

ArcheryOS

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Contents

1	Introduction	2
1.1	Philosophy of ArcheryOS	2
2	Installation	3
3	i3	4
3.1	Introduction to i3	4
3.2	keybinds	4
3.2.1	i3 basics	4
3.2.2	Programs	6
4	Pentesting	7
4.1	List of pentesting tools installed	7
5	Known bugs and issues	8
5.1	Virtualbox issues	8
5.1.1	Screen size	8
5.1.2	Ranger image preview	8
6	Thanks	9

1 Introduction

ArcheryOS is an arch based, rolling release, lightweight pentesting distribution. It uses the default arch linux repositories, to ensure your software is always kept up to date.

1.1 Philosophy of ArcheryOS

- Minimal

ArcheryOS is designed to be minimal. It comes preinstalled with i3, which is a minimal window manager (wm) that focuses on utilising as much space as possible. i3 has been configured with the goal of minimizing keypresses, and embodying the vim philosophy. ArcheryOS has around 700 programs installed by default, many which are minimal terminal programs, focused on lower system resource useage.

- Simple

ArcheryOS is designed to be simple to use and install, coming with a curses installer to simplify the usual arch installation process.

Please note the installer is an offline installation program, simply copying all installed programs to the HDD
Please update after installation

- Privacy

ArcheryOS 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](https://privacytools.io) for more information.

You can also visit [panopticlick](https://panopticlick.com/) to check your browser fingerprint and [privacytools webrtc check](https://privacytools.io/webRTC-check/) to check for WebRTC IP leaks.

- Penetration Testing

ArcheryOS has a suite of 25 basic and essential tools that every aspiring pentester should have. Unlike other pentesting centric distributions, we believe that providing hundreds of tools, which 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**.

Please note, sometimes the status bar will report *No Network* even if there is an active network connection. The installation does not need internet connection, however, if you want to check if there is an active network connection, run `ifconfig`.

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.

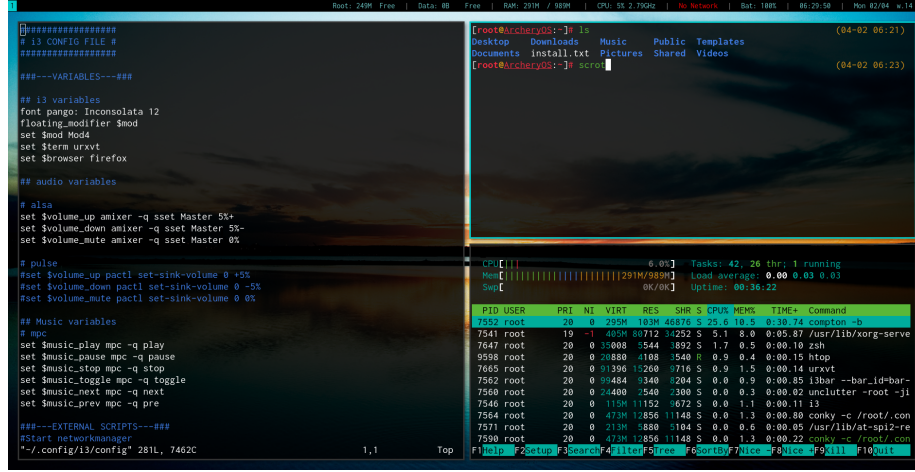


Figure 1: i3 running vim, htop, and scrot in 3 terminals

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 license i3 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 height by 10px
- **Mod+Shift+i** — Expand active windows height 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

- aircrack-ng
- autopsy
- burpsuite
- chnptw
- hashcat
- hydra
- john
- kismet
- macchanger
- maltego-community
- metasploit
- netdiscover
- nikto
- nmap
- openvas
- social-engineer-toolkit
- sqlmap
- unicornscan
- whois
- wireshark-gtk
- wpscan
- zaproxy
- zmap

5 Known bugs and issues

5.1 Virtualbox issues

5.1.1 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**).

5.1.2 Ranger image preview

The default file manager in ArcheryOS, ranger, does not preview images when loaded in virtualbox. I have not found anyway to fix this, as of yet.

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/>.