

CompTIA

CS0-001 Exam

CompTIA Cybersecurity Analyst Exam

Questions & Answers

Demo

Version: 23.1

Question: 1

The developers recently deployed new code to three web servers. A daily automated external device scan report shows server vulnerabilities that are failing items according to PCI DSS.

If the vulnerability is not valid, the analyst must take the proper steps to get the scan clean.

If the vulnerability is valid, the analyst must remediate the finding.

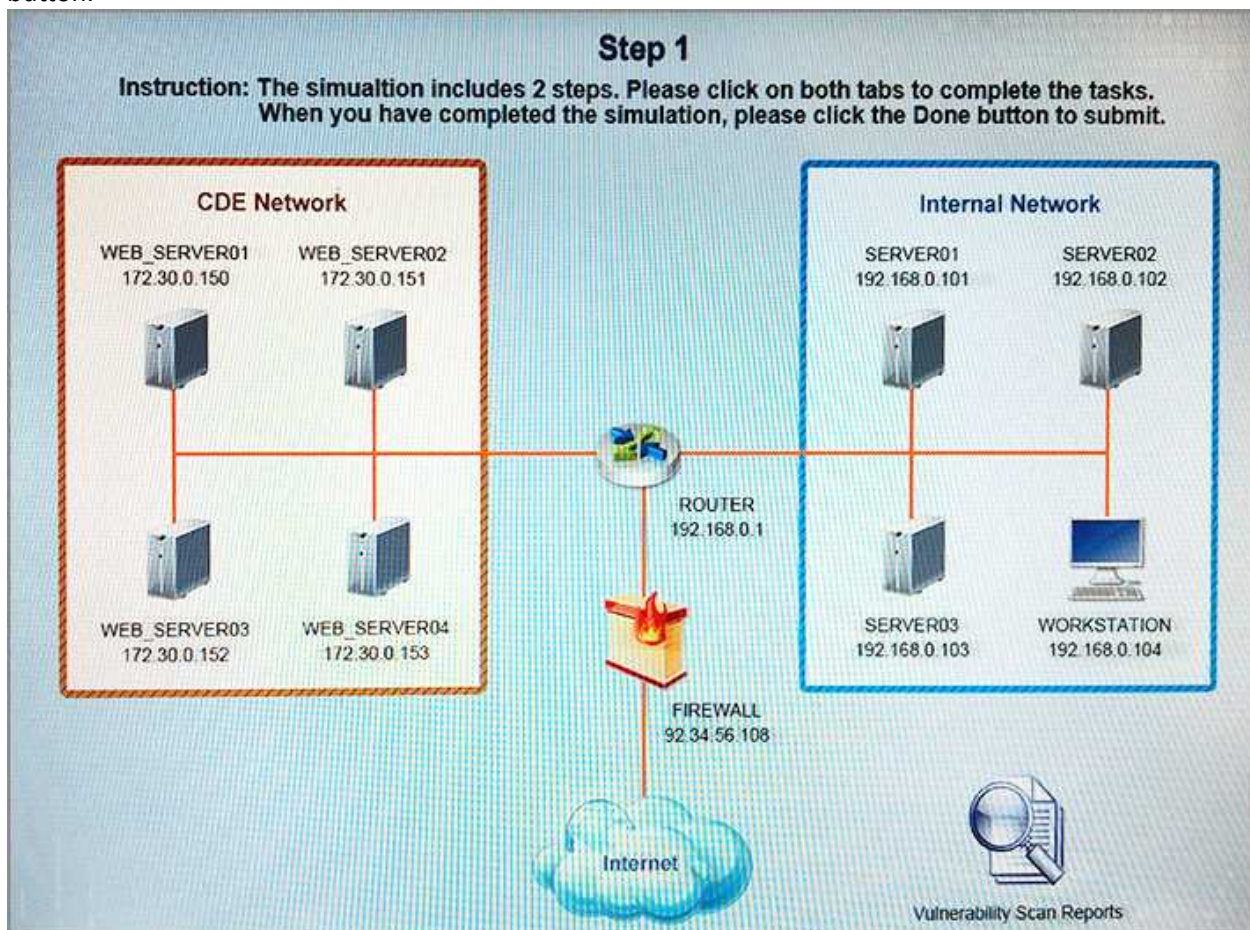
After reviewing the information provided in the network diagram, select the STEP 2 tab to complete the simulation by selecting the correct Validation Result and Remediation Action for each server listed using the drop-down options.

Instructions

STEP 1: Review the information provided in the network diagram.

STEP 2: Given the scenario, determine which remediation action is required to address the vulnerability.

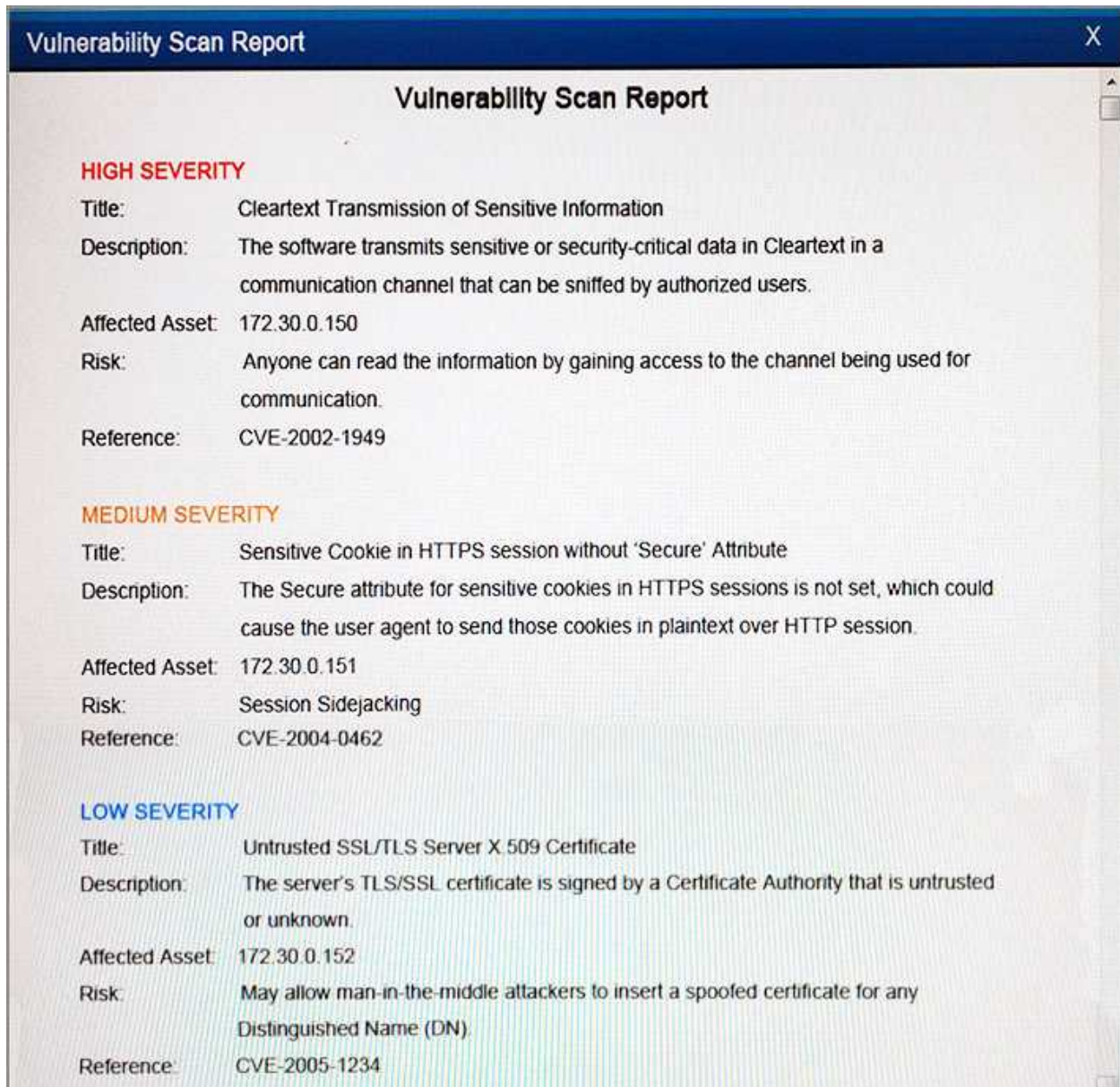
If at any time you would like to bring back the initial state of the simulation, please select the Reset All button.



Step 2

Given the scenario, determine which remediation action is required to address the vulnerabilities.

System	Validate Result	Remediation Action
WEB_SERVER01	<div style="border: 1px solid black; padding: 5px;"> <div style="text-align: right; border-bottom: 1px solid black;">▼</div> False Positive False Negative True Negative True Positive </div>	<div style="border: 1px solid black; padding: 5px;"> <div style="text-align: right; border-bottom: 1px solid black;">▼</div> Encrypt entire session Encrypt all session cookies Implement input validation Submit as non-issue Employ unique token in hidden field Avoid using redirects and forwards Disable http Request certificate from a public CA Renew the current certificate </div>
WEB_SERVER02	<div style="border: 1px solid black; padding: 5px;"> <div style="text-align: right; border-bottom: 1px solid black;">▼</div> False Positive False Negative True Negative True Positive </div>	<div style="border: 1px solid black; padding: 5px;"> <div style="text-align: right; border-bottom: 1px solid black;">▼</div> Encrypt entire session Encrypt all session cookies Implement input validation Submit as non-issue Employ unique token in hidden field Avoid using redirects and forwards Disable http Request certificate from a public CA Renew the current certificate </div>
WEB_SERVER03	<div style="border: 1px solid black; padding: 5px;"> <div style="text-align: right; border-bottom: 1px solid black;">▼</div> False Positive False Negative True Negative True Positive </div>	<div style="border: 1px solid black; padding: 5px;"> <div style="text-align: right; border-bottom: 1px solid black;">▼</div> Encrypt entire session Encrypt all session cookies Implement input validation Submit as non-issue Employ unique token in hidden field Avoid using redirects and forwards Disable http Request certificate from a public CA Renew the current certificate </div>



Vulnerability Scan Report

Vulnerability Scan Report

HIGH SEVERITY

Title: Cleartext Transmission of Sensitive Information

Description: The software transmits sensitive or security-critical data in Cleartext in a communication channel that can be sniffed by authorized users.

Affected Asset: 172.30.0.150

Risk: Anyone can read the information by gaining access to the channel being used for communication.

Reference: CVE-2002-1949

MEDIUM SEVERITY

Title: Sensitive Cookie in HTTPS session without 'Secure' Attribute

Description: The Secure attribute for sensitive cookies in HTTPS sessions is not set, which could cause the user agent to send those cookies in plaintext over HTTP session.

Affected Asset: 172.30.0.151

Risk: Session Sidejacking

Reference: CVE-2004-0462

LOW SEVERITY

Title: Untrusted SSL/TLS Server X.509 Certificate

Description: The server's TLS/SSL certificate is signed by a Certificate Authority that is untrusted or unknown.

Affected Asset: 172.30.0.152

Risk: May allow man-in-the-middle attackers to insert a spoofed certificate for any Distinguished Name (DN).

Reference: CVE-2005-1234

WEB_SERVER01Logs X

While logged in to the web portal (172.30.0.150) from the workstation (192.168.0.104) you perform an account password change. This process requires you to reenter the original password and enter a new password twice.

```
192.168.0.104 172.30.0.151 TLSv1 733 Application Data
172.30.0.151 192.168.0.104 TLSv1 1107 Application Data
192.168.0.104 172.30.0.151 TCP 66 44088 > https [ACK] Seq=1510 Ack=12723 Win=42368
192.168.0.104 172.30.0.150 HTTP 608 GET /verifpwd.learn?URL=AV5FPSHV2Ereal&SSL=83n28x
172.30.0.151 192.168.0.104 TCP 66 http > 60928 [ACK] Seq=622 Ack=847 Win=5154 Len=...
```

Frame: 4021: 114 bytes on wire (912 bits), 114 bytes captured (912 bits) on interface 0

Ethernet II, Src: Vmware 00:03:22 (00:50:56:00:03:22), Dst: PaloAlto_39:1c:30 (00:1b:17:39:1c:30)

Internet Protocol Version 4, Src: 192.168.0.104 (192.168.0.104), Dst: 172.30.0.150 (172.30.0.150)

[2 Reassembled TCP Segments (1496 bytes): #4820(1448), #4821(48)]

Hypertext Transfer Protocol

```
GET /verifpwd.learn?URL=AV5FPSHV2Ereal&SSL=83n28x
Host: XXXXX\r\n
User-Agent: Mozilla/5.0 (x11; Linux x86_64; rv:18.0) Gecko/20100101 Firefox/18.0 Iceweasel/18.0.1\r\n
Accept: text/html,application/xhtml+xml,application/xml;q=0.9,*/*;q=0\r\n
Accept-Language: en=US,en;q=0.5\r\n
Accept-Encoding: gzip, deflate\r\n
Referer: http://XXXX/Shared/Portal/CustomProfiles/A_Profile.real\r\n
[truncated] Cookie: ASPSESSIONIDQABRBT BC=HEJCAHEDJPK08CEP; ZZZ; ECUSERPROPS=
Connection: keep alive\r\n
Content-Type: application/x-www-form-urlencoded\r\n
Content-Length: 121\r\n
\r\n
[Full request URI: http://XXX/Shared/Portal/CustomProfiles/PostProfile.real?47=25378158]
```

Line-based text data: application/x-www-form-urlencoded

```
EMAIL=someone@cloud.org m&PASSold=PassWord1 m&PASSnew1=PassWord2 m&PASSnewv=PassWord2
```

Name	Value	Domain	Expires / Max Age	Http	Secure
_utma	250288278.1028202552.1383963...	yourcompany.com	...	Thu, 05 Nov 2015 23:21:28 GMT	...		x
_utmb	250288278.2.10.1383693377	yourcompany.com	...	Tue, 05 Nov 2013 23:51:28 GMT	...		x
_utmc	250288278	yourcompany.com	...	Session	...		x
_utmz	250288278.1383693377.1.1.utmcs	yourcompany.com	...	Thu, 08 May 2014 11:21:28 GMT	...		x

WEB_SERVER03Logs

[TBD]Service Provider Certificate Info

General Details Certification Path

Certificate Information

This CA Root certificate is not trusted. To enable trust, install this certificate in the Trusted Root Certification Authorities store.

Issued to: PenTestLLC

Issued by: PenTestLLC

Valid from 22/07/2014 to 22/07/2024

Install Certificate... Issuer Statement

Learn more about [certificates](#)

Solution

WEB_SERVER01: VALID – IMPLEMENT SSL/TLS

WEB_SERVER02: VALID – SET SECURE ATTRIBUTE WHEN COOKIE SHOULD SENT VIA HTTPS ONLY

WEB_SERVER03: VALID – IMPLEMENT CA SIGNED CERTIFICATE

Question: 2

HOTSPOT

A security analyst suspects that a workstation may be beaconing to a command and control server. Inspect the logs from the company's web proxy server and the firewall to determine the best course of action to take in order to neutralize the threat with minimum impact to the organization.

Instructions:

Modify the firewall ACL, using the Firewall ACL form to mitigate the issue.

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

Network Diagram

Firewall Access Control List Rule

Action	Protocol	Source IP	Source Port	Dest IP	Dest Port
Deny	TCP	192.168.1.4	Any	101.23.45.78	80
Permit	UDP	192.168.1.5	51987	198.134.5.6	443
		192.168.1.6	42123	2.63.25.201	8080
		192.168.1.7	3456	200.23.43.55	
		192.168.1.8	6580	23.33.56.102	
		192.168.1.10	9870	32.4.5.89	
			11234	34.29.0.45	
			34213	4.5.77.1	
			11345	45.32.4.66	
			9865	67.8.9.221	
			8765	67.8.9.223	
			2318	67.8.9.224	
			7865	67.80.90.1	
			12122	67.89.227.221	
			6699	67.89.227.246	
			7999	69.2.45.10	
			1675	69.58.188.49	
			7658	85.10.211.94	
			2344		
			4537		
			12356		
			9087		

Web Logs

Time	SIP	Sport	DIP	Dport	Request Code	URL
12:01:00	192.168.1.4	2344	67.89.227.246	443	GET	company.cn
12:01:01	192.168.1.5	7658	67.89.227.221	443	GET	google.ru
12:01:02	192.168.1.7	9087	85.10.211.94	80	GET	provider.il
12:01:03	192.168.1.6	3456	2.63.25.201	80	POST	bqtest2.ru
12:01:04	192.168.1.8	12356	69.58.188.49	80	POST	testsite.jp
12:01:05	192.168.1.5	42123	198.134.5.6	443	POST	network.org
12:01:06	192.168.1.4	2318	4.5.77.1	443	GET	mynews.com
12:01:07	192.168.1.8	9865	32.4.5.89	80	GET	catala.com
12:01:08	192.168.1.6	9870	2.63.25.201	80	POST	bqtest2.ru
12:01:09	192.168.1.8	4537	69.2.45.10	80	POST	lillte.cn
12:01:10	192.168.1.5	7865	45.32.4.66	80	POST	portal.co.jp
12:01:11	192.168.1.6	51987	101.23.45.78	443	POST	malware.com
12:01:12	192.168.1.5	34213	200.23.43.55	443	GET	vortex.net
12:01:13	192.168.1.6	11234	2.63.25.201	80	POST	bqtest2.ru
12:01:14	192.168.1.6	8765	34.29.0.45	80	GET	colocation.com
12:01:15	192.168.1.4	1675	67.80.90.1	443	GET	johnson.com
12:01:16	192.168.1.7	11345	23.33.56.102	80	POST	college.edu
12:01:17	192.168.1.7	12122	67.8.9.221	443	GET	lalala.gov
12:01:18	192.168.1.6	6580	2.63.25.201	80	POST	bqtest2.ru
12:01:19	192.168.1.7	6699	67.8.9.223	80	POST	mystuff.ac.jp
12:01:20	192.168.1.5	7999	67.8.9.224	8080	GET	erdas.com

Firewall Logs

Action	Time	SIP	Sport	DIP	Dport
PERMIT	12:01:00	192.168.1.10	2344	67.89.227.246	443
DENY	12:01:01	192.168.1.10	7658	67.89.227.221	443
PERMIT	12:01:02	192.168.1.10	9087	85.10.211.94	80
PERMIT	12:01:03	192.168.1.10	3456	2.63.25.201	80
PERMIT	12:01:04	192.168.1.10	12356	69.58.188.49	80
PERMIT	12:01:05	192.168.1.10	42123	198.134.5.6	443
PERMIT	12:01:06	192.168.1.10	2318	4.5.77.1	443
PERMIT	12:01:07	192.168.1.10	9865	32.4.5.89	80
PERMIT	12:01:08	192.168.1.10	9870	2.63.25.201	80
PERMIT	12:01:09	192.168.1.10	4537	69.2.45.10	80
DENY	12:01:10	192.168.1.10	7865	45.32.4.66	80
PERMIT	12:01:11	192.168.1.10	51987	101.23.45.78	443
PERMIT	12:01:12	192.168.1.10	34213	200.23.43.55	443
PERMIT	12:01:13	192.168.1.10	11234	2.63.25.201	80
PERMIT	12:01:14	192.168.1.10	8765	34.29.0.45	80
PERMIT	12:01:15	192.168.1.10	1675	67.80.90.1	443
PERMIT	12:01:16	192.168.1.10	11345	23.33.56.102	80
PERMIT	12:01:17	192.168.1.10	12122	67.8.9.221	443
PERMIT	12:01:18	192.168.1.10	6580	2.63.25.201	80
PERMIT	12:01:19	192.168.1.10	6699	67.8.9.223	80
DENY	12:01:20	192.168.1.10	7999	67.8.9.224	8080

Deny TCP 192.168.1.6 Any 2.63.25.201 80

Question: 3

Which of the following BEST describes the offensive participants in a tabletop exercise?

- A. Red team
- B. Blue team
- C. System administrators
- D. Security analysts
- E. Operations team

Answer: A

Question: 4

After analyzing and correlating activity from multiple sensors, the security analyst has determined a group from a high-risk country is responsible for a sophisticated breach of the company network and continuous administration of targeted attacks for the past three months. Until now, the attacks went unnoticed. This is an example of:

- A. privilege escalation.
- B. advanced persistent threat.
- C. malicious insider threat.
- D. spear phishing.

Answer: B

Question: 5

A system administrator who was using an account with elevated privileges deleted a large amount of log files generated by a virtual hypervisor in order to free up disk space. These log files are needed by the security team to analyze the health of the virtual machines. Which of the following compensating controls would help prevent this from reoccurring? (Select two.)

- A. Succession planning
- B. Separation of duties
- C. Mandatory vacation
- D. Personnel training
- E. Job rotation

Answer: B,D

Question: 6

Which of the following best practices is used to identify areas in the network that may be vulnerable to penetration testing from known external sources?

- A. Blue team training exercises
- B. Technical control reviews
- C. White team training exercises
- D. Operational control reviews

Answer: A

Question: 7

A cybersecurity analyst is reviewing log data and sees the output below:

```
POST:// payload.php HTTP/1.1
HOST: localhost
Accept: */*
Referrer: http://localhost
*****
HTTP /1.1 403 Forbidden
connection : close
```

Which of the following technologies MOST likely generated this log?

- A. Stateful inspection firewall
- B. Network-based intrusion detection system
- C. Web application firewall
- D. Host-based intrusion detection system

Answer: C

Question: 8

A security analyst is reviewing a report from the networking department that describes an increase in network utilization, which is causing network performance issues on some systems. A top talkers report over a five-minute sample is included.

Source	Destination	Application	Packets	Volume (Kbps)
8.4.4.100	172.16.1.25	SMTP	4386	6141
96.23.114.14	172.16.1.1	IPSec	7734	10827
172.16.1.101	100.15.25.34	HTTP	3412	4776
96.23.114.18	172.16.1.1	IPSec	2723	3812
172.16.1.101	100.15.25.34	SSL	8697	12176
172.16.1.222	203.67.121.12	Quicktime	1302	1822
172.16.1.197	113.121.12.15	8180/tcp	6045	8463
172.16.1.131	172.16.1.67	DHCP	25	35
172.16.1.25	172.16.1.53	DNS	66	93

Given the above output of the sample, which of the following should the security analyst accomplish FIRST to help track down the performance issues?

- A. Perform reverse lookups on each of the IP addresses listed to help determine if the traffic is necessary.
- B. Recommend that networking block the unneeded protocols such as Quicktime to clear up some of the congestion.
- C. Put ACLs in place to restrict traffic destined for random or non-default application ports.
- D. Quarantine the top talker on the network and begin to investigate any potential threats caused by the excessive traffic.

Answer: A

Question: 9

A security analyst received a compromised workstation. The workstation's hard drive may contain evidence of criminal activities. Which of the following is the FIRST thing the analyst must do to ensure the integrity of the hard drive while performing the analysis?

- A. Make a copy of the hard drive.
- B. Use write blockers.
- C. Run `rm -R` command to create a hash.
- D. Install it on a different machine and explore the content.

Answer: B

Question: 10

File integrity monitoring states the following files have been changed without a written request or approved change. The following change has been made:

```
chmod 777 -Rv /usr
```

Which of the following may be occurring?

- A. The ownership of `/usr` has been changed to the current user.
- B. Administrative functions have been locked from users.
- C. Administrative commands have been made world readable/writable.
- D. The ownership of `/usr` has been changed to the root user.

Answer: C
