaries before execution, preventing the execution of unauthorized or compromised binaries.

? A. Improving patching processes: While important, this does not directly address

the issue of verifying the integrity of binaries.

? B. Implementing digital signatures: This ensures that only valid, untampered binaries are executed, preventing attackers from substituting legitimate binaries with malicious ones.

? C. Performing manual updates via USB ports: This is not practical and does not scale well, especially in large environments.

? D. Allowing only files from internal sources: This reduces the risk but does not provide a mechanism to verify the integrity of binaries.

References:

? CompTIA Security+ Study Guide

? NIST SP 800-57, "Recommendation for Key Management"

? OWASP (Open Web Application Security Project) guidelines on code signing

NEW QUESTION 59

After an incident occurred, a team reported during the lessons-learned review that the team.

* Lost important Information for further analysis.

* Did not utilize the chain of communication

* Did not follow the right steps for a proper response

Which of the following solutions is the best way to address these findings?

A. Requesting budget for better forensic tools to Improve technical capabilities for Incident response operations

B. Building playbooks for different scenarios and performing regular table-top exercises

C. Requiring professional incident response certifications for each new team member

D. Publishing the incident response policy and enforcing it as part of the security awareness program

Answer: B

Explanation:

Building playbooks for different scenarios and performing regular table-top exercises directly addresses the issues identified in the lessons-learned review. Here's why:

? Lost important information for further analysis: Playbooks outline step-by-step procedures for incident response, ensuring that team members know exactly what to document and how to preserve evidence.

? Did not utilize the chain of communication: Playbooks include communication protocols, specifying who to notify and when. Regular table-top exercises reinforce these communication channels, ensuring they are followed during actual incidents.

? Did not follow the right steps for a proper response: Playbooks provide a clear sequence of actions to be taken during various types of incidents, helping the team to respond in a structured and effective manner. Regular exercises allow the team to practice these steps, identifying and correcting any deviations from the plan.

Investing in better forensic tools (Option A) or requiring certifications (Option C) are also valuable, but they do not directly address the procedural and communication gaps identified. Publishing and enforcing the incident response policy (Option D) is important but not as practical and hands-on as playbooks and exercises in ensuring the team is prepared.

References:

? CompTIA Security+ Study Guide

? NIST SP 800-61 Rev. 2, "Computer Security Incident Handling Guide"

? SANS Institute, "Incident Handler's Handbook"

NEW QUESTION 64

Which of the following best describes the challenges associated with widespread adoption of homomorphic encryption techniques?

A. Incomplete mathematical primitives

B. No use cases to drive adoption

C. Quantum computers not yet capable

D. insufficient coprocessor support

Answer: D

Explanation:

Homomorphic encryption allows computations to be performed on encrypted data without decrypting it, providing strong privacy guarantees. However, the adoption of homomorphic encryption is challenging due to several factors:

? A. Incomplete mathematical primitives: This is not the primary barrier as the theoretical foundations of homomorphic encryption are well-developed.

? B. No use cases to drive adoption: There are several compelling use cases for homomorphic encryption, especially in privacy-sensitive fields like healthcare and finance.

? C. Quantum computers not yet capable: Quantum computing is not directly related to the challenges of adopting homomorphic encryption.

? D. Insufficient coprocessor support: The computational overhead of homomorphic encryption is significant, requiring substantial processing power. Current general-purpose processors are not optimized for the intensive computations required by homomorphic encryption, limiting its practical deployment. Specialized hardware or coprocessors designed to handle these computations more efficiently are not yet widely available.

References:

? CompTIA Security+ Study Guide

? "Homomorphic Encryption: Applications and Challenges" by Rivest et al.

? NIST, "Report on Post-Quantum Cryptography"

NEW QUESTION 65

A security administrator is performing a gap assessment against a specific OS benchmark. The benchmark requires the following configurations be applied to endpoints:

• Full disk encryption

* Host-based firewall

• Time synchronization

* Password policies

• Application allow listing

* Zero Trust application access

Which of the following solutions best addresses the requirements? (Select two).

- A. CASB
- B. SBoM
- C. SCAP
- D. SASE
- E. HIDS

Answer: CD

Explanation:

To address the specific OS benchmark configurations, the following solutions are most appropriate:

- * C. SCAP (Security Content Automation Protocol): SCAP helps in automating vulnerability management and policy compliance, including configurations like full disk encryption, host-based firewalls, and password policies.
- * D. SASE (Secure Access Service Edge): SASE provides a framework for Zero Trust network access and application allow listing, ensuring secure and compliant access to applications and data.

These solutions together cover the comprehensive security requirements specified in the OS benchmark, ensuring a robust security posture for endpoints.

References:

? CompTIA SecurityX Study Guide: Discusses SCAP and SASE as part of security configuration management and Zero Trust architectures.

? NIST Special Publication 800-126, "The Technical Specification for the Security Content Automation Protocol (SCAP)": Details SCAP's role in security automation.

? "Zero Trust Networks: Building Secure Systems in Untrusted Networks" by Evan Gilman and Doug Barth: Covers the principles of Zero Trust and how SASE can implement them.

By implementing SCAP and SASE, the organization ensures that all the specified security configurations are applied and maintained effectively.

NEW QUESTION 67

An organization wants to manage specialized endpoints and needs a solution that provides the ability to

- * Centrally manage configurations
- * Push policies.
- Remotely wipe devices
- Maintain asset inventory

Which of the following should the organization do to best meet these requirements?

- A. Use a configuration management database
- B. Implement a mobile device management solution.
- C. Configure contextual policy management
- D. Deploy a software asset manager

Answer: B

Explanation:

To meet the requirements of centrally managing configurations, pushing policies, remotely wiping devices, and maintaining an asset inventory, the best solution is to implement a Mobile Device Management (MDM) solution.

MDM Capabilities:

? Central Management: MDM allows administrators to manage the configurations of all devices from a central console.

? Policy Enforcement: MDM solutions enable the push of security policies and updates to ensure compliance across all managed devices.

? Remote Wipe: In case a device is lost or stolen, MDM provides the capability to remotely wipe the device to protect sensitive data.

? Asset Inventory: MDM maintains an up-to-date inventory of all managed devices, including their configurations and installed applications.

Other options do not provide the same comprehensive capabilities required for managing specialized endpoints.

References:

? CompTIA SecurityX Study Guide

? NIST Special Publication 800-124 Revision 1, "Guidelines for Managing the Security of Mobile Devices in the Enterprise"

? "Mobile Device Management Overview," Gartner Research

NEW QUESTION 71

The material finding from a recent compliance audit indicate a company has an issue with excessive permissions. The findings show that employees changing roles or departments results in privilege creep. Which of the following solutions are the best ways to mitigate this issue? (Select two).

Setting different access controls defined by business area

- A. Implementing a role-based access policy
- B. Designing a least-needed privilege policy
- C. Establishing a mandatory vacation policy
- D. Performing periodic access reviews
- E. Requiring periodic job rotation

Answer: AD

Explanation:

To mitigate the issue of excessive permissions and privilege creep, the best solutions are:

? Implementing a Role-Based Access Policy:

? Performing Periodic Access Reviews:

NEW QUESTION 75

A systems administrator wants to reduce the number of failed patch deployments in an organization. The administrator discovers that system owners modify systems or applications in an ad hoc manner. Which of the following is the best way to reduce the number of failed patch deployments?

- A. Compliance tracking
- B. Situational awareness
- C. Change management
- D. Quality assurance

Answer: C

Explanation:

To reduce the number of failed patch deployments, the systems administrator should implement a robust change management process. Change management ensures that all modifications to systems or applications are planned, tested, and approved before deployment. This systematic approach reduces the risk of unplanned changes that can cause patch failures and ensures that patches are deployed in a controlled and predictable manner.

References:

? CompTIA SecurityX Study Guide: Emphasizes the importance of change management in maintaining system integrity and ensuring successful patch deployments.

? ITIL (Information Technology Infrastructure Library) Framework: Provides best practices for change management in IT services.

? "The Phoenix Project" by Gene Kim, Kevin Behr, and George Spafford: Discusses the critical role of change management in IT operations and its impact on system stability and reliability.

NEW QUESTION 76

A hospital provides tablets to its medical staff to enable them to more quickly access and edit patients' charts. The hospital wants to ensure that if a tablet is identified as lost or stolen and a remote command is issued, the risk of data loss can be mitigated within seconds. The tablets are configured as follows to meet hospital policy

- Full disk encryption is enabled
- "Always On" corporate VPN is enabled
- ef-use-backed keystore is enabled'ready.
- Wi-Fi 6 is configured with SAE.
- Location services is disabled.
- Application allow list is configured

- A. Revoking the user certificates used for VPN and Wi-Fi access
- B. Performing cryptographic obfuscation
- C. Using geolocation to find the device
- D. Configuring the application allow list to only per mil emergency calls
- E. Returning on the device's solid-state media to zero

Answer: E

Explanation:

To mitigate the risk of data loss on a lost or stolen tablet quickly, the most effective strategy is to return the device's solid-state media to zero, which effectively erases all data on the device. Here's why:

? Immediate Data Erasure: Returning the solid-state media to zero ensures that all data is wiped instantly, mitigating the risk of data loss if the device is lost or stolen.

? Full Disk Encryption: Even though the tablets are already encrypted, physically erasing the data ensures that no residual data can be accessed if someone attempts to bypass encryption.

? Compliance and Security: This method adheres to best practices for data security and compliance, ensuring that sensitive patient data cannot be accessed by unauthorized parties.

NEW QUESTION 81**SIMULATION**

A product development team has submitted code snippets for review prior to release. INSTRUCTIONS

Analyze the code snippets, and then select one vulnerability, and one fix for each code snippet.

Code Snippet 1

Code Snippet 1

Code Snippet 2

Web browser:

URL: `https://comptia.org/profiles/userdetails?userid=103`

Web server code:

--

```
String accountQuery = "SELECT * from users WHERE userid = ?";
PreparedStatement stmt = connection.prepareStatement(accountQuery);
stmt.setString(1, request.getParameter("userid"));
ResultSet queryResponse = stmt.executeQuery();
```

--

Code Snippet 2

```
Caller:
URL: https://comptia.org/api/userprofile?userid=103

API endpoint (/searchDirectory):
...
import subprocess
from http.server import HTTPServer, BaseHTTPRequestHandler
httpd = HTTPServer(('192.168.0.5', 8443), BaseHTTPRequestHandler)
httpd.serve_forever()

def get_request(request):
    userId = request.getParam(userid)

    ldapLookup = 'ldapsearch -D "cn=' + userId + '" -W -p 389
                  -h loginserver.comptia.org
                  -b "dc=comptia,dc=org" -s sub -x "(objectclass=*)"'
    accountLookup = subprocess.Popen(ldapLookup)

    if (userExists(accountLookup))
        accountFound = true
    else
        accountFound = false
    ...
```

Vulnerability 1:

- ? SQL injection
- ? Cross-site request forgery
- ? Server-side request forgery
- ? Indirect object reference
- ? Cross-site scripting

Fix 1:

- ? Perform input sanitization of the userid field.
- ? Perform output encoding of queryResponse,
- ? Ensure usex:ia belongs to logged-in user.
- ? Inspect URLs and disallow arbitrary requests.
- ? Implement anti-forgery tokens.

Vulnerability 2

- 1) Denial of service
- 2) Command injection
- 3) SQL injection
- 4) Authorization bypass
- 5) Credentials passed via GET

Fix 2

- A) Implement prepared statements and bind variables.
- B) Remove the serve_forever instruction.
- C) Prevent the "authenticated" value from being overridden by a GET parameter.
- D) HTTP POST should be used for sensitive parameters.
- E) Perform input sanitization of the userid field.

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

Code Snippet 1

Vulnerability 1: SQL injection

SQL injection is a type of attack that exploits a vulnerability in the code that interacts with a database. An attacker can inject malicious SQL commands into the input fields, such as username or password, and execute them on the database server. This can result in data theft, data corruption, or unauthorized access.

Fix 1: Perform input sanitization of the userid field.

Input sanitization is a technique that prevents SQL injection by validating and filtering the user input values before passing them to the database. The input sanitization should remove any special characters, such as quotes, semicolons, or dashes, that can alter the intended SQL query. Alternatively, the input sanitization can use a whitelist of allowed values and reject any other values.

Code Snippet 2

Vulnerability 2: Cross-site request forgery

Cross-site request forgery (CSRF) is a type of attack that exploits a vulnerability in the code that handles web requests. An attacker can trick a user into sending a malicious web request to a server that performs an action on behalf of the user, such as changing their password, transferring funds, or deleting data. This can result in unauthorized actions, data loss, or account compromise.

Fix 2: Implement anti-forgery tokens.

Anti-forgery tokens are techniques that prevent CSRF by adding a unique and secret value to each web request that is generated by the server and verified by the server before performing the action. The anti-forgery token should be different for each user and each session, and should not be predictable or reusable by an attacker. This way, only legitimate web requests from the user's browser can be accepted by the server.

NEW QUESTION 82

A network engineer must ensure that always-on VPN access is enabled Curt restricted to company assets Which of the following best describes what the engineer needs to do"

- A. Generate device certificates using the specific template settings needed
- B. Modify signing certificates in order to support IKE version 2
- C. Create a wildcard certificate for connections from public networks
- D. Add the VPN hostname as a SAN entry on the root certificate

Answer: A

Explanation:

To ensure always-on VPN access is enabled and restricted to company assets, the network engineer needs to generate device certificates using the specific template settings required for the company's VPN solution. These certificates ensure that only authorized devices can establish a VPN connection.

Why Device Certificates are Necessary:

? Authentication: Device certificates authenticate company assets, ensuring that only authorized devices can access the VPN.

? Security: Certificates provide a higher level of security compared to username and password combinations, reducing the risk of unauthorized access.

? Compliance: Certificates help in meeting security policies and compliance requirements by ensuring that only managed devices can connect to the corporate network.

Other options do not provide the same level of control and security for always-on VPN access:

? B. Modify signing certificates for IKE version 2: While important for VPN protocols, it does not address device-specific authentication.

? C. Create a wildcard certificate: This is not suitable for device-specific authentication and could introduce security risks.

? D. Add the VPN hostname as a SAN entry: This is more related to certificate management and does not ensure device-specific authentication.

References:

? CompTIA SecurityX Study Guide

? "Device Certificates for VPN Access," Cisco Documentation

? NIST Special Publication 800-77, "Guide to IPsec VPNs"

NEW QUESTION 84

A security engineer needs to secure the OT environment based on the following requirements

- Isolate the OT network segment
- Restrict Internet access.
- Apply security updates to workstations
- Provide remote access to third-party vendors

Which of the following design strategies should the engineer implement to best meet these requirements?

- A. Deploy a jump box on the third party network to access the OT environment and provide updates using a physical delivery method on the workstations
- B. Implement a bastion host in the OT network with security tools in place to monitor access and use a dedicated update server for the workstations.
- C. Enable outbound internet access on the OT firewall to any destination IP address and use the centralized update server for the workstations
- D. Create a staging environment on the OT network for the third-party vendor to access and enable automatic updates on the workstations.

Answer: B

Explanation:

To secure the Operational Technology (OT) environment based on the given requirements, the best approach is to implement a bastion host in the OT network.

The bastion host serves as a secure entry point for remote access, allowing third-party vendors to connect

while being monitored by security tools. Using a dedicated update server for workstations ensures that security updates are applied in a controlled manner without direct internet access.

References:

? CompTIA SecurityX Study Guide: Recommends the use of bastion hosts and dedicated update servers for securing OT environments.

? NIST Special Publication 800-82, "Guide to Industrial Control Systems (ICS) Security": Advises on isolating OT networks and using secure remote access methods.

? "Industrial Network Security" by Eric D. Knapp and Joel Thomas Langill: Discusses strategies for securing OT networks, including the use of bastion hosts and update servers.

NEW QUESTION 87

A systems engineer is configuring a system baseline for servers that will provide email services. As part of the architecture design, the engineer needs to improve performance of the systems by using an access vector cache, facilitating mandatory access control and protecting against:

- Unauthorized reading and modification of data and programs
- Bypassing application security mechanisms
- Privilege escalation
- interference with other processes

Which of the following is the most appropriate for the engineer to deploy?

- A. SELinux
- B. Privileged access management
- C. Self-encrypting disks
- D. NIPS

Answer: A

Explanation:

The most appropriate solution for the systems engineer to deploy is SELinux (Security- Enhanced Linux). Here's why:

? Mandatory Access Control (MAC): SELinux enforces MAC policies, ensuring that

only authorized users and processes can access specific resources. This helps in preventing unauthorized reading and modification of data and programs.

? Access Vector Cache: SELinux utilizes an access vector cache (AVC) to improve

performance. The AVC caches access decisions, reducing the need for repetitive policy lookups and thus improving system efficiency.

? Security Mechanisms: SELinux provides a robust framework to enforce security

policies and prevent bypassing of application security mechanisms. It controls access based on defined policies, ensuring that security measures are consistently applied.

? Privilege Escalation and Process Interference: SELinux limits the ability of

processes to escalate privileges and interfere with each other by enforcing strict access controls. This containment helps in isolating processes and minimizing the risk of privilege escalation attacks.

? References:

NEW QUESTION 90

A company isolated its OT systems from other areas of the corporate network. These systems are required to report usage information over the internet to the vendor. Which of the following best reduces the risk of compromise or sabotage? (Select two).

- A. Implementing allow lists
- B. Monitoring network behavior
- C. Encrypting data at rest
- D. Performing boot integrity checks
- E. Executing daily health checks
- F. Implementing a site-to-site IPSec VPN

Answer: AF

Explanation:

? A. Implementing allow lists: Allow lists (whitelisting) restrict network communication to only authorized devices and applications, significantly reducing the attack surface by ensuring that only pre-approved traffic is permitted.

? F. Implementing a site-to-site IPSec VPN: A site-to-site VPN provides a secure, encrypted tunnel for data transmission between the OT systems and the vendor, protecting the data from interception and tampering during transit.

Other options:

? B. Monitoring network behavior: While useful for detecting anomalies, it does not proactively reduce the risk of compromise or sabotage.

? C. Encrypting data at rest: Important for protecting data stored on devices, but does not address network communication risks.

? D. Performing boot integrity checks: Ensures the integrity of the system at startup but does not protect ongoing network communications.

? E. Executing daily health checks: Useful for maintaining system health but does not directly reduce the risk of network-based compromise or sabotage.

References:

? CompTIA Security+ Study Guide

? NIST SP 800-82, "Guide to Industrial Control Systems (ICS) Security"

? "Industrial Network Security" by Eric D. Knapp and Joel Thomas Langill

NEW QUESTION 93

A software company deployed a new application based on its internal code repository. Several customers are reporting anti-malware alerts on workstations used to test the application. Which of the following is the most likely cause of the alerts?

- A. Misconfigured code commit
- B. Unsecure bundled libraries
- C. Invalid code signing certificate
- D. Data leakage

Answer: B

Explanation:

The most likely cause of the anti-malware alerts on customer workstations is unsecure bundled libraries. When developing and deploying new applications, it is common for developers to use third-party libraries. If these libraries are not properly vetted for security, they can introduce vulnerabilities or malicious code.

Why Unsecure Bundled Libraries?

? Third-Party Risks: Using libraries that are not secure can lead to malware infections if the libraries contain malicious code or vulnerabilities.

? Code Dependencies: Libraries may have dependencies that are not secure, leading to potential security risks.

? Common Issue: This is a frequent issue in software development where libraries are used for convenience but not properly vetted for security.

Other options, while relevant, are less likely to cause widespread anti-malware alerts:

? A. Misconfigured code commit: Could lead to issues but less likely to trigger anti-malware alerts.

? C. Invalid code signing certificate: Would lead to trust issues but not typically anti-malware alerts.

? D. Data leakage: Relevant for privacy concerns but not directly related to anti-malware alerts.

References:

? CompTIA SecurityX Study Guide

? "Securing Open Source Libraries," OWASP

? "Managing Third-Party Software Security Risks," Gartner Research

NEW QUESTION 97

During a gap assessment, an organization notes that OYOD usage is a significant risk. The organization implemented administrative policies prohibiting BYOD usage. However, the organization has not implemented technical controls to prevent the unauthorized use of BYOD assets when accessing the organization's resources. Which of the following solutions should the organization implement to best reduce the risk of OYOD devices? (Select two).

- A. Cloud IAM to enforce the use of token-based MFA
- B. Conditional access, to enforce user-to-device binding
- C. NAC, to enforce device configuration requirements
- D. PA
- E. to enforce local password policies
- F. SD-WA
- G. to enforce web content filtering through external proxies
- H. DLP, to enforce data protection capabilities

Answer: BC

Explanation:

To reduce the risk of unauthorized BYOD (Bring Your Own Device) usage, the organization should implement Conditional Access and Network Access Control (NAC). Why Conditional Access and NAC?

? Conditional Access:

? Network Access Control (NAC):

Other options, while useful, do not address the specific need to control and secure BYOD devices effectively:

? A. Cloud IAM to enforce token-based MFA: Enhances authentication security but does not control device compliance.

- ? D. PAM to enforce local password policies: Focuses on privileged account management, not BYOD control.
- ? E. SD-WAN to enforce web content filtering: Enhances network performance and security but does not enforce BYOD device compliance.
- ? F. DLP to enforce data protection capabilities: Protects data but does not control BYOD device access and compliance.

References:

- ? CompTIA SecurityX Study Guide
- ? "Conditional Access Policies," Microsoft Documentation
- ? "Network Access Control (NAC)," Cisco Documentation

NEW QUESTION 101

A security operations engineer needs to prevent inadvertent data disclosure when encrypted SSDs are reused within an enterprise. Which of the following is the most secure way to achieve this goal?

- A. Executing a script that deletes and overwrites all data on the SSD three times
- B. Wiping the SSD through degaussing
- C. Securely deleting the encryption keys used by the SSD
- D. Writing non-zero, random data to all cells of the SSD

Answer: C

Explanation:

The most secure way to prevent inadvertent data disclosure when encrypted SSDs are reused is to securely delete the encryption keys used by the SSD. Without the encryption keys, the data on the SSD remains encrypted and is effectively unreadable, rendering any residual data useless. This method is more reliable and efficient than overwriting data multiple times or using other physical destruction methods.

References:

- ? CompTIA SecurityX Study Guide: Highlights the importance of managing encryption keys and securely deleting them to protect data.
- ? NIST Special Publication 800-88, "Guidelines for Media Sanitization": Recommends cryptographic erasure as a secure method for sanitizing encrypted storage devices.

NEW QUESTION 104

After an incident response exercise, a security administrator reviews the following table:

Service	Risk rating	Criticality rating	Alert severity
Public website	Medium	Low	Low
Email	High	High	High
Human resources systems	High	Medium	Medium
Phone system	High	Critical	Critical
Intranet	Low	Low	Low

Which of the following should the administrator do to best support rapid incident response in the future?

- A. Automate alerting to IT support for phone system outages.
- B. Enable dashboards for service status monitoring
- C. Send emails for failed log-in attempts on the public website
- D. Configure automated isolation of human resources systems

Answer: B

Explanation:

Enabling dashboards for service status monitoring is the best action to support rapid incident response. The table shows various services with different risk, criticality, and alert severity ratings. To ensure timely and effective incident response, real-time visibility into the status of these services is crucial.

Why Dashboards for Service Status Monitoring?

- ? Real-time Visibility: Dashboards provide an at-a-glance view of the current status of all critical services, enabling rapid detection of issues.
- ? Centralized Monitoring: A single platform to monitor the status of multiple services helps streamline incident response efforts.
- ? Proactive Alerting: Dashboards can be configured to show alerts and anomalies immediately, ensuring that incidents are addressed as soon as they arise.
- ? Improved Decision Making: Real-time data helps incident response teams make informed decisions quickly, reducing downtime and mitigating impact.

Other options, while useful, do not offer the same level of comprehensive, real-time visibility and proactive alerting:

- ? A. Automate alerting to IT support for phone system outages: This addresses one service but does not provide a holistic view.
- ? C. Send emails for failed log-in attempts on the public website: This is a specific alert for one type of issue and does not cover all services.
- ? D. Configure automated isolation of human resources systems: This is a reactive measure for a specific service and does not provide real-time status monitoring.

References:

- ? CompTIA SecurityX Study Guide
- ? NIST Special Publication 800-61 Revision 2, "Computer Security Incident Handling Guide"
- ? "Best Practices for Implementing Dashboards," Gartner Research

NEW QUESTION 105

A security analyst received a report that an internal web page is down after a company-wide update to the web browser. Given the following error message:

Your connection is not private.

Attackers might be trying to steal your information for www.internalwebsite.company.com.

NET::ERR_CERT_WEAK_SIGNATURE_ALGORITHM

Which of the following is the best way to fix this issue?

- A. Rewriting any legacy web functions
- B. Disabling all deprecated ciphers
- C. Blocking all non-essential ports
- D. Discontinuing the use of self-signed certificates

Answer: D

Explanation:

The error message "NET::ERR_CERT_WEAK_SIGNATURE_ALGORITHM" indicates that the web browser is rejecting the certificate because it uses a weak signature algorithm. This commonly happens with self-signed certificates, which often use outdated or insecure algorithms.

Why Discontinue Self-Signed Certificates?

? Security Compliance: Modern browsers enforce strict security standards and may reject certificates that do not comply with these standards.

? Trusted Certificates: Using certificates from a trusted Certificate Authority (CA) ensures compliance with security standards and is less likely to be flagged as insecure.

? Weak Signature Algorithm: Self-signed certificates might use weak algorithms like MD5 or SHA-1, which are considered insecure.

Other options do not address the specific cause of the certificate error:

? A. Rewriting legacy web functions: Does not address the certificate issue.

? B. Disabling deprecated ciphers: Useful for improving security but not related to the certificate error.

? C. Blocking non-essential ports: This is unrelated to the issue of certificate validation.

References:

? CompTIA SecurityX Study Guide

? "Managing SSL/TLS Certificates," OWASP

? "Best Practices for Certificate Management," NIST Special Publication 800-57

NEW QUESTION 106

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