

CompTIA

Exam Questions CAS-004

CompTIA Advanced Security Practitioner (CASP+) Exam



NEW QUESTION 1

A security analyst receives an alert from the SIEM regarding unusual activity on an authorized public SSH jump server. To further investigate, the analyst pulls the event logs directly from /var/log/ auth.log: graphic.ssh_auth_log.

Which of the following actions would BEST address the potential risks by the activity in the logs?

- A. Alerting the misconfigured service account password
- B. Modifying the AllowUsers configuration directive
- C. Restricting external port 22 access
- D. Implementing host-key preferences

Answer: C

Explanation:

Reference: <https://www.rapid7.com/blog/post/2017/10/04/how-to-secure-ssh-server-using-port-knocking-on-ubuntu-linux/>

NEW QUESTION 2

A security analyst is researching containerization concepts for an organization. The analyst is concerned about potential resource exhaustion scenarios on the Docker host due to a single application that is overconsuming available resources.

Which of the following core Linux concepts BEST reflects the ability to limit resource allocation to containers?

- A. Union filesystem overlay
- B. Cgroups
- C. Linux namespaces
- D. Device mapper

Answer: B

Explanation:

Reference: <https://www.ibm.com/support/pages/deep-dive-yarn-cgroups-hadoop-dev>

NEW QUESTION 3

A company undergoing digital transformation is reviewing the resiliency of a CSP and is concerned about meeting SLA requirements in the event of a CSP incident.

Which of the following would be BEST to proceed with the transformation?

- A. An on-premises solution as a backup
- B. A load balancer with a round-robin configuration
- C. A multicloud provider solution
- D. An active-active solution within the same tenant

Answer: D

NEW QUESTION 4

A security architect works for a manufacturing organization that has many different branch offices. The architect is looking for a way to reduce traffic and ensure the branch offices receive the latest copy of revoked certificates issued by the CA at the organization's headquarters location. The solution must also have the lowest power requirement on the CA.

Which of the following is the BEST solution?

- A. Deploy an RA on each branch office.
- B. Use Delta CRLs at the branches.
- C. Configure clients to use OCSP.
- D. Send the new CRLs by using GPO.

Answer: C

Explanation:

Reference: <https://www.sciencedirect.com/topics/computer-science/revoke-certificate>

NEW QUESTION 5

An IT administrator is reviewing all the servers in an organization and notices that a server is missing crucial practice against a recent exploit that could gain root access.

Which of the following describes the administrator's discovery?

- A. A vulnerability
- B. A threat
- C. A breach
- D. A risk

Answer: A

Explanation:

Reference: <https://www.beyondtrust.com/blog/entry/privilege-escalation-attack-defense-explained>

NEW QUESTION 6

In preparation for the holiday season, a company redesigned the system that manages retail sales and moved it to a cloud service provider. The new infrastructure did not meet the company's availability requirements. During a postmortem analysis, the following issues were highlighted:

- * 1. International users reported latency when images on the web page were initially loading.
- * 2. During times of report processing, users reported issues with inventory when attempting to place orders.
- * 3. Despite the fact that ten new API servers were added, the load across servers was heavy at peak times.

Which of the following infrastructure design changes would be BEST for the organization to implement to avoid these issues in the future?

- A. Serve static content via distributed CDNs, create a read replica of the central database and pull reports from there, and auto-scale API servers based on performance.
- B. Increase the bandwidth for the server that delivers images, use a CDN, change the database to a non-relational database, and split the ten API servers across two load balancers.
- C. Serve images from an object storage bucket with infrequent read times, replicate the database across different regions, and dynamically create API servers based on load.
- D. Serve static-content object storage across different regions, increase the instance size on the managed relational database, and distribute the ten API servers across multiple regions.

Answer: A

NEW QUESTION 7

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

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

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

Answer: B

NEW QUESTION 8

An organization is implementing a new identity and access management architecture with the following objectives: Supporting MFA against on-premises infrastructure

Improving the user experience by integrating with SaaS applications

Applying risk-based policies based on location Performing just-in-time provisioning Which of the following authentication protocols should the organization implement to support these requirements?

- A. Kerberos and TACACS
- B. SAML and RADIUS
- C. OAuth and OpenID
- D. OTP and 802.1X

Answer: A

Explanation:

Reference: <https://docs.microsoft.com/en-us/azure/active-directory/manage-apps/migrate-application-authentication-toazure-active-directory>

NEW QUESTION 9

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

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

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

Answer: A

Explanation:

Reference: <https://www.cyberark.com/what-is/privileged-access-management/>

NEW QUESTION 10

Device event logs sources from MDM software as follows:

Which of the following security concerns and response actions would BEST address the risks posed by the device in the logs?

- A. Malicious installation of an application; change the MDM configuration to remove application ID 1220.
- B. Resource leak; recover the device for analysis and clean up the local storage.
- C. Impossible travel; disable the device's account and access while investigating.
- D. Falsified status reporting; remotely wipe the device.

Answer: A

NEW QUESTION 10

An organization is referencing NIST best practices for BCP creation while reviewing current internal organizational processes for mission-essential items. Which of the following phases establishes the identification and prioritization of critical systems and functions?

- A. Review a recent gap analysis.
- B. Perform a cost-benefit analysis.
- C. Conduct a business impact analysis.
- D. Develop an exposure factor matrix.

Answer: C

Explanation:

Reference: <https://itsm.ucsf.edu/business-impact-analysis-bia-0>

NEW QUESTION 12

A technician is reviewing the logs and notices a large number of files were transferred to remote sites over the course of three months. This activity then stopped. The files were transferred via TLSprotected HTTP sessions from systems that do not send traffic to those sites. The technician will define this threat as:

- A. a decrypting RSA using obsolete and weakened encryption attack.
- B. a zero-day attack.
- C. an advanced persistent threat.
- D. an on-path attack.

Answer: A

Explanation:

Reference: <https://www.internetsociety.org/deploy360/tls/basics/>

NEW QUESTION 16

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: CD

NEW QUESTION 18

A security analyst notices a number of SIEM events that show the following activity:

Which of the following response actions should the analyst take FIRST?

- A. Disable powershell.exe on all Microsoft Windows endpoints.
- B. Restart Microsoft Windows Defender.
- C. Configure the forward proxy to block 40.90.23.154.
- D. Disable local administrator privileges on the endpoints.

Answer: A

NEW QUESTION 23

A security engineer thinks the development team has been hard-coding sensitive environment variables in its code. Which of the following would BEST secure the company's CI/CD pipeline?

- A. Utilizing a trusted secrets manager
- B. Performing DAST on a weekly basis
- C. Introducing the use of container orchestration
- D. Deploying instance tagging

Answer: A

Explanation:

Reference: <https://about.gitlab.com/blog/2021/04/09/demystifying-ci-cd-variables/>

NEW QUESTION 25

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

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

Answer: B

Explanation:

Reference: <https://www.open.edu/openlearn/ocw/mod/oucontent/view.php?id=48322&ion=1.3>

NEW QUESTION 30

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. No-execute
- C. Total memory encryption
- D. Virtual memory encryption

Answer: A

Explanation:

Reference: <https://developer.arm.com/documentation/102433/0100/Stack-smashing-and-execution-permissions>

NEW QUESTION 34

A developer is creating a new mobile application for a company. The application uses REST API and TLS 1.2 to communicate securely with the external back-end server. Due to this configuration, the company is concerned about HTTPS interception attacks.

Which of the following would be the BEST solution against this type of attack?

- A. Cookies
- B. Wildcard certificates
- C. HSTS
- D. Certificate pinning

Answer: C

Explanation:

Reference: <https://cloud.google.com/security/encryption-in-transit>

NEW QUESTION 36

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

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

Answer: D

NEW QUESTION 41

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:

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: B

Explanation:

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

NEW QUESTION 46

A company is migrating from company-owned phones to a BYOD strategy for mobile devices. The pilot program will start with the executive management team and be rolled out to the rest of the staff in phases. The company's Chief Financial Officer loses a phone multiple times a year. Which of the following will MOST likely secure the data on the lost device?

- A. Require a VPN to be active to access company data.
- B. Set up different profiles based on the person's risk.
- C. Remotely wipe the device.
- D. Require MFA to access company applications.

Answer: D

NEW QUESTION 51

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: A

NEW QUESTION 55

A security analyst is performing a vulnerability assessment on behalf of a client. The analyst must define what constitutes a risk to the organization. Which of the following should be the analyst's FIRST action?

- A. Create a full inventory of information and data assets.
- B. Ascertain the impact of an attack on the availability of crucial resources.
- C. Determine which security compliance standards should be followed.
- D. Perform a full system penetration test to determine the vulnerabilities.

Answer: C

NEW QUESTION 57

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: B

Explanation:

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

NEW QUESTION 58

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: D

NEW QUESTION 59

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

NEW QUESTION 62

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: C

NEW QUESTION 66

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

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

Answer: C

Explanation:

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

NEW QUESTION 68

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:

Reference: <http://webpages.eng.wayne.edu/~fy8421/19sp-csc5290/labs/lab2-instruction.pdf> (3)

NEW QUESTION 72

Which of the following is a benefit of using steganalysis techniques in forensic response?

- A. Breaking a symmetric cipher used in secure voice communications
- B. Determining the frequency of unique attacks against DRM-protected media
- C. Maintaining chain of custody for acquired evidence
- D. Identifying least significant bit encoding of data in a .wav file

Answer: D

Explanation:

Reference: https://www.garykessler.net/library/fsc_stego.html

NEW QUESTION 77

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

NEW QUESTION 81

Clients are reporting slowness when attempting to access a series of load-balanced APIs that do not require authentication. The servers that host the APIs are showing heavy CPU utilization. No alerts are found on the WAFs sitting in front of the APIs. Which of the following should a security engineer recommend to BEST remedy the performance issues in a timely manner?

- A. Implement rate limiting on the API.
- B. Implement geoblocking on the WAF.
- C. Implement OAuth 2.0 on the API.
- D. Implement input validation on the API.

Answer: C

NEW QUESTION 86

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: BD

NEW QUESTION 87

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

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

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

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

Answer: B

NEW QUESTION 90

DRAG DROP

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

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

After associating scenario 3 with the appropriate host(s), click the host to select the appropriate corrective action for that finding. Each finding may be used more than once.

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

A.

A.

Answer: A

NEW QUESTION 94

After a security incident, a network security engineer discovers that a portion of the company's sensitive external traffic has been redirected through a secondary ISP that is not normally used.

Which of the following would BEST secure the routes while allowing the network to function in the event of a single provider failure?

- A. Disable BGP and implement a single static route for each internal network.
- B. Implement a BGP route reflector.
- C. Implement an inbound BGP prefix list.
- D. Disable BGP and implement OSPF.

Answer: B

NEW QUESTION 97

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

NEW QUESTION 102

A small business requires a low-cost approach to theft detection for the audio recordings it produces and sells. Which of the following techniques will MOST likely meet the business's needs?

- A. Performing deep-packet inspection of all digital audio files
- B. Adding identifying filesystem metadata to the digital audio files
- C. Implementing steganography
- D. Purchasing and installing a DRM suite

Answer: C

Explanation:

Reference: <https://portswigger.net/daily-swig/what-is-steganography-a-complete-guide-to-the-ancient-art-of-concealingmessages>

NEW QUESTION 107

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

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 111

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

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

Answer: A

NEW QUESTION 114

The Chief information Officer (CIO) wants to establish a non-banding agreement with a third party that outlines the objectives of the mutual arrangement dealing with data transfers between both organizations before establishing a format partnership . Which of the follow would MOST likely be used?

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

Answer: A

NEW QUESTION 116

A developer implement the following code snippet.

Which of the following vulnerabilities does the code snippet resolve?

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

Answer: D

NEW QUESTION 118

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.

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

NEW QUESTION 122

Company A is establishing a contractual with Company B. The terms of the agreement are formalized in a document covering the payment terms, limitation of liability, and intellectual property rights .

Which of the following documents will MOST likely contain these elements?

- A. Company A-B SLA v2.docx
- B. Company A OLA v1b.docx
- C. Company A MSA v3.docx
- D. Company A MOU v1.docx
- E. Company A-B NDA v03.docx

Answer: A

NEW QUESTION 126

The Chief information Officer (CIO) asks the system administrator to improve email security at the company based on the following requirements:

- * Transaction being requested by unauthorized individuals.
- * Complete discretion regarding client names, account numbers, and investment information.
- * Malicious attackers using email to malware and ransomware.
- * Exfiltration of sensitive company information.

The cloud-based email solution will provide anti-malware reputation-based scanning, signature-based scanning, and sandboxing .

Which of the following is the BEST option to resolve the boar's concerns for this email migration?

- A. Data loss prevention
- B. Endpoint detection response
- C. SSL VPN
- D. Application whitelisting

Answer: A

NEW QUESTION 130

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