Hacking with Nethunter

Who am I

Head of Threat Research at AnChain.AI

Previously developer and SOC manager

HackMiami member since 2015
- Talks on BLE, SDR, Smart Contracts
- BLE CTF and IHackNFT CTF
- Red Alert ICS and IoT CTF

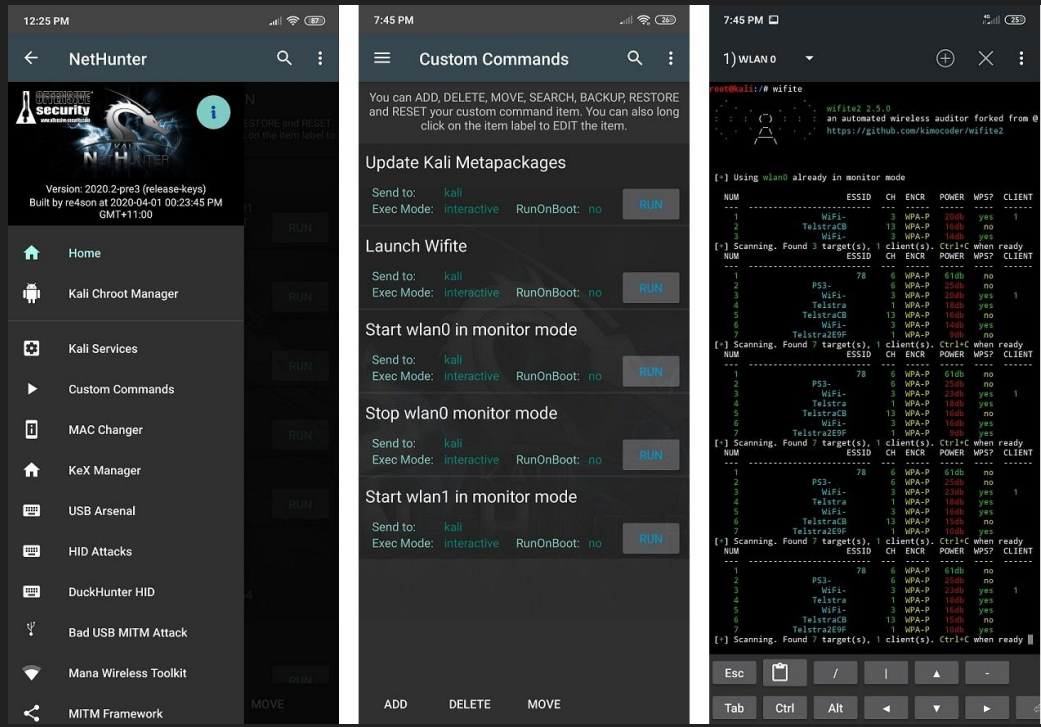
What is Kali Nethunter

Android-based pentesting platform based on Kali Linux

Nethunter Android app for pentesting

Provides many of CLI tools available on Kali

Custom kernel to support 802.11 packet injection



Nethunter Versions

Feature	NetHunter Rootless	NetHunter Lite	NetHunter
App Store	Yes	Yes	Yes
Kali cli	Yes	Yes	Yes
All Kali packages	Yes	Yes	Yes
KeX	Yes	Yes	Yes
Metasploit w/o DB	Yes	Yes	Yes
Metasploit with DB	No	Yes	Yes
NetHunter App	No	Yes	Yes
Requires TWRP	No	Yes	Yes
Requires Root	No	Yes	Yes
WiFi Injection	No	No	Yes
HID attacks	No	No	Yes

Make & Model

OnePlus

- OnePlus One (LineageOS 18.1)
- OnePlus 2 (LineageOS 16.0)
- OnePlus 3 / 3T (Ten)
- OnePlus 6 / 6T (OxygenOS Twelve)
- OnePlus 7 / 7 Pro / 7T / 7T Pro (Eleven)
- OnePlus 7 / 7 Pro / 7T / 7T Pro (Oxygen
- OnePlus 8 / 8T / 8 Pro (Twelve)
- OnePlus Nord AC2003 (Eleven)

Nexus

- Nexus 6P (Oreo)
- Nexus 6P (LineageOS 17.1)
- Nexus 5X (Oreo)
- Nexus 9 (Nougat)
- Nexus 5 (Nougat)
- Nexus 6 (LineageOS 16.0)

Xiaomi

- Xiaomi Pocophone F1 (Eleven)
- Xiaomi Mi 9T MIUI 11 (Ten)
- Xiaomi Mi A3 (LineageOS 18.1, 19.1, 20)

Nokia

- Nokia 6.1 Plus (LineageOS 20)
- Nokia 3.1 (Pie)
- Nokia 6.1 (LineageOS 20)

Gemini

- Gemini PDA (Nougat)

Samsung

- Samsung Galaxy Tab S4 LTE (Oreo)
- Samsung Galaxy Tab S4 WiFi (Oreo)
- Samsung Galaxy S6 Edge (Nougat)

LG

- LG V20 International (LineageOS 19.1)

Sony

- Sony Xperia Z1 (Pie)

OnePlus 7 Pro

Best supported make and model

Used for $150, preinstalled for $1000

Model numbers

- GM1911: India
- GM1913: EU
- GM1915: T-Mobile
- **GM1917: Global/US Unlocked**

Install

Goal

- Flash OxygenOS 10
- Unlock & Root
- Install Magisk & TWRP
- Disable forced encryption on data partition
- Install Nethunter

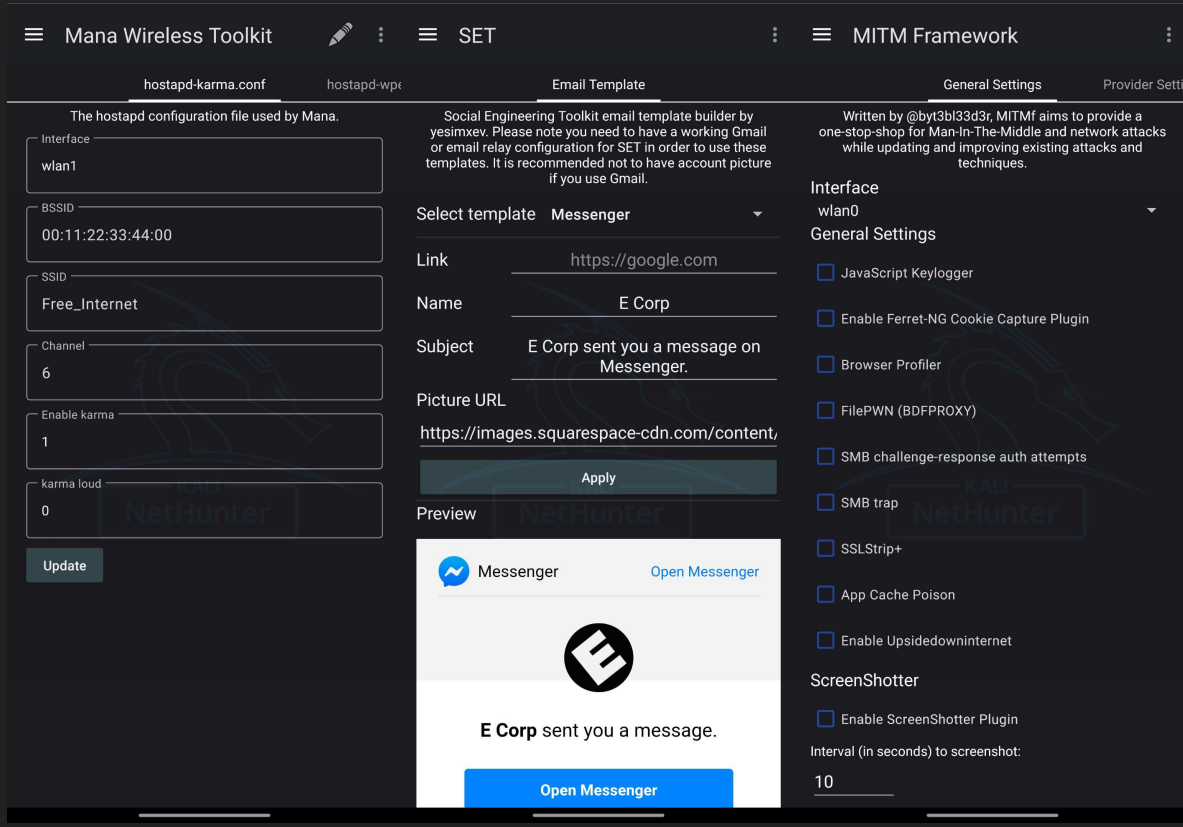
Prerequisite Downloads

- USB drivers for phone
- Android SDK ADB tools
- MSMDownloadTool
- Magisk
- TWRP
- Disable_Dm-Verity-ForceEncrypt.zip

XDA Developers Forums
xdaforums.com

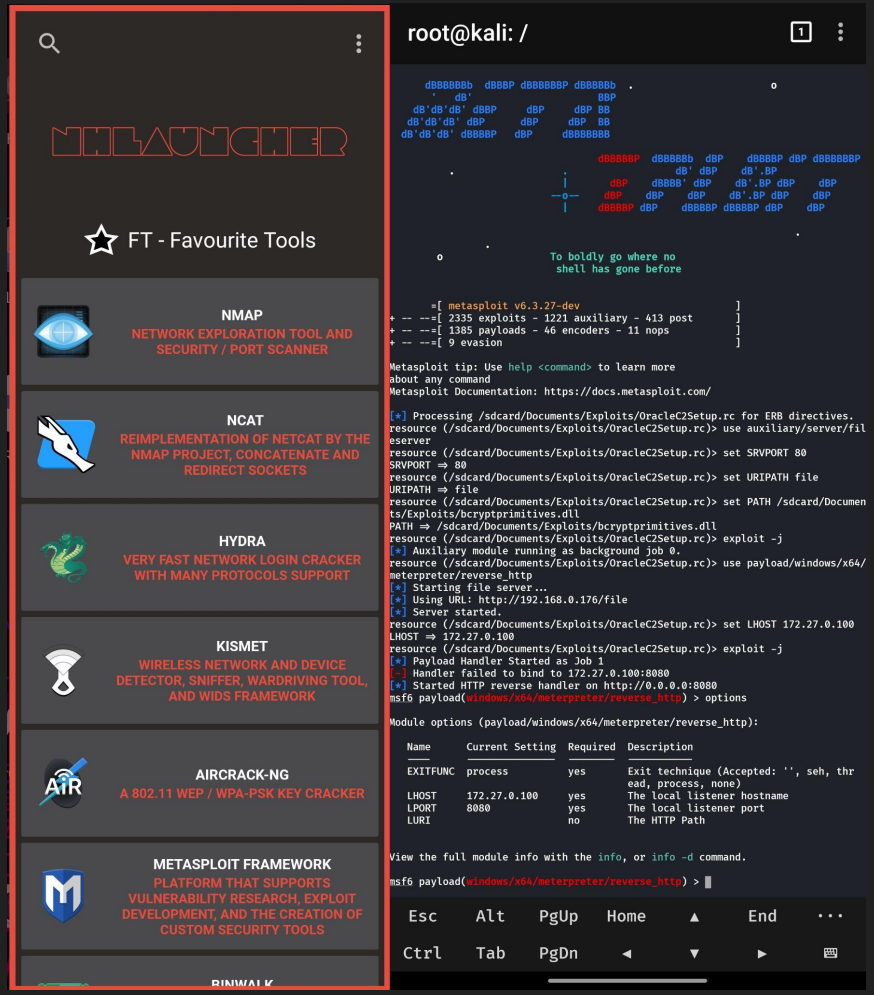
Nethunter App

- MAC Changer
- KeX (Kali Desktop Experience)
- Mana Evil Access Point
- WPS Attacks
- Deauther
- MitM framework
- Nmap
- USB HID attacks
- Bluetooth Arsenal
- SET (Social Engineering Toolkit)
- SearchSploit
- Metasploit payload generator



NHLauncher / Kali Terminal

- Nmap
- Ncat
- Hydra
- Kismet
- Tcpdump
- Ettercap
- Aircrack-ng
- Msfvenom
- Msfconsole



Intercepter-NG

Promiscuous-mode\ARP\DHCP\Gateway\Port\Smart Scanning

Wireshark

Sniffing passwords and hashes

ICQ\IRC\AIM\FTP\IMAP\POP3\SMTP\LDAP\BNC\SOCKS\HTTP\WWW\NNTP

CVS\TELNET\MRA\DC++\VNC\MYSQL\ORACLE\NTLM\KRB5\RADIUS

Sniffing chat messages of: ICQ\AIM\JABBER\YAHOO\MSN\IRC\MRA

Reconstructing files from network protocols: HTTP\FTP\IMAP\POP3\SMTP\SMB

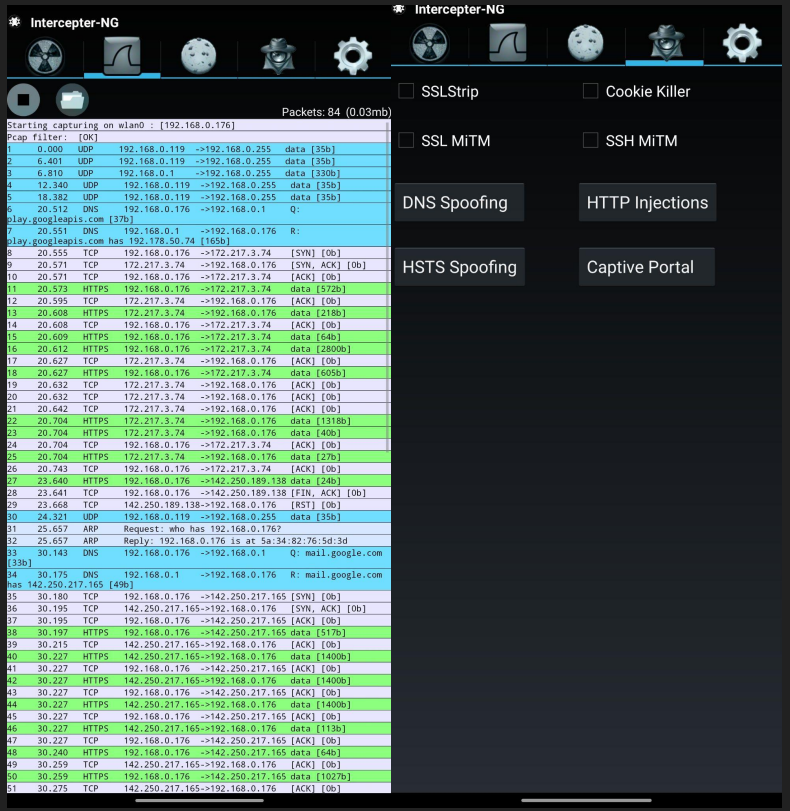
ARP\DNS over ICMP\DHCP\SSL\SSLSTRIP\WPAD\SMB Relay\SSH MiTM

SMB Hijack, LDAP Relay, MySQL LOAD DATA Injection

ARP Watch, ARP Cage, HTTP Injection, Heartbleed exploit, Kerberos Downgrade,

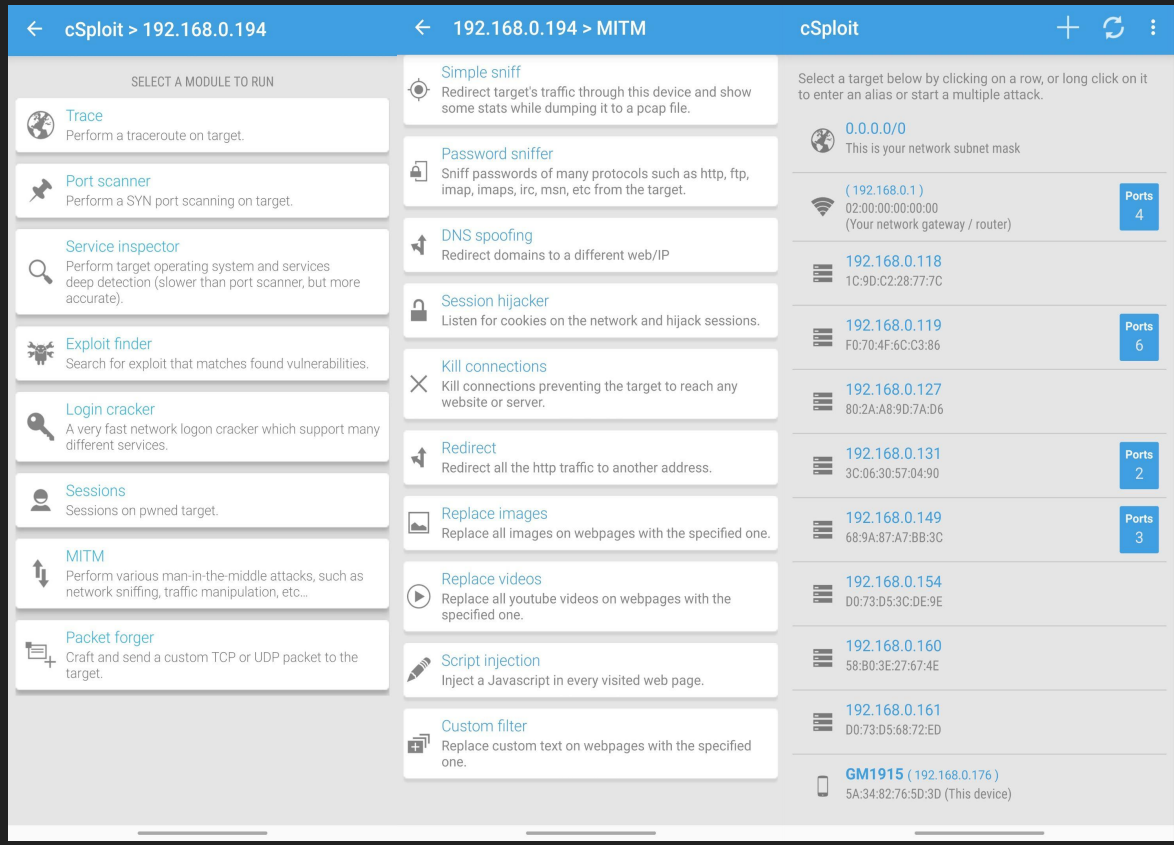
Cookie Killer

DNS\NBNS\LLMNR Spoofing



cSploit

- Map your local network
- Fingerprint hosts' operating systems and open ports
- Integrated Metasploit framework RPCd
- Adjust exploit settings, launch, and create shell consoles on exploited systems
- Forge TCP/UDP packets
- Perform man in the middle attacks (MITM) including:
- Image, text, and video replacement-- replace your own content on unencrypted web pages
- JavaScript injection-- add your own javascript to unencrypted web pages.
- Password sniffing (with common protocols dissection)
- Capture pcap network traffic files
- Real time traffic manipulation to replace images/text/inject into web pages
- DNS spoofing to redirect traffic to different domain
- Session Hijacking-- listen for unencrypted cookies and clone them to take Web session



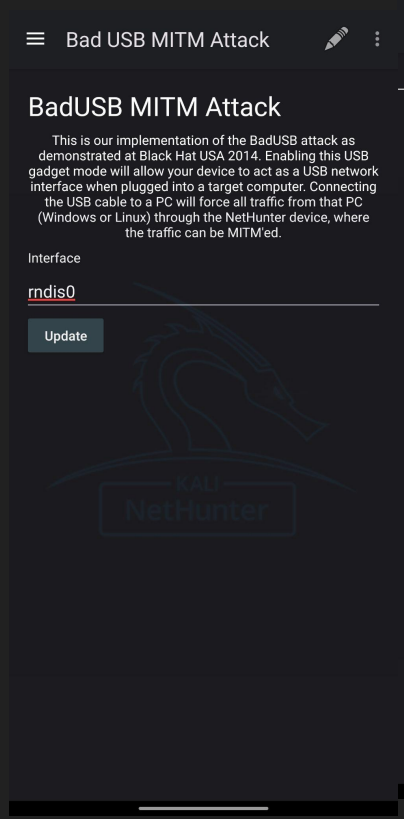
HID Attack / BadUSB

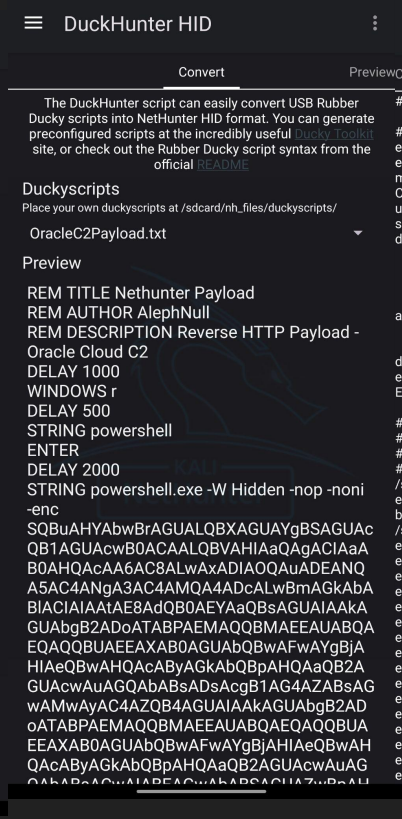
Nethunter BadUSB MitM attack

DuckHunter

Converts Ducky script to bash

ButtonMapper





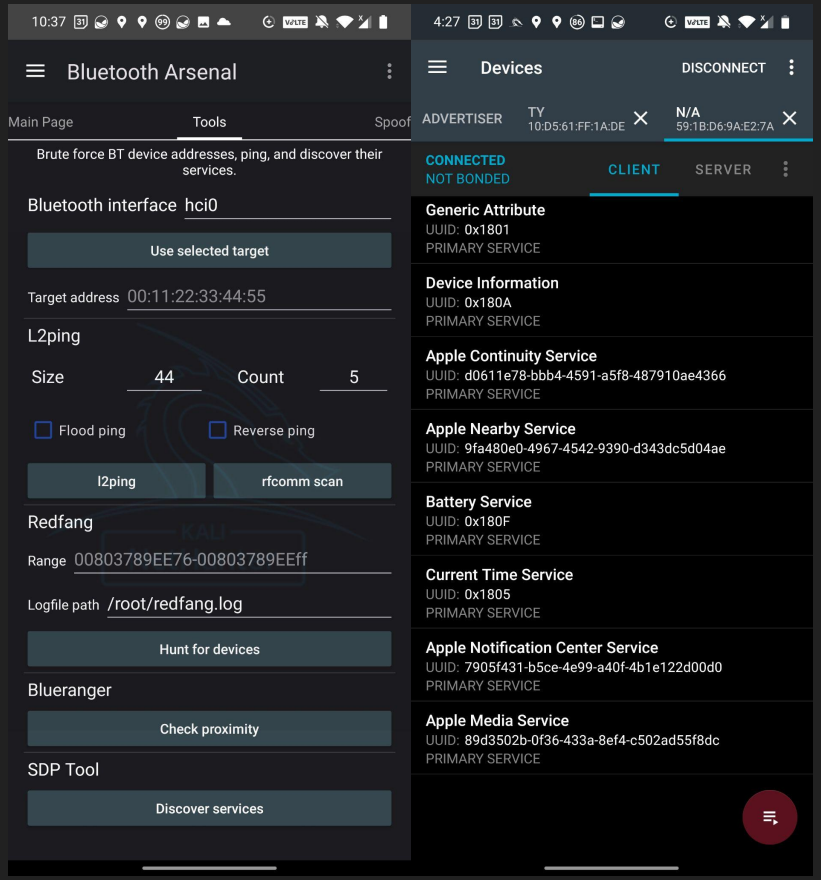
Bluetooth

External BLE adapter required for many attacks

Bluetooth Arsenal

- L2Ping: ping to crash
- Redfang: find unpaired devices
- Blueranger: proximity scanner
- Spoof: spoof device
- Carwhisper: inject audio to vulnerable cars

NRFConnect: Interface with GATT servers



Software Defined Radio (SDR)

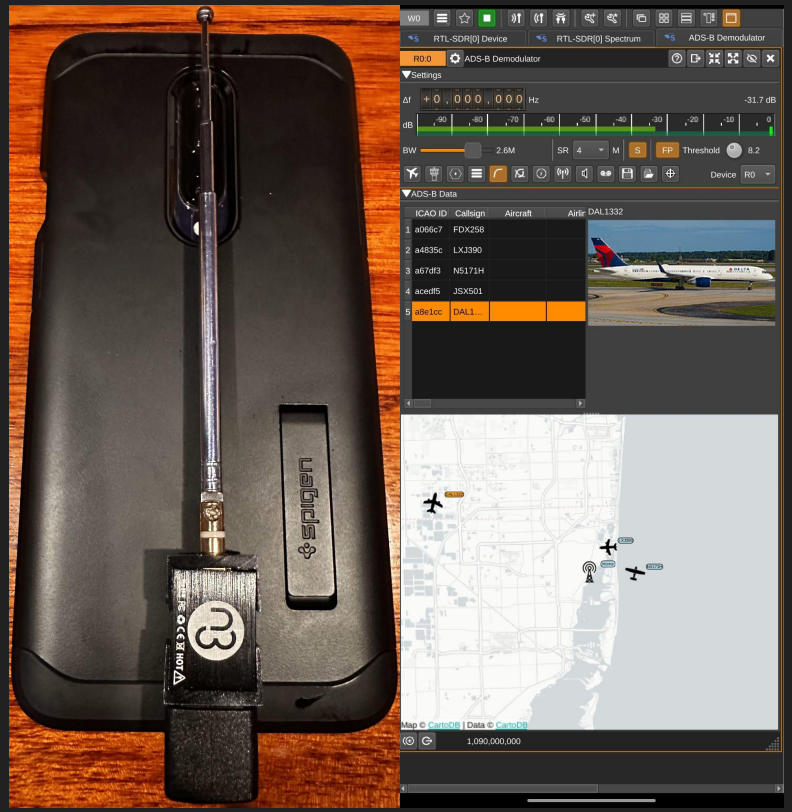
RTL-SDR adapter

RF Analyzer

SDRAngel

- ADS-B: Plane transponders
- AIS: Seaborne vessel transponders
- ISS: APRS packet from ISS
- Radiosonde: Weather balloon telemetry

KrakenSDR



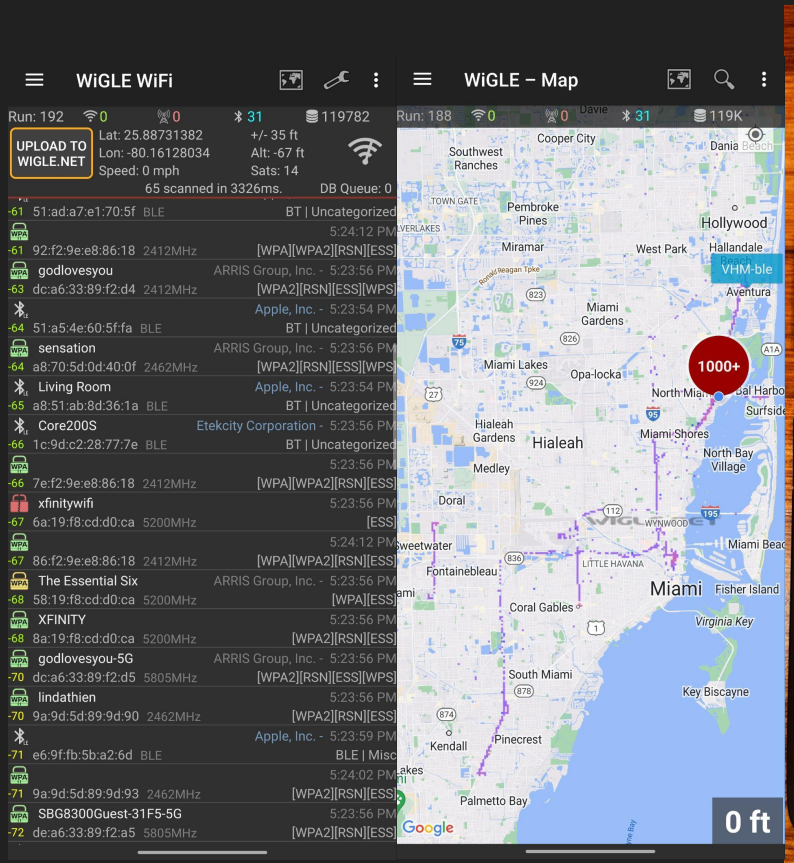
Wardriving

Kismet

Wigle App

- Wifi + BLE + GPS + GSM
- Live Map
- Upload to Wigle.net

External adapter extends range



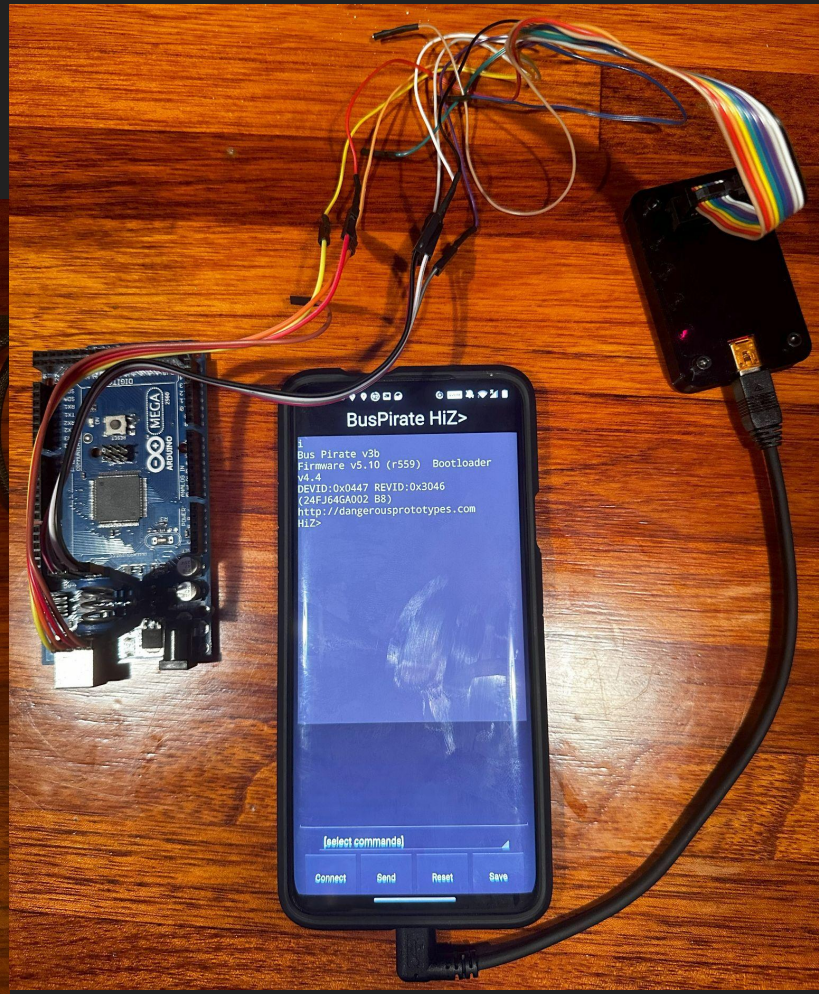
Hardware Hacking

Pinecil Soldering Iron

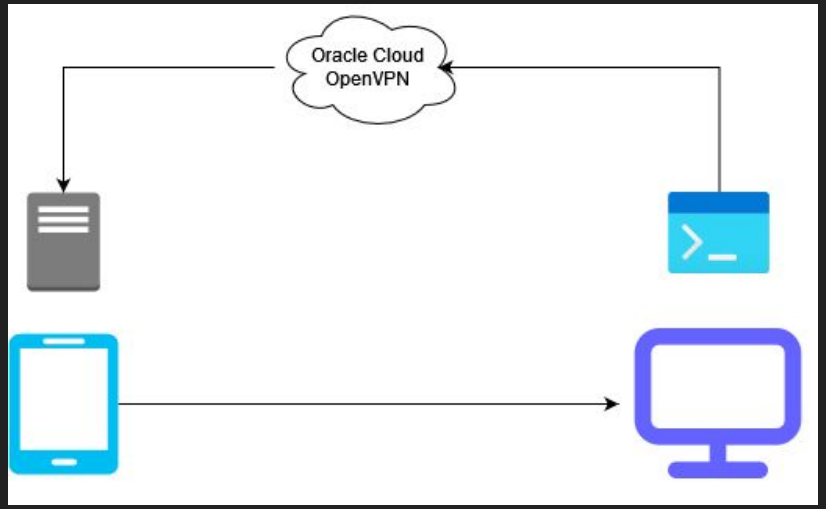
MaxVIEW Microscope

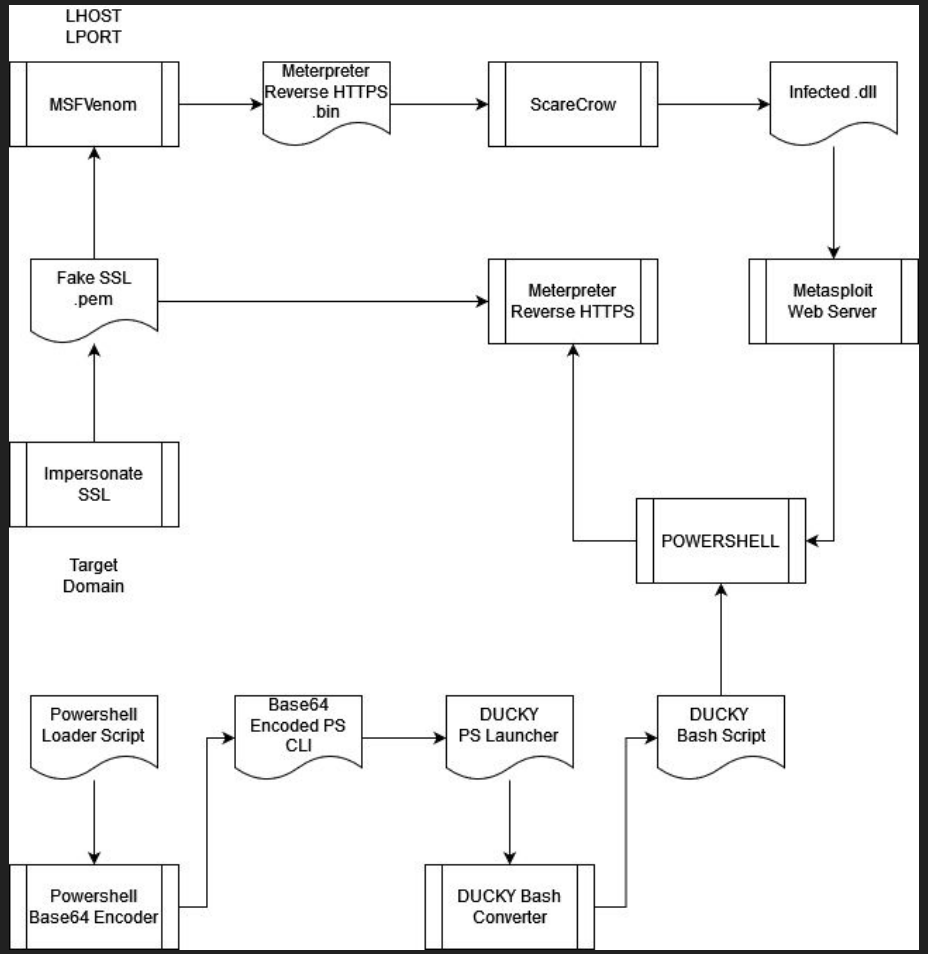
BusPirate GUI

Flashrom



Demo


Oracle Cloud
OpenVPN


LHOST
LPORT
MSFVenom
Meterpreter
Reverse HTTPS
.bin
ScareCrow
Infected .dll
Fake SSL
.pem
Meterpreter
Reverse HTTPS
Metasploit
Web Server
Impersonate
SSL
POWERSHELL
Target
Domain
Powershell
Loader Script
Base64
Encoded PS
CLI
DUCKY
PS Launcher
DUCKY
Bash Script
Powershell
Base64 Encoder
DUCKY Bash
Converter

Demo

Questions?