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Number: SY0-601
Passing Score: 800
Time Limit: 120 min
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SY0-601

CompTIA Security+ Certification Exam

Version 1.0



Exam A

QUESTION 1

SIMULATION

A company recently added a DR site and is redesigning the network. Users at the DR site are having issues browsing websites.

INSTRUCTIONS

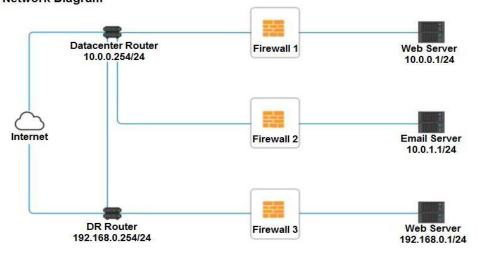
Click on each firewall to do the following:

- 1. Deny cleartext web traffic.
- 2. Ensure secure management protocols are used.
- 3. Resolve issues at the DR site.

The ruleset order cannot be modified due to outside constraints.

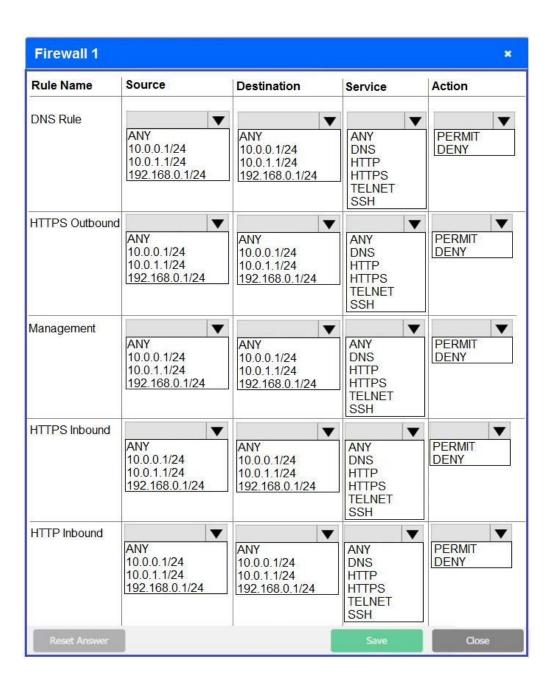
If at any time you would like to bring back the initial state of the simulation, please click the Reset All button.

Network Diagram



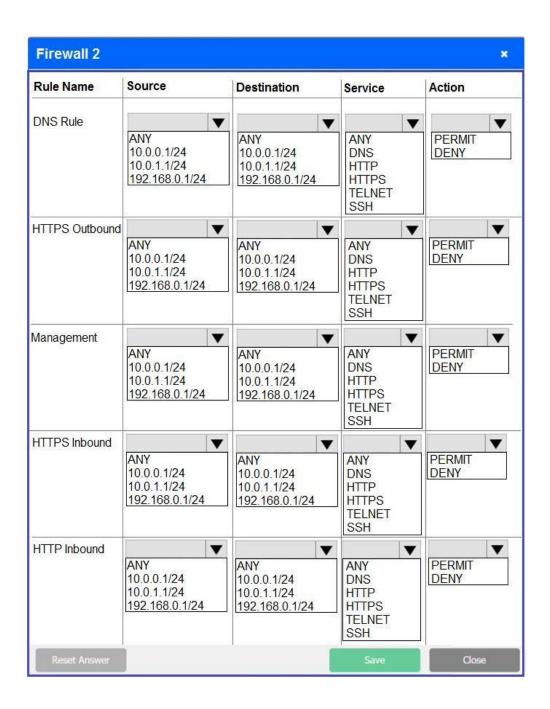






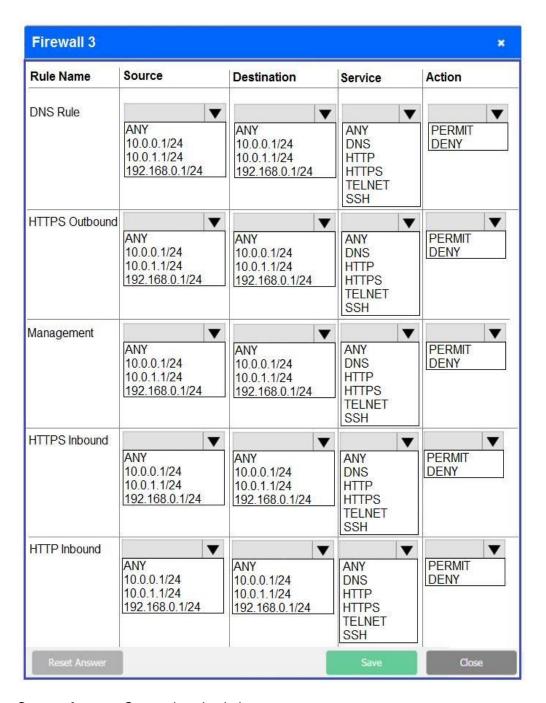












Correct Answer: See explanation below.

Section: (none) Explanation

Explanation/Reference:

Explanation: **Firewall 1**:

DNS Rule – ANY --> ANY --> DNS --> PERMIT
HTTPS Outbound – 10.0.0.1/24 --> ANY --> HTTPS --> PERMIT
Management – ANY --> ANY --> SSH --> PERMIT
HTTPS Inbound – ANY --> ANY --> HTTPS --> PERMIT
HTTP Inbound – ANY --> ANY --> DENY

Firewall 2: No changes should be made to this firewall

Firewall 3:





DNS Rule – ANY --> ANY --> DNS --> PERMIT
HTTPS Outbound – 192.168.0.1/24 --> ANY --> HTTPS --> PERMIT
Management – ANY --> ANY --> SSH --> PERMIT
HTTPS Inbound – ANY --> ANY --> HTTPS --> PERMIT
HTTP Inbound – ANY --> ANY --> HTTP --> DENY

QUESTION 2

DRAG DROP

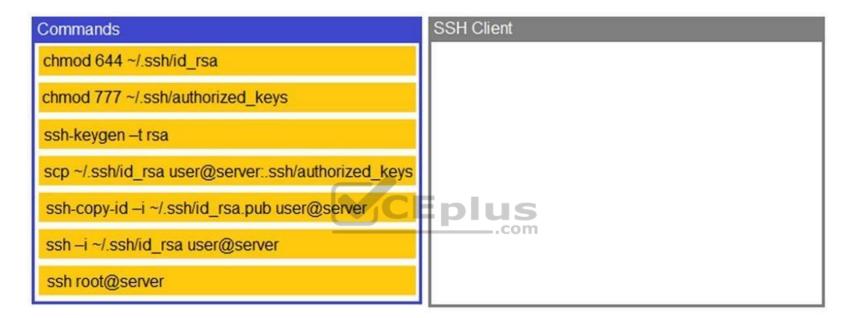
A security engineer is setting up passwordless authentication for the first time.

INSTRUCTIONS

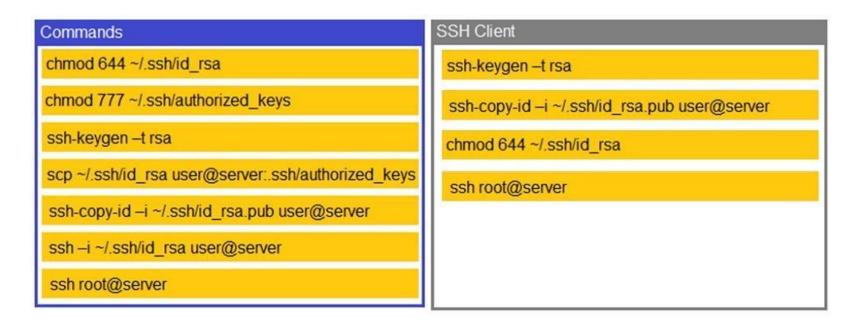
Use the minimum set of commands to set this up and verify that it works. Commands cannot be reused.

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

Select and Place:



Correct Answer:



Section: (none)



Explanation

Explanation/Reference:

QUESTION 3 HOTSPOT

Select the appropriate attack and remediation from each drop-down list to label the corresponding attack with its remediation.

INSTRUCTIONS

Not all attacks and remediation actions will be used.

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

Hot Area:





Attack Description	Target	Attack Identified	BEST Preventative or Remediation Ac
An attacker sends multiple SYN packets from	2007 0000	/4	
	Web server	•	
multiple sources.		Botnet	Enable DDoS protection
		RAT	Patch vulnerable systems
		Logic Bomb	Disable vulnerable services
		Backdoor	Change the default system password
		Virus	Update the cryptographic algorithms
		Spyware	Change the default application password
		Worm	Implement 2FA using push notification
		Adware	Conduct a code review
		-	
		Ransomware	Implement application fuzzing
		Keylogger	Implement a host-based IPS
		Phishing	Disable remote access services
he attack establishes a connection, which allows	SCHEE	•	
	User	Botnet	Enable DDoS protection
emote commands to be executed.		RAT	Patch vulnerable systems
		Logic Bomb	Disable vulnerable services
			10.016.18.13.136.06.13.13.13.13.13.13.13.13.13.13.13.13.13.
		Backdoor	Change the default system password
		Virus	Update the cryptographic algorithms
		Spyware	Change the default application password
		Worm	Implement 2FA using push notification
		Adware	Conduct a code review
		Ransomware	Implement application fuzzing
			Implement a host-based IPS
		Keylogger	Disable remote access services
		Phishing	Disable remote access services
The attack is self propagating and compromises a		75	
SQL database using well-known credentials as it	Database server		
2000년 1200년 1	Dalabase server	Botnet	Enable DDoS protection
noves through the network.		RAT	Patch vulnerable systems
		Logic Bomb	Disable vulnerable services
		Backdoor	Change the default system password
		Virus	Update the cryptographic algorithms
		Spyware	Change the default application password
		Worm	Implement 2FA using push notification
		Adware . CO	Conduct a code review
		Ransomware	Implement application fuzzing
		Keylogger	Implement a host-based IPS
			Disable remote access services
		Phishing	Disable reflicte access services
he attacker uses hardware to remotely monitor a	Executive	•	T
user's input activity to harvest credentials.	LAGCUIIVO	Botnet	Enable DDoS protection
		RAT	Patch vulnerable systems
			Disable vulnerable services
		Logic Bomb	
		Backdoor	Change the default system password
		Virus	Update the cryptographic algorithms
		Spyware	Change the default application password
		Worm	Implement 2FA using push notification
		Adware	Conduct a code review
		Ransomware	Implement application fuzzing
		Keylogger Phishing	Implement a host-based IPS Disable remote access services
		rinaming	
he attacker embeds hidden access in an			
nternally developed application that bypasses	Application	Potent	Enable DDoS protection
		Botnet	Enable DDoS protection
ccount login.		RAT	Patch vulnerable systems
		Logic Bomb	Disable vulnerable services
		Backdoor	Change the default system password
		Virus	Update the cryptographic algorithms
		Spyware	Change the default application password
		Worm	Implement 2FA using push notification
		Adware	Conduct a code review
		Ransomware	Implement application fuzzing
		Keylogger	Implement a host-based IPS
		Phishing	Disable remote access services

Correct Answer:



Attack Description	Target	Attack Identified	BEST Preventative or Remediation Ad
An attacker sends multiple SYN packets from	Moh consor		
multiple sources.	Web server	Botnet	Enable DDoS protection
		RAT	Patch vulnerable systems
			Disable vulnerable services
		Logic Bomb	Change the default system password
		Backdoor	
		Virus	Update the cryptographic algorithms
		Spyware	Change the default application password
		Worm	Implement 2FA using push notification Conduct a code review
		Adware	
		Ransomware	Implement application fuzzing
		Keylogger	Implement a host-based IPS
		Phishing	Disable remote access services
The attack establishes a connection, which allows	199	•	
remote commands to be executed.	User	Botnet	Enable DDoS protection
omoto communos to be executed.		RAT	Patch vulnerable systems
		Logic Bomb	Disable vulnerable services
		Backdoor	Change the default system password
		Virus	Update the cryptographic algorithms
		Spyware	Change the default application password
		Worm	Implement 2FA using push notification
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		Phishing	Disable refilote access services
The attack is self propagating and compromises a			p
SQL database using well-known credentials as it	Database server	,	F
moves through the network.	Duissos 301101	Botnet	Enable DDoS protection
noves inrough the network.		RAT	Patch vulnerable systems
		Logic Bomb	Disable vulnerable services
		Backdoor	Change the default system password
		Virus	Update the cryptographic algorithms
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The attacker uses hardware to remotely monitor a			
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		18	. New
The attacker embeds hidden access in an		_	
internally developed application that bypasses	Application	Botnet	Enable DDoS protection
account login.		RAT	Patch vulnerable systems
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			Update the cryptographic algorithms
		Virus	
		Spyware	Change the default application password
		Worm	Implement 2FA using push notification
		Adware	Conduct a code review
			4 4 4 4 4
		Ransomware	Implement application fuzzing
			Implement application fuzzing Implement a host-based IPS Disable remote access services



Section: (none) Explanation

Explanation/Reference:

QUESTION 4

Which of the following will MOST likely adversely impact the operations of unpatched traditional programmable-logic controllers, running a back-end LAMP server and OT systems with human-management interfaces that are accessible over the Internet via a web interface? (Choose two.)

- A. Cross-site scripting
- B. Data exfiltration
- C. Poor system logging
- D. Weak encryption
- E. SQL injection
- F. Server-side request forgery

Correct Answer: DF Section: (none) Explanation

Explanation/Reference:

QUESTION 5

A company recently transitioned to a strictly BYOD culture due to the cost of replacing lost or damaged corporate-owned mobile devices. Which of the following technologies would be BEST to balance the BYOD culture while also protecting the company's data?

- A. Containerization
- B. Geofencing
- C. Full-disk encryption
- D. Remote wipe

Correct Answer: C Section: (none) Explanation



Explanation/Reference:

QUESTION 6

A Chief Security Office's (CSO's) key priorities are to improve preparation, response, and recovery practices to minimize system downtime and enhance organizational resilience to ransomware attacks. Which of the following would BEST meet the CSO's objectives?

- A. Use email-filtering software and centralized account management, patch high-risk systems, and restrict administration privileges on fileshares.
- B. Purchase cyber insurance from a reputable provider to reduce expenses during an incident.
- C. Invest in end-user awareness training to change the long-term culture and behavior of staff and executives, reducing the organization's susceptibility to phishing attacks.
- D. Implement application whitelisting and centralized event-log management, and perform regular testing and validation of full backups.

Correct Answer: D Section: (none) Explanation

Explanation/Reference:

QUESTION 7

A network engineer has been asked to investigate why several wireless barcode scanners and wireless computers in a warehouse have intermittent connectivity to the shipping server. The barcode scanners and computers are all on forklift trucks and move around the warehouse during their regular use. Which of the following should the engineer do to determine the issue? (Choose two.)



A. Perform	ı a site	survey
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B. Deploy an FTK Imager

C. Create a heat map

D. Scan for rogue access points

E. Upgrade the security protocols

F. Install a captive portal

Correct Answer: AC Section: (none) Explanation

Explanation/Reference:

QUESTION 8

A security administrator suspects an employee has been emailing proprietary information to a competitor. Company policy requires the administrator to capture an exact copy of the employee's hard disk. Which of the following should the administrator use?

A. dd

B. chmod

C. dnsenum

D. logger

Correct Answer: A Section: (none) Explanation

Explanation/Reference:



QUESTION 9

Which of the following is MOST likely to outline the roles and responsibilities of data controllers and data processors?

A. SSAE SOC 2

B. PCI DSS

C. GDPR

D. ISO 31000

Correct Answer: C Section: (none) Explanation

Explanation/Reference:

QUESTION 10 Phishing and spear-phishing attacks have been occurring more frequently against a company's staff. Which of the following would MOST likely help mitigate this issue?

A. DNSSEC and DMARC

B. DNS query logging

C. Exact mail exchanger records in the DNS

D. The addition of DNS conditional forwarders

Correct Answer: C Section: (none) Explanation

Explanation/Reference:



QUESTION 11 On which of the following is the live acquisition of data for forensic analysis MOST dependent? (Choose two.)

- A. Data accessibility
- B. Legal hold
- C. Cryptographic or hash algorithm
- D. Data retention legislation
- E. Value and volatility of data
- F. Right-to-audit clauses

Correct Answer: EF Section: (none) Explanation

Explanation/Reference:

QUESTION 12

Which of the following incident response steps involves actions to protect critical systems while maintaining business operations?

- A. Investigation
- B. Containment
- C. Recovery
- D. Lessons learned

Correct Answer: B Section: (none) Explanation

Explanation/Reference:



QUESTION 13

A security auditor is reviewing vulnerability scan data provided by an internal security team. Which of the following BEST indicates that valid credentials were used?

- A. The scan results show open ports, protocols, and services exposed on the target host
- B. The scan enumerated software versions of installed programs
- C. The scan produced a list of vulnerabilities on the target host
- D. The scan identified expired SSL certificates

Correct Answer: B Section: (none) Explanation

Explanation/Reference:

QUESTION 14 Which of the following BEST explains the difference between a data owner and a data custodian?

- A. The data owner is responsible for adhering to the rules for using the data, while the data custodian is responsible for determining the corporate governance regarding the data
- B. The data owner is responsible for determining how the data may be used, while the data custodian is responsible for implementing the protection to the data
- C. The data owner is responsible for controlling the data, while the data custodian is responsible for maintaining the chain of custody when handling the dataD. The data owner grants the technical permissions for data access, while the data custodian maintains the database access controls to the data

Correct Answer: B Section: (none) Explanation

CEplus

Explanation/Reference:

QUESTION 15

A network engineer needs to build a solution that will allow guests at the company's headquarters to access the Internet via WiFi. This solution should not allow access to the internal corporate network, but it should require guests to sign off on the acceptable use policy before accessing the Internet. Which of the following should the engineer employ to meet these requirements?

A. Implement open PSK on the APs

B. Deploy a WAF

C. Configure WIPS on the APs

D. Install a captive portal

Correct Answer: D Section: (none) Explanation

Explanation/Reference:

QUESTION 16

A security analyst has been asked to investigate a situation after the SOC started to receive alerts from the SIEM. The analyst first looks at the domain controller and finds the following events:

Keywords	Date and time	Source	Event ID
Kerberos pre- authentication failed.	12/26/2019 11:37:21 PM	Microsoft Windows security auditing	4771
Kerberos pre- authentication failed.	12/26/2019 11:37:21 PM	Microsoft Windows security auditing	4771
Kerberos pre- authentication failed.	12/26/2019 11:37:22 PM	Microsoft Windows security auditing	4771



To better understand what is going on, the analyst runs a command and receives the following output:

name	lastbadpasswordattempt			badpwdcount	
John.Smith	12/26/2019	11:37:21	PM	7	
Joe.Jones	12/26/2019	11:37:21	PM	13	
Michael.Johnson	12/26/2019	11:37:22	PM	8	
Mary.Wilson	12/26/2019	11:37:22	PM	8	
Jane.Brown	12/26/2019	11:37:23	PM	12	

Based on the analyst's findings, which of the following attacks is being executed?

A. Credential harvesting

B. Keylogger

C. Brute-force

D. Spraying

Correct Answer: D Section: (none) Explanation

Explanation/Reference:

QUESTION 17

Which of the following cloud models provides clients with servers, storage, and networks but nothing else?

A. SaaS

B. PaaS



C. laaS

D. DaaS

Correct Answer: C Section: (none) Explanation

Explanation/Reference:

QUESTION 18 A network administrator needs to build out a new datacenter, with a focus on resiliency and uptime. Which of the following would BEST meet this objective? (Choose two.)

A. Dual power supply

B. Off-site backups

C. Automatic OS upgrades

D. NIC teaming

E. Scheduled penetration testing

F. Network-attached storage

Correct Answer: AB Section: (none) Explanation

Explanation/Reference:

QUESTION 19

A researcher has been analyzing large data sets for the last ten months. The researcher works with colleagues from other institutions and typically connects via SSH to retrieve additional data. Historically, this setup has worked without issue, but the researcher recently started getting the following message:

Which of the following network attacks is the researcher MOST likely experiencing?

A. MAC cloning

B. Evil twin

C. Man-in-the-middle

D. ARP poisoning

Correct Answer: C Section: (none) Explanation

Explanation/Reference:

QUESTION 20

An organization is developing an authentication service for use at the entry and exit ports of country borders. The service will use data feeds obtained from passport systems, passenger manifests, and high-definition video feeds from CCTV systems that are located at the ports. The service will incorporate machine-learning techniques to eliminate biometric enrollment processes while still allowing authorities to identify passengers with increasing accuracy over time. The more frequently passengers travel, the more accurately the service will identify them. Which of the following biometrics will MOST likely be used, without the need for enrollment? (Choose two.)

A. Voice

B. Gait



C. Vein

D. Facial

E. Retina

F. Fingerprint

Correct Answer: BD Section: (none) Explanation

Explanation/Reference:

QUESTION 21

An organization needs to implement more stringent controls over administrator/root credentials and service accounts. Requirements for the project include: • Checkin/checkout of credentials

- . The ability to use but not know the password
- Automated password changes
- Logging of access to credentials

Which of the following solutions would meet the requirements?

A. OAuth 2.0

B. Secure Enclave

C. A privileged access management system

D. An OpenID Connect authentication system

Correct Answer: D Section: (none) Explanation



Explanation/Reference:

QUESTION 22

Several employees return to work the day after attending an industry trade show. That same day, the security manager notices several malware alerts coming from each of the employee's workstations. The security manager investigates but finds no signs of an attack on the perimeter firewall or the NIDS. Which of the following is MOST likely causing the malware alerts?

- A. A worm that has propagated itself across the intranet, which was initiated by presentation media
- B. A fileless virus that is contained on a vCard that is attempting to execute an attack
- C. A Trojan that has passed through and executed malicious code on the hosts
- D. A USB flash drive that is trying to run malicious code but is being blocked by the host firewall

Correct Answer: A Section: (none) Explanation

Explanation/Reference:

QUESTION 23

After reading a security bulletin, a network security manager is concerned that a malicious actor may have breached the network using the same software flaw. The exploit code is publicly available and has been reported as being used against other industries in the same vertical. Which of the following should the network security manager consult FIRST to determine a priority list for forensic review?

- A. The vulnerability scan output
- B. The IDS logs
- C. The full packet capture data
- D. The SIEM alerts



Correct Answer: A Section: (none) Explanation

Explanation/Reference:

QUESTION 24

A financial organization has adopted a new secure, encrypted document-sharing application to help with its customer loan process. Some important PII needs to be shared across this new platform, but it is getting blocked by the DLP systems. Which of the following actions will BEST allow the PII to be shared with the secure application without compromising the organization's security posture?

- A. Configure the DLP policies to allow all PII
- B. Configure the firewall to allow all ports that are used by this application
- C. Configure the antivirus software to allow the application
- D. Configure the DLP policies to whitelist this application with the specific PII
- E. Configure the application to encrypt the PII

Correct Answer: D Section: (none) Explanation

Explanation/Reference:

QUESTION 25 An auditor is performing an assessment of a security appliance with an embedded OS that was vulnerable during the last two assessments. Which of the following BEST explains the appliance's vulnerable state?

- A. The system was configured with weak default security settings.
- B. The device uses weak encryption ciphers.
- C. The vendor has not supplied a patch for the appliance.
- D. The appliance requires administrative credentials for the assessment.

Correct Answer: C Section: (none) Explanation



Explanation/Reference:

QUESTION 26

A company's bank has reported that multiple corporate credit cards have been stolen over the past several weeks. The bank has provided the names of the affected cardholders to the company's forensics team to assist in the cyber-incident investigation.

An incident responder learns the following information:

- The timeline of stolen card numbers corresponds closely with affected users making Internet-based purchases from diverse websites via enterprise desktop PCs.
- All purchase connections were encrypted, and the company uses an SSL inspection proxy for the inspection of encrypted traffic of the hardwired network. Purchases made with corporate cards over the corporate guest WiFi network, where no SSL inspection occurs, were unaffected.

Which of the following is the MOST likely root cause?

- A. HTTPS sessions are being downgraded to insecure cipher suites
- B. The SSL inspection proxy is feeding events to a compromised SIEM
- C. The payment providers are insecurely processing credit card charges
- D. The adversary has not yet established a presence on the guest WiFi network

Correct Answer: C Section: (none) Explanation

CEplus

Explanation/Reference:

QUESTION 27

A pharmaceutical sales representative logs on to a laptop and connects to the public WiFi to check emails and update reports. Which of the following would be BEST to prevent other devices on the network from directly accessing the laptop? (Choose two.)

A. Trusted Platform Module

B. A host-based firewall

C. A DLP solution

D. Full disk encryption

E. A VPN

F. Antivirus software

Correct Answer: AB Section: (none) Explanation

Explanation/Reference:

QUESTION 28 A company is implementing MFA for all applications that store sensitive data. The IT manager wants MFA to be non-disruptive and user friendly. Which of the following technologies should the IT manager use when implementing MFA?

A. One-time passwords

B. Email tokens

C. Push notifications

D. Hardware authentication

Correct Answer: C Section: (none) Explanation



Explanation/Reference:

QUESTION 29

The CSIRT is reviewing the lessons learned from a recent incident. A worm was able to spread unhindered throughout the network and infect a large number of computers and servers. Which of the following recommendations would be BEST to mitigate the impacts of a similar incident in the future?

A. Install a NIDS device at the boundary.

B. Segment the network with firewalls.

C. Update all antivirus signatures daily.

D. Implement application blacklisting.

Correct Answer: B Section: (none) Explanation

Explanation/Reference:

QUESTION 30 A company is adopting a BYOD policy and is looking for a comprehensive solution to protect company information on user devices. Which of the following solutions would BEST support the policy?

A. Mobile device management

B. Full-device encryption

C. Remote wipe

D. Biometrics



Correct Answer:	F
Section: (none)	
Explanation	

Explanation/Reference:

QUESTION 31

A development team employs a practice of bringing all the code changes from multiple team members into the same development project through automation. A tool is utilized to validate the code and track source code through version control. Which of the following BEST describes this process?

- A. Continuous delivery
- B. Continuous integrationC. Continuous validation
- D. Continuous monitoring

Correct Answer: B Section: (none) Explanation

Explanation/Reference:

QUESTION 32 A cybersecurity administrator needs to add disk redundancy for a critical server. The solution must have a two-drive failure for better fault tolerance. Which of the following RAID levels should the administrator select?

A. 0

B. 1

C. 5

D. 6

Correct Answer: B Section: (none) Explanation



Explanation/Reference:

QUESTION 33

Which of the following BEST explains the reason why a server administrator would place a document named password.txt on the desktop of an administrator account on a server?

- A. The document is a honeyfile and is meant to attract the attention of a cyberintruder.
- B. The document is a backup file if the system needs to be recovered.
- C. The document is a standard file that the OS needs to verify the login credentials.
- D. The document is a keylogger that stores all keystrokes should the account be compromised.

Correct Answer: A Section: (none) Explanation

Explanation/Reference:

QUESTION 34

A small company that does not have security staff wants to improve its security posture. Which of the following would BEST assist the company?

- A. MSSP
- B. SOAR
- C. laaS
- D. PaaS

Correct Answer: B



Section: (none) Explanation

Explanation/Reference:

QUESTION 35

An organization's help desk is flooded with phone calls from users stating they can no longer access certain websites. The help desk escalates the issue to the security team, as these websites were accessible the previous day. The security analysts run the following command: ipconfig /flushdns, but the issue persists. Finally, an analyst changes the DNS server for an impacted machine, and the issue goes away. Which of the following attacks MOST likely occurred on the original DNS server?

A. DNS cache poisoning

B. Domain hijacking

C. Distributed denial-of-service

D. DNS tunneling

Correct Answer: B Section: (none) Explanation

Explanation/Reference:

QUESTION 36

A cybersecurity manager has scheduled biannual meetings with the IT team and department leaders to discuss how they would respond to hypothetical cyberattacks. During these meetings, the manager presents a scenario and injects additional information throughout the session to replicate what might occur in a dynamic cybersecurity event involving the company, its facilities, its data, and its staff. Which of the following describes what the manager is doing?

A. Developing an incident response plan

B. Building a disaster recovery plan

C. Conducting a tabletop exercise

D. Running a simulation exercise

Correct Answer: C Section: (none) Explanation



Explanation/Reference:

QUESTION 37

A RAT that was used to compromise an organization's banking credentials was found on a user's computer. The RAT evaded antivirus detection. It was installed by a user who has local administrator rights to the system as part of a remote management tool set. Which of the following recommendations would BEST prevent this from reoccurring?

A. Create a new acceptable use policy.

B. Segment the network into trusted and untrusted zones.

C. Enforce application whitelisting.

D. Implement DLP at the network boundary.

Correct Answer: C Section: (none) Explanation

Explanation/Reference:

QUESTION 38

A security analyst is reviewing a new website that will soon be made publicly available. The analyst sees the following in the URL:

http://dev-site.comptia.org/home/show.php?sessionID=77276554&loc=us



The analyst then sends an internal user a link to the new website for testing purposes, and when the user clicks the link, the analyst is able to browse the website with the following URL:

http://dev-site.comptia.org/home/show.php?sessionID=98988475&loc=us

Which of the following application attacks is being tested?

- A. Pass-the-hash
- B. Session replay
- C. Object deference
- D. Cross-site request forgery

Correct Answer: D Section: (none) Explanation

Explanation/Reference:

QUESTION 39

A network administrator has been asked to install an IDS to improve the security posture of an organization. Which of the following control types is an IDS?

- A. Corrective
- B. Physical
- C. Detective
- D. Administrative

Correct Answer: C Section: (none) Explanation





QUESTION 40

Which of the following should be put in place when negotiating with a new vendor about the timeliness of the response to a significant outage or incident?

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

Correct Answer: C Section: (none) Explanation

Explanation/Reference:

QUESTION 41

A startup company is using multiple SaaS and IaaS platforms to stand up a corporate infrastructure and build out a customer-facing web application. Which of the following solutions would be BEST to provide security, manageability, and visibility into the platforms?

- A. SIEM
- B. DLP
- C. CASB
- D. SWG

Correct Answer: C Section: (none) Explanation

CEplus

Explanation/Reference:

QUESTION 42

A root cause analysis reveals that a web application outage was caused by one of the company's developers uploading a newer version of the third-party libraries that were shared among several applications. Which of the following implementations would be BEST to prevent the issue from reoccurring?

A. CASB

B. SWG

C. Containerization

D. Automated failover

Correct Answer: C Section: (none) Explanation

Explanation/Reference:

QUESTION 43 A security administrator suspects there may be unnecessary services running on a server. Which of the following tools will the administrator MOST likely use to confirm the suspicions?

A. Nmap

B. Wireshark

C. Autopsy

D. DNSEnum

Correct Answer: A Section: (none) Explanation



Explanation/Reference:

QUESTION 44

A company has drafted an insider-threat policy that prohibits the use of external storage devices. Which of the following would BEST protect the company from data exfiltration via removable media?

A. Monitoring large data transfer transactions in the firewall logs

B. Developing mandatory training to educate employees about the removable media policy

C. Implementing a group policy to block user access to system files

D. Blocking removable-media devices and write capabilities using a host-based security tool

Correct Answer: D Section: (none) Explanation

Explanation/Reference:

QUESTION 45

A network administrator has been alerted that web pages are experiencing long load times. After determining it is not a routing or DNS issue, the administrator logs in to the router, runs a command, and receives the following output:

CPU 0 percent busy, from 300 sec ago 1 sec ave: 99 percent busy 5 sec ave: 97 percent busy 1 min ave: 83 percent busy

Which of the following is the router experiencing?

A. DDoS attack

B. Memory leak



C. Buffer overflow

D. Resource exhaustion

Correct Answer: D Section: (none) Explanation

Explanation/Reference:

QUESTION 46

A company provides mobile devices to its users to permit access to email and enterprise applications. The company recently started allowing users to select from several different vendors and device models. When configuring the MDM, which of the following is a key security implication of this heterogeneous device approach?

CEplus

- A. The most common set of MDM configurations will become the effective set of enterprise mobile security controls.
- B. All devices will need to support SCEP-based enrollment; therefore, the heterogeneity of the chosen architecture may unnecessarily expose private keys to adversaries.
- C. Certain devices are inherently less secure than others, so compensatory controls will be needed to address the delta between device vendors.
- D. MDMs typically will not support heterogeneous deployment environments, so multiple MDMs will need to be installed and configured.

Correct Answer: C Section: (none) Explanation

Explanation/Reference:

QUESTION 47 An organization with a low tolerance for user inconvenience wants to protect laptop hard drives against loss or data theft. Which of the following would be the MOST acceptable?

A. SED

B. HSM

C. DLP

D. TPM

Correct Answer: A Section: (none) Explanation

Explanation/Reference:

QUESTION 48

A security analyst receives a SIEM alert that someone logged in to the appadmin test account, which is only used for the early detection of attacks. The security analyst then reviews the following application log:

```
[03/06/20xx:17:20:18] system 127.0.0.1 FindXPath=//User[Username/text()='foo' or 7=7 or 'o'='o' And Password/text='bar'] [03/06/20xx:17:21:18] appadmin 194.28.114.102 action:login result:success [03/06/20xx:17:22:18] appadmin 194.28.114.102 action:open.account(12345) result:fail [03/06/20xx:17:23:18] appadmin 194.28.114.102 action:open.account(23456) result:fail [03/06/20xx:17:23:18] appadmin 194.28.114.102 action:open.account(23456) result:fail [03/06/20xx:17:23:18] appadmin 194.28.114.102 action:open.account(45678) result:fail
```

Which of the following can the security analyst conclude?

- A. A replay attack is being conducted against the application.
- B. An injection attack is being conducted against a user authentication system.
- C. A service account password may have been changed, resulting in continuous failed logins within the application.
- D. A credentialed vulnerability scanner attack is testing several CVEs against the application.

Correct Answer: C



Section: (none) Explanation

Explanation/Reference:

QUESTION 49

In which of the following situations would it be BEST to use a detective control type for mitigation?

- A. A company implemented a network load balancer to ensure 99.999% availability of its web application.
- B. A company designed a backup solution to increase the chances of restoring services in case of a natural disaster.
- C. A company purchased an application-level firewall to isolate traffic between the accounting department and the information technology department.
- D. A company purchased an IPS system, but after reviewing the requirements, the appliance was supposed to monitor, not block, any traffic.
- E. A company purchased liability insurance for flood protection on all capital assets.

Correct Answer: D Section: (none) Explanation

Explanation/Reference:

QUESTION 50

The IT department's on-site developer has been with the team for many years. Each time an application is released, the security team is able to identify multiple vulnerabilities. Which of the following would BEST help the team ensure the application is ready to be released to production?

- A. Limit the use of third-party libraries.
- B. Prevent data exposure queries.
- C. Obfuscate the source code.
- D. Submit the application to QA before releasing it.

Correct Answer: D Section: (none) Explanation



Explanation/Reference:

QUESTION 51 A cybersecurity analyst needs to implement secure authentication to third-party websites without users' passwords. Which of the following would be the BEST way to achieve this objective?

- A. OAuth
- B. SSO
- C. SAML
- D. PAP

Correct Answer: C Section: (none) Explanation

Explanation/Reference:

QUESTION 52 An analyst needs to identify the applications a user was running and the files that were open before the user's computer was shut off by holding down the power button. Which of the following would MOST likely contain that information?

- A. NGFW
- B. Pagefile
- C. NetFlow



D. RAM

Correct Answer: C Section: (none) Explanation

Explanation/Reference:

QUESTION 53

A remote user recently took a two-week vacation abroad and brought along a corporate-owned laptop. Upon returning to work, the user has been unable to connect the laptop to the VPN. Which of the following is the MOST likely reason for the user's inability to connect the laptop to the VPN?

- A. Due to foreign travel, the user's laptop was isolated from the network.
- B. The user's laptop was quarantined because it missed the latest path update.
- C. The VPN client was blacklisted.
- D. The user's account was put on a legal hold.

Correct Answer: A Section: (none) Explanation

Explanation/Reference:

QUESTION 54 In which of the following common use cases would steganography be employed?

- A. Obfuscation
- B. Integrity
- C. Non-repudiation
- D. Blockchain

Correct Answer: A Section: (none) **Explanation**

Explanation/Reference:

QUESTION 55

To secure an application after a large data breach, an e-commerce site will be resetting all users' credentials. Which of the following will BEST ensure the site's users are not compromised after the reset?

- A. A password reuse policy
- B. Account lockout after three failed attempts
- C. Encrypted credentials in transit
- D. A geofencing policy based on login history

Correct Answer: C Section: (none) **Explanation**

Explanation/Reference:

QUESTION 56 In which of the following risk management strategies would cybersecurity insurance be used?

- A. Transference
- B. Avoidance





D. Mitigation

Correct Answer: A Section: (none) Explanation

Explanation/Reference:

QUESTION 57

An organization has implemented a policy requiring the use of conductive metal lockboxes for personal electronic devices outside of a secure research lab. Which of the following did the organization determine to be the GREATEST risk to intellectual property when creating this policy?

- A. The theft of portable electronic devices
- B. Geotagging in the metadata of images
- C. Bluesnarfing of mobile devices
- D. Data exfiltration over a mobile hotspot

Correct Answer: D Section: (none) Explanation

Explanation/Reference:

QUESTION 58 A security analyst is using a recently released security advisory to review historical logs, looking for the specific activity that was outlined in the advisory. Which of the following is the analyst doing?

- A. A packet capture
- B. A user behavior analysis
- C. Threat hunting
- D. Credentialed vulnerability scanning

Correct Answer: C Section: (none) Explanation

Explanation/Reference:

QUESTION 59

Which of the following would MOST likely support the integrity of a voting machine?

- A. Asymmetric encryption
- B. Blockchain
- C. Transport Layer Security
- D. Perfect forward secrecy

Correct Answer: D Section: (none) Explanation

Explanation/Reference:

QUESTION 60 A Chief Information Security Officer (CISO) needs to create a policy set that meets international standards for data privacy and sharing. Which of the following should the CISO read and understand before writing the policies?





A. PCI DSS

B. GDPR

C. NIST

D. ISO 31000

Correct Answer: B Section: (none) **Explanation**

Explanation/Reference:

QUESTION 61 The IT department at a university is concerned about professors placing servers on the university network in an attempt to bypass security controls. Which of the following BEST represents this type of threat?

A. A script kiddie

B. Shadow IT

C. Hacktivism

D. White-hat

Correct Answer: B Section: (none) **Explanation**

Explanation/Reference:

QUESTION 62 A commercial cyber-threat intelligence organization observes IoCs across a variety of unrelated customers. Prior to releasing specific threat intelligence to other paid subscribers, the organization is MOST likely obligated by contracts to: CEplus

A. perform attribution to specific APTs and nation-state actors.

B. anonymize any PII that is observed within the IoC data.

C. add metadata to track the utilization of threat intelligence reports.

D. assist companies with impact assessments based on the observed data.

Correct Answer: B Section: (none) **Explanation**

Explanation/Reference:

QUESTION 63

While checking logs, a security engineer notices a number of end users suddenly downloading files with the .tar.gz extension. Closer examination of the files reveals they are PE32 files. The end users state they did not initiate any of the downloads. Further investigation reveals the end users all clicked on an external email containing an infected MHT file with an href link a week prior. Which of the following is MOST likely occurring?

- A. A RAT was installed and is transferring additional exploit tools.
- B. The workstations are beaconing to a command-and-control server.
- C. A logic bomb was executed and is responsible for the data transfers.
- D. A fireless virus is spreading in the local network environment.

Correct Answer: A Section: (none) **Explanation**

Explanation/Reference:

QUESTION 64 An organization is developing a plan in the event of a complete loss of critical systems and data. Which of the following plans is the organization MOST likely developing?



Α.	Incid	ent	resp	onse
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B. Communications

C. Disaster recovery

D. Data retention

Correct Answer: C Section: (none) Explanation

Explanation/Reference:

QUESTION 65 Which of the following is the purpose of a risk register?

A. To define the level or risk using probability and likelihood

B. To register the risk with the required regulatory agencies

C. To identify the risk, the risk owner, and the risk measures

D. To formally log the type of risk mitigation strategy the organization is using

Correct Answer: C Section: (none) Explanation

Explanation/Reference:

QUESTION 66

A university with remote campuses, which all use different service providers, loses Internet connectivity across all locations. After a few minutes, Internet and VoIP services are restored, only to go offline again at random intervals, typically within four minutes of services being restored. Outages continue throughout the day, impacting all inbound and outbound connections and services. Services that are limited to the local LAN or WiFi network are not impacted, but all WAN and VoIP services are affected.

Later that day, the edge-router manufacturer releases a CVE outlining the ability of an attacker to exploit the SIP protocol handling on devices, leading to resource exhaustion and system reloads. Which of the following BEST describe this type of attack? (Choose two.)

A. DoS

B. SSL stripping

C. Memory leak

D. Race condition

E. Shimming

F. Refactoring

Correct Answer: AD Section: (none) Explanation

Explanation/Reference:

QUESTION 67

A company recently set up an e-commerce portal to sell its product online. The company wants to start accepting credit cards for payment, which requires compliance with a security standard. Which of the following standards must the company comply with before accepting credit cards on its e-commerce platform?

A. PCI DSS

B. ISO 22301

C. ISO 27001

D. NIST CSF



Correct Answer:	A
Section: (none)	
Explanation	

Explanation/Reference:

QUESTION 68

Which of the following BEST describes a security exploit for which a vendor patch is not readily available?

- A. Integer overflow
- B. Zero-day
- C. End of life
- D. Race condition

Correct Answer: B Section: (none) Explanation

Explanation/Reference:

QUESTION 69

The Chief Financial Officer (CFO) of an insurance company received an email from Ann, the company's Chief Executive Officer (CEO), requesting a transfer of \$10,000 to an account. The email states Ann is on vacation and has lost her purse, containing cash and credit cards. Which of the following social-engineering techniques is the attacker using?

- A. Phishing
- B. Whaling
- C. Typo squatting
- D. Pharming

Correct Answer: B Section: (none) Explanation



Explanation/Reference:

QUESTION 70

An organization wants to implement a third factor to an existing multifactor authentication. The organization already uses a smart card and password. Which of the following would meet the organization's needs for a third factor?

- A. Date of birth
- B. Fingerprints
- C. PIN
- D. TPM

Correct Answer: B Section: (none) Explanation

Explanation/Reference:

QUESTION 71 An employee has been charged with fraud and is suspected of using corporate assets. As authorities collect evidence, and to preserve the admissibility of the evidence, which of the following forensic techniques should be used?

- A. Order of volatility
- B. Data recovery
- C. Chain of custody
- D. Non-repudiation



Correct Answer: C Section: (none) Explanation

Explanation/Reference:

QUESTION 72

A company wants to deploy PKI on its Internet-facing website. The applications that are currently deployed are:

- www.company.com (main website)
- contactus.company.com (for locating a nearby location)
 quotes.company.com (for requesting a price quote)

The company wants to purchase one SSL certificate that will work for all the existing applications and any future applications that follow the same naming conventions, such as store.company.com. Which of the following certificate types would BEST meet the requirements?

A. SAN

B. Wildcard

C. Extended validation

D. Self-signed

Correct Answer: B Section: (none) Explanation

Explanation/Reference:

QUESTION 73

A Chief Security Officer (CSO) is concerned about the amount of PII that is stored locally on each salesperson's laptop. The sales department has a higher-than-average rate of lost equipment. Which of the following recommendations would BEST address the CSO's concern?

A. Deploy an MDM solution.

B. Implement managed FDE.

C. Replace all hard drives with SEDs.

D. Install DLP agents on each laptop.

Correct Answer: B Section: (none) Explanation

Explanation/Reference:

QUESTION 74 A user contacts the help desk to report the following:

- Two days ago, a pop-up browser window prompted the user for a name and password after connecting to the corporate wireless SSID. This had never happened before, but the user entered the information as requested.
- The user was able to access the Internet but had trouble accessing the department share until the next day. The user is now getting notifications from the bank about unauthorized transactions.

Which of the following attack vectors was MOST likely used in this scenario?

A. Rogue access point

B. Evil twin

C. DNS poisoning

D. ARP poisoning

Correct Answer: A



Section: (none) Explanation

Explanation/Reference:

QUESTION 75

A host was infected with malware. During the incident response, Joe, a user, reported that he did not receive any emails with links, but he had been browsing the Internet all day. Which of the following would MOST likely show where the malware originated?

- A. The DNS logs
- B. The web server logs
- C. The SIP traffic logs
- D. The SNMP logs

Correct Answer: A Section: (none) Explanation

Explanation/Reference:

QUESTION 76

A recently discovered zero-day exploit utilizes an unknown vulnerability in the SMB network protocol to rapidly infect computers. Once infected, computers are encrypted and held for ransom. Which of the following would BEST prevent this attack from reoccurring?

- A. Configure the perimeter firewall to deny inbound external connections to SMB ports.
- B. Ensure endpoint detection and response systems are alerting on suspicious SMB connections.
- C. Deny unauthenticated users access to shared network folders.
- D. Verify computers are set to install monthly operating system, updates automatically.

Correct Answer: A Section: (none) Explanation



Explanation/Reference:

QUESTION 77

Joe, an employee, receives an email stating he won the lottery. The email includes a link that requests a name, mobile phone number, address, and date of birth be provided to confirm Joe's identity before sending him the prize. Which of the following BEST describes this type of email?

- A. Spear phishing
- B. Whaling
- C. Phishing
- D. Vishing

Correct Answer: C Section: (none) Explanation

Explanation/Reference:

QUESTION 78

Which of the following refers to applications and systems that are used within an organization without consent or approval?

- A. Shadow IT
- B. OSINT



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D. Insider threats

Correct Answer: A Section: (none) Explanation

Explanation/Reference:

QUESTION 79

A manufacturer creates designs for very high security products that are required to be protected and controlled by the government regulations. These designs are not accessible by corporate networks or the Internet. Which of the following is the BEST solution to protect these designs?

A. An air gap

B. A Faraday cage

C. A shielded cable

D. A demilitarized zone

Correct Answer: A Section: (none) Explanation

Explanation/Reference:

QUESTION 80 A company processes highly sensitive data and senior management wants to protect the sensitive data by utilizing classification labels. Which of the following access control schemes would be BEST for the company to implement?

A. Discretionary

B. Rule-basedC. Role-based

D. Mandatory

Correct Answer: D Section: (none) Explanation

Explanation/Reference:

QUESTION 81

Which of the following policies would help an organization identify and mitigate potential single points of failure in the company's IT/security operations?

- A. Least privilege
- B. Awareness training
- C. Separation of duties
- D. Mandatory vacation

Correct Answer: C Section: (none) Explanation

Explanation/Reference:

QUESTION 82 Which of the following would be the BEST method for creating a detailed diagram of wireless access points and hotspots?

- A. Footprinting
- B. White-box testing
- C. A drone/UAV





D. Pivoting

Correct Answer: A Section: (none) Explanation

Explanation/Reference:

