



# CompTIA

## Exam Questions CAS-003

CompTIA Advanced Security Practitioner (CASP)

#### NEW QUESTION 1

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 2

A security consultant is improving the physical security of a sensitive site and takes pictures of the unbranded building to include in the report. Two weeks later, the security consultant misplaces the phone, which only has one hour of charge left on it. The person who finds the phone removes the MicroSD card in an attempt to discover the owner to return it.

The person extracts the following data from the phone and EXIF data from some files:

DCIM Images folder

Audio books folder Torrentz

My TAX.xls

Consultancy HR Manual.doc Camera: SM-G950F Exposure time: 1/60s

Location: 3500 Lacey Road USA

Which of the following BEST describes the security problem?

- A. MicroSD is not encrypted and also contains personal data.
- B. MicroSD contains a mixture of personal and work data.
- C. MicroSD is not encrypted and contains geotagging information.
- D. MicroSD contains pirated software and is not encrypted.

**Answer: A**

#### NEW QUESTION 3

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 4

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

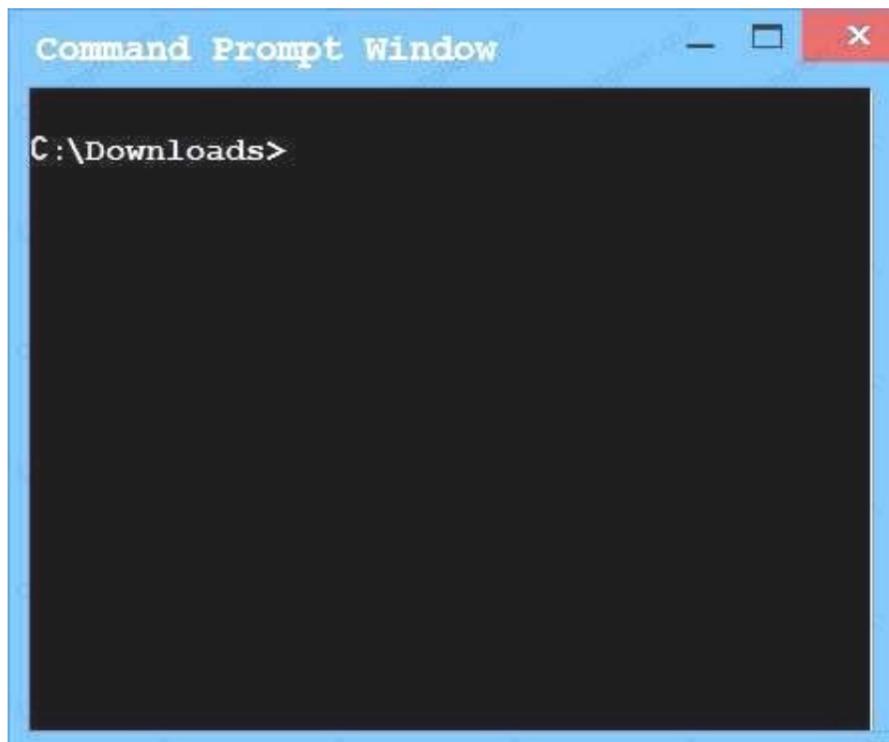
**Answer: C**

#### NEW QUESTION 5

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.



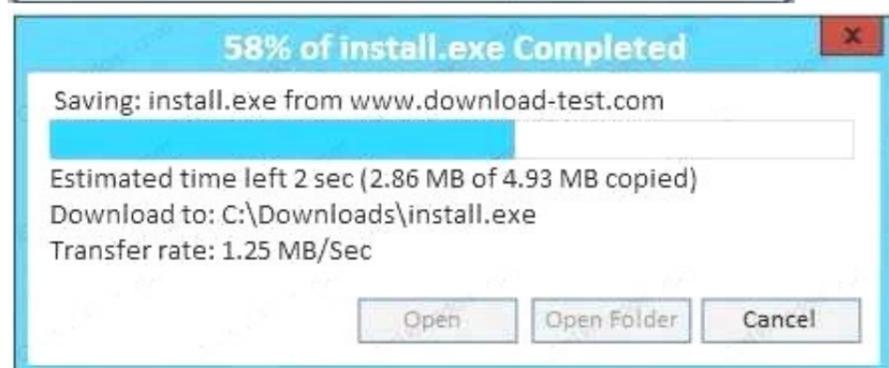
## Download Center

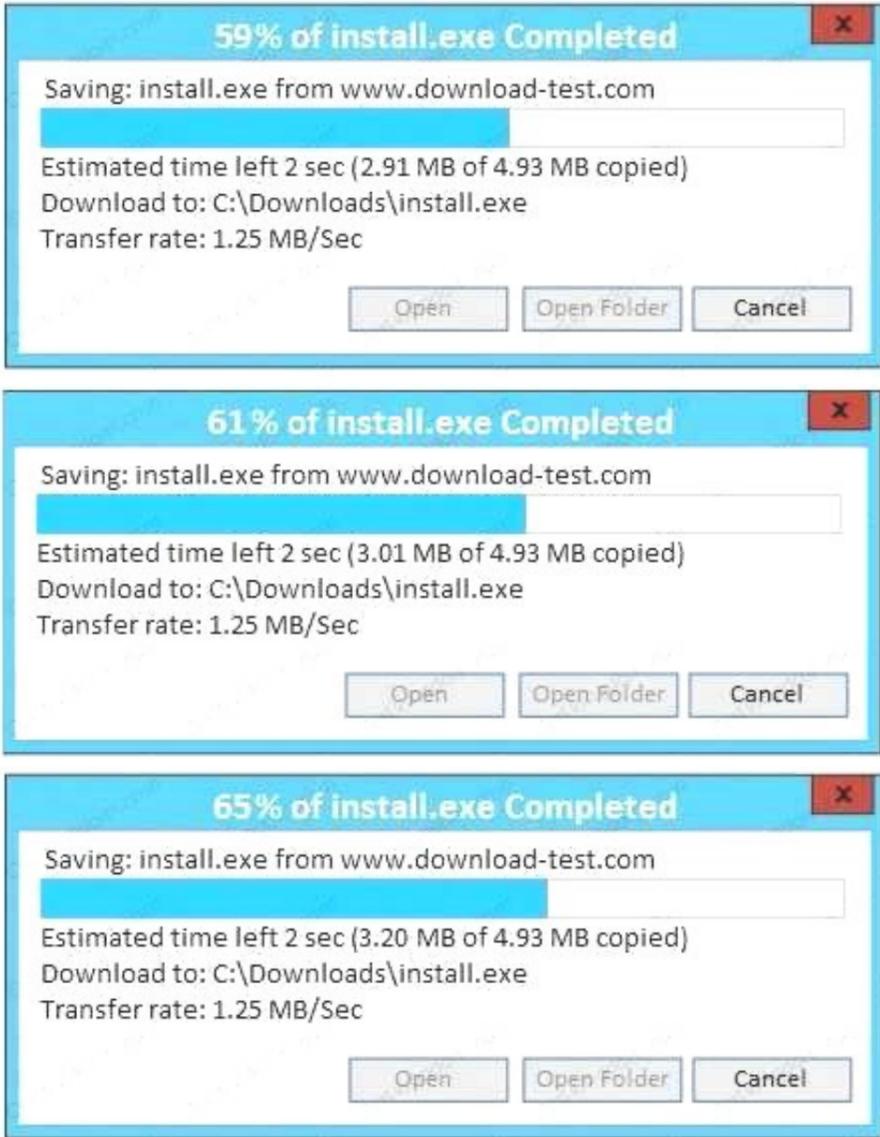
Home > Download Center > Application Patch

The links in this section correspond to separate files available in this download. Download the files most appropriate for you.

File Name	Mirror	Download Files Below
<a href="#">install.exe</a>	<a href="#">Mirror1</a>	<a href="#">Download</a>
<a href="#">install.exe</a>	<a href="#">Mirror2</a>	<a href="#">Download</a>
<a href="#">install.exe</a>	<a href="#">Mirror3</a>	<a href="#">Download</a>
<a href="#">install.exe</a>	<a href="#">Mirror4</a>	<a href="#">Download</a>
<a href="#">install.exe</a>	<a href="#">Mirror5</a>	<a href="#">Download</a>
<a href="#">install.exe</a>	<a href="#">Mirror6</a>	<a href="#">Download</a>

**HASH:** 1759adb5g34700aae19bc4578fc19cc2

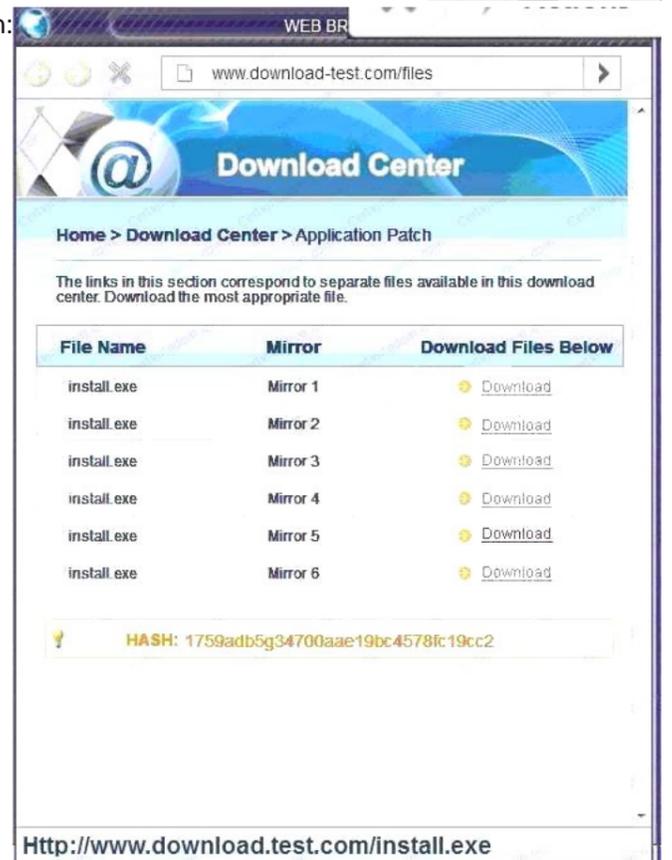




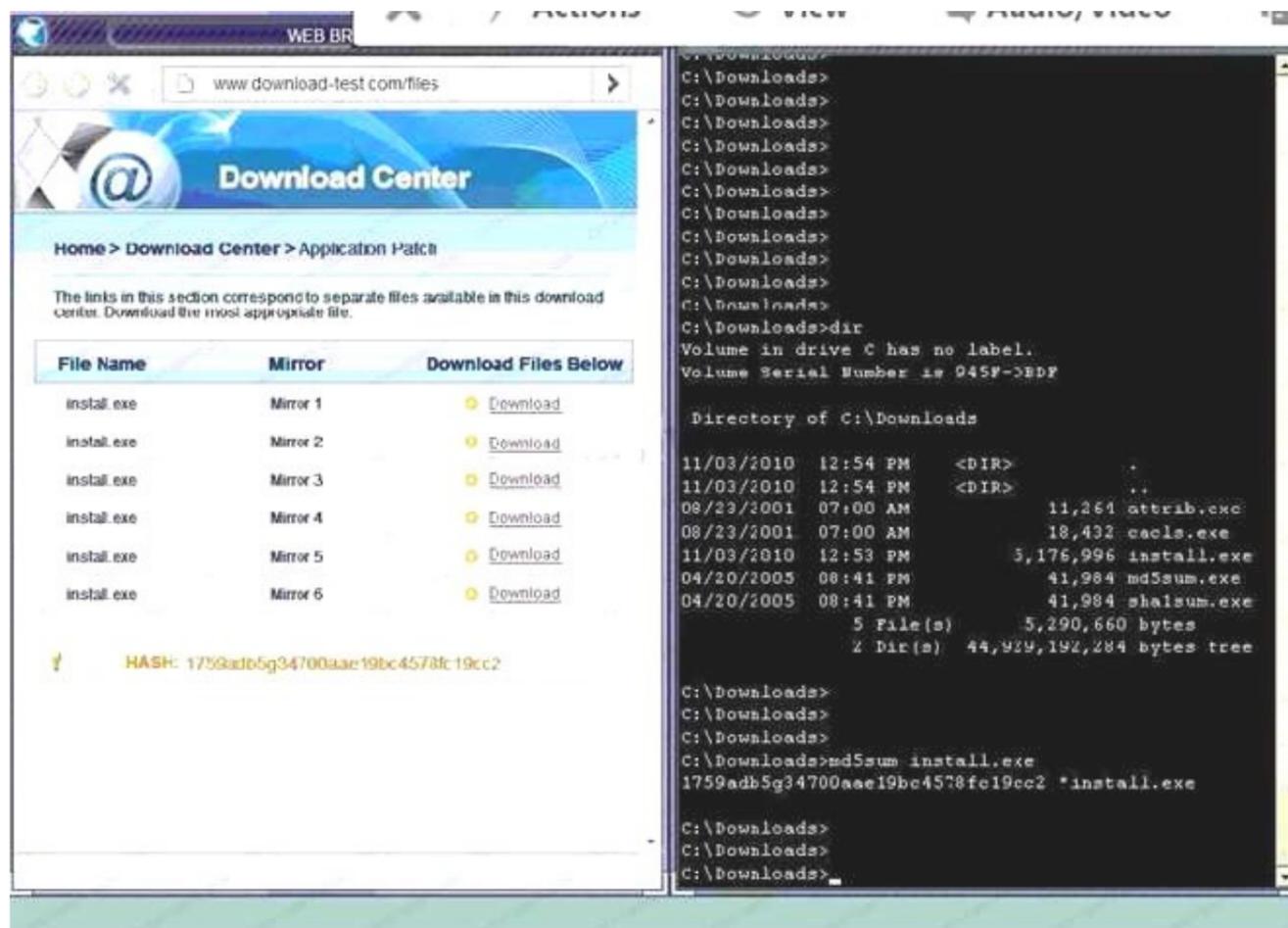
A. In this case the second link should be used (This may vary in actual exam). The first link showed the following error so it should not be used.



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 6**

An infrastructure team is at the end of a procurement process and has selected a vendor. As part of the final negotiations, there are a number of outstanding issues, including:

1. Indemnity clauses have identified the maximum liability
2. The data will be hosted and managed outside of the company's geographical location

The number of users accessing the system will be small, and no sensitive data will be hosted in the solution. As the security consultant on the project, which of the following should the project's security consultant recommend as the NEXT step?

- A. Develop a security exemption, as it does not meet the security policies
- B. Mitigate the risk by asking the vendor to accept the in-country privacy principles
- C. Require the solution owner to accept the identified risks and consequences
- D. Review the entire procurement process to determine the lessons learned

Answer: C

**NEW QUESTION 7**

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 8**

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

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

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

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

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

- A. VNC, router, and HIPS
- B. SIEM, VPN, and firewall

- C. Proxy, VPN, and WAF
- D. IDS, NAC, and log monitoring

**Answer: A**

**NEW QUESTION 9**

An internal penetration tester was assessing a recruiting page for potential issues before it was pushed to the production website. The penetration tester discovers an issue that must be corrected before the page goes live. The web host administrator collects the log files below and gives them to the development team so improvements can be made to the security design of the website.

```
[00:00:09] "GET /cgi-bin/forum/commentary.pl/noframes/read/209 HTTP/1.1"
200 6863
"http://search.company.com/search/cgi/search.cgi?qs=download=&dom=s&offse
t=0&hits=10&switch=0&f=us"
"Mozilla/4.0 (compatible; MSIE 6.0; Windows NT 5.1; Hotbar 4.4.7.0)"
[00:00:12] "GET /js/master.js HTTP/1.1" 200 2263
"http://www.company.com/cgi-bin/forum/commentary.pl/noframes/read/209"
"Mozilla/4.0 (compatible; MSIE 6.0; Windows NT 5.1; Hotbar 4.4.7.0)"
[00:00:22] "GET /internet/index.html HTTP/1.1" 200 6792
"http://www.company.com/video/streaming/http.html"
"Mozilla/5.0 (X11; U; Linux i686; es-ES; rv:1.6) Gecko/20040413
Debian/1.6-5"
[00:00:25] "GET /showFile.action?fileName=<script> alert("an error has
occurred, please send your username and password to me@example.com")
</script> 200
[00:00:27] "GET /contracts.html HTTP/1.0" 200 4595 "-" "FAST-
WebCrawler/2.1-pre2 (ashen@company.net)"
[00:00:29] "GET /news/news.html HTTP/1.0" 200 16716 "-" "FAST-
WebCrawler/2.1-pre2 (ashen@company.net)"
[00:00:29] "GET /download/windows/asctab31.zip HTTP/1.0" 200 1540096
"http://www.company.com/downloads/freeware/webdevelopment/15.html"
"Mozilla/4.7 [en]C-SYMPA (Win95; U)"
[00:00:30] "GET /pics/wpaper.gif HTTP/1.0" 200 6248
"http://www.comptia.com/asctortf/" "Mozilla/4.05 (Macintosh; I; PPC)"
```

Which of the following types of attack vector did the penetration tester use?

- A. SQLi
- B. CSRF
- C. Brute force
- D. XSS
- E. TOC/TOU

**Answer: B**

**NEW QUESTION 10**

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

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

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

- A. Install HIPS

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

**Answer:** BE

**NEW QUESTION 10**

Following a security assessment, the Chief Information Security Officer (CISO) is reviewing the results of the assessment and evaluating potential risk treatment strategies. As part of the CISO's evaluation, a judgment of potential impact based on the identified risk is performed. To prioritize response actions, the CISO uses past experience to take into account the exposure factor as well as the external accessibility of the weakness identified. Which of the following is the CISO performing?

- A. Documentation of lessons learned
- B. Quantitative risk assessment
- C. Qualitative assessment of risk
- D. Business impact scoring
- E. Threat modeling

**Answer:** B

**NEW QUESTION 11**

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 14**

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 19**

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 22**

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

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

**Answer:** A

#### NEW QUESTION 27

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 32

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 37

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 38

A security analyst sees some suspicious entries in a log file from a web server website, which has a form that allows customers to leave feedback on the company's products. The analyst believes a malicious actor is scanning the web form. To know which security controls to put in place, the analyst first needs to determine the type of activity occurring to design a control. Given the log below:

Timestamp	SourceIP	CustName	PreferredContact	ProdName	Comments
Monday 10:00:04	10.14.34.55	aaaaa	Phone	Widget1	None left
Monday 10:00:04	10.14.34.55	bbbbbb	Phone	Widget1	None left
Monday 10:00:05	10.14.34.55	cccc	Phone	Widget1	../../../../etc/passwd
Monday 10:01:03	10.14.34.55	dddddd	Phone	Widget1	None left
Monday 10:01:04	10.14.34.55	eeeeee	Phone	Widget1	None left
Monday 10:01:05	10.14.34.55	fffff	Phone	Widget1	1=1
Monday 10:03:05	172.16.34.20	Joe	Phone	Widget30	Love the Widget!
Monday 10:04:01	10.14.34.55	ggggg	Phone	Widget1	<script>
Monday 10:05:05	10.14.34.55	hhhhh	Phone	Widget1	wget cookie
Monday 10:05:05	10.14.34.55	iiii	Phone	Widget1	None left
Monday 10:05:06	10.14.34.55	llll	Phone	Widget1	None left

Which of the following is the MOST likely type of activity occurring?

- A. SQL injection
- B. XSS scanning
- C. Fuzzing
- D. Brute forcing

**Answer:** A

**NEW QUESTION 43**

A network engineer is attempting to design-in resiliency characteristics for an enterprise network's VPN services.

If the engineer wants to help ensure some resilience against zero-day vulnerabilities exploited against the VPN implementation, which of the following decisions would BEST support this objective?

- A. Implement a reverse proxy for VPN traffic that is defended and monitored by the organization's SOC with near-real-time alerting to administrators.
- B. Subscribe to a managed service provider capable of supporting the mitigation of advanced DDoS attacks on the enterprise's pool of VPN concentrators.
- C. Distribute the VPN concentrators across multiple systems at different physical sites to ensure some backup services are available in the event of primary site loss.
- D. Employ a second VPN layer concurrently where the other layer's cryptographic implementation is sourced from a different vendor.

**Answer:** D

**NEW QUESTION 46**

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 50**

A security engineer is working with a software development team. The engineer is tasked with ensuring all security requirements are adhered to by the developers. Which of the following BEST describes the contents of the supporting document the engineer is creating?

- A. A series of ad-hoc tests that each verify security control functionality of the entire system at once.

- B. A series of discrete tasks that, when viewed in total, can be used to verify and document each individual constraint from the SRTM.
- C. A set of formal methods that apply to one or more of the programming languages used on the development project.
- D. A methodology to verify each security control in each unit of developed code prior to committing the code.

**Answer: D**

**NEW QUESTION 52**

Which of the following is the GREATEST security concern with respect to BYOD?

- A. The filtering of sensitive data out of data flows at geographic boundaries.
- B. Removing potential bottlenecks in data transmission paths.
- C. The transfer of corporate data onto mobile corporate devices.
- D. The migration of data into and out of the network in an uncontrolled manne

**Answer: D**

**NEW QUESTION 55**

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 57**

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

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

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

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

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

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

**Answer: D**

**NEW QUESTION 62**

A 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:



- 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 77

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

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

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

**Answer:** A

#### NEW QUESTION 82

Given the following code snippet:

```
<FORM ACTION="http://192.168.51.10/cgi-bin/order.pl" method="post">
<input type=hidden name="price" value="199.99">
<input type=hidden name="prd_id" value="X190">
QUANTITY: <input type=text name="quant" size=3 maxlength=3 value=1>
</FORM>
```

Of which of the following is this snippet an example?

- A. Data execution prevention
- B. Buffer overflow
- C. Failure to use standard libraries
- D. Improper file usage
- E. Input validation

**Answer:** D

#### NEW QUESTION 83

A company has created a policy to allow employees to use their personally owned devices. The Chief Information Officer (CISO) is getting reports of company data appearing on unapproved forums and an increase in theft of personal electronic devices. Which of the following security controls would BEST reduce the risk of exposure?

- A. Disk encryption on the local drive
- B. Group policy to enforce failed login lockout
- C. Multifactor authentication
- D. Implementation of email digital signatures

**Answer:** A

#### NEW QUESTION 86

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 87

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 generating the same events. The analyst informs the manager of these findings, 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 88**

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 92**

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

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

Answer: D

**NEW QUESTION 95**

The Chief Executive Officer (CEO) instructed the new Chief Information Security Officer (CISO) to provide a list of enhancements to the company's cybersecurity operation. As a result, the CISO has identified the need to align security operations with industry best practices. Which of the following industry references is appropriate to accomplish this?

- A. OSSM
- B. NIST
- C. PCI
- D. OWASP

Answer: B

**NEW QUESTION 97**

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
scruser: domain\samjones
scr: 10.50.50.150
object_name: Beacon Detection
object_id: 6005
category: compromised-host
severity: medium
evidence: Host repeatedly visited a dynamic DNS domain (17 times).
```

After reviewing the alert, which of the following is the BEST analysis?

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

Answer: B

**NEW QUESTION 98**

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](https://en.wikipedia.org/wiki/Data_deduplication)

**NEW QUESTION 101**

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 104**

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

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

**Answer: DF**

**Explanation:**

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

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

Incorrect Answers:

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

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

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

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

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

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

**NEW QUESTION 108**

A security administrator is shown the following log excerpt from a Unix system:

```
2013 Oct 10 07:14:57 web14 sshd[1632]: Failed password for root from 198.51.100.23 port 37914 ssh2
2013 Oct 10 07:14:57 web14 sshd[1635]: Failed password for root from 198.51.100.23 port 37915 ssh2
2013 Oct 10 07:14:58 web14 sshd[1638]: Failed password for root from 198.51.100.23 port 37916 ssh2
2013 Oct 10 07:15:59 web14 sshd[1640]: Failed password for root from 198.51.100.23 port 37918 ssh2
2013 Oct 10 07:16:00 web14 sshd[1641]: Failed password for root from 198.51.100.23 port 37920 ssh2
2013 Oct 10 07:16:00 web14 sshd[1642]: Successful login for root from 198.51.100.23 port 37924 ssh2
```

Which of the following is the MOST likely explanation of what is occurring and the BEST immediate response? (Select TWO).

- A. An authorized administrator has logged into the root account remotely.
- B. The administrator should disable remote root logins.
- C. Isolate the system immediately and begin forensic analysis on the host.
- D. A remote attacker has compromised the root account using a buffer overflow in sshd.
- E. A remote attacker has guessed the root password using a dictionary attack.
- F. Use iptables to immediately DROP connections from the IP 198.51.100.23.
- G. A remote attacker has compromised the private key of the root account.
- H. Change the root password immediately to a password not found in a dictionary.

**Answer:** CE

**Explanation:**

The log shows six attempts to log in to a system. The first five attempts failed due to 'failed password'. The sixth attempt was a successful login. Therefore, the MOST likely explanation of what is occurring is that a remote attacker has guessed the root password using a dictionary attack.

The BEST immediate response is to isolate the system immediately and begin forensic analysis on the host. You should isolate the system to prevent any further access to it and prevent it from doing any damage to other systems on the network. You should perform a forensic analysis on the system to determine what the attacker did on the system after gaining access.

Incorrect Answers:

- A: It is unlikely that an authorized administrator has logged into the root account remotely. It is unlikely that an authorized administrator would enter an incorrect password five times.
- B: Disabling remote root logins is not the best course of action. The attacker has already gained access to the system so potentially the damage is already done.
- D: The log does not suggest a buffer overflow attack; the failed passwords suggest a dictionary attack. F: Using iptables to immediately DROP connections from the IP 198.51.100.23 is not the best course of action. The attacker has already gained access to the system so potentially the damage is already done.
- G: The log does not suggest a remote attacker has compromised the private key of the root account; the failed passwords suggest a dictionary attack.
- H: Changing the root password is a good idea but it is not the best course of action. The attacker has already gained access to the system so potentially the damage is already done.

**NEW QUESTION 110**

Which of the following describes a risk and mitigation associated with cloud data storage?

- A. Risk: Shared hardware caused data leakage Mitigation: Strong encryption at rest
- B. Risk: Offsite replication Mitigation: Multi-site backups
- C. Risk: Data loss from de-duplication Mitigation: Dynamic host bus addressing
- D. Risk: Combined data archiving Mitigation: Two-factor administrator authentication

**Answer:** A

**Explanation:**

With cloud data storage, the storage provider will have large enterprise SANs providing large pools of storage capacity. Portions of the storage pools are assigned to customers. The risk is that multiple customers are storing their data on the same physical hardware storage devices. This presents a risk (usually a very small risk, but a risk all the same) of other customers using the same cloud storage hardware being able to view your data.

The mitigation of the risk is to encrypt your data stored on the SAN. Then the data would be unreadable even if another customer was able to access it.

Incorrect Answers:

- B: Offsite replication is used for disaster recovery purposes. It is not considered to be a risk as long as the data is secure in the other site. Multi-site backups are not a risk mitigation.
- C: Data loss from de-duplication is not considered to be a risk. De-duplication removes duplicate copies of data to reduce the storage space required for the data.
- A: Dynamic host bus addressing is not a risk mitigation.
- D: Combined data archiving is not considered to be a risk. The archived data would be less accessible to other customers than the live data on the shared storage.

**NEW QUESTION 111**

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

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

**Answer:** B

**Explanation:**

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

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

- A: Requiring IPSec connections to the required systems would secure the connections to the required systems. However, it does not prevent access to unauthorized systems.
- C: The question states that the representatives reside at Company XYZ's headquarters. Therefore, they will be accessing Company ABC's systems remotely. Two factor authentication requires that the user be present at the location of the system to present a smart card or for biometric authentication; two factor authentication cannot be performed remotely.
- D: A site-to-site VPN will just create a secure connection between the two sites. It does not restrict access to unauthorized systems.

References:

<http://searchvdi.techtarget.com/definition/virtualdesktop> virtualdesktop.techtarget.com/definition/virtual-desktop

**NEW QUESTION 112**

A vulnerability scanner report shows that a client-server host monitoring solution operating in the credit card corporate environment is managing SSL sessions with a weak algorithm which does not meet corporate policy. Which of the following are true statements? (Select TWO).

- A. The X509 V3 certificate was issued by a non-trusted public CA.
- B. The client-server handshake could not negotiate strong ciphers.

- C. The client-server handshake is configured with a wrong priority.
- D. The client-server handshake is based on TLS authentication.
- E. The X509 V3 certificate is expired.
- F. The client-server implements client-server mutual authentication with different certificate

**Answer:** BC

**Explanation:**

The client-server handshake could not negotiate strong ciphers. This means that the system is not configured to support the strong ciphers provided by later versions of the SSL protocol. For example, if the system is configured to support only SSL version 1.1, then only a weak cipher will be supported. The client-server handshake is configured with a wrong priority. The client sends a list of SSL versions it supports and priority should be given to the highest version it supports. For example, if the client supports SSL versions 1.1, 2 and 3, then the server should use version 3. If the priority is not configured correctly (if it uses the lowest version) then version 1.1 with its weak algorithm will be used.

Incorrect Answers:

A: If the X509 V3 certificate was issued by a non-trusted public CA, then the client would receive an error saying the certificate is not trusted. However, an X509 V3 certificate would not cause a weak algorithm.

D: TLS provides the strongest algorithm; even stronger than SSL version 3.

E: If the X509 V3 certificate had expired, then the client would receive an error saying the certificate is not trusted due to being expired. However, an X509 V3 certificate would not cause a weak algorithm.

F: SSL does not mutual authentication with different certificates. References:

<http://www.slashroot.in/uHYPERLINK> "<http://www.slashroot.in/understanding-ssl-handshakeprotocol>" nderstanding-ssl-hHYPERLINK

"<http://www.slashroot.in/understanding-ssl-handshakeprotocol>" andshake-protocol

**NEW QUESTION 116**

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 118**

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

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

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

**Answer:** AD

**Explanation:**

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

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

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

Incorrect Answers:

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

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

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

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

References: [https://en.wikipedia.org/wiki/Static\\_program\\_analysis](https://en.wikipedia.org/wiki/Static_program_analysis)

<http://searchcio.techtarget.com/definition/Agile-projectmanagement>

**NEW QUESTION 119**

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 123**

An educational institution would like to make computer labs available to remote students. The labs are used for various IT networking, security, and programming courses. The requirements are: Each lab must be on a separate network segment.

Labs must have access to the Internet, but not other lab networks.

Student devices must have network access, not simple access to hosts on the lab networks. Students must have a private certificate installed before gaining access.

Servers must have a private certificate installed locally to provide assurance to the students. All students must use the same VPN connection profile.

Which of the following components should be used to achieve the design in conjunction with directory services?

- A. L2TP VPN over TLS for remote connectivity, SAML for federated authentication, firewalls between each lab segment
- B. SSL VPN for remote connectivity, directory services groups for each lab group, ACLs on routing equipment
- C. IPSec VPN with mutual authentication for remote connectivity, RADIUS for authentication, ACLs on network equipment
- D. Cloud service remote access tool for remote connectivity, OAuth for authentication, ACL on routing equipment

**Answer:** C

**Explanation:**

IPSec VPN with mutual authentication meets the certificates requirements. RADIUS can be used with the directory service for the user authentication.

ACLs (access control lists) are the best solution for restricting access to network hosts. Incorrect Answers:

A: This solution has no provision for restricting access to hosts on the lab networks. B: This solution has no provision for restricting access to hosts on the lab networks. D: This solution has no provision for restricting access to hosts on the lab networks.

**NEW QUESTION 124**

A network engineer wants to deploy user-based authentication across the company's wired and wireless infrastructure at layer 2 of the OSI model. Company policies require that users be centrally managed and authenticated and that each user's network access be controlled based on the user's role within the company. Additionally, the central authentication system must support hierarchical trust and the ability to natively authenticate mobile devices and workstations.

Which of the following are needed to implement these requirements? (Select TWO).

- A. SAML
- B. WAYF
- C. LDAP
- D. RADIUS
- E. Shibboleth
- F. PKI

**Answer:** CD

**Explanation:**

RADIUS is commonly used for the authentication of WiFi connections. We can use LDAP and RADIUS for the authentication of users and devices.

LDAP and RADIUS have something in common. They're both mainly protocols (more than a database) which uses attributes to carry information back and forth. They're clearly defined in RFC documents so you can expect products from different vendors to be able to function properly together.

RADIUS is NOT a database. It's a protocol for asking intelligent questions to a user database. LDAP is just a database. In recent offerings it contains a bit of intelligence (like Roles, Class of Service and so on) but it still is mainly just a rather stupid database. RADIUS (actually RADIUS servers like FreeRADIUS) provide the administrator the tools to not only perform user authentication but also to authorize users based on extremely complex checks and logic. For instance you can allow access on a specific NAS only if the user belongs to a certain category, is a member of a specific group and an outside script allows access. There's no way to perform any type of such complex decisions in a user database.

Incorrect Answers:

A: Security Assertion Markup Language (SAML) is an XML-based, open-standard data format for exchanging authentication and authorization data between parties, in particular, between an identity provider and a service provider. It is used for authenticating users, not devices.

B: WAYF stands for Where Are You From. It is a third-party authentication provider used by websites of some online institutions. WAYF does not meet the requirements in this question.

E: Shibboleth is an open-source project that provides Single Sign-On capabilities and allows sites to make informed authorization decisions for individual access of protected online resources. It cannot perform the device authentication required in this question.

F: PKI (Public Key Infrastructure) uses digital certificates to affirm the identity of the certificate subject and bind that identity to the public key contained in the certificate. PKI does not meet the requirements in this question.

References: <https://kkalev.wordpress.com/2007/03/17/radius-vs-ldap/>

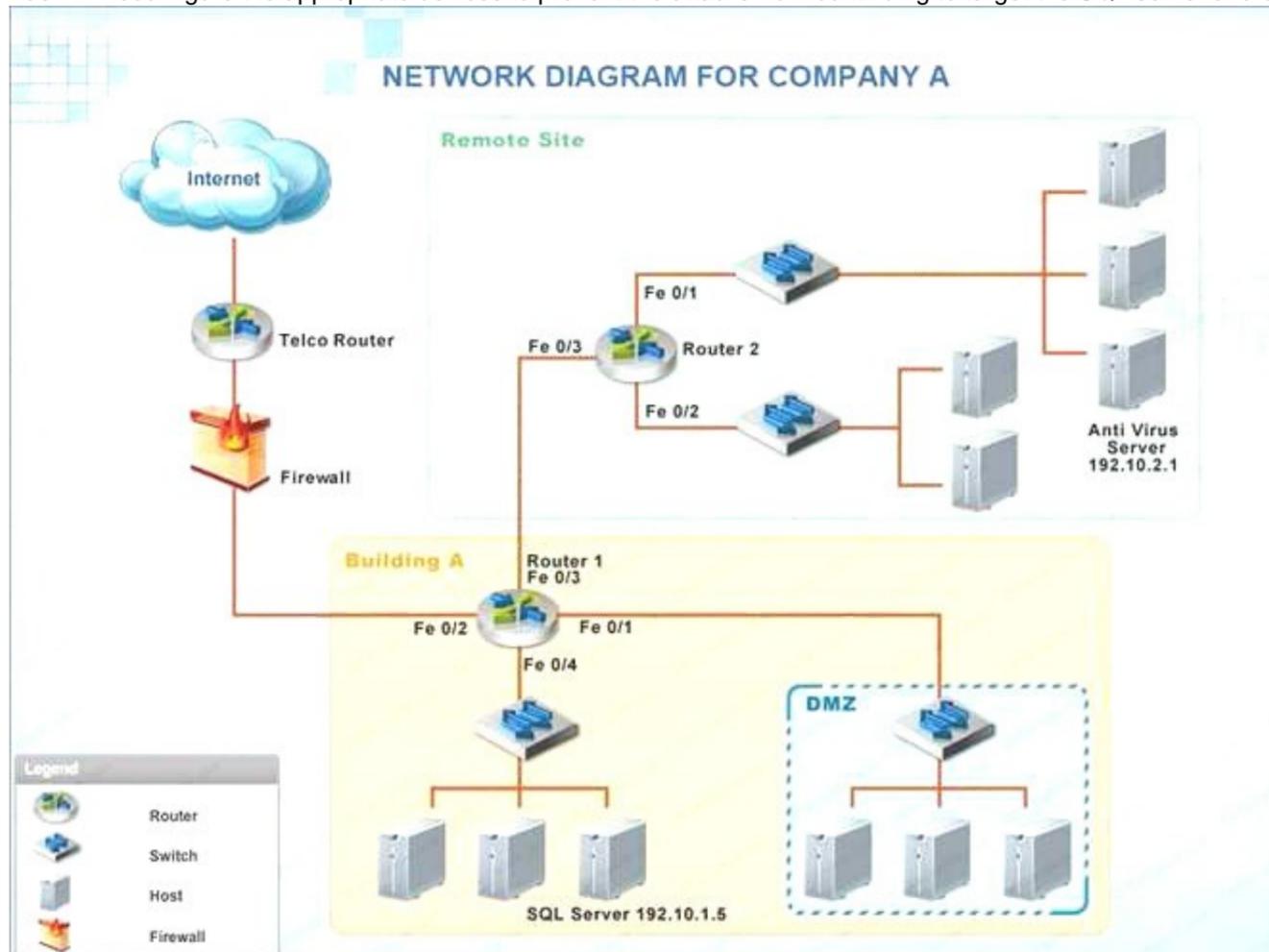
**NEW QUESTION 127**

Company A has noticed abnormal behavior targeting their SQL server on the network from a rogue IP address. The company uses the following internal IP address ranges: 192.10.1.0/24 for the corporate site and 192.10.2.0/24 for the remote site. The Telco router interface uses the 192.10.5.0/30 IP range.

Instructions: Click on the simulation button to refer to the Network Diagram for Company A. Click on Router 1, Router 2, and the Firewall to evaluate and configure each device.

Task 1: Display and examine the logs and status of Router 1, Router 2, and Firewall interfaces.

Task 2: Reconfigure the appropriate devices to prevent the attacks from continuing to target the SQL server and other servers on the corporate network.



```

Router1
Log Command Prompt
*Jul 15 10:47:27: %FW-6-INIT: Firewall inspection startup completed;
beginning operation.
*Jul 15 14:47:29.775:%Router1: ICMP Echo Request - from 192.10.3.204 to 192.10.1.5
*Jul 15 14:47:29.776:%Router1: list 101 permitted icmp 192.10.3.204 (FastEthernet 0/3) ->
192.10.1.5, 6 packets.
*Jul 15 09:47:32: %SYS-6-CLOCKUPDATE: System clock has been updated from
14:47:32 UTC Sun Jul 15 2007 to 09:47:32 EST Sun Jul 15 2007, configured
from console by console.
*Jul 15 14:47:29.779:%Router1: list 101 permitted tcp 192.10.3.204(57222) (FastEthernet
0/3) -> 192.10.1.5 (80), 3 packets.
    
```

```

Router2
Log Command Prompt
*Jul 15 10:47:27: %FW-6-INIT: Firewall inspection startup completed;
beginning operation.
*Jul 15 14:47:29.777:%Router2: ICMP Echo Request - from 192.10.3.254 to 192.10.2.1
*Jul 15 14:47:29.778:%Router2: list 101 permitted icmp 192.10.3.254 (FastEthernet 0/2) ->
192.10.2.1, 5 packets.
*Jul 15 09:47:32: %SYS-6-CLOCKUPDATE: System clock has been updated from
14:47:32 UTC Sun Jul 15 2007 to 09:47:32 EST Sun Jul 15 2007, configured
from console by console.
*Jul 15 14:47:29.779:%Router2: list 101 permitted tcp 192.10.3.254(35650) (FastEthernet
0/2) -> 192.10.2.1 (80), 2 packets.
    
```

FIREWALL ACCESS CONTROL LIST (ACL)			
Source Address	Destination Address	Deny	Allow
0.0.0.0	192.10.0.0/30	<input checked="" type="checkbox"/>	<input type="checkbox"/>
0.0.0.0	192.10.0.0/24	<input type="checkbox"/>	<input checked="" type="checkbox"/>
192.10.3.0/24	192.10.1.0/24	<input type="checkbox"/>	<input checked="" type="checkbox"/>
192.10.3.0/24	192.10.2.0/24	<input type="checkbox"/>	<input checked="" type="checkbox"/>
192.10.4.0/24	192.10.0.0/16	<input type="checkbox"/>	<input checked="" type="checkbox"/>
0.0.0.0	192.10.4.0/29	<input type="checkbox"/>	<input checked="" type="checkbox"/>
0.0.0.0	192.100.3.0/24	<input checked="" type="checkbox"/>	<input type="checkbox"/>
192.10.5.0/30	192.10.0.0/16	<input type="checkbox"/>	<input checked="" type="checkbox"/>
192.10.5.0/30	192.10.1.0/24	<input type="checkbox"/>	<input checked="" type="checkbox"/>
192.10.5.0/30	192.10.2.0/24	<input type="checkbox"/>	<input checked="" type="checkbox"/>
IP Any	IP Any	<input checked="" type="checkbox"/>	<input type="checkbox"/>

A. Check the answer below

FIREWALL ACCESS CONTROL LIST (ACL)			
Source Address	Destination Address	Deny	Allow
0.0.0.0	192.10.0.0/30	<input checked="" type="checkbox"/>	<input type="checkbox"/>
0.0.0.0	192.10.0.0/24	<input type="checkbox"/>	<input checked="" type="checkbox"/>
192.10.3.0/24	192.10.1.0/24	<input checked="" type="checkbox"/>	<input type="checkbox"/>
192.10.3.0/24	192.10.2.0/24	<input checked="" type="checkbox"/>	<input type="checkbox"/>
192.10.4.0/24	192.10.0.0/16	<input type="checkbox"/>	<input checked="" type="checkbox"/>
0.0.0.0	192.10.4.0/29	<input type="checkbox"/>	<input checked="" type="checkbox"/>
0.0.0.0	192.100.3.0/24	<input checked="" type="checkbox"/>	<input type="checkbox"/>
192.10.5.0/30	192.10.0.0/16	<input type="checkbox"/>	<input checked="" type="checkbox"/>
192.10.5.0/30	192.10.1.0/24	<input type="checkbox"/>	<input checked="" type="checkbox"/>
192.10.5.0/30	192.10.2.0/24	<input type="checkbox"/>	<input checked="" type="checkbox"/>
IP Any	IP Any	<input checked="" type="checkbox"/>	<input type="checkbox"/>

We have traffic coming from two rogue IP addresses: 192.10.3.204 and 192.10.3.254 (both in the 192.10.30.0/24 subnet) going to IPs in the corporate site subnet (192.10.1.0/24) and the remote site subnet (192.10.2.0/24). We need to Deny (block) this traffic at the firewall by ticking the following two checkboxes:

192.10.3.0/24	192.10.1.0/24	<input checked="" type="checkbox"/>	<input type="checkbox"/>
192.10.3.0/24	192.10.2.0/24	<input checked="" type="checkbox"/>	<input type="checkbox"/>

B. Check the answer below

FIREWALL ACCESS CONTROL LIST (ACL)			
Source Address	Destination Address	Deny	Allow
0.0.0.0	192.10.0.0/30	<input checked="" type="checkbox"/>	<input type="checkbox"/>
0.0.0.0	192.10.0.0/24	<input type="checkbox"/>	<input checked="" type="checkbox"/>
192.10.3.0/24	192.10.1.0/24	<input checked="" type="checkbox"/>	<input type="checkbox"/>
192.10.3.0/24	192.10.2.0/24	<input type="checkbox"/>	<input type="checkbox"/>
192.10.4.0/24	192.10.0.0/16	<input type="checkbox"/>	<input checked="" type="checkbox"/>
0.0.0.0	192.10.4.0/29	<input type="checkbox"/>	<input checked="" type="checkbox"/>
0.0.0.0	192.100.3.0/24	<input checked="" type="checkbox"/>	<input type="checkbox"/>
192.10.5.0/30	192.10.0.0/16	<input type="checkbox"/>	<input checked="" type="checkbox"/>
192.10.5.0/30	192.10.1.0/24	<input type="checkbox"/>	<input checked="" type="checkbox"/>
192.10.5.0/30	192.10.2.0/24	<input type="checkbox"/>	<input checked="" type="checkbox"/>
IP Any	IP Any	<input checked="" type="checkbox"/>	<input type="checkbox"/>

We have traffic coming from two rogue IP addresses: 192.10.3.204 and 192.10.3.254 (both in the 192.10.30.0/24 subnet) going to IPs in the corporate site subnet (192.10.1.0/24) and the remote site subnet (192.10.2.0/24). We need to Deny (block) this traffic at the firewall by ticking the following two checkboxes:

192.10.3.0/24	192.10.1.0/24	<input type="checkbox"/>	<input type="checkbox"/>
192.10.3.0/24	192.10.2.0/24	<input type="checkbox"/>	<input type="checkbox"/>

Answer: A

**NEW QUESTION 132**

Compliance with company policy requires a quarterly review of firewall rules. A new administrator is asked to conduct this review on the internal firewall sitting between several internal networks. The intent of this firewall is to make traffic more restrictive. Given the following information answer the questions below:  
 User Subnet: 192.168.1.0/24 Server Subnet: 192.168.2.0/24 Finance Subnet:192.168.3.0/24 Instructions: To perform the necessary tasks, please modify the DST port, Protocol, Action, and/or Rule Order columns. Firewall ACLs are read from the top down  
 Task 1) An administrator added a rule to allow their machine terminal server access to the server subnet. This rule is not working. Identify the rule and correct this issue.

- Task 2) All web servers have been changed to communicate solely over SSL. Modify the appropriate rule to allow communications.
- Task 3) An administrator added a rule to block access to the SQL server from anywhere on the network. This rule is not working. Identify and correct this issue.
- Task 4) Other than allowing all hosts to do network time and SSL, modify a rule to ensure that no other traffic is allowed.

**Firewall Interface**

Instructions:

To perform the necessary tasks, please modify the DST port, Protocol, Action, and/or Rule Order columns.

SRC	SRC Port	DST	DST Port	Protocol	Action	Rule Order
192.168.1.10	any	192.168.2.0/24	3389	any	Deny	↑ ↓
any	any	any	any	any	Permit	↑ ↓
any	any	192.168.2.11	1433	UDP	Deny	↑ ↓
192.168.1.0/24	any	192.168.2.0/24	123	UDP	Permit	↑ ↓
192.168.1.5	any	192.168.2.0/24	any	any	Deny	↑ ↓
any	any	192.168.2.33	80	TCP	Permit	↑ ↓



A. Check the answer below

SRC	SRC Port	DST	DST Port	Protocol	Action	Rule Order
192.168.1.10	any	192.168.2.0/24	3389	any	Permit	↑ ↓
any	any	192.168.2.33	443	TCP	Permit	↑ ↓
any	any	192.168.2.11	1433	TCP	Deny	↑ ↓
192.168.1.0/24	any	192.168.2.0/24	123	UDP	Permit	↑ ↓
192.168.1.5	any	192.168.2.0/24	any	any	Deny	↑ ↓
any	any	any	any	any	Deny	↑ ↓

- Task 1) An administrator added a rule to allow their machine terminal server access to the server subne
- B. This rule is not workin
- C. Identify the rule and correct this issue.The rule shown in the image below is the rule in questio
- D. It is not working because the action is set to Den
- E. This needs to be set to Permit.

192.168.1.10	any	192.168.2.0/24	3389	any	Deny	↑ ↓
--------------	-----	----------------	------	-----	------	-----

Task 2)

- All web servers have been changed to communicate solely over SS
- F. Modify the appropriate rule to allow communications.The web servers rule is shown in the image belo
- G. Port 80 (HTTP) needs to be changed to port 443 for HTTPS (HTTP over SSL).

any	any	192.168.2.33	80	TCP	Permit	↑ ↓
-----	-----	--------------	----	-----	--------	-----

- Task 3) An administrator added a rule to block access to the SQL server from anywhere on the networ
- H. This rule is not workin
- I. Identify and correct this issue.The SQL Server rule is shown in the image belo
- J. It is not working because the protocol is wron
- K. It should be TCP, not UDP.

any	any	192.168.2.11	1433	UDP	Deny	↑ ↓
-----	-----	--------------	------	-----	------	-----

Task 4) Other than allowing all hosts to do network time and SSL, modify a rule to ensure that no other traffic is allowed.The network time rule is shown in the image below.

However, this rule is not being used because the 'any' rule shown below allows all traffic and the rule is placed above the network time rule. To block all other traffic, the 'any' rule needs to be set to Deny, not Permit and the rule needs to be placed below all the other rules (it needs to be placed at the bottom of the list to the rule is enumerated last).

any	any	any	any	any	any	Permit	↑	↓
-----	-----	-----	-----	-----	-----	--------	---	---

M. Check the answer below

SRC	SRC Port	DST	DST Port	Protocol	Action	Rule Order
192.168.1.10	any	192.168.2.0/24	3389	any	Permit	↑ ↓
any	any	192.168.2.33	443	TCP	Permit	↑ ↓
any	any	192.168.2.11	1433	TCP	Deny	↑ ↓
192.168.1.0/24	any	192.168.2.0/24	123	UDP	Permit	↑ ↓
192.168.1.5	any	192.168.2.0/24	any	any	Deny	↑ ↓
any	any	any	any	any	Deny	↑ ↓

Task 1) An administrator added a rule to allow their machine terminal server access to the server subne

N. This rule is not workin

O. Identify the rule and correct this issue. The rule shown in the image below is the rule in questio

P. It is not working because the action is set to Den

Q. This needs to be set to Permit.

192.168.1.10	any	192.168.2.0/24	3389	any	Deny	↑ ↓
--------------	-----	----------------	------	-----	------	-----

Task 2)

All web servers have been changed to communicate solely over SS

R. Modify the appropriate rule to allow communications. The web servers rule is shown in the image belo

S. Port 80 (HTTP) needs to be changed to port 443 for HTTPS (HTTP over SSL). Task 3) An administrator added a rule to block access to the SQL server from anywhere on the networ

T. This rule is not workin

. Identify and correct this issue. The SQL Server rule is shown in the image belo

. It is not working because the protocol is wron

. It should be TCP, not UDP.

any	any	192.168.2.11	1433	UDP	Deny	↑ ↓
-----	-----	--------------	------	-----	------	-----

Task 4)

Other than allowing all hosts to do network time and SSL, modify a rule to ensure that noother traffic is allowed. The network time rule is shown in the image below. However, this rule is not being used because the 'any' rule shown below allows all traffic and the rule is placed above the network time rul

. To block all other traffic, the 'any' rule needs to be set to Deny, not Permit and the rule needs to be placed below all the other rules (it needs to be placed at the bottom of the list to the rule is enumerated last).

any	any	any	any	any	any	Permit	↑	↓
-----	-----	-----	-----	-----	-----	--------	---	---

Answer: A

**NEW QUESTION 135**

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

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

Answer: D

**Explanation:**

The risk of security violations or compromised intellectual property (IP) rights is inherently elevated when working internationally. A key concern with outsourcing arrangements is making sure that there is sufficient protection and security in place for personal information being transferred and/or accessed under an outsourcing agreement.

Incorrect Answers:

- A: Interoperability agreement issues are not a major risk when outsourcing to a third party company in another country.
- B: Interoperability agreement issues are not a major risk when outsourcing to a third party company in another country.
- C: Divestiture is the disposition or sale of an asset that is not performing well, and which is not vital to the company's core business, or which is worth more to a potential buyer or as a separate entity than as part of the company.

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

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

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

**NEW QUESTION 139**

A security manager for a service provider has approved two vendors for connections to the service provider backbone. One vendor will be providing authentication services for its payment card service, and the other vendor will be providing maintenance to the service provider infrastructure sites. Which of the following business agreements is MOST relevant to the vendors and service provider's relationship?

- A. Memorandum of Agreement

- B. Interconnection Security Agreement
- C. Non-Disclosure Agreement
- D. Operating Level Agreement

**Answer:** B

**Explanation:**

The Interconnection Security Agreement (ISA) is a document that identifies the requirements for connecting systems and networks and details what security controls are to be used to protect the systems and sensitive data.

Incorrect Answers:

- A: A memorandum of agreement (MOA) is a document composed between parties to cooperate on an agreed upon project or meet an agreed objective.
- C: A nondisclosure agreement (NDA) is designed to protect confidential information.
- D: An operating level agreement (OLA) defines the responsibilities of each partner's internal support group.

References:

Gregg, Michael, and Billy Haines, CASP CompTIA Advanced Security Practitioner Study Guide, John Wiley & Sons, Indianapolis, 2012, pp. 237, 238

**NEW QUESTION 144**

A large hospital has implemented BYOD to allow doctors and specialists the ability to access patient medical records on their tablets. The doctors and specialists access patient records over the hospital's guest WiFi network which is isolated from the internal network with appropriate security controls. The patient records management system can be accessed from the guest network and require two factor authentication. Using a remote desktop type interface, the doctors and specialists can interact with the hospital's system. Cut and paste and printing functions are disabled to prevent the copying of data to BYOD devices. Which of the following are of MOST concern? (Select TWO).

- A. Privacy could be compromised as patient records can be viewed in uncontrolled areas.
- B. Device encryption has not been enabled and will result in a greater likelihood of data loss.
- C. The guest WiFi may be exploited allowing non-authorized individuals access to confidential patient data.
- D. Malware may be on BYOD devices which can extract data via key logging and screen scrapes.
- E. Remote wiping of devices should be enabled to ensure any lost device is rendered inoperable.

**Answer:** AD

**Explanation:**

Privacy could be compromised because patient records can be from a doctor's personal device. This can then be shown to persons not authorized to view this information. Similarly, the doctor's personal device could have malware on it.

Incorrect Answers:

- B: Device encryption is a BYOD concern, but the question asks "Which of the following are of MOST concern?" Patient privacy and Malware threats would be of more concern.
- C: The guest WiFi network is isolated from the internal network with appropriate security controls and the doctors and specialists can interact with the hospital's system via a remote desktop type interface.
- E: Remote wiping is a BYOD concern, but the question asks "Which of the following are of MOST concern?" Patient privacy and Malware threats would be of more concern.

References:

<http://www.gwava.com/blog/top-10-byod-business-concerns>

**NEW QUESTION 146**

The source workstation image for new accounting PCs has begun blue-screening. A technician notices that the date/time stamp of the image source appears to have changed. The desktop support director has asked the Information Security department to determine if any changes were made to the source image. Which of the following methods would BEST help with this process? (Select TWO).

- A. Retrieve source system image from backup and run file comparison analysis on the two images.
- B. Parse all images to determine if extra data is hidden using steganography.
- C. Calculate a new hash and compare it with the previously captured image hash.
- D. Ask desktop support if any changes to the images were made.
- E. Check key system files to see if date/time stamp is in the past six month

**Answer:** AC

**Explanation:**

Running a file comparison analysis on the two images will determine whether files have been changed, as well as what files were changed.

Hashing can be used to meet the goals of integrity and non-repudiation. One of its advantages of hashing is its ability to verify that information has remained unchanged. If the hash values are the same, then the images are the same. If the hash values differ, there is a difference between the two images.

Incorrect Answers:

- B: Steganography is a type of data exfiltration. Data exfiltration is the unauthorized transfer of data from a computer.
- D: According to the scenario, the desktop support director has asked the Information Security department to determine if any changes were made to the source image. Asking the desktop support if any changes to the images were made would therefore be redundant.
- E: The question requires the Information Security department to determine if any changes were made to the source image, not when the date/time stamp manipulation occurred.

References:

Gregg, Michael, and Billy Haines, CASP CompTIA Advanced Security Practitioner Study Guide, John Wiley & Sons, Indianapolis, 2012, pp. 18, 134

**NEW QUESTION 147**

A software project manager has been provided with a requirement from the customer to place limits on the types of transactions a given user can initiate without external interaction from another user with elevated privileges. This requirement is BEST described as an implementation of:

- A. an administrative control
- B. dual control
- C. separation of duties
- D. least privilege
- E. collusion

**Answer:** C

**Explanation:**

Separation of duties requires more than one person to complete a task. Incorrect Answers:

A: Administrative controls refer policies, procedures, guidelines, and other documents used by an organization.

B: Dual control forces employees who are planning anything illegal to work together to complete critical actions.

D: The principle of least privilege prevents employees from accessing levels not required to perform their everyday function.

E: Collusion is defined as an agreement which occurs between two or more persons to deceive, mislead, or defraud others of legal rights.

References:

Gregg, Michael, and Billy Haines, CASP CompTIA Advanced Security Practitioner Study Guide, John Wiley & Sons, Indianapolis, 2012, pp. 245, 321

<https://en.wikipedia.org/wiki/Collusion>

**NEW QUESTION 148**

During a new desktop refresh, all hosts are hardened at the OS level before deployment to comply with policy. Six months later, the company is audited for compliance to regulations. The audit discovers that 40 percent of the desktops do not meet requirements. Which of the following is the MOST likely cause of the noncompliance?

A. The devices are being modified and settings are being overridden in production.

B. The patch management system is causing the devices to be noncompliant after issuing the latest patches.

C. The desktop applications were configured with the default username and password.

D. 40 percent of the devices use full disk encryption

**Answer:** A

**Explanation:**

The question states that all hosts are hardened at the OS level before deployment. So we know the desktops are fully patched when the users receive them. Six months later, the desktops do not meet the compliance standards. The most likely explanation for this is that the users have changed the settings of the desktops during the six months that they've had them.

Incorrect Answers:

B: A patch management system would not cause the devices to be noncompliant after issuing the latest patches. Devices are non-compliant because their patches are out-of-date, not because the patches are too recent.

C: The desktop applications being configured with the default username and password would not be the cause of non-compliance. The hosts are hardened at the OS level so application configuration would not affect this.

D: Devices using full disk encryption would not be the cause of non-compliance. The hosts are hardened at the OS level. Disk encryption would have no effect on the patch level or configuration of the host.

**NEW QUESTION 150**

A firm's Chief Executive Officer (CEO) is concerned that IT staff lacks the knowledge to identify complex vulnerabilities that may exist in a payment system being internally developed. The payment system being developed will be sold to a number of organizations and is in direct competition with another leading product. The CEO highlighted that code base confidentiality is of critical importance to allow the company to exceed the competition in terms of the product's reliability, stability, and performance. Which of the following would provide the MOST thorough testing and satisfy the CEO's requirements?

A. Sign a MOU with a marketing firm to preserve the company reputation and use in-house resources for random testing.

B. Sign a BPA with a small software consulting firm and use the firm to perform Black box testing and address all findings.

C. Sign a NDA with a large security consulting firm and use the firm to perform Grey box testing and address all findings.

D. Use the most qualified and senior developers on the project to perform a variety of White box testing and code reviews.

**Answer:** C

**Explanation:**

Gray box testing has limited knowledge of the system as an attacker would. The base code would remain confidential. This would further be enhanced by a Non-disclosure agreement (NDA) which is designed to protect confidential information.

Incorrect Answers:

A: A memorandum of understanding (MOU) documents conditions and applied terms for outsourcing partner organizations that must share data and information resources. They do not typically cover vulnerabilities and penetration / vulnerability testing. Furthermore, the CEO is concerned that IT staff lacks the knowledge to identify complex vulnerabilities.

B: A business partnership security agreement (BPA) is a legally binding document that is designed to provide safeguards and compel certain actions among business partners in relation to specific security-related activities. Black box testing is integrity-based testing that uses random user inputs. Code confidentiality is maintained but testing is limited.

D: White box testing requires full access to the code base as it involves validating the program logic. This does not test against vulnerabilities. Furthermore, the CEO is concerned that IT staff lacks the knowledge to identify complex vulnerabilities.

References:

Gregg, Michael, and Billy Haines, CASP CompTIA Advanced Security Practitioner Study Guide, John Wiley & Sons, Indianapolis, 2012, pp. 148, 167-168, 238-239

[https://en.wikipedia.org/wiki/Non-disclosure\\_agreement](https://en.wikipedia.org/wiki/Non-disclosure_agreement)

[https://en.wikipedia.org/wiki/Nondisclosure\\_agreement](https://en.wikipedia.org/wiki/Nondisclosure_agreement)

[https://en.wikipedia.org/wiki/Gray\\_box\\_testing](https://en.wikipedia.org/wiki/Gray_box_testing)

**NEW QUESTION 153**

Company policy requires that all company laptops meet the following baseline requirements: Software requirements:

Antivirus

Anti-malware Anti-spyware Log monitoring

Full-disk encryption

Terminal services enabled for RDP Administrative access for local users Hardware restrictions:

Bluetooth disabled FireWire disabled WiFi adapter disabled

Ann, a web developer, reports performance issues with her laptop and is not able to access any network resources. After further investigation, a bootkit was discovered and it was trying to access external websites. Which of the following hardening techniques should be applied to mitigate this specific issue from reoccurring? (Select TWO).

A. Group policy to limit web access

- B. Restrict VPN access for all mobile users
- C. Remove full-disk encryption
- D. Remove administrative access to local users
- E. Restrict/disable TELNET access to network resources
- F. Perform vulnerability scanning on a daily basis
- G. Restrict/disable USB access

**Answer:** DG

**Explanation:**

A rootkit is a collection of computer software, typically malicious, designed to enable access to a computer or areas of its software that would not otherwise be allowed (for example, to an unauthorized user) while at the same time masking its existence or the existence of other software. A bootkit is similar to a rootkit except the malware infects the master boot record on a hard disk. Malicious software such as bootkits or rootkits typically require administrative privileges to be installed.

Therefore, one method of preventing such attacks is to remove administrative access for local users. A common source of malware infections is portable USB flash drives. The flash drives are often plugged into less secure computers such as a user's home computer and then taken to work and plugged in to a work computer. We can prevent this from happening by restricting or disabling access to USB devices.

Incorrect Answers:

A: Using a group policy to limit web access is not a practical solution. Users in a company often require Web access so restricting it will affect their ability to do their jobs.

B: Rootkits or Bootkits would not be caught by connecting to the network over a VPN so disabling VPN access will not help.

C: Removing full-disk encryption will not prevent Bootkits.

E: Bootkits are not caught by connecting to network resources using Telnet connection so disabling Telnet access to resources will not help.

F: Performing vulnerability scanning on a daily basis might help you to quickly detect Bootkits. However, vulnerability scanning does nothing to actually prevent the Bootkits.

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

**NEW QUESTION 155**

A security auditor suspects two employees of having devised a scheme to steal money from the company. While one employee submits purchase orders for personal items, the other employee approves these purchase orders. The auditor has contacted the human resources director with suggestions on how to detect such illegal activities. Which of the following should the human resource director implement to identify the employees involved in these activities and reduce the risk of this activity occurring in the future?

- A. Background checks
- B. Job rotation
- C. Least privilege
- D. Employee termination procedures

**Answer:** B

**Explanation:**

Job rotation can reduce fraud or misuse by preventing an individual from having too much control over an area.

Incorrect Answers:

A: To verify that a potential employee has a clean background and that any negative history is exposed prior to employment, a background check is used.

C: The principle of least privilege prevents employees from accessing levels not required to perform their everyday function.

D: The employee termination procedures will not identify the employees involved in these activities and reduce the risk of this activity occurring in the future.

References:

Gregg, Michael, and Billy Haines, CASP CompTIA Advanced Security Practitioner Study Guide, John Wiley & Sons, Indianapolis, 2012, pp. 243, 245, 246

**NEW QUESTION 159**

There have been some failures of the company's internal facing website. A security engineer has found the WAF to be the root cause of the failures. System logs show that the WAF has been unavailable for 14 hours over the past month, in four separate situations. One of these situations was a two hour scheduled maintenance time, aimed at improving the stability of the WAF. Using the MTTR based on the last month's performance figures, which of the following calculations is the percentage of uptime assuming there were 722 hours in the month?

- A. 92.24 percent
- B. 98.06 percent
- C. 98.34 percent
- D. 99.72 percent

**Answer:** B

**Explanation:**

A web application firewall (WAF) is an appliance, server plugin, or filter that applies a set of rules to an HTTP conversation. Generally, these rules cover common attacks such as cross-site scripting (XSS) and SQL injection. By customizing the rules to your application, many attacks can be identified and blocked.

14h of down time in a period of 722 supposed uptime =  $14/722 \times 100 = 1.939\%$  Thus the % of uptime =  $100\% - 1.939\% = 98.06\%$

References:

Gregg, Michael, and Billy Haines, CASP CompTIA Advanced Security Practitioner Study Guide, John Wiley & Sons, Indianapolis, 2012, pp. 43, 116

**NEW QUESTION 162**

The Chief Executive Officer (CEO) of an Internet service provider (ISP) has decided to limit the company's contribution to worldwide Distributed Denial of Service (DDoS) attacks. Which of the following should the ISP implement? (Select TWO).

- A. Block traffic from the ISP's networks destined for blacklisted IPs.
- B. Prevent the ISP's customers from querying DNS servers other than those hosted by the ISP.
- C. Scan the ISP's customer networks using an up-to-date vulnerability scanner.
- D. Notify customers when services they run are involved in an attack.
- E. Block traffic with an IP source not allocated to customers from exiting the ISP's network.

**Answer:** DE

**Explanation:**

Since DDOS attacks can originate from many different devices and thus makes it harder to defend against, one way to limit the company's contribution to DDOS attacks is to notify customers about any DDOS attack when they run services that are under attack. The company can also block IP sources that are not allocated to customers from the existing SIP's network.

Incorrect Answers:

A: Blocking traffic is in essence denial of service and this should not be implemented by the company.

B: Preventing the ISP's customers from querying/accessing other DNS servers is also a denial of service.

C: Making use of vulnerability scanners does not limit a company's contribution to the DDOS attacks. References:

Gregg, Michael, and Billy Haines, CASP CompTIA Advanced Security Practitioner Study Guide, John Wiley & Sons, Indianapolis, 2012, p. 286

**NEW QUESTION 164**

Which of the following activities is commonly deemed "OUT OF SCOPE" when undertaking a penetration test?

- A. Test password complexity of all login fields and input validation of form fields
- B. Reverse engineering any thick client software that has been provided for the test
- C. Undertaking network-based denial of service attacks in production environment
- D. Attempting to perform blind SQL injection and reflected cross-site scripting attacks
- E. Running a vulnerability scanning tool to assess network and host weaknesses

**Answer: C**

**Explanation:**

Penetration testing is done to look at a network in an adversarial fashion with the aim of looking at what an attacker will use. Penetration testing is done without malice and undertaking a network-based denial of service attack in the production environment is as such 'OUT OF SCOPE'.

Incorrect Answers:

A: Testing the password complexity of login fields and the input validation of form fields can form part of penetration testing. This is part of the gaining access phase of penetration testing.

B: Making use of reverse engineering a thick client software package would fall within the scope of penetration testing.

D: Blind SQL injection and reflected cross-site scripting attacks can be used in penetration testing. It would form part of the escalation of privilege step in penetration testing.

E: A vulnerability scanning tool to check network and host weakness would be admissible in penetration testing because it is part of the scanning process of penetration testing. References:

Gregg, Michael, and Billy Haines, CASP CompTIA Advanced Security Practitioner Study Guide, John Wiley & Sons, Indianapolis, 2012, pp. 91, 166-167

**NEW QUESTION 167**

The Chief Information Security Officer (CISO) is asking for ways to protect against zero-day exploits. The CISO is concerned that an unrecognized threat could compromise corporate data and result in regulatory fines as well as poor corporate publicity. The network is mostly flat, with split staff/guest wireless functionality. Which of the following equipment MUST be deployed to guard against unknown threats?

- A. Cloud-based antivirus solution, running as local admin, with push technology for definition updates.
- B. Implementation of an offsite data center hosting all company data, as well as deployment of VDI for all client computing needs.
- C. Host based heuristic IPS, segregated on a management VLAN, with direct control of the perimeter firewall ACLs.
- D. Behavior based IPS with a communication link to a cloud based vulnerability and threat feed

**Answer: D**

**Explanation:**

Good preventive security practices are a must. These include installing and keeping firewall policies carefully matched to business and application needs, keeping antivirus software updated, blocking potentially harmful file attachments and keeping all systems patched against known vulnerabilities. Vulnerability scans are a good means of measuring the effectiveness of preventive procedures. Real-time protection: Deploy inline intrusion-prevention systems (IPS) that offer comprehensive protection. When considering an IPS, seek the following capabilities: network-level protection, application integrity checking, application protocol Request for Comment (RFC) validation, content validation and forensics capability. In this case it would be behavior-based IPS with a communication link to a cloud-based vulnerability and threat feed.

Incorrect Answers:

A: A cloud-based anti-virus solution will not protect against a zero-day exploit.

B: Due to the nature of zero-day exploits an off-site data center hosting solution for the company data is not the best protection against a zero-day exploit.

C: The best protection against zero-day exploits are behavior-based IPS and not host-based heuristic IPS.

References:

Gregg, Michael, and Billy Haines, CASP CompTIA Advanced Security Practitioner Study Guide, John Wiley & Sons, Indianapolis, 2012, p. 194

[https://en.wikipedia.org/wiki/Zero-day\\_\(computing\)](https://en.wikipedia.org/wiki/Zero-day_(computing)) "https://en.wikipedia.org/wiki/Zero-day\_(computing)"g/wiki/Zero-day\_%28computing%29

**NEW QUESTION 171**

A large company is preparing to merge with a smaller company. The smaller company has been very profitable, but the smaller company's main applications were created in-house. Which of the following actions should the large company's security administrator take in preparation for the merger?

- A. A review of the mitigations implemented from the most recent audit findings of the smaller company should be performed.
- B. An ROI calculation should be performed to determine which company's application should be used.
- C. A security assessment should be performed to establish the risks of integration or co-existence.
- D. A regression test should be performed on the in-house software to determine security risks associated with the software.

**Answer: C**

**Explanation:**

With any merger regardless of the monetary benefit there is always security risks and prior to the merger the security administrator should assess the security risks to as to mitigate these. Incorrect Answers:

A: This is the concern of the smaller organization and not the bigger company for which the security administrator is working.

B: The Cost benefit analysis (ROI) is done as part of the phased changeover process.

D: A regression test is used after a change to validate that inputs and outputs are correct, not prior to a merger.

References:

Project Management Institute, A Guide to the Project Management Body of Knowledge (PMBOK Guide), 5th Edition, Project Management Institute, Inc., Newtown Square, 2013, p. 345  
 Gregg, Michael, and Billy Haines, CASP CompTIA Advanced Security Practitioner Study Guide, John Wiley & Sons, Indianapolis, 2012, pp. 148, 165, 337

**NEW QUESTION 176**

A security analyst, Ann, states that she believes Internet facing file transfer servers are being attacked. Which of the following is evidence that would aid Ann in making a case to management that action needs to be taken to safeguard these servers?

- A. Provide a report of all the IP addresses that are connecting to the systems and their locations
- B. Establish alerts at a certain threshold to notify the analyst of high activity
- C. Provide a report showing the file transfer logs of the servers
- D. Compare the current activity to the baseline of normal activity

**Answer: D**

**Explanation:**

In risk assessment a baseline forms the foundation for how an organization needs to increase or enhance its current level of security. This type of assessment will provide Ann with the necessary information to take to management.

Incorrect Answers:

- A: Reports of IP addresses that connect to the systems and their locations does not prove that your servers are being attacked; it just shows who is connecting.
- B: High activity does not necessarily mean attacks being carried out.
- C: Logs reveal specific activities and the sequence of events that occurred. The file transfer logs of the servers still have to be compared to a baseline of what is normal.

References:

Gregg, Michael, and Billy Haines, CASP CompTIA Advanced Security Practitioner Study Guide, John Wiley & Sons, Indianapolis, 2012, pp. 210, 235

**NEW QUESTION 180**

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

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

**Answer: B**

**Explanation:**

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

References: [http://www.financeformulas.net/Return\\_on\\_Investment.html](http://www.financeformulas.net/Return_on_Investment.html) [https://en.wikipedia.org/wiki/Risk\\_assessment](https://en.wikipedia.org/wiki/Risk_assessment)

**NEW QUESTION 185**

A security manager is looking into the following vendor proposal for a cloud-based SIEM solution. The intention is that the cost of the SIEM solution will be justified by having reduced the number of incidents and therefore saving on the amount spent investigating incidents.

Proposal:

External cloud-based software as a service subscription costing \$5,000 per month. Expected to reduce the number of current incidents per annum by 50%.

The company currently has ten security incidents per annum at an average cost of \$10,000 per incident. Which of the following is the ROI for this proposal after three years?

- A. -\$30,000
- B. \$120,000
- C. \$150,000
- D. \$180,000

**Answer: A**

**Explanation:**

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

or

Return on investment = (gain from investment – cost of investment) / cost of investment Subscriptions = 5,000 x 12 = 60,000 per annum

10 incidents @ 10,000 = 100,000 per annum reduce by 50% = 50,000 per annum

Thus the rate of Return is -10,000 per annum and that makes for -\$30,000 after three years. References:

[http://www.financeformulas.net/Return\\_on\\_Investment.html](http://www.financeformulas.net/Return_on_Investment.html)

**NEW QUESTION 189**

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

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

**Answer: A**

**Explanation:**

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

Incorrect Answers:

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

D: Standards are not security concerns. References:

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

#### NEW QUESTION 191

The helpdesk manager wants to find a solution that will enable the helpdesk staff to better serve company employees who call with computer-related problems. The helpdesk staff is currently unable to perform effective troubleshooting and relies on callers to describe their technology problems. Given that the helpdesk staff is located within the company headquarters and 90% of the callers are telecommuters, which of the following tools should the helpdesk manager use to make the staff more effective at troubleshooting while at the same time reducing company costs? (Select TWO).

- A. Web cameras
- B. Email
- C. Instant messaging
- D. BYOD
- E. Desktop sharing
- F. Presence

**Answer:** CE

#### Explanation:

C: Instant messaging (IM) allows two-way communication in near real time, allowing users to collaborate, hold informal chat meetings, and share files and information. Some IM platforms have added encryption, central logging, and user access controls. This can be used to replace calls between the end-user and the helpdesk.

E: Desktop sharing allows a remote user access to another user's desktop and has the ability to function as a remote system administration tool. This can allow the helpdesk to determine the cause of the problem on the end-users desktop.

Incorrect Answers:

A: Web cameras can be used for videoconferencing. This can be used to replace calls between the end-user and the helpdesk but would require the presence of web cameras and sufficient bandwidth. B: Email can be used to replace calls between the end-user and the helpdesk but email communication is not in real-time.

D: Bring your own device (BYOD) is a relatively new phenomena in which company employees are allowed to connect their personal devices, such as smart phones and tablets to the corporate network and use those devices for work purposes.

F: Presence is an Apple software product that is similar to Windows Remote Desktop. It gives users access to their Mac's files wherever they are. It also allows users to share files and data between a Mac, iPhone, and iPad.

References:

Gregg, Michael, and Billy Haines, CASP CompTIA Advanced Security Practitioner Study Guide, John Wiley & Sons, Indianapolis, 2012, pp. 347, 348, 351

#### NEW QUESTION 193

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

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

**Answer:** BE

#### Explanation:

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

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

Incorrect Answers:

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

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

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

References:

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

[https://en.wikipedia.org/wiki/Managed\\_security\\_service](https://en.wikipedia.org/wiki/Managed_security_service)

[https://en.wikipedia.org/wiki/Managed\\_security\\_service](https://en.wikipedia.org/wiki/Managed_security_service)

[https://en.wikipedia.org/wiki/Managed\\_security\\_service](https://en.wikipedia.org/wiki/Managed_security_service)

[https://en.wikipedia.org/wiki/Network\\_service\\_provider](https://en.wikipedia.org/wiki/Network_service_provider)

#### NEW QUESTION 194

An attacker attempts to create a DoS event against the VoIP system of a company. The attacker uses a tool to flood the network with a large number of SIP INVITE traffic. Which of the following would be LEAST likely to thwart such an attack?

- A. Install IDS/IPS systems on the network
- B. Force all SIP communication to be encrypted
- C. Create separate VLANs for voice and data traffic
- D. Implement QoS parameters on the switches

**Answer:** D

**Explanation:**

Quality of service (QoS) is a mechanism that is designed to give priority to different applications, users, or data to provide a specific level of performance. It is often used in networks to prioritize certain types of network traffic. It is not designed to block traffic, per se, but to give certain types of traffic a lower or higher priority than others. This is least likely to counter a denial of service (DoS) attack.

Incorrect Answers:

A: Denial of Service (DoS) attacks web-based attacks that exploit flaws in the operating system, applications, services, or protocols. These attacks can be mitigated by means of firewalls, routers, and intrusion detection systems (IDSs) that detect DoS traffic, disabling echo replies on external systems, disabling broadcast features on border systems, blocking spoofed packets on the network, and proper patch management.

B: VoIP makes use of Session Initiation Protocol (SIP) and the attack is making use of SIP INVITE requests to initiate VoIP calls. Forcing SIP communication to be encrypted would reduce SIP INVITE requests.

C: Using virtual local area networks (VLANs), to segregate data traffic from voice traffic can drastically reduce the potential for attacks that utilize automated tools.

References:

Gregg, Michael, and Billy Haines, CASP CompTIA Advanced Security Practitioner Study Guide, John Wiley & Sons, Indianapolis, 2012, pp. 135-138, 355-356, 357, 362, 378

**NEW QUESTION 195**

.....

## Thank You for Trying Our Product

### We offer two products:

1st - We have Practice Tests Software with Actual Exam Questions

2nd - Questions and Answers in PDF Format

### CAS-003 Practice Exam Features:

- \* CAS-003 Questions and Answers Updated Frequently
- \* CAS-003 Practice Questions Verified by Expert Senior Certified Staff
- \* CAS-003 Most Realistic Questions that Guarantee you a Pass on Your FirstTry
- \* CAS-003 Practice Test Questions in Multiple Choice Formats and Updatesfor 1 Year

**100% Actual & Verified — Instant Download, Please Click**  
[Order The CAS-003 Practice Test Here](#)