# ArcheryOS

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## Contents

# 1 Introduction

ArcheryOS is a rolling release arch based distribution with a distinct focus on penetration testing, digital forensics, programming, and privacy. It uses the default arch linux repositories, to ensure your software is always kept up to date.

## 1.1 Philosophy of ArcheryOS

- Simple

  ArcheryOS is designed to be simple to use and install, coming with a curses installer to simplify the arch installation process. It comes preinstalled with a minimal window manager of your choice, such as i3, openbox, or awesome.

  *Please note the installer is an offline installation program, simply copying all installed programs to the selected disk. Please update after installation*

- Privacy

  ArcheyOS has been configured with privacy in mind. Firefox has been configured to minimize any data leaks that may identify the user, such as browser fingerprinting and WebRTC IP leaks.

  You can visit privacytools for more information.

  You can also visit panopticlick to check your browser fingerprint and privacytools webrtc check to check for WebRTC IP leaks.

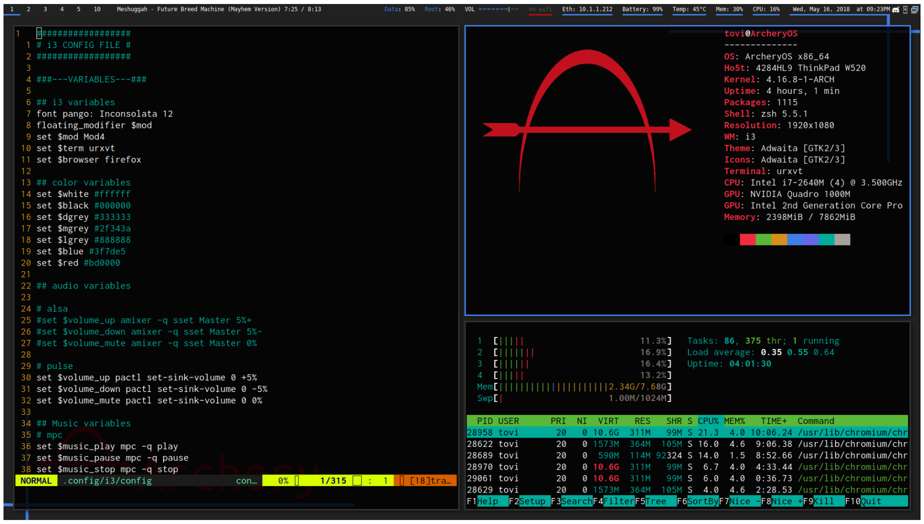
- Penetration Testing

  ArcheryOS has a suite of 61 basic and essential tools that every aspiring pentester should have. Unlike other pentesting centric distributions, we believe that providing hundreds of tools, that many people have no idea what they do, let alone how to use them, is not helpful. ArcheryOS comes with a much smaller selection, and documentation on how to use each and every one of them. When the time comes that this suite of tools become insufficient, the user may install any additional programs from the arch repositories or AUR that better suit the target the user is attacking.

# 2 Installation

ArcheryOS works as both a live boot OS and an installed OS.
To install ArcheryOS, press **Mod+Shift+F12**.

1. **Choose language**
2. **Prepare installation**
   (a) **Set virtual console**
   (b) **Set desktop keyboard layout**
   (c) **Partition disks and encrypt with luks, if you so choose**
   (d) **Mount partitions**
3. **Install base**
   (a) **Install base packages**
   (b) **Run mkinitpcio**
   (c) **Install bootloader**
4. **Configure base**
   (a) **Generate FSTAB**
   (b) **Set hostname**
   (c) **Set system locale**
   (d) **Set timezone**
   (e) **Set root password**
   (f) **Add new users (optional)**
   (g) **Set security and systemd tweaks (optional)**
5. **Close installer and reboot**
   (a) **To reboot, press Mod+Shift+s and then press r. Make sure to unmount the live boot medium.**



```
##################
# i3 CONFIG FILE #
##################

###---VARIABLES---###

## i3 variables
font pango: Inconsolata 12
floating_modifier $mod
set $mod Mod4
set $term urxvt
set $browser firefox

## color variables
set $white #ffffff
set $black #000000
set $dgrey #333333
set $mgrey #2f343a
set $lgrey #888888
set $blue #3f7de5
set $red #bd0000

## audio variables

# alsa
#set $volume_up amixer -q sset Master 5%+
#set $volume_down amixer -q sset Master 5%-
#set $volume_mute amixer -q sset Master 0%

# pulse
set $volume_up pactl set-sink-volume 0 +5%
set $volume_down pactl set-sink-volume 0 -5%
set $volume_mute pactl set-sink-volume 0 0%

## Music variables
# mpc
set $music_play mpc -q play
set $music_pause mpc -q pause
set $music_stop mpc -q stop
NORMAL  .config/i3/config          con…   0%     1/315    :   1    [18]tra…
```

```
tovi@ArcheryOS
--------------
OS: ArcheryOS x86_64
Ho5t: 4284HL9 ThinkPad W520
Kernel: 4.16.8-1-ARCH
Uptime: 4 hours, 1 min
Packages: 1115
Shell: zsh 5.5.1
Resolution: 1920x1080
WM: i3
Theme: Adwaita [GTK2/3]
Icons: Adwaita [GTK2/3]
Terminal: urxvt
CPU: Intel i7-2640M (4) @ 3.500GHz
GPU: NVIDIA Quadro 1000M
GPU: Intel 2nd Generation Core Pro
Memory: 2398MiB / 7862MiB
```

```
  1  [|||||                    11.3%]   Tasks: 86, 375 thr; 1 running
  2  [|||||||                  16.9%]   Load average: 0.35 0.55 0.64
  3  [||||||                   16.4%]   Uptime: 04:01:30
  4  [|||||                    13.2%]
  Mem[||||||||||||||||||||2.34G/7.68G]
  Swp[|                  1.00M/1024M]

  PID USER      PRI  NI  VIRT   RES   SHR S CPU% MEM%   TIME+  Command
28958 tovi       20   0 10.6G  311M   99M S 21.3  4.0 10:06.24 /usr/lib/chromium/chr
28622 tovi       20   0 1573M  364M  105M S 16.0  4.6  9:06.38 /usr/lib/chromium/chr
28689 tovi       20   0  590M  114M 92324 S 14.0  1.5  8:52.66 /usr/lib/chromium/chr
28970 tovi       20   0 10.6G  311M   99M S  6.7  4.0  4:33.44 /usr/lib/chromium/chr
29061 tovi       20   0 10.6G  311M   99M S  6.0  4.0  0:36.73 /usr/lib/chromium/chr
28629 tovi       20   0 1573M  364M  105M S  4.0  4.6  2:28.53 /usr/lib/chromium/chr
F1Help  F2Setup F3SearchF4FilterF5Tree  F6SortByF7Nice -F8Nice +F9Kill  F10Quit
```

Figure 1: i3 running vim, htop, and neofetch in 3 terminals

# 3 i3

## 3.1 Introduction to i3

"i3 is a tiling window manager, completely written from scratch. The target platforms are GNU/Linux and BSD operating systems, our code is Free and Open Source Software (FOSS) under the BSD licensei3 is primarily targeted at advanced users and developers." — Stapelberg [2]

## 3.2 keybinds

"Mod" is a reference to the super key, what is known as the "Windows key". Mod+F1 will show this document at any time

### 3.2.1 i3 basics

- **Mod+Enter** — Open a terminal window
- **Mod+Shift+Enter** — Open a terminal window running tmux
- **Mod+q** — Close active window
- **Mod+Shift+q** — Close active window
- **Mod+Space** — Toggles between a floating and non floating window

- **Mod+Shift+Space** — Makes a tiled window into a floating window
- **Mod+Shift+r** — Restart i3
- **Mod+d** — rofi (a program launcher)
- **Mod+Shift+d** — rofi in “show window” mode (allows user to navigate to running programs)
- **Mod+t** — Toggle between spawning new windows horizontally or vertically to the active window
- **Mod+v** — Spawn new windows vertically from active window
- **Mod+Shift+v** — Spawn new windows horizontally from active window
- **Mod+f** — Fullscreen
- **Mod+h** — Move to window left of active window
- **Mod+Shift+h** — Move active window left
- **Mod+j** — Move to window below of active window
- **Mod+Shift+j** — Move active window down
- **Mod+k** — Move to window above of active window
- **Mod+Shift+k** — Move active window up
- **Mod+l** — Move to window right of active window
- **Mod+Shift+l** — Move active window right
- **Mod+Shift+y** — Expand active windows width by 10 px
- **Mod+Shift+u** — Shrink active windows hight by 10px
- **Mod+Shift+i** — Expand active windows hight by 10px
- **Mod+o** — Opens a GUI program menu
- **Mod+Shift+o** — Shrink active windows width by 10 px
- **Mod+e** — Change to default layout
- **Mod+w** — Change to tabbed layout
- **Mod+s** — Change to stacked layout
- **Mod+Shift+s** — Lock/logout/shutdown/reboot system
- **Mod+a** — Focuses parent program
- **Mod+n** — Expand outer gaps

- **Mod+Shift+n** — Shrink outer gaps
- **Mod+g** — Expand inner gaps
- **Mod+Shift+g** — Shrink inner gaps
- **Mod+c** — Sets gaps to default width
- **Mod+Shift+c** — Turns off gaps
- **Mod+u** — Next song
- **Mod+y** — Previous song
- **Mod+`** — Changes to a random wallpaper from /usr/share/wallpapers

### 3.2.2 Programs

- **Mod+Shift+a** — Audio (pavucontrol)
- **Mod+b** — Browser (firefox)
- **Mod+i** — System information (htop)
- **Mod+Shift+m** — Music (ncmpcpp)
- **Mod+m** — Mute audio
- **Mod+p** — Play/pause music
- **Mod+Shift+p** — Take screenshot (scrot)
- **Mod+r** — File manager (ranger)
- **Mod+Shift+w** — Newsboat
- **Mod+z** — Toggle dropdown terminal
- **Mod+Shift+z** — Reopen dropdown terminal (in case you accidentally close it)

# 4 Pentesting

## 4.1 List of pentesting tools installed

### 4.1.1 airbase-ng

Airbase-ng is a multi-purpose tool aimed at attacking clients as opposed to the Access Point (AP) itself. Since it is so versatile and flexible, summarizing it is a challenge. Here are some of the feature highlights:

- Implements the Caffe Latte WEP client attack
- Implements the Hirte WEP client attack
- Ability to cause the WPA/WPA2 handshake to be captured
- Ability to act as an ad-hoc Access Point
- Ability to act as a full Access Point
- Ability to filter by SSID or client MAC addresses
- Ability to manipulate and resend packets
- Ability to encrypt sent packets and decrypt received packets

The main idea is of the implementation is that it should encourage clients to associate with the fake AP, not prevent them from accessing the real AP.

```
[root@ArcheryOS ~]# airbase-ng --help

  Airbase-ng 1.2 - (C) 2008-2018 Thomas d'Otreppe
  Original work: Martin Beck
  https://www.aircrack-ng.org

  usage: airbase-ng <options> <replay interface>

  Options:

      -a bssid        : set Access Point MAC address
      -i iface        : capture packets from this interface
      -w WEP key      : use this WEP key to en-/decrypt packets
      -h MAC          : source mac for MITM mode
      -f disallow     : disallow specified client MACs (default: allow)
      -W 0|1          : [don't] set WEP flag in beacons 0|1 (default:
          auto)
      -q              : quiet (do not print statistics)
      -v              : verbose (print more messages)
      -A              : Ad-Hoc Mode (allows other clients to peer)
      -Y in|out|both  : external packet processing
      -c channel      : sets the channel the AP is running on
      -X              : hidden ESSID
```

```
    -s              : force shared key authentication (default: auto)
    -S              : set shared key challenge length (default: 128)
    -L              : Caffe-Latte WEP attack (use if driver can't send
        frags)
    -N              : cfrag WEP attack (recommended)
    -x nbpps        : number of packets per second (default: 100)
    -y              : disables responses to broadcast probes
    -0              : set all WPA,WEP,open tags. can't be used with -z
        & -Z
    -z type         : sets WPA1 tags. 1=WEP40 2=TKIP 3=WRAP 4=CCMP
        5=WEP104
    -Z type         : same as -z, but for WPA2
    -V type         : fake EAPOL 1=MD5 2=SHA1 3=auto
    -F prefix       : write all sent and received frames into pcap file
    -P              : respond to all probes, even when specifying ESSIDs
    -I interval     : sets the beacon interval value in ms
    -C seconds      : enables beaconing of probed ESSID values
        (requires -P)
    -n hex          : User specified ANonce when doing the 4-way
        handshake

  Filter options:
    --bssid MAC     : BSSID to filter/use
    --bssids file   : read a list of BSSIDs out of that file
    --client MAC    : MAC of client to filter
    --clients file  : read a list of MACs out of that file
    --essid ESSID   : specify a single ESSID (default: default)
    --essids file   : read a list of ESSIDs out of that file

    --help          : Displays this usage screen
```

### 4.1.2 aircrack-ng

aircrack-ng is an 802.11 WEP and WPA/WPA2-PSK key cracking program. It can recover the WEP key once enough encrypted packets have been captured with airodump-ng. This part of the aircrack-ng suite determines the WEP key using two fundamental methods. The first method is via the PTW approach (Pyshkin, Tews, Weinmann). The main advantage of the PTW approach is that very few data packets are required to crack the WEP key. The second method is the FMS/KoreK method. The FMS/KoreK method incorporates various statistical attacks to discover the WEP key and uses these in combination with brute forcing. Additionally, the program offers a dictionary method for determining the WEP key. For cracking WPA/WPA2 pre-shared keys, a wordlist (file or stdin) or an airolib-ng has to be used.

```
[root@ArcheryOS ~]# aircrack-ng --help

  Aircrack-ng 1.2 - (C) 2006-2018 Thomas d'Otreppe
```

```
https://www.aircrack-ng.org

usage: aircrack-ng [options] <.cap / .ivs file(s)>

Common options:

    -a <amode> : force attack mode (1/WEP, 2/WPA-PSK)
    -e <essid> : target selection: network identifier
    -b <bssid> : target selection: access point's MAC
    -p <nbcpu> : # of CPU to use (default: all CPUs)
    -q        : enable quiet mode (no status output)
    -C <macs> : merge the given APs to a virtual one
    -l <file> : write key to file. Overwrites file.

Static WEP cracking options:

    -c        : search alpha-numeric characters only
    -t        : search binary coded decimal chr only
    -h        : search the numeric key for Fritz!BOX
    -d <mask> : use masking of the key (A1:XX:CF:YY)
    -m <maddr> : MAC address to filter usable packets
    -n <nbits> : WEP key length : 64/128/152/256/512
    -i <index> : WEP key index (1 to 4), default: any
    -f <fudge> : bruteforce fudge factor, default: 2
    -k <korek> : disable one attack method (1 to 17)
    -x or -x0 : disable bruteforce for last keybytes
    -x1       : last keybyte bruteforcing (default)
    -x2       : enable last 2 keybytes bruteforcing
    -X        : disable bruteforce  multithreading
    -y        : experimental single bruteforce mode
    -K        : use only old KoreK attacks (pre-PTW)
    -s        : show the key in ASCII while cracking
    -M <num>  : specify maximum number of IVs to use
    -D        : WEP decloak, skips broken keystreams
    -P <num>  : PTW debug: 1: disable Klein, 2: PTW
    -1        : run only 1 try to crack key with PTW

WEP and WPA-PSK cracking options:

    -w <words> : path to wordlist(s) filename(s)

WPA-PSK options:

    -E <file> : create EWSA Project file v3
    -j <file> : create Hashcat v3.6+ file (HCCAPX)
    -J <file> : create Hashcat file (HCCAP)
    -S        : WPA cracking speed test
    -r <DB>   : path to airolib-ng database
                (Cannot be used with -w)
```

```
  Other options:

      -u        : Displays # of CPUs & MMX/SSE support
      --help    : Displays this usage screen
```

### 4.1.3 airdecap-ng

airdecap-ng decrypts a WEP/WPA crypted pcap file to a unencrypted one by using the right WEP/WPA keys.

```
[root@ArcheryOS ~]# airdecap-ng --help

  Airdecap-ng 1.2 - (C) 2006-2018 Thomas d'Otreppe
  https://www.aircrack-ng.org

  usage: airdecap-ng [options] <pcap file>

  Common options:
      -l         : don't remove the 802.11 header
      -b <bssid> : access point MAC address filter
      -e <essid> : target network SSID
      -o <fname> : output file for decrypted packets (default <src>-dec)

  WEP specific option:
      -w <key>   : target network WEP key in hex
      -c <fname> : output file for corrupted WEP packets (default
          <src>-bad)

  WPA specific options:
      -p <pass>  : target network WPA passphrase
      -k <pmk>   : WPA Pairwise Master Key in hex

      --help     : Displays this usage screen
```

### 4.1.4 airdecloak-ng

airuncloak-ng is a tool that removes wep cloaking from a pcap file. Some WIPS (actually one) can actively ”prevent” cracking a WEP key by inserting chaff (fake wep frames) in the air to fool aircrack-ng. In some rare cases, cloaking fails and the key can be recovered without removing this chaff. In the cases where the key cannot be recovered, use this tool to filter out chaff.

```
[root@ArcheryOS ~]# airdecloak-ng --help

  Airdecloak-ng 1.2 - (C) 2006-2018 Thomas d'Otreppe
  https://www.aircrack-ng.org
```

```
 usage: airdecloak-ng [options]

 options:

  Mandatory:
    -i <file>           : Input capture file
    --ssid <ESSID>      : ESSID of the network to filter
       or
    --bssid <BSSID>     : BSSID of the network to filter

  Optional:
    -o <file>           : Output packets (valid) file (default:
        <src>-filtered.pcap)
    -c <file>           : Output packets (cloaked) file (default:
        <src>-cloaked.pcap)
    -u <file>           : Output packets (unknown/ignored) file
        (default: invalid_status.pcap)
    --filters <filters> : Apply filters (separated by a comma). Filters:
         signal:             Try to filter based on signal.
         duplicate_sn:       Remove all duplicate sequence numbers
                             for both the AP and the client.
         duplicate_sn_ap:    Remove duplicate sequence number for
                             the AP only.
         duplicate_sn_client: Remove duplicate sequence number for the
                             client only.
         consecutive_sn:     Filter based on the fact that IV should
                             be consecutive (only for AP).
         duplicate_iv:       Remove all duplicate IV.
         signal_dup_consec_sn: Use signal (if available), duplicate and
                             consecutive sequence number (filtering is
                              much more precise than using all these
                              filters one by one).
    --null-packets      : Assume that null packets can be cloaked.
    --disable-base_filter : Do not apply base filter.
    --drop-frag         : Drop fragmented packets

    --help              : Displays this usage screen
```

### 4.1.5 aireplay-ng

aireplay-ng is used to inject/replay frames. The primary function is to generate traffic for the later use in aircrack-ng for cracking the WEP and WPA-PSK keys. There are different attacks which can cause deauthentications for the purpose of capturing WPA handshake data, fake authentications, Interactive packet replay, hand-crafted ARP request injection and ARP-request reinjection. With the packetforge-ng tool it's possible to create arbitrary frames.

```
[root@ArcheryOS ~]# aireplay-ng --help
```

```
Aireplay-ng 1.2 - (C) 2006-2018 Thomas d'Otreppe
https://www.aircrack-ng.org

usage: aireplay-ng <options> <replay interface>

Filter options:

    -b bssid : MAC address, Access Point
    -d dmac  : MAC address, Destination
    -s smac  : MAC address, Source
    -m len   : minimum packet length
    -n len   : maximum packet length
    -u type  : frame control, type  field
    -v subt  : frame control, subtype field
    -t tods  : frame control, To   DS bit
    -f fromds : frame control, From DS bit
    -w iswep : frame control, WEP  bit
    -D       : disable AP detection

Replay options:

    -x nbpps : number of packets per second
    -p fctrl : set frame control word (hex)
    -a bssid : set Access Point MAC address
    -c dmac  : set Destination MAC address
    -h smac  : set Source      MAC address
    -g value : change ring buffer size (default: 8)
    -F       : choose first matching packet

    Fakeauth attack options:

    -e essid : set target AP SSID
    -o npckts : number of packets per burst (0=auto, default: 1)
    -q sec   : seconds between keep-alives
    -Q       : send reassociation requests
    -y prga  : keystream for shared key auth
    -T n     : exit after retry fake auth request n time

    Arp Replay attack options:

    -j       : inject FromDS packets

    Fragmentation attack options:

    -k IP    : set destination IP in fragments
    -l IP    : set source IP in fragments

    Test attack options:
    -B       : activates the bitrate test

Source options:

    -i iface : capture packets from this interface
    -r file  : extract packets from this pcap file

Miscellaneous options:

    -R                    : disable /dev/rtc usage
    --ignore-negative-one : if the interface's channel can't be
        determined,
                          ignore the mismatch, needed for unpatched
                              cfg80211
    --deauth-rc rc        : Deauthentication reason code [0-254]
        (Default: 7)

Attack modes (numbers can still be used):

    --deauth      count : deauthenticate 1 or all stations (-0)
    --fakeauth    delay : fake authentication with AP (-1)
    --interactive      : interactive frame selection (-2)
    --arpreplay        : standard ARP-request replay (-3)
    --chopchop         : decrypt/chopchop WEP packet (-4)
    --fragment         : generates valid keystream (-5)
    --caffe-latte      : query a client for new IVs (-6)
    --cfrag            : fragments against a client (-7)
    --migmode          : attacks WPA migration mode (-8)
    --test             : tests injection and quality (-9)

    --help             : Displays this usage screen
```

### 4.1.6 airmon-ng

Airmon-ng is a script can be used to enable monitor mode on wireless interfaces. It may also be used to go back from monitor mode to managed mode. Entering the airmon-ng command without parameters will show the interfaces status. It can also list/kill programs that can interfere with the wireless card operation.

```
[root@ArcheryOS ~]# airmon-ng --help

usage: airmon-ng <start|stop|check> <interface> [channel or frequency]
```

### 4.1.7 airodump-ng

airodump-ng is used for packet capturing of raw 802.11 frames for the intent of using them with aircrack-ng. If you have a GPS receiver connected to the computer, airodump-ng is capable of logging the coordinates of the found access points. Additionally, airodump-ng writes out a text file containing the details of all access points and clients seen.

```
[root@ArcheryOS ~]# airodump-ng --help

  Airodump-ng 1.2 - (C) 2006-2018 Thomas d'Otreppe
  https://www.aircrack-ng.org

  usage: airodump-ng <options> <interface>[,<interface>,...]

  Options:
      --ivs               : Save only captured IVs
      --gpsd              : Use GPSd
      --write     <prefix> : Dump file prefix
      -w                  : same as --write
      --beacons           : Record all beacons in dump file
      --update      <secs> : Display update delay in seconds
      --showack           : Prints ack/cts/rts statistics
      -h                  : Hides known stations for --showack
      -f           <msecs> : Time in ms between hopping channels
      --berlin      <secs> : Time before removing the AP/client
                            from the screen when no more packets
                            are received (Default: 120 seconds)
      -r            <file> : Read packets from that file
      -x           <msecs> : Active Scanning Simulation
      --manufacturer      : Display manufacturer from IEEE OUI list
      --uptime            : Display AP Uptime from Beacon Timestamp
      --wps               : Display WPS information (if any)
      --output-format
                 <formats> : Output format. Possible values:
                            pcap, ivs, csv, gps, kismet, netxml
      --ignore-negative-one : Removes the message that says
                            fixed channel <interface>: -1
      --write-interval
                 <seconds> : Output file(s) write interval in seconds

  Filter options:
      --encrypt  <suite>  : Filter APs by cipher suite
      --netmask <netmask> : Filter APs by mask
      --bssid    <bssid>  : Filter APs by BSSID
      --essid    <essid>  : Filter APs by ESSID
      --essid-regex <regex> : Filter APs by ESSID using a regular
                            expression
      -a                  : Filter unassociated clients

  By default, airodump-ng hop on 2.4GHz channels.
  You can make it capture on other/specific channel(s) by using:
      --ht20              : Set channel to HT20 (802.11n)
      --ht40-             : Set channel to HT40- (802.11n)
```

```
     --ht40+             : Set channel to HT40+ (802.11n)
     --channel <channels> : Capture on specific channels
     --band <abg>        : Band on which airodump-ng should hop
     -C    <frequencies> : Uses these frequencies in MHz to hop
     --cswitch <method>  : Set channel switching method
                  0      : FIFO (default)
                  1      : Round Robin
                  2      : Hop on last
     -s                  : same as --cswitch

     --help              : Displays this usage screen
```

### 4.1.8 airolib-ng

airolib-ng is a tool for the aircrack-ng suite to store and manage essid and password lists, compute their Pairwise Master Keys (PMKs) and use them in WPA/WPA2 cracking. The program uses the lightweight SQLite3 database as the storage mechanism which is available on most platforms. The SQLite3 database was selected taking in consideration platform availability plus management, memory and disk overhead.

```
[root@ArcheryOS ~]# airolib-ng --help

  Airolib-ng 1.2 - (C) 2007, 2008, 2009 ebfe
  https://www.aircrack-ng.org

  Usage: airolib-ng <database> <operation> [options]

  Operations:

      --stats       : Output information about the database.
      --sql <sql>   : Execute specified SQL statement.
      --clean [all] : Clean the database from old junk. ’all’ will also
                      reduce filesize if possible and run an integrity
                          check.
      --batch       : Start batch-processing all combinations of ESSIDs
                      and passwords.
      --verify [all] : Verify a set of randomly chosen PMKs.
                      If ’all’ is given, all invalid PMK will be deleted.

      --import [essid|passwd] <file> :
                      Import a text file as a list of ESSIDs or
                          passwords.
      --import cowpatty <file>      :
                      Import a cowpatty file.

      --export cowpatty <essid> <file> :
                      Export to a cowpatty file.
```

### 4.1.9 airserv-ng

airserv-ng is a wireless card server which allows multiple wireless application programs to independently use a wireless card via a client-server TCP network connection. All operating system and wireless card driver specific code is incorporated into the server. This eliminates the need for each wireless application to contain the complex wireless card and driver logic. It is also supports multiple operating systems.

```
[root@ArcheryOS ~]# airserv-ng -h

  Airserv-ng 1.2 - (C) 2007, 2008, 2009 Andrea Bittau
  https://www.aircrack-ng.org

  Usage: airserv-ng <options>

  Options:

      -h         : This help screen
      -p  <port> : TCP port to listen on (default:666)
      -d <iface> : Wifi interface to use
      -c  <chan> : Channel to use
      -v <level> : Debug level (1 to 3; default: 1)
```

### 4.1.10 airtun-ng

airtun-ng creates a virtual tunnel interface (atX) for sending arbitrary IP packets by using raw ieee802.11 packet injection.

```
[root@ArcheryOS ~]# airtun-ng --help

  Airtun-ng 1.2 - (C) 2006-2018 Thomas d’Otreppe
  Original work: Martin Beck
  https://www.aircrack-ng.org

  usage: airtun-ng <options> <replay interface>

     -x nbpps       : number of packets per second (default: 100)
     -a bssid       : set Access Point MAC address
                      In WDS Mode this sets the Receiver
     -i iface       : capture packets from this interface
     -y file        : read PRGA from this file
     -w wepkey      : use this WEP-KEY to encrypt packets
     -p pass        : use this WPA passphrase to decrypt packets
                      (use with -a and -e)
     -e essid       : target network SSID (use with -p)
     -t tods        : send frames to AP (1) or to client (0)
                      or tunnel them into a WDS/Bridge (2)
     -r file        : read frames out of pcap file
```

```
      -h MAC          : source MAC address

  WDS/Bridge Mode options:
      -s transmitter : set Transmitter MAC address for WDS Mode
      -b              : bidirectional mode. This enables communication
                        in Transmitter's AND Receiver's networks.
                        Works only if you can see both stations.

  Repeater options:
      --repeat        : activates repeat mode
      --bssid <mac>   : BSSID to repeat
      --netmask <mask> : netmask for BSSID filter

      --help          : Displays this usage screen
```

### 4.1.11 airventriloquist-ng

```
[root@ArcheryOS ~]# airventriloquist-ng --help

  Airventriloquist-ng 1.2 - (C) 2015 Tim de Waal
  https://www.aircrack-ng.org

  usage: airventriloquist-ng [options]

      -i <replay interface> : Interface to listen and inject on
      -d | --deauth         : Send active deauths to encrypted stations
      -e | --essid <value>  : ESSID of target network
      -p | --passphrase <val> : WPA Passphrase of target network
      -c | --icmp           : Respond to all ICMP frames (Debug)
      -n | --dns            : IP to resolve all DNS queries to
      -s | --hijack <URL>   : URL to look for in HTTP requests
                              <URL> can have wildcards
                                 eg: *jquery*.js*
      -r | --redirect <URL> : URL to redirect to
      -v | --verbose        : Verbose output
      --help                : This super helpful message
```

### 4.1.12 apktool

apktool is a tool for reverse engineering 3rd party, closed, binary Android apps. It can decode resources to nearly original form and rebuild them after making some modifications.

```
[root@ArcheryOS ~]# apktool
Apktool v2.3.3 - a tool for reengineering Android apk files
with smali v2.2.2 and baksmali v2.2.2
Copyright 2014 Ryszard Winiewski <brut.alll@gmail.com>
```

```
Updated by Connor Tumbleson <connor.tumbleson@gmail.com>

usage: apktool
 -advance,--advanced prints advance information.
 -version,--version  prints the version then exits
usage: apktool if|install-framework [options] <framework.apk>
 -p,--frame-path <dir> Stores framework files into <dir>.
 -t,--tag <tag>        Tag frameworks using <tag>.
usage: apktool d[ecode] [options] <file_apk>
 -f,--force            Force delete destination directory.
 -o,--output <dir>     The name of folder that gets written. Default is
     apk.out
 -p,--frame-path <dir> Uses framework files located in <dir>.
 -r,--no-res           Do not decode resources.
 -s,--no-src           Do not decode sources.
 -t,--frame-tag <tag>  Uses framework files tagged by <tag>.
usage: apktool b[uild] [options] <app_path>
 -f,--force-all        Skip changes detection and build all files.
 -o,--output <dir>     The name of apk that gets written. Default is
     dist/name.apk
 -p,--frame-path <dir> Uses framework files located in <dir>.

For additional info, see: http://ibotpeaches.github.io/Apktool/
For smali/baksmali info, see: https://github.com/JesusFreke/smali
```

### 4.1.13 autopsy

Autopsy is a digital forensics platform and graphical interface to The Sleuth Kit and other digital forensics tools. It is used by law enforcement, military, and corporate examiners to investigate what happened on a computer. You can even use it to recover photos from your camera's memory card.

```
[root@ArcheryOS ~]# autopsy
```

### 4.1.14 bettercap

bettercap is the Swiss army knife for network attacks and monitoring.

```
[root@ArcheryOS ~]# bettercap --help
Usage of bettercap:
  -autostart string
     Comma separated list of modules to auto start. (default
          "events.stream, net.recon, update.check")
  -caplet string
     Read commands from this file and execute them in the interactive
          session.
  -cpu-profile file
```

```
     Write cpu profile file.
  -debug
     Print debug messages.
  -env-file string
     Load environment variables from this file if found, set to empty
          to disable environment persistence.
  -eval string
     Run one or more commands separated by ; in the interactive
          session, used to set variables via command line.
  -iface string
     Network interface to bind to, if empty the default interface will
          be auto selected.
  -mem-profile file
     Write memory profile to file.
  -no-colors
     Disable output color effects.
  -no-history
     Disable interactive session history file.
  -silent
     Suppress all logs which are not errors.
```

### 4.1.15 burpsuite

is a graphical tool for testing Web application security. The tool is written in Java and developed by PortSwigger Security.

```
[root@ArcheryOS ~]# burpsuite
```

### 4.1.16 chkrootkit

chkrootkit is a tool to locally check for signs of a rootkit.

```
[root@ArcheryOS ~]# chkrootkit
```

### 4.1.17 chntpw

chntpw is a program used to remove or change windows passwords when run from a live usb or cd.

```
[root@ArcheryOS ~]# chntpw -h
chntpw: change password of a user in a Windows SAM file, or invoke
    registry editor. Should handle both 32 and 64 bit windows and all
    version from NT3.x to Win8.1
chntpw [OPTIONS] <samfile> [systemfile] [securityfile] [otherreghive]
    [...]
 -h          This message
 -u <user>   Username or RID (0x3e9 for example) to interactively edit
 -l         list all users in SAM file and exit
 -i         Interactive Menu system
 -e         Registry editor. Now with full write support!
 -d         Enter buffer debugger instead (hex editor),
 -v         Be a little more verbose (for debuging)
 -L         For scripts, write names of changed files to /tmp/changed
 -N         No allocation mode. Only same length overwrites possible
     (very safe mode)
 -E         No expand mode, do not expand hive file (safe mode)

Usernames can be given as name or RID (in hex with 0x first)
```

### 4.1.18 cowpatty

cowpatty is a program that performs an offline dictionary attack against WPA/WPA2 .cap files.

```
[root@ArcheryOS ~]# cowpatty
cowpatty 4.6 - WPA-PSK dictionary attack. <jwright@hasborg.com>
cowpatty: Must supply a pcap file with -r

Usage: cowpatty [options]

   -f    Dictionary file
   -d    Hash file (genpmk)
   -r    Packet capture file
   -s    Network SSID (enclose in quotes if SSID includes spaces)
   -c    Check for valid 4-way frames, does not crack
   -h    Print this help information and exit
   -v    Print verbose information (more -v for more verbosity)
   -V    Print program version and exit
```

### 4.1.19 crowbar

Crowbar is a brute forcing tool that can be used when hydra is not applicable.

```
[root@ArcheryOS ~]# crowbar -h
usage: Usage: use --help for further information

Crowbar is a brute force tool which supports OpenVPN, Remote Desktop
    Protocol,
SSH Private Keys and VNC Keys.

positional arguments:
  options

optional arguments:
  -h, --help          show this help message and exit
  -b {vnckey,sshkey,rdp,openvpn}, --brute {vnckey,sshkey,rdp,openvpn}
                      Target service
  -s SERVER, --server SERVER
                      Static target
  -S SERVER_FILE, --serverfile SERVER_FILE
                      Multiple targets stored in a file
  -u USERNAME [USERNAME ...], --username USERNAME [USERNAME ...]
                      Static name to login with
  -U USERNAME_FILE, --usernamefile USERNAME_FILE
                      Multiple names to login with, stored in a file
  -n THREAD, --number THREAD
                      Number of threads to be active at once
  -l FILE, --log FILE Log file (only write attempts)
  -o FILE, --output FILE
                      Output file (write everything else)
  -c PASSWD, --passwd PASSWD
                      Static password to login with
  -C FILE, --passwdfile FILE
                      Multiple passwords to login with, stored in a file
  -t TIMEOUT, --timeout TIMEOUT
                      [SSH] How long to wait for each thread (seconds)
  -p PORT, --port PORT Alter the port if the service is not using the
      default
                      value
  -k KEY_FILE, --keyfile KEY_FILE
                      [SSH/VNC] (Private) Key file or folder containing
                      multiple files
  -m CONFIG, --config CONFIG
                      [OpenVPN] Configuration file
  -d, --discover      Port scan before attacking open ports
  -v, --verbose       Enable verbose output (-vv for more)
  -D, --debug         Enable debug mode
  -q, --quiet         Only display successful logins
```

### 4.1.20 crunch

crunch is used to brute force logins and passwords by creating all iterations of a specified length, and specified charset.

```
[root@ArcheryOS ~]# crunch --help
crunch version 3.6

Crunch can create a wordlist based on criteria you specify. The outout
    from crunch can be sent to the screen, file, or to another program.

Usage: crunch <min> <max> [options]
where min and max are numbers
```

```
Please refer to the man page for instructions and examples on how to use
    crunch
```

### 4.1.21 cupp

cupp (Common User Passwords Profiler) creates a custom wordlist based on keywords about the target.

```
[root@ArcheryOS ~]# cupp3 -h
usage: cupp3 [-h] (-i | -w FILENAME | -l | -a | -v) [-q]

Common User Passwords Profiler

optional arguments:
  -h, --help       show this help message and exit
  -i, --interactive Interactive questions for user password profiling
  -w FILENAME      Use this option to improve existing dictionary, or
      WyD.pl
                   output to make some pwnsauce
  -l               Download huge wordlists from repository
  -a               Parse default usernames and passwords directly from
                   Alecto DB. Project Alecto uses purified databases of
                   Phenoelit and CIRT which were merged and enhanced
  -v, --version    version of this program
  -q, --quiet      Quiet mode (don't print banner)
```

### 4.1.22 cymothoa

Cymothoa is a backdooring tool, that inject backdoor's shellcode directly into running applications. Stealth and lightweight...

```
[root@ArcheryOS ~]# cymothoa -h
                           _
                       _  | |
  ____ _  _ ____  ___ _| |_| |__ ___  _____
 / ___) | | |  \ / _ (_  _)  _ \ / _ \(____ |
( (___| |_| | | | | |_| || |_| | | | |_| / ___ |
 \____)\__ |_|_|_|\___/ \__)_| |_|\___/\_____|
     (____/
Runtime shellcode injection, for stealthy backdoors...

By codwizard (codwizard@gmail.com) and crossbower (crossbower@gmail.com)
from ES-Malaria by ElectronicSouls (http://www.0x4553.org).

Usage:
   cymothoa -p <pid> -s <shellcode_number> [options]

Main options:
   -p process pid
   -s shellcode number
   -l memory region name for shellcode injection (default /lib/ld)
      see /proc/pid/maps...
   -h print this help screen
   -S list available shellcodes

Payload personalization options:
   -x set the IP
   -y set the port number
   -r set the port number 2
   -z set the username (3 bytes)
   -o set the password (8 bytes)
   -i set the interpreter (def /bin/bash)
   -c set the script code (from cmd line)
   -F do not fork parent process
```

### 4.1.23 dirb

DIRB is a Web Content Scanner. It looks for web files by launching a dictionary attack.

```
[root@ArcheryOS ~]# dirb

-----------------
DIRB v2.22
By The Dark Raver
-----------------

dirb <url_base> [<wordlist_file(s)>] [options]

========================= NOTES =========================
 <url_base> : Base URL to scan. (Use -resume for session resuming)
 <wordlist_file(s)> : List of wordfiles.
     (wordfile1,wordfile2,wordfile3...)

======================== HOTKEYS ========================
 'n' -> Go to next directory.
 'q' -> Stop scan. (Saving state for resume)
 'r' -> Remaining scan stats.

======================== OPTIONS ========================
 -a <agent_string> : Specify your custom USER_AGENT.
 -c <cookie_string> : Set a cookie for the HTTP request.
 -f : Fine tunning of NOT_FOUND (404) detection.
 -H <header_string> : Add a custom header to the HTTP request.
 -i : Use case-insensitive search.
 -l : Print "Location" header when found.
 -N <nf_code>: Ignore responses with this HTTP code.
 -o <output_file> : Save output to disk.
 -p <proxy[:port]> : Use this proxy. (Default port is 1080)
 -P <proxy_username:proxy_password> : Proxy Authentication.
 -r : Don't search recursively.
 -R : Interactive recursion. (Asks for each directory)
 -S : Silent Mode. Don't show tested words. (For dumb terminals)
 -t : Don't force an ending '/' on URLs.
 -u <username:password> : HTTP Authentication.
 -v : Show also NOT_FOUND pages.
 -w : Don't stop on WARNING messages.
 -X <extensions> / -x <exts_file> : Append each word with this
     extensions.
 -z <milisecs> : Add a miliseconds delay to not cause excessive Flood.

======================== EXAMPLES =======================
 dirb http://url/directory/ (Simple Test)
 dirb http://url/ -X .html (Test files with '.html' extension)
 dirb http://url/ /usr/share/dirb/wordlists/vulns/apache.txt (Test with
     apache.txt wordlist)
 dirb https://secure_url/ (Simple Test with SSL)
```

### 4.1.24 dirbuster

DirBuster is a multi threaded java application designed to brute force directories and files names on web/application servers. Often is the case now of what looks like a web server in a state of default installation is actually not, and has pages and applications hidden within. DirBuster attempts to find these.

```
[root@ArcheryOS ~]# dirbuster --help
DirBuster - 1.0-RC1
Usage: java -jar DirBuster-1.0-RC1 -u <URL http://example.com/> [Options]

   Options:
    -h : Display this help message
    -H : Start DirBuster in headless mode (no gui), report will be auto
        saved on exit
    -l <Word list to use> : The Word list to use for the list based
        brute force. Default: /home/user/directory-list-2.3-small.txt
    -g : Only use GET requests. Default Not Set
    -e <File Extention list> : File Extention list eg asp,aspx. Default:
        php
    -t <Number of Threads> : Number of connection threads to use.
        Default: 10
    -s <Start point> : Start point of the scan. Default: /
    -v : Verbose output, Default: Not set
    -P : Don't Parse html, Default: Not Set
    -R : Don't be recursive, Default: Not Set
    -r <location> : File to save report to. Default:
        /home/user/DirBuster-Report-[hostname]-[port].txt

Examples:

Run DirBuster in headless mode
java -jar DirBuster-1.0-RC1.jar -H -u https://www.target.com/

Start GUI with target prepopulated
java -jar DirBuster-1.0-RC1.jar -u https://www.target.com/
```

### 4.1.25 dnsspoof

dnsspoof forges replies to arbitrary DNS address / pointer queries on the LAN. This is useful in bypassing hostname-based access controls, or in implementing a variety of man-in-the-middle attacks.

```
[root@ArcheryOS ~]# dnsspoof -h
Version: 2.4
Usage: dnsspoof [-i interface] [-f hostsfile] [expression]
```

### 4.1.26 exe2hex

exe2hex encodes an executable binary file into ASCII text format. The result then can be transferred to the target machine (It is much easier to echo a ASCII file than binary data). Upon executing exe2hex's output file, the original program is restored by using DEBUG.exe or PowerShell (which are pre-installed by default on Windows).

```
[root@ArcheryOS ~]# exe2hex -h
[*] exe2hex v1.5
Usage: exe2hex [options]

Options:
  -h, --help show this help message and exit
  -x EXE     The EXE binary file to convert
  -s         Read from STDIN
  -b BAT     BAT output file (DEBUG.exe method - x86)
  -p POSH    PoSh output file (PowerShell method - x86/x64)
  -e         URL encode the output
  -r TEXT    pRefix - text to add before the command on each line
  -f TEXT    suFfix - text to add after the command on each line
  -l INT     Maximum HEX values per line
  -c         Clones and compress the file before converting (-cc for
      higher
             compression)
  -t         Create a Expect file, to automate to a Telnet session.
  -w         Create a Expect file, to automate to a WinEXE session.
  -v        Enable verbose mode
```

### 4.1.27 ettercap

ettercap is a multipurpose sniffer/content filter for man in the middle attacks.

```
[root@ArcheryOS ~]# ettercap --help

ettercap 0.8.2 copyright 2001-2015 Ettercap Development Team


Usage: ettercap [OPTIONS] [TARGET1] [TARGET2]

TARGET is in the format MAC/IP/IPv6/PORTs (see the man for further
    detail)

Sniffing and Attack options:
  -M, --mitm <METHOD:ARGS> perform a mitm attack
  -o, --only-mitm          don't sniff, only perform the mitm attack
  -b, --broadcast          sniff packets destined to broadcast
  -B, --bridge <IFACE>     use bridged sniff (needs 2 ifaces)
  -p, --nopromisc          do not put the iface in promisc mode
  -S, --nosslmitm          do not forge SSL certificates
  -u, --unoffensive        do not forward packets
  -r, --read <file>        read data from pcapfile <file>
  -f, --pcapfilter <string> set the pcap filter <string>
  -R, --reversed           use reversed TARGET matching
  -t, --proto <proto>      sniff only this proto (default is all)
      --certificate <file> certificate file to use for SSL MiTM
      --private-key <file> private key file to use for SSL MiTM

User Interface Type:
  -T, --text               use text only GUI
       -q, --quiet             do not display packet contents
       -s, --script <CMD>      issue these commands to the GUI
  -C, --curses             use curses GUI
  -D, --daemon             daemonize ettercap (no GUI)
  -G, --gtk                use GTK+ GUI

Logging options:
  -w, --write <file>       write sniffed data to pcapfile <file>
  -L, --log <logfile>      log all the traffic to this <logfile>
  -l, --log-info <logfile> log only passive infos to this <logfile>
  -m, --log-msg <logfile>  log all the messages to this <logfile>
  -c, --compress           use gzip compression on log files

Visualization options:
  -d, --dns                resolves ip addresses into hostnames
  -V, --visual <format>    set the visualization format
  -e, --regex <regex>        visualize only packets matching this regex
  -E, --ext-headers          print extended header for every pck
  -Q, --superquiet           do not display user and password

LUA options:
     --lua-script <script1>,[<script2>,...]  comma-separted list of LUA
         scripts
     --lua-args n1=v1,[n2=v2,...]            comma-separated arguments
         to LUA script(s)

General options:
  -i, --iface <iface>        use this network interface
  -I, --liface               show all the network interfaces
  -Y, --secondary <ifaces>   list of secondary network interfaces
  -n, --netmask <netmask>    force this <netmask> on iface
  -A, --address <address>    force this local <address> on iface
  -P, --plugin <plugin>      launch this <plugin>
  -F, --filter <file>        load the filter <file> (content filter)
  -z, --silent               do not perform the initial ARP scan
  -6, --ip6scan              send ICMPv6 probes to discover IPv6 nodes on
      the link
  -j, --load-hosts <file>    load the hosts list from <file>
  -k, --save-hosts <file>    save the hosts list to <file>
  -W, --wifi-key <wkey>      use this key to decrypt wifi packets (wep or
      wpa)
  -a, --config <config>      use the alterative config file <config>

Standard options:
  -v, --version              prints the version and exit
  -h, --help                 this help screen
```

### 4.1.28 searchsploit

searchsploit is a program used to search the exploit database.

```
[root@ArcheryOS ~]# searchsploit --help
  Usage: searchsploit [options] term1 [term2] ... [termN]

==========
 Examples
==========
  searchsploit afd windows local
  searchsploit -t oracle windows
  searchsploit -p 39446
  searchsploit linux kernel 3.2 --exclude="(PoC)|/dos/"

  For more examples, see the manual:
      https://www.exploit-db.com/searchsploit/
```

```
=========
 Options
=========
   -c, --case    [Term]     Perform a case-sensitive search (Default is
       inSEnsITiVe).
   -e, --exact   [Term]     Perform an EXACT match on exploit title
       (Default is AND) [Implies "-t"].
   -h, --help               Show this help screen.
   -j, --json    [Term]     Show result in JSON format.
   -m, --mirror  [EDB-ID]   Mirror (aka copies) an exploit to the current
       working directory.
   -o, --overflow [Term]    Exploit titles are allowed to overflow their
       columns.
   -p, --path    [EDB-ID]   Show the full path to an exploit (and also
       copies the path to the clipboard if possible).
   -t, --title   [Term]     Search JUST the exploit title (Default is
       title AND the file’s path).
   -u, --update             Check for and install any exploitdb package
       updates (deb or git).
   -w, --www     [Term]     Show URLs to Exploit-DB.com rather than the
       local path.
   -x, --examine [EDB-ID]   Examine (aka opens) the exploit using $PAGER.
       --colour             Disable colour highlighting in search results.
       --id                 Display the EDB-ID value rather than local
           path.
       --nmap    [file.xml] Checks all results in Nmap’s XML output with
           service version (e.g.: nmap -sV -oX file.xml).
                             Use "-v" (verbose) to try even more
                                 combinations
       --exclude="term"     Remove values from results. By using "|" to
           separated you can chain multiple values.
                             e.g. --exclude="term1|term2|term3".

=======
 Notes
=======
 * You can use any number of search terms.
 * Search terms are not case-sensitive (by default), and ordering is
     irrelevant.
   * Use ’-c’ if you wish to reduce results by case-sensitive searching.
   * And/Or ’-e’ if you wish to filter results by using an exact match.
 * Use ’-t’ to exclude the file’s path to filter the search results.
   * Remove false positives (especially when searching using numbers -
       i.e. versions).
 * When updating or displaying help, search terms will be ignored.
```

### 4.1.29 giskismet

GISKismet is a wireless recon visualization tool to represent data gathered using Kismet in a flexible manner. GISKismet stores the information in a database so that the user can generate graphs using SQL.

```
[root@ArcheryOS ~]# giskismet --help
Usage: giskismet [Options]

Input File:
      --csv <csv-file>          Parse the input from Kismet-devel CSV
   -x --xml <xml-file>          Parse the input from Kismet-newcore
       NETXML

Input Filters:
      --bssid file | list       Filter based on BSSID
      --essid file | list       Filter based on ESSID
      --encryption file | list  Filter based on Encryption
      --channel file | list     Filter based on Channel

file | list (list = comma separated lists(needs quotes)

Kismet-newcore Options:
   -a --ap                      Insert only the APs

Query
   -q --query [sql]             SQL query
   -m --manual [csv]            CSV output of manual SQL query

   -o --output [file]           Output filename
   -n --name [str]              Name of the KML layer
      --desc [str]              Description of the KML layer

General Options:
      --ignore-gps              Import data even when GPS fields are
          missing
      --database [file]         SQLite3 database name [default:
          wireless.dbl]
   -d --debug [num]             Display debug information
   -s --silent                  No output when adding APs
   -v --version                 Display version
   -h --help                    Display this information

Send Comments to Joshua "Jabra" Abraham ( jabra@spl0it.org )
```

### 4.1.30 hashcat

Hashcat is the worlds fastest CPU-based password recovery tool.

```
[root@ArcheryOS ~]# hashcat --help
hashcat - advanced password recovery

Usage: hashcat [options]... hash|hashfile|hccapxfile
    [dictionary|mask|directory]...

- [ Options ] -

 Options Short / Long       | Type | Description
                                        | Example
===============================+======+======================================================+========
 -m, --hash-type            | Num  | Hash-type, see references below
                    | -m 1000
 -a, --attack-mode          | Num  | Attack-mode, see references below
                  | -a 3
 -V, --version              |      | Print version
                                       |
 -h, --help                 |      | Print help
                                          |
    --quiet                 |      | Suppress output
                                        |
    --hex-charset           |      | Assume charset is given in hex
                         |
    --hex-salt              |      | Assume salt is given in hex
                            |
    --hex-wordlist          |      | Assume words in wordlist are given
        in hex       |
    --force                 |      | Ignore warnings
                                        |
    --status                |      | Enable automatic update of the
        status screen    |
    --status-timer          | Num  | Sets seconds between status screen
        updates to X | --status-timer=1
    --machine-readable      |      | Display the status view in a
        machine-readable format |
    --keep-guessing         |      | Keep guessing the hash after it has
        been cracked |
    --loopback              |      | Add new plains to induct directory
                     |
    --weak-hash-threshold   | Num  | Threshold X when to stop checking
        for weak hashes | --weak=0
    --markov-hcstat         | File | Specify hcstat file to use
                            | --markov-hc=my.hcstat
    --markov-disable        |      | Disables markov-chains, emulates
        classic brute-force |
    --markov-classic        |      | Enables classic markov-chains, no
        per-position  |
 -t, --markov-threshold     | Num  | Threshold X when to stop accepting
     new markov-chains | -t 50
    --runtime               | Num  | Abort session after X seconds of
```

```
        runtime        | --runtime=10
    --session                  | Str  | Define specific session name
                           | --session=mysession
    --restore                  |      | Restore session from --session
                         |
    --restore-disable          |      | Do not write restore file
                              |
    --restore-file-path        | File | Specific path to restore file
                         | --restore-file-path=my.restore
-o, --outfile                  | File | Define outfile for recovered hash
                  | -o outfile.txt
    --outfile-format           | Num  | Define outfile-format X for
        recovered hash      | --outfile-format=7
    --outfile-autohex-disable |   | Disable the use of $HEX[] in output
        plains      |
    --outfile-check-timer      | Num  | Sets seconds between outfile checks
        to X        | --outfile-check=30
-p, --separator                | Char | Separator char for hashlists and
    outfile       | -p :
    --stdout                   |      | Do not crack a hash, instead print
        candidates only |
    --show                     |      | Compare hashlist with potfile; show
        cracked hashes |
    --left                     |      | Compare hashlist with potfile; show
        uncracked hashes |
    --username                 |      | Enable ignoring of usernames in
        hashfile        |
    --remove                   |      | Enable removal of hashes once they
        are cracked  |
    --remove-timer             | Num  | Update input hash file each X
        seconds           | --remove-timer=30
    --potfile-disable          |      | Do not write potfile
                                   |
    --potfile-path             | Dir  | Specific path to potfile
                               | --potfile-path=my.pot
    --encoding-from            | Code | Force internal wordlist encoding
        from X        | --encoding-from=iso-8859-15
    --encoding-to              | Code | Force internal wordlist encoding to
        X          | --encoding-to=utf-32le
    --debug-mode               | Num  | Defines the debug mode (hybrid only
        by using rules) | --debug-mode=4
    --debug-file               | File | Output file for debugging rules
                       | --debug-file=good.log
    --induction-dir            | Dir  | Specify the induction directory to
        use for loopback | --induction=inducts
    --outfile-check-dir        | Dir  | Specify the outfile directory to
        monitor for plains | --outfile-check-dir=x
    --logfile-disable          |      | Disable the logfile
                                    |
    --hccapx-message-pair      | Num  | Load only message pairs from hccapx
```

```
        matching X  | --hccapx-message-pair=2
    --nonce-error-corrections | Num | The BF size range to replace AP's
        nonce last bytes | --nonce-error-corrections=16
    --truecrypt-keyfiles   | File | Keyfiles to use, separated with
        commas         | --truecrypt-key=x.png
    --veracrypt-keyfiles   | File | Keyfiles to use, separated with
        commas         | --veracrypt-key=x.txt
    --veracrypt-pim        | Num  | VeraCrypt personal iterations
        multiplier       | --veracrypt-pim=1000
-b, --benchmark            |      | Run benchmark
                                      |
    --speed-only           |      | Return expected speed of the
        attack, then quit  |
    --progress-only        |      | Return ideal progress step size and
        time to process |
-c, --segment-size         | Num  | Sets size in MB to cache from the
    wordfile to X | -c 32
    --bitmap-min           | Num  | Sets minimum bits allowed for
        bitmaps to X     | --bitmap-min=24
    --bitmap-max           | Num  | Sets maximum bits allowed for
        bitmaps to X     | --bitmap-max=24
    --cpu-affinity         | Str  | Locks to CPU devices, separated
        with commas     | --cpu-affinity=1,2,3
-I, --opencl-info          |      | Show info about detected OpenCL
    platforms/devices | -I
    --opencl-platforms     | Str  | OpenCL platforms to use, separated
        with commas | --opencl-platforms=2
-d, --opencl-devices       | Str  | OpenCL devices to use, separated
    with commas    | -d 1
-D, --opencl-device-types  | Str  | OpenCL device-types to use,
    separated with commas | -D 1
    --opencl-vector-width  | Num  | Manually override OpenCL
        vector-width to X      | --opencl-vector=4
-w, --workload-profile     | Num  | Enable a specific workload profile,
    see pool below | -w 3
-n, --kernel-accel         | Num  | Manual workload tuning, set
    outerloop step size to X | -n 64
-u, --kernel-loops         | Num  | Manual workload tuning, set
    innerloop step size to X | -u 256
    --nvidia-spin-damp     | Num  | Workaround NVIDIAs CPU burning loop
        bug, in percent | --nvidia-spin-damp=50
    --gpu-temp-disable     |      | Disable temperature and fanspeed
        reads and triggers |
    --gpu-temp-abort       | Num  | Abort if GPU temperature reaches X
        degrees Celsius | --gpu-temp-abort=100
    --gpu-temp-retain      | Num  | Try to retain GPU temperature at X
        degrees Celsius | --gpu-temp-retain=95
    --powertune-enable     |      | Enable power tuning. Restores
        settings when finished |
    --scrypt-tmto          | Num  | Manually override TMTO value for
```

```
         scrypt to X   | --scrypt-tmto=3
 -s, --skip                 | Num  | Skip X words from the start
                        | -s 1000000
 -l, --limit                | Num  | Limit X words from the start +
     skipped words    | -l 1000000
    --keyspace              |      | Show keyspace base:mod values and
         quit         |
 -j, --rule-left            | Rule | Single rule applied to each word
     from left wordlist | -j ’c’
 -k, --rule-right           | Rule | Single rule applied to each word
     from right wordlist | -k ’^-’
 -r, --rules-file           | File | Multiple rules applied to each word
     from wordlists | -r rules/best64.rule
 -g, --generate-rules       | Num  | Generate X random rules
                            | -g 10000
    --generate-rules-func-min | Num  | Force min X functions per rule
                       |
    --generate-rules-func-max | Num  | Force max X functions per rule
                       |
    --generate-rules-seed   | Num  | Force RNG seed set to X
                                |
 -1, --custom-charset1      | CS   | User-defined charset ?1
                            | -1 ?l?d?u
 -2, --custom-charset2      | CS   | User-defined charset ?2
                            | -2 ?l?d?s
 -3, --custom-charset3      | CS   | User-defined charset ?3
                            |
 -4, --custom-charset4      | CS   | User-defined charset ?4
                            |
 -i, --increment            |      | Enable mask increment mode
                         |
    --increment-min         | Num  | Start mask incrementing at X
                           | --increment-min=4
    --increment-max         | Num  | Stop mask incrementing at X
                            | --increment-max=8

- [ Hash modes ] -

      # | Name                                       | Category
  ======+====================================================+====================================
    900 | MD4                                        | Raw Hash
      0 | MD5                                        | Raw Hash
   5100 | Half MD5                                   | Raw Hash
    100 | SHA1                                       | Raw Hash
   1300 | SHA-224                                    | Raw Hash
   1400 | SHA-256                                    | Raw Hash
  10800 | SHA-384                                    | Raw Hash
   1700 | SHA-512                                    | Raw Hash
   5000 | SHA-3 (Keccak)                             | Raw Hash
    600 | BLAKE2b-512                                | Raw Hash
```

```
10100 | SipHash                                    | Raw Hash
 6000 | RIPEMD-160                                 | Raw Hash
 6100 | Whirlpool                                  | Raw Hash
 6900 | GOST R 34.11-94                            | Raw Hash
11700 | GOST R 34.11-2012 (Streebog) 256-bit       | Raw Hash
11800 | GOST R 34.11-2012 (Streebog) 512-bit       | Raw Hash
   10 | md5($pass.$salt)                           | Raw Hash, Salted
       and/or Iterated
   20 | md5($salt.$pass)                           | Raw Hash, Salted
       and/or Iterated
   30 | md5(utf16le($pass).$salt)                  | Raw Hash, Salted
       and/or Iterated
   40 | md5($salt.utf16le($pass))                  | Raw Hash, Salted
       and/or Iterated
 3800 | md5($salt.$pass.$salt)                     | Raw Hash, Salted
     and/or Iterated
 3710 | md5($salt.md5($pass))                      | Raw Hash, Salted
     and/or Iterated
 4010 | md5($salt.md5($salt.$pass))                | Raw Hash, Salted
     and/or Iterated
 4110 | md5($salt.md5($pass.$salt))                | Raw Hash, Salted
     and/or Iterated
 2600 | md5(md5($pass))                            | Raw Hash, Salted
     and/or Iterated
 3910 | md5(md5($pass).md5($salt))                 | Raw Hash, Salted
     and/or Iterated
 4300 | md5(strtoupper(md5($pass)))                | Raw Hash, Salted
     and/or Iterated
 4400 | md5(sha1($pass))                           | Raw Hash, Salted
     and/or Iterated
  110 | sha1($pass.$salt)                          | Raw Hash, Salted
      and/or Iterated
  120 | sha1($salt.$pass)                          | Raw Hash, Salted
      and/or Iterated
  130 | sha1(utf16le($pass).$salt)                 | Raw Hash, Salted
      and/or Iterated
  140 | sha1($salt.utf16le($pass))                 | Raw Hash, Salted
      and/or Iterated
 4500 | sha1(sha1($pass))                          | Raw Hash, Salted
     and/or Iterated
 4520 | sha1($salt.sha1($pass))                    | Raw Hash, Salted
     and/or Iterated
 4700 | sha1(md5($pass))                           | Raw Hash, Salted
     and/or Iterated
 4900 | sha1($salt.$pass.$salt)                    | Raw Hash, Salted
     and/or Iterated
14400 | sha1(CX)                                   | Raw Hash, Salted
    and/or Iterated
 1410 | sha256($pass.$salt)                        | Raw Hash, Salted
     and/or Iterated
 1420 | sha256($salt.$pass)                         | Raw Hash, Salted
     and/or Iterated
 1430 | sha256(utf16le($pass).$salt)                | Raw Hash, Salted
     and/or Iterated
 1440 | sha256($salt.utf16le($pass))                | Raw Hash, Salted
     and/or Iterated
 1710 | sha512($pass.$salt)                         | Raw Hash, Salted
     and/or Iterated
 1720 | sha512($salt.$pass)                         | Raw Hash, Salted
     and/or Iterated
 1730 | sha512(utf16le($pass).$salt)                | Raw Hash, Salted
     and/or Iterated
 1740 | sha512($salt.utf16le($pass))                | Raw Hash, Salted
     and/or Iterated
   50 | HMAC-MD5 (key = $pass)                      | Raw Hash,
       Authenticated
   60 | HMAC-MD5 (key = $salt)                      | Raw Hash,
       Authenticated
  150 | HMAC-SHA1 (key = $pass)                     | Raw Hash,
      Authenticated
  160 | HMAC-SHA1 (key = $salt)                     | Raw Hash,
      Authenticated
 1450 | HMAC-SHA256 (key = $pass)                   | Raw Hash,
     Authenticated
 1460 | HMAC-SHA256 (key = $salt)                   | Raw Hash,
     Authenticated
 1750 | HMAC-SHA512 (key = $pass)                   | Raw Hash,
     Authenticated
 1760 | HMAC-SHA512 (key = $salt)                   | Raw Hash,
     Authenticated
14000 | DES (PT = $salt, key = $pass)               | Raw Cipher,
    Known-Plaintext attack
14100 | 3DES (PT = $salt, key = $pass)              | Raw Cipher,
    Known-Plaintext attack
14900 | Skip32 (PT = $salt, key = $pass)            | Raw Cipher,
    Known-Plaintext attack
15400 | ChaCha20                                    | Raw Cipher,
    Known-Plaintext attack
  400 | phpass                                      | Generic KDF
 8900 | scrypt                                      | Generic KDF
11900 | PBKDF2-HMAC-MD5                             | Generic KDF
12000 | PBKDF2-HMAC-SHA1                            | Generic KDF
10900 | PBKDF2-HMAC-SHA256                          | Generic KDF
12100 | PBKDF2-HMAC-SHA512                          | Generic KDF
   23 | Skype                                       | Network Protocols
 2500 | WPA/WPA2                                    | Network Protocols
 4800 | iSCSI CHAP authentication, MD5(CHAP)        | Network Protocols
 5300 | IKE-PSK MD5                                 | Network Protocols
 5400 | IKE-PSK SHA1                                | Network Protocols
 5500 | NetNTLMv1                                   | Network Protocols
 5500 | NetNTLMv1+ESS                              | Network Protocols
 5600 | NetNTLMv2                                  | Network Protocols
 7300 | IPMI2 RAKP HMAC-SHA1                       | Network Protocols
 7500 | Kerberos 5 AS-REQ Pre-Auth etype 23        | Network Protocols
 8300 | DNSSEC (NSEC3)                             | Network Protocols
10200 | CRAM-MD5                                   | Network Protocols
11100 | PostgreSQL CRAM (MD5)                      | Network Protocols
11200 | MySQL CRAM (SHA1)                          | Network Protocols
11400 | SIP digest authentication (MD5)            | Network Protocols
13100 | Kerberos 5 TGS-REP etype 23                | Network Protocols
  121 | SMF (Simple Machines Forum) > v1.1         | Forums, CMS,
      E-Commerce, Frameworks
  400 | phpBB3 (MD5)                               | Forums, CMS,
      E-Commerce, Frameworks
 2611 | vBulletin < v3.8.5                         | Forums, CMS,
     E-Commerce, Frameworks
 2711 | vBulletin >= v3.8.5                        | Forums, CMS,
     E-Commerce, Frameworks
 2811 | MyBB 1.2+                                  | Forums, CMS,
     E-Commerce, Frameworks
 2811 | IPB2+ (Invision Power Board)               | Forums, CMS,
     E-Commerce, Frameworks
 8400 | WBB3 (Woltlab Burning Board)               | Forums, CMS,
     E-Commerce, Frameworks
   11 | Joomla < 2.5.18                            | Forums, CMS,
       E-Commerce, Frameworks
  400 | Joomla >= 2.5.18 (MD5)                     | Forums, CMS,
      E-Commerce, Frameworks
  400 | WordPress (MD5)                            | Forums, CMS,
      E-Commerce, Frameworks
 2612 | PHPS                                       | Forums, CMS,
     E-Commerce, Frameworks
 7900 | Drupal7                                    | Forums, CMS,
     E-Commerce, Frameworks
   21 | osCommerce                                 | Forums, CMS,
       E-Commerce, Frameworks
   21 | xt:Commerce                                | Forums, CMS,
       E-Commerce, Frameworks
11000 | PrestaShop                                 | Forums, CMS,
    E-Commerce, Frameworks
  124 | Django (SHA-1)                             | Forums, CMS,
      E-Commerce, Frameworks
10000 | Django (PBKDF2-SHA256)                     | Forums, CMS,
    E-Commerce, Frameworks
 3711 | MediaWiki B type                           | Forums, CMS,
     E-Commerce, Frameworks
13900 | OpenCart                                   | Forums, CMS,
    E-Commerce, Frameworks
 4521 | Redmine                                    | Forums, CMS,
     E-Commerce, Frameworks
 4522 | PunBB                                       | Forums, CMS,
     E-Commerce, Frameworks
12001 | Atlassian (PBKDF2-HMAC-SHA1)                | Forums, CMS,
    E-Commerce, Frameworks
   12 | PostgreSQL                                  | Database Server
  131 | MSSQL (2000)                                | Database Server
  132 | MSSQL (2005)                                | Database Server
 1731 | MSSQL (2012, 2014)                          | Database Server
  200 | MySQL323                                    | Database Server
  300 | MySQL4.1/MySQL5                             | Database Server
 3100 | Oracle H: Type (Oracle 7+)                  | Database Server
  112 | Oracle S: Type (Oracle 11+)                 | Database Server
12300 | Oracle T: Type (Oracle 12+)                 | Database Server
 8000 | Sybase ASE                                  | Database Server
  141 | Episerver 6.x < .NET 4                      | HTTP, SMTP, LDAP
      Server
 1441 | Episerver 6.x >= .NET 4                     | HTTP, SMTP, LDAP
     Server
 1600 | Apache $apr1$ MD5, md5apr1, MD5 (APR)       | HTTP, SMTP, LDAP
     Server
12600 | ColdFusion 10+                              | HTTP, SMTP, LDAP
    Server
 1421 | hMailServer                                 | HTTP, SMTP, LDAP
     Server
  101 | nsldap, SHA-1(Base64), Netscape LDAP SHA    | HTTP, SMTP, LDAP
      Server
  111 | nsldaps, SSHA-1(Base64), Netscape LDAP SSHA | HTTP, SMTP, LDAP
      Server
 1411 | SSHA-256(Base64), LDAP {SSHA256}            | HTTP, SMTP, LDAP
     Server
 1711 | SSHA-512(Base64), LDAP {SSHA512}            | HTTP, SMTP, LDAP
     Server
15000 | FileZilla Server >= 0.9.55                  | FTP Server
11500 | CRC32                                       | Checksums
 3000 | LM                                          | Operating Systems
 1000 | NTLM                                        | Operating Systems
 1100 | Domain Cached Credentials (DCC), MS Cache   | Operating Systems
 2100 | Domain Cached Credentials 2 (DCC2), MS Cache 2 | Operating
     Systems
15300 | DPAPI masterkey file v1 and v2              | Operating Systems
12800 | MS-AzureSync PBKDF2-HMAC-SHA256             | Operating Systems
 1500 | descrypt, DES (Unix), Traditional DES       | Operating Systems
12400 | BSDi Crypt, Extended DES                    | Operating Systems
  500 | md5crypt, MD5 (Unix), Cisco-IOS $1$ (MD5)   | Operating Systems
 3200 | bcrypt $2*$, Blowfish (Unix)                | Operating Systems
 7400 | sha256crypt $5$, SHA256 (Unix)              | Operating Systems
 1800 | sha512crypt $6$, SHA512 (Unix)              | Operating Systems
  122 | OSX v10.4, OSX v10.5, OSX v10.6             | Operating Systems
 1722 | OSX v10.7                                   | Operating Systems
 7100 | OSX v10.8+ (PBKDF2-SHA512)                  | Operating Systems
 6300 | AIX {smd5}                                 | Operating Systems
 6700 | AIX {ssha1}                                | Operating Systems
 6400 | AIX {ssha256}                              | Operating Systems
 6500 | AIX {ssha512}                              | Operating Systems
 2400 | Cisco-PIX MD5                              | Operating Systems
 2410 | Cisco-ASA MD5                              | Operating Systems
  500 | Cisco-IOS $1$ (MD5)                        | Operating Systems
 5700 | Cisco-IOS type 4 (SHA256)                  | Operating Systems
 9200 | Cisco-IOS $8$ (PBKDF2-SHA256)              | Operating Systems
 9300 | Cisco-IOS $9$ (scrypt)                     | Operating Systems
   22 | Juniper NetScreen/SSG (ScreenOS)           | Operating Systems
  501 | Juniper IVE                                | Operating Systems
15100 | Juniper/NetBSD sha1crypt                   | Operating Systems
 7000 | FortiGate (FortiOS)                        | Operating Systems
 5800 | Samsung Android Password/PIN               | Operating Systems
13800 | Windows Phone 8+ PIN/password              | Operating Systems
 8100 | Citrix NetScaler                           | Operating Systems
 8500 | RACF                                       | Operating Systems
 7200 | GRUB 2                                     | Operating Systems
 9900 | Radmin2                                    | Operating Systems
  125 | ArubaOS                                    | Operating Systems
 7700 | SAP CODVN B (BCODE)                        | Enterprise
     Application Software (EAS)
 7800 | SAP CODVN F/G (PASSCODE)                   | Enterprise
     Application Software (EAS)
10300 | SAP CODVN H (PWDSALTEDHASH) iSSHA-1        | Enterprise
    Application Software (EAS)
 8600 | Lotus Notes/Domino 5                       | Enterprise
     Application Software (EAS)
 8700 | Lotus Notes/Domino 6                       | Enterprise
     Application Software (EAS)
 9100 | Lotus Notes/Domino 8                       | Enterprise
     Application Software (EAS)
  133 | PeopleSoft                                 | Enterprise
      Application Software (EAS)
13500 | PeopleSoft PS_TOKEN                        | Enterprise
    Application Software (EAS)
11600 | 7-Zip                                      | Archives
12500 | RAR3-hp                                    | Archives
13000 | RAR5                                       | Archives
13200 | AxCrypt                                    | Archives
13300 | AxCrypt in-memory SHA1                     | Archives
13600 | WinZip                                     | Archives
14700 | iTunes backup < 10.0                       | Backup
14800 | iTunes backup >= 10.0                      | Backup
 62XY | TrueCrypt                                  | Full-Disk
     Encryption (FDE)
   X  | 1 = PBKDF2-HMAC-RIPEMD160                  | Full-Disk
       Encryption (FDE)
   X  | 2 = PBKDF2-HMAC-SHA512                     | Full-Disk
```

```
         Encryption (FDE)
     X  | 3 = PBKDF2-HMAC-Whirlpool                  | Full-Disk
         Encryption (FDE)
     X  | 4 = PBKDF2-HMAC-RIPEMD160 + boot-mode      | Full-Disk
         Encryption (FDE)
      Y | 1 = XTS 512 bit pure AES                   | Full-Disk
          Encryption (FDE)
      Y | 1 = XTS 512 bit pure Serpent               | Full-Disk
          Encryption (FDE)
      Y | 1 = XTS 512 bit pure Twofish               | Full-Disk
          Encryption (FDE)
      Y | 2 = XTS 1024 bit pure AES                  | Full-Disk
          Encryption (FDE)
      Y | 2 = XTS 1024 bit pure Serpent              | Full-Disk
          Encryption (FDE)
      Y | 2 = XTS 1024 bit pure Twofish              | Full-Disk
          Encryption (FDE)
      Y | 2 = XTS 1024 bit cascaded AES-Twofish      | Full-Disk
          Encryption (FDE)
      Y | 2 = XTS 1024 bit cascaded Serpent-AES      | Full-Disk
          Encryption (FDE)
      Y | 2 = XTS 1024 bit cascaded Twofish-Serpent  | Full-Disk
          Encryption (FDE)
      Y | 3 = XTS 1536 bit all                       | Full-Disk
          Encryption (FDE)
   8800 | Android FDE <= 4.3                         | Full-Disk
       Encryption (FDE)
  12900 | Android FDE (Samsung DEK)                  | Full-Disk
      Encryption (FDE)
  12200 | eCryptfs                                   | Full-Disk
      Encryption (FDE)
  137XY | VeraCrypt                                  | Full-Disk
      Encryption (FDE)
     X  | 1 = PBKDF2-HMAC-RIPEMD160                  | Full-Disk
         Encryption (FDE)
     X  | 2 = PBKDF2-HMAC-SHA512                     | Full-Disk
         Encryption (FDE)
     X  | 3 = PBKDF2-HMAC-Whirlpool                  | Full-Disk
         Encryption (FDE)
     X  | 4 = PBKDF2-HMAC-RIPEMD160 + boot-mode      | Full-Disk
         Encryption (FDE)
     X  | 5 = PBKDF2-HMAC-SHA256                     | Full-Disk
         Encryption (FDE)
     X  | 6 = PBKDF2-HMAC-SHA256 + boot-mode         | Full-Disk
         Encryption (FDE)
      Y | 1 = XTS 512 bit pure AES                   | Full-Disk
          Encryption (FDE)
      Y | 1 = XTS 512 bit pure Serpent               | Full-Disk
          Encryption (FDE)
      Y | 1 = XTS 512 bit pure Twofish               | Full-Disk
```

```
          Encryption (FDE)
      Y | 2 = XTS 1024 bit pure AES                  | Full-Disk
          Encryption (FDE)
      Y | 2 = XTS 1024 bit pure Serpent              | Full-Disk
          Encryption (FDE)
      Y | 2 = XTS 1024 bit pure Twofish              | Full-Disk
          Encryption (FDE)
      Y | 2 = XTS 1024 bit cascaded AES-Twofish      | Full-Disk
          Encryption (FDE)
      Y | 2 = XTS 1024 bit cascaded Serpent-AES      | Full-Disk
          Encryption (FDE)
      Y | 2 = XTS 1024 bit cascaded Twofish-Serpent  | Full-Disk
          Encryption (FDE)
      Y | 3 = XTS 1536 bit all                       | Full-Disk
          Encryption (FDE)
  14600 | LUKS                                       | Full-Disk
      Encryption (FDE)
   9700 | MS Office <= 2003 $0/$1, MD5 + RC4         | Documents
   9710 | MS Office <= 2003 $0/$1, MD5 + RC4, collider #1 | Documents
   9720 | MS Office <= 2003 $0/$1, MD5 + RC4, collider #2 | Documents
   9800 | MS Office <= 2003 $3/$4, SHA1 + RC4        | Documents
   9810 | MS Office <= 2003 $3, SHA1 + RC4, collider #1 | Documents
   9820 | MS Office <= 2003 $3, SHA1 + RC4, collider #2 | Documents
   9400 | MS Office 2007                             | Documents
   9500 | MS Office 2010                             | Documents
   9600 | MS Office 2013                             | Documents
  10400 | PDF 1.1 - 1.3 (Acrobat 2 - 4)              | Documents
  10410 | PDF 1.1 - 1.3 (Acrobat 2 - 4), collider #1 | Documents
  10420 | PDF 1.1 - 1.3 (Acrobat 2 - 4), collider #2 | Documents
  10500 | PDF 1.4 - 1.6 (Acrobat 5 - 8)              | Documents
  10600 | PDF 1.7 Level 3 (Acrobat 9)                | Documents
  10700 | PDF 1.7 Level 8 (Acrobat 10 - 11)          | Documents
   9000 | Password Safe v2                           | Password Managers
   5200 | Password Safe v3                           | Password Managers
   6800 | LastPass + LastPass sniffed                | Password Managers
   6600 | 1Password, agilekeychain                   | Password Managers
   8200 | 1Password, cloudkeychain                   | Password Managers
  11300 | Bitcoin/Litecoin wallet.dat                | Password Managers
  12700 | Blockchain, My Wallet                      | Password Managers
  15200 | Blockchain, My Wallet, V2                  | Password Managers
  13400 | KeePass 1 (AES/Twofish) and KeePass 2 (AES) | Password Managers
  15500 | JKS Java Key Store Private Keys (SHA1)     | Password Managers
  15600 | Ethereum Wallet, PBKDF2-HMAC-SHA256        | Password Managers
  15700 | Ethereum Wallet, SCRYPT                    | Password Managers
  99999 | Plaintext                                  | Plaintext

- [ Outfile Formats ] -

  # | Format
 ===+========
  1 | hash[:salt]
  2 | plain
  3 | hash[:salt]:plain
  4 | hex_plain
  5 | hash[:salt]:hex_plain
  6 | plain:hex_plain
  7 | hash[:salt]:plain:hex_plain
  8 | crackpos
  9 | hash[:salt]:crack_pos
 10 | plain:crack_pos
 11 | hash[:salt]:plain:crack_pos
 12 | hex_plain:crack_pos
 13 | hash[:salt]:hex_plain:crack_pos
 14 | plain:hex_plain:crack_pos
 15 | hash[:salt]:plain:hex_plain:crack_pos

- [ Rule Debugging Modes ] -

  # | Format
 ===+========
  1 | Finding-Rule
  2 | Original-Word
  3 | Original-Word:Finding-Rule
  4 | Original-Word:Finding-Rule:Processed-Word

- [ Attack Modes ] -

  # | Mode
 ===+======
  0 | Straight
  1 | Combination
  3 | Brute-force
  6 | Hybrid Wordlist + Mask
  7 | Hybrid Mask + Wordlist

- [ Built-in Charsets ] -

  ? | Charset
 ===+=========
  l | abcdefghijklmnopqrstuvwxyz
  u | ABCDEFGHIJKLMNOPQRSTUVWXYZ
  d | 0123456789
  h | 0123456789abcdef
  H | 0123456789ABCDEF
  s |  !"#$%&’()*+,-./:;<=>?@[\]^_‘{|}˜
  a | ?l?u?d?s
  b | 0x00 - 0xff

- [ OpenCL Device Types ] -
```

```
  # | Device Type
 ===+=============
  1 | CPU
  2 | GPU
  3 | FPGA, DSP, Co-Processor

- [ Workload Profiles ] -

  # | Performance | Runtime | Power Consumption | Desktop Impact
 ===+=============+=========+===================+=================
  1 | Low         |   2 ms  | Low               | Minimal
  2 | Default     |  12 ms  | Economic          | Noticeable
  3 | High        |  96 ms  | High              | Unresponsive
  4 | Nightmare   | 480 ms  | Insane            | Headless

- [ Basic Examples ] -

  Attack-          | Hash- |
  Mode             | Type  | Example command
 ==================+=======+==============================================================
  Wordlist         | $P$   | hashcat -a 0 -m 400 example400.hash
      example.dict
  Wordlist + Rules | MD5   | hashcat -a 0 -m 0 example0.hash example.dict
      -r rules/best64.rule
  Brute-Force      | MD5   | hashcat -a 3 -m 0 example0.hash ?a?a?a?a?a?a
  Combinator       | MD5   | hashcat -a 1 -m 0 example0.hash example.dict
      example.dict

If you still have no idea what just happened, try the following pages:

* https://hashcat.net/wiki/#howtos_videos_papers_articles_etc_in_the_wild
* https://hashcat.net/faq/
```

### 4.1.31 hashdeep

hashdeep computes multiple hashes, or message digests, for any number of files while optionally recursively digging through the directory structure. By default the program computes MD5 and SHA-256 hashes, equivalent to -c md5,sha256.

```
[root@ArcheryOS ~]# hashdeep -h
hashdeep version 4.4 by Jesse Kornblum and Simson Garfinkel.
$ hashdeep [OPTION]... [FILES]...
-c <alg1,[alg2]> - Compute hashes only. Defaults are MD5 and SHA-256
                 legal values: md5,sha1,sha256,tiger,whirlpool,
-p <size> - piecewise mode. Files are broken into blocks for hashing
-r        - recursive mode. All subdirectories are traversed
-d        - output in DFXML (Digital Forensics XML)
-k <file> - add a file of known hashes
```

```
-a       - audit mode. Validates FILES against known hashes. Requires -k
-m       - matching mode. Requires -k
-x       - negative matching mode. Requires -k
-w       - in -m mode, displays which known file was matched
-M and -X act like -m and -x, but display hashes of matching files
-e       - compute estimated time remaining for each file
-s       - silent mode. Suppress all error messages
-b       - prints only the bare name of files; all path information is
    omitted
-l       - print relative paths for filenames
-i/-I    - only process files smaller than the given threshold
-o       - only process certain types of files. See README/manpage
-v       - verbose mode. Use again to be more verbose
-d       - output in DFXML; -W FILE - write to FILE.
-j <num> - use num threads (default 1)
```

### 4.1.32 httrack

httrack - offline browser : copy websites to a local directory

```
[root@ArcheryOS ~]# httrack --help

HTTrack version 3.49-2
   usage: httrack <URLs> [-option] [+<URL_FILTER>] [-<URL_FILTER>]
        [+<mime:MIME_FILTER>] [-<mime:MIME_FILTER>]
   with options listed below: (* is the default value)

General options:
  O  path for mirror/logfiles+cache (-O
      path_mirror[,path_cache_and_logfiles]) (--path <param>)

Action options:
  w *mirror web sites (--mirror)
  W  mirror web sites, semi-automatic (asks questions) (--mirror-wizard)
  g  just get files (saved in the current directory) (--get-files)
  i  continue an interrupted mirror using the cache (--continue)
  Y   mirror ALL links located in the first level pages (mirror links)
      (--mirrorlinks)

Proxy options:
  P  proxy use (-P proxy:port or -P user:pass@proxy:port) (--proxy
      <param>)
 %f *use proxy for ftp (f0 don't use) (--httpproxy-ftp[=N])
 %b  use this local hostname to make/send requests (-%b hostname)
     (--bind <param>)

Limits options:
  rN set the mirror depth to N (* r9999) (--depth[=N])
 %eN set the external links depth to N (* %e0) (--ext-depth[=N])
```

```
  mN maximum file length for a non-html file (--max-files[=N])
  mN,N2 maximum file length for non html (N) and html (N2)
  MN maximum overall size that can be uploaded/scanned (--max-size[=N])
  EN maximum mirror time in seconds (60=1 minute, 3600=1 hour)
      (--max-time[=N])
  AN maximum transfer rate in bytes/seconds (1000=1KB/s max)
      (--max-rate[=N])
 %cN maximum number of connections/seconds (*%c10)
     (--connection-per-second[=N])
  GN pause transfer if N bytes reached, and wait until lock file is
      deleted (--max-pause[=N])

Flow control:
  cN number of multiple connections (*c8) (--sockets[=N])
  TN timeout, number of seconds after a non-responding link is shutdown
      (--timeout[=N])
  RN number of retries, in case of timeout or non-fatal errors (*R1)
      (--retries[=N])
  JN traffic jam control, minimum transfert rate (bytes/seconds)
      tolerated for a link (--min-rate[=N])
  HN host is abandonned if: 0=never, 1=timeout, 2=slow, 3=timeout or
      slow (--host-control[=N])

Links options:
 %P *extended parsing, attempt to parse all links, even in unknown tags
     or Javascript (%P0 don't use) (--extended-parsing[=N])
  n  get non-html files 'near' an html file (ex: an image located
      outside) (--near)
  t  test all URLs (even forbidden ones) (--test)
 %L <file> add all URL located in this text file (one URL per line)
     (--list <param>)
 %S <file> add all scan rules located in this text file (one scan rule
     per line) (--urllist <param>)

Build options:
  NN structure type (0 *original structure, 1+: see below)
      (--structure[=N])
     or user defined structure (-N "%h%p/%n%q.%t")
 %N  delayed type check, don't make any link test but wait for files
     download to start instead (experimental) (%N0 don't use, %N1 use
     for unknown extensions, * %N2 always use)
 %D  cached delayed type check, don't wait for remote type during
     updates, to speedup them (%D0 wait, * %D1 don't wait)
     (--cached-delayed-type-check)
 %M  generate a RFC MIME-encapsulated full-archive (.mht) (--mime-html)
  LN long names (L1 *long names / L0 8-3 conversion / L2 ISO9660
      compatible) (--long-names[=N])
  KN keep original links (e.g. http://www.adr/link) (K0 *relative link,
      K absolute links, K4 original links, K3 absolute URI links, K5
      transparent proxy link) (--keep-links[=N])
  x replace external html links by error pages (--replace-external)
 %x do not include any password for external password protected
     websites (%x0 include) (--disable-passwords)
 %q *include query string for local files (useless, for information
     purpose only) (%q0 don't include) (--include-query-string)
  o *generate output html file in case of error (404..) (o0 don't
      generate) (--generate-errors)
  X *purge old files after update (X0 keep delete) (--purge-old[=N])
 %p preserve html files 'as is' (identical to '-K4 -%F ""') (--preserve)
 %T links conversion to UTF-8 (--utf8-conversion)

Spider options:
  bN accept cookies in cookies.txt (0=do not accept,* 1=accept)
      (--cookies[=N])
  u check document type if unknown (cgi,asp..) (u0 don't check, * u1
      check but /, u2 check always) (--check-type[=N])
  j *parse Java Classes (j0 don't parse, bitmask: |1 parse default, |2
      don't parse .class |4 don't parse .js |8 don't be aggressive)
      (--parse-java[=N])
  sN follow robots.txt and meta robots tags (0=never,1=sometimes,*
      2=always, 3=always (even strict rules)) (--robots[=N])
 %h force HTTP/1.0 requests (reduce update features, only for old
     servers or proxies) (--http-10)
 %k use keep-alive if possible, greately reducing latency for small
     files and test requests (%k0 don't use) (--keep-alive)
 %B tolerant requests (accept bogus responses on some servers, but not
     standard!) (--tolerant)
 %s update hacks: various hacks to limit re-transfers when updating
     (identical size, bogus response..) (--updatehack)
 %u url hacks: various hacks to limit duplicate URLs (strip //,
     www.foo.com==foo.com..) (--urlhack)
 %A assume that a type (cgi,asp..) is always linked with a mime type
     (-%A php3,cgi=text/html;dat,bin=application/x-zip) (--assume
     <param>)
    shortcut: '--assume standard' is equivalent to -%A php2 php3 php4
         php cgi asp jsp pl cfm nsf=text/html
    can also be used to force a specific file type: --assume
         foo.cgi=text/html
 @iN internet protocol (0=both ipv6+ipv4, 4=ipv4 only, 6=ipv6 only)
     (--protocol[=N])
 %w disable a specific external mime module (-%w htsswf -%w htsjava)
     (--disable-module <param>)

Browser ID:
  F user-agent field sent in HTTP headers (-F "user-agent name")
      (--user-agent <param>)
 %R default referer field sent in HTTP headers (--referer <param>)
 %E from email address sent in HTTP headers (--from <param>)
 %F footer string in Html code (-%F "Mirrored [from host %s [file %s
     [at %s]]]" (--footer <param>)
 %l  preffered language (-%l "fr, en, jp, *" (--language <param>)
 %a  accepted formats (-%a "text/html,image/png;q=0.9,*/*;q=0.1"
     (--accept <param>)
 %X  additional HTTP header line (-%X "X-Magic: 42" (--headers <param>)

Log, index, cache
  C  create/use a cache for updates and retries (C0 no cache,C1 cache is
      prioritary,* C2 test update before) (--cache[=N])
  k  store all files in cache (not useful if files on disk)
      (--store-all-in-cache)
 %n  do not re-download locally erased files (--do-not-recatch)
 %v  display on screen filenames downloaded (in realtime) - * %v1 short
     version - %v2 full animation (--display)
  Q  no log - quiet mode (--do-not-log)
  q  no questions - quiet mode (--quiet)
  z  log - extra infos (--extra-log)
  Z  log - debug (--debug-log)
  v  log on screen (--verbose)
  f *log in files (--file-log)
  f2 one single log file (--single-log)
  I *make an index (I0 don't make) (--index)
 %i  make a top index for a project folder (* %i0 don't make)
     (--build-top-index)
 %I  make an searchable index for this mirror (* %I0 don't make)
     (--search-index)

Expert options:
  pN priority mode: (* p3) (--priority[=N])
     p0 just scan, don't save anything (for checking links)
     p1 save only html files
     p2 save only non html files
    *p3 save all files
     p7 get html files before, then treat other files
  S  stay on the same directory (--stay-on-same-dir)
  D *can only go down into subdirs (--can-go-down)
  U  can only go to upper directories (--can-go-up)
  B  can both go up&down into the directory structure
      (--can-go-up-and-down)
  a *stay on the same address (--stay-on-same-address)
  d  stay on the same principal domain (--stay-on-same-domain)
  l  stay on the same TLD (eg: .com) (--stay-on-same-tld)
  e  go everywhere on the web (--go-everywhere)
 %H  debug HTTP headers in logfile (--debug-headers)

Guru options: (do NOT use if possible)
 #X *use optimized engine (limited memory boundary checks)
     (--fast-engine)
 #0  filter test (-#0 '*.gif' 'www.bar.com/foo.gif')
     (--debug-testfilters <param>)
 #1  simplify test (-#1 ./foo/bar/../foobar)
 #2 type test (-#2 /foo/bar.php)
 #C cache list (-#C '*.com/spider*.gif' (--debug-cache <param>)
 #R cache repair (damaged cache) (--repair-cache)
 #d debug parser (--debug-parsing)
 #E extract new.zip cache meta-data in meta.zip
 #f always flush log files (--advanced-flushlogs)
 #FN maximum number of filters (--advanced-maxfilters[=N])
 #h version info (--version)
 #K scan stdin (debug) (--debug-scanstdin)
 #L maximum number of links (-#L1000000) (--advanced-maxlinks[=N])
 #p display ugly progress information (--advanced-progressinfo)
 #P catch URL (--catch-url)
 #R old FTP routines (debug) (--repair-cache)
 #T generate transfer ops. log every minutes (--debug-xfrstats)
 #u wait time (--advanced-wait)
 #Z generate transfer rate statictics every minutes (--debug-ratestats)

Dangerous options: (do NOT use unless you exactly know what you are
    doing)
 %! bypass built-in security limits aimed to avoid bandwidth abuses
     (bandwidth, simultaneous connections) (--disable-security-limits)
    IMPORTANT NOTE: DANGEROUS OPTION, ONLY SUITABLE FOR EXPERTS
                   USE IT WITH EXTREME CARE

Command-line specific options:
  V execute system command after each files ($0 is the filename: -V "rm
      \$0") (--userdef-cmd <param>)
 %W use an external library function as a wrapper (-%W
     myfoo.so[,myparameters]) (--callback <param>)

Details: Option N
  N0 Site-structure (default)
  N1 HTML in web/, images/other files in web/images/
  N2 HTML in web/HTML, images/other in web/images
  N3 HTML in web/, images/other in web/
  N4 HTML in web/, images/other in web/xxx, where xxx is the file
      extension (all gif will be placed onto web/gif, for example)
  N5 Images/other in web/xxx and HTML in web/HTML
  N99 All files in web/, with random names (gadget !)
  N100 Site-structure, without www.domain.xxx/
  N101 Identical to N1 exept that "web" is replaced by the site's name
  N102 Identical to N2 exept that "web" is replaced by the site's name
  N103 Identical to N3 exept that "web" is replaced by the site's name
  N104 Identical to N4 exept that "web" is replaced by the site's name
  N105 Identical to N5 exept that "web" is replaced by the site's name
  N199 Identical to N99 exept that "web" is replaced by the site's name
  N1001 Identical to N1 exept that there is no "web" directory
  N1002 Identical to N2 exept that there is no "web" directory
  N1003 Identical to N3 exept that there is no "web" directory (option
      set for g option)
  N1004 Identical to N4 exept that there is no "web" directory
  N1005 Identical to N5 exept that there is no "web" directory
  N1099 Identical to N99 exept that there is no "web" directory
Details: User-defined option N
  '%n' Name of file without file type (ex: image)
  '%N' Name of file, including file type (ex: image.gif)
  '%t' File type (ex: gif)
  '%p' Path [without ending /] (ex: /someimages)
  '%h' Host name (ex: www.someweb.com)
  '%M' URL MD5 (128 bits, 32 ascii bytes)
  '%Q' query string MD5 (128 bits, 32 ascii bytes)
  '%k' full query string
  '%r' protocol name (ex: http)
  '%q' small query string MD5 (16 bits, 4 ascii bytes)
     '%s?' Short name version (ex: %sN)
  '%[param]' param variable in query string
  '%[param:before:after:empty:notfound]' advanced variable extraction
Details: User-defined option N and advanced variable extraction
   %[param:before:after:empty:notfound]
   param : parameter name
   before : string to prepend if the parameter was found
   after : string to append if the parameter was found
   notfound : string replacement if the parameter could not be found
   empty : string replacement if the parameter was empty
   all fields, except the first one (the parameter name), can be empty

Details: Option K
  K0 foo.cgi?q=45 -> foo4B54.html?q=45 (relative URI, default)
  K               -> http://www.foobar.com/folder/foo.cgi?q=45
      (absolute URL) (--keep-links[=N])
  K3              -> /folder/foo.cgi?q=45 (absolute URI)
  K4              -> foo.cgi?q=45 (original URL)
  K5              -> http://www.foobar.com/folder/foo4B54.html?q=45
      (transparent proxy URL)

Shortcuts:
--mirror     <URLs> *make a mirror of site(s) (default)
--get        <URLs> get the files indicated, do not seek other URLs (-qg)
--list  <text file> add all URL located in this text file (-%L)
--mirrorlinks <URLs> mirror all links in 1st level pages (-Y)
--testlinks  <URLs> test links in pages (-r1p0C0I0t)
--spider     <URLs> spider site(s), to test links: reports Errors &
    Warnings (-p0C0I0t)
--testsite   <URLs> identical to --spider
--skeleton   <URLs> make a mirror, but gets only html files (-p1)
--update            update a mirror, without confirmation (-iC2)
--continue          continue a mirror, without confirmation (-iC1)

--catchurl          create a temporary proxy to capture an URL or a form
    post URL
```

```
--clean             erase cache & log files

--http10            force http/1.0 requests (-%h)

Details: Option %W: External callbacks prototypes
see htsdefines.h

example: httrack www.someweb.com/bob/
means:  mirror site www.someweb.com/bob/ and only this site

example: httrack www.someweb.com/bob/ www.anothertest.com/mike/
    +*.com/*.jpg -mime:application/*
means:  mirror the two sites together (with shared links) and accept
    any .jpg files on .com sites

example: httrack www.someweb.com/bob/bobby.html +* -r6
means get all files starting from bobby.html, with 6 link-depth, and
    possibility of going everywhere on the web

example: httrack www.someweb.com/bob/bobby.html --spider -P
    proxy.myhost.com:8080
runs the spider on www.someweb.com/bob/bobby.html using a proxy

example: httrack --update
updates a mirror in the current folder

example: httrack
will bring you to the interactive mode

example: httrack --continue
continues a mirror in the current folder

HTTrack version 3.49-2
Copyright (C) 1998-2017 Xavier Roche and other contributors
```

### 4.1.33 hydra

hydra is a very fast network logon cracker which support many different services

```
[root@ArcheryOS ~]# hydra -h
Hydra v8.6 (c) 2017 by van Hauser/THC - Please do not use in military or
    secret service organizations, or for illegal purposes.

Syntax: hydra [[[-l LOGIN|-L FILE] [-p PASS|-P FILE]] | [-C FILE]] [-e
    nsr] [-o FILE] [-t TASKS] [-M FILE [-T TASKS]] [-w TIME] [-W TIME]
    [-f] [-s PORT] [-x MIN:MAX:CHARSET] [-c TIME] [-ISOuvVd46]
    [service://server[:PORT][/OPT]]

Options:
  -R       restore a previous aborted/crashed session
  -I       ignore an existing restore file (don't wait 10 seconds)
  -S       perform an SSL connect
  -s PORT  if the service is on a different default port, define it here
  -l LOGIN or -L FILE login with LOGIN name, or load several logins from
      FILE
  -p PASS  or -P FILE try password PASS, or load several passwords from
      FILE
  -x MIN:MAX:CHARSET password bruteforce generation, type "-x -h" to get
      help
  -y       disable use of symbols in bruteforce, see above
  -e nsr   try "n" null password, "s" login as pass and/or "r" reversed
      login
  -u       loop around users, not passwords (effective! implied with -x)
  -C FILE  colon separated "login:pass" format, instead of -L/-P options
  -M FILE  list of servers to attack, one entry per line, ':' to specify
      port
  -o FILE  write found login/password pairs to FILE instead of stdout
  -b FORMAT specify the format for the -o FILE: text(default), json,
      jsonv1
  -f / -F  exit when a login/pass pair is found (-M: -f per host, -F
      global)
  -t TASKS run TASKS number of connects in parallel per target (default:
      16)
  -T TASKS run TASKS connects in parallel overall (for -M, default: 64)
  -w / -W TIME wait time for a response (32) / between connects per
      thread (0)
  -c TIME  wait time per login attempt over all threads (enforces -t 1)
  -4 / -6  use IPv4 (default) / IPv6 addresses (put always in [] also in
      -M)
  -v / -V / -d verbose mode / show login+pass for each attempt / debug
      mode
  -O       use old SSL v2 and v3
  -q       do not print messages about connection errors
  -U       service module usage details
  -h       more command line options (COMPLETE HELP)
  server   the target: DNS, IP or 192.168.0.0/24 (this OR the -M option)
  service  the service to crack (see below for supported protocols)
  OPT      some service modules support additional input (-U for module
      help)

Supported services: adam6500 asterisk cisco cisco-enable cvs firebird
    ftp ftps http[s]-{head|get|post} http[s]-{get|post}-form http-proxy
    http-proxy-urlenum icq imap[s] irc ldap2[s]
    ldap3[-{cram|digest}md5][s] mssql mysql nntp oracle-listener
    oracle-sid pcanywhere pcnfs pop3[s] postgres radmin2 rdp redis
    rexec rlogin rpcap rsh rtsp s7-300 sip smb smtp[s] smtp-enum snmp
    socks5 ssh sshkey svn teamspeak telnet[s] vmauthd vnc xmpp

Hydra is a tool to guess/crack valid login/password pairs. Licensed
```

```
    under AGPL
v3.0. The newest version is always available at
    http://www.thc.org/thc-hydra
Don't use in military or secret service organizations, or for illegal
    purposes.
These services were not compiled in: afp ncp oracle sapr3.

Use HYDRA_PROXY_HTTP or HYDRA_PROXY environment variables for a proxy
    setup.
E.g. % export HYDRA_PROXY=socks5://l:p@127.0.0.1:9150 (or: socks4://
    connect://)
     % export HYDRA_PROXY=connect_and_socks_proxylist.txt (up to 64
         entries)
     % export HYDRA_PROXY_HTTP=http://login:pass@proxy:8080
     % export HYDRA_PROXY_HTTP=proxylist.txt (up to 64 entries)

Examples:
  hydra -l user -P passlist.txt ftp://192.168.0.1
  hydra -L userlist.txt -p defaultpw imap://192.168.0.1/PLAIN
  hydra -C defaults.txt -6 pop3s://[2001:db8::1]:143/TLS:DIGEST-MD5
  hydra -l admin -p password ftp://[192.168.0.0/24]/
  hydra -L logins.txt -P pws.txt -M targets.txt ssh
```

### 4.1.34 intrace

InTrace is a traceroute-like application that enables users to enumerate IP hops exploiting existing TCP connections, both initiated from local network (local system) or from remote hosts.

```
[root@ArcheryOS ~]# intrace
InTrace, version 1.5 (C)2007-2011 Robert Swiecki <robert@swiecki.net>
2018/06/02 19:55:42.796514 <INFO> Usage: intrace <-h hostname> [-p
    <port>] [-d <debuglevel>] [-s <payloadsize>] [-6]
```

### 4.1.35 john

john, better known as John the Ripper, is a tool to find weak passwords of users in a server. John can use a dictionary or some search pattern as well as a password file to check for passwords. John supports different cracking modes and understands many ciphertext formats, like several DES variants, MD5 and blowfish. It can also be used to extract AFS and Windows NT passwords.

```
[root@ArcheryOS ~]# john -h
Created directory: /root/.john
John the Ripper password cracker, version 1.8.0.6-jumbo-1-bleeding
    [linux-x86-64-avx]
Copyright (c) 1996-2015 by Solar Designer and others
```

```
Homepage: http://www.openwall.com/john/

Usage: john [OPTIONS] [PASSWORD-FILES]
--single[=SECTION]     "single crack" mode
--wordlist[=FILE] --stdin wordlist mode, read words from FILE or stdin
                --pipe like --stdin, but bulk reads, and allows rules
--loopback[=FILE]      like --wordlist, but fetch words from a .pot file
--dupe-suppression     suppress all dupes in wordlist (and force
    preload)
--prince[=FILE]        PRINCE mode, read words from FILE
--encoding=NAME        input encoding (eg. UTF-8, ISO-8859-1). See also
                       doc/ENCODING and --list=hidden-options.
--rules[=SECTION]      enable word mangling rules for wordlist modes
--incremental[=MODE]   "incremental" mode [using section MODE]
--mask=MASK            mask mode using MASK
--markov[=OPTIONS]     "Markov" mode (see doc/MARKOV)
--external=MODE        external mode or word filter
--stdout[=LENGTH]      just output candidate passwords [cut at LENGTH]
--restore[=NAME]       restore an interrupted session [called NAME]
--session=NAME         give a new session the NAME
--status[=NAME]        print status of a session [called NAME]
--make-charset=FILE    make a charset file. It will be overwritten
--show[=LEFT]          show cracked passwords [if =LEFT, then uncracked]
--test[=TIME]          run tests and benchmarks for TIME seconds each
--users=[-]LOGIN|UID[,..] [do not] load this (these) user(s) only
--groups=[-]GID[,..]   load users [not] of this (these) group(s) only
--shells=[-]SHELL[,..] load users with[out] this (these) shell(s) only
--salts=[-]COUNT[:MAX] load salts with[out] COUNT [to MAX] hashes
--save-memory=LEVEL    enable memory saving, at LEVEL 1..3
--node=MIN[-MAX]/TOTAL this node's number range out of TOTAL count
--fork=N               fork N processes
--pot=NAME             pot file to use
--list=WHAT            list capabilities, see --list=help or doc/OPTIONS
--format=NAME          force hash of type NAME. The supported formats
    can
                       be seen with --list=formats and --list=subformats
```

### 4.1.36 kismet

Kismet is an 802.11 layer2 wireless network detector, sniffer, and intrusion detection system. Kismet will work with any wireless card which supports raw monitoring (rfmon) mode, and can sniff 802.11b, 802.11a, and 802.11g traffic.

```
[root@ArcheryOS ~]# kismet --help
Usage: /usr/bin/kismet_server [OPTION]
Nearly all of these options are run-time overrides for values in the
kismet.conf configuration file. Permanent changes should be made to
the configuration file.
```

```
*** Generic Options ***
-v, --version             Show version
-f, --config-file <file>  Use alternate configuration file
    --no-line-wrap        Turn of linewrapping of output
                          (for grep, speed, etc)
-s, --silent              Turn off stdout output after setup phase
    --daemonize           Spawn detached in the background
    --no-plugins          Do not load plugins
    --no-root         Do not start the kismet_capture binary
                           when not running as root. For no-priv
                           remote capture ONLY.

*** Kismet Client/Server Options ***
-l, --server-listen       Override Kismet server listen options

*** Kismet Remote Drone Options ***
    --drone-listen        Override Kismet drone listen options

*** Dump/Logging Options ***
-T, --log-types <types>   Override activated log types
-t, --log-title <title>   Override default log title
-p, --log-prefix <prefix> Directory to store log files
-n, --no-logging          Disable logging entirely

*** Packet Capture Source Options ***
-c, --capture-source      Specify a new packet capture source
                          (Identical syntax to the config file)
-C, --enable-capture-sources Enable capture sources (comma-separated
                          list of names or interfaces)

*** Kismet Net Tracking Options ***
    --filter-tracker      Tracker filtering

*** Kismet GPS Options ***
    --use-gpsd-gps (h:p)  Use GPSD-controlled GPS at host:port
                          (default: localhost:2947)
    --use-nmea-gps (dev)  Use local NMEA serial GPS on device
                          (default: /dev/ttyUSB0)
    --use-virtual-gps
              (lat,lon,alt) Use a virtual fixed-position gps record
    --gps-modelock <t:f>  Force broken GPS units to act as if they
                          have a valid signal (true/false)
    --gps-reconnect <t:f> Reconnect if a GPS device fails
                          (true/false)
```

### 4.1.37 lynis

Lynis is a security auditing tool for Linux, Mac OSX, and UNIX systems. It checks the system and the software configuration, to see if there is any room for improvement the security defenses. All details are stored in a log file.

```
[root@ArcheryOS ~]# lynis --help

[ Lynis 2.5.0 ]

################################################################################
  Lynis comes with ABSOLUTELY NO WARRANTY. This is free software, and
      you are
  welcome to redistribute it under the terms of the GNU General Public
      License.
  See the LICENSE file for details about using this software.

  2007-2017, CISOfy - https://cisofy.com/lynis/
  Enterprise support available (compliance, plugins, interface and tools)
################################################################################


[+] Initializing program
------------------------------------


  Usage: lynis command [options]


  Command:

    audit
       audit system               : Perform local security scan
       audit system remote <host> : Remote security scan
       audit dockerfile <file>    : Analyze Dockerfile

    show
       show                       : Show all commands
       show version               : Show Lynis version
       show help                  : Show help

    update
       update info                : Show update details
       update release             : Update Lynis release


  Options:

    --no-log                      : Don't create a log file
    --pentest                     : Non-privileged scan (useful for
        pentest)
    --profile <profile>             : Scan the system with the given
        profile file
    --quick (-Q)                    : Quick mode, don't wait for user
        input

    Layout options
    --no-colors                     : Don't use colors in output
    --quiet (-q)                    : No output
    --reverse-colors                : Optimize color display for light
        backgrounds

    Misc options
    --debug                         : Debug logging to screen
    --view-manpage (--man)          : View man page
    --verbose                       : Show more details on screen
    --version (-V)                  : Display version number and quit

    Enterprise options
    --plugin-dir "<path>"           : Define path of available plugins
    --upload                        : Upload data to central node

    More options available. Run '/usr/sbin/lynis show options', or use
        the man page.
```

### 4.1.38 macchanger

macchanger is a GNU/Linux utility for viewing/manipulating the MAC address for network interfaces.

```
[root@ArcheryOS ~]# macchanger --help
GNU MAC Changer
Usage: macchanger [options] device

  -h,  --help                   Print this help
  -V,  --version                Print version and exit
  -s,  --show                   Print the MAC address and exit
  -e,  --ending                 Don't change the vendor bytes
  -a,  --another                Set random vendor MAC of the same kind
  -A                            Set random vendor MAC of any kind
  -p,  --permanent              Reset to original, permanent hardware MAC
  -r,  --random                 Set fully random MAC
  -l,  --list[=keyword]         Print known vendors
  -b,  --bia                    Pretend to be a burned-in-address
  -m,  --mac=XX:XX:XX:XX:XX:XX
       --mac XX:XX:XX:XX:XX:XX Set the MAC XX:XX:XX:XX:XX:XX

Report bugs to https://github.com/alobbs/macchanger/issues
```

### 4.1.39 maltego-community

Maltego is used for open-source intelligence and forensics, developed by Paterva. Maltego focuses on providing a library of transforms for discovery of data from open sources, and visualizing that information in a graph format, suitable for link analysis and data mining.

```
[root@ArcheryOS ~]# maltego --help
Module reload options:
  --reload /path/to/module.jar install or reinstall a module JAR file

Additional module options:
  -a, --alias <arg>
  -u, --updates <arg>
  -i, --import <arg>
  -p, --automationPort <arg>
  -m, --machine <arg>
  -o, --open <arg1>...<argN>

Core options:
  --laf <LaF classname> use given LookAndFeel class instead of the
      default
  --fontsize <size>   set the base font size of the user interface, in
      points
  --locale <language[:country[:variant]]> use specified locale
  --userdir <path>    use specified directory to store user settings
  --cachedir <path>   use specified directory to store user cache, must
      be different from userdir
  --nosplash          do not show the splash screen
```

### 4.1.40 masscan

masscan is an Internet-scale port scanner, useful for large scale surveys of the Internet, or of internal networks.

```
[root@ArcheryOS ~]# masscan --help
MASSCAN is a fast port scanner. The primary input parameters are the
IP addresses/ranges you want to scan, and the port numbers. An example
is the following, which scans the 10.x.x.x network for web servers:
 masscan 10.0.0.0/8 -p80
The program auto-detects network interface/adapter settings. If this
fails, you'll have to set these manually. The following is an
example of all the parameters that are needed:
 --adapter-ip 192.168.10.123
 --adapter-mac 00-11-22-33-44-55
 --router-mac 66-55-44-33-22-11
Parameters can be set either via the command-line or config-file. The
names are the same for both. Thus, the above adapter settings would
appear as follows in a configuration file:
 adapter-ip = 192.168.10.123
 adapter-mac = 00-11-22-33-44-55
 router-mac = 66-55-44-33-22-11
All single-dash parameters have a spelled out double-dash equivalent,
so '-p80' is the same as '--ports 80' (or 'ports = 80' in config file).
To use the config file, type:
 masscan -c <filename>
To generate a config-file from the current settings, use the --echo
option. This stops the program from actually running, and just echoes
the current configuration instead. This is a useful way to generate
your first config file, or see a list of parameters you didn't know
about. I suggest you try it now:
 masscan -p1234 --echo
```

### 4.1.41 mdk3

MDK is a proof-of-concept tool to exploit common IEEE 802.11 protocol weaknesses.

```
[root@ArcheryOS ~]# mdk3 --help

MDK 3.0 v6 - "Yeah, well, whatever"
by ASPj of k2wrlz, using the osdep library from aircrack-ng
And with lots of help from the great aircrack-ng community:
Antragon, moongray, Ace, Zero_Chaos, Hirte, thefkboss, ducttape,
telek0miker, Le_Vert, sorbo, Andy Green, bahathir and Dawid Gajownik
THANK YOU!

MDK is a proof-of-concept tool to exploit common IEEE 802.11 protocol
    weaknesses.
IMPORTANT: It is your responsibility to make sure you have permission
    from the
network owner before running MDK against it.

This code is licenced under the GPLv2

MDK USAGE:
mdk3 <interface> <test_mode> [test_options]

Try mdk3 --fullhelp for all test options
Try mdk3 --help <test_mode> for info about one test only

TEST MODES:
b   - Beacon Flood Mode
      Sends beacon frames to show fake APs at clients.
      This can sometimes crash network scanners and even drivers!
a   - Authentication DoS mode
      Sends authentication frames to all APs found in range.
      Too much clients freeze or reset some APs.
```

```
p   - Basic probing and ESSID Bruteforce mode
      Probes AP and check for answer, useful for checking if SSID has
      been correctly decloaked or if AP is in your adaptors sending range
      SSID Bruteforcing is also possible with this test mode.
d   - Deauthentication / Disassociation Amok Mode
      Kicks everybody found from AP
m   - Michael shutdown exploitation (TKIP)
      Cancels all traffic continuously
x   - 802.1X tests
w   - WIDS/WIPS Confusion
      Confuse/Abuse Intrusion Detection and Prevention Systems
f   - MAC filter bruteforce mode
      This test uses a list of known client MAC Addresses and tries to
      authenticate them to the given AP while dynamically changing
      its response timeout for best performance. It currently works only
      on APs who deny an open authentication request properly
g   - WPA Downgrade test
      deauthenticates Stations and APs sending WPA encrypted packets.
      With this test you can check if the sysadmin will try setting his
      network to WEP or disable encryption.
```

### 4.1.42 medusa

Medusa is intended to be a speedy, massively parallel, modular, login brute-forcer. The goal is to support as many services which allow remote authentication as possible. The author considers following items to some of the key features of this application:

```
[root@ArcheryOS ~]# medusa --help
Medusa v2.2 [http://www.foofus.net] (C) JoMo-Kun / Foofus Networks
    <jmk@foofus.net>

medusa: invalid option -- '-'
CRITICAL: Unknown error processing command-line options.
ALERT: User logon information must be supplied.

Syntax: Medusa [-h host|-H file] [-u username|-U file] [-p password|-P
    file] [-C file] -M module [OPT]
  -h [TEXT]   : Target hostname or IP address
  -H [FILE]   : File containing target hostnames or IP addresses
  -u [TEXT]   : Username to test
  -U [FILE]   : File containing usernames to test
  -p [TEXT]   : Password to test
  -P [FILE]   : File containing passwords to test
  -C [FILE]   : File containing combo entries. See README for more
      information.
  -O [FILE]   : File to append log information to
  -e [n/s/ns] : Additional password checks ([n] No Password, [s]
      Password = Username)
  -M [TEXT]   : Name of the module to execute (without the .mod
      extension)
  -m [TEXT]   : Parameter to pass to the module. This can be passed
      multiple times with a
                different parameter each time and they will all be sent
                    to the module (i.e.
                -m Param1 -m Param2, etc.)
  -d          : Dump all known modules
  -n [NUM]    : Use for non-default TCP port number
  -s          : Enable SSL
  -g [NUM]    : Give up after trying to connect for NUM seconds (default
      3)
  -r [NUM]    : Sleep NUM seconds between retry attempts (default 3)
  -R [NUM]    : Attempt NUM retries before giving up. The total number
      of attempts will be NUM + 1.
  -c [NUM]    : Time to wait in usec to verify socket is available
      (default 500 usec).
  -t [NUM]    : Total number of logins to be tested concurrently
  -T [NUM]    : Total number of hosts to be tested concurrently
  -L          : Parallelize logins using one username per thread. The
      default is to process
                the entire username before proceeding.
  -f          : Stop scanning host after first valid username/password
      found.
  -F          : Stop audit after first valid username/password found on
      any host.
  -b          : Suppress startup banner
  -q          : Display module's usage information
  -v [NUM]    : Verbose level [0 - 6 (more)]
  -w [NUM]    : Error debug level [0 - 10 (more)]
  -V          : Display version
  -Z [TEXT]   : Resume scan based on map of previous scan
```

### 4.1.43 movfuscator

The M/o/Vfuscator (short 'o', sounds like "mobfuscator") compiles programs into "mov" instructions, and only "mov" instructions. Arithmetic, comparisons, jumps, function calls, and everything else a program needs are all performed through mov operations; there is no self-modifying code, no transport-triggered calculation, and no other form of non-mov cheating.

```
[root@ArcheryOS ~]# movcc --help
Usage: /usr/bin/ld [options] file...
Options:
  -a KEYWORD                  Shared library control for HP/UX compatibility
  -A ARCH, --architecture ARCH
                              Set architecture
```

```
-b TARGET, --format TARGET Specify target for following input files
-c FILE, --mri-script FILE Read MRI format linker script
-d, -dc, -dp             Force common symbols to be defined
--force-group-allocation Force group members out of groups
-e ADDRESS, --entry ADDRESS Set start address
-E, --export-dynamic     Export all dynamic symbols
--no-export-dynamic      Undo the effect of --export-dynamic
-EB                      Link big-endian objects
-EL                      Link little-endian objects
-f SHLIB, --auxiliary SHLIB Auxiliary filter for shared object symbol
    table
-F SHLIB, --filter SHLIB Filter for shared object symbol table
-g                       Ignored
-G SIZE, --gpsize SIZE   Small data size (if no size, same as --shared)
-h FILENAME, -soname FILENAME
                         Set internal name of shared library
-I PROGRAM, --dynamic-linker PROGRAM
                         Set PROGRAM as the dynamic linker to use
--no-dynamic-linker      Produce an executable with no program
    interpreter header
-l LIBNAME, --library LIBNAME
                         Search for library LIBNAME
-L DIRECTORY, --library-path DIRECTORY
                         Add DIRECTORY to library search path
--sysroot=<DIRECTORY>    Override the default sysroot location
-m EMULATION             Set emulation
-M, --print-map          Print map file on standard output
-n, --nmagic             Do not page align data
-N, --omagic             Do not page align data, do not make text
    readonly
--no-omagic              Page align data, make text readonly
-o FILE, --output FILE   Set output file name
-O                       Optimize output file
--out-implib FILE        Generate import library
-plugin PLUGIN           Load named plugin
-plugin-opt ARG          Send arg to last-loaded plugin
-flto                    Ignored for GCC LTO option compatibility
-flto-partition=         Ignored for GCC LTO option compatibility
-fuse-ld=                Ignored for GCC linker option compatibility
--map-whole-files        Ignored for gold option compatibility
--no-map-whole-files     Ignored for gold option compatibility
-Qy                      Ignored for SVR4 compatibility
-q, --emit-relocs        Generate relocations in final output
-r, -i, --relocatable    Generate relocatable output
-R FILE, --just-symbols FILE
                         Just link symbols (if directory, same as
                             --rpath)
-s, --strip-all          Strip all symbols
-S, --strip-debug        Strip debugging symbols
--strip-discarded        Strip symbols in discarded sections
```

```
--no-strip-discarded     Do not strip symbols in discarded sections
-t, --trace              Trace file opens
-T FILE, --script FILE   Read linker script
--default-script FILE, -dT Read default linker script
-u SYMBOL, --undefined SYMBOL
                         Start with undefined reference to SYMBOL
--require-defined SYMBOL Require SYMBOL be defined in the final output
--unique [=SECTION]      Don't merge input [SECTION | orphan] sections
-Ur                      Build global constructor/destructor tables
-v, --version            Print version information
-V                       Print version and emulation information
-x, --discard-all        Discard all local symbols
-X, --discard-locals     Discard temporary local symbols (default)
--discard-none           Don't discard any local symbols
-y SYMBOL, --trace-symbol SYMBOL
                         Trace mentions of SYMBOL
-Y PATH                  Default search path for Solaris compatibility
-(, --start-group        Start a group
-), --end-group          End a group
--accept-unknown-input-arch Accept input files whose architecture
    cannot be determined
--no-accept-unknown-input-arch
                         Reject input files whose architecture is
                             unknown
--as-needed              Only set DT_NEEDED for following dynamic libs
    if used
--no-as-needed           Always set DT_NEEDED for dynamic libraries
    mentioned on
                           the command line
-assert KEYWORD          Ignored for SunOS compatibility
-Bdynamic, -dy, -call_shared
                         Link against shared libraries
-Bstatic, -dn, -non_shared, -static
                         Do not link against shared libraries
-Bsymbolic               Bind global references locally
-Bsymbolic-functions     Bind global function references locally
--check-sections         Check section addresses for overlaps (default)
--no-check-sections      Do not check section addresses for overlaps
--copy-dt-needed-entries Copy DT_NEEDED links mentioned inside DSOs
    that follow
--no-copy-dt-needed-entries Do not copy DT_NEEDED links mentioned
    inside DSOs that follow
--cref                   Output cross reference table
--defsym SYMBOL=EXPRESSION Define a symbol
--demangle [=STYLE]      Demangle symbol names [using STYLE]
--embedded-relocs        Generate embedded relocs
--fatal-warnings         Treat warnings as errors
--no-fatal-warnings      Do not treat warnings as errors (default)
-fini SYMBOL             Call SYMBOL at unload-time
--force-exe-suffix       Force generation of file with .exe suffix
```

```
--gc-sections            Remove unused sections (on some targets)
--no-gc-sections         Don't remove unused sections (default)
--print-gc-sections      List removed unused sections on stderr
--no-print-gc-sections   Do not list removed unused sections
--gc-keep-exported       Keep exported symbols when removing unused
    sections
--hash-size=<NUMBER>     Set default hash table size close to <NUMBER>
--help                   Print option help
-init SYMBOL             Call SYMBOL at load-time
-Map FILE                Write a map file
--no-define-common       Do not define Common storage
--no-demangle            Do not demangle symbol names
--no-keep-memory         Use less memory and more disk I/O
--no-undefined           Do not allow unresolved references in object
    files
--allow-shlib-undefined  Allow unresolved references in shared
    libraries
--no-allow-shlib-undefined Do not allow unresolved references in
    shared libs
--allow-multiple-definition Allow multiple definitions
--no-undefined-version   Disallow undefined version
--default-symver         Create default symbol version
--default-imported-symver Create default symbol version for imported
    symbols
--no-warn-mismatch       Don't warn about mismatched input files
--no-warn-search-mismatch Don't warn on finding an incompatible library
--no-whole-archive       Turn off --whole-archive
--noinhibit-exec         Create an output file even if errors occur
-nostdlib                Only use library directories specified on
                           the command line
--oformat TARGET         Specify target of output file
--print-output-format    Print default output format
--print-sysroot          Print current sysroot
-qmagic                  Ignored for Linux compatibility
--reduce-memory-overheads Reduce memory overheads, possibly taking
    much longer
--relax                  Reduce code size by using target specific
    optimizations
--no-relax               Do not use relaxation techniques to reduce
    code size
--retain-symbols-file FILE Keep only symbols listed in FILE
-rpath PATH              Set runtime shared library search path
-rpath-link PATH         Set link time shared library search path
-shared, -Bshareable     Create a shared library
-pie, --pic-executable   Create a position independent executable
--sort-common [=ascending|descending]
                         Sort common symbols by alignment [in
                             specified order]
--sort-section name|alignment
                         Sort sections by name or maximum alignment
```

```
--spare-dynamic-tags COUNT How many tags to reserve in .dynamic section
--split-by-file [=SIZE]  Split output sections every SIZE octets
--split-by-reloc [=COUNT] Split output sections every COUNT relocs
--stats                  Print memory usage statistics
--target-help            Display target specific options
--task-link SYMBOL       Do task level linking
--traditional-format     Use same format as native linker
--section-start SECTION=ADDRESS
                         Set address of named section
-Tbss ADDRESS            Set address of .bss section
-Tdata ADDRESS           Set address of .data section
-Ttext ADDRESS           Set address of .text section
-Ttext-segment ADDRESS   Set address of text segment
-Trodata-segment ADDRESS Set address of rodata segment
-Tldata-segment ADDRESS  Set address of ldata segment
--unresolved-symbols=<method>
                         How to handle unresolved symbols. <method> is:
                           ignore-all, report-all,
                               ignore-in-object-files,
                           ignore-in-shared-libs
--verbose [=NUMBER]      Output lots of information during link
--version-script FILE    Read version information script
--version-exports-section SYMBOL
                         Take export symbols list from .exports, using
                           SYMBOL as the version.
--dynamic-list-data      Add data symbols to dynamic list
--dynamic-list-cpp-new   Use C++ operator new/delete dynamic list
--dynamic-list-cpp-typeinfo Use C++ typeinfo dynamic list
--dynamic-list FILE      Read dynamic list
--warn-common            Warn about duplicate common symbols
--warn-constructors      Warn if global constructors/destructors are
    seen
--warn-multiple-gp       Warn if the multiple GP values are used
--warn-once              Warn only once per undefined symbol
--warn-section-align     Warn if start of section changes due to
    alignment
--warn-shared-textrel    Warn if shared object has DT_TEXTREL
--warn-alternate-em      Warn if an object has alternate ELF machine
    code
--warn-unresolved-symbols Report unresolved symbols as warnings
--error-unresolved-symbols Report unresolved symbols as errors
--whole-archive          Include all objects from following archives
--wrap SYMBOL            Use wrapper functions for SYMBOL
--ignore-unresolved-symbol SYMBOL
                         Unresolved SYMBOL will not cause an error or
                             warning
--push-state             Push state of flags governing input file
    handling
--pop-state              Pop state of flags governing input file
    handling
```

```
  --print-memory-usage      Report target memory usage
  --orphan-handling =MODE   Control how orphan sections are handled.
  @FILE                     Read options from FILE
/usr/bin/ld: supported targets: elf64-x86-64 elf32-i386 elf32-iamcu
    elf32-x86-64 a.out-i386-linux pei-i386 pei-x86-64 elf64-l1om
    elf64-k1om elf64-little elf64-big elf32-little elf32-big pe-x86-64
    pe-bigobj-x86-64 pe-i386 plugin srec symbolsrec verilog tekhex
    binary ihex
/usr/bin/ld: supported emulations: elf_x86_64 elf32_x86_64 elf_i386
    elf_iamcu i386linux elf_l1om elf_k1om i386pep i386pe
/usr/bin/ld: emulation specific options:
ELF emulations:
  --ld-generated-unwind-info Generate exception handling info for PLT
  --no-ld-generated-unwind-info
                             Don't generate exception handling info for PLT
  --build-id[=STYLE]         Generate build ID note
  --compress-debug-sections=[none|zlib|zlib-gnu|zlib-gabi]
                             Compress DWARF debug sections using zlib
                              Default: none
  -z common-page-size=SIZE Set common page size to SIZE
  -z max-page-size=SIZE    Set maximum page size to SIZE
  -z defs                    Report unresolved symbols in object files.
  -z muldefs                 Allow multiple definitions
  -z execstack               Mark executable as requiring executable stack
  -z noexecstack             Mark executable as not requiring executable
      stack
  -z globalaudit             Mark executable requiring global auditing
  --audit=AUDITLIB           Specify a library to use for auditing
  -Bgroup                    Selects group name lookup rules for DSO
  --disable-new-dtags        Disable new dynamic tags
  --enable-new-dtags         Enable new dynamic tags
  --eh-frame-hdr             Create .eh_frame_hdr section
  --no-eh-frame-hdr          Do not create .eh_frame_hdr section
  --exclude-libs=LIBS        Make all symbols in LIBS hidden
  --hash-style=STYLE         Set hash style to sysv, gnu or both
  -P AUDITLIB, --depaudit=AUDITLIB
              Specify a library to use for auditing dependencies
  -z combreloc               Merge dynamic relocs into one section and sort
  -z nocombreloc             Don't merge dynamic relocs into one section
  -z global                  Make symbols in DSO available for subsequently
               loaded objects
  -z initfirst               Mark DSO to be initialized first at runtime
  -z interpose               Mark object to interpose all DSOs but
      executable
  -z lazy                    Mark object lazy runtime binding (default)
  -z loadfltr                Mark object requiring immediate process
  -z nocopyreloc             Don't create copy relocs
  -z nodefaultlib            Mark object not to use default search paths
  -z nodelete                Mark DSO non-deletable at runtime
  -z nodlopen                Mark DSO not available to dlopen
  -z nodump                Mark DSO not available to dldump
  -z now                   Mark object non-lazy runtime binding
  -z origin                Mark object requiring immediate $ORIGIN
           processing at runtime
  -z relro                 Create RELRO program header (default)
  -z norelro               Don't create RELRO program header
  -z separate-code         Create separate code program header
  -z noseparate-code       Don't create separate code program header
      (default)
  -z common                Generate common symbols with STT_COMMON type
  -z nocommon              Generate common symbols with STT_OBJECT type
  -z stack-size=SIZE       Set size of stack segment
  -z text                  Treat DT_TEXTREL in shared object as error
  -z notext                Don't treat DT_TEXTREL in shared object as
      error
  -z textoff               Don't treat DT_TEXTREL in shared object as
      error
elf_x86_64:
  -z noextern-protected-data Do not treat protected data symbol as
      external
  -z dynamic-undefined-weak Make undefined weak symbols dynamic
  -z nodynamic-undefined-weak Do not make undefined weak symbols dynamic
  -z noreloc-overflow      Disable relocation overflow check
  -z call-nop=PADDING      Use PADDING as 1-byte NOP for branch
  -z ibtplt                Generate IBT-enabled PLT entries
  -z ibt                   Generate GNU_PROPERTY_X86_FEATURE_1_IBT
  -z shstk                 Generate GNU_PROPERTY_X86_FEATURE_1_SHSTK
  -z bndplt                Always generate BND prefix in PLT entries
elf32_x86_64:
  -z noextern-protected-data Do not treat protected data symbol as
      external
  -z dynamic-undefined-weak Make undefined weak symbols dynamic
  -z nodynamic-undefined-weak Do not make undefined weak symbols dynamic
  -z noreloc-overflow      Disable relocation overflow check
  -z call-nop=PADDING      Use PADDING as 1-byte NOP for branch
  -z ibtplt                Generate IBT-enabled PLT entries
  -z ibt                   Generate GNU_PROPERTY_X86_FEATURE_1_IBT
  -z shstk                 Generate GNU_PROPERTY_X86_FEATURE_1_SHSTK
elf_i386:
  -z noextern-protected-data Do not treat protected data symbol as
      external
  -z dynamic-undefined-weak Make undefined weak symbols dynamic
  -z nodynamic-undefined-weak Do not make undefined weak symbols dynamic
  -z call-nop=PADDING      Use PADDING as 1-byte NOP for branch
  -z ibtplt                Generate IBT-enabled PLT entries
  -z ibt                   Generate GNU_PROPERTY_X86_FEATURE_1_IBT
  -z shstk                 Generate GNU_PROPERTY_X86_FEATURE_1_SHSTK
elf_iamcu:
  -z noextern-protected-data Do not treat protected data symbol as
      external
  -z dynamic-undefined-weak Make undefined weak symbols dynamic
  -z nodynamic-undefined-weak Do not make undefined weak symbols dynamic
  -z call-nop=PADDING      Use PADDING as 1-byte NOP for branch
elf_l1om:
  -z noextern-protected-data Do not treat protected data symbol as
      external
  -z dynamic-undefined-weak Make undefined weak symbols dynamic
  -z nodynamic-undefined-weak Do not make undefined weak symbols dynamic
  -z call-nop=PADDING      Use PADDING as 1-byte NOP for branch
elf_k1om:
  -z noextern-protected-data Do not treat protected data symbol as
      external
  -z dynamic-undefined-weak Make undefined weak symbols dynamic
  -z nodynamic-undefined-weak Do not make undefined weak symbols dynamic
  -z call-nop=PADDING      Use PADDING as 1-byte NOP for branch
i386pep:
  --base_file <basefile>         Generate a base file for relocatable
      DLLs
  --dll                          Set image base to the default for DLLs
  --file-alignment <size>        Set file alignment
  --heap <size>                  Set initial size of the heap
  --image-base <address>         Set start address of the executable
  --major-image-version <number> Set version number of the executable
  --major-os-version <number>    Set minimum required OS version
  --major-subsystem-version <number> Set minimum required OS subsystem
      version
  --minor-image-version <number> Set revision number of the executable
  --minor-os-version <number>    Set minimum required OS revision
  --minor-subsystem-version <number> Set minimum required OS subsystem
      revision
  --section-alignment <size>     Set section alignment
  --stack <size>                 Set size of the initial stack
  --subsystem <name>[:<version>] Set required OS subsystem [& version]
  --support-old-code             Support interworking with old code
  --[no-]leading-underscore      Set explicit symbol underscore prefix
      mode
  --[no-]insert-timestamp        Use a real timestamp rather than zero.
      (default)
                                 This makes binaries non-deterministic
  --add-stdcall-alias            Export symbols with and without @nn
  --disable-stdcall-fixup        Don't link _sym to _sym@nn
  --enable-stdcall-fixup         Link _sym to _sym@nn without warnings
  --exclude-symbols sym,sym,...  Exclude symbols from automatic export
  --exclude-all-symbols          Exclude all symbols from automatic
      export
  --exclude-libs lib,lib,...     Exclude libraries from automatic export
  --exclude-modules-for-implib mod,mod,...
                                 Exclude objects, archive members from
                                     auto
                                 export, place into import library
```

```
                                     instead.
  --export-all-symbols           Automatically export all globals to DLL
  --kill-at                      Remove @nn from exported symbols
  --output-def <file>            Generate a .DEF file for the built DLL
  --warn-duplicate-exports       Warn about duplicate exports.
  --compat-implib                Create backward compatible import libs;
                                   create __imp_<SYMBOL> as well.
  --enable-auto-image-base       Automatically choose image base for
      DLLs
                                   unless user specifies one
  --disable-auto-image-base      Do not auto-choose image base.
      (default)
  --dll-search-prefix=<string>   When linking dynamically to a dll
      without
                                   an importlib, use
                                       <string><basename>.dll
                                   in preference to lib<basename>.dll
  --enable-auto-import           Do sophisticated linking of _sym to
                                   __imp_sym for DATA references
  --disable-auto-import          Do not auto-import DATA items from DLLs
  --enable-runtime-pseudo-reloc  Work around auto-import limitations by
                                   adding pseudo-relocations resolved at
                                   runtime.
  --disable-runtime-pseudo-reloc Do not add runtime pseudo-relocations
      for
                                   auto-imported DATA.
  --enable-extra-pep-debug        Enable verbose debug output when
      building
                                   or linking to DLLs (esp. auto-import)
  --enable-long-section-names    Use long COFF section names even in
                                   executable image files
  --disable-long-section-names   Never use long COFF section names, even
                                   in object files
  --high-entropy-va              Image is compatible with 64-bit
      address space
                                   layout randomization (ASLR)
  --dynamicbase       Image base address may be relocated using
                 address space layout randomization (ASLR)
  --forceinteg   Code integrity checks are enforced
  --nxcompat     Image is compatible with data execution prevention
  --no-isolation    Image understands isolation but do not isolate the
      image
  --no-seh       Image does not use SEH. No SE handler may
                 be called in this image
  --no-bind      Do not bind this image
  --wdmdriver    Driver uses the WDM model
  --tsaware               Image is Terminal Server aware
  --build-id[=STYLE]      Generate build ID
i386pe:
  --base_file <basefile>         Generate a base file for relocatable
```

```
    DLLs
--dll                          Set image base to the default for DLLs
--file-alignment <size>        Set file alignment
--heap <size>                  Set initial size of the heap
--image-base <address>         Set start address of the executable
--major-image-version <number> Set version number of the executable
--major-os-version <number>    Set minimum required OS version
--major-subsystem-version <number> Set minimum required OS subsystem
    version
--minor-image-version <number> Set revision number of the executable
--minor-os-version <number>    Set minimum required OS revision
--minor-subsystem-version <number> Set minimum required OS subsystem
    revision
--section-alignment <size>     Set section alignment
--stack <size>                 Set size of the initial stack
--subsystem <name>[:<version>] Set required OS subsystem [& version]
--support-old-code             Support interworking with old code
--[no-]leading-underscore      Set explicit symbol underscore prefix
    mode
--thumb-entry=<symbol>         Set the entry point to be Thumb
    <symbol>
--[no-]insert-timestamp        Use a real timestamp rather than zero
    (default).
                               This makes binaries non-deterministic
--add-stdcall-alias            Export symbols with and without @nn
--disable-stdcall-fixup        Don't link _sym to _sym@nn
--enable-stdcall-fixup         Link _sym to _sym@nn without warnings
--exclude-symbols sym,sym,...  Exclude symbols from automatic export
--exclude-all-symbols          Exclude all symbols from automatic
    export
--exclude-libs lib,lib,...     Exclude libraries from automatic export
--exclude-modules-for-implib mod,mod,...
                               Exclude objects, archive members from
                                   auto
                               export, place into import library
                                   instead.
--export-all-symbols           Automatically export all globals to DLL
--kill-at                      Remove @nn from exported symbols
--output-def <file>            Generate a .DEF file for the built DLL
--warn-duplicate-exports       Warn about duplicate exports
--compat-implib                Create backward compatible import libs;
                                 create __imp_<SYMBOL> as well.
--enable-auto-image-base[=<address>] Automatically choose image base
    for DLLs
                                 (optionally starting with address)
                                     unless
                                 specifically set with --image-base
--disable-auto-image-base      Do not auto-choose image base.
    (default)
--dll-search-prefix=<string>   When linking dynamically to a dll
```

```
      without
                                   an importlib, use
                                       <string><basename>.dll
                                   in preference to lib<basename>.dll
  --enable-auto-import             Do sophisticated linking of _sym to
                                   __imp_sym for DATA references
  --disable-auto-import            Do not auto-import DATA items from DLLs
  --enable-runtime-pseudo-reloc    Work around auto-import limitations by
                                   adding pseudo-relocations resolved at
                                   runtime.
  --disable-runtime-pseudo-reloc   Do not add runtime pseudo-relocations
      for
                                   auto-imported DATA.
  --enable-extra-pe-debug          Enable verbose debug output when
      building
                                   or linking to DLLs (esp. auto-import)
  --large-address-aware            Executable supports virtual addresses
                                   greater than 2 gigabytes
  --disable-large-address-aware    Executable does not support virtual
                                   addresses greater than 2 gigabytes
  --enable-long-section-names      Use long COFF section names even in
                                   executable image files
  --disable-long-section-names     Never use long COFF section names, even
                                   in object files
  --dynamicbase          Image base address may be relocated using
                 address space layout randomization (ASLR)
  --forceinteg   Code integrity checks are enforced
  --nxcompat     Image is compatible with data execution prevention
  --no-isolation    Image understands isolation but do not isolate the
      image
  --no-seh       Image does not use SEH. No SE handler may
                 be called in this image
  --no-bind      Do not bind this image
  --wdmdriver    Driver uses the WDM model
  --tsaware               Image is Terminal Server aware
  --build-id[=STYLE]      Generate build ID

Report bugs to <https://bugs.archlinux.org/>
```

### 4.1.44 msfconsole

msfconsole is a way to interacte with the Metasploit Framework (MSF).

```
[root@ArcheryOS ~]# msfconsole


 _                                                _
/ \   /\        __                       _   __  /_/ __
| |\  / | _____  \ \          ___  _____ | | / \ _  \ \
| | \/| | | ___\ |- -| /\   / __\ | -__/ | || | || | |- -|
|_|   | | | _|__  | |_  / -\ __\ \   | |    | | \__/| |  | |_
      |/  |____/  \___\/ /\ \\___/   \/     \__|    |_\  \___\


      =[ metasploit v4.16.58-dev                    ]
+ -- --=[ 1771 exploits - 1006 auxiliary - 307 post ]
+ -- --=[ 537 payloads - 41 encoders - 10 nops      ]
+ -- --=[ Free Metasploit Pro trial: http://r-7.co/trymsp ]

msf >
```

### 4.1.45 msfd

msfd provides an instance of msfconsole that remote clients can connect to.

```
[root@ArcheryOS ~]# msfd -h

Usage: msfd <options>

OPTIONS:

    -A <opt> Specify list of hosts allowed to connect
    -D <opt> Specify list of hosts not allowed to connect
    -a <opt> Bind to this IP address instead of loopback
    -f       Run the daemon in the foreground
    -h       Help banner
    -p <opt> Bind to this port instead of 55554
    -q       Do not print the banner on startup
    -s       Use SSL
```

### 4.1.46 msfpc

MSFvenom Payload Creator (MSFPC) is a wrapper that generates multiple types of payloads, based on user-selected options.

```
[root@ArcheryOS ~]# msfpc --help
 [*] MSFvenom Payload Creator (MSFPC v1.4.4)

 /usr/bin/msfpc <TYPE> (<DOMAIN/IP>) (<PORT>) (<CMD/MSF>)
     (<BIND/REVERSE>) (<STAGED/STAGELESS>) (<TCP/HTTP/HTTPS/FIND_PORT>)
     (<BATCH/LOOP>) (<VERBOSE>)
   Example: /usr/bin/msfpc windows 192.168.1.10   # Windows & manual IP.
           /usr/bin/msfpc elf bind eth0 4444      # Linux, eth0's IP &
               manual port.
           /usr/bin/msfpc stageless cmd py https # Python, stageless
               command prompt.
           /usr/bin/msfpc verbose loop eth1      # A payload for every
               type, using eth1's IP.
```

```
          /usr/bin/msfpc msf batch wan           # All possible
              Meterpreter payloads, using WAN IP.
          /usr/bin/msfpc help verbose            # Help screen, with
              even more information.

<TYPE>:
  + APK
  + ASP
  + ASPX
  + Bash [.sh]
  + Java [.jsp]
  + Linux [.elf]
  + OSX [.macho]
  + Perl [.pl]
  + PHP
  + Powershell [.ps1]
  + Python [.py]
  + Tomcat [.war]
  + Windows [.exe // .exe // .dll]

Rather than putting <DOMAIN/IP>, you can do a interface and MSFPC will
    detect that IP address.
Missing <DOMAIN/IP> will default to the IP menu.

Missing <PORT> will default to 443.

<CMD> is a standard/native command prompt/terminal to interactive with.
<MSF> is a custom cross platform shell, gaining the full power of
    Metasploit.
Missing <CMD/MSF> will default to <MSF> where possible.

<BIND> opens a port on the target side, and the attacker connects to
    them. Commonly blocked with ingress firewalls rules on the target.
<REVERSE> makes the target connect back to the attacker. The attacker
    needs an open port. Blocked with engress firewalls rules on the
    target.
Missing <BIND/REVERSE> will default to <REVERSE>.

<STAGED> splits the payload into parts, making it smaller but dependent
    on Metasploit.
<STAGELESS> is the complete standalone payload. More 'stable' than
    <STAGED>.
Missing <STAGED/STAGELESS> will default to <STAGED> where possible.

<TCP> is the standard method to connecting back. This is the most
    compatible with TYPES as its RAW. Can be easily detected on IDSs.
<HTTP> makes the communication appear to be HTTP traffic (unencrypted).
    Helpful for packet inspection, which limit port access on protocol
    - e.g. TCP 80.
<HTTPS> makes the communication appear to be (encrypted) HTTP traffic
```

```
    using as SSL. Helpful for packet inspection, which limit port
    access on protocol - e.g. TCP 443.
<FIND_PORT> will attempt every port on the target machine, to find a
    way out. Useful with stick ingress/engress firewall rules. Will
    switch to 'allports' based on <TYPE>.
Missing <TCP/HTTP/HTTPS/FIND_PORT> will default to <TCP>.

<BATCH> will generate as many combinations as possible: <TYPE>, <CMD +
    MSF>, <BIND + REVERSE>, <STAGED + STAGLESS> & <TCP + HTTP + HTTPS
    + FIND_PORT>
<LOOP> will just create one of each <TYPE>.

<VERBOSE> will display more information.
```

### 4.1.47 msfrpc

msfrpc connects to an RPC instance of Metasploit.

```
[root@ArcheryOS ~]# msfrpc -h

Usage: msfrpc <options>

OPTIONS:

    -P <opt> Specify the password to access msfrpcd
    -S       Disable SSL on the RPC socket
    -U <opt> Specify the username to access msfrpcd
    -a <opt> Connect to this IP address
    -h       Help banner
    -p <opt> Connect to the specified port instead of 55553
```

### 4.1.48 msfrpcd

msfrpcd provides an RPC interface to Metasploit.

```
[root@ArcheryOS ~]# msfrpcd -h

Usage: msfrpcd <options>

OPTIONS:

    -P <opt> Specify the password to access msfrpcd
    -S       Disable SSL on the RPC socket
    -U <opt> Specify the username to access msfrpcd
    -a <opt> Bind to this IP address
    -f       Run the daemon in the foreground
    -h       Help banner
    -n       Disable database
    -p <opt> Bind to this port instead of 55553
    -t <opt> Token Timeout (default 300 seconds
    -u <opt> URI for Web server
```

### 4.1.49 msfvenom

msfvenom is a standalone Metasploit payload generator

```
[root@ArcheryOS ~]# msfvenom -h
MsfVenom - a Metasploit standalone payload generator.
Also a replacement for msfpayload and msfencode.
Usage: /usr/bin/msfvenom [options] <var=val>

Options:
    -p, --payload     <payload>   Payload to use. Specify a ’-’ or stdin
        to use custom payloads
       --payload-options          List the payload’s standard options
    -l, --list        [type]      List a module type. Options are:
        payloads, encoders, nops, all
    -n, --nopsled     <length>    Prepend a nopsled of [length] size on
        to the payload
    -f, --format      <format>    Output format (use --help-formats for
        a list)
       --help-formats             List available formats
    -e, --encoder     <encoder>   The encoder to use
    -a, --arch        <arch>      The architecture to use
       --platform     <platform>  The platform of the payload
       --help-platforms           List available platforms
    -s, --space       <length>    The maximum size of the resulting
        payload
       --encoder-space <length>  The maximum size of the encoded
           payload (defaults to the -s value)
    -b, --bad-chars   <list>      The list of characters to avoid
        example: ’\x00\xff’
    -i, --iterations  <count>     The number of times to encode the
        payload
    -c, --add-code    <path>      Specify an additional win32 shellcode
        file to include
    -x, --template    <path>      Specify a custom executable file to
        use as a template
    -k, --keep                    Preserve the template behavior and
        inject the payload as a new thread
    -o, --out         <path>      Save the payload
    -v, --var-name    <name>      Specify a custom variable name to use
        for certain output formats
       --smallest                 Generate the smallest possible payload
    -h, --help                    Show this message
```

### 4.1.50 mimikatz

mimikatz is a group of tools to exploit Windows security.

### 4.1.51 miranda

miranda is a Python-based Universal Plug-N-Play client application designed to discover, query and interact with UPNP devices, particularly Internet Gateway Devices (aka, routers). It can be used to audit UPNP-enabled devices on a network for possible vulnerabilities. Some of its features include:

```
[root@ArcheryOS ~]# miranda -h

Command line usage: /usr/bin/miranda [OPTIONS]

   -s <struct file> Load previous host data from struct file
   -l <log file>   Log user-supplied commands to log file
   -i <interface>  Specify the name of the interface to use (Linux only,
       requires root)
   -u      Disable show-uniq-hosts-only option
   -d      Enable debug mode
   -v      Enable verbose mode
   -h         Show help
```

### 4.1.52 mitmf

MITMf aims to provide a one-stop-shop for Man-In-The-Middle and network attacks while updating and improving existing attacks and techniques.

Originally built to address the significant shortcomings of other tools (e.g Ettercap, Mallory), it's been almost completely re-written from scratch to provide a modular and easily extendible framework that anyone can use to implement their own MITM attack.

```
[root@ArcheryOS ~]# mitmf --help
```

```
usage: mitmf.py -i interface [mitmf options] [plugin name] [plugin
    options]

MITMf v0.9.8 - 'The Dark Side'

optional arguments:
  -h, --help            show this help message and exit
  -v, --version         show program's version number and exit

MITMf:
  Options for MITMf

  --log-level {debug,info}
                      Specify a log level [default: info]
  -i INTERFACE        Interface to listen on
  -c CONFIG_FILE      Specify config file to use
  -p, --preserve-cache Don't kill client/server caching
  -r READ_PCAP, --read-pcap READ_PCAP
                      Parse specified pcap for credentials and exit
  -l PORT             Port to listen on (default 10000)
  -f, --favicon       Substitute a lock favicon on secure requests.
  -k, --killsessions  Kill sessions in progress.
  -F FILTER [FILTER ...], --filter FILTER [FILTER ...]
                      Filter to apply to incoming traffic

Inject:
  Inject arbitrary content into HTML content

  --inject            Load plugin 'Inject'
  --js-url JS_URL     URL of the JS to inject
  --js-payload JS_PAYLOAD
                      JS string to inject
  --js-file JS_FILE   File containing JS to inject
  --html-url HTML_URL URL of the HTML to inject
  --html-payload HTML_PAYLOAD
                      HTML string to inject
  --html-file HTML_FILE
                      File containing HTML to inject
  --per-domain        Inject once per domain per client.
  --rate-limit RATE_LIMIT
                      Inject once every RATE_LIMIT seconds per client.
  --count-limit COUNT_LIMIT
                      Inject only COUNT_LIMIT times per client.
  --white-ips IP      Inject content ONLY for these ips (comma seperated)
  --black-ips IP      DO NOT inject content for these ips (comma
      seperated)
  --white-domains DOMAINS
                      Inject content ONLY for these domains (comma
                          seperated)
  --black-domains DOMAINS
                      DO NOT inject content for these domains (comma
                          seperated)

HTA Drive-By:
  Performs HTA drive-by attacks on clients

  --hta               Load plugin 'HTA Drive-By'
  --text TEXT         Text to display on notification bar
  --hta-app HTA_APP   Path to HTA application [defaults to
      config/hta_driveby/flash_setup.hta]

Replace:
  Replace arbitrary content in HTML content

  --replace           Load plugin 'Replace'

Upsidedownternet:
  Flips images 180 degrees

  --upsidedownternet  Load plugin 'Upsidedownternet'

BrowserProfiler:
  Attempts to enumerate all browser plugins of connected clients

  --browserprofiler   Load plugin 'BrowserProfiler'

FilePwn:
  Backdoor executables being sent over http using bdfactory

  --filepwn           Load plugin 'FilePwn'

SSLstrip+:
  Enables SSLstrip+ for partial HSTS bypass

  --hsts              Load plugin 'SSLstrip+'

Captive Portal:
  Be a captive portal!

  --captive           Load plugin 'Captive Portal'
  --portalurl URL     Specify the URL where the portal is located, e.g.
      http://example.com.
  --portaldir LOCALDIR Specify a local path containg the portal files
      served with a SimpleHTTPServer on a different port (see config).
  --use-dns           Whether we use dns spoofing to serve from a
      fancier portal URL captive.portal when used without options or
      portaldir. Requires DNS for "captive.portal" to resolve, e.g. via
      configured dns spoofing --dns.
```

```
ScreenShotter:
  Uses HTML5 Canvas to render an accurate screenshot of a clients browser

  --screen            Load plugin 'ScreenShotter'
  --interval SECONDS  Interval at which screenshots will be taken
      (default 10 seconds)

SMBAuth:
  Evoke SMB challenge-response auth attempts

  --smbauth           Load plugin 'SMBAuth'

Ferret-NG:
  Captures cookies and starts a proxy that will feed them to connected
      clients

  --ferretng          Load plugin 'Ferret-NG'
  --port PORT         Port to start Ferret-NG proxy on (default 10010)
  --load-cookies FILE Load cookies from a log file

JSKeylogger:
  Injects a javascript keylogger into clients webpages

  --jskeylogger       Load plugin 'JSKeylogger'

AppCachePoison:
  Performs App Cache Poisoning attacks

  --appoison          Load plugin 'AppCachePoison'

Responder:
  Poison LLMNR, NBT-NS and MDNS requests

  --responder         Load plugin 'Responder'
  --analyze           Allows you to see NBT-NS, BROWSER, LLMNR requests
      without poisoning
  --wredir            Enables answers for netbios wredir suffix queries
  --nbtns             Enables answers for netbios domain suffix queries
  --fingerprint       Fingerprint hosts that issued an NBT-NS or LLMNR
      query
  --lm                Force LM hashing downgrade for Windows XP/2003 and
      earlier
  --wpad              Start the WPAD rogue proxy server
  --forcewpadauth     Force NTLM/Basic authentication on wpad.dat file
      retrieval (might cause a login prompt)
  --basic             Return a Basic HTTP authentication. If not set, an
      NTLM authentication will be returned

ImageRandomizer:
  Replaces images with a random one from a specified directory

  --imgrand           Load plugin 'ImageRandomizer'
  --img-dir DIRECTORY Directory with images

Spoof:
  Redirect/Modify traffic using ICMP, ARP, DHCP or DNS

  --spoof             Load plugin 'Spoof'
  --arp               Redirect traffic using ARP spoofing
  --icmp              Redirect traffic using ICMP redirects
  --dhcp              Redirect traffic using DHCP offers
  --dns               Proxy/Modify DNS queries
  --netmask NETMASK   The netmask of the network
  --shellshock PAYLOAD Trigger the Shellshock vuln when spoofing DHCP,
      and execute specified command
  --gateway GATEWAY   Specify the gateway IP
  --gatewaymac GATEWAYMAC
                      Specify the gateway MAC [will auto resolve if
                          ommited]
  --targets TARGETS   Specify host/s to poison [if ommited will default
      to subnet]
  --ignore IGNORE     Specify host/s not to poison
  --arpmode {rep,req} ARP Spoofing mode: replies (rep) or requests (req)
      [default: rep]

SMBTrap:
  Exploits the SMBTrap vulnerability on connected clients

  --smbtrap           Load plugin 'SMBTrap'

BrowserSniper:
  Performs drive-by attacks on clients with out-of-date browser plugins

  --browsersniper     Load plugin 'BrowserSniper'

Use wisely, young Padawan.
```

### 4.1.53 nbtscan

NBTScan is a program for scanning IP networks for NetBIOS name information (similar to what the Windows nbtstat tool provides against single hosts). It sends a NetBIOS status query to each address in a supplied range and lists received information in human readable form. For each responded host it lists IP address, NetBIOS computer name, logged-in user name and MAC address.

```
[root@ArcheryOS ~]# nbtscan
```

```
NBTscan version 1.5.1. Copyright (C) 1999-2003 Alla Bezroutchko.
This is a free software and it comes with absolutely no warranty.
You can use, distribute and modify it under terms of GNU GPL.

Usage:
nbtscan [-v] [-d] [-e] [-l] [-t timeout] [-b bandwidth] [-r] [-q] [-s
    separator] [-m retransmits] (-f filename)|(<scan_range>)
   -v   verbose output. Print all names received
        from each host
   -d   dump packets. Print whole packet contents.
   -e   Format output in /etc/hosts format.
   -l   Format output in lmhosts format.
        Cannot be used with -v, -s or -h options.
   -t timeout wait timeout milliseconds for response.
        Default 1000.
   -b bandwidth  Output throttling. Slow down output
        so that it uses no more that bandwidth bps.
        Useful on slow links, so that ougoing queries
        don't get dropped.
   -r   use local port 137 for scans. Win95 boxes
        respond to this only.
        You need to be root to use this option on Unix.
   -q   Suppress banners and error messages,
   -s separator  Script-friendly output. Don't print
        column and record headers, separate fields with separator.
   -h   Print human-readable names for services.
        Can only be used with -v option.
   -m retransmits Number of retransmits. Default 0.
   -f filename Take IP addresses to scan from file filename.
        -f - makes nbtscan take IP addresses from stdin.
   <scan_range>  what to scan. Can either be single IP
        like 192.168.1.1 or
        range of addresses in one of two forms:
        xxx.xxx.xxx.xxx/xx or xxx.xxx.xxx.xxx-xxx.
Examples:
   nbtscan -r 192.168.1.0/24
      Scans the whole C-class network.
   nbtscan 192.168.1.25-137
      Scans a range from 192.168.1.25 to 192.168.1.137
   nbtscan -v -s : 192.168.1.0/24
      Scans C-class network. Prints results in script-friendly
      format using colon as field separator.
      Produces output like that:
      192.168.0.1:NT_SERVER:00U
      192.168.0.1:MY_DOMAIN:00G
      192.168.0.1:ADMINISTRATOR:03U
      192.168.0.2:OTHER_BOX:00U
      ...
   nbtscan -f iplist
      Scans IP addresses specified in file iplist.
```

### 4.1.54 ncrack

Ncrack is an open source tool for network authentication cracking. It was designed for high-speed parallel cracking using a dynamic engine that can adapt to different network situations. Ncrack can also be extensively fine-tuned for special cases, though the default parameters are generic enough to cover almost every situation. It is built on a modular architecture that allows for easy extension to support additional protocols. Ncrack is designed for companies and security professionals to audit large networks for default or weak passwords in a rapid and reliable way. It can also be used to conduct fairly sophisticated and intensive brute force attacks against individual services.

```
[root@ArcheryOS ~]# ncrack --help
Ncrack 0.6 ( http://ncrack.org )
Usage: ncrack [Options] {target and service specification}
TARGET SPECIFICATION:
  Can pass hostnames, IP addresses, networks, etc.
  Ex: scanme.nmap.org, microsoft.com/24, 192.168.0.1; 10.0.0-255.1-254
  -iX <inputfilename>: Input from Nmap's -oX XML output format
  -iN <inputfilename>: Input from Nmap's -oN Normal output format
  -iL <inputfilename>: Input from list of hosts/networks
  --exclude <host1[,host2][,host3],...>: Exclude hosts/networks
  --excludefile <exclude_file>: Exclude list from file
SERVICE SPECIFICATION:
  Can pass target specific services in <service>://target (standard)
      notation or
  using -p which will be applied to all hosts in non-standard notation.
  Service arguments can be specified to be host-specific, type of
      service-specific
  (-m) or global (-g). Ex: ssh://10.0.0.10,at=10,cl=30 -m ssh:at=50 -g
      cd=3000
  Ex2: ncrack -p ssh,ftp:3500,25 10.0.0.10 scanme.nmap.org
      google.com:80,ssl
  -p <service-list>: services will be applied to all non-standard
      notation hosts
  -m <service>:<options>: options will be applied to all services of
      this type
  -g <options>: options will be applied to every service globally
  Misc options:
    ssl: enable SSL over this service
    path <name>: used in modules like HTTP ('=' needs escaping if used)
    db <name>: used in modules like MongoDB to specify the database
    domain <name>: used in modules like WinRM to specify the domain
TIMING AND PERFORMANCE:
  Options which take <time> are in seconds, unless you append 'ms'
  (miliseconds), 'm' (minutes), or 'h' (hours) to the value (e.g. 30m).
  Service-specific options:
    cl (min connection limit): minimum number of concurrent parallel
        connections
    CL (max connection limit): maximum number of concurrent parallel
        connections
    at (authentication tries): authentication attempts per connection
    cd (connection delay): delay <time> between each connection
        initiation
    cr (connection retries): caps number of service connection attempts
    to (time-out): maximum cracking <time> for service, regardless of
        success so far
  -T<0-5>: Set timing template (higher is faster)
  --connection-limit <number>: threshold for total concurrent connections
  --stealthy-linear: try credentials using only one connection against
      each specified host
    until you hit the same host again. Overrides all other timing
        options.
AUTHENTICATION:
  -U <filename>: username file
  -P <filename>: password file
  --user <username_list>: comma-separated username list
  --pass <password_list>: comma-separated password list
  --passwords-first: Iterate password list for each username. Default is
      opposite.
  --pairwise: Choose usernames and passwords in pairs.
OUTPUT:
  -oN/-oX <file>: Output scan in normal and XML format, respectively, to
      the given filename.
  -oA <basename>: Output in the two major formats at once
  -v: Increase verbosity level (use twice or more for greater effect)
  -d[level]: Set or increase debugging level (Up to 10 is meaningful)
  --nsock-trace <level>: Set nsock trace level (Valid range: 0 - 10)
  --log-errors: Log errors/warnings to the normal-format output file
  --append-output: Append to rather than clobber specified output files
MISC:
  --resume <file>: Continue previously saved session
  --save <file>: Save restoration file with specific filename
  -f: quit cracking service after one found credential
  -6: Enable IPv6 cracking
  -sL or --list: only list hosts and services
  --datadir <dirname>: Specify custom Ncrack data file location
  --proxy <type://proxy:port>: Make connections via socks4, 4a, http.
  -V: Print version number
  -h: Print this help summary page.
MODULES:
  SSH, RDP, FTP, Telnet, HTTP(S), POP3(S), IMAP, SMB, VNC, SIP, Redis,
      PostgreSQL, MySQL, MSSQL, MongoDB, Cassandra, WinRM, OWA
EXAMPLES:
  ncrack -v --user root localhost:22
  ncrack -v -T5 https://192.168.0.1
  ncrack -v -iX ~/nmap.xml -g CL=5,to=1h
SEE THE MAN PAGE (http://nmap.org/ncrack/man.html) FOR MORE OPTIONS AND
    EXAMPLES
```

### 4.1.55 netdiscover

netdiscover is an active/passive arp reconnaissance tool, initially developed to gain information about wireless networks without dhcp servers in wardriving scenarios. It can also be used on switched networks.

```
[root@ArcheryOS ~]# netdiscover -h
Netdiscover 0.3-pre-beta7 [Active/passive arp reconnaissance tool]
Written by: Jaime Penalba <jpenalbae@gmail.com>

Usage: netdiscover [-i device] [-r range | -l file | -p] [-m file] [-s
    time] [-n node] [-c count] [-f] [-d] [-S] [-P] [-c]
  -i device: your network device
  -r range: scan a given range instead of auto scan.
      192.168.6.0/24,/16,/8
  -l file: scan the list of ranges contained into the given file
  -p passive mode: do not send anything, only sniff
  -m file: scan the list of known MACs and host names
  -F filter: Customize pcap filter expression (default: "arp")
  -s time: time to sleep between each arp request (miliseconds)
  -n node: last ip octet used for scanning (from 2 to 253)
  -c count: number of times to send each arp reques (for nets with
      packet loss)
  -f enable fastmode scan, saves a lot of time, recommended for auto
  -d ignore home config files for autoscan and fast mode
  -S enable sleep time supression betwen each request (hardcore mode)
  -P print results in a format suitable for parsing by another program
  -N Do not print header. Only valid when -P is enabled.
  -L in parsable output mode (-P), continue listening after the active
      scan is completed

If -r, -l or -p are not enabled, netdiscover will scan for common lan
    addresses.
```

### 4.1.56 nikto

nikto examines a web server to find potential problems and security vulnerabilities, including:

- Server and software misconfigurations
- Default files and programs
- Insecure files and programs

- Outdated servers and programs

```
[root@ArcheryOS ~]# nikto -Help

   Options:
      -ask+                 Whether to ask about submitting updates
                                yes   Ask about each (default)
                                no    Don't ask, don't send
                                auto  Don't ask, just send
      -Cgidirs+             Scan these CGI dirs: "none", "all", or values
          like "/cgi/ /cgi-a/"
      -config+              Use this config file
      -Display+             Turn on/off display outputs:
                                1     Show redirects
                                2     Show cookies received
                                3     Show all 200/OK responses
                                4     Show URLs which require authentication
                                D     Debug output
                                E     Display all HTTP errors
                                P     Print progress to STDOUT
                                S     Scrub output of IPs and hostnames
                                V     Verbose output
      -dbcheck             Check database and other key files for syntax
          errors
      -evasion+            Encoding technique:
                                1     Random URI encoding (non-UTF8)
                                2     Directory self-reference (/./)
                                3     Premature URL ending
                                4     Prepend long random string
                                5     Fake parameter
                                6     TAB as request spacer
                                7     Change the case of the URL
                                8     Use Windows directory separator (\)
                                A     Use a carriage return (0x0d) as a
                                    request spacer
                                B     Use binary value 0x0b as a request
                                    spacer
       -Format+             Save file (-o) format:
                                csv   Comma-separated-value
                                htm   HTML Format
                                nbe   Nessus NBE format
                                sql   Generic SQL (see docs for schema)
                                txt   Plain text
                                xml   XML Format
                                (if not specified the format will be taken
                                    from the file extension passed to
                                    -output)
      -Help                Extended help information
      -host+               Target host
```

```
-404code         Ignore these HTTP codes as negative responses
    (always). Format is "302,301".
-404string       Ignore this string in response body content as
    negative response (always). Can be a regular expression.
-id+             Host authentication to use, format is id:pass or
    id:pass:realm
-key+            Client certificate key file
-list-plugins    List all available plugins, perform no testing
-maxtime+        Maximum testing time per host (e.g., 1h, 60m,
    3600s)
-mutate+         Guess additional file names:
                      1     Test all files with all root
                          directories
                      2     Guess for password file names
                      3     Enumerate user names via Apache
                          (/~user type requests)
                      4     Enumerate user names via cgiwrap
                          (/cgi-bin/cgiwrap/~user type requests)
                      5     Attempt to brute force sub-domain
                          names, assume that the host name is the
                          parent domain
                      6     Attempt to guess directory names from
                          the supplied dictionary file
-mutate-options  Provide information for mutates
-nointeractive   Disables interactive features
-nolookup        Disables DNS lookups
-nossl           Disables the use of SSL
-no404           Disables nikto attempting to guess a 404 page
-Option          Over-ride an option in nikto.conf, can be issued
    multiple times
-output+         Write output to this file ('.' for auto-name)
-Pause+          Pause between tests (seconds, integer or float)
-Plugins+        List of plugins to run (default: ALL)
-port+           Port to use (default 80)
-RSAcert+        Client certificate file
-root+           Prepend root value to all requests, format is
    /directory
-Save            Save positive responses to this directory ('.'
    for auto-name)
-ssl             Force ssl mode on port
-Tuning+         Scan tuning:
                      1     Interesting File / Seen in logs
                      2     Misconfiguration / Default File
                      3     Information Disclosure
                      4     Injection (XSS/Script/HTML)
                      5     Remote File Retrieval - Inside Web Root
                      6     Denial of Service
                      7     Remote File Retrieval - Server Wide
                      8     Command Execution / Remote Shell
                      9     SQL Injection
```

```
                            0    File Upload
                            a    Authentication Bypass
                            b    Software Identification
                            c    Remote Source Inclusion
                            d    WebService
                            e    Administrative Console
                            x    Reverse Tuning Options (i.e., include
                                all except specified)
      -timeout+        Timeout for requests (default 10 seconds)
      -Userdbs         Load only user databases, not the standard
          databases
                            all  Disable standard dbs and load only
                                user dbs
                            tests Disable only db_tests and load
                                udb_tests
      -useragent       Over-rides the default useragent
      -until           Run until the specified time or duration
      -update          Update databases and plugins from CIRT.net
      -useproxy        Use the proxy defined in nikto.conf, or argument
          http://server:port
      -Version         Print plugin and database versions
      -vhost+          Virtual host (for Host header)
        + requires a value
```

### 4.1.57 nmap

Nmap (Network Mapper) is an open source tool for network exploration and security auditing. It was designed to rapidly scan large networks, although it works fine against single hosts. Nmap uses raw IP packets in novel ways to determine what hosts are available on the network, what services (application name and version) those hosts are offering, what operating systems (and OS versions) they are running, what type of packet filters/firewalls are in use, and dozens of other characteristics.

```
[root@ArcheryOS ~]# nmap --help
Nmap 7.70 ( https://nmap.org )
Usage: nmap [Scan Type(s)] [Options] {target specification}
TARGET SPECIFICATION:
  Can pass hostnames, IP addresses, networks, etc.
  Ex: scanme.nmap.org, microsoft.com/24, 192.168.0.1; 10.0.0-255.1-254
  -iL <inputfilename>: Input from list of hosts/networks
  -iR <num hosts>: Choose random targets
  --exclude <host1[,host2][,host3],...>: Exclude hosts/networks
  --excludefile <exclude_file>: Exclude list from file
HOST DISCOVERY:
  -sL: List Scan - simply list targets to scan
  -sn: Ping Scan - disable port scan
  -Pn: Treat all hosts as online -- skip host discovery
  -PS/PA/PU/PY[portlist]: TCP SYN/ACK, UDP or SCTP discovery to given
      ports
  -PE/PP/PM: ICMP echo, timestamp, and netmask request discovery probes
  -PO[protocol list]: IP Protocol Ping
  -n/-R: Never do DNS resolution/Always resolve [default: sometimes]
  --dns-servers <serv1[,serv2],...>: Specify custom DNS servers
  --system-dns: Use OS's DNS resolver
  --traceroute: Trace hop path to each host
SCAN TECHNIQUES:
  -sS/sT/sA/sW/sM: TCP SYN/Connect()/ACK/Window/Maimon scans
  -sU: UDP Scan
  -sN/sF/sX: TCP Null, FIN, and Xmas scans
  --scanflags <flags>: Customize TCP scan flags
  -sI <zombie host[:probeport]>: Idle scan
  -sY/sZ: SCTP INIT/COOKIE-ECHO scans
  -sO: IP protocol scan
  -b <FTP relay host>: FTP bounce scan
PORT SPECIFICATION AND SCAN ORDER:
  -p <port ranges>: Only scan specified ports
    Ex: -p22; -p1-65535; -p U:53,111,137,T:21-25,80,139,8080,S:9
  --exclude-ports <port ranges>: Exclude the specified ports from
      scanning
  -F: Fast mode - Scan fewer ports than the default scan
  -r: Scan ports consecutively - don't randomize
  --top-ports <number>: Scan <number> most common ports
  --port-ratio <ratio>: Scan ports more common than <ratio>
SERVICE/VERSION DETECTION:
  -sV: Probe open ports to determine service/version info
  --version-intensity <level>: Set from 0 (light) to 9 (try all probes)
  --version-light: Limit to most likely probes (intensity 2)
  --version-all: Try every single probe (intensity 9)
  --version-trace: Show detailed version scan activity (for debugging)
SCRIPT SCAN:
  -sC: equivalent to --script=default
  --script=<Lua scripts>: <Lua scripts> is a comma separated list of
          directories, script-files or script-categories
  --script-args=<n1=v1,[n2=v2,...]>: provide arguments to scripts
  --script-args-file=filename: provide NSE script args in a file
  --script-trace: Show all data sent and received
  --script-updatedb: Update the script database.
  --script-help=<Lua scripts>: Show help about scripts.
          <Lua scripts> is a comma-separated list of script-files or
          script-categories.
OS DETECTION:
  -O: Enable OS detection
  --osscan-limit: Limit OS detection to promising targets
  --osscan-guess: Guess OS more aggressively
TIMING AND PERFORMANCE:
  Options which take <time> are in seconds, or append 'ms'
      (milliseconds),
  ’s’ (seconds), ’m’ (minutes), or ’h’ (hours) to the value (e.g. 30m).
  -T<0-5>: Set timing template (higher is faster)
  --min-hostgroup/max-hostgroup <size>: Parallel host scan group sizes
  --min-parallelism/max-parallelism <numprobes>: Probe parallelization
  --min-rtt-timeout/max-rtt-timeout/initial-rtt-timeout <time>: Specifies
      probe round trip time.
  --max-retries <tries>: Caps number of port scan probe retransmissions.
  --host-timeout <time>: Give up on target after this long
  --scan-delay/--max-scan-delay <time>: Adjust delay between probes
  --min-rate <number>: Send packets no slower than <number> per second
  --max-rate <number>: Send packets no faster than <number> per second
FIREWALL/IDS EVASION AND SPOOFING:
  -f; --mtu <val>: fragment packets (optionally w/given MTU)
  -D <decoy1,decoy2[,ME],...>: Cloak a scan with decoys
  -S <IP_Address>: Spoof source address
  -e <iface>: Use specified interface
  -g/--source-port <portnum>: Use given port number
  --proxies <url1,[url2],...>: Relay connections through HTTP/SOCKS4
      proxies
  --data <hex string>: Append a custom payload to sent packets
  --data-string <string>: Append a custom ASCII string to sent packets
  --data-length <num>: Append random data to sent packets
  --ip-options <options>: Send packets with specified ip options
  --ttl <val>: Set IP time-to-live field
  --spoof-mac <mac address/prefix/vendor name>: Spoof your MAC address
  --badsum: Send packets with a bogus TCP/UDP/SCTP checksum
OUTPUT:
  -oN/-oX/-oS/-oG <file>: Output scan in normal, XML, s|<rIpt kIddi3,
     and Grepable format, respectively, to the given filename.
  -oA <basename>: Output in the three major formats at once
  -v: Increase verbosity level (use -vv or more for greater effect)
  -d: Increase debugging level (use -dd or more for greater effect)
  --reason: Display the reason a port is in a particular state
  --open: Only show open (or possibly open) ports
  --packet-trace: Show all packets sent and received
  --iflist: Print host interfaces and routes (for debugging)
  --append-output: Append to rather than clobber specified output files
  --resume <filename>: Resume an aborted scan
  --stylesheet <path/URL>: XSL stylesheet to transform XML output to HTML
  --webxml: Reference stylesheet from Nmap.Org for more portable XML
  --no-stylesheet: Prevent associating of XSL stylesheet w/XML output
MISC:
  -6: Enable IPv6 scanning
  -A: Enable OS detection, version detection, script scanning, and
      traceroute
  --datadir <dirname>: Specify custom Nmap data file location
  --send-eth/--send-ip: Send using raw ethernet frames or IP packets
  --privileged: Assume that the user is fully privileged
  --unprivileged: Assume the user lacks raw socket privileges
  -V: Print version number
  -h: Print this help summary page.
EXAMPLES:
  nmap -v -A scanme.nmap.org
  nmap -v -sn 192.168.0.0/16 10.0.0.0/8
  nmap -v -iR 10000 -Pn -p 80
SEE THE MAN PAGE (https://nmap.org/book/man.html) FOR MORE OPTIONS AND
    EXAMPLES
```

### 4.1.58 openvas

OpenVAS is a framework of several services and tools offering a comprehensive and powerful vulnerability scanning and vulnerability management solution.

```
# Setting up
[root@ArcheryOS ~]# systemctl restart redis
[root@ArcheryOS ~]# openvas-manage-certs -a
[root@ArcheryOS ~]# greenbone-nvt-sync
[root@ArcheryOS ~]# greenbone-scapdata-sync
[root@ArcheryOS ~]# greenbone-certdata-sync
[root@ArcheryOS ~]# systemctl start openvas-scanner
[root@ArcheryOS ~]# openvasmd --rebuild --progress
[root@ArcheryOS ~]# openvasmd --create-user=admin --role=Admin
[root@ArcheryOS ~]# openvasmd -p 9390 -a 127.0.0.1
# Start the Greenbone Security Assistant WebUI (optional)
[root@ArcheryOS ~]# gsad -f --listen=127.0.0.1 --mlisten=127.0.0.1
    --mport=9390
# Then open 127.0.0.1:9390 in firefox
```

### 4.1.59 ophcrack

Ophcrack is a free open source program that cracks Windows log-in passwords by using LM hashes through rainbow tables. The program includes the ability to import the hashes from a variety of formats, including dumping directly from the SAM files of Windows.

```
[root@ArcheryOS ~]# ophcrack -h
ophcrack 3.8.0 by Objectif Securite (http://www.objectif-securite.ch)

Usage: ophcrack [OPTIONS]
Cracks Windows passwords with Rainbow tables

  -a              disable audit mode (default)
  -A              enable audit mode
  -b              disable bruteforce
  -B              enable bruteforce (default)
  -c config_file specify the config file to use
  -D              display (lots of!) debugging information
  -d dir        specify tables base directory
  -e            do not display empty passwords
  -f file       load hashes from the specified file (pwdump or session)
  -g            disable GUI
  -h            display this information
  -i            hide usernames
  -I            show usernames (default)
  -l file       log all output to the specified file
  -n num        specify the number of threads to use
  -o file       write cracking output to file in pwdump format
  -p num        preload (0 none, 1 index, 2 index+end, 3 all default)
  -q            quiet mode
  -r            launch the cracking when ophcrack starts (GUI only)
  -s            disable session auto-saving
  -S session_file specify the file to use to automatically save the
      progress of the search
  -u            display statistics when cracking ends
  -t table1[,a[,b,...]][:table2[,a[,b,...]]]
                specify which table to use in the directory given by -d
  -v            verbose
  -w dir        load hashes from encrypted SAM file in directory dir
  -x file       export data in CSV format to file


Example: ophcrack -g -d /path/to/tables -t xp_free_fast,0,3:vista_free
    -f in.txt

     Launch ophcrack in command line using tables 0 and 3 in
     /path/to/tables/xp_free_fast and all tables in
         /path/to/tables/vista_free
     and cracks hashes from pwdump file in.txt
```

### 4.1.60 piCrypt

piCrypt is a small tool used to encrypt small files or folders.

```
[root@ArcheryOS ~]# ./piCrypt --help

   Usage: piCrypt [options] [arguments]

   Options:

   -h, --help: Shows this help screen.
   -e, --encrypt: Sets program to encrypt files.
   -d, --decrypt: Sets program to decrypt files.
   -r, --read: Prints output of file to screen instead of
     writing to file (to be used -d, --decrypt).

   Arguments:
```

```
  Arguments passed are file or folder to be encrypted or decrypted.
  If a folder is passed into the encryption option of piCrypt,
  it will be archived into a .tar.gz file first, and then encrypted.
```

### 4.1.61 pixiewps

pixiewps is a tool written in C used to bruteforce offline the WPS PIN exploiting the low or non-existing entropy of some software implementations, the so-called ”pixie-dust attack” discovered by Dominique Bongard in summer 2014.

```
[root@ArcheryOS ~]# pixiewps -h

 Pixiewps 1.4 WPS pixie-dust attack tool
 Copyright (c) 2015-2017, wiire <wi7ire@gmail.com>

 Usage: pixiewps <arguments>

 Required arguments:

   -e, --pke       : Enrollee public key
   -r, --pkr       : Registrar public key
   -s, --e-hash1   : Enrollee hash-1
   -z, --e-hash2   : Enrollee hash-2
   -a, --authkey   : Authentication session key
   -n, --e-nonce   : Enrollee nonce

 Optional arguments:

   -m, --r-nonce   : Registrar nonce
   -b, --e-bssid   : Enrollee BSSID
   -v, --verbosity : Verbosity level 1-3, 1 is quietest      [3]
   -o, --output    : Write output to file
   -j, --jobs      : Number of parallel threads to use     [Auto]

   -h              : Display this usage screen
   --help          : Verbose help and more usage examples
   -V, --version   : Display version

   --mode N[,... N] : Mode selection, comma separated      [Auto]
   --start [mm/]yyyy : Starting date        (only mode 3) [+1 day]
   --end   [mm/]yyyy : Ending date          (only mode 3) [-1 day]
   -f, --force     : Bruteforce full range  (only mode 3)

 Miscellaneous arguments:

   -7, --m7-enc    : Recover encrypted settings from M7 (only mode 3)
   -5, --m5-enc    : Recover secret nonce from M5    (only mode 3)
 Example (use --help for more):

 pixiewps -e <pke> -r <pkr> -s <e-hash1> -z <e-hash2> -a <authkey> -n
     <e-nonce>
```

### 4.1.62 powersploit

PowerSploit is a collection of Microsoft PowerShell modules that can be used to aid penetration testers during all phases of an assessment.

```
# The PowerSploit modules/scripts are located in /opt/powersploit
```

### 4.1.63 pyrit

Pyrit allows you to create massive databases of pre-computed WPA/WPA2-PSK authentication phase in a space-time-tradeoff. By using the computational power of Multi-Core CPUs and other platforms through ATI-Stream,Nvidia CUDA and OpenCL, it is currently by far the most powerful attack against one of the world's most used security-protocols.

```
[root@ArcheryOS ~]# pyrit -h
Pyrit 0.5.0 (C) 2008-2011 Lukas Lueg - 2015 John Mora
https://github.com/JPaulMora/Pyrit
This code is distributed under the GNU General Public License v3+

Usage: pyrit [options] command

Recognized options:
  -b             : Filters AccessPoint by BSSID
  -e             : Filters AccessPoint by ESSID
  -h             : Print help for a certain command
  -i             : Filename for input ('-' is stdin)
  -o             : Filename for output ('-' is stdout)
  -r             : Packet capture source in pcap-format
  -u             : URL of the storage-system to use
  --all-handshakes : Use all handshakes instead of the best one
  --aes          : Use AES

Recognized commands:
  analyze                : Analyze a packet-capture file
  attack_batch           : Attack a handshake with PMKs/passwords from
      the db
  attack_cowpatty        : Attack a handshake with PMKs from a
      cowpatty-file
  attack_db              : Attack a handshake with PMKs from the db
  attack_passthrough     : Attack a handshake with passwords from a file
  batch                  : Batchprocess the database
  benchmark             : Determine performance of available cores
  benchmark_long        : Longer and more accurate version of benchmark
      (5 minutes)
  check_db              : Check the database for errors
  create_essid          : Create a new ESSID
  delete_essid          : Delete a ESSID from the database
  eval                  : Count the available passwords and matching
      results
  export_cowpatty       : Export results to a new cowpatty file
  export_hashdb         : Export results to an airolib database
  export_passwords      : Export passwords to a file
  help                  : Print general help
  import_passwords      : Import passwords from a file-like source
  import_unique_passwords : Import unique passwords from a file-like
      source
  list_cores            : List available cores
  list_essids           : List all ESSIDs but don't count matching
      results
  passthrough           : Compute PMKs and write results to a file
  relay                 : Relay a storage-url via RPC
  selftest              : Test hardware to ensure it computes correct
      results
  serve                 : Serve local hardware to other Pyrit clients
  strip                 : Strip packet-capture files to the relevant
      packets
  stripLive             : Capture relevant packets from a live
      capture-source
  verify                : Verify 10% of the results by recomputation
```

### 4.1.64 radare2

Radare2 is a complete framework for reverse-engineering and analyzing binaries; composed of a set of small utilities that can be used together or independently from the command line.

```
[root@ArcheryOS ~]# radare2 -h
Usage: r2 [-ACdfLMnNqStuvwzX] [-P patch] [-p prj] [-a arch] [-b bits]
    [-i file]
         [-s addr] [-B baddr] [-m maddr] [-c cmd] [-e k=v]
             file|pid|-|--|=
 --          run radare2 without opening any file
 -           same as 'r2 malloc://512'
 =           read file from stdin (use -i and -c to run cmds)
 -=          perform !=! command to run all commands remotely
 -0          print \x00 after init and every command
 -2          close stderr file descriptor (silent warning messages)
 -a [arch]   set asm.arch
 -A          run 'aaa' command to analyze all referenced code
 -b [bits]   set asm.bits
 -B [baddr]  set base address for PIE binaries
 -c 'cmd..'  execute radare command
 -C          file is host:port (alias for -c+=http://%s/cmd/)
 -d          debug the executable 'file' or running process 'pid'
 -D [backend] enable debug mode (e cfg.debug=true)
 -e k=v      evaluate config var
 -f          block size = file size
 -F [binplug] force to use that rbin plugin
 -h, -hh     show help message, -hh for long
 -H ([var])  display variable
 -i [file]   run script file
 -I [file]   run script file before the file is opened
 -k [OS/kern] set asm.os (linux, macos, w32, netbsd, ...)
 -l [lib]    load plugin file
 -L          list supported IO plugins
 -m [addr]   map file at given address (loadaddr)
 -M          do not demangle symbol names
 -n, -nn     do not load RBin info (-nn only load bin structures)
 -N          do not load user settings and scripts
 -q          quiet mode (no prompt) and quit after -i
 -Q          quiet mode (no prompt) and quit faster (quickLeak=true)
 -p [prj]    use project, list if no arg, load if no file
 -P [file]   apply rapatch file and quit
 -r [rarun2] specify rarun2 profile to load (same as -e dbg.profile=X)
 -R [rr2rule] specify custom rarun2 directive
 -s [addr]   initial seek
 -S          start r2 in sandbox mode
 -t          load rabin2 info in thread
 -u          set bin.filter=false to get raw sym/sec/cls names
 -v, -V      show radare2 version (-V show lib versions)
 -w          open file in write mode
 -x          open without exec-flag (asm.emu will not work), See io.exec
 -X          same as -e bin.usextr=false (useful for dyldcache)
 -z, -zz     do not load strings or load them even in raw
```

### 4.1.65 reaver

Reaver implements a brute force attack against WiFi Protected Setup which can crack the WPS pin of an access point in a matter of hours and subsequently recover the WPA/WPA2 passphrase.

```
[root@ArcheryOS ~]# reaver --help

Reaver v1.6.5 WiFi Protected Setup Attack Tool
Copyright (c) 2011, Tactical Network Solutions, Craig Heffner
    <cheffner@tacnetsol.com>
```

```
Required Arguments:
  -i, --interface=<wlan>       Name of the monitor-mode interface to use
  -b, --bssid=<mac>            BSSID of the target AP

Optional Arguments:
  -m, --mac=<mac>              MAC of the host system
  -e, --essid=<ssid>           ESSID of the target AP
  -c, --channel=<channel>      Set the 802.11 channel for the interface
       (implies -f)
  -s, --session=<file>         Restore a previous session file
  -C, --exec=<command>         Execute the supplied command upon
       successful pin recovery
  -f, --fixed                  Disable channel hopping
  -5, --5ghz                   Use 5GHz 802.11 channels
  -v, --verbose                Display non-critical warnings (-vv or
       -vvv for more)
  -q, --quiet                  Only display critical messages
  -h, --help                   Show help

Advanced Options:
  -p, --pin=<wps pin>          Use the specified pin (may be arbitrary
       string or 4/8 digit WPS pin)
  -d, --delay=<seconds>        Set the delay between pin attempts [1]
  -l, --lock-delay=<seconds>   Set the time to wait if the AP locks WPS
       pin attempts [60]
  -g, --max-attempts=<num>     Quit after num pin attempts
  -x, --fail-wait=<seconds>    Set the time to sleep after 10
       unexpected failures [0]
  -r, --recurring-delay=<x:y>  Sleep for y seconds every x pin attempts
  -t, --timeout=<seconds>      Set the receive timeout period [10]
  -T, --m57-timeout=<seconds>  Set the M5/M7 timeout period [0.40]
  -A, --no-associate           Do not associate with the AP
       (association must be done by another application)
  -N, --no-nacks               Do not send NACK messages when out of
       order packets are received
  -S, --dh-small               Use small DH keys to improve crack speed
  -L, --ignore-locks           Ignore locked state reported by the
       target AP
  -E, --eap-terminate          Terminate each WPS session with an EAP
       FAIL packet
  -J, --timeout-is-nack        Treat timeout as NACK (DIR-300/320)
  -F, --ignore-fcs             Ignore frame checksum errors
  -w, --win7                   Mimic a Windows 7 registrar [False]
  -K, --pixie-dust             Run pixiedust attack
  -Z                           Run pixiedust attack

Example:
  reaver -i wlan0mon -b 00:90:4C:C1:AC:21 -vv
```

### 4.1.66 rkhunter

rkhunter is a shell script which carries out various checks on the local system to try and detect known rootkits and malware. It also performs checks to see if commands have been modified, if the system startup files have been modified, and various checks on the network interfaces, including checks for listening applications.

```
[root@ArcheryOS ~]# rkhunter --help

Usage: rkhunter {--check | --unlock | --update | --versioncheck |
               --propupd [{filename | directory | package name},...] |
               --list [{tests | {lang | languages} | rootkits | perl |
                   propfiles}] |
               --config-check | --version | --help} [options]

Current options are:
        --append-log               Append to the logfile, do not
            overwrite
        --bindir <directory>...    Use the specified command directories
    -c, --check                    Check the local system
    -C, --config-check             Check the configuration file(s),
         then exit
  --cs2, --color-set2              Use the second color set for output
        --configfile <file>        Use the specified configuration file
        --cronjob                  Run as a cron job
                                   (implies -c, --sk and --nocolors
                                       options)
        --dbdir <directory>        Use the specified database directory
        --debug                    Debug mode
                                   (Do not use unless asked to do so)
        --disable <test>[,<test>...] Disable specific tests
                                   (Default is to disable no tests)
        --display-logfile          Display the logfile at the end
        --enable <test>[,<test>...] Enable specific tests
                                   (Default is to enable all tests)
        --hash {MD5 | SHA1 | SHA224 | SHA256 | SHA384 | SHA512 |
               NONE | <command>}   Use the specified file hash function
                                   (Default is SHA256)
    -h, --help                     Display this help menu, then exit
 --lang, --language <language>     Specify the language to use
                                   (Default is English)
        --list [tests | languages | List the available test names,
            languages,
               rootkits | perl |   rootkit names, perl module status
               propfiles]          or file properties database, then
                   exit
    -l, --logfile [file]           Write to a logfile
                                   (Default is /var/log/rkhunter.log)
        --noappend-log             Do not append to the logfile,
            overwrite it
        --nocf                     Do not use the configuration file
            entries
                                   for disabled tests (only valid with
                                       --disable)
        --nocolors                 Use black and white output
        --nolog                    Do not write to a logfile
--nomow, --no-mail-on-warning      Do not send a message if warnings
    occur
   --ns, --nosummary               Do not show the summary of check
       results
 --novl, --no-verbose-logging      No verbose logging
        --pkgmgr {RPM | DPKG | BSD | Use the specified package manager
            to obtain
                 BSDng | SOLARIS | or verify file property values.
                 NONE}             (Default is NONE)
        --propupd [file | directory | Update the entire file properties
            database,
                  package]...      or just for the specified entries
    -q, --quiet                    Quiet mode (no output at all)
  --rwo, --report-warnings-only    Show only warning messages
   --sk, --skip-keypress           Don't wait for a keypress after each
       test
        --summary                  Show the summary of system check
            results
                                   (This is the default)
        --syslog [facility.priority] Log the check start and finish
            times to syslog
                                   (Default level is authpriv.notice)
        --tmpdir <directory>       Use the specified temporary directory
        --unlock                   Unlock (remove) the lock file
        --update                   Check for updates to database files
   --vl, --verbose-logging         Use verbose logging (on by default)
    -V, --version                  Display the version number, then exit
        --versioncheck             Check for latest version of program
    -x, --autox                    Automatically detect if X is in use
    -X, --no-autox                 Do not automatically detect if X is
         in use
```

### 4.1.67 social-engineer-toolkit

The Social-Engineer Toolkit is an open-source penetration testing framework designed for social engineering. SET has a number of custom attack vectors that allow you to make a believable attack quickly. SET is a product of TrustedSec, LLC  an information security consulting firm located in Cleveland, Ohio.

```
[root@ArcheryOS ~]# setoolkit
```

### 4.1.68 sslscan

sslscan queries SSL/TLS services, such as HTTPS, in order to determine the ciphers that are supported.

```
[root@ArcheryOS ~]# sslscan --help
                  _
          ___ ___| |___ ___ __ _ _ __
         / __/ __| / __|/ __/ _` | '_ \
         \__ \__ \ \__ \ (_| (_| | | | |
         |___/___/_|___/\___\__,_|_| |_|


SSLScan is a fast SSL port scanner. SSLScan connects to SSL
ports and determines what ciphers are supported, which are
the servers preferred ciphers, which SSL protocols are
supported and  returns the  SSL  certificate.  Client
certificates / private key can be configured and output is
to text / XML.

Command:
  sslscan [Options] [host:port | host]

Options:
  --targets=<file>   A file containing a list of hosts to
                     check. Hosts can be supplied with
                     ports (i.e. host:port).
  --localip=<ip>     Local IP from which connection should be made
  --no-failed        List only accepted ciphers (default
                     is to listing all ciphers).
  --tls1             Only check TLSv1 ciphers.
  --tls11            Only check TLSv11 ciphers.
  --tls12            Only check TLSv12 ciphers.
  --pk=<file>        A file containing the private key or
                     a PKCS#12 file containing a private
                     key/certificate pair (as produced by
                     MSIE and Netscape).
  --pkpass=<password> The password for the private key or
                     PKCS#12 file.
  --certs=<file>     A file containing PEM/ASN1 formatted
                     client certificates.
  --renegotiation    Attempt TLS renegotiation
  --starttls-ftp     STARTTLS setup for FTP
  --starttls-imap    STARTTLS setup for IMAP
  --starttls-pop3    STARTTLS setup for POP3
  --starttls-smtp    STARTTLS setup for SMTP
  --starttls-xmpp    STARTTLS setup for XMPP
  --http             Test a HTTP connection.
  --bugs             Enable SSL implementation bug work-
                     arounds.
  --xml=<file>        Output results to an XML file.
  --version           Display the program version.
  --verbose           Display verbose output.
  --help              Display the help text you are now
                      reading.
Example:
  sslscan 127.0.0.1
```

### 4.1.69 steghide

Steghide is a steganography program that is able to hide data in various kinds of image- and audio-files. The color- respectivly sample-frequencies are not changed thus making the embedding resistant against first-order statistical tests.

```
[root@ArcheryOS ~]# steghide embed -cf picture.jpg -ef secret.txt
Enter passphrase:
Re-Enter passphrase:
embedding "secret.txt" in "picture.jpg"... done
[root@ArcheryOS ~]# steghide extract -sf picture.jpg
Enter passphrase:
the file "secret.txt" does already exist. overwrite ? (y/n) y
wrote extracted data to "secret.txt".
```

### 4.1.70 smbmap

SMBMap allows users to enumerate samba share drives across an entire domain. List share drives, drive permissions, share contents, upload/download functionality, file name auto-download pattern matching, and even execute remote commands. This tool was designed with pen testing in mind, and is intended to simplify searching for potentially sensitive data across large networks.

```
[root@ArcheryOS ~]# smbmap --help
usage: smbmap [-h] (-H HOST | --host-file FILE) [-u USERNAME] [-p
    PASSWORD]
             [-s SHARE] [-d DOMAIN] [-P PORT] [-x COMMAND] [-L | -R
                 [PATH] |
             -r [PATH]] [-A PATTERN] [-q] [--depth DEPTH] [-F PATTERN]
             [--search-path PATH] [--download PATH] [--upload SRC DST]
             [--delete PATH TO FILE] [--skip]

SMBMap - Samba Share Enumerator | Shawn Evans - ShawnDEvans@gmail.com

optional arguments:
  -h, --help            show this help message and exit

Main arguments:
  -H HOST               IP of host
  --host-file FILE    File containing a list of hosts
  -u USERNAME         Username, if omitted null session assumed
  -p PASSWORD         Password or NTLM hash
  -s SHARE            Specify a share (default C$), ex 'C$'
  -d DOMAIN           Domain name (default WORKGROUP)
  -P PORT             SMB port (default 445)

Command Execution:
  Options for executing commands on the specified host

  -x COMMAND          Execute a command ex. 'ipconfig /all'

Filesystem Search:
  Options for searching/enumerating the filesystem of the specified host

  -L                  List all drives on the specified host
  -R [PATH]           Recursively list dirs, and files (no share\path
      lists
                      ALL shares), ex. 'C$\Finance'
  -r [PATH]           List contents of directory, default is to list
      root of
                      all shares, ex. -r 'C$\Documents and
                      Settings\Administrator\Documents'
  -A PATTERN          Define a file name pattern (regex) that auto
      downloads
                      a file on a match (requires -R or -r), not case
                      sensitive, ex '(web|global).(asax|config)'
  -q                  Disable verbose output. Only shows shares you have
                      READ/WRITE on, and supresses file listing when
                      performing a search (-A).
  --depth DEPTH       Traverse a directory tree to a specific depth

File Content Search:
  Options for searching the content of files

  -F PATTERN          File content search, -F '[Pp]assword' (requies
      admin
                      access to execute commands, and powershell on
                          victim
                      host)
  --search-path PATH  Specify drive/path to search (used with -F, default
                      C:\Users), ex 'D:\HR\'

Filesystem interaction:
  Options for interacting with the specified host's filesystem

  --download PATH     Download a file from the remote system,
                      ex.'C$\temp\passwords.txt'
  --upload SRC DST    Upload a file to the remote system ex.
                      '/tmp/payload.exe C$\temp\payload.exe'
  --delete PATH TO FILE
                      Delete a remote file, ex. ’C$\temp\msf.exe’
  --skip              Skip delete file confirmation prompt

Examples:

$ python smbmap.py -u jsmith -p password1 -d workgroup -H 192.168.0.1
$ python smbmap.py -u jsmith -p
    ’aad3b435b51404eeaad3b435b51404ee:da76f2c4c96028b7a6111aef4a50a94d’
    -H 172.16.0.20
$ python smbmap.py -u ’apadmin’ -p ’asdf1234!’ -d ACME -H 10.1.3.30 -x
    ’net group "Domain Admins" /domain’
```

### 4.1.71 sqlmap

sqlmap is an open source penetration testing tool that automates the process of detecting and exploiting SQL injection flaws and taking over of database servers. It comes with a powerful detection engine, many niche features for the ultimate penetration tester and a broad range of switches lasting from database fingerprinting, over data fetching from the database, to accessing the underlying file system and executing commands on the operating system via out-of-band connections.

```
[root@ArcheryOS ~]# sqlmap --help
        ___
       __H__
 ___ ___["]_____ ___ ___  {1.2.5#stable}
|_ -| . ["]     | .’| . |
|___|_  [)]_|_|_|__,|  _|
      |_|V          |_|   http://sqlmap.org

Usage: python sqlmap.py [options]

Options:
  -h, --help            Show basic help message and exit
  -hh                   Show advanced help message and exit
  --version             Show program’s version number and exit
  -v VERBOSE            Verbosity level: 0-6 (default 1)

  Target:
    At least one of these options has to be provided to define the
    target(s)

    -u URL, --url=URL   Target URL (e.g.
        "http://www.site.com/vuln.php?id=1")
    -g GOOGLEDORK       Process Google dork results as target URLs

  Request:
    These options can be used to specify how to connect to the target URL

    --data=DATA       Data string to be sent through POST
    --cookie=COOKIE   HTTP Cookie header value
    --random-agent    Use randomly selected HTTP User-Agent header value
    --proxy=PROXY     Use a proxy to connect to the target URL
    --tor             Use Tor anonymity network
    --check-tor       Check to see if Tor is used properly

  Injection:
    These options can be used to specify which parameters to test for,
    provide custom injection payloads and optional tampering scripts

    -p TESTPARAMETER  Testable parameter(s)
    --dbms=DBMS       Force back-end DBMS to this value

  Detection:
    These options can be used to customize the detection phase

    --level=LEVEL     Level of tests to perform (1-5, default 1)
    --risk=RISK       Risk of tests to perform (1-3, default 1)

  Techniques:
    These options can be used to tweak testing of specific SQL injection
    techniques

    --technique=TECH  SQL injection techniques to use (default "BEUSTQ")

  Enumeration:
    These options can be used to enumerate the back-end database
    management system information, structure and data contained in the
    tables. Moreover you can run your own SQL statements

    -a, --all         Retrieve everything
    -b, --banner      Retrieve DBMS banner
    --current-user    Retrieve DBMS current user
    --current-db      Retrieve DBMS current database
    --passwords       Enumerate DBMS users password hashes
    --tables          Enumerate DBMS database tables
    --columns         Enumerate DBMS database table columns
    --schema          Enumerate DBMS schema
    --dump            Dump DBMS database table entries
    --dump-all        Dump all DBMS databases tables entries
    -D DB             DBMS database to enumerate
    -T TBL            DBMS database table(s) to enumerate
    -C COL            DBMS database table column(s) to enumerate

  Operating system access:
    These options can be used to access the back-end database management
    system underlying operating system
    --os-shell          Prompt for an interactive operating system shell
    --os-pwn            Prompt for an OOB shell, Meterpreter or VNC

  General:
    These options can be used to set some general working parameters

    --batch             Never ask for user input, use the default behavior
    --flush-session     Flush session files for current target

  Miscellaneous:
    --sqlmap-shell      Prompt for an interactive sqlmap shell
    --wizard            Simple wizard interface for beginner users
```

### 4.1.72 swaks

swaks' primary design goal is to be a flexible, scriptable, transaction-oriented SMTP test tool. It handles SMTP features and extensions such as TLS, authentication, and pipelining; multiple version of the SMTP protocol including SMTP, ESMTP, and LMTP; and multiple transport methods including unix-domain sockets, internet-domain sockets, and pipes to spawned processes.

```
[root@ArcheryOS ~]# swaks --help
```

### 4.1.73 thc-ipv6

The Hacker Choice's IPv6 Attack Toolkit (aka thc-ipv6)

```
[root@ArcheryOS ~]# thc-ipv6-setup.sh
[root@ArcheryOS ~]# thcping6
[root@ArcheryOS ~]# thcsyn6
```

### 4.1.74 twofi

twofi uses Twitter to help generate those lists based on searches for keywords related to the list that is being cracked. I've expanded this idea into twofi which will take multiple search terms and return a word list sorted by most common first.

```
[root@ArcheryOS ~]# twofi --help
twofi 1.0 Robin Wood (robin@digininja.org) (www.digininja.org)
twofi - Twitter Words Of Interest

Usage: twofi [OPTIONS]
   --help, -h: show help
   --count, -c: include the count with the words
   --min_word_length, -m: minimum word length
   --term_file, -T file: a file containing a list of terms
   --terms, -t: comma separated usernames
      quote words containing spaces, no space after commas
   --user_file, -U file: a file containing a list of users
   --users, -u: comma separated search terms
      quote words containing spaces, no space after commas
   --verbose, -v: verbose
```

### 4.1.75 unicornscan

Unicornscan is an attempt at a User-land Distributed TCP/IP stack for information gathering and correlation. It is intended to provide a researcher a superior interface for introducing a stimulus into and measuring a response from a TCP/IP enabled device or network. Some of its features include asynchronous stateless TCP scanning with all variations of TCP flags, asynchronous stateless TCP banner grabbing, and active/passive remote OS, application, and component identification by analyzing responses. Like Scanrand, it isn't for the faint of heart.

```
[root@ArcheryOS ~]# unicornscan --help
unicornscan (version 0.4.7)
usage: unicornscan [options
    ‘b:B:cd:De:EFG:hHi:Ij:l:L:m:M:o:p:P:q:Qr:R:s:St:T:u:Uw:W:vVzZ:’ ]
    X.X.X.X/YY:S-E
   -b, --broken-crc   *set broken crc sums on [T]ransport layer,
       [N]etwork layer, or both[TN]
   -B, --source-port  *set source port? or whatever the scan module
       expects as a number
   -c, --proc-duplicates process duplicate replies
   -d, --delay-type   *set delay type (numeric value, valid options are
       ‘1:tsc 2:gtod 3:sleep’)
   -D, --no-defpayload no default Payload, only probe known protocols
   -e, --enable-module *enable modules listed as arguments (output and
       report currently)
   -E, --proc-errors   for processing ‘non-open’ responses (icmp errors,
       tcp rsts...)
   -F, --try-frags
   -G, --payload-group *payload group (numeric) for tcp/udp type payload
       selection (default all)
   -h, --help          help
   -H, --do-dns        resolve hostnames during the reporting phase
   -i, --interface    *interface name, like eth0 or fxp1, not normally
       required
   -I, --immediate     immediate mode, display things as we find them
   -j, --ignore-seq   *ignore ‘A’ll, ’R’eset sequence numbers for tcp
       header validation
   -l, --logfile      *write to this file not my terminal
   -L, --packet-timeout *wait this long for packets to come back
       (default 7 secs)
   -m, --mode         *scan mode, tcp (syn) scan is default, U for udp T
       for tcp 'sf' for tcp connect scan and A for arp
                        for -mT you can also specify tcp flags following
                            the T like -mTsFpU for example
                        that would send tcp syn packets with (NO
                            Syn|FIN|NO Push|URG)
   -M, --module-dir   *directory modules are found at (defaults to
       /usr/lib/unicornscan/modules)
   -o, --format       *format of what to display for replies, see man
       page for format specification
   -p, --ports         global ports to scan, if not specified in target
       options
   -P, --pcap-filter  *extra pcap filter string for reciever
   -q, --covertness   *covertness value from 0 to 255
   -Q, --quiet         dont use output to screen, its going somewhere
       else (a database say...)
   -r, --pps          *packets per second (total, not per host, and as
       you go higher it gets less accurate)
   -R, --repeats      *repeat packet scan N times
   -s, --source-addr  *source address for packets 'r' for random
   -S, --no-shuffle    do not shuffle ports
   -t, --ip-ttl       *set TTL on sent packets as in 62 or 6-16 or
       r64-128
   -T, --ip-tos       *set TOS on sent packets
   -u, --debug   *debug mask
   -U, --no-openclosed dont say open or closed
   -w, --safefile     *write pcap file of recieved packets
   -W, --fingerprint  *OS fingerprint 0=cisco(def) 1=openbsd 2=WindowsXP
       3=p0fsendsyn 4=FreeBSD 5=nmap
                       6=linux 7:strangetcp
   -v, --verbose       verbose (each time more verbose so -vvvvv is
       really verbose)
   -V, --version       display version
   -z, --sniff         sniff alike
   -Z, --drone-str    *drone String
*: options with '*' require an argument following them

  address ranges are cidr like 1.2.3.4/8 for all of 1.?.?.?
  if you omit the cidr mask then /32 is implied
  port ranges are like 1-4096 with 53 only scanning one port, a for all
      65k and p for 1-1024
example: unicornscan -i eth1 -Ir 160 -E 192.168.1.0/24:1-4000 gateway:a
```

### 4.1.76 urlcrazy

Generate and test domain typos and variations to detect and perform typo squatting, URL hijacking, phishing, and corporate espionage.

```
[root@ArcheryOS ~]# urlcrazy --help
URLCrazy version 0.5
by Andrew Horton (urbanadventurer)
http://www.morningstarsecurity.com/research/urlcrazy

Generate and test domain typos and variations to detect and perform typo
    squatting, URL hijacking,
phishing, and corporate espionage.

Supports the following domain variations:
Character omission, character repeat, adjacent character swap, adjacent
    character replacement, double
character replacement, adjacent character insertion, missing dot, strip
    dashes, singular or pluralise,
common misspellings, vowel swaps, homophones, bit flipping (cosmic
    rays), homoglyphs, wrong top level
domain, and wrong second level domain.

Usage: /usr/bin/urlcrazy [options] domain

Options
 -k, --keyboard=LAYOUT Options are: qwerty, azerty, qwertz, dvorak
     (default: qwerty)
 -p, --popularity Check domain popularity with Google
 -r, --no-resolve Do not resolve DNS
 -i, --show-invalid Show invalid domain names
 -f, --format=TYPE Human readable or CSV (default: human readable)
 -o, --output=FILE Output file
 -h, --help   This help
 -v, --version  Print version information. This version is 0.5
```

### 4.1.77 unix-privesc-check

unix-priv-esc is a script to run post exploitation to find misconfigurations and security vulnerablilites, to help find a way to elevate privillage.

```
# Move to victem computer, and run:
[root@ArcheryOS ~]# ./unix-privesc-check
```

### 4.1.78 veracrypt

VeraCrypt is a fork of the discontinued TrueCrypt project. Many security improvements have been implemented and issues raised by TrueCrypt code audits have been fixed. VeraCrypt features optimized implementations of cryptographic hash functions and ciphers which boost performance on modern CPUs.

```
[root@ArcheryOS ~]# veracrypt
```

### 4.1.79 wapiti

Wapiti allows you to audit the security of your web applications. It performs ”black-box” scans, i.e. it does not study the source code of the application but will scans the webpages of the deployed webapp, looking for scripts and forms where it can inject data. Once it gets this list, Wapiti acts like a fuzzer, injecting payloads to see if a script is vulnerable. Wapiti is useful only to discover vulnerabilities : it is not an exploitation tools. Some well known applications can be used for the exploitation part like the recommanded sqlmap.

```
[root@ArcheryOS ~]# wapiti --help
```

```
Wapiti-3.0.0 (wapiti.sourceforge.net)
usage: wapiti [-h] [-u URL] [--scope {page,folder,domain,url}]
              [-m MODULES_LIST] [--list-modules] [-l LEVEL] [-p PROXY_URL]
              [-a CREDENTIALS] [--auth-type {basic,digest,kerberos,ntlm}]
              [-c COOKIE_FILE] [--skip-crawl] [--resume-crawl]
              [--flush-attacks] [--flush-session] [-s URL] [-x URL]
              [-r PARAMETER] [--skip PARAMETER] [-d DEPTH]
              [--max-links-per-page MAX] [--max-files-per-dir MAX]
              [--max-scan-time MINUTES] [--max-parameters MAX] [-S FORCE]
              [-t SECONDS] [-H HEADER] [-A AGENT] [--verify-ssl {0,1}]
              [--color] [-v LEVEL] [-f FORMAT] [-o OUPUT_PATH]
              [--no-bugreport] [--version]

Wapiti-3.0.0: Web application vulnerability scanner

optional arguments:
  -h, --help            show this help message and exit
  -u URL, --url URL     The base URL used to define the scan scope (default
                      scope is folder)
  --scope {page,folder,domain,url}
                      Set scan scope
  -m MODULES_LIST, --module MODULES_LIST
                      List of modules to load
  --list-modules      List Wapiti attack modules and exit
  -l LEVEL, --level LEVEL
                      Set attack level
  -p PROXY_URL, --proxy PROXY_URL
                      Set the HTTP(S) proxy to use. Supported: http(s)
                          and
                      socks proxies
  -a CREDENTIALS, --auth-cred CREDENTIALS
                      Set HTTP authentication credentials
  --auth-type {basic,digest,kerberos,ntlm}
                      Set the authentication type to use
  -c COOKIE_FILE, --cookie COOKIE_FILE
                      Set a JSON cookie file to use
  --skip-crawl        Don't resume the scanning process, attack URLs
      scanned
                      during a previous session
  --resume-crawl      Resume the scanning process (if stopped) even if
      some
                      attacks were previously performed
  --flush-attacks     Flush attack history and vulnerabilities for the
                      current session
  --flush-session     Flush everything that was previously found for this
                      target (crawled URLs, vulns, etc)
  -s URL, --start URL Adds an url to start scan with
  -x URL, --exclude URL
                      Adds an url to exclude from the scan
  -r PARAMETER, --remove PARAMETER
                      Remove this parameter from urls
  --skip PARAMETER    Skip attacking given parameter(s)
  -d DEPTH, --depth DEPTH
                      Set how deep the scanner should explore the website
  --max-links-per-page MAX
                      Set how many (in-scope) links the scanner should
                      extract for each page
  --max-files-per-dir MAX
                      Set how many pages the scanner should explore per
                      directory
  --max-scan-time MINUTES
                      Set how many minutes you want the scan to last
                          (floats
                      accepted)
  --max-parameters MAX URLs and forms having more than MAX input
      parameters
                      will be erased before attack.
  -S FORCE, --scan-force FORCE
```

```
                      Easy way to reduce the number of scanned and
                          attacked
                      URLs. Possible values: paranoid, sneaky, polite,
                      normal, aggressive, insane
  -t SECONDS, --timeout SECONDS
                      Set timeout for requests
  -H HEADER, --header HEADER
                      Set a custom header to use for every requests
  -A AGENT, --user-agent AGENT
                      Set a custom user-agent to use for every requests
  --verify-ssl {0,1}  Set SSL check (default is no check)
  --color             Colorize output
  -v LEVEL, --verbose LEVEL
                      Set verbosity level (0: quiet, 1: normal, 2:
                          verbose)
  -f FORMAT, --format FORMAT
                      Set output format. Supported: json, html (default),
                      txt, openvas, vulneranet, xml
  -o OUPUT_PATH, --output OUPUT_PATH
                      Output file or folder
  --no-bugreport      Don't send automatic bug report when an attack
      module
                      fails
  --version           Show program's version number and exit
```

### 4.1.80 websploit

Websploit is an automatic vulnerability assessment, web crawler and exploiter tool. It is an open source command line utility that composed on modular structure.

```
[root@ArcheryOS ~]# websploit
```

### 4.1.81 wfuzz

Wfuzz is a tool designed for bruteforcing Web Applications, it can be used for finding resources not linked (directories, servlets, scripts, etc), bruteforce GET and POST parameters for checking different kind of injections (SQL, XSS, LDAP,etc), bruteforce Forms parameters (User/Password), Fuzzing,etc.

```
[root@ArcheryOS ~]# wfuzz --help
*********************************************************
* Wfuzz 2.2.9 - The Web Fuzzer                    *
*                                                 *
* Version up to 1.4c coded by:                    *
* Christian Martorella (cmartorella@edge-security.com) *
* Carlos del ojo (deepbit@gmail.com)              *
*                                                *
* Version 1.4d to 2.2.9 coded by:                *
* Xavier Mendez (xmendez@edge-security.com)      *
********************************************************

Usage:  wfuzz [options] -z payload,params <url>

   FUZZ, ..., FUZnZ wherever you put these keywords wfuzz will replace
       them with the values of the specified payload.
   FUZZ{baseline_value} FUZZ will be replaced by baseline_value. It will
       be the first request performed and could be used as a base for
       filtering.


Options:
   -h/--help        : This help
   --help           : Advanced help
   --version        : Wfuzz version details
   -e <type>        : List of available
       encoders/payloads/iterators/printers/scripts

   --recipe <filename>   : Reads options from a recipe
   --dump-recipe <filename> : Prints current options as a recipe
   --oF <filename>       : Saves fuzz results to a file. These can be
       consumed later using the wfuzz payload.

   -c          : Output with colors
   -v          : Verbose information.
   -f filename,printer      : Store results in the output file using the
       specified printer (raw printer if omitted).
   -o printer               : Show results using the specified printer.
   --interact       : (beta) If selected,all key presses are captured.
       This allows you to interact with the program.
   --dry-run        : Print the results of applying the requests without
       actually making any HTTP request.
   --prev           : Print the previous HTTP requests (only when using
       payloads generating fuzzresults)

   -p addr          : Use Proxy in format ip:port:type. Repeat option
       for using various proxies.
                Where type could be SOCKS4,SOCKS5 or HTTP if omitted.

   -t N          : Specify the number of concurrent connections (10
       default)
   -s N          : Specify time delay between requests (0 default)
   -R depth      : Recursive path discovery being depth the maximum
       recursion level.
   -L,--follow      : Follow HTTP redirections
   -Z          : Scan mode (Connection errors will be ignored).
   --req-delay N       : Sets the maximum time in seconds the request is
```

```
    allowed to take (CURLOPT_TIMEOUT). Default 90.
--conn-delay N            : Sets the maximum time in seconds the
    connection phase to the server to take (CURLOPT_CONNECTTIMEOUT).
    Default 90.

-A          : Alias for --script=default -v -c
--script=        : Equivalent to --script=default
--script=<plugins>     : Runs script's scan. <plugins> is a comma
    separated list of plugin-files or plugin-categories
--script-help=<plugins>   : Show help about scripts.
--script-args n1=v1,...   : Provide arguments to scripts. ie.
    --script-args grep.regex="<A href=\"(.*?)\">"

-u url                    : Specify a URL for the request.
-m iterator      : Specify an iterator for combining payloads
    (product by default)
-z payload       : Specify a payload for each FUZZ keyword used in
    the form of name[,parameter][,encoder].
              A list of encoders can be used, ie. md5-sha1. Encoders
                  can be chained, ie. md5@sha1.
              Encoders category can be used. ie. url
                           Use help as a payload to show payload
                               plugin's details (you can filter using
                               --slice)
--zP <params>       : Arguments for the specified payload (it must be
    preceded by -z or -w).
--slice <filter>    : Filter payload's elements using the specified
    expression. It must be preceded by -z.
-w wordlist      : Specify a wordlist file (alias for -z
    file,wordlist).
-V alltype       : All parameters bruteforcing (allvars and allpost).
    No need for FUZZ keyword.
-X method        : Specify an HTTP method for the request, ie. HEAD
    or FUZZ

-b cookie        : Specify a cookie for the requests. Repeat option
    for various cookies.
-d postdata         : Use post data (ex: "id=FUZZ&catalogue=1")
-H header        : Use header (ex:"Cookie:id=1312321&user=FUZZ").
    Repeat option for various headers.
--basic/ntlm/digest auth  : in format "user:pass" or "FUZZ:FUZZ" or
    "domain\FUZ2Z:FUZZ"

--hc/hl/hw/hh N[,N]+   : Hide responses with the specified
    code/lines/words/chars (Use BBB for taking values from baseline)
--sc/sl/sw/sh N[,N]+   : Show responses with the specified
    code/lines/words/chars (Use BBB for taking values from baseline)
--ss/hs regex       : Show/hide responses with the specified regex
    within the content
--filter <filter>   : Show/hide responses using the specified filter
```

```
       expression (Use BBB for taking values from baseline)
   --prefilter <filter>  : Filter items before fuzzing using the
       specified expression.
```

### 4.1.82 whois

WHOIS is a query and response protocol that is widely used for querying databases that store the registered users or assignees of an Internet resource, such as a domain name, an IP address block, or an autonomous system, but is also used for a wider range of other information.

```
[root@ArcheryOS ~]# whois --help
Usage: whois [OPTION]... OBJECT...

-h HOST, --host HOST connect to server HOST
-p PORT, --port PORT connect to PORT
-H                   hide legal disclaimers
      --verbose      explain what is being done
      --help         display this help and exit
      --version      output version information and exit

These flags are supported by whois.ripe.net and some RIPE-like servers:
-l                   find the one level less specific match
-L                   find all levels less specific matches
-m                   find all one level more specific matches
-M                   find all levels of more specific matches
-c                   find the smallest match containing a mnt-irt
    attribute
-x                   exact match
-b                   return brief IP address ranges with abuse contact
-B                   turn off object filtering (show email addresses)
-G                   turn off grouping of associated objects
-d                   return DNS reverse delegation objects too
-i ATTR[,ATTR]...    do an inverse look-up for specified ATTRibutes
-T TYPE[,TYPE]...    only look for objects of TYPE
-K                   only primary keys are returned
-r                   turn off recursive look-ups for contact information
-R                   force to show local copy of the domain object even
                     if it contains referral
-a                   also search all the mirrored databases
-s SOURCE[,SOURCE]... search the database mirrored from SOURCE
-g SOURCE:FIRST-LAST find updates from SOURCE from serial FIRST to LAST
-t TYPE              request template for object of TYPE
-v TYPE              request verbose template for object of TYPE
-q [version|sources|types] query specified server info
```

### 4.1.83 wifit

wifite is used to attack multiple WEP, WPA, and WPS encrypted networks in a row.

```
[root@ArcheryOS ~]# wifite --help

  .;’                     ‘;,
 .;’  ,;’             ‘;,  ‘;,   WiFite v2 (r87)
.;’  ,;’  ,;’     ‘;,  ‘;,  ‘;,
::   ::   :   ( )   :   ::   ::  automated wireless auditor
’:.  ’:.  ’:. /_\ ,:’  ,:’  ,:’
 ’:.  ’:.    /___\    ,:’  ,:’   designed for Linux
  ’:.       /_____\      ,:’
           /       \

usage: wifite [-h] [--check CHECK] [--cracked] [--recrack] [--all]
              [-i INTERFACE] [--mac] [--mon-iface MONITOR_INTERFACE]
              [-c CHANNEL] [-e ESSID] [-b BSSID] [--showb] [--nodeauth]
              [--power POWER] [--tx TX] [--quiet] [--update] [--wpa]
              [--wpat WPAT] [--wpadt WPADT] [--strip] [--crack] [--dict
                  DIC]
              [--aircrack] [--pyrit] [--tshark] [--cowpatty] [--wep]
              [--pps PPS] [--wept WEPT] [--chopchop] [--arpreplay]
              [--fragment] [--caffelatte] [--p0841] [--hirte]
                  [--nofakeauth]
              [--wepca WEPCA] [--wepsave WEPSAVE] [--wps] [--pixie]
              [--wpst WPST] [--wpsratio WPSRATIO] [--wpsretry WPSRETRY]

optional arguments:
  -h, --help          show this help message and exit

COMMAND:
  --check CHECK       Check capfile [file] for handshakes.
  --cracked           Display previously cracked access points.
  --recrack           Include already cracked networks in targets.

GLOBAL:
  --all               Attack all targets.
  -i INTERFACE        Wireless interface for capturing.
  --mac               Anonymize MAC address.
  --mon-iface MONITOR_INTERFACE
                      Interface already in monitor mode.
  -c CHANNEL          Channel to scan for targets.
  -e ESSID            Target a specific access point by ssid (name).
  -b BSSID            Target a specific access point by bssid (mac).
  --showb             Display target BSSIDs after scan.
  --nodeauth          Do not deauthenticate clients while scanning
  --power POWER       Attacks any targets with signal strength > [pow].
  --tx TX             Set adapter TX power level.
  --quiet             Do not print list of APs during scan.
  --update            Check and update Wifite.

WPA:
  --wpa               Only target WPA networks (works with --wps --wep).
  --wpat WPAT         Time to wait for WPA attack to complete (seconds).
  --wpadt WPADT       Time to wait between sending deauth packets
      (seconds).
  --strip             Strip handshake using tshark or pyrit.
  --crack             Crack WPA handshakes using [dic] wordlist file.
  --dict DIC          Specificy dictionary to use when cracking WPA.
  --aircrack          Verify handshake using aircrack.
  --pyrit             Verify handshake using pyrit.
  --tshark            Verify handshake using tshark.
  --cowpatty          Verify handshake using cowpatty.

WEP:
  --wep               Only target WEP networks.
  --pps PPS           Set the number of packets per second to inject.
  --wept WEPT         Sec to wait for each attack, 0 implies endless.
  --chopchop          Use chopchop attack.
  --arpreplay         Use arpreplay attack.
  --fragment          Use fragmentation attack.
  --caffelatte        Use caffe-latte attack.
  --p0841             Use P0842 attack.
  --hirte             Use hirte attack.
  --nofakeauth        Stop attack if fake authentication fails.
  --wepca WEPCA       Start cracking when number of IVs surpass [n].
  --wepsave WEPSAVE   Save a copy of .cap files to this directory.

WPS:
  --wps               Only target WPS networks.
  --pixie             Only use the WPS PixieDust attack
  --wpst WPST         Max wait for new retry before giving up (0: never).
  --wpsratio WPSRATIO Min ratio of successful PIN attempts/total retries.
  --wpsretry WPSRETRY Max number of retries for same PIN before giving
      up.
```

### 4.1.84 wireshark-gtk

Wireshark is a GUI network protocol analyzer. It lets you interactively browse packet data from a live network or from a previously saved capture file.

```
[root@ArcheryOS ~]# wireshark-gtk
```

### 4.1.85 wpscan

WPScan is a black box WordPress vulnerability scanner that can be used to scan remote WordPress installations to find security issues.

```
[root@ArcheryOS ~]# wpscan --help
_______________________________________________________________
       __         _______  _____
       \ \       / /  __ \ / ____|
        \ \  /\  / /| |__) | (___ ___  __ _ _ __
         \ \/  \/ / |  ___/ \___ \ / __|/ _‘ | ’_ \
          \  /\  /  | |    ____) | (__| (_| | | | |
           \/  \/   |_|   |_____/ \___|\__,_|_| |_|

       WordPress Security Scanner by the WPScan Team
                     Version 2.9.3
         Sponsored by Sucuri - https://sucuri.net
   @_WPScan_, @ethicalhack3r, @erwan_lr, pvdl, @_FireFart_
_______________________________________________________________

Help :

Some values are settable in a config file, see the example.conf.json

--update                        Update the database to the latest
    version.
--url       | -u <target url>   The WordPress URL/domain to scan.
--force     | -f                Forces WPScan to not check if the
    remote site is running WordPress.
--enumerate | -e [option(s)]    Enumeration.
  option :
    u       usernames from id 1 to 10
    u[10-20] usernames from id 10 to 20 (you must write [] chars)
    p       plugins
    vp      only vulnerable plugins
    ap      all plugins (can take a long time)
    tt      timthumbs
    t       themes
    vt      only vulnerable themes
    at      all themes (can take a long time)
  Multiple values are allowed : "-e tt,p" will enumerate timthumbs and
      plugins
  If no option is supplied, the default is "vt,tt,u,vp"

--exclude-content-based "<regexp or string>"
                                Used with the enumeration option, will
                                    exclude all occurrences based on
                                    the regexp or string supplied.
                                You do not need to provide the regexp
                                    delimiters, but you must write the
                                    quotes (simple or double).
--config-file | -c <config file> Use the specified config file, see the
    example.conf.json.
--user-agent  | -a <User-Agent>  Use the specified User-Agent.
--cookie <string>                String to read cookies from.
--random-agent | -r              Use a random User-Agent.
--follow-redirection             If the target url has a redirection, it
    will be followed without asking if you wanted to do so or not
--batch                          Never ask for user input, use the
    default behaviour.
--no-color                       Do not use colors in the output.
--log [filename]                 Creates a log.txt file with WPScan's
    output if no filename is supplied. Otherwise the filename is used
    for logging.
--no-banner                      Prevents the WPScan banner from being
    displayed.
--disable-accept-header          Prevents WPScan sending the Accept HTTP
    header.
--disable-referer                Prevents setting the Referer header.
--disable-tls-checks             Disables SSL/TLS certificate
    verification.
--wp-content-dir <wp content dir> WPScan try to find the content
    directory (ie wp-content) by scanning the index page, however you
    can specify it.
                                 Subdirectories are allowed.
--wp-plugins-dir <wp plugins dir> Same thing than --wp-content-dir but
    for the plugins directory.
                                 If not supplied, WPScan will use
                                    wp-content-dir/plugins.
                                    Subdirectories are allowed
--proxy <[protocol://]host:port> Supply a proxy. HTTP, SOCKS4 SOCKS4A
    and SOCKS5 are supported.
                                 If no protocol is given (format
                                    host:port), HTTP will be used.
--proxy-auth <username:password> Supply the proxy login credentials.
--basic-auth <username:password> Set the HTTP Basic authentication.
--wordlist | -w <wordlist>       Supply a wordlist for the password
    brute forcer.
--username | -U <username>       Only brute force the supplied username.
--usernames   <path-to-file>     Only brute force the usernames from the
    file.
--cache-dir     <cache-directory> Set the cache directory.
--cache-ttl     <cache-ttl>      Typhoeus cache TTL.
--request-timeout <request-timeout> Request Timeout.
--connect-timeout <connect-timeout> Connect Timeout.
--threads | -t <number of threads> The number of threads to use when
    multi-threading requests.
--max-threads   <max-threads>    Maximum Threads.
--throttle      <milliseconds>   Milliseconds to wait before doing
    another web request. If used, the --threads should be set to 1.
```

```
--help    | -h                  This help screen.
--verbose | -v                  Verbose output.
--version                       Output the current version and exit.


Examples :

-Further help ...
ruby /opt/wpscan/wpscan.rb --help

-Do 'non-intrusive' checks ...
ruby /opt/wpscan/wpscan.rb --url www.example.com

-Do wordlist password brute force on enumerated users using 50 threads
    ...
ruby /opt/wpscan/wpscan.rb --url www.example.com --wordlist darkc0de.lst
    --threads 50

-Do wordlist password brute force on the 'admin' username only ...
ruby /opt/wpscan/wpscan.rb --url www.example.com --wordlist darkc0de.lst
    --username admin

-Enumerate installed plugins ...
ruby /opt/wpscan/wpscan.rb --url www.example.com --enumerate p

-Enumerate installed themes ...
ruby /opt/wpscan/wpscan.rb --url www.example.com --enumerate t

-Enumerate users ...
ruby /opt/wpscan/wpscan.rb --url www.example.com --enumerate u

-Enumerate installed timthumbs ...
ruby /opt/wpscan/wpscan.rb --url www.example.com --enumerate tt

-Use a HTTP proxy ...
ruby /opt/wpscan/wpscan.rb --url www.example.com --proxy 127.0.0.1:8118

-Use a SOCKS5 proxy ... (cURL >= v7.21.7 needed)
ruby /opt/wpscan/wpscan.rb --url www.example.com --proxy
    socks5://127.0.0.1:9000

-Use custom content directory ...
ruby /opt/wpscan/wpscan.rb -u www.example.com --wp-content-dir
    custom-content

-Use custom plugins directory ...
ruby /opt/wpscan/wpscan.rb -u www.example.com --wp-plugins-dir
    wp-content/custom-plugins

-Update the DB ...
```

```
ruby /opt/wpscan/wpscan.rb --update

-Debug output ...
ruby /opt/wpscan/wpscan.rb --url www.example.com --debug-output
    2>debug.log
```

### 4.1.86 zaproxy

zaproxy can help you automatically find security vulnerabilities in your web applications while you are developing and testing your applications. Its also a great tool for experienced pentesters to use for manual security testing.

```
[root@ArcheryOS ~]# zaproxy
```

### 4.1.87 zmap

ZMap is a network tool for scanning the entire Internet (or large samples). ZMap is capable of scanning the entire Internet in around 45 minutes on a gigabit network connection, reaching 98% theoretical line speed.

```
[root@ArcheryOS ~]# zmap --help
zmap 2.1.1

A fast Internet-wide scanner.

Usage: zmap [OPTIONS]... [SUBNETS]...

Basic arguments:
  -p, --target-port=port     port number to scan (for TCP and UDP scans)
  -o, --output-file=name     Output file
  -b, --blacklist-file=path  File of subnets to exclude, in CIDR
      notation,
                               e.g. 192.168.0.0/16
  -w, --whitelist-file=path  File of subnets to constrain scan to, in
      CIDR
                               notation, e.g. 192.168.0.0/16

Scan options:
  -r, --rate=pps             Set send rate in packets/sec
  -B, --bandwidth=bps        Set send rate in bits/second (supports
      suffixes
                               G, M and K)
  -n, --max-targets=n        Cap number of targets to probe (as a number
      or
                               a percentage of the address space)
  -t, --max-runtime=ses      Cap length of time for sending packets
  -N, --max-results=n        Cap number of results to return
  -P, --probes=n              Number of probes to send to each IP
                                (default=‘1’)
  -c, --cooldown-time=secs    How long to continue receiving after sending
                                last probe (default=‘8’)
  -e, --seed=n                Seed used to select address permutation
      --retries=n             Max number of times to try to send packet if
                                send fails (default=‘10’)
  -d, --dryrun                Don’t actually send packets
      --shards=N              Set the total number of shards (default=‘1’)
      --shard=n               Set which shard this scan is (0 indexed)
                                (default=‘0’)

Network options:
  -s, --source-port=port|range Source port(s) for scan packets
  -S, --source-ip=ip|range    Source address(es) for scan packets
  -G, --gateway-mac=addr      Specify gateway MAC address
      --source-mac=addr       Source MAC address
  -i, --interface=name        Specify network interface to use
  -X, --vpn                   Sends IP packets instead of Ethernet (for
      VPNs)

Probe Modules:
  -M, --probe-module=name     Select probe module (default=‘tcp_synscan’)
      --probe-args=args       Arguments to pass to probe module
      --list-probe-modules    List available probe modules

Data Output:
  -f, --output-fields=fields Fields that should be output in result set
  -O, --output-module=name    Select output module (default=‘default’)
      --output-args=args      Arguments to pass to output module
      --output-filter=filter Specify a filter over the response fields to
                                limit what responses get sent to the
                                    output
                                module
      --list-output-modules   List available output modules
      --list-output-fields    List all fields that can be output by
          selected

                                probe module

Logging and Metadata:
  -v, --verbosity=n           Level of log detail (0-5) (default=‘3’)
  -l, --log-file=name         Write log entries to file
  -L, --log-directory=directory Write log entries to a timestamped file
      in this
                                directory
  -m, --metadata-file=name    Output file for scan metadata (JSON)
  -u, --status-updates-file=name
                              Write scan progress updates to CSV file
  -q, --quiet                 Do not print status updates
      --disable-syslog        Disables logging messages to syslog
      --notes=notes          Inject user-specified notes into scan
          metadata
      --user-metadata=json   Inject user-specified JSON metadata into
          scan
                               metadata

Additional options:
  -C, --config=filename      Read a configuration file, which can specify
                               any of these options
                               (default='/etc/zmap/zmap.conf')
      --max-sendto-failures=n Maximum NIC sendto failures before scan is
                               aborted (default='-1')
      --min-hitrate=n        Minimum hitrate that scan can hit before
          scan
                               is aborted (default='0.0')
  -T, --sender-threads=n     Threads used to send packets (default='1')
      --cores=STRING         Comma-separated list of cores to pin to
      --ignore-invalid-hosts Ignore invalid hosts in whitelist/blacklist
                               file
  -h, --help                 Print help and exit
  -V, --version              Print version and exit

Examples:
    zmap -p 80 (scan the Internet for hosts on tcp/80 and output to
        stdout)
    zmap -N 5 -B 10M -p 80 (find 5 HTTP servers, scanning at 10 Mb/s)
    zmap -p 80 10.0.0.0/8 192.168.0.0/16 -o (scan both subnets on tcp/80)
    zmap -p 80 1.2.3.4 10.0.0.3 (scan 1.2.3.4, 10.0.0.3 on tcp/80)

Probe-module (tcp_synscan) Help:
Probe module that sends a TCP SYN packet to a specific port. Possible
classifications are: synack and rst. A SYN-ACK packet is considered a
    success
and a reset packet is considered a failed response.

Output-module (csv) Help:
By default, ZMap prints out unique, successfulIP addresses (e.g.,
    SYN-ACK from
a TCP SYN scan) in ASCII form (e.g., 192.168.1.5) to stdout or the
    specified
output file. Internally this is handled by the "csv" output module and is
equivalent to running zmap --output-module=csv --output-fields=saddr
--output-filter="success = 1 && repeat = 0"
```

# 5 Known bugs and issues

## 5.1 Screen size

When first starting ArcheryOS in virtualbox, the screen size will be quite small. To fix this just logout and log back in again (**Mod+Shift+s** then **e**).

## 5.2 Ranger image preview

The default file manager in ArcheryOS, ranger, does not preview images when run as root.

## 5.3 Found more bugs?

If you have found bugs or have any issuse with ArcheryOS, please submit an issue to the ArcheryOS github repo.

# 6 Thanks

Thank you to Icar-u5 [1], who created the wallpaper. See the bibliography for his github account.

# References

[1] Icar-u5. *Wallpaper*. URL: `https://github.com/Icar-u5`.

[2] Michael Stapelberg. *i3wm*. 2009-2017. URL: `https://i3wm.org/`.