

CompTIA

Exam Questions CS0-003

CompTIA CySA+ Certification Beta Exam



NEW QUESTION 1

A company has the following security requirements:

- No public IPs
- All data secured at rest
- No insecure ports/protocols

After a cloud scan is completed, a security analyst receives reports that several misconfigurations are putting the company at risk. Given the following cloud scanner output:

VM name	VM_DEV_DB	VM_PRD_Web01	VM_DEV_Web02	VM_PRD_DB
IP config	private	public	public	public
Encrypt	no	yes	yes	no
Ingress port	443, open	3389, open	22, open	80, open

Which of the following should the analyst recommend be updated first to meet the security requirements and reduce risks?

- A. VM_PRD_DB
- B. VM_DEV_DB
- C. VM_DEV_Web02
- D. VM_PRD_Web01

Answer: D

Explanation:

This VM has a public IP and an open port 80, which violates the company's security requirements of no public IPs and no insecure ports/protocols. It also exposes the VM to potential attacks from the internet. This VM should be updated first to use a private IP and close the port 80, or use a secure protocol such as HTTPS.

References[CompTIA CySA+ Study Guide: Exam CS0-003, 3rd Edition], Chapter 2: Cloud and Hybrid Environments, page 67.[What is a Public IP Address?][What is Port 80?]

NEW QUESTION 2

Which of the following best describes the importance of implementing TAXII as part of a threat intelligence program?

- A. It provides a structured way to gain information about insider threats.
- B. It proactively facilitates real-time information sharing between the public and private sectors.
- C. It exchanges messages in the most cost-effective way and requires little maintenance once implemented.
- D. It is a semi-automated solution to gather threat intelligence about competitors in the same sector.

Answer: B

Explanation:

The correct answer is B. It proactively facilitates real-time information sharing between the public and private sectors.

TAXII, or Trusted Automated eXchange of Intelligence Information, is a standard protocol for sharing cyber threat intelligence in a standardized, automated, and secure manner. TAXII defines how cyber threat information can be shared via services and message exchanges, such as discovery, collection management, inbox, and poll. TAXII is designed to support STIX, or Structured Threat Information eXpression, which is a standardized language for describing cyber threat information in a readable and consistent format. Together, STIX and TAXII form a framework for sharing and using threat intelligence, creating an open-source platform that allows users to search through records containing attack vectors details such as malicious IP addresses, malware signatures, and threat actors¹²³. The importance of implementing TAXII as part of a threat intelligence program is that it proactively facilitates real-time information sharing between the public and private sectors. By using TAXII, organizations can exchange cyber threat information with various entities, such as security vendors, government agencies, industry associations, or trusted groups. TAXII enables different sharing models, such as hub and spoke, source/subscriber, or peer-to-peer, depending on the needs and preferences of the information producers and consumers. TAXII also supports different levels of access control, encryption, and authentication to ensure the security and privacy of the shared information¹²³.

By implementing TAXII as part of a threat intelligence program, organizations can benefit from the following advantages:

- ? They can receive timely and relevant information about the latest threats and vulnerabilities that may affect their systems or networks.
- ? They can leverage the collective knowledge and experience of other organizations that have faced similar or related threats.
- ? They can improve their situational awareness and threat detection capabilities by correlating and analyzing the shared information.
- ? They can enhance their incident response and mitigation strategies by applying the best practices and recommendations from the shared information.
- ? They can contribute to the overall improvement of cyber security by sharing their own insights and feedback with other organizations¹²³.

The other options are incorrect because they do not accurately describe the importance of implementing TAXII as part of a threat intelligence program.

Option A is incorrect because TAXII does not provide a structured way to gain information about insider threats. Insider threats are malicious activities conducted by authorized users within an organization, such as employees, contractors, or partners. Insider threats can be detected by using various methods, such as user behavior analysis, data loss prevention, or anomaly detection. However, TAXII is not designed to collect or share information about insider threats specifically.

TAXII is more focused on external threats that originate from outside sources, such as hackers, cybercriminals, or nation-states⁴.

Option C is incorrect because TAXII does not exchange messages in the most cost-effective way and requires little maintenance once implemented. TAXII is a protocol that defines how messages are exchanged, but it does not specify the cost or maintenance of the exchange. The cost and maintenance of implementing TAXII depend on various factors, such as the type and number of services used, the volume and frequency of data exchanged, the security and reliability requirements of the exchange, and the availability and compatibility of existing tools and platforms. Implementing TAXII may require significant resources and efforts from both the information producers and consumers to ensure its functionality and performance⁵.

Option D is incorrect because TAXII is not a semi-automated solution to gather threat intelligence about competitors in the same sector. TAXII is a fully automated solution that enables the exchange of threat intelligence among various entities across different sectors. TAXII does not target or collect information about specific competitors in the same sector. Rather, it aims to foster collaboration and cooperation among organizations that share common interests or goals in cyber security. Moreover, gathering threat intelligence about competitors in the same sector may raise ethical and legal issues that are beyond the scope of TAXII.

References:

- ? 1 What is STIX/TAXII? | Cloudflare

- ? 2 What Are STIX/TAXII Standards? - Anomali Resources
- ? 3 What is STIX and TAXII? - EclecticlQ
- ? 4 What Is an Insider Threat? Definition & Examples | Varonis
- ? 5 Implementing STIX/TAXII - GitHub Pages
- ? [6] Cyber Threat Intelligence: Ethical Hacking vs Unethical Hacking | Infosec

NEW QUESTION 3

A security analyst at a company called ACME Commercial notices there is outbound traffic to a host IP that resolves to <https://office365password.acme.co>. The site's standard VPN logon page is www.acme.com/logon. Which of the following is most likely true?

- A. This is a normal password change URL.
- B. The security operations center is performing a routine password audit.
- C. A new VPN gateway has been deployed
- D. A social engineering attack is underway

Answer: D

Explanation:

A social engineering attack is underway is the most likely explanation for the outbound traffic to a host IP that resolves to <https://office365password.acme.co>, while the site's standard VPN logon page is www.acme.com/logon. A social engineering attack is a technique that exploits human psychology and behavior to manipulate people into performing actions or divulging information that benefit the attackers. A common type of social engineering attack is phishing, which involves sending fraudulent emails or other messages that appear to come from a legitimate source, such as a company or a colleague, and lure the recipients into clicking on malicious links or attachments, or entering their credentials or other sensitive information on fake websites. In this case, the attackers may have registered a domain name that looks similar to the company's domain name, but with a typo (office365 instead of office365), and set up a fake website that mimics the company's VPN logon page. The attackers may have also sent phishing emails to the company's employees, asking them to reset their passwords or log in to their VPN accounts using the malicious link. The security analyst should investigate the source and content of the phishing emails, and alert the employees not to click on any suspicious links or enter their credentials on any untrusted websites. Official References:

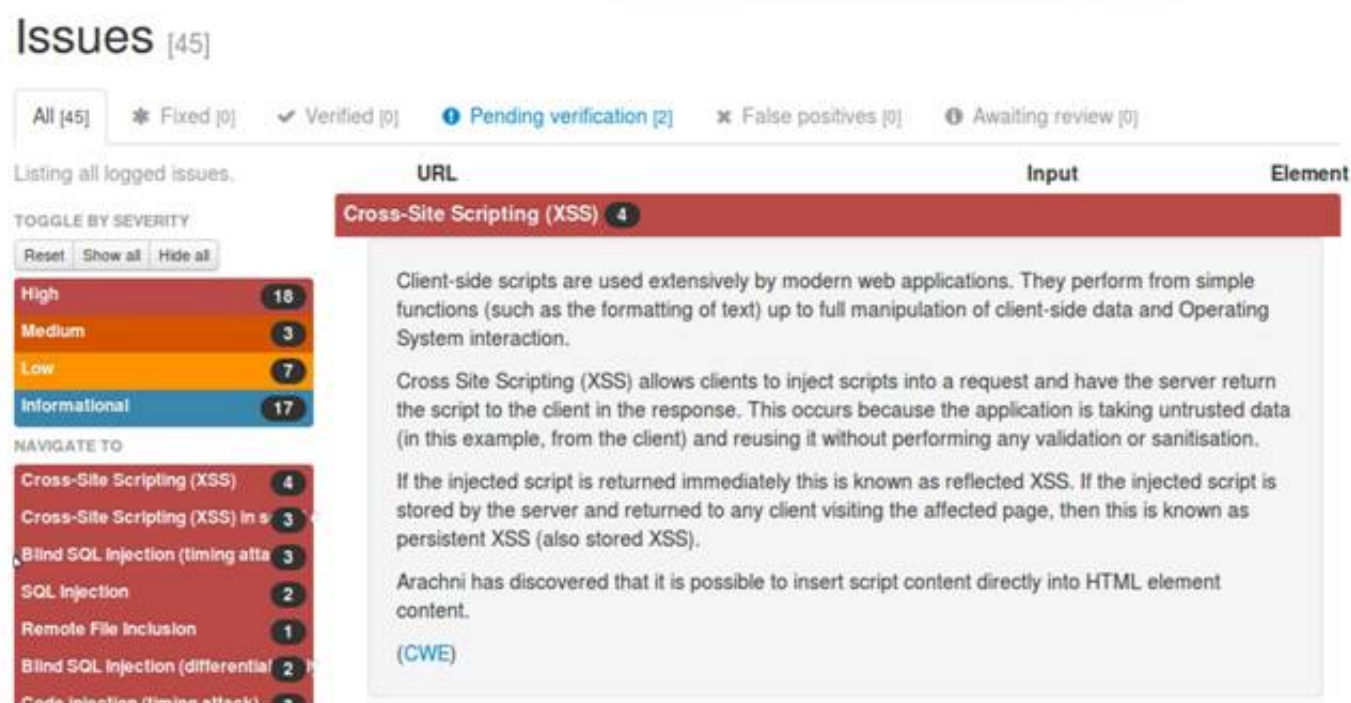
? <https://partners.comptia.org/docs/default-source/resources/comptia-cysa-cs0-002-exam-objectives>

? <https://www.comptia.org/certifications/cybersecurity-analyst>

? <https://www.comptia.org/blog/the-new-comptia-cybersecurity-analyst-your-questions-answered>

NEW QUESTION 4

A security analyst reviews the following Arachni scan results for a web application that stores PII data:



The screenshot displays the Arachni web application security scanner interface. At the top, it shows 'Issues [45]' with filters for 'All [45]', 'Fixed [0]', 'Verified [0]', 'Pending verification [2]', 'False positives [0]', and 'Awaiting review [0]'. Below this, a table lists all logged issues. On the left, a 'TOGGLE BY SEVERITY' section shows counts for High (18), Medium (3), Low (7), and Informational (17). A 'NAVIGATE TO' section lists specific issues: Cross-Site Scripting (XSS) (4), Cross-Site Scripting (XSS) in s (3), Blind SQL Injection (timing atta (3), SQL Injection (2), Remote File Inclusion (1), Blind SQL Injection (differential (2), and Code injection (timing attack) (1). The main content area shows details for 'Cross-Site Scripting (XSS) 4', including a description of client-side scripts, how XSS works, and a note that Arachni has discovered it is possible to insert script content directly into HTML element content. A '(CWE)' link is also present.

Which of the following should be remediated first?

- A. SQL injection
- B. RFI
- C. XSS
- D. Code injection

Answer: A

Explanation:

SQL injection should be remediated first, as it is a high-severity vulnerability that can allow an attacker to execute arbitrary SQL commands on the database server and access, modify, or delete sensitive data, including PII. According to the Arachni scan results, there are two instances of SQL injection and three instances of blind SQL injection (two timing attacks and one differential analysis) in the web application. These vulnerabilities indicate that the web application does not properly validate or sanitize the user input before passing it to the database server, and thus exposes the database to malicious queries¹². SQL injection can have serious consequences for the confidentiality, integrity, and availability of the data and the system, and can also lead to further attacks, such as privilege escalation, data exfiltration, or remote code execution³⁴. Therefore, SQL injection should be the highest priority for remediation, and the web application should implement input validation, parameterized queries, and least privilege principle to prevent SQL injection attacks⁵. References: Web application testing with Arachni | Infosec, How do I create a generated scan report for PDF in Arachni Web ..., Command line user interface · Arachni/arachni Wiki · GitHub, SQL Injection - OWASP, Blind SQL Injection - OWASP, SQL Injection Attack: What is it, and how to prevent it., SQL Injection Cheat Sheet & Tutorial | Veracode

NEW QUESTION 5

The Chief Executive Officer of an organization recently heard that exploitation of new attacks in the industry was happening approximately 45 days after a patch was released.

Which of the following would best protect this organization?

- A. A mean time to remediate of 30 days
- B. A mean time to detect of 45 days
- C. A mean time to respond of 15 days
- D. Third-party application testing

Answer: A

Explanation:

A mean time to remediate (MTTR) is a metric that measures how long it takes to fix a vulnerability after it is discovered. A MTTR of 30 days would best protect the organization from the new attacks that are exploited 45 days after a patch is released, as it would ensure that the vulnerabilities are fixed before they are exploited

NEW QUESTION 6

An older CVE with a vulnerability score of 7.1 was elevated to a score of 9.8 due to a widely available exploit being used to deliver ransomware. Which of the following factors would an analyst most likely communicate as the reason for this escalation?

- A. Scope
- B. Weaponization
- C. CVSS
- D. Asset value

Answer: B

Explanation:

Weaponization is a factor that describes how an adversary develops or acquires an exploit or payload that can take advantage of a vulnerability and deliver a malicious effect. Weaponization can increase the severity or impact of a vulnerability, as it makes it easier or more likely for an attacker to exploit it successfully and cause damage or harm. Weaponization can also indicate the level of sophistication or motivation of an attacker, as well as the availability or popularity of an exploit or payload in the cyber threat landscape. In this case, an older CVE with a vulnerability score of 7.1 was elevated to a score of 9.8 due to a widely available exploit being used to deliver ransomware. This indicates that weaponization was the reason for this escalation.

NEW QUESTION 7

A Chief Information Security Officer wants to map all the attack vectors that the company faces each day. Which of the following recommendations should the company align their security controls around?

- A. OSSTMM
- B. Diamond Model Of Intrusion Analysis
- C. OWASP
- D. MITRE ATT&CK

Answer: D

Explanation:

The correct answer is D. MITRE ATT&CK.

MITRE ATT&CK is a framework that maps the tactics, techniques, and procedures (TTPs) of various threat actors and groups, based on real-world observations and data. MITRE ATT&CK can help a Chief Information Security Officer (CISO) to map all the attack vectors that the company faces each day, as well as to align their security controls around the most relevant and prevalent threats. MITRE ATT&CK can also help the CISO to assess the effectiveness and maturity of their security posture, as well as to identify and prioritize the gaps and improvements .

The other options are not the best recommendations for mapping all the attack vectors that the company faces each day. OSSTMM (Open Source Security Testing Methodology Manual) (A) is a methodology that provides guidelines and best practices for conducting security testing and auditing, but it does not map the TTPs of threat actors or groups. Diamond Model of Intrusion Analysis (B) is a model that analyzes the relationships and interactions between four elements of an intrusion: adversary, capability, infrastructure, and victim. The Diamond Model can help understand the characteristics and context of an intrusion, but it does not map the TTPs of threat actors or groups. OWASP (Open Web Application Security Project) © is a project that provides resources and tools for improving the security of web applications, but it does not map the TTPs of threat actors or groups.

NEW QUESTION 8

A security administrator has been notified by the IT operations department that some vulnerability reports contain an incomplete list of findings. Which of the following methods should be used to resolve this issue?

- A. Credentialed scan
- B. External scan
- C. Differential scan
- D. Network scan

Answer: A

Explanation:

A credentialed scan is a type of vulnerability scan that uses valid credentials to log in to the scanned systems and perform a more thorough and accurate assessment of their vulnerabilities. A credentialed scan can access more information than a non-credentialed scan, such as registry keys, patch levels, configuration settings, and installed applications. A credentialed scan can also reduce the number of false positives and false negatives, as it can verify the actual state of the system rather than relying on inference or assumptions. The other types of scans are not related to the issue of incomplete findings, as they refer to different aspects of vulnerability scanning, such as the scope, location, or frequency of the scan. An external scan is a scan that is performed from outside the network perimeter, usually from the internet. An external scan can reveal how an attacker would see the network and what vulnerabilities are exposed to the public. An external scan cannot access internal systems or resources that are behind firewalls or other security controls. A differential scan is a scan that compares the results of two scans and highlights the differences between them. A differential scan can help identify changes in the network environment, such as new vulnerabilities, patched vulnerabilities, or new devices. A differential scan does not provide a complete list of findings by itself, but rather a summary of changes. A network scan is a scan that focuses on the network layer of the OSI model and detects vulnerabilities related to network devices, protocols, services, and configurations. A network scan can discover open ports, misconfigured firewalls, unencrypted traffic, and other network-related issues. A network scan does not provide information about the application layer or the host layer of the OSI model, such as web applications or operating systems.

NEW QUESTION 9

Which of the following best describes the reporting metric that should be utilized when measuring the degree to which a system, application, or user base is affected by an uptime availability outage?

- A. Timeline
- B. Evidence
- C. Impact
- D. Scope

Answer: C

Explanation:

The correct answer is C. Impact.

The impact metric is the best way to measure the degree to which a system, application, or user base is affected by an uptime availability outage. The impact metric quantifies the consequences of the outage in terms of lost revenue, productivity, reputation, customer satisfaction, or other relevant factors. The impact metric can help prioritize the recovery efforts and justify the resources needed to restore the service¹.

The other options are not the best ways to measure the degree to which a system, application, or user base is affected by an uptime availability outage. The timeline metric (A) measures the duration and frequency of the outage, but not its effects. The evidence metric (B) measures the sources and types of data that can be used to investigate and analyze the outage, but not its effects. The scope metric (D) measures the extent and severity of the outage, but not its effects.

NEW QUESTION 10

An analyst is designing a message system for a bank. The analyst wants to include a feature that allows the recipient of a message to prove to a third party that the message came from the sender Which of the following information security goals is the analyst most likely trying to achieve?

- A. Non-repudiation
- B. Authentication
- C. Authorization
- D. Integrity

Answer: A

Explanation:

Non-repudiation ensures that a message sender cannot deny the authenticity of their sent message. This is crucial in banking communications for legal and security reasons.

The goal of allowing a message recipient to prove the message's origin is non-repudiation. This ensures that the sender cannot deny the authenticity of their message. Non- repudiation is a fundamental aspect of secure messaging systems, especially in banking and financial communications.

NEW QUESTION 10

Which of the following would likely be used to update a dashboard that integrates.....

- A. Webhooks
- B. Extensible Markup Language
- C. Threat feed combination
- D. JavaScript Object Notation

Answer: D

Explanation:

JavaScript Object Notation (JSON) is commonly used for transmitting data in web applications and would be suitable for updating dashboards that integrate various data sources. It's lightweight and easy to parse and generate.

NEW QUESTION 12

A Chief Information Security Officer wants to implement security by design, starting vulnerabilities, including SQL injection, FRI, XSS, etc. Which of the following would most likely meet the requirement?

- A. Reverse engineering
- B. Known environment testing
- C. Dynamic application security testing
- D. Code debugging

Answer: C

Explanation:

Dynamic Application Security Testing (DAST) is used to detect vulnerabilities in running applications, including common issues like SQL injection, FRI, XSS, etc. It aligns with the goal of implementing security by design.

NEW QUESTION 13

A recent penetration test discovered that several employees were enticed to assist attackers by visiting specific websites and running downloaded files when prompted by phone calls. Which of the following would best address this issue?

- A. Increasing training and awareness for all staff
- B. Ensuring that malicious websites cannot be visited
- C. Blocking all scripts downloaded from the internet
- D. Disabling all staff members' ability to run downloaded applications

Answer: A

Explanation:

Increasing training and awareness for all staff is the best way to address the issue of employees being enticed to assist attackers by visiting specific websites and running downloaded files when prompted by phone calls. This issue is an example of social engineering, which is a technique that exploits human psychology and behavior to manipulate people into performing actions or divulging information that benefit the attackers. Social engineering can take many forms, such as phishing, vishing, baiting, quid pro quo, or impersonation. The best defense against social engineering is to educate and train the staff on how to recognize and avoid common social engineering tactics, such as:

- ? Verifying the identity and legitimacy of the caller or sender before following their instructions or clicking on any links or attachments
- ? Being wary of unsolicited or unexpected requests for information or action, especially if they involve urgency, pressure, or threats
- ? Reporting any suspicious or anomalous activity to the security team or the appropriate authority
- ? Following the organization's policies and procedures on security awareness and best practices

Official References:

- ? <https://partners.comptia.org/docs/default-source/resources/comptia-cysa-cs0-002-exam-objectives>
- ? <https://www.comptia.org/certifications/cybersecurity-analyst>
- ? <https://www.comptia.org/blog/the-new-comptia-cybersecurity-analyst-your-questions-answered>

NEW QUESTION 14

A manufacturer has hired a third-party consultant to assess the security of an OT network that includes both fragile and legacy equipment. Which of the following must be considered to ensure the consultant does no harm to operations?

- A. Employing Nmap Scripting Engine scanning techniques
- B. Preserving the state of PLC ladder logic prior to scanning
- C. Using passive instead of active vulnerability scans
- D. Running scans during off-peak manufacturing hours

Answer: C

Explanation:

In environments with fragile and legacy equipment, passive scanning is preferred to prevent any potential disruptions that active scanning might cause. When assessing the security of an Operational Technology (OT) network, especially one with fragile and legacy equipment, it's crucial to use passive instead of active vulnerability scans. Active scanning can sometimes disrupt the operation of sensitive or older equipment. Passive scanning listens to network traffic without sending probing requests, thus minimizing the risk of disruption.

NEW QUESTION 16

An analyst is reviewing a vulnerability report and must make recommendations to the executive team. The analyst finds that most systems can be upgraded with a reboot resulting in a single downtime window. However, two of the critical systems cannot be upgraded due to a vendor appliance that the company does not have access to. Which of the following inhibitors to remediation do these systems and associated vulnerabilities best represent?

- A. Proprietary systems
- B. Legacy systems
- C. Unsupported operating systems
- D. Lack of maintenance windows

Answer: A

Explanation:

Proprietary systems are systems that are owned and controlled by a specific vendor or manufacturer, and that use proprietary standards or protocols that are not compatible with other systems. Proprietary systems can pose a challenge for vulnerability management, as they may not allow users to access or modify their configuration, update their software, or patch their vulnerabilities. In this case, two of the critical systems cannot be upgraded due to a vendor appliance that the company does not have access to. This indicates that these systems and associated vulnerabilities are examples of proprietary systems as inhibitors to remediation.

NEW QUESTION 20

After a security assessment was done by a third-party consulting firm, the cybersecurity program recommended integrating DLP and CASB to reduce analyst alert fatigue. Which of the following is the best possible outcome that this effort hopes to achieve?

- A. SIEM ingestion logs are reduced by 20%.
- B. Phishing alerts drop by 20%.
- C. False positive rates drop to 20%.
- D. The MTTR decreases by 20%.

Answer: D

Explanation:

The MTTR (Mean Time to Resolution) decreases by 20% is the best possible outcome that this effort hopes to achieve, as it reflects the improvement in the efficiency and effectiveness of the incident response process by reducing analyst alert fatigue. Analyst alert fatigue is a term that refers to the phenomenon of security analysts becoming overwhelmed, desensitized, or exhausted by the large number of alerts they receive from various security tools or systems, such as DLP (Data Loss Prevention) or CASB (Cloud Access Security Broker). DLP is a security solution that helps to prevent unauthorized access, use, or transfer of sensitive data, such as personal information, intellectual property, or financial records. CASB is a security solution that helps to monitor and control the use of cloud-based applications and services, such as SaaS (Software as a Service), PaaS (Platform as a Service), or IaaS (Infrastructure as a Service). Both DLP and CASB can generate alerts when they detect potential data breaches, policy violations, or malicious activities, but they can also produce false positives, irrelevant information, or duplicate notifications that can overwhelm or distract the security analysts. Analyst alert fatigue can have negative consequences for the security posture and performance of an organization, such as missing or ignoring critical alerts, delaying or skipping investigations or remediations, making errors or mistakes, or losing motivation or morale. Therefore, it is important to reduce analyst alert fatigue and optimize the alert management process by using various strategies, such as tuning the alert thresholds and rules, prioritizing and triaging the alerts based on severity and context, enriching and correlating the alerts with additional data sources, automating or orchestrating repetitive or low-level tasks or actions, or integrating and consolidating different security tools or systems into a unified platform. By reducing analyst alert fatigue and optimizing the alert management process, the effort hopes to achieve a decrease in the MTTR, which is a metric that measures the average time it takes to resolve an incident from the moment it is reported to the moment it is closed. A lower MTTR indicates a faster and more effective incident response process, which can help to minimize the impact and damage of security incidents, improve customer satisfaction and trust, and enhance security operations and outcomes. The other options are not as relevant or realistic as the MTTR decreases by 20%, as they do not reflect the best possible outcome that this effort hopes to achieve.

SIEM ingestion logs are reduced by 20% is not a relevant outcome, as it does not indicate any improvement in the incident response process or any reduction in analyst alert fatigue. SIEM (Security Information and Event Management) is a security solution that collects and analyzes data from various sources, such as logs, events, or alerts, and provides security monitoring, threat detection, and incident response capabilities. SIEM ingestion logs are records of the data that is ingested by the SIEM system from different sources. Reducing SIEM ingestion logs may imply less data volume or less data sources for the SIEM system, which may not necessarily improve its performance or accuracy. Phishing alerts drop by 20% is not a realistic outcome, as it does not depend on the integration of DLP and CASB or any reduction in analyst alert fatigue. Phishing alerts are notifications that indicate potential phishing attempts or attacks, such as fraudulent emails, websites, or messages that try to trick users into revealing sensitive information or installing malware. Phishing alerts can be generated by various security tools or systems, such as email security solutions, web security solutions, endpoint security solutions, or user awareness training programs. Reducing phishing alerts may imply less phishing attempts or attacks on the organization, which may not necessarily be influenced by the integration of DLP and CASB or any reduction in analyst alert fatigue. False positive rates drop to 20% is not a realistic outcome

NEW QUESTION 23

Which of the following security operations tasks are ideal for automation?

- A. Suspicious file analysis: – Create subfolders in the original folder based on category of graphics found
- B. Move the suspicious graphics to the appropriate subfolder. – Look for suspicious-looking graphics in a folder.
- C. Firewall IoC block actions:Examine the firewall logs for IoCs from the most recently published zero-day exploit Take mitigating actions in the firewall to block the behavior found in the logsFollow up on any false positives that were caused by the block rules
- D. Security application user errors:Search the error logs for signs of users having trouble with the security application Look up the user's phone numberCall the user to help with any questions about using the application
- E. Email header analysis:Check the email header for a phishing confidence metric greater than or equal to five Add the domain of sender to the block listMove the email to quarantine

Answer: D

Explanation:

Email header analysis is one of the security operations tasks that are ideal for automation. Email header analysis involves checking the email header for various indicators of phishing or spamming attempts, such as sender address spoofing, mismatched domains, suspicious subject lines, or phishing confidence metrics. Email header analysis can be automated using tools or scripts that can parse and analyze email headers and take appropriate actions based on predefined rules or thresholds

NEW QUESTION 26

SIMULATION

You are a cybersecurity analyst tasked with interpreting scan data from Company A's servers. You must verify the requirements are being met for all of the servers and recommend changes if you find they are not.

The company's hardening guidelines indicate the following:

- TLS 1.2 is the only version of TLS running.
- Apache 2.4.18 or greater should be used.
- Only default ports should be used.

INSTRUCTIONS

using the supplied data, record the status of compliance with the company's guidelines for each server.

The question contains two parts: make sure you complete Part 1 and Part 2. Make recommendations for Issues based ONLY on the hardening guidelines provided.

Part 1: AppServ1:

```
AppServ1 AppServ2 AppServ3 AppServ4

root@INFOSEC:~# curl --head appsrv1.fictionalorg.com:443

HTTP/1.1 200 OK
Date: Wed, 26 Jun 2019 21:15:15 GMT
Server: Apache/2.4.48 (CentOS)
Last-Modified: Wed, 26 Jun 2019 21:10:22 GMT
ETag: "13520-58c407930177d"
Accept-Ranges: bytes
Content-Length: 79136
Vary: Accept-Encoding
Cache-Control: max-age=3600
Expires: Wed, 26 Jun 2019 22:15:15 GMT
Content-Type: text/html


root@INFOSEC:~# nmap --script ssl-enum-ciphers appsrv1.fictionalorg.com -p 443

Starting Nmap 6.40 ( http://nmap.org ) at 2019-06-26 16:07 CDT

Nmap scan report for AppSrv1.fictionalorg.com (10.21.4.68)
Host is up (0.042s latency).
rDNS record for 10.21.4.68: inaddrArpa.fictionalorg.com
PORT      STATE SERVICE
443/tcp   open  https


root@INFOSEC:~# nmap --script ssl-enum-ciphers appsrv1.fictionalorg.com -p 443

Starting Nmap 6.40 ( http://nmap.org ) at 2019-06-26 16:07 CDT

Nmap scan report for AppSrv1.fictionalorg.com (10.21.4.68)
Host is up (0.042s latency).
|_ TLS_RSA_WITH_AES_256_GCM_SHA384 - strong
|_ compressors:
|_ NULL
|_ least strength: strong

Nmap done: 1 IP address (1 host up) scanned in 8.63 seconds


root@INFOSEC:~# nmap --top-ports 10 appsrv1.fictionalorg.com

Starting Nmap 6.40 ( http://nmap.org ) at 2019-06-27 10:13 CDT

Nmap scan report for appsrv1.fictionalorg.com (10.21.4.68)
Host is up (0.15s latency).
rDNS record for 10.21.4.68: appsrv1.fictionalorg.com
PORT      STATE SERVICE
80/tcp    open  http
```

AppServ2:

AppServ1 AppServ2 AppServ3 AppServ4

```
HTTP/1.1 200 OK
Date: Wed, 26 Jun 2019 21:15:15 GMT
Server: Apache/2.3.48 (CentOS)
Last-Modified: Wed, 26 Jun 2019 21:10:22 GMT
ETag: "13520-58c407930177d"
Accept-Ranges: bytes
Content-Length: 79136
Vary: Accept-Encoding
Cache-Control: max-age=3600
Expires: Wed, 26 Jun 2019 22:15:15 GMT
Content-Type: text/html

root@INFOSEC:~# nmap --script ssl-enum-ciphers appsrv2.fictionalorg.com -p 443

Starting Nmap 6.40 ( http://nmap.org ) at 2019-06-26 16:07 CDT

Nmap scan report for AppSrv2.fictionalorg.com (10.21.4.69)
Host is up (0.042s latency).
rDNS record for 10.21.4.69: inaddrArpa.fictionalorg.com
Not shown: 998 filtered ports
PORT      STATE SERVICE
80/tcp    open  http
```

AppServ3:

AppServ1 AppServ2 AppServ3 AppServ4

```
HTTP/1.1 200 OK
Date: Wed, 26 Jun 2019 21:15:15 GMT
Server: Apache/2.4.48 (CentOS)
Last-Modified: Wed, 26 Jun 2019 21:10:22 GMT
ETag: "13520-58c406780177e"
Accept-Ranges: bytes
Content-Length: 79136
Vary: Accept-Encoding
Cache-Control: max-age=3600
Expires: Wed, 26 Jun 2019 22:15:15 GMT
Content-Type: text/html

root@INFOSEC:~# nmap --script ssl-enum-ciphers appsrv3.fictionalorg.com -p 443

Starting Nmap 6.40 ( http://nmap.org ) at 2019-06-26 16:07 CDT

Nmap scan report for AppSrv3.fictionalorg.com (10.21.4.70)
Host is up (0.042s latency).
rDNS record for 10.21.4.70: inaddrArpa.fictionalorg.com
PORT      STATE SERVICE
80/tcp    open  http
443/tcp   open  https
```

AppServ4:

AppServ1
AppServ2
AppServ3
AppServ4

```

Server: Apache/2.4.48 (CentOS)
Last-Modified: Wed, 26 Jun 2019 21:10:22 GMT
ETag: "13520-58c406780177e"
Accept-Ranges: bytes
Content-Length: 79136
Vary: Accept-Encoding
Cache-Control: max-age=3600
Expires: Wed, 26 Jun 2019 22:15:15 GMT
Content-Type: text/html

root@INFOSEC:~# nmap --script ssl-enum-ciphers appsrv4.fictionalorg.com -p 443

Starting Nmap 6.40 ( http://nmap.org ) at 2019-06-26 16:07 CDT

Nmap scan report for AppSrv4.fictionalorg.com (10.21.4.71)
Host is up (0.042s latency).
rDNS record for 10.21.4.71: inaddrArpa.fictionalorg.com
Not shown: 998 filtered ports
PORT      STATE SERVICE
443/tcp   open  https
| TLSv1.2:
|   ciphers:
|     TLS_RSA_WITH_3DES_EDE_CBC_SHA - strong
2:38:26 | TLS_RSA_WITH_AES_128_CBC_SHA - strong
| TLS_RSA_WITH_AES_128_GCM_SHA256 - strong
    
```

Compliance Report

Fill out the following report based on your analysis of the scan data.

- ☐ AppServ1 is only using TLS 1.2
- ☐ AppServ2 is only using TLS 1.2
- ☐ AppServ3 is only using TLS 1.2
- ☐ AppServ4 is only using TLS 1.2
- ☐ AppServ1 is using Apache 2.4.18 or greater
- ☐ AppServ2 is using Apache 2.4.18 or greater
- ☐ AppServ3 is using Apache 2.4.18 or greater
- ☐ AppServ4 is using Apache 2.4.18 or greater

Part 2:

Add Recommendation for

AppSrv4 ▼
AppSrv1
AppSrv2
AppSrv3
AppSrv4

Server

AppSrv4 ▼
AppSrv3
AppSrv2
AppSrv4
AppSrv1

Service

▼
HTTPD Security
TELNET
SSH
MYSQL
Apache Version

Config Change

▼
Move to Port 443
Restrict To TLS 1.2
Upgrade Version
Move to Port 22
Remove or Disable

- A. Mastered
B. Not Mastered

Answer: A

Explanation:
Part 1:

Compliance Report

Fill out the following report based on your analysis of the scan data.

☐

AppServ1 is only using TLS 1.2

☒

AppServ2 is only using TLS 1.2

☒

AppServ3 is only using TLS 1.2

☒

AppServ4 is only using TLS 1.2

☐

AppServ1 is using Apache 2.4.18 or greater

☒

AppServ2 is using Apache 2.4.18 or greater

☒

AppServ3 is using Apache 2.4.18 or greater

☐

AppServ4 is using Apache 2.4.18 or greater

Part 2:

Based on the compliance report, I recommend the following changes for each server: AppServ1: No changes are needed for this server.
AppServ2: Disable or upgrade TLS 1.0 and TLS 1.1 to TLS 1.2 on this server to ensure secure encryption and communication between clients and the server. Update Apache from version 2.4.17 to version 2.4.18 or greater on this server to fix any potential vulnerabilities or bugs.
AppServ3: Downgrade Apache from version 2.4.19 to version 2.4.18 or lower on this server to ensure compatibility and stability with the company's applications and policies. Change the port number from 8080 to either port 80 (for HTTP) or port 443 (for HTTPS) on this server to follow the default port convention and avoid any confusion or conflicts with other services.
AppServ4: Update Apache from version 2.4.16 to version 2.4.18 or greater on this server to fix any potential vulnerabilities or bugs. Change the port number from 8443 to either port 80 (for HTTP) or port 443 (for HTTPS) on this server to follow the default port convention and avoid any confusion or conflicts with other services.

NEW QUESTION 31

HOTSPOT

The developers recently deployed new code to three web servers. A daffy automated external device scan report shows server vulnerabilities that are failure items according to PCI DSS.

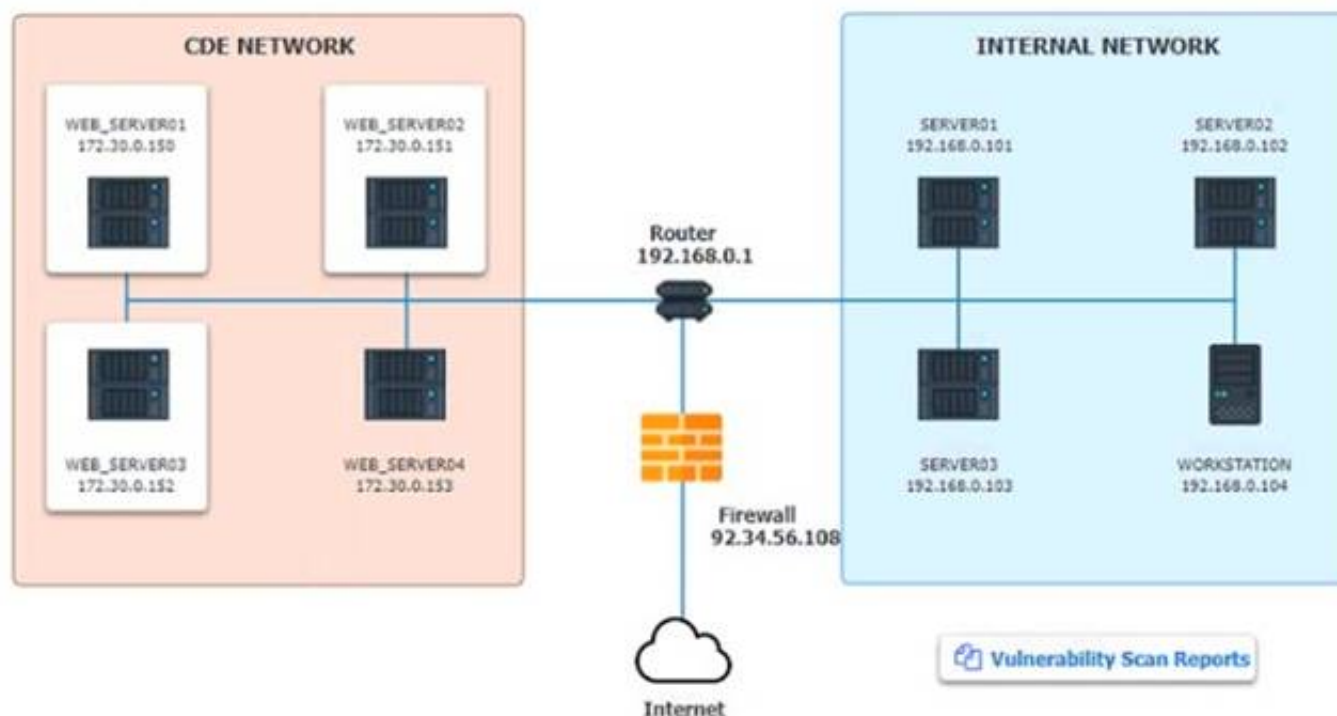
If the venerability is not valid, the analyst must take the proper steps to get the scan clean. If the venerability is valid, the analyst must remediate the finding.

After reviewing the information provided in the network diagram, select the STEP 2 tab to complete the simulation by selecting the correct Validation Result and Remediation Action for each server listed using the drop-down options.

INTRUCTIONS:

The simulation includes 2 steps.

Step1:Review the information provided in the network diagram and then move to the STEP 2 tab.



Vulnerability Scan Report

HIGH SEVERITY

Title: Cleartext Transmission of Sensitive Information

Description: The software transmits sensitive or securitycritical data in Cleartext in a communication channel that can be sniffed by authorized users.

Affected Asset: 172.30.0.15

Risk: Anyone can read the information by gaining access to the channel being used for communication.

Reference: CVE-2002-1949

MEDIUM SEVERITY

Title: Sensitive Cookie in HTTPS session without 'Secure' Attribute

Description: The Secure attribute for sensitive cookies in HTTPS sessions is not set, which could cause the use agent to send those cookies in plaintext over HTTP session.

Affected Asset: 172.30.0.152

Risk: Session Sidejacking

Reference: CVE-2004-0462

LOW SEVERITY

Title: Untrusted SSL/TLS Server X.509 Certificate

Description: The server's TLS/SSL certificate is signed by a Certification Authority that is untrusted or unknown.

Affected Asset: 172.30.0.153

Risk: May allow man-in-the-middle attackers to insert a spoofed certificate for any Distinguished Name (DN).

Reference: CVE-2005-1234

STEP 2: Given the Scenario, determine which remediation action is required to address the vulnerability.

Network Diagram

INSTRUCTIONS

STEP 2: Given the scenario, determine which remediation action is required to address the vulnerability.

System	Validate Result	Remediation Action
WEB_SERVER01	<div>False Positive</div> <div>False Negative</div> <div>True Positive</div> <div>True Negative</div>	<div>Encrypt Entire Session</div> <div>Encrypt All Session Cookies</div> <div>Implement Input Validation</div> <div>Submit as Non-Issue</div> <div>Employ Unique Token in Hidden Field</div> <div>Avoid Using Redirects and Forwards</div> <div>Disable HTTP</div> <div>Request Certificate from a Public CA</div> <div>Renew the Current Certificate</div>
WEB_SERVER02	<div>False Positive</div> <div>False Negative</div> <div>True Positive</div> <div>True Negative</div>	<div>Encrypt Entire Session</div> <div>Encrypt All Session Cookies</div> <div>Implement Input Validation</div> <div>Submit as Non-Issue</div> <div>Employ Unique Token in Hidden Field</div> <div>Avoid Using Redirects and Forwards</div> <div>Disable HTTP</div> <div>Request Certificate from a Public CA</div> <div>Renew the Current Certificate</div>
WEB_SERVER03	<div>False Positive</div> <div>False Negative</div> <div>True Positive</div> <div>True Negative</div>	<div>Encrypt Entire Session</div> <div>Encrypt All Session Cookies</div> <div>Implement Input Validation</div> <div>Submit as Non-Issue</div> <div>Employ Unique Token in Hidden Field</div> <div>Avoid Using Redirects and Forwards</div> <div>Disable HTTP</div> <div>Request Certificate from a Public CA</div> <div>Renew the Current Certificate</div>

- A. Mastered
B. Not Mastered

Answer: A

Explanation:

INSTRUCTIONS

STEP 2: Given the scenario, determine which remediation action is required to address the vulnerability.

System	Validate Result	Remediation Action
WEB_SERVER01	True Positive	Encrypt Entire Session
WEB_SERVER02	True Positive	Encrypt All Session Cookies
WEB_SERVER03	True Positive	Request Certificate from a Public CA

NEW QUESTION 32

An organization conducted a web application vulnerability assessment against the corporate website, and the following output was observed:



Which of the following tuning recommendations should the security analyst share?

- A. Set an HttpOnly flag to force communication by HTTPS
- B. Block requests without an X-Frame-Options header
- C. Configure an Access-Control-Allow-Origin header to authorized domains
- D. Disable the cross-origin resource sharing header

Answer: B

Explanation:

The output shows that the web application is vulnerable to clickjacking attacks, which allow an attacker to overlay a hidden frame on top of a legitimate page and trick users into clicking on malicious links. Blocking requests without an X-Frame-Options header can prevent this attack by instructing the browser to not display the page within a frame.

NEW QUESTION 35

A security audit for unsecured network services was conducted, and the following output was generated:

```
#nmap --top-ports 7 192.29.0.5
```

PORT	STATE	SERVICE
21	closed	ftp
22	open	ssh
23	filtered	telnet
636	open	ldaps
1723	open	pptp
443	closed	https
3389	closed	ms-term-server

Which of the following services should the security team investigate further? (Select two).

- A. 21
- B. 22
- C. 23
- D. 636
- E. 1723
- F. 3389

Answer: CD

Explanation:

The output shows the results of a port scan, which is a technique used to identify open ports and services running on a network host. Port scanning can be used by attackers to discover potential vulnerabilities and exploit them, or by defenders to assess the security posture and configuration of their network devices¹

The output lists six ports that are open on the target host, along with the service name and version associated with each port. The service name indicates the type of application or protocol that is using the port, while the version indicates the specific release or update of the service. The service name and version can provide useful information for both attackers and defenders, as they can reveal the capabilities, features, and weaknesses of the service.

Among the six ports listed, two are particularly risky and should be investigated further by the security team: port 23 and port 636.

Port 23 is used by Telnet, which is an old and insecure protocol for remote login and command execution. Telnet does not encrypt any data transmitted over the network, including usernames and passwords, which makes it vulnerable to eavesdropping, interception, and modification by attackers. Telnet also has many known vulnerabilities that can allow attackers to gain unauthorized access, execute arbitrary commands, or cause denial-of-service attacks on the target host²³

Port 636 is used by LDAP over SSL/TLS (LDAPS), which is a protocol for accessing and modifying directory services over a secure connection. LDAPS encrypts the data exchanged between the client and the server using SSL/TLS certificates, which provide authentication, confidentiality, and integrity. However, LDAPS can also be vulnerable to attacks if the certificates are not properly configured, verified, or updated. For example, attackers can use self-signed or expired certificates to perform man-in-the-middle attacks, spoofing attacks, or certificate revocation attacks on LDAPS connections.

Therefore, the security team should investigate further why port 23 and port 636 are open on the target host, and what services are running on them. The security team should also consider disabling or replacing these services with more secure alternatives, such as SSH for port 23 and StartTLS for port 636²

NEW QUESTION 39

Which of the following is an important aspect that should be included in the lessons-learned step after an incident?

- A. Identify any improvements or changes in the incident response plan or procedures
- B. Determine if an internal mistake was made and who did it so they do not repeat the error
- C. Present all legal evidence collected and turn it over to law enforcement
- D. Discuss the financial impact of the incident to determine if security controls are well spent

Answer: A

Explanation:

An important aspect that should be included in the lessons-learned step after an incident is to identify any improvements or changes in the incident response plan or procedures. The lessons-learned step is a process that involves reviewing and evaluating the incident response activities and outcomes, as well as identifying and documenting any strengths, weaknesses, gaps, or best practices. Identifying any improvements or changes in the incident response plan or procedures can help enhance the security posture, readiness, or capability of the organization for future incidents

NEW QUESTION 40

Exploit code for a recently disclosed critical software vulnerability was publicly available (or download for several days before being removed. Which of the following CVSS v.3.1 temporal metrics was most impacted by this exposure?

- A. Remediation level
- B. Exploit code maturity
- C. Report confidence
- D. Availability

Answer: B

Explanation:

Exploit code maturity in the CVSS v.3.1 temporal metrics refers to the reliability and availability of exploit code for a vulnerability. Public availability of exploit code increases the exploit code maturity score.

The availability of exploit code affects the 'Exploit Code Maturity' metric in CVSS v.3.1. This metric evaluates the level of maturity of the exploit that targets the vulnerability. When exploit code is readily available, it suggests a higher level of maturity, indicating that the exploit is more reliable and easier to use.

NEW QUESTION 41

A systems analyst is limiting user access to system configuration keys and values in a Windows environment. Which of the following describes where the analyst can find these configuration items?

- A. confi
- B. ini
- C. ntds.dit
- D. Master boot record
- E. Registry

Answer: D

Explanation:

The correct answer is D. Registry.

The registry is a database that stores system configuration keys and values in a Windows environment. The registry contains information about the hardware, software, users, and preferences of the system. The registry can be accessed and modified using the Registry Editor tool (regedit.exe) or the command-line tool (reg.exe). The registry is organized into five main sections, called hives, which are further divided into subkeys and values.

The other options are not the best descriptions of where the analyst can find system configuration keys and values in a Windows environment. config.ini (A) is a file that stores configuration settings for some applications, but it is not a database that stores system configuration keys and values. ntds.dit (B) is a file that stores the Active Directory data for a domain controller, but it is not a database that stores system configuration keys and values. Master boot record (D) is a section of the hard disk that contains information about the partitions and the boot loader, but it is not a database that stores system configuration keys and values.

NEW QUESTION 43

A security alert was triggered when an end user tried to access a website that is not allowed per organizational policy. Since the action is considered a terminable offense, the SOC analyst collects the authentication logs, web logs, and temporary files, reflecting the web searches from the user's workstation, to build the case for the investigation. Which of the following is the best way to ensure that the investigation complies with HR or privacy policies?

- A. Create a timeline of events detailing the date stamps, user account hostname and IP information associated with the activities
- B. Ensure that the case details do not reflect any user-identifiable information Password protect the evidence and restrict access to personnel related to the investigation
- C. Create a code name for the investigation in the ticketing system so that all personnel with access will not be able to easily identify the case as an HR-related investigation
- D. Notify the SOC manager for awareness after confirmation that the activity was intentional

Answer: B

Explanation:

The best way to ensure that the investigation complies with HR or privacy policies is to ensure that the case details do not reflect any user-identifiable information, such as name, email address, phone number, or employee ID. This can help protect the privacy and confidentiality of the user and prevent any potential discrimination or retaliation. Additionally, password protecting the evidence and restricting access to personnel related to the investigation can help preserve the integrity and security of the evidence and prevent any unauthorized or accidental disclosure or modification.

NEW QUESTION 48

Which of the following would best mitigate the effects of a new ransomware attack that was not properly stopped by the company antivirus?

- A. Install a firewall.
- B. Implement vulnerability management.
- C. Deploy sandboxing.
- D. Update the application blocklist.

Answer: C

Explanation:

Sandboxing is a technique that isolates potentially malicious programs or files in a controlled environment, preventing them from affecting the rest of the system. It can help mitigate the effects of a new ransomware attack by preventing it from encrypting or deleting important data or spreading to other devices. References: CompTIA CySA+ Study Guide: Exam CS0-003, 3rd Edition, Chapter 5, page 202; CompTIA CySA+ CS0-003 Certification Study Guide, Chapter 5, page 210.

NEW QUESTION 51

A team of analysts is developing a new internal system that correlates information from a variety of sources analyzes that information, and then triggers notifications according to company policy Which of the following technologies was deployed?

- A. SIEM

- B. SOAR
- C. IPS
- D. CERT

Answer: A

Explanation:

SIEM (Security Information and Event Management) technology aggregates and analyzes activity from many different resources across your IT infrastructure. The description of correlating information from various sources and triggering notifications aligns with the capabilities of a SIEM system.

NEW QUESTION 56

While configuring a SIEM for an organization, a security analyst is having difficulty correlating incidents across different systems. Which of the following should be checked first?

- A. If appropriate logging levels are set
- B. NTP configuration on each system
- C. Behavioral correlation settings
- D. Data normalization rules

Answer: B

Explanation:

The NTP configuration on each system should be checked first, as it is essential for ensuring accurate and consistent time stamps across different systems. NTP is the Network Time Protocol, which is used to synchronize the clocks of computers over a network. NTP uses a hierarchical system of time sources, where each level is assigned a stratum number. The most accurate time sources, such as atomic clocks or GPS receivers, are at stratum 0, and the devices that synchronize with them are at stratum 1, and so on. NTP clients can query multiple NTP servers and use algorithms to select the best time source and adjust their clocks accordingly¹. If the NTP configuration is not consistent or correct on each system, the time stamps of the logs and events may differ, making it difficult to correlate incidents across different systems. This can affect the security analysis and correlation of events, as well as the compliance and auditing of the network²³.

References: How the Windows Time Service Works, Time Synchronization - All You Need To Know, What is SIEM? | Microsoft Security

NEW QUESTION 58

During an incident, analysts need to rapidly investigate by the investigation and leadership teams. Which of the following best describes how PII should be safeguarded during an incident?

- A. Implement data encryption and close the data so only the company has access.
- B. Ensure permissions are limited in the investigation team and encrypt the data.
- C. Implement data encryption and create a standardized procedure for deleting data that is no longer needed.
- D. Ensure that permissions are open only to the company.

Answer: B

Explanation:

The best option to safeguard PII during an incident is to ensure permissions are limited in the investigation team and encrypt the data. This is because limiting permissions reduces the risk of unauthorized access or leakage of sensitive data, and encryption protects the data from being read or modified by anyone who does not have the decryption key. Option A is not correct because closing the data may hinder the investigation process and prevent collaboration with other parties who may need access to the data. Option C is not correct because deleting data that is no longer needed may violate legal or regulatory requirements for data retention, and may also destroy potential evidence for the incident. Option D is not correct because opening permissions to the company may expose the data to more people than necessary, increasing the risk of compromise or misuse.

References: CompTIA CySA+ Study Guide: Exam CS0-002, 2nd Edition, Chapter 4, "Data Protection and Privacy Practices", page 195; CompTIA CySA+ Certification Exam Objectives Version 4.0, Domain 4.0 "Compliance and Assessment", Objective 4.1 "Given a scenario, analyze data as part of a security incident", Sub-objective "Data encryption", page 23

CompTIA CySA+ Study Guide: Exam CS0-002, 2nd Edition : CompTIA CySA+ Certification Exam Objectives Version 4.0.pdf)

NEW QUESTION 62

An organization was compromised, and the usernames and passwords of all employees were leaked online. Which of the following best describes the remediation that could reduce the impact of this situation?

- A. Multifactor authentication
- B. Password changes
- C. System hardening
- D. Password encryption

Answer: A

Explanation:

Multifactor authentication (MFA) is a security method that requires users to provide two or more pieces of evidence to verify their identity, such as a password, a PIN, a fingerprint, or a one-time code. MFA can reduce the impact of a credential leak because even if the attackers have the usernames and passwords of the employees, they would still need another factor to access the organization's systems and resources. Password changes, system hardening, and password encryption are also good security practices, but they do not address the immediate threat of compromised credentials.

References: CompTIA CySA+ Certification Exam Objectives, [What Is Multifactor Authentication (MFA)?]

NEW QUESTION 67

A security analyst receives an alert for suspicious activity on a company laptop An excerpt of the log is shown below:

Event #	Process	Parent process
1	Console Windows Host (conhost.exe)	System (-)
2	Console Windows Host (conhost.exe)	Command Prompt (cmd.exe)
3	Windows Explorer (Explorer.exe)	Microsoft Outlook (outlook.exe)
4	Microsoft Outlook (outlook.exe)	Microsoft Word (winword.exe)
5	Microsoft Word (winword.exe)	PowerShell (powershell.exe)
6	Windows Explorer (Explorer.exe)	Google Chrome (chrome.exe)

Which of the following has most likely occurred?

- A. An Office document with a malicious macro was opened.
- B. A credential-stealing website was visited.
- C. A phishing link in an email was clicked
- D. A web browser vulnerability was exploited.

Answer: A

Explanation:

An Office document with a malicious macro was opened is the most likely explanation for the suspicious activity on the company laptop, as it reflects the common technique of using macros to execute PowerShell commands that download and run malware. A macro is a piece of code that can automate tasks or perform actions in an Office document, such as a Word file or an Excel spreadsheet. Macros can be useful and legitimate, but they can also be abused by threat actors to deliver malware or perform malicious actions on the system. A malicious macro can be embedded in an Office document that is sent as an attachment in a phishing email or hosted on a compromised website. When the user opens the document, they may be prompted to enable macros or content, which will trigger the execution of the malicious code. The malicious macro can then use PowerShell, which is a scripting language and command-line shell that is built into Windows, to perform various tasks, such as downloading and running malware from a remote URL, bypassing security controls, or establishing persistence on the system. The log excerpt shows that PowerShell was used to download a string from a URL using the WebClient.DownloadString method, which is a common way to fetch and execute malicious code from the internet. The log also shows that PowerShell was used to invoke an expression (iex) that contains obfuscated code, which is another common way to evade detection and analysis. The other options are not as likely as an Office document with a malicious macro was opened, as they do not match the evidence in the log excerpt. A credential-stealing website was visited is possible, but it does not explain why PowerShell was used to download and execute code from a URL. A phishing link in an email was clicked is also possible, but it does not explain what happened after the link was clicked or how PowerShell was involved. A web browser vulnerability was exploited is unlikely, as it does not explain why PowerShell was used to download and execute code from a URL.

NEW QUESTION 68

After identifying a threat, a company has decided to implement a patch management program to remediate vulnerabilities. Which of the following risk management principles is the company exercising?

- A. Transfer
- B. Accept
- C. Mitigate
- D. Avoid

Answer: C

Explanation:

Mitigate is the best term to describe the risk management principle that the company is exercising, as it means to reduce the likelihood or impact of a risk. By implementing a patch management program to remediate vulnerabilities, the company is mitigating the threat of cyberattacks that could exploit those vulnerabilities and compromise the security or functionality of the systems. The other terms are not as accurate as mitigate, as they describe different risk management principles. Transfer means to shift the responsibility or burden of a risk to another party, such as an insurer or a contractor. Accept means to acknowledge the existence of a risk and decide not to take any action to reduce it, usually because the risk is low or the cost of mitigation is too high. Avoid means to eliminate the possibility of a risk by changing the plans or activities that could cause it, such as cancelling a project or discontinuing a service.

NEW QUESTION 70

Which of the following is a benefit of the Diamond Model of Intrusion Analysis?

- A. It provides analytical pivoting and identifies knowledge gaps.
- B. It guarantees that the discovered vulnerability will not be exploited again in the future.
- C. It provides concise evidence that can be used in court
- D. It allows for proactive detection and analysis of attack events

Answer: A

Explanation:

The Diamond Model of Intrusion Analysis is a framework that helps analysts to understand the relationships between the adversary, the victim, the infrastructure, and the capability involved in an attack. It also enables analytical pivoting, which is the process of moving from one piece of information to another related one, and identifies knowledge gaps that need further investigation.

NEW QUESTION 72

A SOC analyst is analyzing traffic on a network and notices an unauthorized scan. Which of the following types of activities is being observed?

- A. Potential precursor to an attack
- B. Unauthorized peer-to-peer communication
- C. Rogue device on the network
- D. System updates

Answer: A

NEW QUESTION 75

A security analyst found the following vulnerability on the company's website:

```
<INPUT TYPE="IMAGE" SRC="javascript:alert('test');">
```

Which of the following should be implemented to prevent this type of attack in the future?

- A. Input sanitization
- B. Output encoding
- C. Code obfuscation
- D. Prepared statements

Answer: A

Explanation:

This is a type of web application vulnerability called cross-site scripting (XSS), which allows an attacker to inject malicious code into a web page that is viewed by other users. XSS can be used to steal cookies, session tokens, credentials, or other sensitive information, or to perform actions on behalf of the victim.

Input sanitization is a technique that prevents XSS attacks by checking and filtering the user input before processing it. Input sanitization can remove or encode any characters or strings that may be interpreted as code by the browser, such as <, >, ", ', or javascript:. Input sanitization can also validate the input against a predefined format or range of values, and reject any input that does not match.

Output encoding is a technique that prevents XSS attacks by encoding the output before sending it to the browser. Output encoding can convert any characters or strings that may be interpreted as code by the browser into harmless entities, such as <, >, ", ', or javascript:. Output encoding can also escape any special characters that may have a different meaning in different contexts, such as , /, or ;.

Code obfuscation is a technique that makes the source code of a web application more difficult to read and understand by humans. Code obfuscation can use techniques such as renaming variables and functions, removing comments and whitespace, replacing literals with expressions, or adding dummy code. Code obfuscation can help protect the intellectual property and trade secrets of a web application, but it does not prevent XSS attacks.

NEW QUESTION 78

A systems administrator receives reports of an internet-accessible Linux server that is running very sluggishly. The administrator examines the server, sees a high amount of memory utilization, and suspects a DoS attack related to half-open TCP sessions consuming memory. Which of the following tools would best help to prove whether this server was experiencing this behavior?

- A. Nmap
- B. TCPDump
- C. SIEM
- D. EDR

Answer: B

Explanation:

TCPDump is the best tool to prove whether the server was experiencing a DoS attack related to half-open TCP sessions consuming memory. TCPDump is a command-line tool that can capture and analyze network traffic, such as TCP, UDP, and ICMP packets. TCPDump can help the administrator to identify the source and destination of the traffic, the TCP flags and sequence numbers, the packet size and frequency, and other information that can indicate a DoS attack. A DoS attack related to half-open TCP sessions is also known as a SYN flood attack, which is a type of volumetric attack that aims to exhaust the network bandwidth or resources of the target server by sending a large amount of TCP SYN requests and ignoring the TCP SYN-ACK responses. This creates a backlog of half-open connections on the server, which consume memory and CPU resources, and prevent legitimate connections from being established¹². TCPDump can help the administrator to detect a SYN flood attack by looking for a high number of TCP SYN packets with different source IP addresses, a low number of TCP SYN-ACK packets, and a very low number of TCP ACK packets³⁴. References: SYN flood DDoS attack | Cloudflare, What is a SYN flood attack and how to prevent it? | NETSCOUT, TCPDump - A Powerful Tool for Network Analysis and Security, How to Detect a SYN Flood Attack with TCPDump

NEW QUESTION 80

An analyst needs to provide recommendations based on a recent vulnerability scan:

Plug-in name	Family
SMB use domain SID to enumerate users	Windows : User management
SYN scanner	Port scanners
SSL certificate cannot be trusted	General
Scan not performed with admin privileges	Settings

Which of the following should the analyst recommend addressing to ensure potential vulnerabilities are identified?

- A. SMB use domain SID to enumerate users
- B. SYN scanner
- C. SSL certificate cannot be trusted
- D. Scan not performed with admin privileges

Answer: D

Explanation:

This is because scanning without admin privileges can limit the scope and accuracy of the vulnerability scan, and potentially miss some critical vulnerabilities that require higher privileges to detect. According to the OWASP Vulnerability Management Guide¹, “scanning without administrative privileges will result in a large number of false negatives and an incomplete scan”. Therefore, the analyst should recommend addressing this issue to ensure potential vulnerabilities are identified.

NEW QUESTION 81

A Chief Information Security Officer (CISO) wants to disable a functionality on a business- critical web application that is vulnerable to RCE in order to maintain the minimum risk level with minimal increased cost.

Which of the following risk treatments best describes what the CISO is looking for?

- A. Transfer
- B. Mitigate
- C. Accept
- D. Avoid

Answer: B

NEW QUESTION 83

A security analyst recently joined the team and is trying to determine which scripting language is being used in a production script to determine if it is malicious.

Given the following script:

```
foreach ($user in Get-Content .\this.txt)
{
    Get-ADUser $user -Properties primaryGroupID |select-object primaryGroupID
    Add-ADGroupMember "Domain Users" -Members $user
    Set-ADUser $user -Replace @{primaryGroupID=513}
}
```

Which of the following scripting languages was used in the script?

- A. PowerShell
- B. Ruby
- C. Python
- D. Shell script

Answer: A

Explanation:

The script uses PowerShell syntax, such as cmdlets, parameters, variables, and comments. PowerShell is a scripting language that can be used to automate tasks and manage systems.

NEW QUESTION 86

A security analyst is trying to detect connections to a suspicious IP address by collecting the packet captures from the gateway. Which of the following commands should the security analyst consider running?

- A. grep [IP address] packets.pcapB cat packets.pcap | grep [IP Address]
- B. tcpdump -n -r packets.pcap host [IP address]
- C. strings packets.pcap | grep [IP Address]

Answer: C

Explanation:

tcpdump is a command-line tool that can capture and analyze network packets from a given interface or file. The -n option prevents tcpdump from resolving hostnames, which can speed up the analysis. The -r option reads packets from a file, in this case packets.pcap. The host [IP address] filter specifies that tcpdump should only display packets that have the given IP address as either the source or the destination. This command can help the security analyst detect connections to a suspicious IP address by collecting the packet captures from the gateway. Official References:

? <https://partners.comptia.org/docs/default-source/resources/comptia-cysa-cs0-002-exam-objectives>

? <https://www.techtarget.com/searchsecurity/quiz/Sample-CompTIA-CySA-test-questions-with-answers>

? https://www.reddit.com/r/CompTIA/comments/tmxx84/passed_cysa_heres_my_experience_and_how_i_studied/

NEW QUESTION 88

While reviewing web server logs, a security analyst found the following line:

Which of the following malicious activities was attempted?

- A. Command injection
- B. XML injection
- C. Server-side request forgery
- D. Cross-site scripting

Answer: D

Explanation:

XSS is a type of web application attack that exploits the vulnerability of a web server or browser to execute malicious scripts or commands on the client-side. XSS attackers inject malicious code, such as JavaScript, VBScript, HTML, or CSS, into a web page or application that is viewed by other users. The malicious code can then access or manipulate the user's session, cookies, browser history, or personal information, or perform actions on behalf of the user, such as stealing credentials, redirecting to phishing sites, or installing malware¹²

The line in the web server log shows an example of an XSS attack using VBScript. The attacker tried to insert an tag with a malicious SRC attribute that contains a VBScript code. The VBScript code is intended to display a message box with the text “test” when the user views the web page or application. This is a simple and harmless example of XSS, but it could be used to test the vulnerability of the web server or browser, or to launch more sophisticated and harmful attacks³

NEW QUESTION 92

A technician is analyzing output from a popular network mapping tool for a PCI audit:

```
PORT STATE SERVICE VERSION
22/tcp open  ssh Cisco SSH 1.25 (protocol 2.0)
443/tcp open  ssl/http OpenResty web app server
|_ http-server-header: openresty
|_ ssl-enum-ciphers:
|_ TLSv1.1:
|_ ciphers:
|_ TLS_RSA_WITH_AES_128_CBC_SHA (rsa 2048) - F
|_ TLS_ECDHE_RSA_WITH_AES_128_CBC_SHA (secp256r1) - F
|_ compressors:
|_ NULL
|_ cipher preference: server
|_ warnings:
|_ Insecure certificate signature (SHA1), score capped at F
|_ TLSv1.2:
|_ ciphers:
|_ TLS_ECDHE_RSA_WITH_AES_128_GCM_SHA256 (secp256r1) - F
|_ TLS_ECDHE_RSA_WITH_AES_256_GCM_SHA384 (secp256r1) - F
|_ TLS_ECDHE_RSA_WITH_AES_256_CBC_SHA384 (secp256r1) - F
|_ TLS_RSA_WITH_AES_256_CBC_SHA256 (rsa 2048) - F
|_ TLS_ECDHE_RSA_WITH_AES_128_CBC_SHA256 (secp256r1) - F
|_ TLS_RSA_WITH_AES_256_GCM_SHA384 (rsa 2048) - F
|_ TLS_RSA_WITH_AES_128_GCM_SHA256 (rsa 2048) - F
|_ TLS_RSA_WITH_AES_128_CBC_SHA256 (rsa 2048) - F
|_ TLS_RSA_WITH_AES_128_CBC_SHA (rsa 2048) - F
|_ TLS_ECDHE_RSA_WITH_AES_128_CBC_SHA (secp256r1) - F
|_ compressors:
|_ NULL
|_ cipher preference: server
|_ warnings:
|_ Insecure certificate signature (SHA1), score capped at F
|_ least strength: F
```

Which of the following best describes the output?

- A. The host is not up or responding.
- B. The host is running excessive cipher suites.
- C. The host is allowing insecure cipher suites.
- D. The Secure Shell port on this host is closed

Answer: C

Explanation:

The output shows the result of running the ssl-enum-ciphers script with Nmap, which is a tool that can scan web servers for supported SSL/TLS cipher suites. Cipher suites are combinations of cryptographic algorithms that are used to establish secure communication between a client and a server. The output shows the cipher suites that are supported by the server, along with a letter grade (A through F) indicating the strength of the connection. The output also shows the least strength, which is the strength of the weakest cipher offered by the server. In this case, the least strength is F, which means that the server is allowing insecure cipher suites that are vulnerable to attacks or have been deprecated. For example, the output shows that the server supports SSLv3, which is an outdated and insecure protocol that is susceptible to the POODLE attack. The output also shows that the server supports RC4, which is a weak and broken stream cipher that should not be used. Therefore, the best description of the output is that the host is allowing insecure cipher suites. The other descriptions are not accurate, as they do not reflect what the output shows. The host is not up or responding is incorrect, as the output clearly shows that the host is up and responding to the scan. The host is running excessive cipher suites is incorrect, as the output does not indicate how many cipher suites the host is running, only which ones it supports. The Secure Shell port on this host is closed is incorrect, as the output does not show anything about port 22, which is the default port for Secure Shell (SSH). The output only shows information about port 443, which is the default port for HTTPS.

NEW QUESTION 93

A SOC manager is establishing a reporting process to manage vulnerabilities. Which of the following would be the best solution to identify potential loss incurred by an issue?

- A. Trends
- B. Risk score
- C. Mitigation
- D. Prioritization

Answer: B

Explanation:

A risk score is a numerical value that represents the potential impact and likelihood of a vulnerability being exploited. It can help to identify the potential loss incurred by an issue and prioritize remediation efforts accordingly. <https://www.comptia.org/training/books/cysa-cs0-003-study-guide>

NEW QUESTION 98

An analyst is examining events in multiple systems but is having difficulty correlating data points. Which of the following is most likely the issue with the system?

- A. Access rights
- B. Network segmentation
- C. Time synchronization
- D. Invalid playbook

Answer: C

Explanation:

Time synchronization is the process of ensuring that all systems in a network have the same accurate time, which is essential for correlating data points from different sources. If the system has an issue with time synchronization, the analyst may have difficulty matching events that occurred at the same time or in a specific order. Access rights, network segmentation, and invalid playbook are not directly related to the issue of correlating data points. Verified References: [CompTIA CySA+ CS0-002 Certification Study Guide], page 23

NEW QUESTION 100

A security analyst is reviewing a packet capture in Wireshark that contains an FTP session from a potentially compromised machine. The analyst sets the following display filter: ftp. The analyst can see there are several RETR requests with 226 Transfer complete responses, but the packet list pane is not showing the packets containing the file transfer itself. Which of the following can the analyst perform to see the entire contents of the downloaded files?

- A. Change the display filter to f c
- B. acciv
- C. pore
- D. Change the display filter to tcg.port=20
- E. Change the display filter to f cp-daca and follow the TCP streams
- F. Navigate to the File menu and select FTP from the Export objects option

Answer: C

Explanation:

The best way to see the entire contents of the downloaded files in Wireshark is to change the display filter to ftp-data and follow the TCP streams. FTP-data is a protocol that is used to transfer files between an FTP client and server using TCP port 20. By filtering for ftp-data packets and following the TCP streams, the analyst can see the actual file data that was transferred during the FTP session

NEW QUESTION 104

A security analyst is reviewing the following alert that was triggered by FIM on a critical system:

Host	Path	Key added
WEBSERVER01	HKLM\Software\Microsoft\Windows\CurrentVersion\Personalization	Allow (1)
WEBSERVER01	HKLM\Software\Microsoft\Windows\CurrentVersion\Run	RunMe (%appdata%\abc.exe)
WEBSERVER01	HKCU\Printers\ConvertUserDevModesCount	Microsoft XPS Writer (2)
WEBSERVER01	HKCU\Network\Z	Remote Path (192.168.1.10 CorpZ_Drive)
WEBSERVER01	HKLM\Software\Microsoft\PCHealthCheck	Installed (1)

Which of the following best describes the suspicious activity that is occurring?

- A. A fake antivirus program was installed by the user.
- B. A network drive was added to allow exfiltration of data
- C. A new program has been set to execute on system start
- D. The host firewall on 192.168.1.10 was disabled.

Answer: C

Explanation:

A new program has been set to execute on system start is the most likely cause of the suspicious activity that is occurring, as it indicates that the malware has modified the registry keys of the system to ensure its persistence. File Integrity Monitoring (FIM) is a tool that monitors changes to files and registry keys on a system and alerts the security analyst of any unauthorized or malicious modifications. The alert triggered by FIM shows that the malware has created a new registry key under the Run subkey, which is used to launch programs automatically when the system starts. The new registry key points to a file named "update.exe" in the Temp folder, which is likely a malicious executable disguised as a legitimate update file. Official References:

? <https://www.comptia.org/blog/the-new-comptia-cybersecurity-analyst-your-questions-answered>

? <https://partners.comptia.org/docs/default-source/resources/comptia-cysa-cs0-002-exam-objectives>

? <https://www.comptia.org/training/books/cysa-cs0-002-study-guide>

NEW QUESTION 109

A cybersecurity analyst is doing triage in a SIEM and notices that the time stamps between the firewall and the host under investigation are off by 43 minutes. Which of the following is the most likely scenario occurring with the time stamps?

- A. The NTP server is not configured on the host.
- B. The cybersecurity analyst is looking at the wrong information.
- C. The firewall is using UTC time.
- D. The host with the logs is offline.

Answer: A

Explanation:

The most likely scenario occurring with the time stamps is that the NTP server is not configured on the host. NTP is the Network Time Protocol, which is used to synchronize the clocks of computers over a network. NTP uses a hierarchical system of time sources, where each level is assigned a stratum number. The most accurate time sources, such as atomic clocks or GPS receivers, are at stratum 0, and the devices that synchronize with them are at stratum 1, and so on. NTP clients can query multiple NTP servers and use algorithms to select the best time source and adjust their clocks accordingly¹. If the NTP server is not configured on the host, the host will rely on its own hardware clock, which may drift over time and become inaccurate. This can cause discrepancies in the time stamps between the host and other devices on the network, such as the firewall, which may be synchronized with a different NTP server or use a different time zone. This can affect the security analysis and correlation of events, as well as the compliance and auditing of the network²³. References: How the Windows Time Service Works, Time Synchronization - All You Need To Know, Firewall rules logging: a closer look at our new network compliance and ...

NEW QUESTION 114

A company is in the process of implementing a vulnerability management program, and there are concerns about granting the security team access to sensitive data. Which of the following scanning methods can be implemented to reduce the access to systems while providing the most accurate vulnerability scan results?

- A. Credentialed network scanning
- B. Passive scanning
- C. Agent-based scanning
- D. Dynamic scanning

Answer: C

Explanation:

Agent-based scanning is a method that involves installing software agents on the target systems or networks that can perform local scans and report the results to a central server or console. Agent-based scanning can reduce the access to systems, as the agents do not require any credentials or permissions to scan the local system or network. Agent-based scanning can also provide the most accurate vulnerability scan results, as the agents can scan continuously or on-demand, regardless of the system or network status or location.

NEW QUESTION 118

Which of the following entities should an incident manager work with to ensure correct processes are adhered to when communicating incident reporting to the general public, as a best practice? (Select two).

- A. Law enforcement
- B. Governance
- C. Legal
- D. Manager
- E. Public relations
- F. Human resources

Answer: CE

Explanation:

An incident manager should work with the legal and public relations entities to ensure correct processes are adhered to when communicating incident reporting to the general public, as a best practice. The legal entity can provide guidance on the legal implications and obligations of disclosing the incident, such as compliance with data protection laws, contractual obligations, and liability issues. The public relations entity can help craft the appropriate message and tone for the public communication, as well as manage the reputation and image of the organization in the aftermath of the incident. These two entities can help the incident manager balance the need for transparency and accountability with the need for confidentiality and security¹². References: Incident Communication Templates, Incident Management: Processes, Best Practices & Tools - Atlassian

NEW QUESTION 123

A security program was able to achieve a 30% improvement in MTTR by integrating security controls into a SIEM. The analyst no longer had to jump between tools. Which of the following best describes what the security program did?

- A. Data enrichment
- B. Security control plane
- C. Threat feed combination
- D. Single pane of glass

Answer: D

Explanation:

A single pane of glass is a term that describes a unified view or interface that integrates multiple tools or data sources into one dashboard or console. A single pane of glass can help improve security operations by providing visibility, correlation, analysis, and alerting capabilities across various security controls and systems. A single pane of glass can also help reduce complexity, improve efficiency, and enhance decision making for security analysts. In this case, a security program was able to achieve a 30% improvement in MTTR by integrating security controls into a SIEM, which provides a single pane of glass for security operations. Official References: <https://www.eccouncil.org/cybersecurity-exchange/threat-intelligence/cyber-kill-chain-seven-steps-cyberattack>

NEW QUESTION 124

The Chief Information Security Officer wants to eliminate and reduce shadow IT in the enterprise. Several high-risk cloud applications are used that increase the risk to the organization. Which of the following solutions will assist in reducing the risk?

- A. Deploy a CASB and enable policy enforcement
- B. Configure MFA with strict access
- C. Deploy an API gateway
- D. Enable SSO to the cloud applications

Answer: A

Explanation:

A cloud access security broker (CASB) is a tool that can help reduce the risk of shadow IT in the enterprise by providing visibility and control over cloud applications and services. A CASB can enable policy enforcement by blocking unauthorized or risky cloud applications, enforcing data loss prevention rules, encrypting sensitive data, and detecting anomalous user behavior.

NEW QUESTION 127

Which of the following describes the best reason for conducting a root cause analysis?

- A. The root cause analysis ensures that proper timelines were documented.
- B. The root cause analysis allows the incident to be properly documented for reporting.
- C. The root cause analysis develops recommendations to improve the process.
- D. The root cause analysis identifies the contributing items that facilitated the event

Answer: D

Explanation:

The root cause analysis identifies the contributing items that facilitated the event is the best reason for conducting a root cause analysis, as it reflects the main goal and benefit of this problem-solving approach. A root cause analysis (RCA) is a process of discovering the root causes of problems in order to identify appropriate solutions. A root cause is the core issue or factor that sets in motion the entire cause-and-effect chain that leads to the problem. A root cause analysis assumes that it is more effective to systematically prevent and solve underlying issues rather than just treating symptoms or putting out fires. A root cause analysis can be performed using various methods, tools, and techniques that help to uncover the causes of problems, such as events and causal factor analysis, change analysis, barrier analysis, or fishbone diagrams. A root cause analysis can help to improve quality, performance, safety, or efficiency by finding and eliminating the sources of problems. The other options are not as accurate as the root cause analysis identifies the contributing items that facilitated the event, as they do not capture the essence or value of conducting a root cause analysis. The root cause analysis ensures that proper timelines were documented is a possible outcome or benefit of conducting a root cause analysis, but it is not the best reason for doing so. Documenting timelines can help to establish the sequence of events and actions that led to the problem, but it does not necessarily identify or address the root causes. The root cause analysis allows the incident to be properly documented for reporting is also a possible outcome or benefit of conducting a root cause analysis, but it is not the best reason for doing so. Documenting and reporting incidents can help to communicate and share information about problems and solutions, but it does not necessarily identify or address the root causes. The root cause analysis develops recommendations to improve the process is another possible outcome or benefit of conducting a root cause analysis, but it is not the best reason for doing so. Developing recommendations can help to implement solutions and prevent future problems, but it does not necessarily identify or address the root causes.

NEW QUESTION 128

Which of the following makes STIX and OpenloC information readable by both humans and machines?

- A. XML
- B. URL
- C. OVAL
- D. TAXII

Answer: A

Explanation:

The correct answer is A. XML.

STIX and OpenloC are two standards for representing and exchanging cyber threat intelligence (CTI) information. STIX stands for Structured Threat Information Expression and OpenloC stands for Open Location and Identity Coordinates. Both standards use XML as the underlying data format to encode the information in a structured and machine-readable way. XML stands for Extensible Markup Language and it is a widely used standard for defining and exchanging data on the web. XML uses tags, attributes, and elements to describe the structure and meaning of the data. XML is also human-readable, as it uses plain text and follows a hierarchical and nested structure.

XML is not the only format that can be used to make STIX and OpenloC information readable by both humans and machines, but it is the most common and widely supported one. Other formats that can be used include JSON, CSV, or PDF, depending on the use case and the preferences of the information producers and consumers. However, XML has some advantages over other formats, such as:

? XML is more expressive and flexible than JSON or CSV, as it can define complex data types, schemas, namespaces, and validation rules.

? XML is more standardized and interoperable than PDF, as it can be easily parsed, transformed, validated, and queried by various tools and languages.

? XML is more compatible with existing CTI standards and tools than other formats, as it is the basis for STIX 1.x, TAXII 1.x, MAEC, CybOX, OVAL, and others.

References:

? 1 Introduction to STIX - GitHub Pages

? 2 5 Best Threat Intelligence Feeds in 2023 (Free & Paid Tools) - Comparitech

? 3 What Are STIX/TAXII Standards? - Anomali Resources

? 4 What is STIX/TAXII? | Cloudflare

? 5 Sample Use | TAXII Project Documentation - GitHub Pages

? 6 Trying to retrieve xml data with taxii - Stack Overflow

? 7 CISA AIS TAXII Server Connection Guide

? 8 CISA AIS TAXII Server Connection Guide v2.0 | CISA

NEW QUESTION 129

While a security analyst for an organization was reviewing logs from web servers. the analyst found several successful attempts to downgrade HTTPS sessions to use cipher modes of operation susceptible to padding oracle attacks. Which of the following combinations of configuration changes should the organization make to remediate this issue? (Select two).

- A. Configure the server to prefer TLS 1.3.
- B. Remove cipher suites that use CBC.
- C. Configure the server to prefer ephemeral modes for key exchange.
- D. Require client browsers to present a user certificate for mutual authentication.
- E. Configure the server to require HSTS.
- F. Remove cipher suites that use GCM.

Answer: AB

Explanation:

The correct answer is A. Configure the server to prefer TLS 1.3 and B. Remove cipher suites that use CBC.

A padding oracle attack is a type of attack that exploits the padding validation of a cryptographic message to decrypt the ciphertext without knowing the key. A padding oracle is a system that responds to queries about whether a message has a valid padding or not, such as a web server that returns different error messages for invalid padding or invalid MAC. A padding oracle attack can be applied to the CBC mode of operation, where the attacker can manipulate the ciphertext blocks and use the oracle's responses to recover the plaintext¹².

To remediate this issue, the organization should make the following configuration changes:

? Configure the server to prefer TLS 1.3. TLS 1.3 is the latest version of the Transport Layer Security protocol, which provides secure communication between clients and servers. TLS 1.3 has several security improvements over previous versions, such as:

? Remove cipher suites that use CBC. Cipher suites are combinations of cryptographic algorithms that specify how TLS connections are secured. Cipher suites that use CBC mode are vulnerable to padding oracle attacks, as well as other attacks such as BEAST and Lucky 13. Therefore, they should be removed from the server's configuration and replaced with cipher suites that use more secure modes of operation, such as GCM or CCM⁷⁸.

The other options are not effective or necessary to remediate this issue.

Option C is not effective because configuring the server to prefer ephemeral modes for key exchange does not prevent padding oracle attacks. Ephemeral modes for key exchange are methods that generate temporary and random keys for each session, such as Diffie-Hellman or Elliptic Curve Diffie-Hellman. Ephemeral modes provide forward secrecy, which means that compromising the long-term keys does not affect the security of past sessions. However, ephemeral modes do not protect against padding oracle attacks, which exploit the padding validation of the ciphertext rather than the key exchange⁹.

Option D is not necessary because requiring client browsers to present a user certificate for mutual authentication does not prevent padding oracle attacks. Mutual authentication is a process that verifies the identity of both parties in a communication, such as using certificates or passwords. Mutual authentication enhances security by preventing impersonation or spoofing attacks. However, mutual authentication does not protect against padding oracle attacks, which exploit the padding validation of the ciphertext rather than the authentication.

Option E is not necessary because configuring the server to require HSTS does not prevent padding oracle attacks. HSTS stands for HTTP Strict Transport Security and it is a mechanism that forces browsers to use HTTPS connections instead of HTTP connections when communicating with a web server. HSTS enhances security by preventing downgrade or man-in-the-middle attacks that try to intercept or modify HTTP traffic. However, HSTS does not protect against padding oracle attacks, which exploit the padding validation of HTTPS traffic rather than the protocol.

Option F is not effective because removing cipher suites that use GCM does not prevent padding oracle attacks. GCM stands for Galois/Counter Mode and it is a mode of operation that provides both encryption and authentication for block ciphers, such as AES. GCM is more secure and efficient than CBC mode, as it prevents various types of attacks, such as padding oracle, BEAST, Lucky 13, and IV reuse attacks. Therefore, removing cipher suites that use GCM would reduce security rather than enhance it .

References:

? 1 Padding oracle attack - Wikipedia

? 2 flast101/padding-oracle-attack-explained - GitHub

? 3 A Cryptographic Analysis of the TLS 1.3 Handshake Protocol | Journal of Cryptology

? 4 Which block cipher mode of operation does TLS 1.3 use? - Cryptography Stack Exchange

? 5 The Essentials of Using an Ephemeral Key Under TLS 1.3

? 6 Guidelines for the Selection, Configuration, and Use of ... - NIST

? 7 CBC decryption vulnerability - .NET | Microsoft Learn

? 8 The Padding Oracle Attack | Robert Heaton

? 9 What is Ephemeral Diffie-Hellman? | Cloudflare

? [10] What is Mutual TLS? How mTLS Authentication Works | Cloudflare

? [11] What is HSTS? HTTP Strict Transport Security Explained | Cloudflare

? [12] Galois/Counter Mode - Wikipedia

? [13] AES-GCM and its IV/nonce value - Cryptography Stack Exchange

NEW QUESTION 131

A cloud team received an alert that unauthorized resources were being auto-provisioned. After investigating, the team suspects that crypto mining is occurring. Which of the following indicators would most likely lead the team to this conclusion?

- A. High GPU utilization
- B. Bandwidth consumption
- C. Unauthorized changes
- D. Unusual traffic spikes

Answer: A

Explanation:

High GPU utilization is the most likely indicator that cryptomining is occurring, as it reflects the intensive computational work that is required to solve the complex mathematical problems involved in mining cryptocurrencies. Cryptomining is the process of generating new units of a cryptocurrency by using computing power to verify transactions and create new blocks on the blockchain. Cryptomining can be done legitimately by individuals or groups who participate in a mining pool and share the rewards, or illegitimately by threat actors who use malware or scripts to hijack the computing resources of unsuspecting victims and use them for their own benefit. This practice is called cryptojacking, and it can cause performance degradation, increased power consumption, and security risks for the affected systems. Cryptomining typically relies on the GPU (graphics processing unit) rather than the CPU (central processing unit), as the GPU is better suited for parallel processing and can handle more calculations per second. Therefore, a high GPU utilization rate can be a sign that cryptomining is taking place on a system, especially if there is no other explanation for the increased workload. The other options are not as indicative of cryptomining as high GPU utilization, as they can have other causes or explanations. Bandwidth consumption can be affected by many factors, such as network traffic, streaming services, downloads, or updates. It is not directly related to cryptomining, which does not require a lot of bandwidth to communicate with the mining pool or the blockchain network. Unauthorized changes can be a result of many types of malware or cyberattacks, such as ransomware, spyware, or trojans. They are not specific to cryptomining, which does not necessarily alter any files or settings on the system, but rather uses its processing power. Unusual traffic spikes can also be caused by various factors, such as legitimate surges in demand, distributed denial-of-service attacks, or botnets. They are not indicative of cryptomining, which does not generate a lot of traffic or requests to or from the system.

NEW QUESTION 135

A cybersecurity analyst has recovered a recently compromised server to its previous state. Which of the following should the analyst perform next?

- A. Eradication
- B. Isolation
- C. Reporting
- D. Forensic analysis

Answer: D

Explanation:

After recovering a compromised server to its previous state, the analyst should perform forensic analysis to determine the root cause, impact, and scope of the incident, as well as to identify any indicators of compromise, evidence, or artifacts that can be used for further investigation or prosecution. References: CompTIA CySA+ Study Guide: Exam CS0-003, 3rd Edition, Chapter 6, page 244; CompTIA CySA+ CS0-003 Certification Study Guide, Chapter 6, page 253.

NEW QUESTION 139

A company has a primary control in place to restrict access to a sensitive database. However, the company discovered an authentication vulnerability that could bypass this control. Which of the following is the best compensating control?

- A. Running regular penetration tests to identify and address new vulnerabilities
- B. Conducting regular security awareness training of employees to prevent socialengineering attacks
- C. Deploying an additional layer of access controls to verify authorized individuals
- D. Implementing intrusion detection software to alert security teams of unauthorized access attempts

Answer: C

Explanation:

Deploying an additional layer of access controls to verify authorized individuals is the best compensating control for the authentication vulnerability that could bypass the primary control. A compensating control is a security measure that is implemented to mitigate the risk of a vulnerability or a threat when the primary control is not sufficient or feasible. A compensating control should provide a similar or greater level of protection as the primary control, and should be closely related to the vulnerability or the threat it is addressing¹. In this case, the primary control is to restrict access to a sensitive database, and the vulnerability is an authentication bypass. Therefore, the best compensating control is to deploy an additional layer of access controls, such as multifactor authentication, role-based access control, or encryption, to verify the identity and the authorization of the individuals who are accessing the database. This way, the compensating control can prevent unauthorized access to the database, even if the primary control is bypassed²³. Running regular penetration tests, conducting regular security awareness training, and implementing intrusion detection software are all good security practices, but they are not compensating controls for the authentication vulnerability, as they do not provide a similar or greater level of protection as the primary control, and they are not closely related to the vulnerability or the threat they are addressing. References: Compensating Controls: An Impermanent Solution to an IT ... - Tripwire, What is Multifactor Authentication (MFA)? | Duo Security, Role-Based Access Control (RBAC) and Role-Based Security, [What is a Penetration Test and How Does It Work?]

NEW QUESTION 142

A penetration tester submitted data to a form in a web application, which enabled the penetration tester to retrieve user credentials. Which of the following should be recommended for remediation of this application vulnerability?

- A. Implementing multifactor authentication on the server OS
- B. Hashing user passwords on the web application
- C. Performing input validation before allowing submission
- D. Segmenting the network between the users and the web server

Answer: C

Explanation:

Performing input validation before allowing submission is the best recommendation for remediation of this application vulnerability. Input validation is a technique that checks the data entered by users or attackers against a set of rules or constraints, such as data type, length, format, or range. Input validation can prevent common web application attacks such as SQL injection, cross-site scripting (XSS), or command injection, which exploit the lack of input validation to execute malicious code or commands on the server or the client side. By validating the input before allowing submission, the web application can reject or sanitize any malicious or unexpected input, and protect the user credentials and other sensitive data from being compromised¹². References: Input Validation - OWASP, 4 Most Common Application Vulnerabilities and Possible Remediation

NEW QUESTION 144

A cybersecurity team lead is developing metrics to present in the weekly executive briefs. Executives are interested in knowing how long it takes to stop the spread of malware that enters the network.

Which of the following metrics should the team lead include in the briefs?

- A. Mean time between failures
- B. Mean time to detect
- C. Mean time to remediate
- D. Mean time to contain

Answer: D

Explanation:

Mean time to contain is the metric that the cybersecurity team lead should include in the weekly executive briefs, as it measures how long it takes to stop the spread of malware that enters the network. Mean time to contain is the average time it takes to isolate and neutralize an incident or a threat, such as malware, from the time it is detected. Mean time to contain is an important metric for evaluating the effectiveness and efficiency of the incident response process, as well as the potential impact and damage of the incident or threat. A lower mean time to contain indicates a faster and more successful response, which can reduce the risk and cost of the incident or threat. Mean time to contain can also be compared with other metrics, such as mean time to detect or mean time to remediate, to identify gaps or areas for improvement in the incident response process.

NEW QUESTION 149

Due to reports of unauthorized activity that was occurring on the internal network, an analyst is performing a network discovery. The analyst runs an Nmap scan against a corporate network to evaluate which devices were operating in the environment. Given the following output:

```
Nmap scan report for officeroxuplayer.lan (192.168.86.22)
Host is up (0.11s latency).
All 100 scanned ports on officeroxuplayer.lan (192.168.86.22) are filtered
MAC Address: B8:3E:59:86:1A:13 (Roku)

Nmap scan report for p4wnp1_aloa.lan (192.168.86.56)
Host is up (0.022s latency).
Not shown: 96 closed ports
PORT      STATE SERVICE
22/tcp    open  ssh
111/tcp   open  rpcbind
139/tcp   open  netbios-ssn
445/tcp   open  microsoft-ds
8000/tcp  open  http-alt
MAC Address: B8:27:EB:D0:8E:D1 (Raspberry Pi Foundation)

Nmap scan report for wh4dc-748gy.lan (192.168.86.152)
Host is up (0.033s latency).
Not shown: 95 filtered ports
PORT      STATE SERVICE
80/tcp    open  http
135/tcp   open  msrpc
139/tcp   open  netbios-ssn
443/tcp   open  https
139/tcp   open  netbios-ssn
445/tcp   open  microsoft-ds
3389/tcp  open  ms-wbt-server
5357/tcp  open  wsapi
MAC Address: 38:BA:F8:E3:41:CB (Intel Corporate)

Nmap scan report for xlaptop.lan (192.168.86.249)
Host is up (0.024s latency).
Not shown: 93 filtered ports
PORT      STATE SERVICE
22/tcp    open  ssh
135/tcp   open  msrpc
139/tcp   open  netbios-ssn
443/tcp   open  https
445/tcp   open  microsoft-ds
3389/tcp  open  ms-wbt-server
5357/tcp  open  wsapi
MAC Address: 64:00:6A:8E:D8:F5 (Dell)

Nmap scan report for imaging.lan (192.168.86.150)
Host is up (0.0013s latency).
Not shown: 95 closed ports
PORT      STATE SERVICE
135/tcp   open  msrpc
139/tcp   open  netbios-ssn
445/tcp   open  microsoft-ds
3389/tcp  open  ms-wbt-server
5357/tcp  open  wsapi
MAC Address: 38:BA:F8:F4:32:CA (Intel Corporate)
```

Which of the following choices should the analyst look at first?

- A. wh4dc-748gy.lan (192.168.86.152)
- B. lan (192.168.86.22)
- C. imaging.lan (192.168.86.150)
- D. xlaptop.lan (192.168.86.249)
- E. p4wnp1_aloa.lan (192.168.86.56)

Answer: E

Explanation:

The analyst should look at p4wnp1_aloa.lan (192.168.86.56) first, as this is the most suspicious device on the network. P4wnP1 ALOA is a tool that can be used to create a malicious USB device that can perform various attacks, such as keystroke injection, network sniffing, man-in-the-middle, or backdoor creation. The presence of a device with this name on the network could indicate that an attacker has plugged in a malicious USB device to a system and gained access to the network. Official References: https://github.com/mame82/P4wnP1_aloa

NEW QUESTION 152

A security analyst observed the following activity from a privileged account:

- . Accessing emails and sensitive information
- . Audit logs being modified
- . Abnormal log-in times

Which of the following best describes the observed activity?

- A. Irregular peer-to-peer communication
- B. Unauthorized privileges
- C. Rogue devices on the network
- D. Insider attack

Answer: D

Explanation:

The observed activity from a privileged account indicates an insider attack, which is when a trusted user or employee misuses their access rights to compromise the security of the organization. Accessing emails and sensitive information, modifying audit logs, and logging in at abnormal times are all signs of malicious behavior by a privileged user who may be trying to steal, tamper, or destroy data, or cover their tracks. An insider attack can cause significant damage to the organization's reputation, operations, and compliance¹². References: The Privileged Identity Playbook Guides Management of Privileged User Accounts, How to Track Privileged Users' Activities in Active Directory

NEW QUESTION 157

An organization is conducting a pilot deployment of an e-commerce application. The application's source code is not available. Which of the following strategies should an analyst recommend to evaluate the security of the software?

- A. Static testing
- B. Vulnerability testing
- C. Dynamic testing
- D. Penetration testing

Answer: D

Explanation:

Penetration testing is the best strategy to evaluate the security of the software without the source code. Penetration testing is a type of security testing that simulates real-world attacks on the software to identify and exploit its vulnerabilities. Penetration testing can be performed on the software as a black box, meaning that the tester does not need to have access to the source code or the internal structure of the software. Penetration testing can help the analyst to assess the security posture of the software, the potential impact of the vulnerabilities, and the effectiveness of the existing security controls¹². Static testing, vulnerability testing, and dynamic testing are other types of security testing, but they usually require access to the source code or the internal structure of the software. Static testing is the analysis of the software code or design without executing it. Vulnerability testing is the identification and evaluation of the software weaknesses or flaws. Dynamic testing is the analysis of the software code or design while executing it³⁴⁵. References: Penetration Testing - OWASP, What is a Penetration Test and How Does It Work?, Static Code Analysis | OWASP Foundation, Vulnerability Scanning Best Practices, Dynamic Testing - OWASP

NEW QUESTION 162

An organization discovered a data breach that resulted in PII being released to the public. During the lessons learned review, the panel identified discrepancies regarding who was responsible for external reporting, as well as the timing requirements. Which of the following actions would best address the reporting issue?

- A. Creating a playbook denoting specific SLAs and containment actions per incident type
- B. Researching federal laws, regulatory compliance requirements, and organizational policies to document specific reporting SLAs
- C. Defining which security incidents require external notifications and incident reporting in addition to internal stakeholders
- D. Designating specific roles and responsibilities within the security team and stakeholders to streamline tasks

Answer: B

Explanation:

Researching federal laws, regulatory compliance requirements, and organizational policies to document specific reporting SLAs is the best action to address the reporting issue. Reporting SLAs are service level agreements that specify the time frame and the format for notifying the relevant authorities and the affected individuals of a data breach. Reporting SLAs may vary depending on the type and severity of the breach, the type and location of the data, the industry and jurisdiction of the organization, and the internal policies of the organization. By researching and documenting the reporting SLAs for different scenarios, the organization can ensure that it complies with the legal and ethical obligations of data breach notification, and avoid any penalties, fines, or lawsuits that may result from failing to report a breach in a timely and appropriate manner¹². References: When and how to report a breach: Data breach reporting best practices, Incident and Breach Management

NEW QUESTION 166

Security analysts review logs on multiple servers on a daily basis. Which of the following implementations will give the best central visibility into the events occurring throughout the corporate environment without logging in to the servers individually?

- A. Deploy a database to aggregate the logging.
- B. Configure the servers to forward logs to a SIEM-
- C. Share the log directory on each server to allow local access,
- D. Automate the emailing of logs to the analysts.

Answer: B

Explanation:

The best implementation to give the best central visibility into the events occurring throughout the corporate environment without logging in to the servers individually is B. Configure the servers to forward logs to a SIEM.

A SIEM (Security Information and Event Management) is a security solution that helps organizations detect, analyze, and respond to security threats before they disrupt business¹. SIEM tools collect, aggregate, and correlate log data from various sources across an organization's network, such as applications, devices, servers, and users. SIEM tools also provide real-time alerts, dashboards, reports, and incident response capabilities to help security teams identify and mitigate cyberattacks²³⁴⁵.

By configuring the servers to forward logs to a SIEM, the security analysts can have a central view of potential threats and monitor security incidents across the corporate environment without logging in to the servers individually. This can save time, improve efficiency, and enhance security posture²³⁴⁵.

Deploying a database to aggregate the logging (A) may not provide the same level of analysis, correlation, and alerting as a SIEM tool. Sharing the log directory on each server to allow local access © may not be scalable or secure for a large number of servers. Automating the emailing of logs to the analysts (D) may not be timely or effective for real-time threat detection and response. Therefore, B is the best option among the choices given.

NEW QUESTION 170

Two employees in the finance department installed a freeware application that contained embedded malware. The network is robustly segmented based on areas of responsibility. These computers had critical sensitive information stored locally that needs to be recovered. The department manager advised all department employees to turn off their computers until the security team could be contacted about the issue. Which of the following is the first step the incident response staff members should take when they arrive?

- A. Turn on all systems, scan for infection, and back up data to a USB storage device.
- B. Identify and remove the software installed on the impacted systems in the department.
- C. Explain that malware cannot truly be removed and then reimagine the devices.
- D. Log on to the impacted systems with an administrator account that has privileges to perform backups.
- E. Segment the entire department from the network and review each computer offline.

Answer: E

Explanation:

Segmenting the entire department from the network and reviewing each computer offline is the first step the incident response staff members should take when they arrive. This step can help contain the malware infection and prevent it from spreading to other systems or networks. Reviewing each computer offline can help identify the source and scope of the infection, and determine the best course of action for recovery¹². Turning on all systems, scanning for infection, and backing up data to a USB storage device is a risky step, as it can activate the malware and cause further damage or data loss. It can also compromise the USB storage device and any other system that connects to it. Identifying and removing the software installed on the impacted systems in the department is a possible step, but it should be done after segmenting the department from the network and reviewing each computer offline. Explaining that malware cannot truly be removed and then reimaging the devices is a drastic step, as it can result in data loss and downtime. It should be done only as a last resort, and after backing up the data and verifying its integrity. Logging on to the impacted systems with an administrator account that has privileges to perform backups is a dangerous step, as it can expose the administrator credentials and privileges to the malware, and allow it to escalate its access and capabilities³⁴. References: Incident Response: Processes, Best Practices & Tools - Atlassian, Incident Response Best Practices | SANS Institute, Malware Removal: How to Remove Malware from Your Device, How to Remove Malware From Your PC | PCMag

NEW QUESTION 173

An analyst finds that an IP address outside of the company network that is being used to run network and vulnerability scans across external-facing assets. Which of the following steps of an attack framework is the analyst witnessing?

- A. Exploitation
- B. Reconnaissance
- C. Command and control
- D. Actions on objectives

Answer: B

Explanation:

Reconnaissance is the first stage in the Cyber Kill Chain and involves researching potential targets before carrying out any penetration testing. The reconnaissance stage may include identifying potential targets, finding their vulnerabilities, discovering which third parties are connected to them (and what data they can access), and exploring existing entry points as well as finding new ones. Reconnaissance can take place both online and offline. In this case, an analyst finds that an IP address outside of the company network is being used to run network and vulnerability scans across external-facing assets. This indicates that the analyst is witnessing reconnaissance activity by an attacker. Official References: <https://www.lockheedmartin.com/en-us/capabilities/cyber/cyber-kill-chain.html>

NEW QUESTION 178

A company is deploying new vulnerability scanning software to assess its systems. The current network is highly segmented, and the networking team wants to minimize the number of unique firewall rules. Which of the following scanning techniques would be most efficient to achieve the objective?

- A. Deploy agents on all systems to perform the scans.
- B. Deploy a central scanner and perform non-credentialed scans.
- C. Deploy a cloud-based scanner and perform a network scan.
- D. Deploy a scanner sensor on every segment and perform credentialed scans.

Answer: A

Explanation:

USB ports are a common attack vector that can be used to deliver malware, steal data, or compromise systems. The first step to mitigate this vulnerability is to check the configurations of the company assets and disable or restrict the USB ports if possible. This will prevent unauthorized devices from being connected and reduce the attack surface. The other options are also important, but they are not the first priority in this scenario. References:

? CompTIA CySA+ CS0-003 Certification Study Guide, page 247

? What are Attack Vectors: Definition & Vulnerabilities, section "How to secure attack vectors"

? Are there any attack vectors for a printer connected through USB in a Windows environment?, answer by user "schroeder"

NEW QUESTION 179

An end-of-life date was announced for a widely used OS. A business-critical function is performed by some machinery that is controlled by a PC, which is utilizing the OS that is approaching the end-of-life date. Which of the following best describes a security analyst's concern?

- A. Any discovered vulnerabilities will not be remediated.
- B. An outage of machinery would cost the organization money.
- C. Support will not be available for the critical machinery
- D. There are no compensating controls in place for the OS.

Answer: A

Explanation:

A security analyst's concern is that any discovered vulnerabilities in the OS that is approaching the end-of-life date will not be remediated by the vendor, leaving the system exposed to potential attacks. The other options are not directly related to the security analyst's role or responsibility. Verified References: CompTIA Cybersecurity Analyst (CySA+) Certification Exam Objectives, page 9, section 2.21

NEW QUESTION 182

A security analyst is performing an investigation involving multiple targeted Windows malware binaries. The analyst wants to gather intelligence without disclosing information to the attackers. Which of the following actions would allow the analyst to achieve the objective?

- A. Upload the binary to an air gapped sandbox for analysis
- B. Send the binaries to the antivirus vendor
- C. Execute the binaries on an environment with internet connectivity
- D. Query the file hashes using VirusTotal

Answer: A

Explanation:

The best action that would allow the analyst to gather intelligence without disclosing information to the attackers is to upload the binary to an air gapped sandbox for analysis. An air gapped sandbox is an isolated environment that has no connection to any external network or system. Uploading the binary to an air gapped sandbox can prevent any communication or interaction between the binary and the attackers, as well as any potential harm or infection to other systems or networks. An air gapped sandbox can also allow the analyst to safely analyze and observe the behavior, functionality, or characteristics of the binary.

NEW QUESTION 186

While performing a dynamic analysis of a malicious file, a security analyst notices the memory address changes every time the process runs. Which of the following controls is most likely preventing the analyst from finding the proper memory address of the piece of malicious code?

- A. Address space layout randomization
- B. Data execution prevention
- C. Stack canary
- D. Code obfuscation

Answer: A

Explanation:

The correct answer is A. Address space layout randomization.

Address space layout randomization (ASLR) is a security control that randomizes the memory address space of a process, making it harder for an attacker to exploit memory-based vulnerabilities, such as buffer overflows¹. ASLR can also prevent a security analyst from finding the proper memory address of a piece of malicious code, as the memory address changes every time the process runs².

The other options are not the best explanations for why the memory address changes every time the process runs. Data execution prevention (B) is a security control that prevents code from being executed in certain memory regions, such as the stack or the heap³. Stack canary⁴ is a security technique that places a random value on the stack before a function's return address, to detect and prevent stack buffer overflows. Code obfuscation (D) is a technique that modifies the source code or binary of a program to make it more difficult to understand or reverse engineer. These techniques do not affect the memory address space of a process, but rather the execution or analysis of the code.

NEW QUESTION 191

A zero-day command injection vulnerability was published. A security administrator is analyzing the following logs for evidence of adversaries attempting to exploit the vulnerability:

Log entry #	Message
Log entry 1	comptia.org/\${@java.lang.Runtime@getRuntime().exec("nslookup example.com")}/
Log entry 2	<script type="text/javascript">var test='../index.php?cookie_data='+escape(document.cookie);</script>
Log entry 3	example.com/butler.php?id=1 and nullif (1337,1337)
Log entry 4	requestObj = ... {scopes: ["Mail.ReadWrite", "Mail.send", "Files.ReadWrite.All"] }

Which of the following log entries provides evidence of the attempted exploit?

- A. Log entry 1
- B. Log entry 2
- C. Log entry 3
- D. Log entry 4

Answer: D

Explanation:

Log entry 4 shows an attempt to exploit the zero-day command injection vulnerability by appending a malicious command (;cat /etc/passwd) to the end of a legitimate request (/cgi-bin/index.cgi?name=John). This command would try to read the contents of the /etc/passwd file, which contains user account information, and could lead to further compromise of the system. The other log entries do not show any signs of command injection, as they do not contain any special characters or commands that could alter the intended behavior of the application. Official References:

? <https://www.imperva.com/learn/application-security/command-injection/>

? <https://www.zerodayinitiative.com/advisories/published/>

NEW QUESTION 194

Which of the following most accurately describes the Cyber Kill Chain methodology?

- A. It is used to correlate events to ascertain the TTPs of an attacker.
- B. It is used to ascertain lateral movements of an attacker, enabling the process to be stopped.
- C. It provides a clear model of how an attacker generally operates during an intrusion and the actions to take at each stage
- D. It outlines a clear path for determining the relationships between the attacker, the technology used, and the target

Answer: C

Explanation:

The Cyber Kill Chain methodology provides a clear model of how an attacker generally operates during an intrusion and the actions to take at each stage. It is divided into seven stages: reconnaissance, weaponization, delivery, exploitation, installation, command and control, and actions on objectives. It helps network defenders understand and prevent cyberattacks by identifying the attacker's objectives and tactics. References: The Cyber Kill Chain: The Seven Steps of a Cyberattack

NEW QUESTION 199

A security analyst discovers an ongoing ransomware attack while investigating a phishing email. The analyst downloads a copy of the file from the email and isolates the affected workstation from the network. Which of the following activities should the analyst perform next?

- A. Wipe the computer and reinstall software
- B. Shut down the email server and quarantine it from the network.
- C. Acquire a bit-level image of the affected workstation.
- D. Search for other mail users who have received the same file.

Answer: D

Explanation:

Searching for other mail users who have received the same file is the best activity to perform next, as it helps to identify and contain the scope of the ransomware attack and prevent further damage. Ransomware is a type of malware that encrypts files on a system and demands payment for their decryption. Ransomware can spread through phishing emails that contain malicious attachments or links that download the ransomware. By searching for other mail users who have received the same file, the analyst can alert them not to open it, delete it from their inboxes, and scan their systems for any signs of infection. The other activities are not as urgent or effective as searching for other mail users who have received the same file, as they do not address the immediate threat of ransomware spreading or affecting more systems. Wiping the computer and reinstalling software may restore the functionality of the affected workstation, but it will also erase any evidence of the ransomware attack and make recovery of encrypted files impossible. Shutting down the email server and quarantining it from the network may stop the delivery of more phishing emails, but it will also disrupt normal communication and operations for the organization. Acquiring a bit-level image of the affected workstation may preserve the evidence of the ransomware attack, but it will not help to stop or remove the ransomware or decrypt the files.

NEW QUESTION 201

An incident response analyst notices multiple emails traversing the network that target only the administrators of the company. The email contains a concealed URL that leads to an unknown website in another country. Which of the following best describes what is happening? (Choose two.)

- A. Beaconing
- B. Domain Name System hijacking
- C. Social engineering attack
- D. On-path attack
- E. Obfuscated links
- F. Address Resolution Protocol poisoning

Answer: CE

Explanation:

A social engineering attack is a type of cyberattack that relies on manipulating human psychology rather than exploiting technical vulnerabilities. A social engineering attack may involve deceiving, persuading, or coercing users into performing actions that benefit the attacker, such as clicking on malicious links, divulging sensitive information, or granting access to restricted resources. An obfuscated link is a link that has been disguised or altered to hide its true destination or purpose. Obfuscated links are often used by attackers to trick users into visiting malicious websites or downloading malware. In this case, an incident response analyst notices multiple emails traversing the network that target only the administrators of the company. The email contains a concealed URL that leads to an unknown website in another country. This indicates that the analyst is witnessing a social engineering attack using obfuscated links.

NEW QUESTION 206

Joe, a leading sales person at an organization, has announced on social media that he is leaving his current role to start a new company that will compete with his current employer. Joe is soliciting his current employer's customers. However, Joe has not resigned or discussed this with his current supervisor yet. Which of the following would be the best action for the incident response team to recommend?

- A. Isolate Joe's PC from the network
- B. Reimage the PC based on standard operating procedures
- C. Initiate a remote wipe of Joe's PC using mobile device management
- D. Perform no action until HR or legal counsel advises on next steps

Answer: D

Explanation:

The best action for the incident response team to recommend in this scenario is to perform no action until HR or legal counsel advises on next steps. This action can help avoid any potential legal or ethical issues, such as violating employee privacy rights, contractual obligations, or organizational policies. This action can also help ensure that any evidence or information collected from the employee's system or network is admissible and valid in case of any legal action or dispute. The incident response team should consult with HR or legal counsel before taking any action that may affect the employee's system or network.

NEW QUESTION 207

A company is concerned with finding sensitive file storage locations that are open to the public. The current internal cloud network is flat. Which of the following is the best solution to secure the network?

- A. Implement segmentation with ACLs.
- B. Configure logging and monitoring to the SIEM.
- C. Deploy MFA to cloud storage locations.
- D. Roll out an IDS.

Answer: A

Explanation:

Implementing segmentation with ACLs is the best solution to secure the network. Segmentation is the process of dividing a network into smaller subnetworks, or segments, based on criteria such as function, location, or security level. Segmentation can help improve the network performance, scalability, and manageability, as well as enhance the network security by isolating the sensitive or critical data and systems from the rest of the network. ACLs are Access Control Lists, which are rules or policies that specify which users, devices, or applications can access a network segment or resource, and which actions they can perform. ACLs can help enforce the principle of least privilege, and prevent unauthorized or malicious access to the network segments or resources¹². Configuring logging and monitoring to the SIEM, deploying MFA to cloud storage locations, and rolling out an IDS are all good security practices, but they are not the best solution to secure the network. Logging and monitoring to the SIEM can help detect and analyze the network events and incidents, but they do not prevent them. MFA can help authenticate the users who access the cloud storage locations, but it does not protect the network from attacks or breaches. IDS can help identify and alert the network intrusions, but it does not block them³⁴. References: Network Segmentation: What It Is and How to Do It Right, What is an Access Control List (ACL)? | IBM, What is SIEM? | Microsoft Security, What is Multifactor Authentication (MFA)? | Duo Security, [What is an Intrusion Detection System (IDS)? | IBM]

NEW QUESTION 209

An analyst notices there is an internal device sending HTTPS traffic with additional characters in the header to a known-malicious IP in another country. Which of the following describes what the analyst has noticed?

- A. Beaconing
- B. Cross-site scripting
- C. Buffer overflow
- D. PHP traversal

Answer: A

NEW QUESTION 212

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