

Configuration Manual

MSc Research Project MSc in Cybersecurity

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MSc Project Submission Sheet

School of Computing

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Programme:	MSc in Cybersecurity Year:2022-2023
Module:	MSc Research Project
Lecturer:	Arghir Nicolae Moldova
Due Date:	
Project Title:	Client-side Evil-Twin access point detection using beacon-frame delay and wireless network parameter deviation

I hereby certify that the information contained in this (my submission) is information pertaining to research I conducted for this project. All information other than my own contribution will be fully referenced and listed in the relevant bibliography section at the rear of the project.

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Signature: ...Abhinav Wakhloo.....

Date: ...1/2/2023.....

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Configuration Manual

Abhinav Wakhloo Student ID: x21156956

1 Introduction

This configuration manual articulates the methodology and the implementation of the proposed setup illustrated in the thesis by providing comprehensive information on installing the required software tools and dependencies and configuring the dependent hardware. The proposed model includes various wireless adapters and security and social engineering tools. This manual serves as a guide to help prepare the various adapters and provides the required commands and steps to initialize, install, and use the various tools.

2 System Configuration

The setup requires a Debian-based Linux distribution running as a virtual machine on top of the base host machine. The virtualization software used is Parallels Desktop 17.

MI MacBook Pro
8-core CPU with 4 performance cores and 4 efficiency cores
ARM-64
Ventura 13.0.1
8 GB

Virtual Machine	Kali Linux
Processor	2-core CPU
System Architecture	ARM-64
Operating System	Kali 2022.4
RAM	2 GB

3 Installation and Setup

3.1 Checking the Adapter compatibility:

• First, issue the command sudo su to get root privileges.

sudo su

```
(parallels@kali-linux-2021-3)-[~]
$ sudo su
[sudo] password for parallels:
   (root@kali-linux-2021-3)-[/home/parallels]
```

• To check the compatibility of the wireless adapters, we must first check whether they are detected in Kali Linux. To check the same, we must first issue the command.

iwconfig



• If the adapter is not detected in iwconfig, we can check whether it is connected and detected by Kali Linux by issuing the command.

lsusb

r+	(para	allels®	kali-	-li	nux-2021-3	D-[~] / SSID='VODAFONE-9570' / Dot11EltRates / Dot11EltDSSSet / Dot11Elt / D
L-\$	lsus					
Bus	003	Device	015:	ID	203a:fff9	PARALLELS Stormtrooper Camera
Bus	003	Device	005:	ID	203a:fff9	PARALLELS FaceTime HD Camera
Bus	003	Device	004:	ID	0bda:8153	Realtek Semiconductor Corp. RTL8153 Gigabit Ethernet Adapter
Bus	003	Device	003:	ID	203a:fffb	PARALLELS Virtual Keyboard Data discussion of the CRA-DATA Doct 1000
Bus	003	Device	002:	ID	203a:fffc	PARALLELS Virtual Mouse and a second decide decide decide de la decide de la decide de la decide de la decide de
Bus	003	Device	001:	ID	1d6b:0003	Linux Foundation 3.0 root hub / Doch EltRates / Doth EltRates / Doth EltRates
Büs	002	Device	001:	ID	1d6b:0002	Linux Foundation 2.0 root hub to specific
Bus	001	Device	003:	ID	291a:8338	Anker / SSID= VODAFONE Anker USB-C Hub Device DottlebtDSSSEC DottlebtDS
Bus	001	Device	004:	ID	0bda:8812	Realtek Semiconductor Corp. RTL8812AU 802.11a/b/g/n/ac 2T2R DB WLAN Adapter
Bus	001	Device	002:	ID	2357:0109	TP-Link TL-WN823N v2/v3 [Realtek RTL8192EU]
Bus	001	Device	001:	ID	1d6b:0002	Linux Foundation 2.0 root hub a Docubele Rates / Docubele Docubele

• We can then check the various modes supported by the adapter by running the following command,



iw list | grep "Supported interface modes" -A 8

• To create an Evil-Twin access point, the Monitor and AP mode must be supported by the adapters.

• If all modes are not supported, or the adapter is not detected, then the adapter is either incompatible or is not running the appropriate driver.

3.2 Preparing the Adapters:

TP-Link TL-WN8223N:

- The adapter is detected by default in Kali Linux, and the default driver supports Monitor and Managed modes.
- With the default driver, the adapter cannot create an Access Point. To fix this, the driver must be updated to rtl8192eu-linux-driver.
- To update the adapter's driver, issue the following commands,
 - 1. Install the required tools.

sudo apt-get install git linux-headers-generic build-essential
dkms

2. Clone the repository rtl8192eu-linux-driver from Github.

git clone https://github.com/Mange/rtl8192eu-linux-driver

3. Change the current directory to the cloned directory

cd rtl8192eu-linux-driver

- 4. Update the Makefile by changing the following values (Note: the system used is an M1 MacBook Pro which is ARM-based).
- •••

 $CONFIG_PLATFORM_I386_PC = n$

```
CONFIG_PLATFORM_ARM_AARCH64 = y
```

5. To add the cloned driver to DKMS, issue the following command.

sudo dkms add .

6. The next step is to build and install the driver with the following command.

sudo dkms install rtl8192eu/1.0

7. We must blacklist the default driver to run the new one.

echo "blacklist rtl8xxxu" | sudo tee
/etc/modprobe.d/rtl8xxxu.conf

8. We also must force the adapter to boot with the new driver.

echo -e "8192eu\n\nloop" | sudo tee /etc/modules

9. To avoid any plugin issues with any of the distributions, run the following command

echo "options 8192eu rtw_power_mgnt=0 rtw_enusbss=0" | sudo tee
/etc/modprobe.d/8192eu.conf

10. Update the changes implemented

sudo update-grub; sudo update-initramfs -u

11. Reboot to load the implemented changes.

systemctl reboot -i

12. To check whether the kernel has loaded the correct module.

sudo lshw -c network

13. To revert and uninstall the new driver, use the following command.

sudo dkms uninstall rtl8192eu/1.0

• After the driver is installed, the device will also be able to create an AP, whereas, with the default driver, the adapter can only retrieve the WPA handshake.



Alfa -AWUS036ACH adapter:

• The Alfa adapter does not get detected by Kali Linux by default. (Note: this is the case if the adapter is a dual band).



- However, it is being detected by Kali Linux under the lsusb command.
- To fix this, the adapter's driver must be updated to rtl8812au.
- Follow the following commands to update the driver.

```
sudo apt update
sudo apt upgrade -y
sudo apt dist-upgrade -y
sudo reboot now
sudo apt update
sudo apt install realtek-rtl88xxau-dkms
sudo apt install dkms
git clone <u>https://github.com/aircrack-ng/rtl8812au</u>
cd rtl8812au/
make
sudo make install
lsusb
iwconfig
```



• After Flashing the adapter, all modes are available and can be used with tools.

Supported interface modes: * IBSS * managed * AP * monitor * P2P-client * P2P-G0 Note: If it does not show in iwconfig, disconnect the adapter, reconnect it, and then it will show.

Hak5 Pineapple Tetra:

Steps for initial setup of Wi-Fi Pineapple Tetra:

- Connect the Y-USB cable from the laptop to the ETH port of the Pineapple Tetra.
- At the initial boot of the adapter, the orange status led can be seen, followed by the blue led. The blue led will remain constantly on, indicating the device is booted.
- From the terminal issue, the following command is to see the adapter's status.

\$ifconfig

```
eth4: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
inet6 fe80::49f8:a1b7:41ce:b633 prefixlen 64 scopeid 0×20<link>
ether 00:13:37:a6:c0:0a txqueuelen 1000 (Ethernet)
RX packets 0 bytes 0 (0.0 B)
RX errors 0 dropped 0 overruns 0 frame 0
TX packets 33 bytes 4579 (4.4 KiB)
TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
```

• If the adapter does not show an IP address, manually add the ethernet adapter from the Kali Advance Network Setting option. Click on the '+' button from the bottom left corner, select ethernet, and then click on create.



• Test again with the ifconfig command to see the IP address. The default IP address range of the Pineapple Tetra is 172.16.42.x/24.



- Once the IP address is seen for the ethernet adapter, open the web browser.
- In the URL section, open http://172.16.42.1:1471 to access the GUI of the adapter. The default username is root, and the password is change_on_install for the initial setup.
 Hak5 WiFI Pineapple

Username:	root		
Password:	change_on_install		
	Login		

• If you cannot log in, you can reset the adapter to its default settings by pressing the reset button and holding it for about 10 seconds.



- After the device reboots, wait until the status led shows a constant blue light.
- Try logging into the GUI of the Pineapple Tetra, and you will be prompted to complete the initial setup.
- Set a new device password and other fields.

\leftarrow \rightarrow C \textcircled{a}	○ 👌 172.16.42.1:1471/#i/modules/Setup	☆	⊠ ≡
🔭 Kali Linux 🔒 Kali Tools 🛛 💆 Kali	Docs 🕱 Kali Forums Kali NetHunter 🔌 Exploit-DB 🔌 Google Hacking DB 🗍 OffSec		
WiFi Pineapple			
	Device Configuration		
	Set Root Password The root account is used for SSH and Web Interface access. Please set a strong password. Password:		

3.3 Preparing the wireless interfaces:

- Open terminal and run the command, sudo su (to get into root environment)
- Then run the following command, iwconfig(to check the mode of wireless interface)

• The wireless interface is initially in managed mode, as seen in the below screenshot.



- Then run the following command to check and kill any processes that might interfere with the aircrack-ng suite.
- The following command is used to confirm that the interface mode is changed,

airmon-ng check airmon-ng check kill



• The command iwconfig can be used to check the wireless mode as well,

Iwconfig



• To revert the mode to managed mode for the interface.

airmon-ng stop wlan0

[<mark>∦</mark> ai	<mark>ot⊗kali-l</mark> rmon-ng st	inux-2021-3)-[/home/para op wlan0	allels]; KB) 231231231.pcapng (700 KB)
PHY	Interfac	e Driver /home/parallels/testit	Chipset
phy1	wlan0	rtl8192eu (monitor mode disabled)	TP_Link_TL_WN823N v2/v3 [Realtek RTL8192EU]
phy2	wlan1	/iic88xxau attels/Desk	Realtek Semiconductor Corp. RTL8812AU 802.11a/b/g/n/ac 2T2R DB WLAN Adapter

• To restart the stopped services.

service networking restart
service NetworkManager restart



3.4 Installing and Running the Tools:

Airgeddon:

• We first need to clone the repository <u>airgeddon</u> from GitHub to install the tool.

git clone --depth 1 https://github.com/v1s1t0r1sh3r3/airgeddon.git

• First, issue the command sudo su to get root privileges.

sudo su

• Change the current directory to the cloned directory.

cd /airgeddon-master

• Run airgeddon.

./airgeddon.sh

Fluxion:

• We need to clone the repository <u>fluxion</u> from GitHub to install the tool.

git clone --depth 1 https://github.com/v1s1t0r1sh3r3/airgeddon.git

• First, issue the command sudo su to get root privileges.

sudo su

• Change the current directory to the cloned directory.

cd /fluxion-master

• Run fluxion.

./ fluxion.sh

Running the wireless auditing tools:

Airgeddon:

Choose the options from the menu as selected in the screenshots to run the tool.



File Actions Edit View Help	

Select an option from menu:	
0. Exit script 1. Select another network interface 2. Put interface in monitor mode 3. Put	
4. DoS attacks menu 5. Handshake/PMKID tools menu 6. Offline WPA/WPA2 decrypt menu 7. Evil Twin attacks menu 8. WPS attacks menu 9. WEP attacks menu 10. Enterprise attacks menu	
11. About & Credits / Sponsorship mentions 12. Options and language menu	
Hint* Select a wifi card to work in order to be able to do more actions than with an ethernet interface	
Retry:off RTS thr:off Fragment thr:off 2 Power Management:off Setting your interface in monitorimode Noise level:0 Retry:off Retry:off Retr	I
Monitor mode now is set on wlan1 Invalid misc:0 Missed beacon:0 Press [Enter] key to continue	





elect an option from menu:

- Return to main menu: Return to main menu Select another network interface Put interface in monaged mode Explore for targets (monitor mode needed) (without sniffing, just AP) Evil Twin attack just AP (with sniffing) Evil Twin AP attack with sniffing and bettercap-sslstrip2 Evil Twin AP attack with sniffing and bettercap-sslstrip2/BeEF (without sniffing, and bettercap-sslstrip2/BeEF (without sniffing, and bettercap-sslstrip2/BeEF (without sniffing, portal) Evil Twin AP attack with sniffing and bettercap-sslstrip2/BeEF

n exploration looking for targets is going to be done... ress [Enter] key to continue...

PA/WPA2/WPA3 filter enabled in scan. When started, press [Ctrl+C] to stop... ress [Enter] key to continue...

	root@kali-linux-2021-3: /home/parallels/Downloads	X			Expl	oring for	targets				(
File Actions Edit View Help		Cl. 0.1(5)	0 . 15 0000	. 40. 07	00-40						
		CH 9 JL Elapsed:	0 s j[2022	2-12-07	22:16						
Interface wlan1 selected. Mode: Monitor. Supported bands: 2.4		BSSID	PWR Beaco	ons I	Data, M	V∕s CH	MB E	ENC CIPHER	auth	ESSID	
Selected channel: 11		C8:D1:2A:95:ED:44 A0:2D:13:13:6F:1D	-38 -24	ហេត		1 6 0 1	130 k 130 k	JPA2 CCMP JPA2 CCMP	PSK PSK	VMP2945666 V0104E0NE-9570	
		F4:23:9C:B2:95:71	-22	7		0 1	195 k	JPA2 CCMP	PSK	VODAFONE-9570	
Select an option from menu:		AE:F8:CC:08:59:9D	-49	3		0 11	195 k	JPA2 CCMP	MGT	Horizon Wi-Free	
		BSSID	STATION		PUR	Rate	Lost	Frames	Notes	Probes	
0. Return to main menu (tensions. 1. Select another network interface		C8:D1:2A:95:ED:44	A2:37:51:5	59:78:3E	-1	1e- 0					
21anPut interface in monitor mode" (WIFIBREALTERS"		F4:23:9C:B2:95:71	E6:4F:C9:3	3C:73:45	5 -17	24e- 1					
3. Put interface in managed mode 2.447 GHz Access Points W											
(without sniffing, just AP)											
5. Evil Twin attack just AP											
6. Evil Twin AP attack with sniffing											
7. Evil Twin AP attack with sniffing and bettercap-sslstrip	2con:0										
 Evil Twin AP attack with sniffing and bettercap-sslstrip: (without sniffing, cantive nortal) 	2/BeEF		0								
9. Evil Twin AP attack with captive portal (monitor mode new	eded)sociated		L								
Sensitivity:0/0 *Hint+ On Evil Twin attack with ReFE integrated: in addition											
		d its version		/							
> Link Quality:0 Signal level:0 Noise level:0 > 9 10 Rx invalid nwid:0 Rx invalid crypt:0 Rx invalid invalid											
also performing denial of service (DoS). Do you want to cont:	ing VIF (Virtual Interface). This attac inue? If yes, the denial of service wil	ll not work bei		porta	nt par		the at		rake 1 mak	ing it probab	
fective [y/N] > kali-linux-2021-3)-[~]											
> y 🗌											
An exploration looking for targets is going to be done											
Press [Enter] key to continue											
Exploring for targets option chosen (monitor mode needed)											
Selected interface wlan1 is in monitor mode. Exploration can	be performed										
WPA2/WPA3 and in that case they are displayed in the scan win										llow you sele	
chose that acso offering mar											
WPA/WPA2/WPA3 filter enabled in scan. When started, press [C Press [Enter] key to continue	trl+C] to stop										

File	Actions	Edit	View	Help				
****	******	*****	*****	******	Selec	t targe:	et *******	******
N.		BSSID		CHANNELS	PWR	ENC	ESSID	
1)*	AE:F8	:CC:08	:59:9D	ten 11 ons	50%	WPA2	Horizon W	Vi-Free
2)	6A:08	:5E:97	:48:EE	11	73%	WPA2	OnePlus 8	3 Pro
et3)	AC:F8	:CC:08	:59:9D	ten 11 ons	52%	WPA2	VM8053781	L
4)*	C8:D1	:2A:95	:ED:44	6	63%	WPA2	VMP294566	56
et5)	A0:2D	:13:13	:6E:1D	tens 1 ons	76%	WPA2	VODAFONE-	-9570
6)*	F4:23	:9C:B2	:95:71	. 1	78%	WPA2	VODAFONE-	-9570
(*) N	etwork	withcl	lients					
Selec	t targe	t netwo	ork:					
>								
********* Interface Selected B	wlan1 selected SSSID: 6A:08:5	******* Evi d. Mode: Mon E:97:48:EE	l Twin deau itor. Suppo	th ************************************				
Selected c Selected E Handshake	channel: 11 ESSID: OnePlus file selected							
Select an	option from m	xtensions. enu:						
0. Return	n to Evil Twin	attacks men	u					
1. Deauth	n / disassoc a	mok mdk4 att	WIFI@REALTE ack7 GHz A					
2. Deauth 3. WIDS /	n aireplay att: / WIPS / WDS Co	ack onfusion att	ack agment t					
Hint If								
> 1								
If you wan	nt to integrate Mode:Managed	e "DoS pursu Frequency=2	it mode" on	T an Evil Twin a t ccess Point: Not	ttack, anoth	er additional	wifi interface in m	wonitor mode will be needed to be able to perform it
Do you wan >	nt to enable:" Retry:off	DoS pursuit	mode"? This Fragment t					l countering "channel hopping" [y/N]
ingth: iteoi								
a toto	Tx excessive	retries:0 I	nvalid misc	:0 Missed bear	:on:0			
*******	******** Evil	Twin AP atta	ck with cap	tive portal *****	******	***		
Selected B Selected c	SSID: 6A:08:5E: hannel: 11	:97:48:EE		20 Danus: 2,4012,				
Selected E	SSID: OnePlus &	Be <mark>Proons</mark> . method: mdk4						
Handshake								
Hint If el: https:	you have any do //discord.gg/s0	oubt or probl Q9dgt9			ection (http	s://github.com/	/v1s1t0r1sh3r3/airged	don/wiki/FAQ%208%20Troubleshooting) or ask in our Discord chan
atano								
Do you wan > y	t to spoof your	r MAC address	during this	sāttack? [y/N]				
This attac	k requires that	t you have pr	eviously a N	WPA/WPA2 network Rx invalid frag:	captured Han	dshake file		
If you don								
Do you alr > n	eady have a cap	ptured Handsh	ake ^c file?cAn					a new one now [y/N]
Type value > 20	in seconds (10	0-100) for ti	meout or pro	ess [Enter] to ac	cept the pro	posal [20]:		
Timeout se	t to 20 seconds							
Two window								
Don't clos Press [Ent	e any window ma er] key to cont	anually, scri tinue	pt will do v	when needed. In a	bout 20 seco	nds maximum you	u'll know if you've g	ot the Handshake

File Actions Edit View Help			CH 11][Elanced+	0 @][2022-12-07 3	22•16][UPO handebake•	60+08+5E+97+48+EE
*********************** Evil: Twin			DOCID	DUD DWO Deserve	ab-t- #/- CIL ND	
Interface wlan1 selected. Mode	e: Monitor. Supported bands: 2.4Ghz, 5Gh		B551D	FUK KAQ Beacons	*Jata, */S CH HB	ENC CIPHER HUTH ESSID
Selected channel: 11			6R:08:5E:97:48:EE	-24 0 38	5 2 11 360	WPR2 CCMP PSK UnePlus 8 Pro
Selected ESSID: OnePlus 8 Pro			BSSID	STATION	PMR Rate Lost	Frames Notes Probes
Handshake file selected: /roo	α: maκ4 t/handshake-6A:08:5E:97:48:EE.cap		6A:08:5E:97:48:EE	DA:A0:CF:B8:C2:59	-25 1e-1e 1092	222 EAPOL
Hint If you have any doubt el: https://discord.gg/sQ9dgt		on (https://github.com/v1s1				
Mode:Monitor Freque Sensitivity:0/0						
Do you want to spoot your MAC	address during this attack? [y/N]					
This attack requires that you	have previously a WPA/WPA2 network capt	ured Handshake file				
If you don't have a captured						
Do you already have a capture > n	d Handshake file? Answer yes ("y") to en					
Tuna valua in caronde (10-100		the proposal [20]:				
20	mdk4 amok attack					
Periodically re-reading blacklist/white						
Disconnecting IA:A0:CF:I8:C2:59 from 6A: Packets sent: 1 - Speed: 1 packet	108:5E:97:48:EE on channel 11 ets/sec	attack to force cl	lients to recon			
Disconnecting IA:A0:CF:I8:C2:59 from 6A:						
Packets sent: 229 - Speed: 228 packet Disconnecting DA:A0:CF:B8:C2:59 from GA: Packets sent: 309 - Speed: 80 packet	hts/sec 10815E197;48:EE on channel 11 ets/sec	s maximum you'll k	know if you've	got the Handsh	ake	
File Actions Edit View Help						
********************* Evil Twin.						
Interface wlan1 selected. Mode						
Selected BSSID: BA:08:5E:97:48						
elected ESSID: OnePlus 8 Pro						
Jeauthentication chosen method landshake file selected: /root						
Secected: 7100c						
<pre>Hint* If you have any doubt o el: https://discord.gg/sQ9dgt9</pre>	r problem, you can check Wiki FAQ section	on (https://github.com/v1s1t	0r1sh3r3/airge	ddon/wiki/FAQ%	206%20Troubleshoo	ting) or ask in our Discord chann

Type value in seconds (10-100) for timeout or press [Enter] to accept the proposal [20]:

meout set to 20 seconds

addition to capturing a Handshake, it has been verified that a PMKID from the target network has also been successfully captured

ype the path to store the file or press [Enter] to accept the default proposal [/root/handshake-6A:08:5E:97:48:EE.cap]

Do you want to spoof your MAC address during this attack? [y/N]

> y This attack requires that you have previously a WPA/WPA2 network captured Handshake file

Do you already have a captured Handshake file? Answer yes ("y") to enter the path or answer no ("n") to capture a new one now [y/N] > n

Type value in seconds (10-100) for timeout or press [Enter] to accept the proposal [20]: > 20

Don't close any window manually, script will do when needed. In about 20 seconds maximum you'll know if you've got the Handshake Press [Enter] key to continue...

Type the path to store the file or press [Enter] to accept the default proposal [/root/handshake-6A:08:5E:97:48:EE.cap]

Capture file generated successfully at [/root/handshake-6A:08:5E:97:48:EE.cap] Press [Enter] key to continue...

Type the path to store the file or press [Enter] to accept the default proposal [/root/handshake-6A:08:5E:97:48:EE.cap]
The path is valid and you have write permissions. Script can continue
Capture file generated successfully at [/root/handshake-6A:08:5E:97:48:EE.cap] Press [Enter] key to continue
ISSID set to 6A:08:5E:97:48:EE
Channel set to 11
ESSID set to OnePlus 8 Pro
If the password for the wifi network is achieved with the captive portal, you must decide where to save it. Type the path to store the file or press [Enter] to accept the defa alt proposal [/root/evil_twin_captive_portal_password-OnePlus 8 Pro.txt]
File Actions Edit View Help ************************************
Choose the language in which network clients will see the captive portal:
0. Return to Evil Twin attacks menu flootAlTion
English dividit Propagation of Active Provide
<pre>tint control signal foots make contro ##int* To perform an EVII Twin attack you'll need to be very close to the target AP or have a very powerful wifi antenna. Your signal must reach clients equally strong or more than the legitimate AProfiles the invalid miscale allocation.</pre>
>

⊚ :

19:15		÷ 35
Settings	Wi-Fi	Edit
Wi-Fi		
✓ OnePlus 8 Unsecured Net	Pro etwork	≈ (i)
MY NETWORKS		
VODAFON	IE-9570	🔒 🗢 🚺
OTHER NETWOR	RKS SI	
TEST_AP_	1	🔒 🗢 🚺
VMP2945	666	ê 🗟 î
Other		
Ask to Join N	letworks	Notify >
Known networks known networks available networ	s will be joined autor s are available, you v rks.	natically. If no vill be notified of
Auto-Join Ho	otspot	Ask to Join >
Allow this device personal hotspo	e to automatically di Its when no Wi-Fi ne	iscover nearby twork is available.

00:3	:0 🛱		:: 4G 100
		captive.apple.com OnePlus 8 Pro	
		Log In	Cancel
The password is correct, the connection will be restablished in a few moments			

19	:17		: 34		
		captive.apple.com OnePlus 8 Pro			
<	>	Log In	Cancel		
		Wireless network, ESSID:			
	OnePlus 8 Pro				
Ent inte	er your v ernet acc	wireless network password ess	to get		
Pas	sword				
Show password					
S	ubmit				

Fluxion:

Choose the options from the menu as selected in the screenshots to run the tool.



FLUXION 6.9 < Fluxion Is The Future >
[
*] Select a channel to monitor
[1] All channels (2.4GHz)
[2] All channels (5GHz)
[3] All channels (2.4GHz & 5Ghz)
[4] Specific channel(s)
[5] Back
[fluxion@kali-linux-2021-3]-[~] 3
[*] Starting scanner, please wait ...
[*] Five seconds after the target AP appears, close the FLUXION Scanner (ctrl+c).

X	FLUX	XION Sca	nner				kali-linux-2021-3: /home/parallels/Downloads/fluxion-master
CH 2][Elapsed:	0 s][2022-12-11	09:23					
BSSID	PWR Beacons #	Data, #/:	s CH MB	ENC CIPHER	auth	ESSI	
A0:2D:13:13:6E:1D C8:D1:2A:95:ED:44 34:2C:C4:37:27:64	-41 5 -44 5 -45 4	0 1 0	$\begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$	WPA2 CCMP WPA2 CCMP WPA2 CCMP	PSK PSK PSK	VODAFONE-9570 VMP2945666 VM1555633	FLUXION 6.9 < Fluxion Is The Future >
36:2C:94:37:27:64 F4:23:9C:B2:95:71 AE:F8:CC:08:59:9D AC:F8:CC:08:59:9D	-49 5 -45 4 -49 4 -52 7		$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	WPA2 CCMP WPA2 CCMP WPA2 CCMP WPA2 CCMP	Mgt PSK Mgt PSK	Horizon Wi-Fr VODAFONE-9570 Horizon Wi-Fr VM8053781	
BE:6B:28:38:F9:D7 5E:79:CC:98:50:A7	-38 6 -26 7	2 0	0 11 155 0 11 360 0 11 360	WPA2 CCMP WPA2 CCMP	PSK PSK	OnePlus 8 Pro TEST_AP_1	
BSSID	STATION	PWR	Rate Lo:	st Frames	Notes	Probes	
C8:D1:2A:95:ED:44 BE:6B:28:38:F9:D7	4A:71:8E:AB:28:E3 50:2F:9B:F8:2F:7D	3 -37) -33	0 - 1 1e-24e	0 3 0 3			
[*] ⊦ıve secon	ds after the	target	АР арре	ars, close	the	FLUXION Sca	nner (ctrl+c).

File Actions Edit View Help	shpani Mineess Toor Her		
9 suda apt dist-opgarde L∏ L⊥	FLUXION 6.9 < Fluxion is the future >		
	WIFI LIST		
*] ESSID		QLTY PWR STA CH SECURITY	BSSID
001) TEST_AP_1 002) OnePlus 8 Pro 003) VM8053781 004 Horizon Wi-Free 005 Horizon Wi-Free 006 VODAFONE-9570 007 Horizon Wi-Free 006 VM2945663 009 VM2945666 010 VODAFONE-9570 fluxion@kali-linux-2021-3 [~] 2		100% -58 0 11 WPA2 100% -58 0 11 WPA2 100% -52 0 11 WPA2 100% -52 0 11 WPA2 100% -49 0 11 WPA2 100% -50 11 WPA2 100% -50 0 1 WPA2 100% -50 0 1 WPA2 100% -34 1 6 WPA2 100% -41 0 6 WPA2 WPA	SE:79:CC:98:50:A7 BE:68:28:38:F9:D7 AC:F8:CC:08:59:90 AE:F8:CC:08:59:90 AE:F8:CC:091:64:07 F4:23:9C:B2:95:71 36:2C:94:37:27:64 34:2C:C4:37:27:64 C8:D1:2A:95:ED1:44 A0:2D1:31:13:6E:1D



t-≸ <u>sudo</u> apt dist-upgarde Lj∐ Li i i i i i i i i i i i i i i i i i i	FLUXION 6.9 < Fluxion Is The Future >
[*] This attack has already been configured. [1] Restore attack [2] Perct attack	
[fluxion@kali-linux-2021-3]-[*] 2	
(anternativetationstanticationstationstationstanticationstanticationst	
Lanneneeneeneeneeneeneeneeneeneeneeneenee	FLUXION 6.9 < fluxion Is The Future >
 and exclosions by Singerset and Singerset 	ESSID: "OnePlus 8 Pro" / WPA2 Channel: 11 BSSID: BE:6B:28:38:F9:D7 ([N/A])
[*] Select a method of handshake retrieval	
 Monitor (passive) aireplay-ng deauthentication (aggressive) mdk4 deauthentication (aggressive) Back 	
[fluxion@kali-linux-2021-3]-[~] 2	

File Actio	ns Edit View	Help Analyze Statistics Development Windows	
[~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~			FLUXION 6.9 < fluxion is The Future >
			ESSID: "OnePlus 8 Pro" / WPA2 Channel: 11 BSSID: BE:6B:28:38:F9:D7 ([N/A])
[*] Select	an interface	for monitoring & jamming.	
[1] wlan1 [2] wlan0 [3] Repeat [4] Back	[*] Realte [+] TP-Lin	k Semiconductor Corp. RTL8812AU 802.11a/b/ k TL-WN823N v2/v3 [Realtek RTL8192EU]	g/n/ac 2T2R DB WLAN Adapter
[fluxion@	ali-linux-202	1-3]-[~] 1	



[fluxion@kali-linux-2021-3]-[~] 1



1:F9:D7) Sending Defuth (code 7) to broadcast -- BSSID: [5:F9:D7) Sending Defuth (code 7) to broadcast -- BSSID: [5:F9:D7) Maiting for beacon frame (BSSID: BE:6B:28:38:F9:

[FLUXION 6.9 < Fluxion Is The Future >
 A state of the sta		ESSID: "OnePlus 8 Pro" / WPA2 Channel: 11 BSSID: BE:6B:28:38:F9:D7 ([N/A])
[*] Handshake Snooper attack in progress		
<pre>[1] Select another attack [2] Exit</pre>		202122 22 22 22 22 22 22 22 22 22 22 22 22
[fluxion@kali-linux-2021-3]-[~] [C FLLXION AP Authenticator HangupNTS ONLINE:04.100 ovrxstxxtxxttxtxx((secon)) 1: (124666) No such process 1 xtxxtxxtxx((secon))
Handshake Snooper Arbiter Log S [09:24:05] Handshake Snooper arbiter daemon running. [09:24:06] Snooping for 30 seconds. [09:24:36] Stopping snooper & checking for hashes. [09:24:36] Searching for hashes in the capture file. [09:24:36] Success: A valid hash was detected and saved to fluxion's database. [09:24:36] Handshake Snooper attack completed, close this w indow and start another attack.		HHC
File Actions Edit View Help	Felephony Miretest 1	Loss Help
Seebasalistatististististististististististististist		FLUXION 6.9 < Fluxion Is The Future >
 Buth Provide the State of the S		ESSID: "OnePlus 8 Pro" / WPA2 Channel: 11 BSSID: BE:6B:28:38:F9:D7 ([N/A])
[*] Handshake Snooper attack in progress		BOLLL 200 BERCON Frames OKELN F BOLLL 200 BERCON Frames OKELNOT
<pre>[1] Select another attack [2] Exit</pre>		Augusta Luckerski Konstein Konstein Bergeste General Konstein (1996) Schultz Carlo Konstein Constein Schultz Carlo Konstein Constein Schultz Carlo Konstein Constein Schultz (1997)
[fluxion@kali-linux-2021-3]-[~] 1	I	<pre>Add Li Li</pre>
(nebaanakkalaakkalakkalaanaakkalakkalakkala		

properties des dés dés des set set set set set set set set set s	FLUXION 6.9 < fluxion is the future >
	ESSID: "OnePlus 8 Pro" / WPA2 Channel: 11 BSSID: BE:6B:28:38:F9:D7 ([N/A])
<pre>[*] Fluxion is targetting the access point above. [*] Continue with this target? [Y/n] y</pre>	
[-S <u>sudo</u> apt dist-upgarde Υ[] □ [-S <u>sudo</u> apt dist-upgarde Υ[] □ [helenicippe_sidirpe=sidir [FLUKION 6.9 < Fluxion Is The Future >
<pre>[*] Select a wireless interface for target tracking. [*] Choosing a dedicated interface may be required. [*] If you're unsure, choose "Skip"!</pre>	
 wlan1 [*] Realtek Semiconductor Corp. RTL8812AU 802.11a/b/g. wlan0 [+] TP-Link TL-WN823N v2/v3 [Realtek RTL8192EU] Skip Repeat Back 	/n/ac 2T2R DB WLAN Adapter
[fluxion@kali-linux-2021-3]-[~] 3	
-S <u>sudo</u> apt dist-opgarde -j	FLUXION 6.9 < Fluxion Is The Future >
- This attack has already been configured	
[1] Restore attack	
2 Reset attack	
[fluxion@kali-linux-2021-3]~[~] 2	
(maipressivents soldentized i pressive) i soldenti pressivent and	
helan 'n type_rabby e==008	FLUXION 6.9 < Fluxion Is The Future >
<pre>[*] Select an interface for jamming.</pre>	
 wlan1 [*] Realtek Semiconductor Corp. RTL8812AU 802.11a/b wlan0 [+] TP-Link TL-WN823N v2/v3 [Realtek RTL8192EU] Repeat Back 	/g/n/ac 2T2R DB WLAN Adapter
[fluxion@kali-linux-2021-3]-[~] 1	



FLUXION 6.9 < fluxion is the future >
FLUXION 6.9



*] Select an internet connectivity type for the rogue network. [1] disconnected (recommended)
[2] emulated
[3] Back

[fluxion@kali-linux-2021-3]-[~] 1

	Dhawa and	6
	BDOX DI DI DI DI	
apt dist-upgarde Ayl and [33]	Belkin	
	Belkin	
35	Cisco	
Destination	Cisco-Linksys	
37	Digicom	
[38]	Djaweb	
[39]	Dlink	
[40]	Dlink	
01981901a7 Bhoadsast [41]	Freebox	
21981 701 a 7 Biro ad cas t [42]	FRITZBox1	
(43) (43) Encadeast	FRITZBox2	
secondesentes desenances (44)	FRITZBox	
	GENENIX	
[46]	Google	
(47) [47]	HUAWEI	
[48] [48] [48]	HUAWEI	
8: 7:: 7:0: 1: 8: 1: 8: 1: 8: 1: 7[49]	HUAWEI	
o 95 deda 44 — Encondens t	HUAWEI	
51983505a7 Broadcast [51]	kpn - Bobles - Bobles Beacon frame. Skei	
o ta chiere desserver [52]	Livebox	
[53]	movistar	
[54]	NETGEAR	
	NETGEAR	
[56]	NETGEAR	
51981501a7 Booaddast [57]	NETGEAR+LoginNE:04.06 xxpochochochochochochochochochochochochocho	
01981501a7 - Broadcast [58]	Netis//fluxspace/captive_portal_authenticator.sh: line 4: kil	
59] b2::97:271 Broadcast	Proximus	
80 Tat Türke — Broadcast [60]	Proximus	
61]	SFR Vendor	
[62]	Siemens ^{intime}	
[63]	Sitecom ^{tempts}	
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	Technicolor ()	
50 al 5e 79 de 98 50 al do 11 80 0f 57 a [66]	Telecom NTS ONLINE:	
00000034.00031.14.00009034.45.53.54.5f.4 [67]	Telekom	
[68] 0 00 10 20 10 20 20 02 02 02 02 00 00 00 00 [68]	TP-LINK	
	TP-LINK/tmp/fluxspace/clients.txt: No such file or directory	
	TP-LINK) 100,100,254,107 performance(comment)	
na an air as ag an an an air as ag an an (71)	Verizon/tmp/fluxspace/clients.txt: No such file or directory	
[72] https://www.com/article/a	vodafone	
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	ziggo1 /tmp/fluxspace/clients.txt: No such file or directory	
[75]	ziggo211) 12.155.254.110.xxtxxtxxxxxxxxxxxx(000000)	
	Zyxel	
[77]	Zyxel	
	Zyxel	
akali_linuv_2021_2]-[w]		





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$\leftarrow \rightarrow \mathbf{C}$ A Not secure captive.gateway.lar		년 🕁	🐵 💩 🕒	🗯 🗖 🛞 E
				Î
	<u>OnePlus 8 Pro</u> (BE:6B:28:38:F9:D7)			
	Authentication required for Internet access.			
WPA Kev:				
				- 1
Connect				
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← → C ▲ Not secure captive.gateway.lan/check.php		Ŀ	☆			u 🗈	*	- (6) :
Error: The password entered is incorrect!									
Bark									
									-



Net	work & internet > Wi-Fi	
((r	Wi-Fi	On 🗾
(();	OnePlus 8 Pro properties Connected, secured	>
ක	Show available networks	^
(final)	OnePlus 8 Pro Connected, secured	1
l		Disconnect
	VODAFONE-9570	
Ŕ	OnePlus 8 Pro 2	

22:03		::!! [14]
Settings	Wi-Fi	Edit
Wi-Fi		
MY NETWORKS		
OnePlus 8 Pro		∻ (i)
VODAFONE-95	570	ê 🗢 i
OTHER NETWORKS		
TEST_AP_1		🔒 🗢 🚺
VMP2945666		🔒 🧟 🚺
Other		
Ask to Join Netwo	orks	Notify >
Known networks will b known networks are a available networks.	e joined automa vailable, you will	atically. If no I be notified of
Auto-Join Hotspo	t	Ask to Join >
Allow this device to au personal hotspots whe	itomatically disc en no Wi-Fi netv	cover nearby vork is available.

22	:21		::!! [10]
		captive.gateway.lan OnePlus 8 Pro	
<	>	Log In	Cancel
	<u>OnePl</u>	l <u>us 8 Pro</u> (BE:6B:28:38:F9):D7)
	Authentic	ation required for Internet	access.
W	PA Key:		
ľ	 Conne 	ect	





PineAp:

Choose the options from the menu as selected in the screenshots to run the tool.

	Check for Librardes
Please stop any unnecessary services and modu additional services and modules is recommended	les before upgrading. Restarting the WiFi Pineapple without starting

Upgrading firmware should only be done while using a stable power source. An Ethernet connection to the WiFi Pineapple is recommended for this process.

Once the firmware upgrade has completed the WiFi Pineapple will reboot into an initial setup state. This process will take several minutes. Do not interrupt the upgrade process by unplugging power or closing the web interface as this may result in a soft-brick state.

For recovery or manual upgrade instructions and help please visit https://www.wifipineapple.com/?flashing.

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WiFi Pineapple				© -
C Dashboard				
A Recon	0 hours, 11 minutes	0		0
Le Clients	UPTIME	CLIENTS CONNECTED		SSIDS IN POOL
Tracking	82% CPU USAGE			0 SSIDS ADDED THIS SESSION
Modules -	Landing Page Browser Stats		Notifications	
Y Filters	No Landing Page Browser Stats Available		No Notifications	
(()) PineAP				
Logging	Bulletins			
Reporting	Load Bulletins from WiFiPineap	ple.com		
A Networking				
Configuration				
© ^o Advanced				
Notes				
Help				

$\leftarrow \rightarrow \mathbf{C}$	O 👌 172.16.42.1:1471/#!/modules/Recon		쇼	⊚ ≡
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🛞 WiFi Pineapple				⊗ -
C Dashboard	Scan Settings	Scan Results	Refresh	
A Recon	0.2.4GHz 0.5GHz Roth			
Le Clients	Service Source Source Source	Scans Location /tmp/	Set	
Tracking	Continuous ~	Scan	✓ Load Remove	
Modules -	Continuous 30 Seconds	There are no scans available. Please run Recor	n at least once.	
¥ Filters	1 Minute			
() PineAP	5 Minutes			
	10 Minutes No scan results.			
Reporting				
A Networking				

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Filters							
(()) PineAP	Scan Results -						
Logging	SSID .	MAC	Security	WPS	Channel	Signal	Last Seen
Reporting	➡ Hidden	▼ 00:13:37:A6:C0:07	- Open	No	11	-29	1 second ago
A Networking		► AE:F8:CC:08:59:9D	▼ WPA2 Enterprise (CCMP)	No	11	-81	1 second ago
Configuration	✓ OnePlus 8 Pro	► F6:8C:B4:4F:€9:87	✓ WPA2 PSK (CCMP)	No	6	-64	4 seconds ago
Advanced	▼ TEST_AP_1	▼ 5E:79:CC:98:5 0:A7 This MA0	WPA2 PSK (CCMP) C was likely locally assigned and was not assign	No ed by the hardwa	are vendor.	-86	4 seconds ago
Notes	▼ VM1555633	➡ 34:2C:C4:37:27 registere	d be the result of MAC randomization, Spoofing d with the IEEE Registration Authority.	g, or a vendor tha	at has not	-86	7 seconds ago
INDIES	▼ VM8053781	➡ AC:F8:CC:08:59:9D	✓ WPA2 PSK (CCMP)	Yes	11	-75	1 second ago
Help	▼ VMP2945666	← C8:D1:2A:95:ED:44	▼ WPA Mixed PSK (CCMP TKIP)	Yes	6	-59	4 seconds ago
		◄ 4A:71:8E:AB:28:E3					27 seconds ago
	▼ VMP2945666	← C8:D1:2A:95:ED:48	▼ WPA Mixed PSK (CCMP TKIP)	Yes	36	-71	1 second ago

← → C @	0 🔒 172.16.42.1:147	71/#!/modules/Recon			☆	⊚ ≡
🗠 Kali Linux 🛛 🔒 Kali Tools 🛛 💆 Kali D	ocs Kali Forums 🤜 H	Kali NetHunter 🔌 Exploit-DB 🛸 Google Hacking DB 🧍 OffSec				
🕑 WiFi Pineapple						⊗ -
C Dashboard	Scan Settings	× DA:A0:CF:B8:C2:59				Refresh
Recon	🔾 2.4GHz 🔿 5GHz	This MAC was likely locally assigned and was not assigned by the hardware vendor. This could be the result of MAC randomization, Spoofing, or a vendor that has not registered				Set
Clients	Live	with the IEEE Registration Authority.				
Tracking	30 Seconds	PineAP Filter		~	Load R	emove
Modules -	Start Stop	Add MAC Remove MAC				
Y Filters						
() PineAP	Scan Results -	PineAP Tracking				
Logging	SSID .		WPS	Channel	Signal	Last Seen
A Reporting	➡ Hidden	Deauth Clients	No	11	-21	2 seconds ago
A Networking	➡ Horizon Wi-Free	Deauth Multiplier	No	11	-92	2 seconds ago
Configuration	✓ OnePlus 8 Pro		No	6	-78	2 seconds ago
Advanced		Deauth				8 seconds ago
Notos	▼ TEST_AP_1		No	1	-59	5 seconds ago
	▼ VM8053781	PineAP Logged Probes	Yes	11	-82	2 seconds ago
Help	▼ VMP2945666	Load	Yes	6	-77	2 seconds ago

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🛞 WiFi Pineapple		Ø -
Can Dashboard	Configuration	SSID Pool - Refresh
Recon		
Le Clients	PineAP Deemon' Enabled Switch	OnePlus 8 Pro
Tracking	Autostart PineAP: Disabled Switch	
Modules -	Log PineAP Events	
Manage Modules	Client Connect Notifications Client Disconnect Notifications	
Filters	Capture SSIDs to Pool Beacon Response	
(()) PineAP	Broadcast SSID Pool	
Logging	Beacon Response Interval Normal	A.
Reporting	Broadcast SSID Pool Normal ~	SSID Add Remove
A Networking	Source MAC 00:13:37:A6:C0:07	Pool Location /etc/pineapple/ Save
Configuration	Target MAC FF:FF:FF:FF:FF	

🛞 WiFi Pineapple						0
C Dashboard	Configuration			SSID Pool		Refresh
Recon						
Lients	Allow Associations			OnePlus 8 Pro		
@ Tracking	PineAP Daemon: Enabled Switch					
e Tracking	Autostart PineAP: Disabled	Autostart PineAP: Disabled Switch				
Modules -	✓ Log PineAP Events					
Manage Modules	Client Connect Notifications Client Disconnect Notifications					
¥ Filters	Capture SSIDs to Pool					
((•)) PineAP	Beacon Response Broadcast SSID Pool					
Logging	Beacon Response Interval Normal		~			lie
B Reporting	Broadcast SSID Pool Normal		~	SSID	Add	Remove
A Networking	Source MAC 00:13:37:A6:C0:07			Pool Location /etc/pineapple/		Save
Configuration	Target MAC FF:FF:FF:FF:FF					

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WiFi Pineapple							© -
C Dashboard Available Modules						Refresh	
Recon	Module	Version	Description	Author	Size	Туре	Action
Le Clients	DWall	1.4	Display's Plaintext HTTP URLs, Cookies, POST DATA, and images from browsing clients.	sebkinne	6.80K	GUI	Install
Iracking	Evil Portal	3.2	An Evil Captive Portal.	newbi3	23.33K	GUI	Install
Modules -	Deauth	1.7	Deauthentication attacks of all devices connected to APs nearby	whistlemaster	6.90K	GUI	Install
Manage Modules	Site Survey	1.6	WiFi site survey	whistlemaster	10.01K	GUI	Install
₩ Filters	Meterpreter	1.1	meterpreter configuration utility	audibleblink	2.04K	GUI	Install
* ((φ)) Pine ΔP	SSLsplit	1.5	(FW2.5.4 or below) Perform man-in-the-middle attacks using SSLsplit	whistlemaster	6.67K	GUI	Install
T	get	1.2	Profile clients through the browser plugins supported by their browser	dustbyter	1.31K	GUI	Install

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🛞 WiFi Pineapple				Ø -		
Can Dashboard	Controls		Work Bench			
Recon	Captive Portal	Start	Paria y Dattal Nama	Create New Portal		
Lients	Start On Boot	Enable		Create New Portai		
J Tracking			No Portals in Library to Display.			
Modules -	Evil Portal Messag	es	White List			
Manage Modules	No Messages.		Authorized Clients			
Evil Portal			Line Dender			
¥ Filters			Live Preview			
(()) PineAP			Evil Portal Info			
Logging						



Detection script:

- Install dependencies for the script by installing the packages required by the detection script. The following packages need to be installed.
 - 1. Scapy 2.4.5 pip install scapy
 - 2. mac-vendor-lookup 0.1.12
 pip install mac-vendor-lookup
 - 3. macaddress 2.0.2 pip install macaddress
 - 4. pandas 1.5.2 pip install pandas

Running scapy manually:

- To run the scapy tool manually, first, open the terminal with root privileges.
- Make sure to change the mode of the wireless interface to monitor mode.
- Also, the processes we must kill the "networking" and the "NetworkManager" processes.

<pre>(parallels ali-linux- \$ sudo su [sudo] password for parall (root & kali-linux-2021) # airmon-ng check</pre>	-2021-3)-[~] Lels: -3)-[/home/parallels]
Found 1 processes that cou Kill them using 'airmon-ng the card in monitor mode, and sometimes putting the	uld cause trouble. g check kill' before putting they will interfere by changing channels interface back in managed mode
PID Name 604 NetworkManager (root⊙ kali-linux-2021	->/home/parallels]
(roos@ kali-linux-2021-a)-[/home/par	allels]
PHY Interface Driver phy1 wlan0 rtl8192eu (monitor mode enabled) phy2 wlan1 88XXau	Chipset TP-Link TL-WN823N v2/v3 [Realtek RTL8192EU] Realtek Semiconductor Corp. RTL8812AU 802.11a/b/g/n/ac 2T2R DB WLAN Adapte

• Then run the command scapy to run the application.

<pre>croot@kg/binke-2021-3)-[/home/parallels] scapy</pre>
<pre><frozen importlibbootstrap="">:914: ImportWarning: _SixMetaPathImporter.find_spec() not found; falling back to find_module()</frozen></pre>
<pre><frozen importlibbootstrap="">:914: ImportWarning: _SixMetaPathImporter.find_spec() not found; falling back to find_module()</frozen></pre>
<pre><frozen importlibbootstrap="">:671: ImportWarning: _SixMetaPathImporter.exec_module() not found; falling back to load_module</frozen></pre>
<pre><frozen bootstrap="" importlib.="">:914: ImportWarning: _SixMetaPathImporter.find_spec() not found; falling back to find_module()</frozen></pre>
<pre><frozen importlibbootstrap="">:914: ImportWarning: _SixMetaPathImporter.find_spec() not found; falling back to find_module()</frozen></pre>
<pre><frozen importlibbootstrap="">:914: ImportWarning: _SixMetaPathImporter.find_spec() not found; falling back to find_module()</frozen></pre>
<pre><frozen importlibbootstrap="">:914: ImportWarning: _SixMetaPathImporter.find_spec() not found; falling back to find_module()</frozen></pre>
<pre><frozen importlibbootstrap="">:914: ImportWarning: _SixMetaPathImporter.find_spec() not found; falling back to find_module()</frozen></pre>
<pre><frozen importlibbootstrap="">:914: ImportWarning: _SixMetaPathImporter.find_spec() not found; falling back to find_module()</frozen></pre>
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INFO: Can't import PyX. Won't be able to use psdump() or pdfdump().
<pre><frozen importlibbootstrap="">:914: ImportWarning: _SixMetaPathImporter.find_spec() not found; falling back to find_module()</frozen></pre>
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NoSpoolst using IPvthon 8.5.0
<pre><frozen bootstrap="" importlib.="">:914: ImportWarning: SixMetaPathImporter.find spec() not found; falling back to find module()</frozen></pre>
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• Run the sniff() function to capture the packets by passing the name of the wireless interface in the iface parameter and an interval for the count parameter and saving the data in the pkts variable.



• The nsummary() function provides the output of the various packets captured.

>>> pkts.nsummary()

• The individual packet can be saved in the new variable "pkt."

0491 RadioTap / Dot11FCS / Dot11Beacon / SSID='Stormtrooper' / Dot11EltRates / Dot11EltDSSSet / Dot11Elt / Dot11EltCountry / Dot11Elt / Dot11Elt / Dot11EltERP / Do / Dot11EltRSN / Dot11EltHTCapabilities / Dot11Elt / Dot11Elt / Dot11EltVendorSpecific / Dot11EltVendorSpecific / Dot11EltVendorSpecific / Dot11EltVendorSpecific / Dot11EltVendorSpecific

• We can then display the contents of the individual packet.



• To restart the services killed issue the following commands.

```
service networking restart
service NetworkManager restart
```



To run the Detection script:

- Navigate to the directory where the script is stored.
- Change the wireless interface to be used to monitor mode.
- Run the script by passing the name of the wireless interface and the interval value.
- The script will save the output in a generated .csv file.

Wireshark:

- Install Wireshark. sudo apt-get install Wireshark
- Open Wireshark and choose the interface to capture the packets.
- To filter out the beacon frames captured, run the following filter.

wlan.fc.type_subtype==0x08

Note: The filter will only show beacon frames since the beacon frames are management frames and have type 0 and subtype 8.