

# CompTIA

## Exam Questions CS0-002

CompTIA Cybersecurity Analyst (CySA+) Certification Exam



#### NEW QUESTION 1

After running the `cat file01.bin | hexdump -c` command, a security analyst reviews the following output snippet:

```
00000000 ff d8 ff e0 00 10 4a 46 49 46 00 01 01 00 00 01 |.....JFIF.....|
```

Which of the following digital-forensics techniques is the analyst using?

- A. Reviewing the file hash
- B. Debugging the binary file
- C. Implementing file carving
- D. Verifying the file type
- E. Utilizing reverse engineering

**Answer:** D

#### Explanation:

This is the digital-forensics technique that the analyst is using by running the `cat file01.bin | hexdump -c` command. This command displays the contents of the binary file in hexadecimal and ASCII format, which can help identify the file type based on its header or signature. In this case, the output snippet shows that the file type is JPEG, as indicated by the `ff d8 ff e0` bytes at the beginning and the `JFIF` string in ASCII.

#### NEW QUESTION 2

An organization wants to collect IoCs from multiple geographic regions so it can sell the information to its customers. Which of the following should the organization deploy to accomplish this task?

- A. A honeypot
- B. A bastion host
- C. A proxy server
- D. A Jumpbox

**Answer:** A

#### Explanation:

A honeypot is a decoy system that is designed to attract and trap attackers, by mimicking a real system or network, but containing fake or harmless data. A honeypot can be used to collect IoCs from multiple geographic regions, by deploying it in different locations or networks, and monitoring the activities or attacks that target it. A honeypot can also provide valuable threat intelligence data that can be sold to customers.

#### NEW QUESTION 3

An IT security analyst has received an email alert regarding a vulnerability within the new fleet of vehicles the company recently purchased. Which of the following attack vectors is the vulnerability MOST likely targeting?

- A. SCADA
- B. CAN bus
- C. Modbus
- D. IoT

**Answer:** B

#### Explanation:

The Controller Area Network - CAN bus is a message-based protocol designed to allow the Electronic Control Units (ECUs) found in today's automobiles, as well as other devices, to communicate with each other in a reliable, priority-driven fashion. Messages or "frames" are received by all devices in the network, which does not require a host computer.

CAN bus stands for Controller Area Network bus, which is a communication protocol that allows different devices and components in a vehicle to communicate and exchange data. The vulnerability within the new fleet of vehicles is most likely targeting the CAN bus, because it could allow an attacker to manipulate or disrupt the operation of the vehicle. SCADA, Modbus, and IoT are other terms related to communication protocols or systems, but they are not specific to vehicles.

Reference: <https://www.csoonline.com/article/3218104/what-is-a-can-bus-and-how-can-it-be-hacked.html>

#### NEW QUESTION 4

The steering committee for information security management annually reviews the security incident register for the organization to look for trends and systematic issues. The steering committee wants to rank the risks based on past incidents to improve the security program for next year. Below is the incident register for the organization:

Date	Department impacted	Incident	Impact
January 12	IT	SIEM log review was not performed in the month of January	- Known malicious IPs not blacklisted - No known company impact - Policy violation - Internal audit finding
March 16	HR	Termination of employee; did not remove access within 48-hour window	- No known impact - Policy violation - Internal audit finding
April 1	Engineering	Change control ticket not found	- No known impact - Policy violation - Internal audit finding
July 31	Company-wide	Service outage	- Backups failed - Unable to restore for three days - Policy violation
September 8	IT	Quarterly scans showed unpatched critical vulnerabilities (more than 90 days old)	- No known impact - Policy violation - Internal audit finding
November 24	Company-wide	Ransomware attack	- Backups failed - Unable to restore for five days - Policy violation
December 26	IT	Lost laptop at airport	- Cost of laptop \$1,250

Which of the following should the organization consider investing in first due to the potential impact of availability?

- A. Hire a managed service provider to help with vulnerability management.
- B. Build a warm site in case of system outages.
- C. Invest in a failover and redundant system, as necessary.
- D. Hire additional staff for the IT department to assist with vulnerability management and log review.

**Answer: C**

**Explanation:**

Investing in a failover and redundant system, as necessary, is the best solution to improve the availability of the organization's systems based on past incidents. A failover system is a backup system that automatically takes over the operation of a primary system in case of a failure or outage. A redundant system is a duplicate system that runs simultaneously with the primary system and provides backup functionality if needed. Investing in a failover and redundant system can help to ensure that the organization's systems are always available and can handle the workload without interruption or degradation .

**NEW QUESTION 5**

Due to a rise in cyberattackers seeking PHI, a healthcare company that collects highly sensitive data from millions of customers is deploying a solution that will ensure the customers' data is protected by the organization internally and externally Which of the following countermeasures can BEST prevent the loss of customers' sensitive data?

- A. Implement privileged access management
- B. Implement a risk management process
- C. Implement multifactor authentication
- D. Add more security resources to the environment

**Answer: A**

**Explanation:**

Implementing privileged access management (PAM) would be the best countermeasure to prevent the loss of customers' sensitive data due to a rise in cyberattackers seeking PHI (Protected Health Information). PAM is a solution that helps to control and monitor the access and use of privileged accounts, such as administrator or root accounts, that have elevated permissions or access to sensitive data. PAM can help prevent unauthorized or accidental use of privileged accounts by enforcing strict access policies, such as requiring approval, authentication, or auditing for each access request. PAM can also help rotate or expire the passwords of privileged accounts to reduce the risk of compromise. PAM can help protect PHI from cyberattackers who may try to exploit privileged accounts to access or exfiltrate sensitive data.

**NEW QUESTION 6**

Which of the following is a vulnerability associated with the Modbus protocol?

- A. Weak encryption
- B. Denial of service
- C. Unchecked user input
- D. Lack of authentication

**Answer: D**

**Explanation:**

Modbus is a communication protocol that is widely used in industrial control systems (ICS) and supervisory control and data acquisition (SCADA) systems. However, Modbus was not designed to provide security and it is vulnerable to various cyberattacks. One of the main vulnerabilities of Modbus is the lack of authentication, which means that any device on the network can send or receive commands without verifying its identity or authority. This can lead to unauthorized access, data manipulation, or denial of service attacks on the ICS or SCADA system.

Some examples of attacks that exploit the lack of authentication in Modbus are:

- > Detection attack: An attacker can scan the network and discover the devices and their addresses, functions, and registers by sending Modbus requests and observing the responses. This can reveal sensitive information about the system configuration and operation1.
- > Command injection attack: An attacker can send malicious commands to the devices and modify their settings, values, or outputs. For example, an attacker can change the speed of a motor, open or close a valve, or turn off a switch23.
- > Response injection attack: An attacker can intercept and alter the responses from the devices and

deceive the master or other devices about the true state of the system. For example, an attacker can fake a normal response when there is an error or an alarm<sup>23</sup>.

- Denial of service attack: An attacker can flood the network with Modbus requests or commands and overload the devices or the communication channel. This can prevent legitimate requests or commands from being processed and disrupt the normal operation of the system<sup>14</sup>. To mitigate these attacks, some security measures that can be applied to Modbus are:
  - Encryption: Encrypting the Modbus messages can prevent eavesdropping and tampering by unauthorized parties. However, encryption can also introduce additional overhead and latency to the communication<sup>56</sup>.
  - Authentication: Adding authentication mechanisms to Modbus can ensure that only authorized devices can send or receive commands. Authentication can be based on passwords, certificates, tokens, or other methods<sup>56</sup>.
  - Firewall: Installing a firewall between the Modbus network and other networks can filter out unwanted traffic and block unauthorized access. A firewall can also enforce rules and policies for Modbus communication<sup>24</sup>.
  - Intrusion detection system: Deploying an intrusion detection system (IDS) on the Modbus network can monitor the traffic and detect anomalous or malicious activities. An IDS can also alert the operators or trigger countermeasures when an attack is detected<sup>24</sup>.

#### NEW QUESTION 7

After detecting possible malicious external scanning, an internal vulnerability scan was performed, and a critical server was found with an outdated version of JBoss. A legacy application that is running depends on that version of JBoss. Which of the following actions should be taken FIRST to prevent server compromise and business disruption at the same time?

- A. Make a backup of the server and update the JBoss server that is running on it.
- B. Contact the vendor for the legacy application and request an updated version.
- C. Create a proper DMZ for outdated components and segregate the JBoss server.
- D. Apply visualization over the server, using the new platform to provide the JBoss service for the legacy application as an external service.

**Answer: C**

#### Explanation:

What is that application for? "The DMZ is a special network zone designed to house systems that receive connections from the outside world, such as web and email servers. Sound firewall designs place these systems on an isolated network where, if they become compromised, they pose little threat to the internal network because connections between the DMZ and the internal network must still pass through the firewall and are subject to its security policy" Creating a proper DMZ for outdated components and segregating the JBoss server is the best action to take first to prevent server compromise and business disruption at the same time. A DMZ (demilitarized zone) is a network segment that separates internal networks from external networks, such as the internet, and provides an additional layer of security<sup>3</sup>. Creating a proper DMZ for outdated components and segregating the JBoss server can isolate and protect the critical server from external attacks that may exploit its vulnerability.

#### NEW QUESTION 8

Which of the following is the greatest security concern regarding ICS?

- A. The involved systems are generally hard to identify.
- B. The systems are configured for automatic updates, leading to device failure.
- C. The systems are oftentimes air gapped, leading to fileless malware attacks.
- D. Issues on the systems cannot be reversed without rebuilding the systems.

**Answer: D**

#### Explanation:

Industrial control systems (ICS) are systems that monitor and control physical processes, such as power generation, water treatment, manufacturing, and transportation. ICS are often critical for public safety and national security, and therefore a prime target for cyberattacks. One of the greatest security concerns regarding ICS is that issues on the systems cannot be reversed without rebuilding the systems. This means that any damage or disruption caused by an attack can have long-lasting and catastrophic consequences for the physical infrastructure and human lives. The other options are not true or not specific to ICS. References: CompTIA Cybersecurity Analyst (CySA+) Certification Exam Objectives (CS0-002), page 13; <https://www.us-cert.gov/ics/What-are-Industrial-Control-Systems>

#### NEW QUESTION 9

A company is aiming to test a new incident response plan. The management team has made it clear that the initial test should have no impact on the environment. The company has limited resources to support testing. Which of the following exercises would be the best approach?

- A. Tabletop scenarios
- B. Capture the flag
- C. Red team v
- D. blue team
- E. Unknown-environment penetration test

**Answer: A**

#### Explanation:

A tabletop scenario is an informal, discussion-based session in which a team discusses their roles and responses during an emergency, walking through one or more example scenarios. A tabletop scenario is the best approach for a company that wants to test a new incident response plan without impacting the environment or using many resources. A tabletop scenario can help the company identify strengths and weaknesses in their plan, clarify roles and responsibilities, and improve communication and coordination among team members. The other options are more intensive and disruptive exercises that involve simulating a real incident or attack. References: CompTIA Cybersecurity Analyst (CySA+) Certification Exam Objectives (CS0-002), page 16; <https://www.linkedin.com/pulse/tabletop-exercises-explained-matt-lemon-phd>

#### NEW QUESTION 10

A company notices unknown devices connecting to the internal network and would like to implement a solution to block all non-corporate managed machines. Which of the following solutions would be best to accomplish this goal?

- A. WPA2 for W1F1 networks
- B. NAC with 802.1X implementation
- C. Extensible Authentication Protocol
- D. RADIUS with challenge/response

**Answer: B**

**Explanation:**

This solution is the best to accomplish the goal of blocking all non-corporate managed machines from connecting to the internal network. NAC stands for network access control, which is a method of enforcing policies and rules on network devices based on their identity, role, location, and other attributes. 802.1X is a standard for port-based network access control, which authenticates devices before granting them access to a network port or wireless access point.

**NEW QUESTION 10**

Which of the following BEST identifies the appropriate use of threat intelligence as a function of detection and response?

- A. To identify weaknesses in an organization's security posture
- B. To identify likely attack scenarios within an organization
- C. To build a business security plan for an organization
- D. To build a network segmentation strategy

**Answer: B**

**Explanation:**

Threat intelligence can be used to identify likely attack scenarios within an organization based on the organization's specific vulnerabilities, assets, and threat landscape. Threat intelligence can help security teams anticipate and prepare for potential attacks, as well as detect and respond to ongoing attacks more effectively<sup>1</sup>. Threat intelligence can also provide insights into the threat actors, their motivations, and their tactics, techniques, and procedures (TTPs)<sup>2</sup>.

**NEW QUESTION 15**

Which of the following is an advantage of continuous monitoring as a way to help protect an enterprise?

- A. Continuous monitoring leverages open-source tools, thereby reducing cost to the organization.
- B. Continuous monitoring responds to active Intrusions without requiring human assistance.
- C. Continuous monitoring blocks malicious activity by connecting to real-time threat feeds.
- D. Continuous monitoring uses automation to identify threats and alerts in real time

**Answer: D**

**Explanation:**

Continuous monitoring uses automation to identify threats and alerts in real time. This is an advantage of continuous monitoring as a way to help protect an enterprise because it enables faster detection and response to security incidents, reduces the risk of human error, and improves the overall security posture and compliance of the organization.

**NEW QUESTION 16**

A company stores all of its data in the cloud. All company-owned laptops are currently unmanaged, and all users have administrative rights. The security team is having difficulty identifying a way to secure the environment. Which of the following would be the BEST method to protect the company's data?

- A. Implement UEM on an systems and deploy security software.
- B. Implement DLP on all workstations and block company data from being sent outside the company
- C. Implement a CASB and prevent certain types of data from being downloaded to a workstation
- D. Implement centralized monitoring and logging for an company systems.

**Answer: C**

**Explanation:**

A CASB, or Cloud Access Security Broker, is a software tool or service that acts as an intermediary between an organization's cloud services and its users. A CASB can provide various security functions, such as visibility, compliance, threat protection, and data security<sup>2</sup>

A CASB can help protect the company's data stored in the cloud by preventing certain types of data from being downloaded to a workstation, such as sensitive or confidential information. This can reduce the risk of data leakage, theft, or loss if a workstation is compromised or stolen.

**NEW QUESTION 20**

A security operations manager wants some recommendations for improving security monitoring. The security team currently uses past events to create an IOC list for monitoring.

Which of the following is the best suggestion for improving monitoring capabilities?

- A. Update the IPS and IDS with the latest rule sets from the provider.
- B. Create an automated script to update the IPS and IDS rule sets.
- C. Use an automated subscription to select threat feeds for IDS.
- D. Implement an automated malware solution on the IPS.

**Answer: C**

**Explanation:**

Threat feeds are sources of information that provide timely and relevant data about current or emerging cyber threats, such as indicators of compromise (IOCs), tactics, techniques, and procedures (TTPs), or threat actors. An IDS, or intrusion detection system, is a tool that monitors network traffic and detects malicious or anomalous activities based on predefined or custom rules. Using an automated subscription to select threat feeds for IDS can help to improve security monitoring capabilities by providing the security team with up-to-date and actionable intelligence that can enhance the detection and response to cyberattacks

**NEW QUESTION 24**

While reviewing a vulnerability assessment, an analyst notices the following issue is identified in the report: this finding, which of the following would be most appropriate for the analyst to recommend to the network engineer?

The following certificates are part of the certificate chain but using insecure signature

```
ms:
CN=10.200.20.1,OU=HTTPS Management Certificate for SonicWALL (self-
,O=HTTPS Management Certificate for SonicWALL (self-signed),L=Sunnyvale,ST=Califor
e Algorithm: sha1WithRSAEncryption
```

- A. Reconfigure the device to support only connections leveraging TLSv1.2.
- B. Obtain a new self-signed certificate and select AES as the hashing algorithm.
- C. Replace the existing certificate with a certificate that uses only MD5 for signing.
- D. Use only signed certificates with cryptographically secure certificate sources.

**Answer: A**

**Explanation:**

The vulnerability assessment report shows that the device is using SSLv3, which is an outdated and insecure protocol for secure communication over a network. SSLv3 has several known vulnerabilities, such as POODLE, that allow attackers to decrypt or modify the encrypted data. To remediate this issue, the analyst should recommend reconfiguring the device to support only connections leveraging TLSv1.2, which is a newer and more secure protocol that provides stronger encryption, authentication, and integrity protection for the data transmitted over the network.

**NEW QUESTION 26**

A cybersecurity analyst needs to harden a server that is currently being used as a web server. The server needs to be accessible when entering www.company.com into the browser. Additionally, web pages require frequent updates which are performed by a remote contractor. Given the following output:

```
Starting Nmap 7.12 ( https://nmap.org ) at 2020-08-25 11:44
Nmap scan report for finance-server (72.56.70.94)
Host is up (0.000060s latency).
Not shown: 995 closed ports
PORT      STATE SERVICE
22/tcp    open  ssh
23/tcp    open  telnet
53/tcp    open  domain
80/tcp    open  http
443/tcp   open  https
```

Which of the following should the cybersecurity analyst recommend to harden the server? (Select TWO).

- A. Uninstall the DNS service
- B. Perform a vulnerability scan
- C. Change the server's IP to a private IP address
- D. Disable the Telnet service
- E. Block port 80 with the host-based firewall
- F. Change the SSH port to a non-standard port

**Answer: DF**

**Explanation:**

Disabling the Telnet service would harden the server by removing an insecure protocol that transmits data in cleartext and could allow unauthorized access to the server. Changing the SSH port to a non-standard port would harden the server by reducing the exposure to brute-force attacks or port scans that target the default SSH port (22). Uninstalling the DNS service, performing a vulnerability scan, changing the server's IP to a private IP address, or blocking port 80 with the host-based firewall would not harden the server or could affect its functionality as a web server. Reference: <https://www.cisco.com/c/en/us/support/docs/ip/access-lists/13608-21.html>

**NEW QUESTION 28**

An analyst is working on a method to allow secure access to a highly sensitive server. The solution must allow named individuals remote access to data contained on the box and must limit access to a single IP address. Which of the following solutions would best meet these requirements?

- A. Jump box
- B. Software-defined networking
- C. VLAN
- D. ACL

**Answer: A**

**Explanation:**

A jump box is a secure computer that can be used to access a remote server or network. It acts as an intermediary between the user and the target system, and can limit access to specific IP addresses. A jump box can also provide logging and auditing of the user's actions on the remote system. A jump box is a common solution for accessing highly sensitive servers or networks.

**NEW QUESTION 30**

While conducting a cloud assessment, a security analyst performs a Prowler scan, which generates the following within the report:

```
7.74 [extra774] Ensure credentials unused for 30 days or greater are disabled
PASS! User admin has logged into the console in the past 30 days
PASS! User SecOps has logged into the console in the past 30 days
INFO! User CloudDev has not used access key 1 since creation
FAIL! User BusinessUsr has never used access key 1 and not rotated it in 30 days
PASS! No users found with access key 2 enabled
```

Based on the Prowler report, which of the following is the BEST recommendation?

- A. Delete CloudDev access key 1.
- B. Delete BusinessUsr access key 1.
- C. Delete access key 1.
- D. Delete access key 2.

**Answer: C**

**Explanation:**

Prowler is a tool that can scan AWS environments for security issues and compliance violations. The Prowler report shows that there are two access keys for CloudDev user: access key 1 and access key 2. Access key 1 has not been used in more than 90 days, which violates the AWS CIS benchmark 1.4 (Ensure access keys are rotated every 90 days or less). Therefore, the best recommendation is to delete access key 1 and use access key 2 instead. Deleting CloudDev access key 1, deleting BusinessUsr access key 1, or deleting access key 2 are not appropriate recommendations based on the Prowler report. Reference: <https://github.com/toniblyx/prowler>

**NEW QUESTION 33**

An IT security analyst has received an email alert regarding vulnerability within the new fleet of vehicles the company recently purchased. Which of the following attack vectors is the vulnerability MOST likely targeting?

- A. SCADA
- B. CAN bus
- C. Modbus
- D. IoT

**Answer: B**

**Explanation:**

CAN bus (Controller Area Network) is a vehicle bus standard designed to allow microcontrollers and devices to communicate with each other's applications without a host computer<sup>1</sup>. CAN bus is a message-based protocol, designed originally for multiplex electrical wiring within automobiles to save on copper, but it can also be used in many other contexts. CAN bus enables each device to send and receive data on a shared network, reducing the need for complex wiring and increasing reliability and performance. CAN bus is one of the five protocols used in the on-board diagnostics (OBD)-II vehicle diagnostics standard. A vulnerability within the new fleet of vehicles that the company recently purchased is most likely targeting CAN bus, as it is a common and critical communication system in modern vehicles. An attacker could exploit a vulnerability in CAN bus to compromise or manipulate various vehicle functions or systems, such as braking, steering, engine control, airbags, etc. SCADA (A) stands for Supervisory Control And Data Acquisition, which is a system that monitors and controls industrial processes or infrastructure<sup>2</sup>. SCADA is not a vehicle bus standard and is not likely to be targeted by a vulnerability within a fleet of vehicles. Modbus © is a serial communications protocol that connects industrial electronic devices<sup>3</sup>. Modbus is not a vehicle bus standard and is not likely to be targeted by a vulnerability within a fleet of vehicles. IoT (D) stands for Internet of Things, which is a network of physical objects that are embedded with sensors, software, and other technologies to connect and exchange data with other devices and systems over the internet. IoT is not a vehicle bus standard and is not likely to be targeted by a vulnerability within a fleet of vehicles.

References: 1: <https://www.techopedia.com/definition/24771/technical-controls> 2: <https://www.techopedia.com/definition/25888/security-development-lifecycle-sdl> 3: <https://www.techopedia.com/definition/31686/resource-exhaustion> : <https://www.techopedia.com/definition/13493/penetration-testing>

**NEW QUESTION 38**

A security analyst was transferred to an organization's threat-hunting team to track specific activity throughout the enterprise environment The analyst must observe and assess the number of times this activity occurs and aggregate the results. Which of the following is the BEST threat-hunting method for the analyst to use?

- A. Stack counting
- B. Searching
- C. Clustering
- D. Grouping

**Answer: A**

**Explanation:**

Stack counting is the best threat-hunting method for the analyst to use to observe and assess the number of times a specific activity occurs and aggregate the results. Stack counting is a technique that involves collecting data from multiple sources, such as logs, events, or alerts, and grouping them by a common attribute, such as an IP address, a user name, or a process name. Stack counting can help identify patterns, trends, outliers, or anomalies in the data that may indicate malicious activity or compromise.

**NEW QUESTION 41**

An analyst is reviewing the following output as part of an incident:

```
ICMP ECHO REQUEST 192.168.1.10 -> 10.20.30.40 Length=10 ABCDEFGHIJ
ICMP ECHO REPLY 10.20.30.40 -> 192.168.1.10 Length=10 ABCDEFGHIJ
ICMP ECHO REQUEST 192.168.1.10 -> 10.20.30.40 Length=15 ABCDEFGHIJ
ICMP ECHO REPLY 10.20.30.40 -> 192.168.1.10 Length=15 ABCDEFGHIJ|]8fd
ICMP ECHO REQUEST 192.168.1.10 -> 10.20.30.40 Length=20 ABCDEFGHIJ1234567890
ICMP ECHO REPLY 10.20.30.40 -> 192.168.1.10 Length=20 ABCDEFGHIJ1234567890
```

Which of the following is MOST likely happening?

- A. The hosts are part of a reflective denial-of-service attack.
- B. Information is leaking from the memory of host 10.20.30.40
- C. Sensitive data is being exfiltrated by host 192.168.1.10.
- D. Host 291.168.1.10 is performing firewall port knocking.

**Answer:** A

**Explanation:**

The hosts are most likely part of a reflective denial-of-service attack. A reflective denial-of-service attack is a technique that allows attackers to both magnify the amount of malicious traffic they can generate and obscure the sources of the attack traffic. This type of distributed denial-of-service (DDoS) attack overwhelms the target, causing disruption or outage of systems and services. A reflective denial-of-service attack works by spoofing the target's IP address and sending requests to vulnerable servers that will respond to the target. The servers act as reflectors that bounce back the responses to the target, amplifying the attack volume and hiding the attacker's identity<sup>1</sup>. The output shows that host 10.20.30.40 is sending requests with a spoofed source IP address of 192.168.1.10 to host 203.0.113.15 on port 123, which is used by the Network Time Protocol (NTP). NTP is a common protocol used for reflection/amplification attacks, as it can generate large responses to small requests<sup>2</sup>.

**NEW QUESTION 43**

A company's Chief Information Security Officer (CISO) published an Internet usage policy that prohibits employees from accessing unauthorized websites. The IT department whitelisted websites used for business needs. The CISO wants the security analyst to recommend a solution that would improve security and support employee morale. Which of the following security recommendations would allow employees to browse non-business-related websites?

- A. Implement a virtual machine alternative.
- B. Develop a new secured browser.
- C. Configure a personal business VLAN.
- D. Install kiosks throughout the building.

**Answer:** A

**Explanation:**

A virtual machine alternative is a solution that allows employees to access non-business-related websites on a separate virtual machine that is isolated from the company's network and data. This way, the employees can browse the internet without compromising the security or performance of the company's systems<sup>3</sup>

**NEW QUESTION 44**

A company needs to expand its development group due to an influx of new feature requirements from its customers. To do so quickly, the company is using junior-level developers to fill in as needed. The company has found a number of vulnerabilities that have a direct correlation to the code contributed by the junior-level developers. Which of the following controls would best help to reduce the number of software vulnerabilities introduced by this situation?

- A. Requiring senior-level developers to review code written by junior-level developers
- B. Hiring senior-level developers only
- C. Allowing only senior-level developers to write code for new features
- D. Using authorized source code repositories only

**Answer:** A

**Explanation:**

This control would best help to reduce the number of software vulnerabilities introduced by this situation because it ensures that code quality and security standards are met before deploying to production. Senior-level developers can provide feedback, guidance, and corrections to junior-level developers and catch any errors or flaws in their code.

**NEW QUESTION 46**

A security analyst is monitoring a company's network traffic and finds ping requests going to accounting and human resources servers from a SQL server. Upon investigation, the analyst discovers a technician responded to potential network connectivity issues. Which of the following is the best way for the security analyst to respond?

- A. Report this activity as a false positive, as the activity is legitimate.
- B. Isolate the system and begin a forensic investigation to determine what was compromised.
- C. Recommend network segmentation to the management team as a way to secure the various environments.
- D. Implement host-based firewalls on all systems to prevent ping sweeps in the future.

**Answer:** A

**Explanation:**

Reporting this activity as a false positive, as the activity is legitimate, is the best way for the security analyst to respond. A false positive is a condition in which harmless traffic is classified as a potential network attack by a security monitoring tool. Ping requests are a common network diagnostic tool that can be used to test network connectivity issues. The technician who responded to potential network connectivity issues was performing a legitimate task and did not pose any threat to the accounting and human resources servers.

**NEW QUESTION 47**

Which of the following is MOST important when developing a threat hunting program?

- A. Understanding penetration testing techniques
- B. Understanding how to build correlation rules within a SIEM
- C. Understanding security software technologies
- D. Understanding assets and categories of assets

**Answer:** D

**Explanation:**

Understanding assets and categories of assets is most important when developing a threat hunting program. Assets are anything that have value to an organization, such as data, systems, networks, applications, devices, people, processes, or reputation. Categories of assets are groups of assets that share common characteristics or attributes, such as type, function, location, owner, or criticality. Understanding assets and categories of assets can help to identify and prioritize the potential targets and impact of threats in an organization. Understanding assets and categories of assets can also help to determine and apply appropriate security controls and measures for each asset or category. Understanding assets and categories of assets can also help to collect and analyze relevant data and indicators for each asset or category during threat hunting activities. Understanding penetration testing techniques (A) is not most important when developing a threat hunting program. Penetration testing techniques are methods or tools that are used to simulate attacks on a system or network to evaluate its security posture and identify vulnerabilities or weaknesses. Penetration testing techniques can help to validate and improve the security of an organization, but they are not directly related to threat hunting activities. Penetration testing techniques are reactive rather than proactive approaches to security. Understanding how to build correlation rules within a SIEM (B) is also not most important when developing a threat hunting program. Correlation rules are logic statements that define relationships or patterns between different events or data points in a system or network. A SIEM (Security Information and Event Management) is a software solution that collects, analyzes, and correlates data from various sources in an organization to provide security monitoring and alerting capabilities<sup>1</sup>. Correlation rules can help to detect and respond to known threats in an organization, but they are not sufficient for threat hunting activities. Correlation rules are based on predefined criteria rather than hypotheses or assumptions about unknown threats. Understanding security software technologies (C) is also not most important when developing a threat hunting program. Security software technologies are applications or programs that provide security functions or features for an organization, such as antivirus software, firewalls, encryption software, VPNs (Virtual Private Networks), etc<sup>2</sup>. Security software technologies can help to protect an organization from various threats, but they are not essential for threat hunting activities. Security software technologies are based on signatures or heuristics rather than indicators of compromise or behavioral analysis.

References: 1: <https://www.techopedia.com/definition/24771/technical-controls> 2: <https://www.techopedia.com/definition/25888/security-development-lifecycle-sdl>

**NEW QUESTION 52**

While reviewing abnormal user activity, a security analyst notices a user has the following fileshare activities:

Server	Share	Action
Server001	Confidential	Deny
Server001	HumanResources	Deny
Server002	Temporary	Permit
Server002	Installs	Permit
Server003	Payroll	Deny
Server003	W9Docs	Deny

Which of the following should the analyst do first?

- A. Initiate the security incident response process for unauthorized access.
- B. Shut down the servers while the access is investigated.
- C. Remove the user's access for all fileshares.
- D. Lock the user account until the access can be explained.

**Answer: A**

**Explanation:**

The security incident response process is a set of procedures and guidelines that define how to identify, contain, analyze, and recover from security incidents that compromise the confidentiality, integrity, or availability of an organization's assets or operations. Initiating the security incident response process for unauthorized access is the first and most appropriate action that the analyst should take, as it would allow the analyst to follow a structured and consistent approach to handle the situation and mitigate the impact of the incident<sup>1</sup>.

**NEW QUESTION 57**

Which of the following best explains why it is important for companies to implement both privacy and security policies?

- A. Private data is insecure by design, so different programs ensure both policies are addressed.
- B. Security policies will automatically ensure the data complies with privacy regulations.
- C. Privacy policies will satisfy all regulations to secure consumer and sensitive company data.
- D. Both policies have some overlap, but the differences can have regulatory consequences.

**Answer: D**

**Explanation:**

The correct answer is D. Both policies have some overlap, but the differences can have regulatory consequences. Privacy and security policies are both important for companies to protect their data and comply with various laws and regulations. However, privacy and security policies are not the same, and they have different goals and requirements.

Privacy policies are nontechnical controls that define how a company collects, uses, shares, and protects personal information from its customers, employees, or partners. Privacy policies are based on the principles of data minimization, consent, transparency, and accountability. Privacy policies aim to respect the rights and preferences of data subjects and comply with different privacy regulations, such as the General Data Protection Regulation (GDPR) or the California Consumer Privacy Act (CCPA)<sup>1</sup>.

Security policies are technical or nontechnical controls that define how a company protects its data and systems from unauthorized access, modification, or destruction. Security policies are based on the principles of confidentiality, integrity, and availability. Security policies aim to prevent or mitigate the impact of cyberattacks and comply with different security standards, such as the Payment Card Industry Data Security Standard (PCI DSS) or the ISO/IEC 27000 series<sup>2</sup>. Privacy and security policies have some overlap, as they both involve data protection and compliance. However, they also have some differences, as they address different aspects and risks of data processing. For example, a company may have a strong security policy that encrypts its data, but it may still violate a privacy policy if it collects or shares more data than necessary or without consent. Conversely, a company may have a clear privacy policy that informs its customers about its data practices, but it may still suffer a security breach if it does not implement adequate security measures<sup>3</sup>.

**NEW QUESTION 58**

After examining a header and footer file, a security analyst begins reconstructing files by scanning the raw data bytes of a hard disk and rebuilding them. Which of the following techniques is the analyst using?

- A. Header analysis
- B. File carving
- C. Metadata analysis
- D. Data recovery

**Answer: B**

**Explanation:**

File carving is a technique that involves scanning the raw data bytes of a hard disk and rebuilding files by using information found in file headers and footers. File carving can help recover files that have been deleted or corrupted or that are not recognized by the file system. File carving does not rely on metadata or directory structures to locate files, but rather on file signatures or patterns that indicate the start and end of files. File carving can be performed manually or automatically using tools or software that support various file formats. Header analysis (A) is a technique that involves examining file headers to determine file types or formats. Header analysis can help identify files that have been renamed or disguised or that have unknown extensions. Header analysis does not involve reconstructing files by scanning raw data bytes. Metadata analysis © is a technique that involves examining metadata to extract information about files or file systems. Metadata analysis can help determine file attributes such as name, size, date, location, owner, etc. Metadata analysis does not involve reconstructing files by scanning raw data bytes

**NEW QUESTION 60**

An application developer needs help establishing a digital certificate for a new application. Which of the following illustrates a certificate management best practice?

- A. Ensure the certificate is applied to the certificate revocation list.
- B. Ensure the certificate key algorithm is SHA-1 compliant.
- C. Ensure the certificate is requested from a trusted CA.
- D. Ensure the developer has self-signed the certificate.
- E. Ensure the certificate key is less than 1028 bits long.

**Answer: C**

**Explanation:**

The best practice for establishing a digital certificate for a new application is to ensure the certificate is requested from a trusted CA. A CA stands for Certificate Authority, and it is an entity that issues and verifies digital certificates, which are electronic documents that contain a public key and a digital signature that prove the identity and authenticity of an application, a website, or a person. Requesting a certificate from a trusted CA can help ensure that the certificate is valid, secure, and recognized by other parties.

**NEW QUESTION 65**

Which of the following lines from this output most likely indicates that attackers could quickly use brute force and determine the negotiated secret session key?

```
* SSL 3.0 Cipher Suites:
Attempted to connect using 80 cipher suites.
The server accepted the following 10 cipher suites:
TLS_RSA_WITH_RC4_128_SHA 128
TLS_RSA_WITH_RC4_128_MD5 128
TLS_RSA_WITH_DES_CBC_SHA 56
TLS_RSA_WITH_AES_256_CBC_SHA 256
TLS_RSA_WITH_AES_128_CBC_SHA 128
TLS_RSA_WITH_3DES_EDE_CBC_SHA 168

* TLS 1.0 Cipher Suites:
Attempted to connect using 80 cipher suites.
The server accepted the following 10 cipher suites:
TLS_RSA_WITH_RC4_128_SHA 128
TLS_RSA_WITH_RC4_128_MD5 128
TLS_RSA_WITH_DES_CBC_SHA 56
TLS_RSA_WITH_AES_256_CBC_SHA 256
TLS_RSA_WITH_AES_128_CBC_SHA 128
TLS_RSA_WITH_3DES_EDE_CBC_SHA 168
TLS_DHE_RSA_WITH_DES_CBC_SHA 56 DH (1024 bits)
TLS_DHE_RSA_WITH_AES_256_CBC_SHA 256 DH (1024 bits)
TLS_DHE_RSA_WITH_AES_128_CBC_SHA 128 DH (1024 bits)
TLS_DHE_RSA_WITH_3DES_EDE_CBC_SHA 168 DH (1024 bits)
TLS_DHE_RSA_WITH_AES_256_GCM_SHA256 DH (2048 bits)
The group of cipher suites supported by the server has the following properties:
Forward Secrecy OK - Supported
Legacy RC4 Algorithm INSECURE - Supported
```

- A. TLS\_RSA\_WITH\_DES\_CBC\_SHA 56
- B. TLS\_DHE\_RSA\_WITH\_AES\_128\_CBC\_SHA 128 DH (1024 bits)
- C. TLS\_RSA\_WITH\_AES\_256\_CBC\_SHA 256
- D. TLS\_DHE\_RSA\_WITH\_AES\_256\_GCM\_SHA256 DH (2048 bits)

**Answer: B**

**Explanation:**

The line from this output that most likely indicates that attackers could quickly use brute force and determine the negotiated secret session key is TLS\_DHE\_RSA\_WITH\_AES\_128\_CBC\_SHA 128 DH (1024 bits). This line indicates that the cipher suite uses Diffie-Hellman ephemeral (DHE) key exchange with RSA authentication, AES 128-bit encryption with cipher block chaining (CBC) mode, and SHA-1 hashing. The DHE key exchange uses a 1024-bit Diffie-Hellman

group, which is considered too weak for modern security standards and can be broken by attackers using sufficient computing power. The other lines indicate stronger cipher suites that use longer key lengths or more secure algorithms. References: CompTIA Cybersecurity Analyst (CySA+) Certification Exam Objectives (CS0-002), page 9;  
<https://learn.microsoft.com/en-us/windows/win32/secauthn/cipher-suites-in-schannel>

#### NEW QUESTION 70

A security analyst is concerned about sensitive data living on company file servers following a zero-day attack that nearly resulted in a breach of millions of customer records. The after action report indicates a lack of controls around the file servers that contain sensitive data. Which of the following DLP considerations would best help the analyst to classify and address the sensitive data on the file servers?

- A. Implement a CASB device and connect the SaaS applications.
- B. Deploy network DLP appliances pointed to all file servers.
- C. Use data-at-rest scans to locate and identify sensitive data.
- D. Install endpoint DLP agents on all computing resources.

**Answer: C**

#### Explanation:

Use data-at-rest scans to locate and identify sensitive data. This option is the best DLP consideration for addressing the sensitive data on the file servers. Data-at-rest scans are performed on data that is stored on a device or a network, such as file servers, and can help identify and classify sensitive data based on predefined policies or rules. The other options are not relevant for this scenario, as they either deal with data in transit (network DLP appliances), data in use (endpoint DLP agents), or cloud-based data (CASB device).

#### NEW QUESTION 73

A routine vulnerability scan detected a known vulnerability in a critical enterprise web application. Which of the following would be the BEST next step?

- A. Submit a change request to have the system patched
- B. Evaluate the risk and criticality to determine if further action is necessary
- C. Notify a manager of the breach and initiate emergency procedures.
- D. Remove the application from production and inform the users.

**Answer: B**

#### Explanation:

A routine vulnerability scan is a process of identifying and assessing known vulnerabilities in a system or network using automated tools or software.

A vulnerability scan does not necessarily mean that there is an active threat or exploit on the system or network, but rather that there are potential weaknesses that could be exploited by attackers. The best next step after a routine vulnerability scan detected a known vulnerability in a critical enterprise web application is to evaluate the risk and criticality of the vulnerability, which means assessing the likelihood and impact of an exploit on the web application, and prioritizing the remediation actions based on the severity and urgency of the vulnerability.

#### NEW QUESTION 76

A security analyst found an old version of OpenSSH running on a DMZ server and determined the following piece of code could have led to a command execution through an integer overflow;

```
nresp = packet_get_inf();
if (nresp > 0) {
    response = xmalloc(nresp*sizeof(char*));
    for (i = 0; i < nresp; i++)
        response[i] = packet_get_string(NULL);
}
```

Which of the following controls must be in place to prevent this vulnerability?

- A. Convert all integer numbers in strings to handle the memory buffer correctly.
- B. Implement float numbers instead of integers to prevent integer overflows.
- C. Use built-in functions from libraries to check and handle long numbers properly.
- D. Sanitize user inputs, avoiding small numbers that cannot be handled in the memory.

**Answer: C**

#### Explanation:

The security analyst should implement a control that uses built-in functions from libraries to check and handle long numbers properly. This will help prevent integer overflow vulnerabilities, which occur when a value is moved into a variable type too small to hold it. For example, if an integer variable can only store values up to 255, and a value of 256 is assigned to it, the variable will overflow and wrap around to 0. This can cause unexpected program behavior or lead to buffer overflow vulnerabilities if the overflowed value is used as an index or size for memory allocation. Built-in functions from libraries can help avoid integer overflow by performing checks on the input values and the resulting values, and throwing exceptions or errors if they exceed the limits of the variable type.

#### NEW QUESTION 80

A security analyst is concerned the number of security incidents being reported has suddenly gone down. Daily business interactions have not changed, and no following should the analyst review FIRST?

- A. The DNS configuration
- B. Privileged accounts
- C. The IDS rule set
- D. The firewall ACL

**Answer: C**

#### Explanation:

The security analyst should review the IDS rule set first. The IDS (Intrusion Detection System) is a tool that monitors network traffic and alerts on any suspicious or malicious activity. The IDS rule set is a set of conditions or patterns that define what constitutes normal or abnormal behavior on the network. The IDS rule set can affect the number of security incidents being reported, as it determines what triggers an alert or not. The security analyst should review the IDS rule set to check if it is up to date, accurate, and comprehensive. If the IDS rule set is outdated, inaccurate, or incomplete, it may miss some incidents or generate false positives or negatives.

#### NEW QUESTION 82

A new variant of malware is spreading on the company network using TCP 443 to contact its command-and-control server. The domain name used for callback continues to change, and the analyst is unable to predict future domain name variance. Which of the following actions should the analyst take to stop malicious communications with the LEAST disruption to service?

- A. Implement a sinkhole with a high entropy level
- B. Disable TCP/53 at the perimeter firewall
- C. Block TCP/443 at the edge router
- D. Configure the DNS forwarders to use recursion

**Answer: A**

#### Explanation:

A sinkhole is a technique that redirects malicious network traffic to a controlled destination, such as a fake server or a black hole. A sinkhole can be used to stop malicious communications with a command-and-control server by preventing the malware from reaching its intended destination. A high entropy level means that the sinkhole can generate random domain names that match the changing domain name used by the malware for callback. Blocking TCP/443 at the edge router, disabling TCP/53 at the perimeter firewall, or configuring the DNS forwarders to use recursion are other possible actions that could stop malicious communications, but they could also disrupt legitimate services that use those protocols or settings. Reference: <https://www.cisco.com/c/en/us/about/security-center/dns-sinkholing.html>

#### NEW QUESTION 84

While reviewing system logs, a network administrator discovers the following entry:

```
psexec \\10.1.11.2 -u Administrator -p testpw cmd.exe
```

Which of the following occurred?

- A. An attempt was made to access a remote workstation.
- B. The PsExec services failed to execute.
- C. A remote shell failed to open.
- D. A user was trying to download a password file from a remote system.

**Answer: D**

#### Explanation:

The output shows an entry from a system log that indicates a user was trying to download a password file from a remote system using PsExec. PsExec is a command-line tool that allows users to execute processes on remote systems. The entry shows that the user "administrator" tried to run PsExec with the following parameters: `\192.168.1.100 -u administrator -p P@ssw0rd -c cmd.exe /c type c:\windows\system32\config\SAM > \192.168.1.101\c$\temp\sam.txt`. This means that the user tried to connect to the remote system with IP address 192.168.1.100 using the username "administrator" and password "P@ssw0rd", copy cmd.exe to the remote system, and execute it with the command "type c:\windows\system32\config\SAM > \192.168.1.101\c\$\temp\sam.txt". This command attempts to read the SAM file, which contains hashed passwords of local users, and write it to a file on another system with IP address 192.168.1.101. References: CompTIA Cybersecurity Analyst (CySA+) Certification Exam Objectives (CS0-002), page 8; <https://docs.microsoft.com/en-us/sysinternals/downloads/psexec>

#### NEW QUESTION 87

A security analyst is reviewing a new Internet portal that will be used for corporate employees to obtain their pay statements. Corporate policy classifies pay statement information as confidential, and it must be protected by MFA. Which of the following would best fulfill the MFA requirement while keeping the portal accessible from the internet?

- A. Obtaining home public IP addresses of corporate employees to implement source IP restrictions and requiring a username and password
- B. Requiring the internet portal to be accessible from only the corporate SSO internet endpoint and requiring a smart card and PIN
- C. Moving the internet portal server to a DMZ that is only accessible from the corporate VPN and requiring a username and password
- D. Distributing a shared password that must be provided before the internet portal loads and requiring a username and password

**Answer: B**

#### Explanation:

Requiring the internet portal to be accessible from only the corporate SSO internet endpoint and requiring a smart card and PIN. This option provides the best MFA requirement because it uses two factors of authentication: something you have (smart card) and something you know (PIN). It also restricts access to the portal from a trusted source (corporate SSO internet endpoint).

#### NEW QUESTION 91

Which of the following data exfiltration discoveries would most likely require communicating a breach to regulatory agencies?

- A. CRM data
- B. PHI files
- C. SIEM logs
- D. UEBA metrics

**Answer: B**

#### Explanation:

PHI stands for protected health information, which is any information that relates to the health or health care of an individual and can be used to identify that person. PHI is regulated by the Health Insurance Portability and Accountability Act of 1996 (HIPAA), which sets national standards for the privacy and security of

health information. HIPAA requires covered entities, such as health care providers, health plans, and health care clearinghouses, to notify individuals and regulatory agencies of any breach of unsecured PHI. A breach is defined as the unauthorized acquisition, access, use, or disclosure of PHI that compromises the privacy or security of the information

**NEW QUESTION 96**

A systems administrator believes a user's workstation has been compromised. The workstation's performance has been lagging significantly for the past several hours. The administrator runs the task list / v command and receives the following output:

Image name	PID	Mem usage	Status	Username	CPU time
lsass.exe	84	5040K	Unknown	N/A	01:00:15
dwm.exe	153	56073K	Unknown	ESRM\User	00:30:29
svchost.exe	459	1024K	Unknown	SYSTEM	00:00:00
paint.exe	823	894203K	Unknown	SYSTEM	06:39:12
notepad.exe	487	54203K	Unknown	ESRM\User	03:20:11
vscode.exe*32	302	1302103K	Unknown	ESRM\User	02:07:01

Which of the following should a security analyst recognize as an indicator of compromise?

- A. dwm.exe being executed under the user context
- B. The high usage of vsco
- C. exe \* 32
- D. The abnormal behavior of paint.exe
- E. svchost.exe being executed as SYSTEM

**Answer: B**

**Explanation:**

The tasklist command is used to display a list of all running processes on a system. In this output, the security analyst should recognize the high memory usage (1302103K) of vscode.exe \* 32, which is an indication that this process is consuming a large amount of system resources. This could be a sign that the system has been compromised, as malware often uses system resources to perform malicious activities.

**NEW QUESTION 97**

Which of the following factors would determine the regulations placed on data under data sovereignty laws?

- A. What the company intends to do with the data it owns
- B. The company's data security policy
- C. The type of data the company stores
- D. The data laws of the country in which the company is located

**Answer: D**

**Explanation:**

The data laws of the country in which the company is located would determine the regulations placed on data under data sovereignty laws. Data sovereignty laws are laws that govern how data is collected, stored, processed, and transferred within a country's jurisdiction. Data sovereignty laws can vary from country to country, depending on their legal system, political system, culture, and values. Data sovereignty laws can affect how companies handle their data, especially when they operate across borders or use cloud services. For example, some countries may have strict data protection or privacy laws that require companies to obtain consent from data subjects before collecting or processing their data. Some countries may also have data localization or data residency laws that require companies to store their data within the country's borders or limit cross-border data transfers.

**NEW QUESTION 101**

A security analyst needs to recommend a solution that will allow users at a company to access cloud-based SaaS services but also prevent them from uploading and exfiltrating data. Which of the following solutions should the security analyst recommend?

- A. CASB
- B. MFA
- C. VPN
- D. VPS
- E. DLP

**Answer: A**

**Explanation:**

A cloud access security broker (CASB) is a solution that acts as a gatekeeper between users and cloud-based SaaS services. A CASB can enforce security policies, such as data loss prevention (DLP), encryption, authentication, or access control, to protect sensitive data from unauthorized access, upload, or exfiltration. A CASB can also provide visibility and monitoring of cloud usage and activity1.

**NEW QUESTION 104**

An analyst receives an alert from the continuous-monitoring solution about unauthorized changes to the firmware versions on several field devices. The asset owners confirm that no firmware version updates were performed by authorized technicians, and customers have not reported any performance issues or outages. Which Of the following actions would be BEST for the analyst to recommend to the asset owners to secure the devices from further exploitation?

- A. Change the passwords on the devices.
- B. Implement BIOS passwords.
- C. Remove the assets from the production network for analysis.
- D. Report the findings to the threat intel community.

**Answer: C**

**Explanation:**

If we were referring to other devices, yes - Implement BIOS passwords before they are compromised. But the ones that were already compromised, they need to be removed from the system to avoid further exploitation. Plus, if you put a password on there, the attacker may now have your password. Remove the assets from the production network for analysis. If the analyst receives an alert about unauthorized changes to the firmware versions on several field devices, the best action to recommend to the asset owners is to remove the assets from the production network for analysis. This would prevent further exploitation of the devices by isolating them from potential attackers and allow the analyst to investigate the source and nature of the unauthorized changes. Changing the passwords on the devices, implementing BIOS passwords, or reporting the findings to the threat intel community are other possible actions, but they are not as effective or urgent as removing the assets from the production network for analysis. Reference: <https://www.sans.org/reading-room/whitepapers/incident/incident-handlers-handbook-33901>

**NEW QUESTION 105**

A security analyst is reviewing the following server statistics:

% CPU	Disk KB in	Disk KB out	Net KB in	Net KB out
99	3122	43	456	34
100	123	56	87	7
99	2	234	3	245
100	78	3	243	43
100	345	867	8243	85
98	22	3	5634	42326
100	435	345	54	42
99	0	4	575	3514

Which of the following is MOST likely occurring?

- A. Race condition
- B. Privilege escalation
- C. Resource exhaustion
- D. VM escape

**Answer: C**

**Explanation:**

Resource exhaustion is most likely occurring on the server. Resource exhaustion is a condition where a system runs out of resources, such as CPU, memory, disk space, or network bandwidth, due to excessive demand or consumption by one or more processes. Resource exhaustion can cause performance degradation, system instability, or denial-of-service. The server statistics show that the CPU usage is 100%, the memory usage is 99%, and the disk usage is 98%. These indicate that the server is under heavy load and has little or no resources available to handle incoming requests or perform other tasks.

**NEW QUESTION 110**

An analyst receives artifacts from a recent intrusion and is able to pull a domain, IP address, email address, and software version. When of the following points of the Diamond Model of Intrusion Analysis does this intelligence represent?

- A. Infrastructure
- B. Capabilities
- C. Adversary
- D. Victims

**Answer: A**

**Explanation:**

The Diamond Model of Intrusion Analysis is a framework for analyzing and understanding malicious activity on a system or network. It defines the basic atomic element of any intrusion activity as the event, which consists of four core features: adversary, infrastructure, capability, and victim. These features are connected by edges that represent their underlying relationships and arranged in the shape of a diamond<sup>1</sup>. The infrastructure feature refers to the physical or logical communication structures that are used by the adversary to deliver a capability or interact with a victim. Examples of infrastructure elements are IP addresses, domain names, email addresses, servers, routers, etc. The domain, IP address, email address, and software version that the analyst extracted from the artifacts are all examples of infrastructure elements that can be used to identify or track the adversary's activity.

**NEW QUESTION 114**

A security analyst discovers the company's website is vulnerable to cross-site scripting. Which of the following solutions will best remedy the vulnerability?

- A. Prepared statements
- B. Server-side input validation
- C. Client-side input encoding
- D. Disabled JavaScript filtering

**Answer: B**

**Explanation:**

Server-side input validation is a solution that can prevent cross-site scripting (XSS) vulnerabilities by checking and filtering any user input that is sent to the server before rendering it on a web page. Server-side input validation can help to ensure that the user input conforms to the expected format, length and type, and does not contain any malicious characters or syntax that may alter the logic or behavior of the web page. Server-side input validation can also reject or sanitize any input

that does not meet the validation criteria .

**NEW QUESTION 118**

An organization implemented an extensive firewall access-control blacklist to prevent internal network ranges from communicating with a list of IP addresses of known command-and-control domains. A security analyst wants to reduce the load on the firewall. Which of the following can the analyst implement to achieve similar protection and reduce the load on the firewall?

- A. A DLP system
- B. DNS sinkholing
- C. IP address allow list
- D. An inline IDS

**Answer: B**

**Explanation:**

DNS sinkholing is a mechanism that can prevent internal network ranges from communicating with a list of IP addresses of known command-and-control domains by returning a false or controlled IP address for those domains. This can reduce the load on the firewall by intercepting the DNS requests before they reach the firewall and diverting them to a sinkhole server. The other options are not relevant or effective for this purpose. References: CompTIA Cybersecurity Analyst (CySA+) Certification Exam Objectives (CS0-002), page 9; <https://www.enisa.europa.eu/topics/incident-response/glossary/dns-sinkhole>

**NEW QUESTION 123**

An employee contacts the SOC to report a high-severity bug that was identified in a new, internally developed web application, which went live in production last week. The SOC staff did not receive contact details or escalation procedures to follow. Which of the following stages of the SDLC process was overlooked?

- A. Input validation
- B. Planning
- C. Implementation and integration
- D. Operations and maintenance

**Answer: B**

**Explanation:**

The planning stage of the SDLC process is when the project scope, objectives, requirements, risks, and deliverables are defined and agreed upon by all stakeholders. This stage also involves creating a project plan that outlines the tasks, resources, schedule, budget, and communication channels for the project. The planning stage is crucial for ensuring that the project is aligned with the business goals and customer needs, and that the project team has a clear vision and direction for the development process. By overlooking this stage, the SOC staff did not receive contact details or escalation procedures to follow in case of a high-severity bug, which could have serious consequences for the security and functionality of the web application.

**NEW QUESTION 127**

A security is reviewing a vulnerability scan report and notes the following finding:

Vulnerability	Severity	QoD	Host	Location
Antivirus missing current signature	10.0 (High)	97%	192.168.86.8	general/tcp

As part of the detection and analysis procedures, which of the following should the analyst do NEXT?

- A. Patch or reimage the device to complete the recovery
- B. Restart the antivirus running processes
- C. Isolate the host from the network to prevent exposure
- D. Confirm the workstation's signatures against the most current signatures.

**Answer: D**

**Explanation:**

The vulnerability scan report shows that the workstation has a high-risk vulnerability (CVE-2019-0708) that affects Remote Desktop Services on Windows systems. This vulnerability allows remote code execution without authentication or user interaction, and can be exploited by sending specially crafted requests to the target system.

As part of the detection and analysis procedures, the analyst should confirm the workstation's signatures against the most current signatures. This can help verify if the workstation has been patched or updated to address the vulnerability, or if it is still vulnerable and needs remediation. The analyst can use tools such as Windows Update or Microsoft Baseline Security Analyzer to check the workstation's patch level and compare it with the latest available signatures.

**NEW QUESTION 132**

A Chief Executive Officer (CEO) is concerned about the company's intellectual property being leaked to competitors. The security team performed an extensive review but did not find any indication of an outside breach. The data sets are currently encrypted using the Triple Data Encryption Algorithm. Which of the following courses of action is appropriate?

- A. Limit all access to the sensitive data based on geographic access requirements with strict role-based access controls.
- B. Enable data masking and reencrypt the data sets using AES-256.
- C. Ensure the data is correctly classified and labeled, and that DLP rules are appropriate to prevent disclosure.
- D. Use data tokenization on sensitive fields, reencrypt the data sets using AES-256, and then create an MD5 hash.

**Answer: B**

**Explanation:**

Data masking is a technique that replaces sensitive data with fictitious but realistic data, thus preventing unauthorized access to the original data. Reencrypting the data sets using AES-256 would provide a stronger level of encryption than Triple DES, which has been deprecated by NIST due to its vulnerability to attacks.

References: 1  
 Publication  
 What Is AES-256 Encryption? How Does It Work? - MU2O Archived NIST Technical Series

**NEW QUESTION 136**

An information security analyst discovered a virtual machine server was compromised by an attacker. Which of the following should be the first steps to confirm and respond to the incident? (Select two).

- A. Pause the virtual machine.
- B. Shut down the virtual machine.
- C. Take a snapshot of the virtual machine.
- D. Remove the NIC from the virtual machine.
- E. Review host hypervisor log of the virtual machine.
- F. Execute a migration of the virtual machine.

**Answer: AC**

**Explanation:**

These steps are the best to confirm and respond to the incident because they preserve the state of the compromised server for further analysis and evidence collection. Pausing the virtual machine prevents any further changes or damage by the attacker, while taking a snapshot creates a copy of the virtual machine's memory and disk contents.

**NEW QUESTION 140**

A security analyst works for a biotechnology lab that is planning to release details about a new cancer treatment. The analyst has been instructed to tune the SIEM software and IPS in preparation for the announcement. For which of the following concerns will the analyst most likely be monitoring?

- A. Intellectual property loss
- B. PII loss
- C. Financial information loss
- D. PHI loss

**Answer: A**

**Explanation:**

SIEM software is a tool that provides a single centralized platform for the collection, monitoring, and management of security-related events and log data from across the enterprise<sup>1</sup>. SIEM software can help security analysts detect, investigate, and respond to threats, as well as comply with regulations and standards. IPS stands for Intrusion Prevention System. It is a device or software that monitors network traffic and blocks or modifies malicious packets before they reach their destination<sup>2</sup>. IPS can help security analysts prevent attacks, protect sensitive data, and reduce network downtime.

A security analyst working for a biotechnology lab that is planning to release details about a new cancer treatment would most likely be monitoring for A. Intellectual property loss. Intellectual property (IP) refers to the creations of the mind, such as inventions, designs, artistic works, or trade secrets<sup>3</sup>. IP loss occurs when someone steals, leaks, or misuses the IP of an organization without authorization.

The biotechnology lab's new cancer treatment is an example of IP that has high value and potential impact on the market and society. Therefore, the security analyst would want to protect it from competitors, hackers, or other malicious actors who might try to access it illegally or sabotage it. The security analyst would use SIEM software and IPS to monitor for any signs of unauthorized access, data exfiltration, or tampering with the lab's network or systems.

**NEW QUESTION 144**

A security analyst is running a tool against an executable of an unknown source. The Input supplied by the tool to the executable program and the output from the executable are shown below:

Input supplied by tool	Output from executable
asdfnerlajnvjanjkdfnvkjanakjdv	asdfnerlajnvjanjkdfnvkjanakjdv
klrejfkalsdjfkalsdjffjladsf892	klrejfkalsdjfkalsdjffjladsf892
ADSFQEOVASDASDFASDF;ADSFASDWF	command not found
qscTROVcaDFcaDCasDC23rdcasdfAS	qscTROVcaDFcaDCasDC23rdcasdfAS
lqkejfc934ejcjvsad:cmaciwefasd	lqkejfc934ejcjvsad:cmaciwefasd

Which of the following should the analyst report after viewing this Information?

- A. A dynamic library that is needed by the executable is missing
- B. Input can be crafted to trigger an Infection attack in the executable
- C. The tool caused a buffer overflow in the executable's memory
- D. The executable attempted to execute a malicious command

**Answer: C**

**Explanation:**

A buffer overflow is a type of attack that exploits a vulnerability in an application or program that does not properly check the size or boundaries of an input. A buffer overflow occurs when an attacker supplies more data than the buffer can hold, causing the excess data to overwrite adjacent memory locations. This can result in unpredictable behavior, such as crashes, errors, data corruption, or execution of malicious code<sup>2</sup>

The tool that the analyst ran against the executable supplied an input that was too long for the buffer allocated by the executable. This caused a buffer overflow in the executable's memory, as indicated by the error message "Segmentation fault (core dumped)".

**NEW QUESTION 149**

To prioritize the morning's work, an analyst is reviewing security alerts that have not yet been investigated. Which of the following assets should be investigated FIRST?

- A. The workstation of a developer who is installing software on a web server
- B. A new test web server that is in the process of initial installation
- C. An accounting supervisor's laptop that is connected to the VPN
- D. The laptop of the vice president that is on the corporate LAN

**Answer:** D

**Explanation:**

The laptop of the vice president that is on the corporate LAN should be investigated first. According to the CompTIA CySA+ Certification Exam (CS0-002) study guide, when prioritizing security alerts, the analyst should prioritize assets based on the potential impact of a successful attack or compromise. Therefore, the laptop of the vice president, which is connected to the corporate LAN, should be investigated first, as it has the highest potential impact.

**NEW QUESTION 152**

As a proactive threat-hunting technique, hunters must develop situational cases based on likely attack scenarios derived from the available threat intelligence information. After forming the basis of the scenario, which of the following may the threat hunter construct to establish a framework for threat assessment?

- A. Critical asset list
- B. Threat vector
- C. Attack profile
- D. Hypothesis

**Answer:** D

**Explanation:**

A hypothesis is a statement that can be tested by threat hunters to establish a framework for threat assessment. A hypothesis is based on situational awareness and threat intelligence information, and describes a possible attack scenario that may affect the organization. A hypothesis can help to guide threat hunters in their investigation by providing a clear and specific question to answer, such as "Is there any evidence of lateral movement within our network?" or "Are there any signs of data exfiltration from our servers?".

**NEW QUESTION 155**

Which of the following describes the difference between intentional and unintentional insider threats'?

- A. Their access levels will be different
- B. The risk factor will be the same
- C. Their behavior will be different
- D. The rate of occurrence will be the same

**Answer:** C

**Explanation:**

The difference between intentional and unintentional insider threats is their behavior. Intentional insider threats are malicious actors who deliberately misuse their access to harm the organization or its assets. Unintentional insider threats are careless or negligent users who accidentally compromise the security of the organization or its assets. Their access levels, risk factors, and rates of occurrence may vary depending on various factors, but their behavior is the main distinction. References: CompTIA Cybersecurity Analyst (CySA+) Certification Exam Objectives (CS0-002), page 12; [https://www.cisa.gov/sites/default/files/publications/Insider\\_Threat\\_Mitigation\\_Guide\\_508.pdf](https://www.cisa.gov/sites/default/files/publications/Insider_Threat_Mitigation_Guide_508.pdf)

**NEW QUESTION 159**

A security analyst observes a large amount of scanning activity coming from an IP address outside the organization's environment. Which of the following should the analyst do to block this activity?

- A. Create an IPS rule to block the subnet.
- B. Sinkhole the IP address.
- C. Create a firewall rule to block the IP address.
- D. Close all unnecessary open ports.

**Answer:** C

**Explanation:**

A firewall is a device or software that controls the incoming and outgoing network traffic based on predefined rules. Creating a firewall rule to block the IP address that is scanning the organization's environment is an effective way to stop this activity and prevent potential attacks. Creating an IPS rule to block the subnet, sinkholing the IP address, or closing all unnecessary open ports are other possible actions, but they are not as specific or efficient as creating a firewall rule to block the IP address. Reference: <https://www.cisco.com/c/en/us/solutions/small-business/resource-center/security/firewall.html>

**NEW QUESTION 160**

A development team recently released a new version of a public-facing website for testing prior to production. The development team is soliciting the help of various teams to validate the functionality of the website due to its high visibility. Which of the following activities best describes the process the development team is initiating?

- A. Static analysis
- B. Stress testing
- C. Code review
- D. User acceptance testing

**Answer:** D

**Explanation:**

User acceptance testing is a process of verifying that a software application meets the requirements and expectations of the end users before it is released to production. User acceptance testing can help to validate the functionality, usability, performance and compatibility of the software application with real-world

scenarios and feedback . User acceptance testing can involve various teams, such as developers, testers, customers and stakeholders.

**NEW QUESTION 161**

Which of the following are reasons why consumer IoT devices should be avoided in an enterprise environment? (Select TWO)

- A. Message queuing telemetry transport does not support encryption.
- B. The devices may have weak or known passwords.
- C. The devices may cause a dramatic increase in wireless network traffic.
- D. The devices may utilize unsecure network protocols.
- E. Multiple devices may interface with the functions of other IoT devices.
- F. The devices are not compatible with TLS 1.2.

**Answer: BD**

**Explanation:**

Consumer IoT devices are devices that connect to the internet and provide various functions or services for personal or home use, such as smart speakers, cameras, thermostats, etc. Consumer IoT devices should be avoided in an enterprise environment because they may pose security risks or challenges for the organization's network and data. Some of the reasons why consumer IoT devices should be avoided are:

- > The devices may have weak or known passwords: Many consumer IoT devices come with default or hardcoded passwords that are easy to guess or find online. Some devices may not allow users to change their passwords or enforce strong password policies. This can make them vulnerable to brute-force attacks or unauthorized access by attackers.
- > The devices may utilize unsecure network protocols: Many consumer IoT devices use unsecure network protocols to communicate with other devices or servers, such as HTTP, FTP, Telnet, etc. These protocols do not encrypt or authenticate the data they transmit or receive, which can expose them to interception, modification, or spoofing by attackers.

**NEW QUESTION 166**

A security analyst discovers suspicious host activity while performing monitoring activities. The analyst pulls a packet capture for the activity and sees the following:

Date/time	Destination	Protocol	Host	Info
2020-08-20	92.168.4.52	HTTP	utoftor.com	POST /210/gate.php HTTP/1.1 (Application/octet-stream)

**Follow TCP stream:**

```
POST /210/gate.php HTTP/1.1
Cache-control: no-cache
Connection: close
Pragma: no-cache
Content-Type: application/octet-stream
User-Agent: Mozilla/4.0
Host: utoftor.com
$.0.k..4.4.RQA.6...HTTP/1.1 200 OK
Server: nginx/1.6.2
-
```

Which of the following describes what has occurred?

- A. The host attempted to download an application from utoftor.com.
- B. The host downloaded an application from utoftor.com.
- C. The host attempted to make a secure connection to utoftor.com.
- D. The host rejected the connection from utoftor.com.

**Answer: C**

**Explanation:**

The packet capture shows that the host sent a Client Hello message to utoftor.com on port 443. This message is part of the TLS (Transport Layer Security) handshake protocol, which is used to establish a secure connection between a client and a server. The Client Hello message contains information such as the supported TLS version, cipher suites, and extensions that the client can use for the secure connection. The server is expected to respond with a Server Hello message that selects the parameters for the secure connection. However, the packet capture does not show any response from the server, which means that the host only attempted to make a secure connection to utoftor.com, but did not succeed. The host did not download (B) or reject (D) any application from utoftor.com.

**NEW QUESTION 167**

Which of the following solutions is the BEST method to prevent unauthorized use of an API?

- A. HTTPS
- B. Geofencing
- C. Rate limiting
- D. Authentication

**Answer: D**

**Explanation:**

Authentication is a method of verifying a user's identity by requiring some piece of evidence, such as something the user knows (e.g., password), something the user has (e.g., token), or something the user is (e.g., fingerprint). Authentication is the best method to prevent unauthorized use of an API, because it ensures that only legitimate users can access or use the API functions or data. HTTPS, geofencing, or rate limiting are other methods that can enhance the security or performance of an API, but they do not prevent unauthorized use of an API. Reference: <https://www.redhat.com/en/topics/api/what-is-api-security>

#### NEW QUESTION 171

During an Incident, it is determined that a customer database containing email addresses, first names, and last names was exfiltrated. Which of the following should the security analyst do NEXT?

- A. Consult with the legal department for regulatory impact.
- B. Encrypt the database with available tools.
- C. Email the customers to inform them of the breach.
- D. Follow the incident communications process.

**Answer: D**

#### Explanation:

An incident communications process is a set of procedures that defines how to communicate with internal and external stakeholders during and after an incident, such as customers, employees, management, regulators and media. An incident communications process can help to provide accurate, timely and consistent information about the incident, its impact and the actions taken to resolve it. An incident communications process can also help to maintain trust and reputation, comply with legal obligations and prevent misinformation or confusion.

#### NEW QUESTION 172

An organization's internal department frequently uses a cloud provider to store large amounts of sensitive data. A threat actor has deployed a virtual machine to at the use of the cloud hosted hypervisor, the threat actor has escalated the access rights. Which of the following actions would be BEST to remediate the vulnerability?

- A. Sandbox the virtual machine.
- B. Implement an MFA solution.
- C. Update to the secure hypervisor version.
- D. Implement dedicated hardware for each customer.

**Answer: C**

#### Explanation:

MFA can be used to reduce the likelihood that the attacker gains access to the VM, however, the scenario specifically states that the attacker was able to escalate rights and the question asks what can be done to remediate the vulnerability. The vulnerability in this case would be the ability to escalate rights. The best way to remediate the vulnerability is to update to the secure hypervisor version. A hypervisor is a software that creates and manages virtual machines on a physical server. A hypervisor can be vulnerable to various attacks, such as privilege escalation, code injection, or denial-of-service. Updating to the secure hypervisor version can help fix any known bugs or flaws in the hypervisor software and prevent attackers from exploiting them. Updating to the secure hypervisor version can also provide additional security features or enhancements that can improve the protection of the virtual machines and their data.

#### NEW QUESTION 173

Legacy medical equipment, which contains sensitive data, cannot be patched. Which of the following is the best solution to improve the equipment's security posture?

- A. Move the legacy systems behind a WAR
- B. Implement an air gap for the legacy systems.
- C. Place the legacy systems in the perimeter network.
- D. Implement a VPN between the legacy systems and the local network.

**Answer: B**

#### Explanation:

Implementing an air gap for the legacy systems is the best solution to improve their security posture. An air gap is a physical separation of a system or network from any other system or network that may pose a threat. An air gap can prevent any unauthorized access or data transfer between the isolated system or network and the external environment. Implementing an air gap for the legacy systems can help to protect them from being exploited by attackers who may take advantage of their unpatched vulnerabilities.

#### NEW QUESTION 175

Company A is in the process of merging with Company B. As part of the merger, connectivity between the ERP systems must be established so pertinent financial information can be shared between the two entities. Which of the following will establish a more automated approach to secure data transfers between the two entities?

- A. Set up an FTP server that both companies can access and export the required financial data to a folder.
- B. Set up a VPN between Company A and Company B
- C. granting access only to the ERPs within the connection
- D. Set up a PKI between Company A and Company B and Intermediate shared certificates between the two entities
- E. Create static NATs on each entity's firewalls that map to the ERP systems and use native ERP authentication to allow access.

**Answer: C**

#### Explanation:

The security analyst should set up a PKI (Public Key Infrastructure) between Company A and Company B and exchange shared certificates between the two entities. This will allow them to establish a more automated approach to secure data transfers between their ERP systems. A PKI is a system that provides encryption and authentication services using public key cryptography. A PKI consists of certificates, certificate authorities (CAs), and other components that enable users to securely exchange data over untrusted networks. By exchanging shared certificates between Company A and Company B, they can verify each other's identity and encrypt their data using public and private keys.

#### NEW QUESTION 180

A security analyst at example.com receives a SIEM alert for an IDS signature and reviews the associated packet capture and TCP stream:

Packet capture:

Source	Destination	Protocol	Length	Info
203.0.113.15	192.168.100.56	TCP	1016	60100 > 80 [PSH, ACK] Seq=1 Ack=1 Win=229 Len=946 TSval=419499016 TSsecr=668384771 [TCP segment of a reassembled PDU]

TCP stream:

```
GET /admin/auth/Register.do HTTP/1.1
accept: text/html,application/xhtml+xml,application/xml;q=0.9,*/*;q=0.8
connection: close
content-type: <<test='multipart/form-data'>.<#dm=#ognl.OgnlContext@DEFAULT_MEMBER_ACCESS>.<#_memberAccess?>(<#_memberAccess=#dm!>
(<#container=#context['com.opensymphony.xwork2.ActionContext.container']>.<#ognlUtil=#container.getInstance(<#com.opensymphony.xwork2.ognl.OgnlUtil@class>)>.<#ognlUtil.getExcludedPackageNames().clear()>.<#ognlUtil.getExcludedClasses().clear()>.<#context.setMemberAccess(#dm)>)>.<#ros=
(<#org.apache.struts2.ServletActionContext@getResponse().getOutputStream()>.<#ros.println(31337*31337)>.<#ros.flush()>
host: connect.example.local
iv-user: Unauthenticated
user-agent: Security Operations Center: X-500-Scan (soc@example.com);
via: HTTP/1.1 revproxy.dmr.example.local:443
iv_server_name: connect-webseald-revproxy.dmr.example.local
X-
```

Which of the following actions should the security analyst take NEXT?

- A. Review the known Apache vulnerabilities to determine if a compromise actually occurred
- B. Contact the application owner for connect example local for additional information
- C. Mark the alert as a false positive scan coming from an approved source.
- D. Raise a request to the firewall team to block 203.0.113.15.

**Answer: A**

**Explanation:**

The security analyst should review the known Apache vulnerabilities to determine if a compromise actually occurred. The SIEM alert indicates that an IDS signature detected an attempt to exploit a vulnerability in Apache Struts 2 (CVE-2017-5638), which allows remote code execution via a crafted Content-Type header. The packet capture and TCP stream show that the attacker sent a malicious request with a Content-Type header containing an OGNL expression that executes the command “whoami” on the target server. However, this does not necessarily mean that the attack was successful, as it depends on whether the target server was running a vulnerable version of Apache Struts 2 or not. Therefore, the security analyst should review the known Apache vulnerabilities and compare them with the version of Apache Struts 2 running on the server to confirm if a compromise actually occurred or not.

**NEW QUESTION 183**

A threat hunting team received a new IoC from an ISAC that follows a threat actor's profile and activities. Which of the following should be updated NEXT?

- A. The whitelist
- B. The DNS
- C. The blocklist
- D. The IDS signature

**Answer: D**

**Explanation:**

The IDS signature should be updated next after receiving a new IoC (Indicator of Compromise) from an ISAC (Information Sharing and Analysis Center) that follows a threat actor's profile and activities. An IoC is a piece of evidence or artifact that suggests a system or network has been compromised or attacked by a threat actor. An IoC can be an IP address, domain name, URL, file hash, email address, registry key, etc. An ISAC is a nonprofit organization that collects, analyzes, and shares threat intelligence and best practices among its members within a specific sector or industry. An ISAC can help to improve the security awareness and preparedness of its members by providing timely and relevant information about emerging threats and incidents.

**NEW QUESTION 187**

Which of the following SCAP standards provides standardization for measuring and describing the severity of security-related software flaws?

- A. OVAL
- B. CVSS
- C. CVE
- D. CCE

**Answer: B**

**Explanation:**

CVSS stands for Common Vulnerability Scoring System, and it is a standard for measuring and describing the severity of security-related software flaws. CVSS provides a numerical score and a vector string that represent the characteristics and impact of a vulnerability. CVSS can help prioritize remediation efforts and communicate risk levels to stakeholders.

**NEW QUESTION 188**

An analyst is performing a BIA and needs to consider measures and metrics. Which of the following would help the analyst achieve this objective? (Select two).

- A. Time to reimage the server

- B. Minimum data backup volume
- C. Disaster recovery plan for non-critical services
- D. Maximum downtime before impact is unacceptable
- E. Time required to inform stakeholders about outage
- F. Total time accepted for business process outage

**Answer:** DF

**Explanation:**

The objective of a BIA is to determine the potential impacts of various disruptions on the business processes and functions, and to establish the recovery priorities and objectives for each process and function. To achieve this objective, the analyst needs to consider various measures and metrics that can quantify the impacts and the recovery requirements. Some of the common measures and metrics that are used in a BIA are:

- Maximum downtime before impact is unacceptable: This metric defines the maximum amount of time that a business process or function can be disrupted without causing significant or irreversible damage to the organization's reputation, operations, finances, or legal obligations. This metric is also known as the maximum tolerable downtime (MTD) or maximum tolerable period of disruption (MTPD). It helps to determine the recovery time objective (RTO), which is the target time for restoring the process or function to an acceptable level of service after a disruption<sup>1</sup>.
- Total time accepted for business process outage: This metric defines the total amount of time that a business process or function can be out of service within a given period, such as a day, a week, or a month. This metric is also known as the recovery point objective (RPO), which is the maximum amount of data loss or corruption that can be tolerated after a disruption<sup>1</sup>. It helps to determine the backup frequency and retention policy for the data and systems that support the process or function.
- Time required to inform stakeholders about outage: This metric defines the time frame for communicating with the internal and external stakeholders who are affected by or involved in the disruption and recovery of a business process or function. This metric helps to establish the crisis communication plan and protocol, which specifies who, what, when, where, why, and how to communicate during and after a disruption<sup>2</sup>. It also helps to manage the expectations and perceptions of the stakeholders and to maintain their trust and confidence in the organization.
- Time to reimage the server: This metric defines the time needed to restore a server to its original or desired state after a disruption. This metric helps to estimate the resources and efforts required for recovering the server and its applications. It also helps to evaluate the feasibility and effectiveness of different recovery strategies, such as restoring from backup, rebuilding from scratch, or replacing with a spare<sup>3</sup>.
- Minimum data backup volume: This metric defines the minimum amount of data that needs to be backed up regularly to ensure the continuity and integrity of a business process or function. This metric helps to optimize the backup process and reduce the storage costs and bandwidth consumption. It also helps to identify the critical data elements and sources that are essential for the process or function<sup>4</sup>.

**NEW QUESTION 192**

Ensuring that all areas of security have the proper controls is a primary reason why organizations use:

- A. frameworks.
- B. directors and officers.
- C. incident response plans.
- D. engineering rigor.

**Answer:** A

**Explanation:**

Ensuring that all areas of security have the proper controls is a primary reason why organizations use frameworks. Frameworks provide an organized structure for organizations to evaluate their security posture and implement the necessary security measures for their operations. Frameworks such as NIST, COBIT, and ISO 27001 provide guidance on how to develop, implement and monitor security policies, controls, and procedures for an organization. Additionally, frameworks provide a benchmark for organizations to measure their security posture against and create a roadmap for continued improvement.

**NEW QUESTION 195**

An organization announces that all employees will need to work remotely for an extended period of time. All employees will be provided with a laptop and supported hardware to facilitate this requirement. The organization asks the information security division to reduce the risk during this time. Which of the following is a technical control that will reduce the risk of data loss if a laptop is lost or stolen?

- A. Requiring the use of the corporate VPN
- B. Requiring the screen to be locked after five minutes of inactivity
- C. Requiring the laptop to be locked in a cabinet when not in use
- D. Requiring full disk encryption

**Answer:** D

**Explanation:**

Full disk encryption (FDE) is a technical control that encrypts all the data on a disk drive, including the operating system and applications. FDE prevents unauthorized access to the data if the disk drive is lost or stolen, as it requires a password or key to decrypt the data. FDE can be implemented using software or hardware solutions and can protect data at rest on laptops and other devices. The other options are not technical controls or do not reduce the risk of data loss if a laptop is lost or stolen. References: CompTIA Cybersecurity Analyst (CySA+) Certification Exam Objectives (CS0-002), page 10; <https://docs.microsoft.com/en-us/windows/security/information-protection/bitlocker/bitlocker-overview>

**NEW QUESTION 199**

A security analyst needs to provide the development team with secure connectivity from the corporate network to a three-tier cloud environment. The developers require access to servers in all three tiers in order to perform various configuration tasks. Which of the following technologies should the analyst implement to provide secure transport?

- A. CASB
- B. VPC
- C. Federation
- D. VPN

**Answer:** D

**Explanation:**

What is the difference between VPN and VPC?

Just as a virtual private network (VPN) provides secure data transfer over the public Internet, a VPC provides secure data transfer between a private enterprise and a public cloud provider.

VPN (Virtual Private Network) is a technology that provides secure connectivity from the corporate network to a cloud environment. VPN creates an encrypted tunnel between the two networks, allowing developers to access servers in all three tiers of the cloud environment without exposing their traffic to interception or tampering. VPN can also provide authentication and authorization mechanisms to verify the identity and permissions of the developers.

**NEW QUESTION 202**

According to a static analysis report for a web application, a dynamic code evaluation script injection vulnerability was found. Which of the following actions is the BEST option to fix the vulnerability in the source code?

- A. Delete the vulnerable section of the code immediately.
- B. Create a custom rule on the web application firewall.
- C. Validate user input before execution and interpretation.
- D. Use parameterized queries.

**Answer: C**

**Explanation:**

Validating user input before execution and interpretation can help to prevent dynamic code evaluation script injection vulnerabilities by checking and filtering any malicious input from the user that may contain code or commands. Dynamic code evaluation script injection is a type of vulnerability that occurs when an application accepts user input and executes or interprets it as part of its own code without proper validation or sanitization. This can allow an attacker to inject arbitrary code or commands into the application and execute them with the same privileges as the application. Validating user input before execution and interpretation can help to ensure that the input conforms to the expected format, length and type, and does not contain any malicious characters or syntax that may alter the logic or behavior of the application.

**NEW QUESTION 205**

Which of the following is a reason for correctly identifying APTs that might be targeting an organization?

- A. APTs' passion for social justice will make them ongoing and motivated attackers.
- B. APTs utilize methods and technologies differently than other threats
- C. APTs are primarily focused on financial gain and are widely available over the internet.
- D. APTs lack sophisticated methods, but their dedication makes them persistent.

**Answer: B**

**Explanation:**

APTs utilize methods and technologies differently than other threats. APTs stand for Advanced Persistent Threats, and they are sophisticated and stealthy attacks that target specific organizations or networks over a long period of time, often with political or financial motives. APTs utilize methods and technologies differently than other threats, such as using custom-made malware, exploiting zero-day vulnerabilities, leveraging social engineering techniques, or employing multiple vectors of attack. APTs can also evade detection by existing security tools or controls, by using encryption, obfuscation, proxy servers, or other techniques to hide their activities or communications.

**NEW QUESTION 210**

A code review reveals a web application is using lime-based cookies for session management. This is a security concern because lime-based cookies are easy to:

- A. parameterize.
- B. decode.
- C. guess.
- D. decrypt.

**Answer: B**

**Explanation:**

Lime-based cookies are a type of cookies that use lime encoding to store data in a web browser. Lime encoding is a simple substitution cipher that replaces each character in a string with another character based on a fixed key. Lime-based cookies are easy to decode because the key is publicly available and the encoding algorithm is simple. Anyone who intercepts or accesses the lime-based cookies can easily decode them and read the data stored in them. This is a security concern because lime-based cookies are often used for session management, which means they store information about the user's identity and preferences on a web application. If an attacker can decode the lime-based cookies, they can impersonate the user or access their sensitive information.

**NEW QUESTION 214**

A company's legal and accounting teams have decided it would be more cost-effective to offload the risks of data storage to a third party. The IT management team has decided to implement a cloud model and has asked the security team for recommendations. Which of the following will allow all data to be kept on the third-party network?

- A. VDI
- B. SaaS
- C. CASB
- D. FaaS

**Answer: B**

**Explanation:**

SaaS stands for Software as a Service, which is a cloud model that allows users to access software applications over the internet without installing or maintaining them on their own devices. SaaS will allow all data to be kept on the third-party network, because the software applications and the data they generate or process are stored on the cloud provider's servers. VDI, CASB, and FaaS are other terms related to cloud computing or security, but they do not match the description of keeping all data on the third-party network. Reference: <https://www.ibm.com/cloud/learn/software-as-a-service>

**NEW QUESTION 216**

A security technician is testing a solution that will prevent outside entities from spoofing the company's email domain, which is *comptia.org*. The testing is successful, and the security technician is prepared to fully implement the solution. Which of the following actions should the technician take to accomplish this task?

- A. Add TXT @ "v=spf1 mx include:\_spf.compti
- B. org -all" to the DNS record.
- C. Add : XT @ "v=spf1 mx include:\_spf.comptia.org -all" to the email server.
- D. Add TXT @ "v=spf1 mx include:\_spf.comptia.org +all" to the domain controller.
- E. AddTXT @ "v=apfl mx Include:\_spf .comptia.org +a 11" to the web server.

**Answer: A**

**Explanation:**

Adding TXT @ "v=spf1 mx include:\_spf.comptia.org -all" to the DNS record can help to prevent outside entities from spoofing the company's email domain, which is *comptia.org*. This is an example of a Sender Policy Framework (SPF) record, which is a type of DNS record that specifies which mail servers are authorized to send email on behalf of a domain. SPF records can help to prevent spoofing by allowing the recipient mail servers to check the validity of the sender's domain against the SPF record. The "-all" at the end of the SPF record indicates that any mail server that is not listed in the SPF record is not authorized to send email for *comptia.org*.

**NEW QUESTION 221**

A vulnerability scanner has identified an out-of-support database software version running on a server. The software update will take six to nine months to complete. The management team has agreed to a one-year extended support contract with the software vendor. Which of the following BEST describes the risk treatment in this scenario?

- A. The extended support mitigates any risk associated with the software.
- B. The extended support contract changes this vulnerability finding to a false positive.
- C. The company is transferring the risk for the vulnerability to the software vendor.
- D. The company is accepting the inherent risk of the vulnerability.

**Answer: C**

**Explanation:**

The company is transferring the risk for the vulnerability to the software vendor. Risk transfer is a risk treatment strategy that involves shifting the potential loss or impact of a risk to a third party, such as an insurance company or a vendor. Risk transfer does not eliminate the risk, but it reduces the organization's exposure or liability for the risk. In this scenario, the company is transferring the risk for the vulnerability in the out-of-support database software to the software vendor by signing an extended support contract. The extended support contract means that the software vendor will continue to provide security patches and updates for the software until the company can complete the software update. This reduces the likelihood and impact of a potential exploit of the vulnerability.

**NEW QUESTION 225**

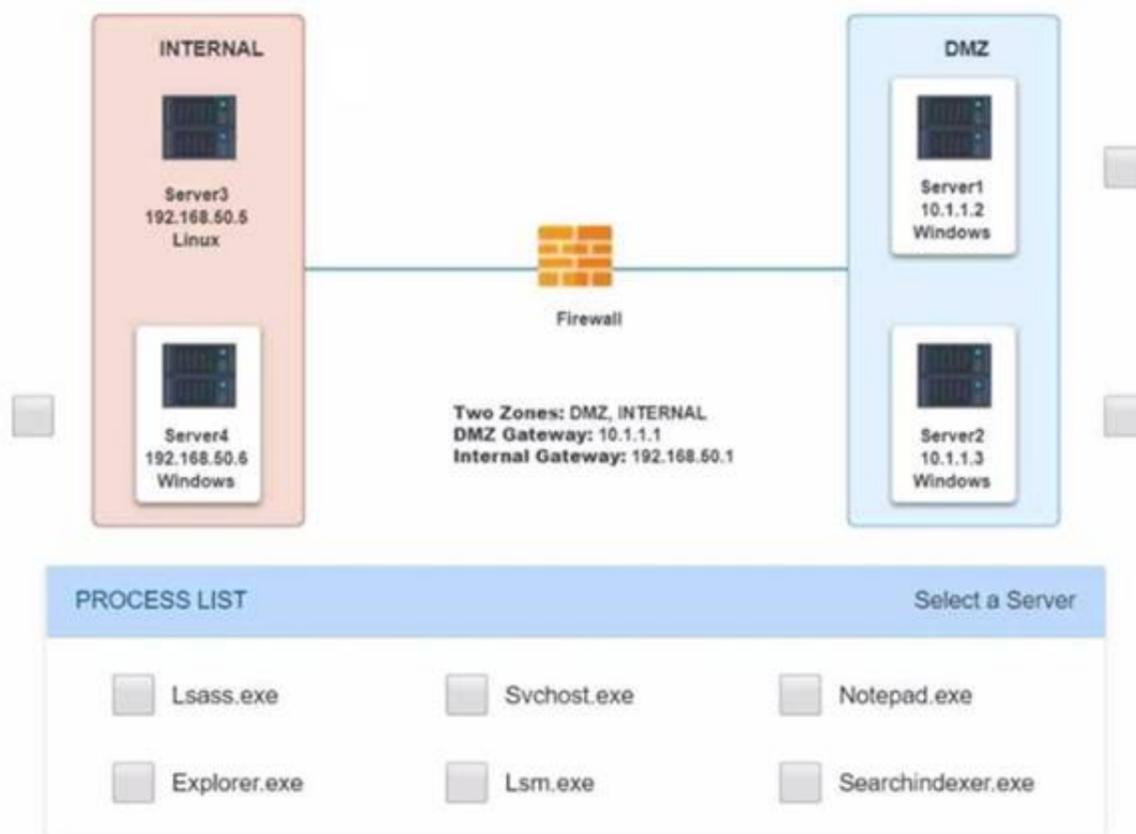
Malware is suspected on a server in the environment.

The analyst is provided with the output of commands from servers in the environment and needs to review all output files in order to determine which process running on one of the servers may be malware.

**INSTRUCTIONS**

Servers 1, 2, and 4 are clickable. Select the Server and the process that host the malware.

**Network Diagram for Company A**



**Server1 Log** ✕

C:\Users\Team3>netstat -oan

Active Connections

Proto	Local Address	Foreign Address	State	PID
TCP	0.0.0.0:49154	0.0.0.0:0	LISTENING	884
TCP	0.0.0.0:49184	0.0.0.0:0	LISTENING	540
TCP	0.0.0.0:49190	0.0.0.0:0	LISTENING	532
TCP	10.1.1.2:57433	192.168.50.6:443	ESTABLISHED	1276
TCP	10.1.1.2:50125	192.168.50.6:445	ESTABLISHED	276
TCP	10.1.1.2:52349	192.168.50.6:139	ESTABLISHED	276
TCP	10.1.1.2:139	0.0.0.0:0	LISTENING	4
TCP	10.1.1.2:3389	172.30.0.148:49242	ESTABLISHED	348
TCP	10.1.1.2:50741	172.30.0.101:445	ESTABLISHED	4
TCP	10.1.1.2:50777	172.30.0.4:135	TIME_WAIT	0
TCP	10.1.1.2:50778	172.30.0.4:49157	TIME_WAIT	0
TCP	[::]:135	[::]:0	LISTENING	540
TCP	[::]:445	[::]:0	LISTENING	4

C:\Users\Team3>tasklist

Image Name	PID	Session Name	Session#	Mem Usage
------------	-----	--------------	----------	-----------

**Server1 Log** ✕

svchost.exe	2020	Services	0	17,524 K
notepad.exe	1276	Services	0	4,324 K
svchost.exe	1720	Services	0	3,172 K
SearchIndexer.exe	864	Services	0	14,968 K
OSPPSVC.EXE	2584	Services	0	13,764 K
csrss.exe	372	RDP-Tcp#0	1	7,556 K
winlogon.exe	460	RDP-Tcp#0	1	5,832 K
rdpclip.exe	1600	RDP-Tcp#0	1	4,356 K
dwm.exe	772	RDP-Tcp#0	1	5,116 K
taskhost.exe	1700	RDP-Tcp#0	1	8,720 K
explorer.exe	2500	RDP-Tcp#0	1	66,444 K
splwow64.exe	2960	RDP-Tcp#0	1	4,152 K
cmd.exe	1260	RDP-Tcp#0	1	2,652 K
conhost.exe	2616	RDP-Tcp#0	1	5,256 K
audiodg.exe	980	Services	0	13,256 K
csrss.exe	2400	Console	3	3,512 K
winlogon.exe	2492	Console	3	5,772 K
LogonUI.exe	2864	Console	3	17,056 K
notepad.exe	376	Services	1	5,636 K
taskhost.exe	2812	Services	0	9,540 K
tasklist.exe	1208	RDP-Tcp#0	1	5,196 K
WmiPrvSE.exe	1276	Services	0	5,776 K

- A. Mastered
- B. Not Mastered

**Answer:** A

**Explanation:**  
 Server1 and svchost.exe

**NEW QUESTION 230**

A user receives a potentially malicious attachment that contains spelling errors and a PDF document. A security analyst reviews the email and decides to download the attachment to a Linux sandbox for review. Which of the following commands would most likely indicate if the email is malicious?

- A. sha256sum ~/Desktop/fi1e.pdf

- B. `/bin/;s -1 ~/Desktop/fi1e.pdf`
- C. `strings ~/Desktop/fi1e.pdf | grep -i "<script"`
- D. `cat < ~/Desktop/file.pdf | grep -i .exe`

**Answer: C**

**Explanation:**

This command would most likely indicate if the email attachment is malicious, as it would display any JavaScript code embedded in the PDF file. JavaScript code can be used by attackers to execute malicious commands or scripts on the victim's system when the PDF file is opened<sup>1</sup>. The strings command extracts the printable characters from a binary file, such as a PDF file, and the `grep -i "<script"` option searches for the presence of JavaScript code in a case-insensitive manner<sup>2</sup>.

**NEW QUESTION 231**

A company frequently experiences issues with credential stuffing attacks Which of the following is the BEST control to help prevent these attacks from being successful?

- A. SIEM
- B. IDS
- C. MFA
- D. TLS

**Answer: C**

**Explanation:**

MFA stands for multi-factor authentication, which is a method of verifying a user's identity by requiring two or more pieces of evidence, such as something the user knows (e.g., password), something the user has (e.g., token), or something the user is (e.g., fingerprint). MFA is the best control to help prevent credential stuffing attacks from being successful, because even if an attacker obtains a valid username and password from a breached site, they would still need another factor to access the target site. SIEM, IDS, and TLS are other security controls, but they are not as effective as MFA for preventing credential stuffing attacks. Reference: <https://www.cloudflare.com/learning/bots/what-is-credential-stuffing/>

**NEW QUESTION 236**

A technician working at company.com received the following email:

From: joe@gmail.com  
 To: technician@company.com  
 Subject: FW: Need help with my computer

Dear tech support,

Please contact me at +1-555-867-5309 as my computer was not fixed by the previous technician. My employee ID is 030234 and the computer serial # is A238482

--- Forward Message ---

From: joe@company.com  
 To: joe@gmail.com  
 Subject: FW: Need help with my computer

Dear joe, rebooting you computer should solve the issue.

After looking at the above communication, which of the following should the technician recommend to the security team to prevent exposure of sensitive information and reduce the risk of corporate data being stored on non-corporate assets?

- A. Forwarding of corporate email should be disallowed by the company.
- B. A VPN should be used to allow technicians to troubleshoot computer issues securely.
- C. An email banner should be implemented to identify emails coming from external sources.
- D. A rule should be placed on the DLP to flag employee IDs and serial numbers.

**Answer: C**

**Explanation:**

An email banner is a message that is added to the top or bottom of an email to provide some information or warning to the recipient. An email banner should be implemented to identify emails coming from external sources to prevent exposure of sensitive information and reduce the risk of corporate data being stored on non-corporate assets. An email banner can help employees recognize phishing or spoofing attempts and avoid clicking on malicious links or attachments. It can also remind employees not to share confidential information with external parties or forward corporate emails to personal accounts. The other options are not relevant or effective for this purpose. References: CompTIA Cybersecurity Analyst (CySA+) Certification Exam Objectives (CS0-002), page 13; <https://www.csoonline.com/article/3235970/what-is-spoofing-definition-and-how-to-prevent-it.html>

**NEW QUESTION 241**

Which of following allows Secure Boot to be enabled?

- A. eFuse
- B. UEFI
- C. MSM
- D. PAM

**Answer: B**

**Explanation:**

UEFI, or Unified Extensible Firmware Interface, is a specification that defines the software interface between an operating system and platform firmware. UEFI replaces the legacy BIOS (Basic Input/Output System) interface that was used to boot and configure computers. UEFI provides several advantages over BIOS, such as faster boot times, better security features, larger disk support, graphical user interface, etc. One of the security features that UEFI supports is Secure Boot, which is a mechanism that ensures that only authorized software can run during the boot process. Secure Boot prevents unauthorized or malicious code from loading or executing before the operating system starts. Secure Boot works by verifying the digital signature of each piece of boot software against a database of trusted keys stored in UEFI firmware. If the signature is valid, the software is allowed to run; otherwise, it is blocked or rejected.

**NEW QUESTION 243**

An employee observes degraded system performance on a Windows workstation. While attempting to access documents, the employee notices the file icons appear abnormal and the file extensions have been changed. The employee instantly shuts down the machine and alerts a supervisor. Which of the following forensic evidence will be lost as a result of these actions?

- A. All user actions prior to shutting down the machine
- B. All information stored in the machine's local database
- C. All cached items that are queued to be written to the registry
- D. Volatile artifacts in the system's memory

**Answer: D**

**Explanation:**

Volatile artifacts are data that is stored in a computer's volatile memory while it is running, such as open network connections, running processes, encryption keys, and internet history. Volatile artifacts can provide valuable evidence for forensic investigations, especially for detecting and analyzing malware or malicious activities that do not leave traces on the hard drive. However, volatile artifacts are wiped off the system's memory once the power is turned off, so they cannot be recovered later.

**NEW QUESTION 244**

An organization is concerned about the proper handling of data and wants to implement measures to help safeguard customer data and the organization's proprietary information from exposure. Which of the following is the first step to improve awareness of overall privacy and protection?

- A. Perform user acceptance testing.
- B. Implement corporate policies.
- C. Conduct biannual training.
- D. Review data classification processes.

**Answer: D**

**Explanation:**

Data classification is the process of categorizing data based on its level of sensitivity, value, and risk. Data classification can help determine the appropriate level of protection and access control for each type of data.

Data classification processes should be reviewed regularly to ensure that they are aligned with the organization's goals, policies, and standards. Data classification processes should also reflect the changing nature and value of data, as well as the evolving threats and regulations in the data environment.

Reviewing data classification processes can help improve awareness of overall privacy and protection by: ➤ Educating data owners and users about their roles and responsibilities in handling data.

- Establishing clear and consistent criteria for labeling and handling data.
- Identifying and prioritizing the most critical and sensitive data assets.
- Applying the appropriate security measures and controls for each data category.
- Reducing the risk of data loss, theft, or misuse.

**NEW QUESTION 245**

A security analyst who works in the SOC receives a new requirement to monitor for indicators of compromise. Which of the following is the first action the analyst should take in this situation?

- A. Develop a dashboard to track the indicators of compromise.
- B. Develop a query to search for the indicators of compromise.
- C. Develop a new signature to alert on the indicators of compromise.
- D. Develop a new signature to block the indicators of compromise.

**Answer: B**

**Explanation:**

Developing a query to search for the indicators of compromise is the first action the analyst should take in this situation. Indicators of compromise (IOCs) are pieces of information that suggest a system or network has been compromised by an attacker. IOCs can include IP addresses, domain names, file hashes, URLs, or other artifacts that are associated with malicious activity. Developing a query to search for IOCs can help to identify any potential incidents or threats in the environment and initiate further investigation or response.

**NEW QUESTION 249**

A financial organization has offices located globally. Per the organization's policies and procedures, all executives who conduct Business overseas must have their mobile devices checked for malicious software or evidence of tempering upon their return. The information security department oversees the process, and no executive has had a device compromised. The Chief Information Security Officer wants to implement an additional safeguard to protect the organization's data. Which of the following controls would work BEST to protect the privacy of the data if a device is stolen?

- A. Implement a mobile device wiping solution for use if a device is lost or stolen.
- B. Install a DLP solution to track data now
- C. Install an encryption solution on all mobile devices.
- D. Train employees to report a lost or stolen laptop to the security department immediately

**Answer:** A

**Explanation:**

A mobile device wiping solution is a security feature that allows an organization to remotely erase or delete all data on a mobile device if it is lost or stolen. A mobile device wiping solution can help protect the privacy of the data on a device and prevent unauthorized access or disclosure of sensitive information. A mobile device wiping solution can be implemented using built-in features of some mobile operating systems, third-party applications, or mobile device management (MDM) software.

**NEW QUESTION 251**

A security analyst is reviewing the output of tcpdump to analyze the type of activity on a packet capture:

```
16:06:32.909791 IP 192.168.0.1.39224 > 192.168.1.1.442: Flags [S], seq 1683238133, win 65535, options [mss 65495,sackOK,TS val 3178342128 ecr 0,nop,wscale 11], length 0
16:06:32.909796 IP 192.168.1.1.442 > 192.168.0.1.39224: Flags [R.], seq 0, ack 1683238134, win 0, length 0
16:06:32.910601 IP 192.168.0.1.51076 > 192.168.1.1.443: Flags [S], seq 1697823267, win 65535, options [mss 65495,sackOK,TS val 3178342129 ecr 0,nop,wscale 11], length 0
16:06:32.910608 IP 192.168.1.1.443 > 192.168.0.1.51076: Flags [S.], seq 2507327109, ack 1697823268, win 65535, options [mss 65495,sackOK,TS val 719168538 ecr 3178342129,nop,wscale 11], length 0
16:06:32.910615 IP 192.168.0.1.51076 > 192.168.1.1.443: Flags [.], ack 1, win 64, options [nop,nop,TS val 3178342129 ecr 719168538], length 0
16:06:32.910626 IP 192.168.0.1.51076 > 192.168.1.1.443: Flags [F.], seq 1, ack 1, win 64, options [nop,nop,TS val 3178342129 ecr 719168538], length 0
16:06:32.910903 IP 192.168.1.1.443 > 192.168.0.1.51076: Flags [F.], seq 1, ack 2, win 64, options [nop,nop,TS val 719168538 ecr 3178342129], length 0
16:06:32.910908 IP 192.168.0.1.51076 > 192.168.1.1.443: Flags [.], ack 2, win 64, options [nop,nop,TS val 3178342129 ecr 719168538], length 0
16:06:32.911743 IP 192.168.0.1.56346 > 192.168.1.1.444: Flags [S], seq 862629258, win 65535, options [mss 65495,sackOK,TS val 3178342130 ecr 0,nop,wscale 11], length 0
16:06:32.911747 IP 192.168.1.1.444 > 192.168.0.1.56346: Flags [R.], seq 0, ack 862629259, win 0, length 0
16:06:32.912562 IP 192.168.0.1.52002 > 192.168.1.1.445: Flags [S], seq 1707382117, win 65535, options [mss 65495,sackOK,TS val 3178342131 ecr 0,nop,wscale 11], length 0
16:06:32.912566 IP 192.168.1.1.445 > 192.168.0.1.52002: Flags [R.], seq 0, ack 1707382118, win 0, length 0
16:06:32.913389 IP 192.168.0.1.59808 > 192.168.1.1.446: Flags [S], seq 2627951491, win 65535, options [mss 65495,sackOK,TS val 3178342131 ecr 0,nop,wscale 11], length 0
```

Which of the following generated the above output?

- A. A port scan
- B. A TLS connection
- C. A vulnerability scan
- D. A ping sweep

**Answer:** B

**Explanation:**

A port scan generated the output. A port scan is a type of attack that probes a host or a network for open ports or services. A port scan can help an attacker discover potential vulnerabilities or entry points for further exploitation. The output shows that tcpdump captured packets with different flags, such as SYN, ACK, RST, and FIN, which indicate different stages of the TCP three-way handshake or connection termination. The output also shows that the source IP address 192.168.1.100 sent packets to different destination ports on the target IP address 192.168.1.101, such as 22, 23, 25, 80, and 443. These are common ports that an attacker would scan to find out what services are running on the target.

**NEW QUESTION 255**

A security analyst is investigating a data leak on a corporate website. The attacker was able to dump data by sending a crafted HTTP request with the following payload:

```
GET /sales.php?user=-1+union+select+7,9,11,87
host: victim.example.com
Upgrade-Insecure-Requests: 1
User-agent: Mozilla/5.0
Connection: close
```

Which of the following systems would most likely have logs with details regarding the threat actor's requests?

- A. Cloud WAF
- B. Internal proxy
- C. TAXII server
- D. Hardware security module

**Answer:** A

**Explanation:**

The correct answer is A. Cloud WAF. A cloud WAF stands for a cloud-based web application firewall, and it is a service that protects web applications from common attacks, such as SQL injection, cross-site scripting, or denial-of-service. A cloud WAF can inspect and filter HTTP requests and responses between the web application and the internet, and block or allow them based on predefined or custom rules. A cloud WAF can also generate logs with details regarding the threat actor's requests, such as the source IP address, the destination URL, the payload, the rule triggered, and the action taken.

\* B. Internal proxy is not correct. An internal proxy is a server that acts as an intermediary between internal clients and external servers. An internal proxy can provide various functions, such as caching, filtering, authentication, or encryption. An internal proxy can also generate logs with details regarding the client's requests, such as the source IP address, the destination URL, the protocol used, and the response received. However, an internal proxy would not have logs with details regarding the threat actor's requests, as they are directed to the web application, not to the internal proxy.

\* C. TAXII server is not correct. TAXII stands for Trusted Automated eXchange of Intelligence Information, and it is a standard that defines how to exchange cyber threat intelligence (CTI) between different systems or organizations. TAXII uses a client-server model, where a TAXII client can request or send CTI to a TAXII server using predefined services and messages. A TAXII server can store and provide CTI in a structured and standardized format. However, a TAXII server would not have logs with details regarding the threat actor's requests, as they are not related to CTI exchange.

\* D. Hardware security module is not correct. A hardware security module (HSM) is a physical device that provides secure storage and processing of cryptographic keys and operations. An HSM can protect sensitive data and transactions, such as encryption, decryption, signing, or verification, from unauthorized access or tampering. However, an HSM would not have logs with details regarding the threat actor's requests, as they are not related to cryptographic operations.

\* 1: What Is a Cloud-Based Web Application Firewall (WAF)? 2: What Is a Proxy Server? 3: What Is T  
[What Is a Hardware Security Module (HSM)?]

#### NEW QUESTION 259

A company wants to run a leaner team and needs to deploy a threat management system with minimal human interaction. Which of the following is the server component of the threat management system that can accomplish this goal?

- A. STIX
- B. OpenIOC
- C. CVSS
- D. TAXII

**Answer: D**

#### Explanation:

TAXII stands for Trusted Automated eXchange of Indicator Information, and it is a server component of a threat management system that can facilitate the exchange of threat intelligence data between different sources and consumers, using a standard protocol and format. TAXII can help deploy a threat management system with minimal human interaction, by automating the collection, processing, and dissemination of threat intelligence data.

#### NEW QUESTION 263

A current, validated DLP solution is now in place because of a previous data breach. However, a new data breach has taken place. The following symptoms were observed shortly after a recent sales meeting:

- \* Sensitive corporate documents appeared on the dark web.
- \* Unusually large packets of data were being sent out.

Which of the following is most likely occurring?

- A. Documents are not tagged properly to restrict sharing.
- B. An insider threat is exfiltrating data.
- C. The DLP solution is not configured for unsecured web traffic.
- D. File audits are not enabled on CASB.

**Answer: B**

#### Explanation:

This is most likely occurring based on the symptoms observed after a recent sales meeting. An insider threat is a person who has legitimate access to an organization's network or data and uses it for malicious purposes, such as stealing, leaking, or sabotaging information. The symptoms suggest that someone from the sales team or someone who attended the meeting has copied sensitive corporate documents and uploaded them to the dark web using large data packets.

#### NEW QUESTION 266

A security analyst is supporting an embedded software team. Which of the following is the best recommendation to ensure proper error handling at runtime?

- A. Perform static code analysis.
- B. Require application fuzzing.
- C. Enforce input validation.
- D. Perform a code review.

**Answer: D**

#### Explanation:

Performing a code review is the best recommendation to ensure proper error handling at runtime for an embedded software team. A code review is a process of examining and evaluating source code by one or more developers other than the original author. A code review can help to identify and fix any errors, bugs, vulnerabilities, or inefficiencies in the code before it is deployed or executed. A code review can also help to ensure that the code follows the best practices, standards, and guidelines for error handling at runtime.

#### NEW QUESTION 270

Given the Nmap request below:

```
Scanner# nmap -p 22,113,139,1433 www.scannable.org -d --packet-trace
Starting Nmap(http://nmap.org)
Nmap scan report for www.scannable.org
SENT(0.0149s) ICMP SCANNER > SCANNABLE
echo request (type=8/code=0) TTL=52 ID=1929
SENT(0.0112s) TCP SCANNER:63541 > SCANNABLE:80 iplen=40 seq=99850910
RCVC(0.0179s) ICMP SCANNABLE > SCANNER echo reply(type=0/code=0 iplen=28 seq=99850910
we got a ping back for SCANNABLE: ID=48822 seq=713 checksum=16000
massping done: num_host:1 num_response:1
Initiating SYN STEALTH Scan against www.scannable.org (SCANNABLE) 3 ports at 00:47
SENT(0.0134s) TCP SCANNER:63517 > SCANNABLE:113 iplen=40 seq=1048634
SENT(0.0148s) TCP SCANNER:63517 > SCANNABLE:139 iplen=40 seq=1048634
SENT(0.0092s) TCP SCANNER:63517 > SCANNABLE:22 iplen=40 seq=1048634
RCVD(0.0151s) TCP SCANNABLE:113 > SCANNER:63517 iplen=40 seq=1048634
RCVD(0.0151s) TCP SCANNABLE:22 > SCANNER:63517 iplen=40 seq=1048634
SENT(0.0097s) TCP SCANNER:63517 > SCANNABLE:139 iplen=40 seq=1048634
The SYN STEALTH Scan took 1.25s to scan 3 total ports
Nmap Report for www.scannable.org (SCANNABLE)
```

PORT	STATE	SERVICE
22/tcp	open	ssh
113/tcp	closed	auth
139/tcp	filtered	netbios-ssh
1433/tcp	closed	ms-sql

Which of the following actions will an attacker be able to initiate directly against this host?

- A. Password sniffing
- B. ARP spoofing
- C. A brute-force attack
- D. An SQL injection

**Answer: C**

**Explanation:**

The Nmap command given in the question performs a TCP SYN scan (-sS), a service version detection scan (-sV), an OS detection scan (-O), and a port scan for ports 1-1024 (-p 1-1024) on the host 192.168.1.1. This command will reveal information about the host's operating system, open ports, and running services, which can be used by an attacker to launch a brute-force attack against the host. A brute-force attack is a method of guessing passwords or encryption keys by trying many possible combinations until finding the correct one. An attacker can use the information from the Nmap scan to target specific services or protocols that may have weak or default credentials, such as FTP, SSH, Telnet, or HTTP.

**NEW QUESTION 274**

An organization is focused on restructuring its data governance programs and an analyst has been Tasked with surveying sensitive data within the organization. Which of the following is the MOST accurate method for the security analyst to complete this assignment?

- A. Perform an enterprise-wide discovery scan.
- B. Consult with an internal data custodian.
- C. Review enterprise-wide asset Inventory.
- D. Create a survey and distribute it to data owners.

**Answer: A**

**Explanation:**

A data governance program is a collection of practices, policies, and procedures that manage, leverage, and protect the data assets of an organization<sup>1</sup>. It requires changing the workplace culture and adding some software<sup>1</sup>. To survey sensitive data within the organization, the most accurate method is to perform an enterprise-wide discovery scan that can identify and classify data from various sources and systems<sup>2</sup>. This way, the analyst can have a comprehensive view of the data landscape and its quality, security, accessibility, and usage. Consulting with an internal data custodian (B) or reviewing enterprise-wide asset inventory © may provide some insights, but not as accurate or complete as a discovery scan. Creating a survey and distributing it to data owners (D) may be time-consuming and unreliable, as data owners may not have the full knowledge or awareness of their data.

References: 1: <https://www.analytics8.com/blog/8-steps-to-start-your-data-governance-program/> 2: <https://solutionsreview.com/data-management/the-best-data-governance-tools-and-software/>

**NEW QUESTION 279**

An online gaming company was impacted by a ransomware attack. An employee opened an attachment that was received via an SMS attack on a company-issued mobile device while connected to the network. Which of the following actions would help during the forensic analysis of the mobile device? (Select TWO).

- A. Resetting the phone to factory settings
- B. Rebooting the phone and installing the latest security updates
- C. Documenting the respective chain of custody
- D. Uninstalling any potentially unwanted programs
- E. Performing a memory dump of the mobile device for analysis
- F. Unlocking the device by browsing the eFuse

**Answer: CE**

**Explanation:**

Documenting the chain of custody is an important step in the forensic analysis of any device, as it helps to ensure that all evidence is collected and preserved

correctly. A memory dump is also essential, as it can provide information about the state of the device when the attack occurred and can be used for further analysis.

Documenting the respective chain of custody can help to preserve the integrity and admissibility of the evidence collected from the mobile device during the forensic analysis. Chain of custody is a record of who handled, accessed or modified the evidence, when, where, how and why . Performing a memory dump of the mobile device for analysis can help to extract volatile data from the mobile device that may contain valuable information about the ransomware attack, such as processes, network connections or encryption keys. Memory dump is a process of copying the contents of the memory (RAM) to a file or storage device .

References: <https://www.techopedia.com/definition/23371/chain-of-custody> <https://www.techopedia.com/definition/10339/memory-dump>

#### **NEW QUESTION 281**

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