



# CompTIA

## Exam Questions CAS-003

CompTIA Advanced Security Practitioner (CASP)

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#### 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 company is transitioning to a new VDI environment, and a system engineer is responsible for developing a sustainable security strategy for the VDIs. Which of the following is the MOST appropriate order of steps to be taken?

- A. Firmware update, OS patching, HIDS, antivirus, baseline, monitoring agent
- B. OS patching, baseline, HIDS, antivirus, monitoring agent, firmware update
- C. Firmware update, OS patching, HIDS, antivirus, monitoring agent, baseline
- D. Baseline, antivirus, OS patching, monitoring agent, HIDS, firmware update

**Answer: A**

#### NEW QUESTION 3

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

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

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

**Answer: C**

#### NEW QUESTION 4

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 5

A project manager is working with a team that is tasked to develop software applications in a structured environment and host them in a vendor's cloud-based infrastructure. The organization will maintain responsibility for the software but will not manage the underlying server applications. Which of the following does the organization plan to leverage?

- A. SaaS
- B. PaaS
- C. IaaS
- D. Hybrid cloud
- E. Network virtualization

**Answer: B**

#### NEW QUESTION 6

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

- A. Port security
- B. Rogue device detection
- C. Bluetooth

D. GPS

**Answer:** D

#### NEW QUESTION 7

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

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

**Answer:** A

#### NEW QUESTION 8

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 9

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

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

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

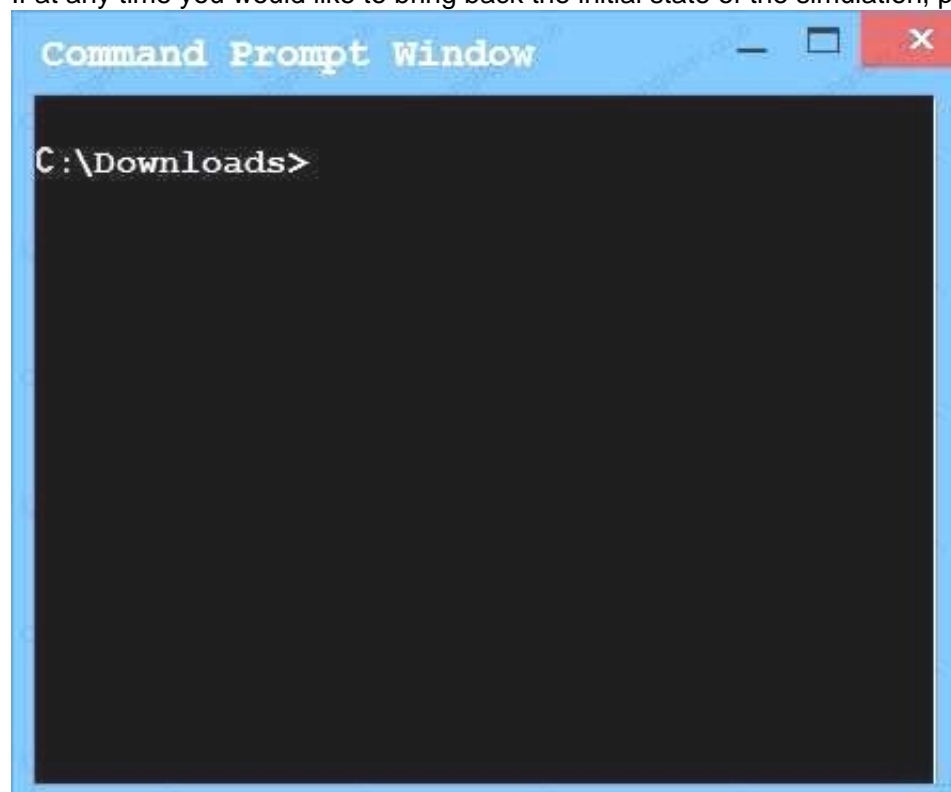
**Answer:** B

#### NEW QUESTION 10

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 - Test x

www.download-test.com/files

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="#">Mirror 2</a>	<a href="#">Download</a>
<a href="#">install.exe</a>	<a href="#">Mirror 3</a>	<a href="#">Download</a>
<a href="#">install.exe</a>	<a href="#">Mirror 4</a>	<a href="#">Download</a>
<a href="#">install.exe</a>	<a href="#">Mirror 5</a>	<a href="#">Download</a>
<a href="#">install.exe</a>	<a href="#">Mirror 6</a>	<a href="#">Download</a>

**HASH:** 1759adb5g34700aae19bc4578fc19cc2

Security Alert

Information you exchange with this site cannot be viewed or changed by others.  
However, there is a problem with the site's security certificate.

- The security certificate was issued by a company you have not chosen to trust. View the certificate to determine whether you want to trust the certifying authority.
- The security certificate date is valid.
- The name of the security certificate does not match the name of the site.

Do you want to proceed?

Yes No

58% of install.exe Completed

Saving: install.exe from www.download-test.com

Estimated time left 2 sec (2.86 MB of 4.93 MB copied)

Download to: C:\Downloads\install.exe

Transfer rate: 1.25 MB/Sec

Open Open Folder Cancel

59% of install.exe Completed

Saving: install.exe from www.download-test.com

Estimated time left 2 sec (2.91 MB of 4.93 MB copied)

Download to: C:\Downloads\install.exe

Transfer rate: 1.25 MB/Sec

Open Open Folder Cancel

61% of install.exe Completed

Saving: install.exe from www.download-test.com

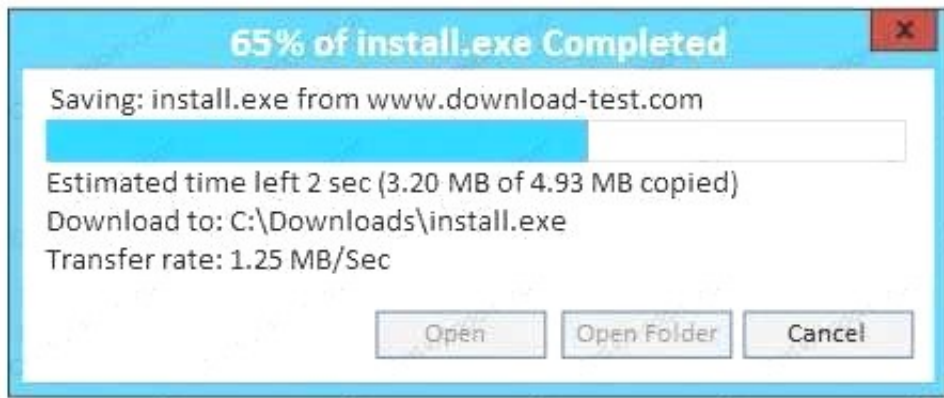
Estimated time left 2 sec (3.01 MB of 4.93 MB copied)

Download to: C:\Downloads\install.exe

Transfer rate: 1.25 MB/Sec

Open Open Folder Cancel

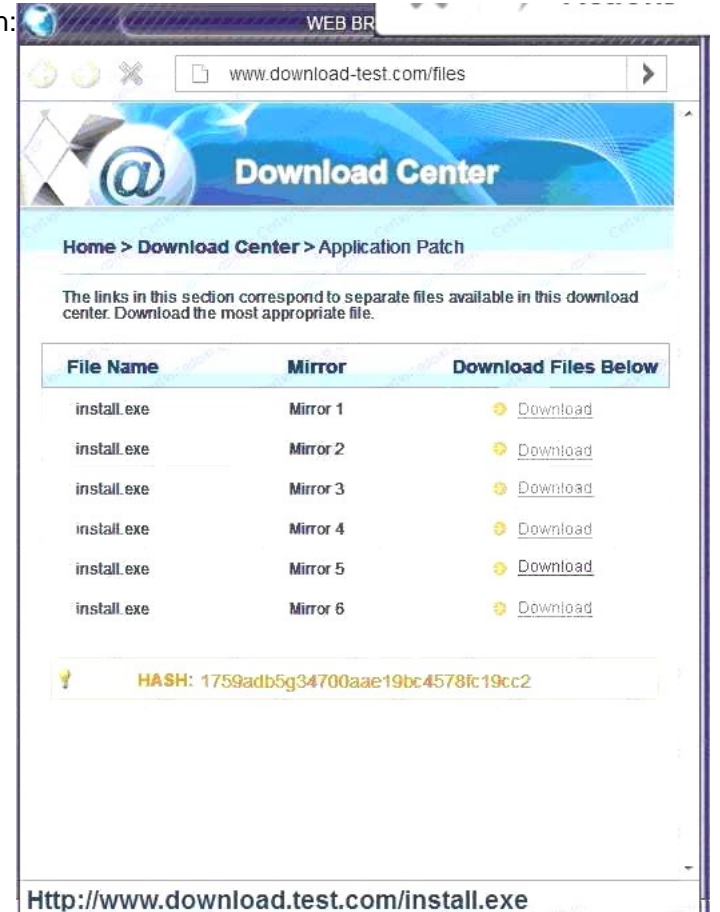




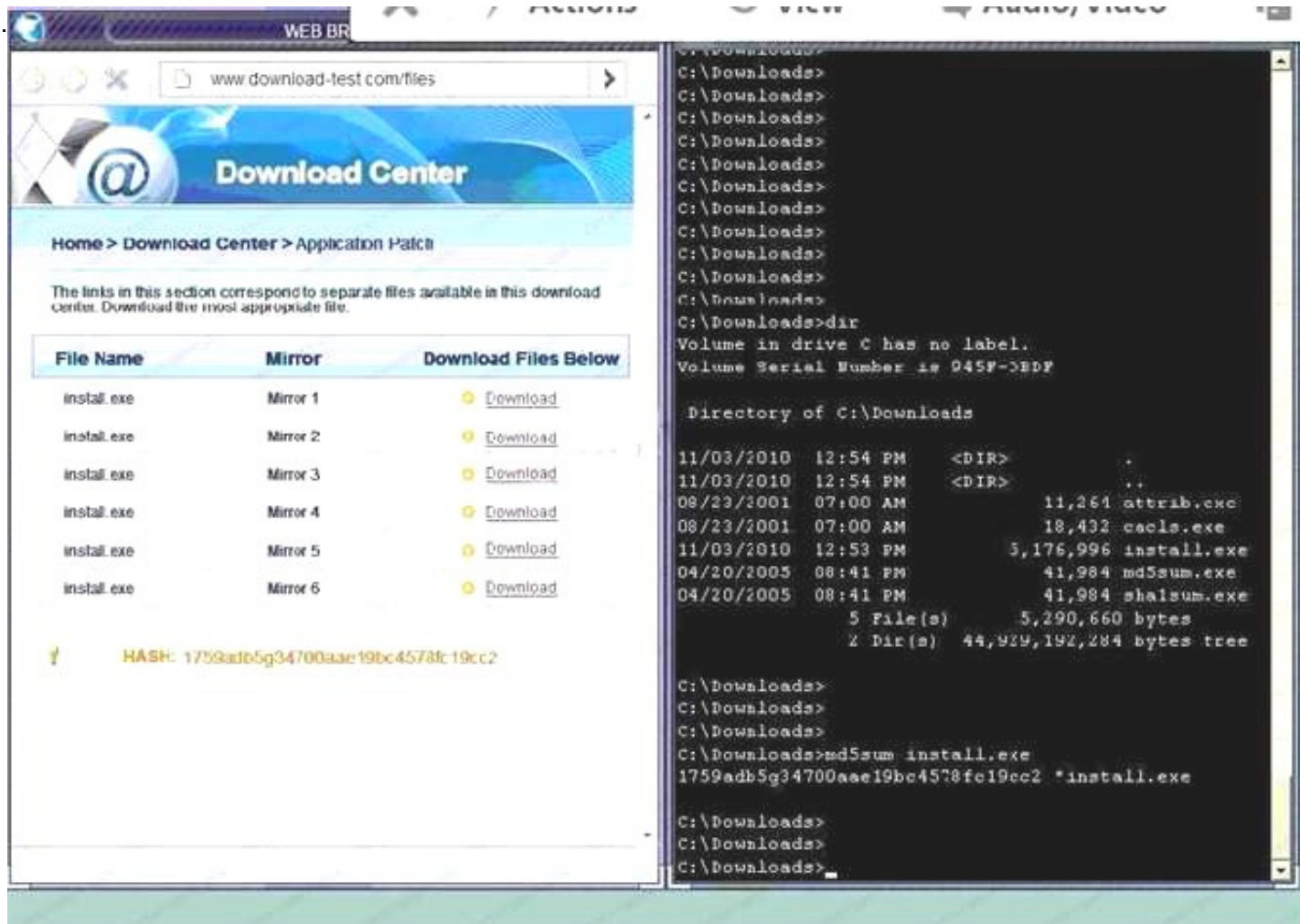
A. In this case the second link should be used (This may vary in actual exam). The first link showed the following error so it should not be used.



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 shown. D. Make sure that the hash matches. Finally, type in install.exe to install it and make sure there are no signature verification errors.

Answer: A

NEW QUESTION 10

DRAG DROP

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

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

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

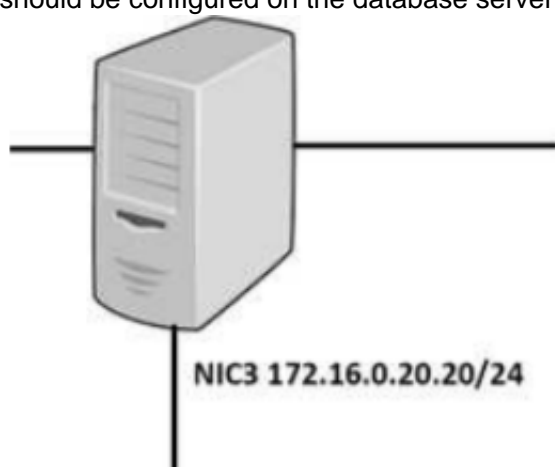


Use-case scenario	Cloud deployment model
Large multinational organization wants to improve elasticity and resource usage of hardware that is housing on-premise critical internal services	Private cloud with IaaS
Collection of organizations in the same industry vertical developing services based on a common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

## NEW QUESTION 12

### DRAG DROP

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





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

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

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

The DB server should not initiate outbound connections on NIC2

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

- A. Mastered  
 B. Not Mastered

**Answer:** A

**Explanation:**

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

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

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

The DB server should not initiate outbound connections on NIC2

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

#### NEW QUESTION 17

A company has entered into a business agreement with a business partner for managed human resources services. The Chief Information Security Officer (CISO) has been asked to provide documentation that is required to set up a business-to-business VPN between the two organizations. Which of the following is required in this scenario?

- A. ISA  
 B. BIA  
 C. SLA  
 D. RA

**Answer:** C

#### NEW QUESTION 22

During a security assessment, an organization is advised of inadequate control over network segmentation. The assessor explains that the organization's reliance on VLANs to segment traffic is insufficient to provide segmentation based on regulatory standards. Which of the following should the organization consider implementing along with VLANs to provide a greater level of segmentation?

- A. Air gaps
- B. Access control lists
- C. Spanning tree protocol
- D. Network virtualization
- E. Elastic load balancing

**Answer: D**

#### NEW QUESTION 26

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

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

**Answer: F**

#### NEW QUESTION 31

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

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

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

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

**Answer: B**

#### NEW QUESTION 35

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

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

**Answer: A**

#### NEW QUESTION 36

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

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

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

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

Which of the following is the engineer implementing?

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

**Answer: B**

#### NEW QUESTION 38

An engineer is assisting with the design of a new virtualized environment that will house critical company services and reduce the datacenter's physical footprint. The company has expressed concern about the integrity of operating systems and wants to ensure a vulnerability exploited in one datacenter segment would not lead to the compromise of all others. Which of the following design objectives should the engineer complete to BEST mitigate the company's concerns? (Choose two.)

- A. Deploy virtual desktop infrastructure with an OOB management network
- B. Employ the use of vTPM with boot attestation
- C. Leverage separate physical hardware for sensitive services and data
- D. Use a community CSP with independently managed security services
- E. Deploy to a private cloud with hosted hypervisors on each physical machine

**Answer: AC**

#### NEW QUESTION 43

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

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

**Answer: C**

#### NEW QUESTION 46

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

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

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

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

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

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

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

**Answer: C**

#### NEW QUESTION 48

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

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

**Answer: BE**

#### NEW QUESTION 51

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

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

**Answer:** A

#### NEW QUESTION 55

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

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

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

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

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

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

**Answer:** BCE

#### NEW QUESTION 57

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

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

**Answer:** AD

#### NEW QUESTION 59

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

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

**Answer:** AB

#### NEW QUESTION 60

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

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

**Answer:** B

#### NEW QUESTION 64

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

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

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

- A. Code deduplicators



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

**Answer:** B

#### NEW QUESTION 69

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

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

**Answer:** D

#### NEW QUESTION 71

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

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

**Answer:** B

#### NEW QUESTION 72

A SaaS-based email service provider often receives reports from legitimate customers that their IP netblocks are on blacklists and they cannot send email. The SaaS has confirmed that affected customers typically have IP addresses within broader network ranges and some abusive customers within the same IP ranges may have performed spam campaigns. Which of the following actions should the SaaS provider perform to minimize legitimate customer impact?

- A. Inform the customer that the service provider does not have any control over third-party blacklist entries
- B. The customer should reach out to the blacklist operator directly
- C. Perform a takedown of any customer accounts that have entries on email blacklists because this is a strong indicator of hostile behavior
- D. Work with the legal department and threaten legal action against the blacklist operator if the netblocks are not removed because this is affecting legitimate traffic
- E. Establish relationship with a blacklist operators so broad entries can be replaced with more granular entries and incorrect entries can be quickly pruned

**Answer:** D

#### NEW QUESTION 76

An agency has implemented a data retention policy that requires tagging data according to type before storing it in the data repository. The policy requires all business emails be automatically deleted after two years. During an open records investigation, information was found on an employee's work computer concerning a conversation that occurred three years prior and proved damaging to the agency's reputation. Which of the following MOST likely caused the data leak?

- A. The employee manually changed the email client retention settings to prevent deletion of emails
- B. The file that contained the damaging information was mistagged and retained on the server for longer than it should have been
- C. The email was encrypted and an exception was put in place via the data classification application
- D. The employee saved a file on the computer's hard drive that contained archives of emails, which were more than two years old

**Answer:** D

#### NEW QUESTION 79

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 81

An engineer maintains a corporate-owned mobility infrastructure, and the organization requires that all web browsing using corporate-owned resources be monitored. Which of the following would allow the organization to meet its requirement? (Choose two.)

- A. Exempt mobile devices from the requirement, as this will lead to privacy violations
- B. Configure the devices to use an always-on IPSec VPN

- C. Configure all management traffic to be tunneled into the enterprise via TLS
- D. Implement a VDI solution and deploy supporting client apps to devices
- E. Restrict application permissions to establish only HTTPS connections outside of the enterprise boundary

**Answer:** BE

#### NEW QUESTION 86

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 90

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

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

**Answer:** C

#### NEW QUESTION 92

A company contracts a security engineer to perform a penetration test of its client-facing web portal. Which of the following activities would be MOST appropriate?

- A. Use a protocol analyzer against the site to see if data input can be replayed from the browser
- B. Scan the website through an interception proxy and identify areas for the code injection
- C. Scan the site with a port scanner to identify vulnerable services running on the web server
- D. Use network enumeration tools to identify if the server is running behind a load balancer

**Answer:** C

#### NEW QUESTION 97

The code snippet below controls all electronic door locks to a secure facility in which the doors should only fail open in an emergency. In the code, "criticalValue" indicates if an emergency is underway:

```
try {  
    if (criticalValue)  
        openDoors=true  
    else  
        OpenDoors=false  
} catch (e) {  
    OpenDoors=true  
}
```

Which of the following is the BEST course of action for a security analyst to recommend to the software developer?

- A. Rewrite the software to implement fine-grained, conditions-based testing
- B. Add additional exception handling logic to the main program to prevent doors from being opened
- C. Apply for a life-safety-based risk exception allowing secure doors to fail open
- D. Rewrite the software's exception handling routine to fail in a secure state

**Answer:** B

#### NEW QUESTION 101

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

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

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

**Answer:** D

#### NEW QUESTION 104

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

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

**Answer: B**

#### NEW QUESTION 108

A recent CRM upgrade at a branch office was completed after the desired deadline. Several technical issues were found during the upgrade and need to be discussed in depth before the next branch office is upgraded. Which of the following should be used to identify weak processes and other vulnerabilities?

- A. Gap analysis
- B. Benchmarks and baseline results
- C. Risk assessment
- D. Lessons learned report

**Answer: D**

#### NEW QUESTION 110

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 114

An information security officer is responsible for one secure network and one office network. Recent intelligence suggests there is an opportunity for attackers to gain access to the secure network due to similar login credentials across networks. To determine the users who should change their information, the information security officer uses a tool to scan a file with hashed values on both networks and receives the following data:

Corporate Network		Secure Network	
james.bond	asHU8\$1bg	jbond	asHU8\$1bg
tom.jones	wit4njyt%l	tom.jones	wit4njyt%l
dade.murphy	mUrpHTIME7	d.murph3	t%w3BT9)n
herbie.hancock	hh2016!#	hhanco	hh2016!#2
suzy.smith	lLi*#HFadf	ssmith	lLI*#HFadf

Which of the following tools was used to gather this information from the hashed values in the file?

- A. Vulnerability scanner
- B. Fuzzer
- C. MD5 generator
- D. Password cracker
- E. Protocol analyzer

**Answer: C**

#### NEW QUESTION 119

A Chief Information Security Officer (CISO) is reviewing and revising system configuration and hardening guides that were developed internally and have been used several years to secure the organization's systems. The CISO knows improvements can be made to the guides.

Which of the following would be the BEST source of reference during the revision process?

- A. CVE database
- B. Internal security assessment reports
- C. Industry-accepted standards
- D. External vulnerability scan reports
- E. Vendor-specific implementation guides

**Answer: A**

#### NEW QUESTION 121

The legal department has required that all traffic to and from a company's cloud-based word processing and email system is logged. To meet this requirement, the Chief Information Security Officer (CISO) has implemented a next-generation firewall to perform inspection of the secure traffic and has decided to use a cloud-based log aggregation solution for all traffic that is logged. Which of the following presents a long-term risk to user privacy in this scenario?

- A. Confidential or sensitive documents are inspected by the firewall before being logged.
- B. Latency when viewing videos and other online content may increase.
- C. Reports generated from the firewall will take longer to produce due to more information from inspected traffic.
- D. Stored logs may contain non-encrypted usernames and passwords for personal website

**Answer:** A

#### NEW QUESTION 125

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

The SIEM must be able to identify traffic baseline anomalies

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

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

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

**Answer:** BD

#### NEW QUESTION 127

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

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

Containerization of email, calendar, and contacts

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

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

**Answer:** B

#### NEW QUESTION 132

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

User IP space: 192.168.1.0/24

Server IP space: 192.168.192.0/25

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

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

**Answer:** B

#### NEW QUESTION 133

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

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

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

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

**Answer:** A

#### NEW QUESTION 135

Given the following code snippet:



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

Which of the following failure modes would the code exhibit?

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

**Answer: D**

#### NEW QUESTION 136

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 137

Given the following output from a security tool in Kali:

[12:17:41] dumping options:

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

state: <8>

lineo: <56>

literals: <74>

sequences: [34]

symbols: [0]

req\_del: <200>

mseq\_len: <1024>

plugin: <none>

s\_syms: <0>

literal [1] = [jf2d43kaj4i9eahfh8fbiud8sd8sdhfdfhj9]

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

**Answer: D**

#### NEW QUESTION 142

A security researches is gathering information about a recent spoke in the number of targeted attacks against multinational banks. The spike is on top of already sustained attacks against the banks. Some of the previous attacks have resulted in the loss of sensitive data, but as of yet the attackers have not successfully stolen any funds.

Based on the information available to the researcher, which of the following is the MOST likely threat profile?

- A. Nation-state-sponsored attackers conducting espionage for strategic gain.
- B. Insiders seeking to gain access to funds for illicit purposes.
- C. Opportunists seeking notoriety and fame for personal gain.
- D. Hackvisits seeking to make a political statement because of socio-economic factor

**Answer: D**

#### NEW QUESTION 144

Engineers at a company believe a certain type of data should be protected from competitors, but the data owner insists the information is not sensitive. An information security engineer is implementing controls to secure the corporate SAN. The controls require dividing data into four groups: nonsensitive, sensitive but accessible, sensitive but export-controlled, and extremely sensitive. Which of the following actions should the engineer take regarding the data?

- A. Label the data as extremely sensitive.
- B. Label the data as sensitive but accessible.
- C. Label the data as non-sensitive.
- D. Label the data as sensitive but export-controlle

**Answer: C**

#### NEW QUESTION 147

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

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

**Answer: D**

#### NEW QUESTION 150

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

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

00000000000000000000000000000000

00000000000000000000000000000000

00000000000000000000000000000000

0000000000000000000000000000qjkehd

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

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

**Answer:** A

#### NEW QUESTION 152

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

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

**Answer:** C

#### NEW QUESTION 155

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

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

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

**Answer:** A

#### NEW QUESTION 160

As a result of an acquisition, a new development team is being integrated into the company. The development team has BYOD laptops with IDEs installed, build servers, and code repositories that utilize SaaS. To have the team up and running effectively, a separate Internet connection has been procured. A stand up has identified the following additional requirements:

1. Reuse of the existing network infrastructure
2. Acceptable use policies to be enforced
3. Protection of sensitive files
4. Access to the corporate applications

Which of the following solution components should be deployed to BEST meet the requirements? (Select three.)

- A. IPSec VPN
- B. HIDS
- C. Wireless controller
- D. Rights management
- E. SSL VPN
- F. NAC
- G. WAF
- H. Load balancer

**Answer:** DEF

#### NEW QUESTION 163

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 entrie

**Answer:** A

#### NEW QUESTION 165

A user asks a security practitioner for recommendations on securing a home network. The user recently purchased a connected home assistant and multiple IoT devices in an effort to automate the home. Some of the IoT devices are wearables, and other are installed in the user's automobiles. The current home network is

configured as a single flat network behind an ISP-supplied router. The router has a single IP address, and the router performs NAT on incoming traffic to route it to individual devices.

Which of the following security controls would address the user's privacy concerns and provide the BEST level of security for the home network?

- A. Ensure all IoT devices are configured in a geofencing mode so the devices do not work when removed from the home network
- B. Disable the home assistant unless actively using it, and segment the network so each IoT device has its own segment.
- C. Install a firewall capable of cryptographically separating network traffic require strong authentication to access all IoT devices, and restrict network access for the home assistant based on time-of-day restrictions.
- D. Segment the home network to separate network traffic from users and the IoT devices, ensure security settings on the home assistant support no or limited recording capability, and install firewall rules on the router to restrict traffic to the home assistant as much as possible.
- E. Change all default passwords on the IoT devices, disable Internet access for the IoT devices and the home assistant, obtain routable IP addresses for all devices, and implement IPv6 and IPSec protections on all network traffic.

**Answer: B**

#### NEW QUESTION 169

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

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

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

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

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

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

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

**Answer: A**

#### NEW QUESTION 171

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 172

Ann, a terminated employee, left personal photos on a company-issued laptop and no longer has access to them. Ann emails her previous manager and asks to get her personal photos back. Which of the following BEST describes how the manager should respond?

- A. Determine if the data still exists by inspecting to ascertain if the laptop has already been wiped and if the storage team has recent backups.
- B. Inform Ann that the laptop was for company data only and she should not have stored personal photos on a company asset.
- C. Report the email because it may have been a spoofed request coming from an attacker who is trying to exfiltrate data from the company laptop.
- D. Consult with the legal and/or human resources department and check company policies around employment and termination procedures.

**Answer: D**

#### NEW QUESTION 174

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

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

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

**Answer: C**



#### NEW QUESTION 175

A company has decided to lower costs by conducting an internal assessment on specific devices and various internal and external subnets. The assessment will be done during regular office hours, but it must not affect any production servers. Which of the following would MOST likely be used to complete the assessment? (Select two.)

- A. Agent-based vulnerability scan
- B. Black-box penetration testing
- C. Configuration review
- D. Social engineering
- E. Malware sandboxing
- F. Tabletop exercise

**Answer:** AC

#### NEW QUESTION 180

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

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

**Answer:** A

#### NEW QUESTION 184

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

- A. Increase the company's bandwidth.
- B. Apply ingress filters at the routers.
- C. Install a packet capturing tool.
- D. Block all SYN packet

**Answer:** B

#### NEW QUESTION 189

There have been several exploits to critical devices within the network. However, there is currently no process to perform vulnerability analysis. Which 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 194

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

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

**Answer:** B

#### NEW QUESTION 195

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

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

**Answer:** D

#### NEW QUESTION 197

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 201

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 203

The administrator is troubleshooting availability issues on an FCoE-based storage array that uses deduplication. The single controller in the storage array has failed, so the administrator wants to move the drives to a storage array from a different manufacturer in order to access the data. Which of the following issues may potentially occur?

- A. The data may not be in a usable format.
- B. The new storage array is not FCoE based.
- C. The data may need a file system check.
- D. The new storage array also only has a single controller

**Answer:** B

#### Explanation:

Fibre Channel over Ethernet (FCoE) is a computer network technology that encapsulates Fibre Channel frames over Ethernet networks. This allows Fibre Channel to use 10 Gigabit Ethernet networks (or higher speeds) while preserving the Fibre Channel protocol.

When moving the disks to another storage array, you need to ensure that the array supports FCoE, not just regular Fiber Channel. Fiber Channel arrays and Fiber Channel over Ethernet arrays use different network connections, hardware and protocols. Fiber Channel arrays use the Fiber Channel protocol over a dedicated Fiber Channel network whereas FCoE arrays use the Fiber Channel protocol over an Ethernet network. Incorrect Answers:

A: It is unlikely that the data will not be in a usable format. Fiber Channel LUNs appear as local disks on a Windows computer. The computer then creates an NTFS volume on the fiber channel LUN. The storage array does not see the NTFS file system or the data stored on it. FCoE arrays only see the underlying block level storage.

C: The data would not need a file system check. FCoE arrays use block level storage and do not check the file system. Any file system checks would be performed by a Windows computer. Even if this happened, the data would be accessible after the check.

D: The new storage array also having a single controller would not be a problem. Only one controller is required.

References: [https://en.wikipedia.org/wiki/Fibre\\_CHANNEL](https://en.wikipedia.org/wiki/Fibre_CHANNEL)

"[https://en.wikipedia.org/wiki/Fibre\\_Channel\\_over\\_Ethernet](https://en.wikipedia.org/wiki/Fibre_Channel_over_Ethernet)"Channel\_over\_Ethernet

#### NEW QUESTION 208

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

Which of the following is the BEST course of action?

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

**Answer:** A

#### Explanation:

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

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

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

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

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

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

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

C: 6to4 relays work in a similar way to Teredo. However, the addresses used by 6to4 relays start with 2002:: whereas Teredo addresses start with 2001. Therefore, a 6to4 relay is not being used in this question so this answer is incorrect.

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

References: [https://en.wikipedia.org/wiki/Teredo\\_tunneling](https://en.wikipedia.org/wiki/Teredo_tunneling)

"[https://en.wikipedia.org/wiki/Teredo\\_tunneling](https://en.wikipedia.org/wiki/Teredo_tunneling)"org/wiki/Teredo\_tun[HYPERLINK "https://en.wikipedia.org/wiki/Teredo\\_tunneling"](https://en.wikipedia.org/wiki/Teredo_tunneling)neling

#### NEW QUESTION 210

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

- A. Software-based root of trust

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

**Answer: C**

**Explanation:**

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

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

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

The TPM is the hardware root of trust.

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

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

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

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

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

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

**NEW QUESTION 212**

An organization is concerned with potential data loss in the event of a disaster, and created a backup datacenter as a mitigation strategy. The current storage method is a single NAS used by all servers in both datacenters. Which of the following options increases data availability in the event of a datacenter failure?

- A. Replicate NAS changes to the tape backups at the other datacenter.
- B. Ensure each server has two HBAs connected through two routes to the NAS.
- C. Establish deduplication across diverse storage paths.
- D. Establish a SAN that replicates between datacenters.

**Answer: D**

**Explanation:**

A SAN is a Storage Area Network. It is an alternative to NAS storage. SAN replication is a technology that replicates the data on one SAN to another SAN; in this case, it would replicate the data to a SAN in the backup datacenter. In the event of a disaster, the SAN in the backup datacenter would contain all the data on the original SAN.

Array-based replication is an approach to data backup in which compatible storage arrays use built-in software to automatically copy data from one storage array to another. Array-based replication software runs on one or more storage controllers resident in disk storage systems, synchronously or asynchronously replicating data between similar storage array models at the logical unit number (LUN) or volume block level. The term can refer to the creation of local copies of data within the same array as the source data, as well as the creation of remote copies in an array situated off site. Incorrect Answers:

A: Replicating NAS changes to the tape backups at the other datacenter would result in a copy of the NAS data in the backup datacenter. However, the data will be stored on tape. In the event of a disaster, you would need another NAS to restore the data to.

B: Ensuring that each server has two routes to the NAS is not a viable solution. The NAS is still a single point of failure. In the event of a disaster, you could lose the NAS and all the data on it.

C: Deduplication is the process of eliminating multiple copies of the same data to save storage space. The NAS is still a single point of failure. In the event of a disaster, you could lose the NAS and all the data on it.

References:

<http://searchdisasterrecovery.techtarget.com/definition/Array-basedreplication> chdisasterrecovery.tHYPERLINK

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cation

**NEW QUESTION 214**

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 216

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 220

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

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

**Answer:** BD

#### Explanation:

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

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

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

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

Incorrect Answers:

- A: This question is asking which of the following additional controls MUST be implemented to minimize the risk of data leakage. Implementing a full system backup does not minimize the risk of data leakage.
- C: Strong authentication implemented via external biometric devices will ensure that only authorized people can access the network. However, it does not minimize the risk of data leakage.
- E: Full-drive file hashing is not required because we already have full drive encryption.
- F: Split-tunnel VPN is used when a user is remotely accessing the network. Communications with company servers go over a VPN whereas private communications such as web browsing does not use a VPN. A more secure solution is a full tunnel VPN.

References:

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

#### NEW QUESTION 225

An administrator is tasked with securing several website domains on a web server. The administrator elects to secure www.example.com, mail.example.org, archive.example.com, and www.example.org with the same certificate. Which of the following would allow the administrator to secure those domains with a single issued certificate?

- A. Intermediate Root Certificate



- B. Wildcard Certificate
- C. EV x509 Certificate
- D. Subject Alternative Names Certificate

**Answer:** D

**Explanation:**

Subject Alternative Names let you protect multiple host names with a single SSL certificate. Subject Alternative Names allow you to specify a list of host names to be protected by a single SSL certificate. When you order the certificate, you will specify one fully qualified domain name in the common name field. You can then add other names in the Subject Alternative Names field.

Incorrect Answers:

A: An Intermediate Root Certificate is used to trust an intermediate CA (Certification Authority). The Intermediate root CA can issue certificates but the Intermediate Root Certificate itself cannot be used to secure multiple domains on a web server.

B: A wildcard certificate can be used to secure multiple domain names within the same higher level domain. For example: a wildcard certificate "\*.example.com" can secure an unlimited number of domains that end in 'example.com' such as domain1.example.com, domain2.example.com etc. A wildcard certificate cannot be used to secure the domains listed in this question.

C: The certificate used to secure the domains will be an x509 certificate but it will not be a standard EV certificate. EV stands for extended validation. With a non-EV certificate, the issuing CA just ensures that you own the domains that you want to secure. With an EV certificate, further checks are carried out such as checks on your company. EV certificates take longer to issue due to the extra checks but the EV certificate provides extra guarantees to your customers that you are who you say you are. However, a standard EV certificate only secures a single domain.

**NEW QUESTION 230**

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

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

**Answer:** FG

**Explanation:**

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

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

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

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

Incorrect Answers:

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

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

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

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

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

References: <http://searchvirtualstorage.techtarget.com/definition/LUN-masking> [https://en.wikipedia.org/wiki/Fibre\\_Channel\\_zoning](https://en.wikipedia.org/wiki/Fibre_Channel_zoning)

**NEW QUESTION 234**

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

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

**Answer:** D

**Explanation:**

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

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

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

digital

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

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

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

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

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

References: [http://en.wikipedia.org/wiki/IEEE\\_802.1X](http://en.wikipedia.org/wiki/IEEE_802.1X)

<https://www.juniper.net/techpubs/software/aHYPERLINK> "https://www.juniper.net/techpubs/software/aaa\_802/sbr/sbr70/sw-sbr-admin/html/EAP-024.html"aa\_802/HYPERLINK "https://www.juniper.net/techpubs/software/aaa\_802/sbr/sbr70/sw-sbr-admin/html/EAP-024.html"sbr/sbr70/sw-sbr-admin/html/EAP-024.html

### NEW QUESTION 238

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

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

**Answer:** DE

#### Explanation:

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

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

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

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

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

Incorrect Answers:

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

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

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

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

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

"http://www.webopedia.com/TERM/V/vulnerability\_scanning.html"rability\_scanning.html

### NEW QUESTION 243

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> com/definition/Agile-project-management

#### NEW QUESTION 248

A security administrator has been asked to select a cryptographic algorithm to meet the criteria of a new application. The application utilizes streaming video that can be viewed both on computers and mobile devices. The application designers have asked that the algorithm support the transport encryption with the lowest possible performance overhead. Which of the following recommendations would BEST meet the needs of the application designers? (Select TWO).

- A. Use AES in Electronic Codebook mode
- B. Use RC4 in Cipher Block Chaining mode
- C. Use RC4 with Fixed IV generation
- D. Use AES with cipher text padding
- E. Use RC4 with a nonce generated IV
- F. Use AES in Counter mode

**Answer:** EF

#### Explanation:

In cryptography, an initialization vector (IV) is a fixed-size input to a cryptographic primitive that is typically required to be random or pseudorandom.

Randomization is crucial for encryption schemes to achieve semantic security, a property whereby repeated usage of the scheme under the same key does not allow an attacker to infer relationships between segments of the encrypted message.

Some cryptographic primitives require the IV only to be non-repeating, and the required randomness is derived internally. In this case, the IV is commonly called a nonce (number used once), and the primitives are described as stateful as opposed to randomized. This is because the IV need not be explicitly forwarded to a recipient but may be derived from a common state updated at both sender and receiver side. An example of stateful encryption schemes is the counter mode of operation, which uses a sequence number as a nonce.

AES is a block cipher. Counter mode turns a block cipher into a stream cipher. It generates the next keystream block by encrypting successive values of a "counter". The counter can be any function which produces a sequence which is guaranteed not to repeat for a long time, although an actual increment-by-one counter is the simplest and most popular.

Incorrect Answers:

A: AES in Electronic Codebook mode cannot be used to encrypt streaming video. You would need a stream cipher such as RC4 or AES in Counter Mode.

B: RC4 in Cipher Block Chaining mode cannot be used to encrypt streaming video. You would need a stream cipher such as RC4 (not in Cipher Block Chaining mode) or AES in Counter Mode.

C: You cannot use fixed IV generation for RC4 when encrypting streaming video.

D: AES with cipher text padding cannot be used to encrypt streaming video. You would need a stream cipher such as RC4 or AES in Counter Mode.

References: [https://en.wikipedia.org/wiki/Initialization\\_vector](https://en.wikipedia.org/wiki/Initialization_vector)

#### NEW QUESTION 249

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

- A. Implement an Acceptable Use Policy which addresses malware downloads.
- B. Deploy a network access control system with a persistent agent.
- C. Enforce mandatory security awareness training for all employees and contractors.
- D. Block cloud-based storage software on the company network

**Answer:** D

#### Explanation:

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

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

Incorrect Answers:

A: An Acceptable Use Policy is always a good idea

A. However, it just tells the users how they 'should' use the company systems. It is not a technical control to prevent malware.

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

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

#### NEW QUESTION 251

Using SSL, an administrator wishes to secure public facing server farms in three subdomains: dc1.east.company.com, dc2.central.company.com, and dc3.west.company.com. Which of the following is the number of wildcard SSL certificates that should be purchased?

- A. 1
- B. 3
- C. 6

**Answer:** C

#### Explanation:

You would need three wildcard certificates:

- \*. east.company.com
- \*. central.company.com
- \*. west.company.com



The common domain in each of the domains is company.com. However, a wildcard covers only one level of subdomain. For example: \*.company.com will cover "<anything>.company.com" but it won't cover "<anything>.<anything>.company.com".

You can only have one wildcard in a domain. For example: \*.company.com. You cannot have

\*.\*.company.com. Only the leftmost wildcard (\*) is counted. Incorrect Answers:

A: You cannot secure public facing server farms without any SSL certificates.

B: You need three wildcard certificates, not one. A wildcard covers only one level of subdomain. D: You do not need six wildcard certificates to secure three domains.

References:

<https://uk.godaddy.com/help/what-is-a-wildcard-ssl-certification> HYPERLINK "https://uk.godaddy.com/help/what-is-a-wildcard-ssl-certificate-567"cate-567

#### NEW QUESTION 253

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

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

**Answer: C**

#### Explanation:

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

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

Incorrect Answers:

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

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

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

References: <http://searchsecurity.techtarget.com/definition/physical-security> HYPERLINK

"http://searchsecurity.techtarget.com/definition/physical-security"inition/physical-security

#### NEW QUESTION 257

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 262

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 subnet  
 B. This rule is not working  
 C. Identify the rule and correct this issue. The rule shown in the image below is the rule in question  
 D. It is not working because the action is set to Deny  
 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 SSL  
 F. Modify the appropriate rule to allow communications. The web servers rule is shown in the image below  
 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 network  
 H. This rule is not working

- I. Identify and correct this issue. The SQL Server rule is shown in the image below  
J. It is not working because the protocol is wrong  
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

- L. 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	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 subnet

- N. This rule is not working  
O. Identify the rule and correct this issue. The rule shown in the image below is the rule in question  
P. It is not working because the action is set to Deny  
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 SSL

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

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 network

T. This rule is not working

- . Identify and correct this issue. The SQL Server rule is shown in the image below  
. It is not working because the protocol is wrong  
. 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	Permit	↑	↓
-----	-----	-----	-----	-----	--------	---	---

Answer: A

#### NEW QUESTION 267

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

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

Answer: D

#### Explanation:

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

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

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

Incorrect Answers:

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

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

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

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

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

#### NEW QUESTION 270

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



- A. Business or technical justification for not implementing the requirements.
- B. Risks associated with the inability to implement the requirements.
- C. Industry best practices with respect to the technical implementation of the current controls.
- D. All sections of the policy that may justify non-implementation of the requirements.
- E. A revised DRP and COOP plan to the exception form.
- F. Internal procedures that may justify a budget submission to implement the new requirement.
- G. Current and planned controls to mitigate the risk

**Answer:** ABG

**Explanation:**

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

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

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

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

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

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

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

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

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

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

**NEW QUESTION 271**

A company is in the process of outsourcing its customer relationship management system to a cloud provider. It will host the entire organization's customer database. The database will be accessed by both the company's users and its customers. The procurement department has asked what security activities must be performed for the deal to proceed. Which of the following are the MOST appropriate security activities to be performed as part of due diligence? (Select TWO).

- A. Physical penetration test of the datacenter to ensure there are appropriate controls.
- B. Penetration testing of the solution to ensure that the customer data is well protected.
- C. Security clauses are implemented into the contract such as the right to audit.
- D. Review of the organizations security policies, procedures and relevant hosting certifications.
- E. Code review of the solution to ensure that there are no back doors located in the softwar

**Answer:** CD

**Explanation:**

Due diligence refers to an investigation of a business or person prior to signing a contract. Due diligence verifies information supplied by vendors with regards to processes, financials, experience, and performance. Due diligence should verify the data supplied in the RFP and concentrate on the following:

Company profile, strategy, mission, and reputation

Financial status, including reviews of audited financial statements

Customer references, preferably from companies that have outsourced similar processes Management qualifications, including criminal background checks

Process expertise, methodology, and effectiveness Quality initiatives and certifications

Technology, infrastructure stability, and applications Security and audit controls

Legal and regulatory compliance, including any outstanding complaints or litigation Use of subcontractors

Insurance

Disaster recovery and business continuity policies C and D form part of Security and audit controls. Incorrect Answers:

A: A Physical Penetration Test recognizes the security weaknesses and strengths of the physical security. It will, therefore, not form part of due diligence because due diligence verifies information supplied by vendors with regards to processes, financials, experience, and performance.

B: A penetration test is a software attack on a computer system that looks for security weaknesses. It will, therefore, not form part of due diligence because due diligence verifies information supplied by vendors with regards to processes, financials, experience, and performance.

E: A security code review is an examination of an application that is designed to identify and assess threats to an organization. It will, therefore, not form part of due diligence because due diligence verifies information supplied by vendors with regards to processes, financials, experience, and performance.

References: [https://en.wikipedia.org/wiki/Due\\_diligence](https://en.wikipedia.org/wiki/Due_diligence) [httpHYPERLINK](#)

"<http://www.ftpress.com/articles/article.aspx?p=465313&seqNum=5>"[p://www.ftpress.com/articles/](http://www.ftpress.com/articles/article.aspx?p=465313&seqNum=5)

[article.aspx?p=465313](http://www.ftpress.com/articles/article.aspx?p=465313&seqNum=5)[HYPERLINK](#) "<http://www.ftpress.com/articles/article.aspx?p=465313&seqNum=5>"[HYPERLINK](#)

"<http://www.ftpress.com/articles/article.aspx?p=465313&seqNum=5>"[seqNum=5](#) <http://seclists.org/pen-test/2004/Dec/11>

Gregg, Michael, and Billy Haines, CASP CompTIA Advanced Security Practitioner Study Guide, John Wiley & Sons, Indianapolis, 2012, p. 169

**NEW QUESTION 273**

A large organization has recently suffered a massive credit card breach. During the months of Incident Response, there were multiple attempts to assign blame for whose fault it was that the incident occurred. In which part of the incident response phase would this be addressed in a controlled and productive manner?

- A. During the Identification Phase
- B. During the Lessons Learned phase
- C. During the Containment Phase
- D. During the Preparation Phase

**Answer:** B

**Explanation:**

The Lessons Learned phase is the final step in the Incident Response process, when everyone involved reviews what happened and why.

Incorrect Answers:

A: The Identification Phase is the second step in the Incident Response process that deals with the detection of events and incidents.

C: The Containment Phase is the third step in the Incident Response process that deals with the planning, training, and execution of the incident response plan.

D: The Preparation Phase is the first step in the Incident Response process that deals with policies and procedures required to attend to the potential of security incidents.

References:

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

#### NEW QUESTION 277

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

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

**Answer: D**

#### Explanation:

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

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

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

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

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

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

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

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

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

process.pdf"ites/rit.edu.security/files/exceptionHYPERLINK "http://www.rit.edu/security/sites/rit.edu.security/files/exception process.pdf"%20process.pdf

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

#### NEW QUESTION 280

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 285

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

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

**Answer: B**

#### Explanation:

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

Incorrect Answers:

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

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

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

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

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

#### NEW QUESTION 286

The Chief Executive Officer (CEO) of a company that allows telecommuting has challenged the Chief Security Officer's (CSO) request to harden the corporate network's perimeter. The CEO argues that the company cannot protect its employees at home, so the risk at work is no different. Which of the following BEST explains why this company should proceed with protecting its corporate network boundary?



- A. The corporate network is the only network that is audited by regulators and customers.
- B. The aggregation of employees on a corporate network makes it a more valuable target for attackers.
- C. Home networks are unknown to attackers and less likely to be targeted directly.
- D. Employees are more likely to be using personal computers for general web browsing when they are at home.

**Answer: B**

**Explanation:**

Data aggregation is any process in which information is gathered and expressed in a summary form, for purposes such as statistical analysis. Data aggregation increases the impact and scale of a security breach. The amount of data aggregation on the corporate network is much more than on an employee's home network, and is therefore more valuable.

Incorrect Answers:

A: Protecting its corporate network boundary is the only network that is audited by regulators and customers is not a good enough reason. Protecting its corporate network boundary because the amount of data aggregation on the corporate network is much more than on an employee's home network is.

C: Home networks are not less likely to be targeted directly because they are unknown to attackers, but because the amount of data aggregation available on the corporate network is much more.

D: Whether employees are browsing from their personal computers or logged into the corporate network, they could still be attacked. However, the amount of data aggregation on the corporate network is much more than on an employee's home network, and is therefore more valuable. References:

Gregg, Michael, and Billy Haines, CASP CompTIA Advanced Security Practitioner Study Guide, John Wiley & Sons, Indianapolis, 2012, p. 101

<http://searchsqlserver.techtarget.com/definition/data-aggregation>

**NEW QUESTION 288**

An assessor identifies automated methods for identifying security control compliance through validating sensors at the endpoint and at Tier 2. Which of the following practices satisfy continuous monitoring of authorized information systems?

- A. Independent verification and validation
- B. Security test and evaluation
- C. Risk assessment
- D. Ongoing authorization

**Answer: D**

**Explanation:**

Ongoing assessment and authorization is often referred to as continuous monitoring. It is a process

that determines whether the set of deployed security controls in an information system continue to be effective with regards to planned and unplanned changes that occur in the system and its environment over time.

Continuous monitoring allows organizations to evaluate the operating effectiveness of controls on or near a real-time basis. Continuous monitoring enables the enterprise to detect control failures quickly because it transpires immediately or closely after events in which the key controls are utilized.

Incorrect Answers:

A: Independent verification and validation (IV&V) is executed by a third party organization not involved in the development of a product. This is not considered continuous monitoring of authorized information systems.

B: Security test and evaluation is not considered continuous monitoring of authorized information systems.

C: Risk assessment is the identification of potential risks and threats. It is not considered continuous monitoring of authorized information systems.

References:

<http://www.fedramp.net/ongoing-assessment-and-authorization-continuous-monitoring> "http://www.fedramp.net/ongoing-assessment-and-authorization-continuous-monitoring"- authorization-continuous-monitoring

<https://www.techopedia.com/definition/24836/independent-verification-and-validation>--

iv&v" <https://www.techopedia.com/definition/24836/independent-verification-and-validation-iv&v>

and-validation--iv&v"& <https://www.techopedia.com/definition/24836/independent-verification-and-validation-iv&v>

Gregg, Michael, and Billy Haines, CASP CompTIA Advanced Security Practitioner Study Guide, John Wiley & Sons, Indianapolis, 2012, pp. 213, 219

**NEW QUESTION 293**

A company is facing penalties for failing to effectively comply with e-discovery requests. Which of the following could reduce the overall risk to the company from this issue?

- A. Establish a policy that only allows filesystem encryption and disallows the use of individual file encryption.
- B. Require each user to log passwords used for file encryption to a decentralized repository.
- C. Permit users to only encrypt individual files using their domain password and archive all old user passwords.
- D. Allow encryption only by tools that use public keys from the existing escrowed corporate PK

**Answer: D**

**Explanation:**

Electronic discovery (also called e-discovery) refers to any process in which electronic data is sought, located, secured, and searched with the intent of using it as evidence in a civil or criminal legal case. E-discovery can be carried out offline on a particular computer or it can be done in a network.

An e-discovery policy would define how data is archived and encrypted. If the data is archived in an insecure manner, a user could be able to delete data that the user does not want to be searched. Therefore, we need to find a way of securing the data in a way that only authorized people can access the data.

A public key infrastructure (PKI) supports the distribution and identification of public encryption keys for the encryption of data.

A. The data can only be decrypted by the private key.

In this question, we have an escrowed corporate PKI. Escrow is an independent and licensed third party that holds something (money, sensitive data etc.) and releases it only when predefined conditions have been met. In this case, Escrow is holding the private key of the PKI.

By encrypting the e-discovery data by using the PKI public key, we can ensure that the data can only be decrypted by the private key held in Escrow and this will only happen when the predefined conditions are met.

Incorrect Answers:

A: File encryption should be enabled to enable the archiving of the data.

B: Requiring each user to log passwords used for file encryption is not a good solution. Apart from there being no mechanism to enforce this, you should not need to know users' passwords. You need a mechanism that ensures that the data can be decrypted by authorized personnel without the need to know user passwords.

C: You cannot and should not be able to archive old passwords. You need a mechanism that ensures that the data can be decrypted by authorized personnel without the need to know user passwords. References:

<http://searchfinancialsecurity.techtarget.com/definition/electronicdiscovery>" financialsecurity.techtarget.com/definithyperlink  
"http://searchfinancialsecurity.techtarget.com/definition/electronic-discovery"ion/electronicdiscovery <https://en.wikipedia.org/wiki/Escrow>

**NEW QUESTION 295**

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