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Desarrollo de Entorno Profesional para la Ciberseguridad

Realizado por:

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Installation & Configuration Manual

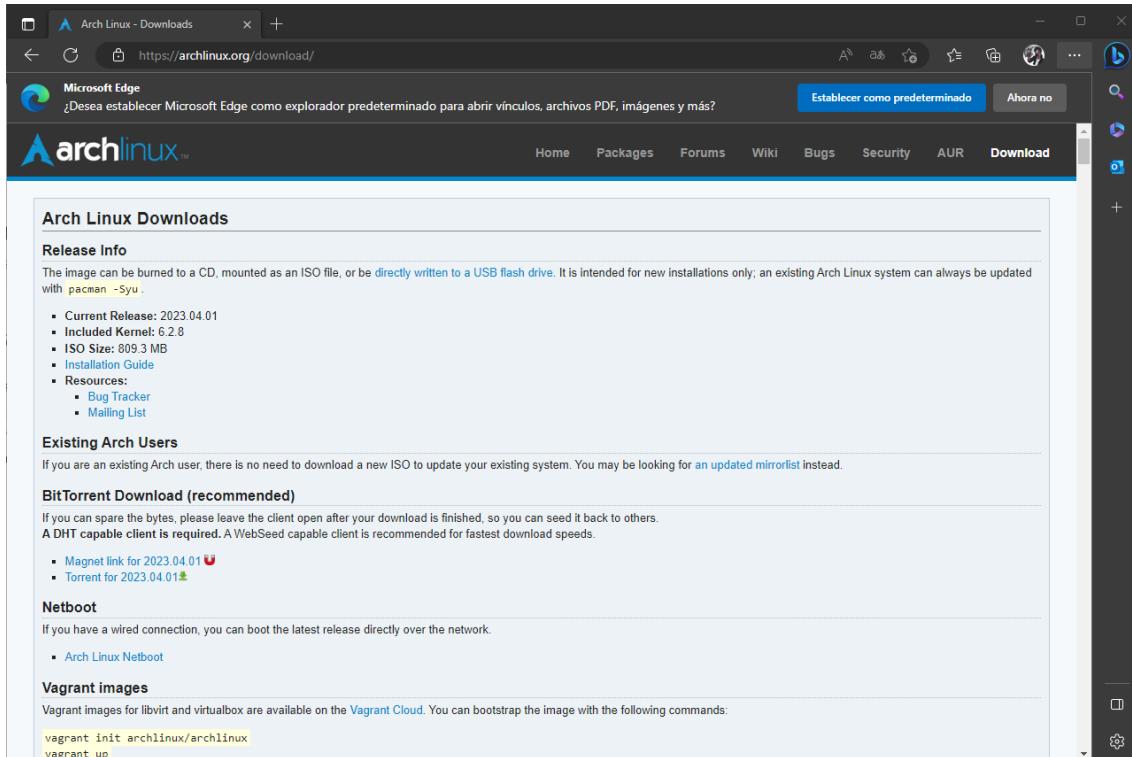
Introduction

The facility is divided into 3 different points. Arch, Gnome and BSPWM.

1 Initial installation of ARCH.

Step 1. We downloaded the official Arch ISO and created a MV with it.

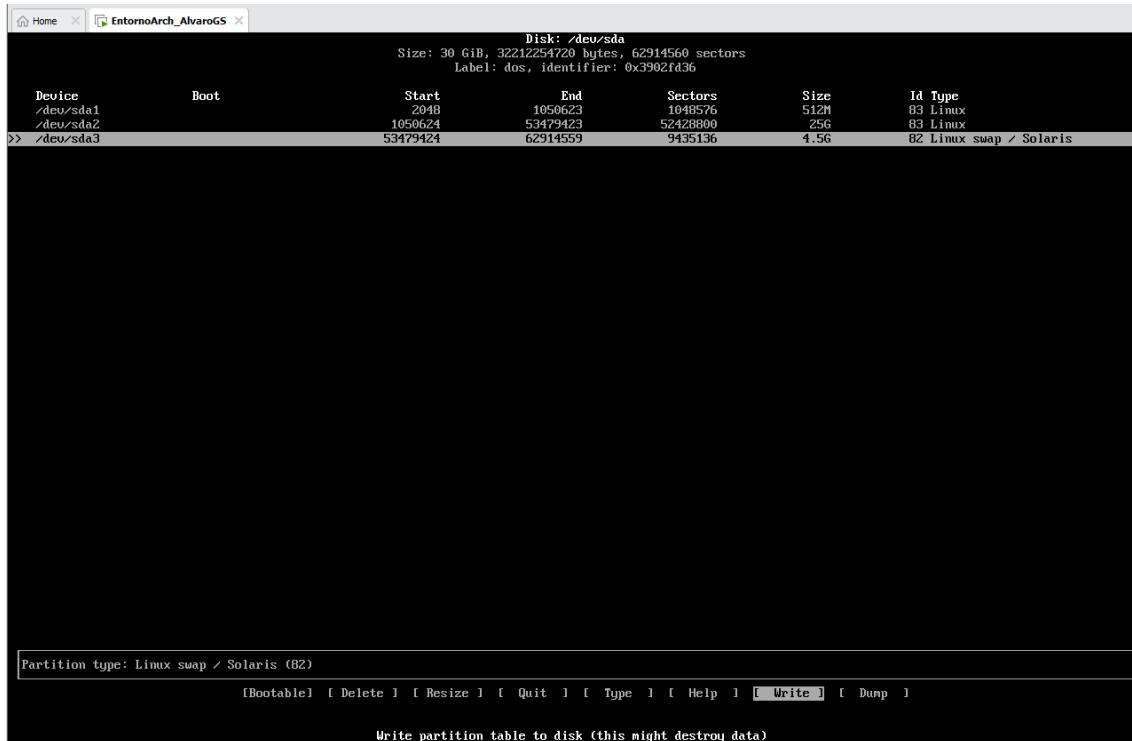
Link to the Arch ISO:<https://archlinux.org/download/>



Step 2. We check the connectivity of the MV.

A screenshot of a terminal window titled 'EntornoArch_AlvaroGS'. The terminal shows the root user performing network-related commands. It starts with 'loadkeys es', followed by a 'ping' command to 'google.es'. The output of the ping command shows a successful connection with a round-trip time of 10.6 ms. Below the ping statistics, the user runs 'ifconfig' to view network interface details. The output shows two interfaces: 'lo' (loopback) and 'ens33' (ethernet). The 'ens33' interface has an IP address of 192.168.64.24 and is connected to a bridge 'br0'. Other interfaces listed include 'br0' and 'wlan0'. The terminal ends with a simple command 'root@archiso ~ # _'.

Step 3. We manually define the partitions with CFDISK.



```
EntornoArch_AlvaroGS X
root@archiso ~ # lsblk
NAME   MAJ:MIN RM   SIZE RO TYPE MOUNTPOINTS
loop0    7:0    0 687.9M  1 loop /run/archiso/airootfs
sda     8:0    0   30G  0 disk
└─sda1   8:1    0   512M  0 part
└─sda2   8:2    0   25G  0 part
└─sda3   8:3    0   4.5G  0 part
sr0    11:0    1 809.3M  0 rom  /run/archiso/bootmnt
root@archiso ~ # _
```

Step 4. We format the partitions.

```
EntornoArch_AlvaroGS X
root@archiso ~ # mkfs.ufat -F 32 /dev/sda1
mkfs.fat 4.2 (2021-01-31)
root@archiso ~ # mkfs.ext4 /dev/sda2
mke2fs 1.47.0 (5-Feb-2023)
Creating filesystem with 6553600 4k blocks and 1638400 inodes
Filesystem UUID: a3ba2382-ddb9-48ef-8e43-7f85f6e46f27
Superblock backups stored on blocks:
      32768, 98304, 163840, 229376, 294912, 819200, 884736, 1605632, 2654208,
      4096000

Allocating group tables: done
Writing inode tables: done
Creating journal (32768 blocks): done
Writing superblocks and filesystem accounting information: done

root@archiso ~ # mkswap /dev/sda3
Setting up swapspace version 1, size = 4.5 GiB (4830785536 bytes)
no label, UUID=523cc326-2629-4fac-9f89-9fed899d4643
root@archiso ~ # swapon
root@archiso ~ # _
```

Step 5. We mount the partitions and install essential packages.

```
EntornoArch_AlvaroGS ~ 
root@archiso ~ # mkdir /mnt/boot
root@archiso ~ # mount /dev/sda1 /mnt/boot
root@archiso ~ # pacstrap /mnt linux linux-firmware networkmanager grub wpa_supplicant base base-devel
=> Creating install root at /mnt
=> Installing packages to /mnt
:: Synchronizing package databases...
core                               154.0 KiB  1320 KiB/s 00:00 [########################################] 100%
extra                             1763.2 KiB  8.92 MiB/s 00:00 [########################################] 100%
community                          7.2 MiB   4.78 MiB/s 00:02 [########################################] 100%
resolving dependencies...
:: There are 3 providers available for initramfs:
:: Repository core
  1) mkinitcpio
:: Repository extra
  2) booster  3) dracut
Enter a number (default=1):
looking for conflicting packages...
```

Step 6. We generate the fstab file.

```
EntornoArch_AlvaroGS ~ 
root@archiso ~ # genfstab -U /mnt > /mnt/etc/fstab
root@archiso ~ # cat $#
cat /mnt/etc/fstab
# /dev/sda2
UUID=444f8a18-d813-47b2-a2e7-ec0a1856c714      /          ext4      rw,relatime  0 1
# /dev/sda1
UUID=f903-a096      /boot      vfat      rw,relatime,fmask=0022,dmask=0022,codepage=437,iocharset=ascii,shortname=mixed,utf8,errors=remount-ro 0
2
root@archiso ~ # _
```

Step 7. We access as root, assign a password and create a new user.

```
EntornoArch_AlvaroGS ~ 
root@archiso ~ # arch-chroot /mnt
[root@archiso ~]# passwd
New password:
Retype new password:
passwd: password updated successfully
[root@archiso ~]# useradd -m alvaro
[root@archiso ~]# passwd alvaro
New password:
Retype new password:
passwd: password updated successfully
[root@archiso ~]# ls /home
alvaro
[root@archiso ~]# _
```

Step 8. We installed sudo, vim and nano.

```
EntornoArch_AlvaroGS ~ 
root@archiso ~ # usermod -aG wheel alvaro
[root@archiso ~]# pacman -S sudo
warning: sudo-1.9.13.p3-1 is up to date -- reinstalling
resolving dependencies...
looking for conflicting packages...

Packages (1) sudo-1.9.13.p3-1

Total Installed Size: 7.21 MiB
Net Upgrade Size: 0.00 MiB

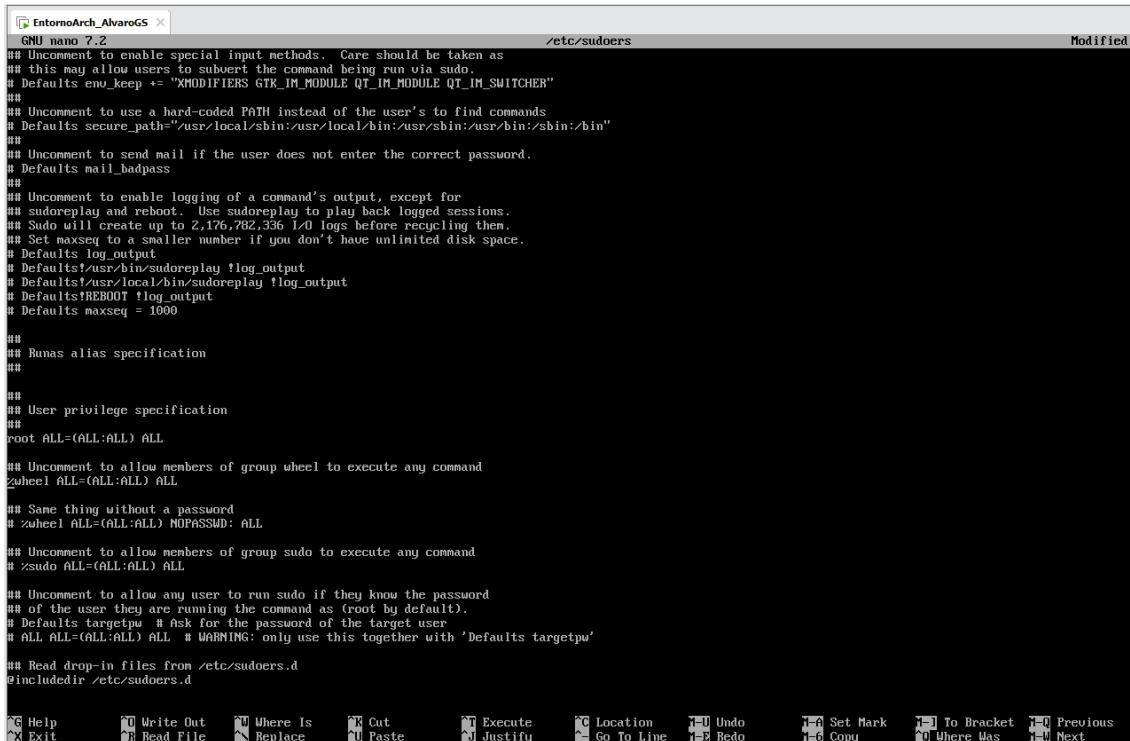
:: Proceed with installation? [Y/n] Y
(1/1) checking keys in keyring
(1/1) checking package integrity
(1/1) loading package files
(1/1) checking for file conflicts
(1/1) checking available disk space
:: Processing package changes...
(1/1) reinstalling sudo
:: Running post-transaction hooks...
(1/3) Reloading system manager configuration...
  Skipped: Running in chroot
(2/3) Creating temporary files...
(3/3) Arming ConditionNeedsUpdate...
[root@archiso ~]# pacman -S vim nano
resolving dependencies...
looking for conflicting packages...

Packages (3) vim-runtime-9.0.1420-1  nano-7.2-1  vim-9.0.1420-1

Total Download Size: 9.76 MiB
Total Installed Size: 41.74 MiB

:: Proceed with installation? [Y/n] Y
:: Retrieving packages...
  vim-runtime-9.0.1420-1-x86_64
Total (0/3)
```

Step 9. We uncomment a line in /etc/sudoers (%wheel)

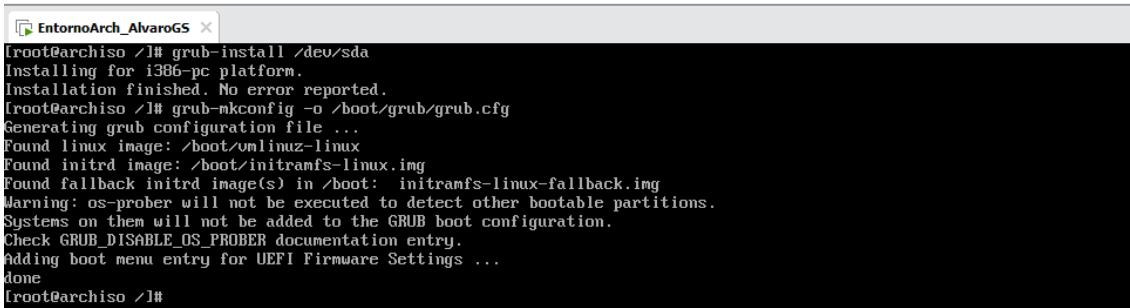


```
EntornoArch_AlvaroGS x
GNU nano 7.2                                     /etc/sudoers
## Uncomment to enable special input methods. Care should be taken as
## this may allow users to subvert the command being run via sudo.
# Defaults env_keep += "XMODIFIERS GTK_IM_MODULE QT_IM_MODULE QT_IM_SWITCHER"
##
## Uncomment to use a hard-coded PATH instead of the user's to find commands
# Defaults secure_path="/usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bin:/sbin:/bin"
##
## Uncomment to send mail if the user does not enter the correct password.
# Defaults mail_badpass
##
## Uncomment to enable logging of a command's output, except for
## sudoreplay and reboot. Use sudoreplay to play back logged sessions.
## Sudo will create up to 2,176,782,336 I/O logs before recycling them.
## Set maxseq to a smaller number if you don't have unlimited disk space.
# Defaults log_output
# Defaults!/usr/bin/sudoreplay !log_output
# Defaults!/usr/local/bin/sudoreplay !log_output
# Defaults!/sbin/sudoreplay !log_output
# Defaults maxseq = 1000
##
## Runas alias specification
##
##
## User privilege specification
##
root ALL=(ALL:ALL) ALL
## Uncomment to allow members of group wheel to execute any command
%wheel ALL=(ALL:ALL) ALL
## Same thing without a password
# %wheel ALL=(ALL:ALL) NOPASSWD: ALL
## Uncomment to allow members of group sudo to execute any command
# %sudo ALL=(ALL:ALL) ALL
## Uncomment to allow any user to run sudo if they know the password
## of the user they are running the command as (root by default).
# Defaults targetpw # Ask for the password of the target user
# ALL ALL=(ALL:ALL) ALL # WARNING: only use this together with 'Defaults targetpw'
## Read drop-in files from /etc/sudoers.d
@include /etc/sudoers.d

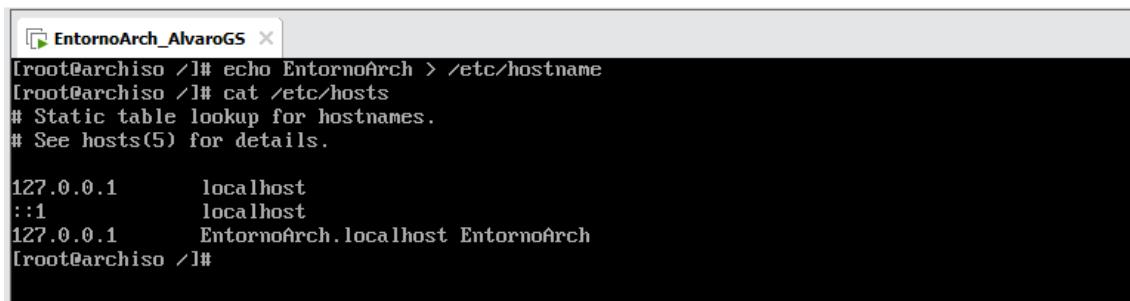
File Help     Write Out    Where Is    Cut      Paste      Execute      Location      Go To Line      Undo      Redo      Set Mark      To Bracket      Copy      Where Was      Previous      Next

```

Step 10. We install grub, define hostname and hosts.



```
EntornoArch_AlvaroGS x
[root@archiso /]# grub-install /dev/sda
Installing for i386-pc platform.
Installation finished. No error reported.
[root@archiso /]# grub-mkconfig -o /boot/grub/grub.cfg
Generating grub configuration file...
Found linux image: /boot/vmlinuz-linux
Found initrd image: /boot/initramfs-linux.img
Found fallback initrd image(s) in /boot: initramfs-linux-fallback.img
Warning: os-prober will not be executed to detect other bootable partitions.
Systems on them will not be added to the GRUB boot configuration.
Check GRUB_DISABLE_OS_PROBER documentation entry.
Adding boot menu entry for UEFI Firmware Settings ...
done
[root@archiso /]#
```



```
EntornoArch_AlvaroGS x
[root@archiso /]# echo EntornoArch > /etc/hostname
[root@archiso /]# cat /etc/hosts
# Static table lookup for hostnames.
# See hosts(5) for details.

127.0.0.1      localhost
::1            localhost
127.0.0.1      EntornoArch.localhost EntornoArch
[root@archiso /]#
```

Step 11. We install neofetch and restart the system.

```
EntornoArch_AlvaroGS ~]$ arch Linux 6.2.11-arch1-1 (tty1)
EntornoArch login: alvaroogs
Password:
[alvaroogs@EntornoArch ~]$ neofetch
  _.
  .+` .
  `000/
  +0000:
  +00000:
  -+00000:
  `/:-:+0000+:
  /+****/+*****+:
  /+*****+*****+:
  /+***000000000000\` .
  ./00SSSO+0SSSSSSO+
  .0SSSSSO-` ``/0SSSSS+
  -0SSSSSS. :SSSSSSO.
  :0SSSSSS/ OSSSSS+.
  /0SSSSSS/ +SSSS000/-
  /0SSSSS0+/- -:/+0SSSS0+-
  +SS0+:-` .-/+0SO:
  .+::` .`/+/` .
[alvaroogs@EntornoArch ~]$ _
```

Step 12. We start the NetworkManager and wpa_supplicant to have internet.

```
EntornoArch_AlvaroGS ~]$ sudo systemctl start NetworkManager.service
[sudo] password for alvaroogs:
[alvaroogs@EntornoArch ~]$ sudo su
[root@EntornoArch alvaroogs]# systemctl enable NetworkManager
Created symlink /etc/systemd/system/multi-user.target.wants/NetworkManager.service → /usr/lib/systemd/system/NetworkManager.service.
Created symlink /etc/systemd/system/dhds-org.freedesktop.nm-dispatcher.service → /usr/lib/systemd/system/NetworkManager-dispatcher.service.
Created symlink /etc/systemd/system/network-online.target.wants/NetworkManager-wait-online.service → /usr/lib/systemd/system/NetworkManager-wait-online.service.
[root@EntornoArch alvaroogs]# systemctl start wpa_supplicant
[root@EntornoArch alvaroogs]# systemctl enable wpa_supplicant
Created symlink /etc/systemd/system/dhds-f1.w1.wpa_supplicant1.service → /usr/lib/systemd/system/wpa_supplicant.service.
Created symlink /etc/systemd/system/multi-user.target.wants/wpa_supplicant.service → /usr/lib/systemd/system/wpa_supplicant.service.
[root@EntornoArch alvaroogs]#
```

Step 13. We installed git and the following AUR repository.

```
EntornoArch_AlvaroGS ~]$ pacman -S git
(resolving dependencies...
looking for conflicting packages...)

Packages (4) perl-error-0.17029-4 perl-mailtools-2.21-6 perl-timedate-2.33-4 git-2.40.0-1

total Download Size: 6.70 MiB
Total Installed Size: 37.71 MiB

:: Proceed with installation? [Y/n] Y
:: Retrieving packages...
git-2.40.0-1-x86_64          6.6 MiB 4.66 MiB/s 00:01 [#####
perl-mailtools-2.21-6-any     62.2 Kib 691 Kib/s 00:00 [#####
perl-timedate-2.33-4-any      35.8 Kib 397 Kib/s 00:00 [#####
perl-error-0.17029-4-any      21.8 Kib 204 Kib/s 00:00 [#####
Total (4)                               6.7 MiB 3.20 MiB/s 00:02 [#####

(4/4) checking keys in keyring
(4/4) checking package integrity
(4/4) loading package files
(4/4) checking for file conflicts
(4/4) checking available disk space
:: Processing package changes...
(1/4) installing perl-error
(2/4) installing perl-timedate
(3/4) installing perl-mailtools
(4/4) installing git
Optional dependencies for git
  tk, gitk and git-gui
total 4
```

```
EntornoArch_AlvaroGS ~]$ git clone https://aur.archlinux.org/paru-bin.git
Cloning into 'paru-bin'...
remote: Enumerating objects: 132, done.
remote: Counting objects: 100% (132/132), done.
remote: Compressing objects: 100% (92/92), done.
remote: Total 132 (delta 40), reused 132 (delta 40), pack-reused 0
Receiving objects: 100% (132/132), 41.48 Kib | 566.00 KiB/s, done.
Resolving deltas: 100% (40/40), done.
(alvaroogs@EntornoArch repos)$ ls -1
total 4
drwxr-xr-x 3 alvaroogs 4096 Apr 16 12:18 paru-bin
(alvaroogs@EntornoArch repos)$ cd paru-bin
(alvaroogs@EntornoArch paru-bin)$ makepkg -si
=> Making package: paru-bin 1.11.2-1 (Sun Apr 16 12:18:56 2023)
=> Checking runtime dependencies...
=> Checking builtime dependencies...
=> Retrieving sources...
  → Downloading paru-v1.11.2-x86_64.tar.zst...
  % Total    % Received % Xferd  Average Speed   Time   Time     Time Current
     0       0       0       0       0      0      0 --:--:-- --:--:-- --:--:-- 0
```

Step 14. We download the following BASH file and run it as root.

Step 15.We install the Impacket suite.

```
[EntornoArch_AlvaroGS]# pacman -S impacket
resolving dependencies...
looking for conflicting packages...

Packages (20) libssl1-2.0.0-3 python-3.10.10-1 python-cffi-1.15.1-1 python-click-0.1.3-1 python-cryptography-40.0.1-1 python-flask-2.2.2-1
           python-itsdangerous-2.1.2-2 python-jinja1-3.1.2-2 python-ldap3-2.9.1-3 python-markupsafe-2.1.2-1 python-pcapu-1.0.5-1 python-ply-3.11-10
           python-psutil-0.4.8-7 python-pycparser-2.21-3 python-pycryptodome-3.17.0-1 python-pycryptodomex-3.12.0-1 python-pyopenssl-23.1.1-1
           python-six-1.16.0-6 python-werkzeug-2.2.3-1 impacket-0.9.24-1

Total Download Size: 19.06 MiB
Total Installed Size: 98.53 MiB

:: Proceed with installation? [Y/n] Y
:: Retrieving packages...
python-3.10.10-1-x86_64          12.0 MiB  4.23 MiB/s  00:03 [#####
python-impacket-0.9.24-1-any     1802.1 KiB  2.71 MiB/s  00:01 [#####
python-pycryptodome-3.12.0-0-1-x86_64 1354.7 KiB  2.65 MiB/s  00:01 [#####
python-pycryptodome-3.17.0-1-x86_64 1016.0 KiB  1360 KiB/s  00:01 [#####
python-cryptography-40.0.1-1-x86_64 913.2 KiB  3.38 MiB/s  00:00 [#####
python-ldap3-2.9.1-3-any        442.8 KiB  2.03 MiB/s  00:00 [#####
python-werkzeug-2.2.3-1-any      330.9 KiB  1651 KiB/s  00:00 [#####
python-cffi-1.15.1-1-x86_64     222.3 KiB  649 KiB/s  00:00 [#####
python-jinja1-3.1.2-2-any       218.0 KiB  1425 KiB/s  00:00 [#####
python-pycparser-2.21-3-any     18.2 MiB  1157 KiB/s  00:00 [#####
python-psutil-0.4.8-7-any       18.2 MiB  1157 KiB/s  00:00 [#####

Total ( 9/20)
```

Step 16. Graphic interface. We install all xorg and gnome packages.

```

EntornoArch_AlvaroGS
[root@EntornoArch blackarch]# pacman -S xorg xorg-server
:: There are 48 members in group xorg:
:: Repository extra
  1) xf86-video-vesa 2) xorg-bdftopcf 3) xorg-docs 4) xorg-font-util 5) xorg-fONTS-100dpi 6) xorg-fONTS-75dpi 7) xorg-fONTS-encodings 8) xorg-iceauth
  9) xorg-mkfontscale 10) xorg-server 11) xorg-server-common 12) xorg-server-devel 13) xorg-server-xephyr 14) xorg-server-xnest 15) xorg-server-xvfb
  16) xorg-sessreg 17) xorg-setxkbmap 18) xorg-smproxy 19) xorg-x11perf 20) xorg-xauth 21) xorg-xbacklight 22) xorg-xcsmdb 23) xorg-xcursorsgen
  24) xorg-xdpyinfo 25) xorg-xdiinfo 26) xorg-xev 27) xorg-xgamma 28) xorg-xhost 29) xorg-xinput 30) xorg-xkbcomp 31) xorg-xkbeud 32) xorg-xkbutils
  33) xorg-xkill 34) xorg-xlatsons 35) xorg-xlatclients 36) xorg-xmodmap 37) xorg-xpr 38) xorg-xprop 39) xorg-xrandr 40) xorg-xrdb 41) xorg-xrefresh
  42) xorg-xset 43) xorg-xsetroot 44) xorg-xvinfo 45) xorg-xwayland 46) xorg-xwd 47) xorg-xwininfo 48) xorg-xwd

Enter a selection (default=all):
resolving dependencies...
:: There are 2 providers available for man:
:: Repository core
  1) man-db
:: Repository community
  2) mandoc

Enter a number (default=1):
looking for conflicting packages...
warning: dependency cycle detected:
warning: harfbuzz will be installed before its freetype2 dependency
warning: dependency cycle detected:
warning: mesa will be installed before its libglu dependency

Packages (114) default-cursors-2-2.14.2-1 fontconfig-2-2.14.2-1 freetype2-2-13.0-0 graphite-1-1.3.14-3 harfbuzz-2-1.0-1 libdrm-2-4.115-1 libedit-20221030_3.1-1
libepoxy-1.5.10-1 libevdev-1.13.0-1 libfontenc-1.1.1-1 libgluind-0.1-1 libgludev-237-2 libice-1.1.1-2 libinput-1.23.0-1
libibus-1-heligon-0.9-3.4 libpcaccess-0.17-1 libpipinge-1.5.7-1 libpng-1.6.39-1 libsm-1.2.4-1 libuinput-1.6.2-2 libwacom-2.6.0-2
libxcb-1.8.4-1 libxau-1.0.11-2 libxau-1.0.15-1 libxcb-1.15-7 libcomposite-0.4.6-1 libcursor-1.2.1-3 libcut-0.1.2-1 libxdamage-1.1.6-1
libxdcy-1.1.4-2 libxext-1.3.5-2 libxfixedes-6.0.1-1 libxfont2-0.2.6-2 libxft-2.3.7-1 libxi-1.8-3 libxinerama-1.1.5-1 libxbfile-1.1.2-1
libxmu-1.1.4-1 libxpm-3.5.15-1 libxrandr-1.5.3-1 libxrender-0.9.11-1 libxshmfence-1.3.2-1 libxt-1.3.0-1 libxtst-1.2.4-1 libxv-1.0.12-1
libxxf86m-1.1.5-1 libxlib-15.0.7-2 lsensors-1:3.6.0.r41.g3d1ff125-2 man-db-2.11.2-1 mesa-23.0.2-2 mtaev-1.1.6-2 pixman-0.42.2-1
ouulkan-icd-loader-1.3.245-1 liblang1-2.2.0-1 xcbproto-1.15.2-2 xcbutil-0.4.1-1 xcbutil-image-0.4.1-1 xcbutil-kegsums-0.4.1-1
xcb-util-renderutil-0.3.10-1 xcb-util-un-0.4.2-1 xf86-input-libinput-1.3.0-1 xkeyboard-config-2.38-1 xorg-fONTS-alias-100dpi-1.0.5-1
xorg-fONTS-alias-75dpi-1.0.5-1 xorg-fONTS-nacros-1.20.0-2 xorgproto-2022.2-1 xf86-video-vesa-2.6.0-1 xorg-bdftopcf-1.1.1-1 xorg-docs-1.7.2-2
xorg-fONTS-util-1.4.0-2 xorg-fONTS-100dpi-1.0.4-2 xorg-fONTS-75dpi-1.0.4-1 xorg-fONTS-encodings-1.0.7-1 xorg-iceauth-1.0.9-1
xorg-mkfontscale-1.2.2-1 xorg-server-21.1.8-1 xorg-server-common-21.1.8-1 xorg-server-devel-21.1.8-1 xorg-server-xephyr-21.1.8-1
xorg-server-xnest-21.1.8-1 xorg-server-xvfb-21.1.8-1 xorg-sessreg-1.1.3-1 xorg-setxkbmap-1.3.3-2 xorg-smproxy-1.0.7-1 xorg-x11perf-1.6.2-1
xorg-xauth-1.2.1-2 xorg-xbacklight-1.2.3-3 xorg-xcsmdb-1.0.6-1 xorg-xcursorsgen-1.0.8-1 xorg-xdpyinfo-1.3.3-4 xorg-xdiinfo-1.0.7-1
xorg-xev-1.2.5-1 xorg-xgamma-1.0.7-1 xorg-xhost-1.0.9-1 xorg-xinput-1.6.3-3 xorg-xkbcomp-1.4.6-1 xorg-xkbeud-1.1.5-1 xorg-xkbutils-1.0.5-1
xorg-xkill-1.0.6-1 xorg-xlatsons-1.1.4-1 xorg-xlatclients-1.1.5-1 xorg-xmodmap-1.0.11-1 xorg-xpr-1.1.0-1 xorg-xprop-1.2.6-1
xorg-xrandr-1.5.2-1 xorg-xrdb-1.2.1-1 xorg-xrefresh-1.0.7-1 xorg-xset-1.2.5-1 xorg-xsetroot-1.1.3-1 xorg-xwininfo-1.1.5-1
xorg-xwayland-23.1.1-1 xorg-xwd-1.0.8-1 xorg-xwininfo-1.1.6-1 xorg-xwd-1.0.6-1

Total Download Size: 84.52 MiB
Total Installed Size: 298.14 MiB

:: Proceed with installation? [Y/n] _
```

```
[root@EntornoArch blackarch]# pacman -S gnome
:: There are 54 packages in group gnome:
:: Repository extra
 1) baobab 2) cheese 3) cog 4) epiphany 5) evince 6) file-roller 7) gdm 8) gnome-backgrounds 9) gnome-calculator 10) gnome-calendar
 11) gnome-characters 12) gnome-clocks 13) gnome-color-manager 14) gnome-console 15) gnome-contacts 16) gnome-control-center 17) gnome-disk-utility
 18) gnome-font-viewer 19) gnome-keyring 20) gnome-logs 21) gnome-maps 22) gnome-menus 23) gnome-music 24) gnome-photos 25) gnome-remote-desktop
 26) gnome-session 27) gnome-settings-daemon 28) gnome-shell 29) gnome-shell-extensions 30) gnome-software 31) gnome-system-monitor
 32) gnome-text-editor 33) gnome-user-docs 34) gnome-user-share 35) gnome-video-effects 36) gnome-weather 37) grilo-plugins 38) gits 39) gufs-afc
 40) gofs-goa 41) gofs-google 42) gofs-pphotof2 43) gofs-mp 44) gofs-nfs 45) gofs-smb 46) mailcontent 47) nautilus 48) orca 49) rygel 50) sushi
 51) totem 52) tracker3-miners 53) xdg-user-dirs-gtk 54) gimp

Enter a selection (default=1):
resolving dependencies...
:: There are 2 providers available for jack:
:: Repository extra
 1) jack2 2) pipewire-jack

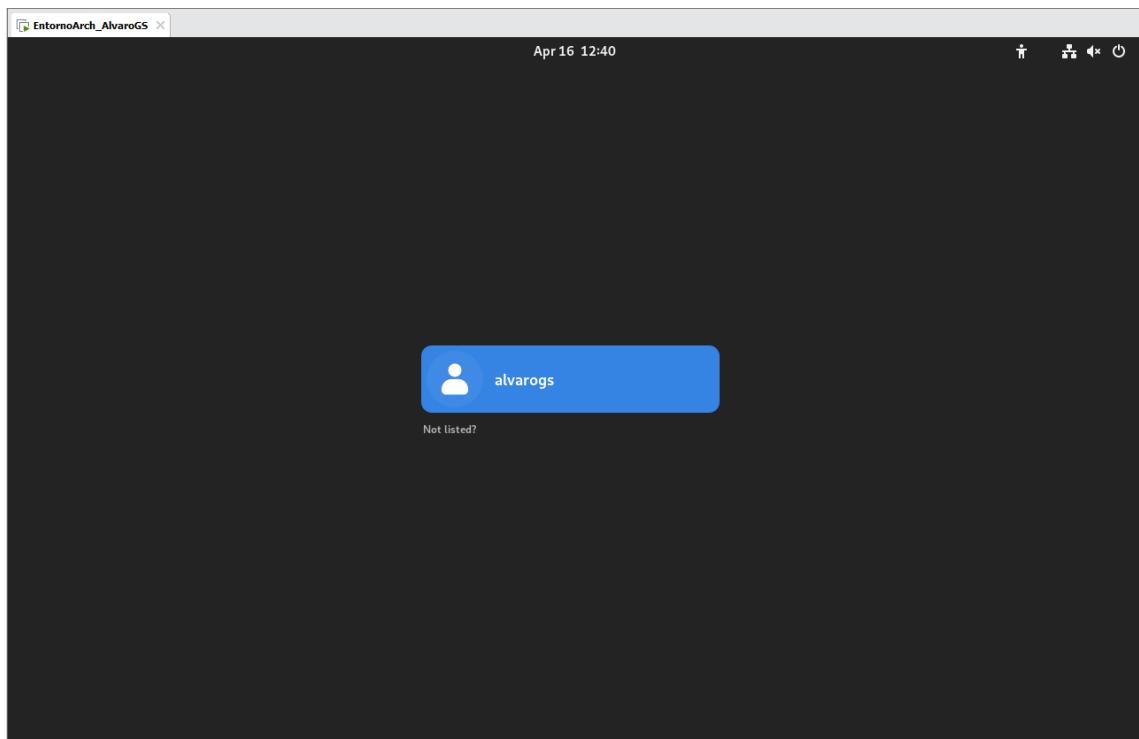
Enter a number (default=1):
:: There are 2 providers available for emoji-font:
:: Repository extra
 1) noto-fonts-emoji
:: Repository community
 2) ttf-jaypixels

Enter a number (default=1):
:: There are 6 providers available for xdg-desktop-portal-impl:
:: Repository extra
 1) xdg-desktop-portal-gnome 2) xdg-desktop-portal-gtk 3) xdg-desktop-portal-kde
:: Repository community
 4) xdg-desktop-portal-hyprland 5) xdg-desktop-portal-lxqt 6) xdg-desktop-portal-wlr

Enter a number (default=1):
```

2 Configuration from GNOME

Step 17. we execute **systemctl start gdm.service** to display the graphical interface. Once inside we press **CTRL+ALT+F3** for return to the terminal and execute **systemctl enable gdm.service**.



```
[root@EntornoArch alvarogs]# systemctl enable gdm.service
Created symlink /etc/systemd/system/display-manager.service → /usr/lib/systemd/system/gdm.service.
[root@EntornoArch alvarogs]#
```

Step 18. We download and install KITTY, and reboot.

```
[root@EntornoArch_AlvaroGS ~]#
[root@EntornoArch_AlvaroGS ~]# pacman -S kitty
resolving dependencies...
looking for conflicting packages...

Packages (4) kitty-shell-integration-0.28.1-1 kitty-terminfo-0.28.1-1 librsync-1:2.3.4-1 kitty-0.28.1-1

Total Download Size: 10.53 MiB
Total Installed Size: 35.21 MiB

:: Proceed with installation? [Y/n] Y
:: Retrieving packages...
kitty-0.28.1-1-x86_64          10.5 MiB  5.73 MiB/s 00:02 [########################################] 100%
librsync-1:2.3.4-1-x86_64       38.9 KIB  418 Kib/s 00:00 [########################################] 100%
kitty-shell-integration-0.28.1-1-x86_64   24.6 KIB  254 Kib/s 00:00 [########################################] 100%
kitty-terminfo-0.28.1-1-x86_64      4.2 KIB  41.5 Kib/s 00:00 [########################################] 100%
Total (4/4)                      10.5 MiB  4.25 MiB/s 00:02 [########################################] 100%

(4/4) checking keys in keyring
(4/4) checking package integrity
(4/4) loading package files
(4/4) checking for file conflicts
(4/4) checking available disk space
:: Processing package changes...
(1/4) installing librsync
(2/4) installing kitty-terminfo
(3/4) installing kitty-shell-integration
(4/4) installing kitty
Optional dependencies for kitty
    imagemagick: viewing images with icat [installed]
    python-pygments: syntax highlighting in kitty <kitten diff>
    libcanberra: playing "bell" sound on terminal bell [installed]
:: Running post-transaction hooks...
(1/3) Arming ConditionNeedsUpdate...
(2/3) Updating icon theme caches...
(3/3) Updating the desktop file MIME type cache...
[root@EntornoArch_AlvaroGS ~]# _
```

Step 19. It will open the graphical interface, click again **CTRL+ALT+F3** to open a new terminal, and install the packages **gtkmm**, **open-vm-tools**, **xf86-video-vmware**, and **xf86-input-vmmouse** (These last 3 if we are in VMware). We also enable the vmware service and restart.

```
[root@EntornoArch_AlvaroGS ~]#
[root@EntornoArch_AlvaroGS ~]# pacman -S gtkmm open-vm-tools xf86-video-vmware xf86-input-vmmouse
resolving dependencies...
looking for conflicting packages...

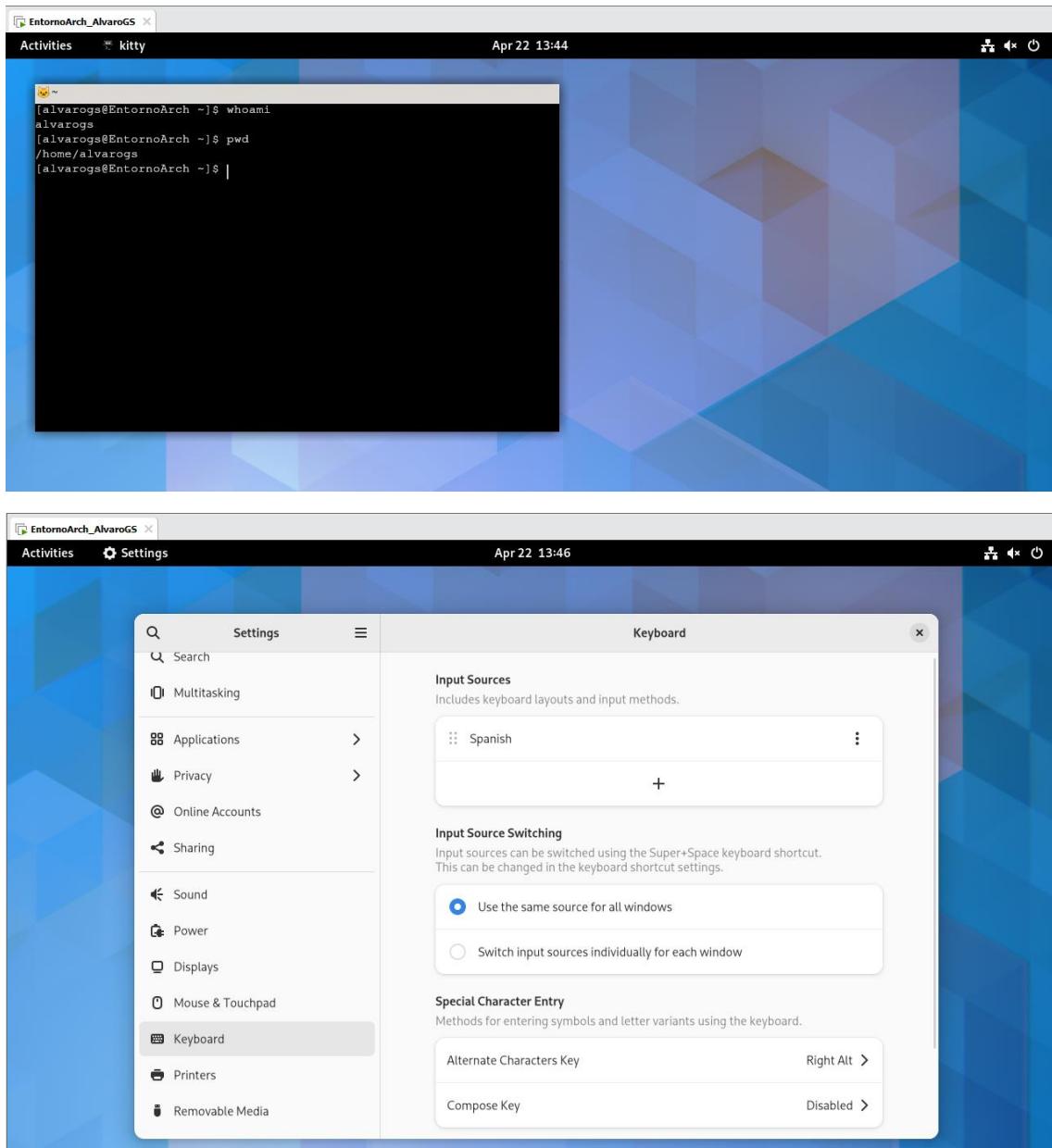
Packages (11) gdk-pixbuf-xlib-2.40.2-2 gtk2-2.24.33-3 libdnet-1.16.4-1 libspack-1:0.11alpha-1 libss-1.2.3-4 lsb-release-2.0.r48.3cf5103-1
                   uriparser-0.9.7-1 gtkmm-1:2.24.5-4 open-vm-tools-6:12.2.0-1 xf86-input-vmmouse-13.2.0-1 xf86-video-vmware-13.4.0-1

Total Download Size: 0.26 MiB
Total Installed Size: 49.53 MiB

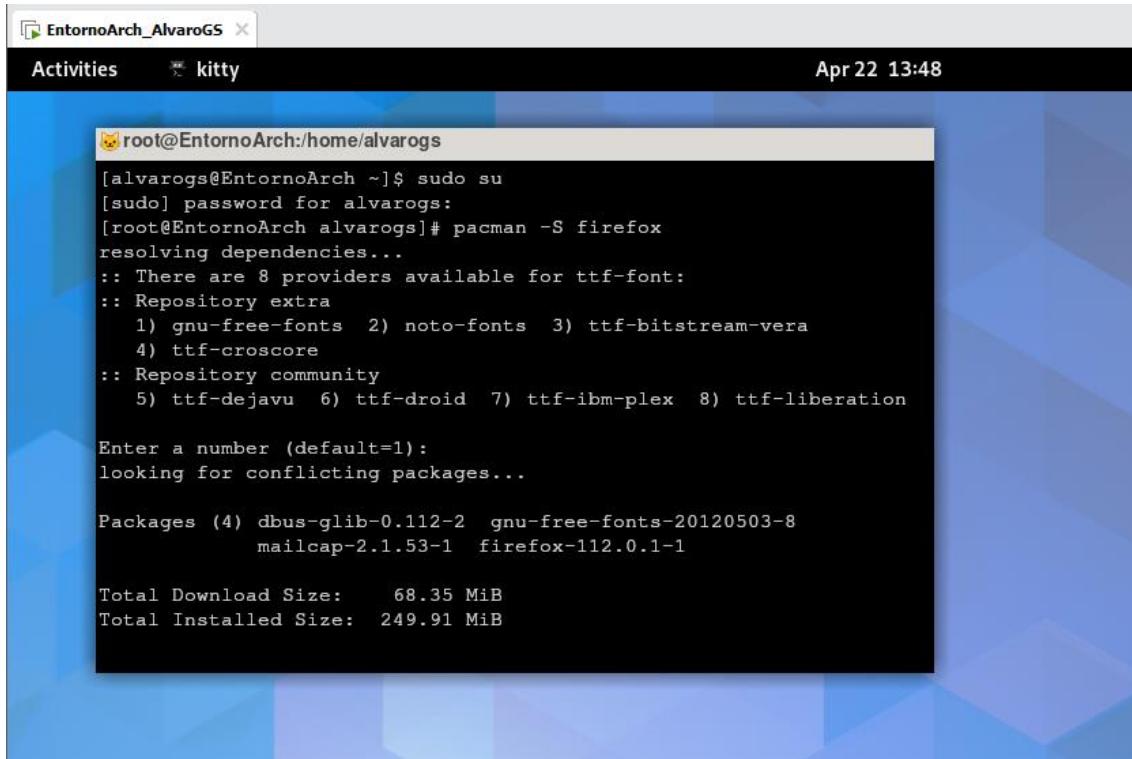
:: Proceed with installation? [Y/n] Y
:: Retrieving packages...
libdnet-1.16.4-1-x86_64          61.2 KIB  523 Kib/s 00:00 [########################################] 100%
gdk-pixbuf-xlib-2.40.2-2-x86_64  57.8 KIB  578 Kib/s 00:00 [########################################] 100%
uriparser-0.9.7-1-x86_64         56.0 KIB  700 Kib/s 00:00 [########################################] 100%
libspack-1:0.11alpha-1-x86_64    54.6 KIB  1029 Kib/s 00:00 [########################################] 100%
xf86-input-vmmouse-13.2.0-1-x86_64 14.3 KIB  107 Kib/s 00:00 [########################################] 100%
libss-1.2.3-4-x86_64             14.0 KIB  280 Kib/s 00:00 [########################################] 100%
lsb-release-2.0.r48.3cf5103-1-any 8.8 KIB  97.3 Kib/s 00:00 [########################################] 100%
Total (7/7)
(11/11) checking keys in keyring
(11/11) checking package integrity
(11/11) loading package files
(11/11) checking for file conflicts
(11/11) checking available disk space
:: Processing package changes...
(1/11) installing gtk2
Optional dependencies for gtk2
    adwaita-icon-theme: Default icon theme [installed]
    gnome-themes-standard: Default widget theme
    python: gtk-builder-converter [installed]
(2/11) installing gtkmm
(3/11) installing libdnet
(4/11) installing libspack
(5/11) installing libss
(6/11) installing lsb-release
(7/11) installing uriparser
(8/11) installing gdk-pixbuf-xlib
(9/11) installing open-vm-tools
Optional dependencies for open-vm-tools
    gtkmm3: DnD-CP plugin [installed]
    libxtst: DnD-CP, resolution set plugin [installed]
    netctl: suspend-resume network state
    networkmanager: suspend-resume network state [installed]
(10/11) installing xf86-video-vmware
(11/11) installing xf86-input-vmmouse
:: Running post-transaction hooks...
(1/4) Reloading system manager configuration...
(2/4) Reloading device manager configuration...
```

```
[root@EntornoArch_AlvaroGS ~]#
[root@EntornoArch_AlvaroGS ~]# systemctl enable vmtoolsd
Created symlink /etc/systemd/system/multi-user.target.wants/vmtoolsd.service → /usr/lib/systemd/system/vmtoolsd.service.
[root@EntornoArch_AlvaroGS ~]# reboot_
```

Step 20. We open the new environment, test the kitty and remap the keyboard manually.



Step 21.We installed firefox from kitty.



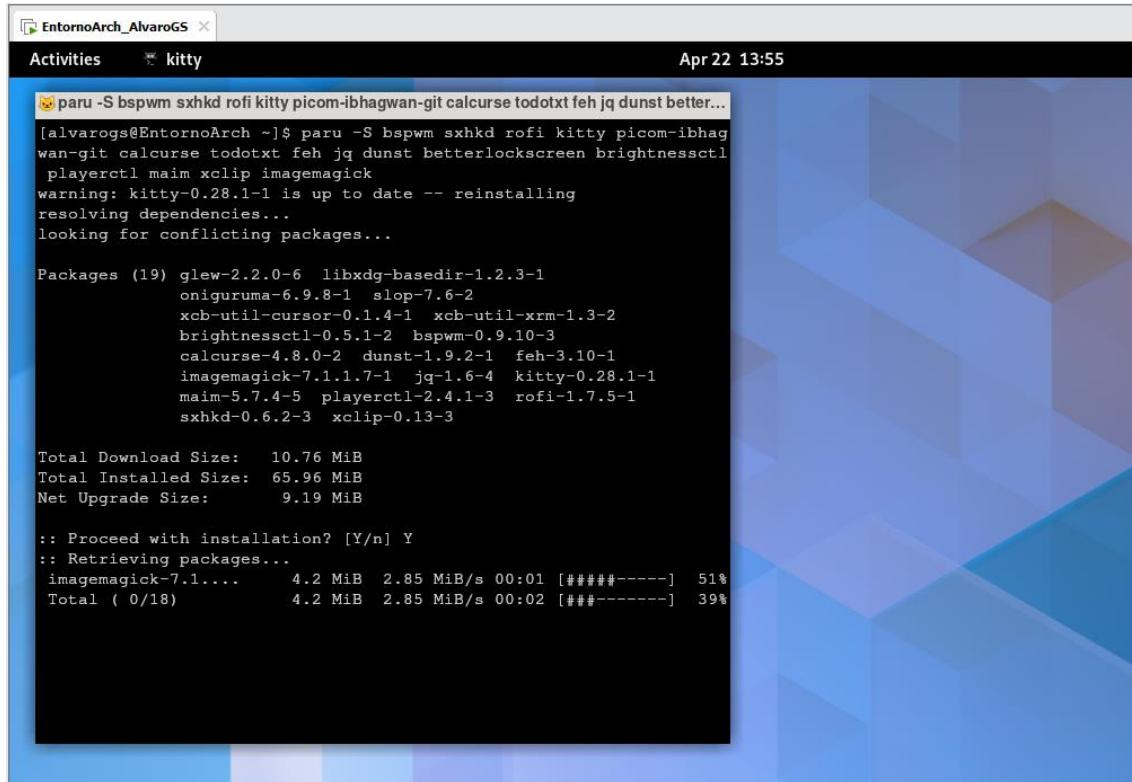
```
[root@EntornoArch ~]$ sudo su
[sudo] password for alvarogs:
[root@EntornoArch alvarogs]# pacman -S firefox
resolving dependencies...
:: There are 8 providers available for ttf-font:
:: Repository extra
  1) gnu-free-fonts  2) noto-fonts  3) ttf-bitstream-vera
  4) ttf-croscore
:: Repository community
  5) ttf-dejavu   6) ttf-droid   7) ttf-ibm-plex  8) ttf-liberation

Enter a number (default=1):
looking for conflicting packages...

Packages (4) dbus-glib-0.112-2  gnu-free-fonts-20120503-8
               mailcap-2.1.53-1  firefox-112.0.1-1

Total Download Size:    68.35 MiB
Total Installed Size:  249.91 MiB
```

Step 22.We install the following packages (Always ask, everything by default). It is a long installation, you have to wait.



```
[alvarogs@EntornoArch ~]$ paru -S bspwm sxhkd rofi kitty picom-ibhagwan-git calcuse todotxt feh jq dunst better...
[alvarogs@EntornoArch ~]$ paru -S bspwm sxhkd rofi kitty picom-ibhagwan-git calcuse todotxt feh jq dunst betterlockscreen brightnessctl
playerctl main xclip imagemagick
warning: kitty-0.28.1-1 is up to date -- reinstalling
resolving dependencies...
looking for conflicting packages...

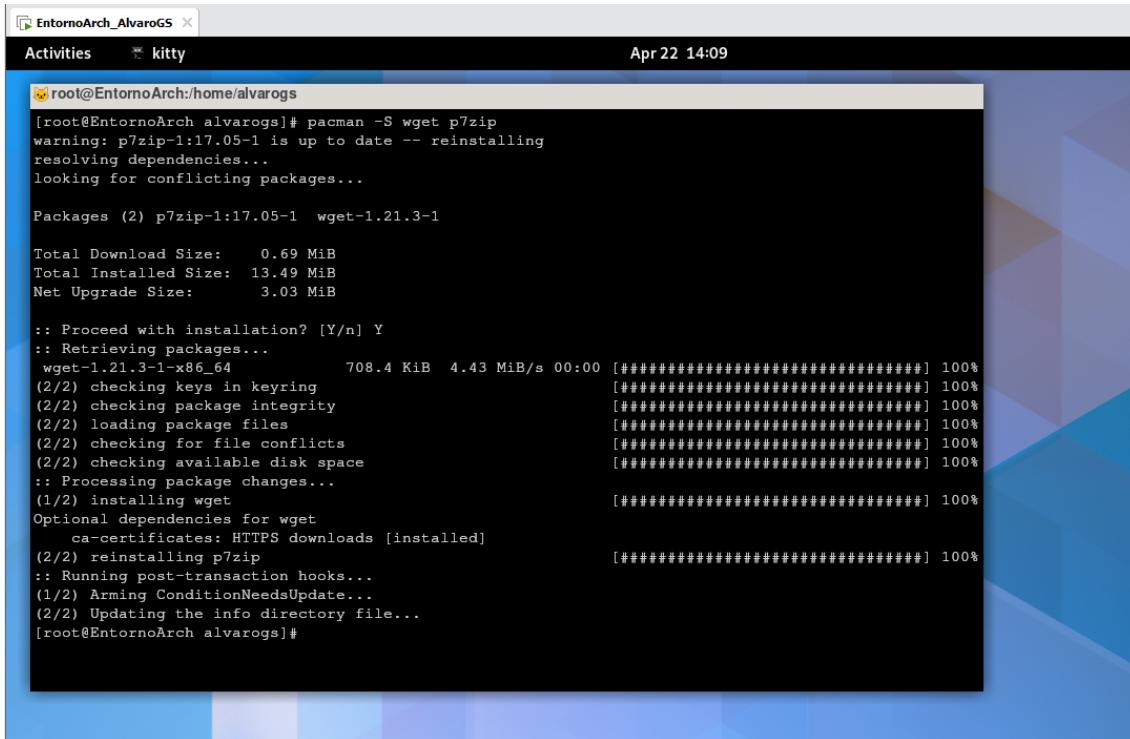
Packages (19) glew-2.2.0-6  libxdg-basedir-1.2.3-1
               oniguruma-6.9.8-1  sllop-7.6-2
               xcb-util-cursor-0.1.4-1  xcb-util-xrm-1.3-2
               brightnessctl-0.5.1-2  bspwm-0.9.10-3
               calcuse-4.8.0-2  dunst-1.9.2-1  feh-3.10-1
               imagemagick-7.1.1.7-1  jq-1.6-4  kitty-0.28.1-1
               maim-5.7.4-5  playerctl-2.4.1-3  rofi-1.7.5-1
               sxhkd-0.6.2-3  xclip-0.13-3

Total Download Size:  10.76 MiB
Total Installed Size: 65.96 MiB
Net Upgrade Size:    9.19 MiB

:: Proceed with installation? [Y/n] Y
:: Retrieving packages...
imagemagick-7.1....      4.2 MiB  2.85 MiB/s 00:01 [#####-----]  51%
Total ( 0/18)      4.2 MiB  2.85 MiB/s 00:02 [##-----]  39%
```

Repository of the AWESOME theme that we will be using, created by **RXYHN**.
<https://github.com/rxyhn/tokyo>

Step 23.We install wget and 7zip.



```
[root@EntornoArch alvarogs]# pacman -S wget p7zip
warning: p7zip-1:17.05-1 is up to date -- reinstalling
resolving dependencies...
looking for conflicting packages...

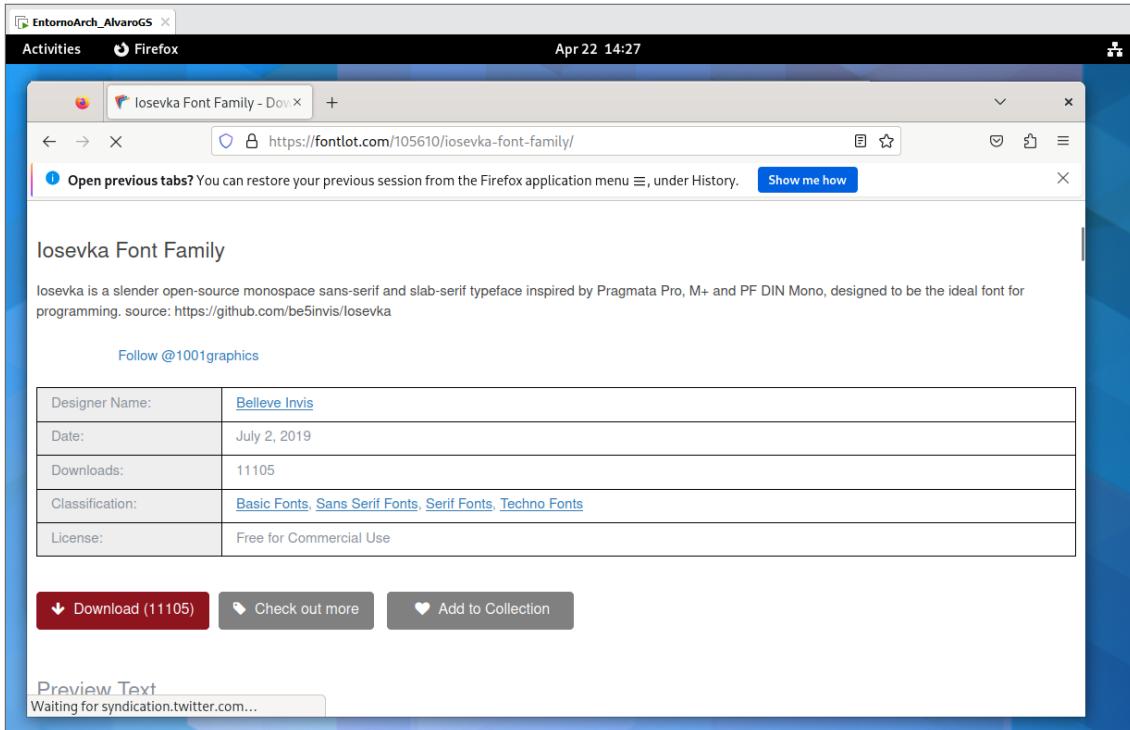
Packages (2) p7zip-1:17.05-1   wget-1.21.3-1

Total Download Size:    0.69 MiB
Total Installed Size:  13.49 MiB
Net Upgrade Size:      3.03 MiB

:: Proceed with installation? [Y/n] Y
:: Retrieving packages...
wget-1.21.3-1-x86_64          708.4 KiB  4.43 MiB/s 00:00  [#####
(2/2) checking keys in keyring           [#####
(2/2) checking package integrity        [#####
(2/2) loading package files            [#####
(2/2) checking for file conflicts       [#####
(2/2) checking available disk space    [#####
:: Processing package changes...
(1/2) installing wget                [#####
Optional dependencies for wget
    ca-certificates: HTTPS downloads [installed]
(2/2) reinstalling p7zip             [#####
:: Running post-transaction hooks...
(1/2) Arming ConditionNeedsUpdate...
(2/2) Updating the info directory file...
[root@EntornoArch alvarogs]#
```

Step 24.We access fontlot and download the IOSEVKA family.

<https://fontlot.com/105610/iosevka-font-family/>



The screenshot shows a Firefox browser window with the title "Iosevka Font Family - Dov". The address bar shows the URL <https://fontlot.com/105610/iosevka-font-family/>. The page content includes the following information:

Iosevka Font Family

Iosevka is a slender open-source monospace sans-serif and slab-serif typeface inspired by Pragmata Pro, M+ and PF DIN Mono, designed to be the ideal font for programming. source: <https://github.com/be5invis/losevka>

Follow @1001graphics

Designer Name:	Believe Invis
Date:	July 2, 2019
Downloads:	11105
Classification:	Basic Fonts, Sans Serif Fonts, Serif Fonts, Techno Fonts
License:	Free for Commercial Use

Buttons:

- Download (11105)
- Check out more
- Add to Collection

Preview Text:

Waiting for syndication.twitter.com...

Step 25.We move the compressed to our sources folder and uncompress. Then we delete the residual files.

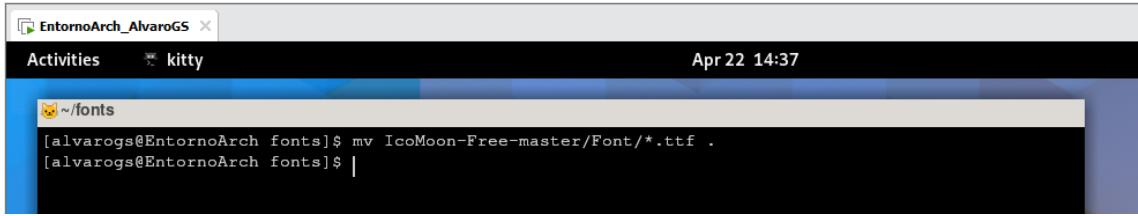
The image shows two terminal windows side-by-side. The left window (Apr 22 14:29) shows the command: [alvarogs@EntornoArch fonts]\$ mv ..Downloads/iosevka-font-family-1682148521-0.zip fuentes.zip [alvarogs@EntornoArch fonts]\$ unzip fuentes.zip. The right window (Apr 22 14:30) shows the command: [alvarogs@EntornoArch fonts]\$ rm -rf fuentes.zip info.txt [alvarogs@EntornoArch fonts]\$

Step 26.We access IcoMoon and download the free font. We do the same as with the previous one.

<https://icomoon.io/icons-icomoon.html>

The image shows a screenshot of the IcoMoon website. It features three main sections: 'Free Version', 'Essential Pack', and 'Ultimate Pack'. Each section has a list of features and a 'Preview' or 'Purchase' button. The 'Free Version' section includes icons for 490 icons, handcrafted on a 16x16 grid, installable ligature font (TTF), optimized for icon font use, vector formats (SVG, PDF, EPS, Ai, PSD), Photoshop shapes (CSH), and dual tone icons. It also mentions free updates, a friendly license, and a \$39 refund policy. The 'Essential Pack' and 'Ultimate Pack' sections have similar lists with more icons (950 and 1600 respectively) and additional features like dual tone icons and friendly licenses.

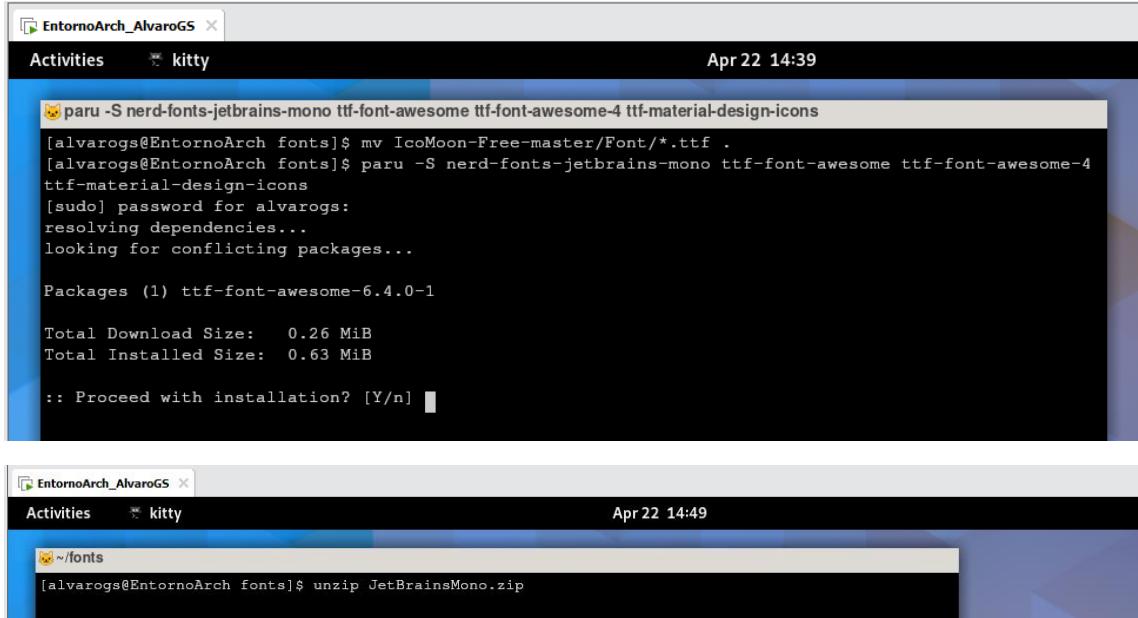
The image shows a terminal window (Apr 22 14:35) with the command: [alvarogs@EntornoArch fonts]\$ mv ..Downloads/IcoMoon-Free-master.zip icomoon.zip [alvarogs@EntornoArch fonts]\$ unzip icomoon.zip



```
[alvarogs@EntornoArch fonts]$ mv IcoMoon-Free-master/Font/*.ttf .
[alvarogs@EntornoArch fonts]$ |
```

Step 27. We installed the following font packages. JetBrainsMono can be downloaded from the following GitHub repo.

<https://github.com/ryanoasis/nerd-fonts/releases/download/v2.3.3/JetBrainsMono.zip>



```
paru -S nerd-fonts-jetbrains-mono ttf-font-awesome ttf-font-awesome-4 ttf-material-design-icons
[alvarogs@EntornoArch fonts]$ mv IcoMoon-Free-master/Font/*.ttf .
[alvarogs@EntornoArch fonts]$ paru -S nerd-fonts-jetbrains-mono ttf-font-awesome ttf-font-awesome-4
ttf-material-design-icons
[sudo] password for alvarogs:
resolving dependencies...
looking for conflicting packages...

Packages (1) ttf-font-awesome-6.4.0-1

Total Download Size: 0.26 MiB
Total Installed Size: 0.63 MiB

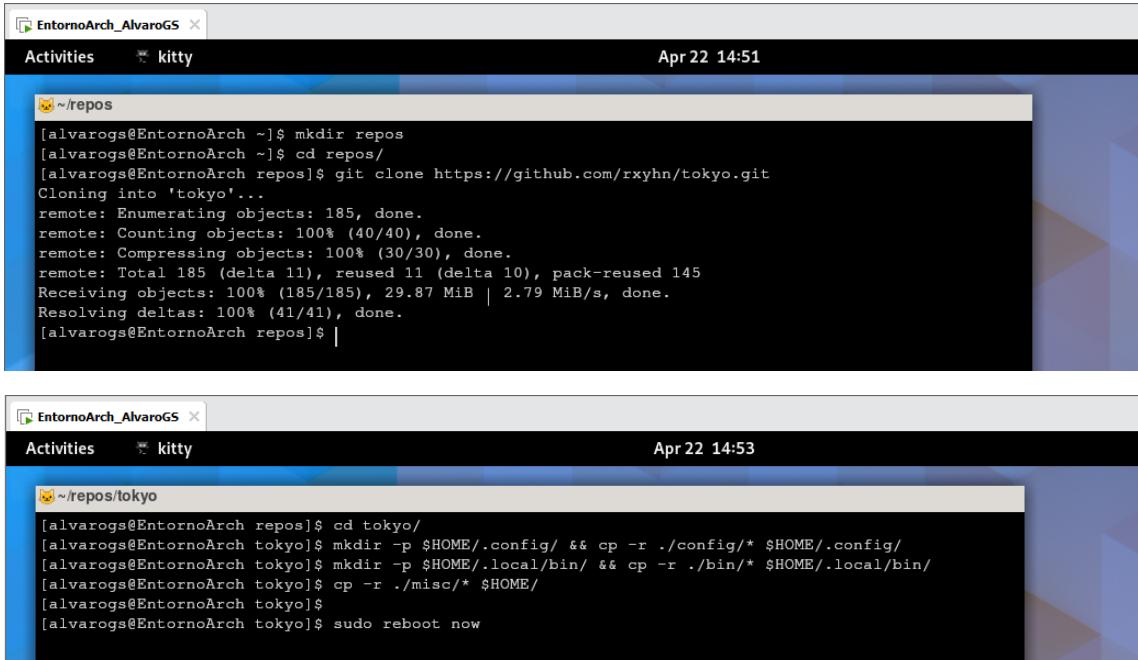
:: Proceed with installation? [Y/n] |
```



```
[alvarogs@EntornoArch fonts]$ unzip JetBrainsMono.zip
```

Step 28. We create a repos repository, train and clone the following theme for BSPWM:

<https://github.com/rxhynn/tokyo.git>



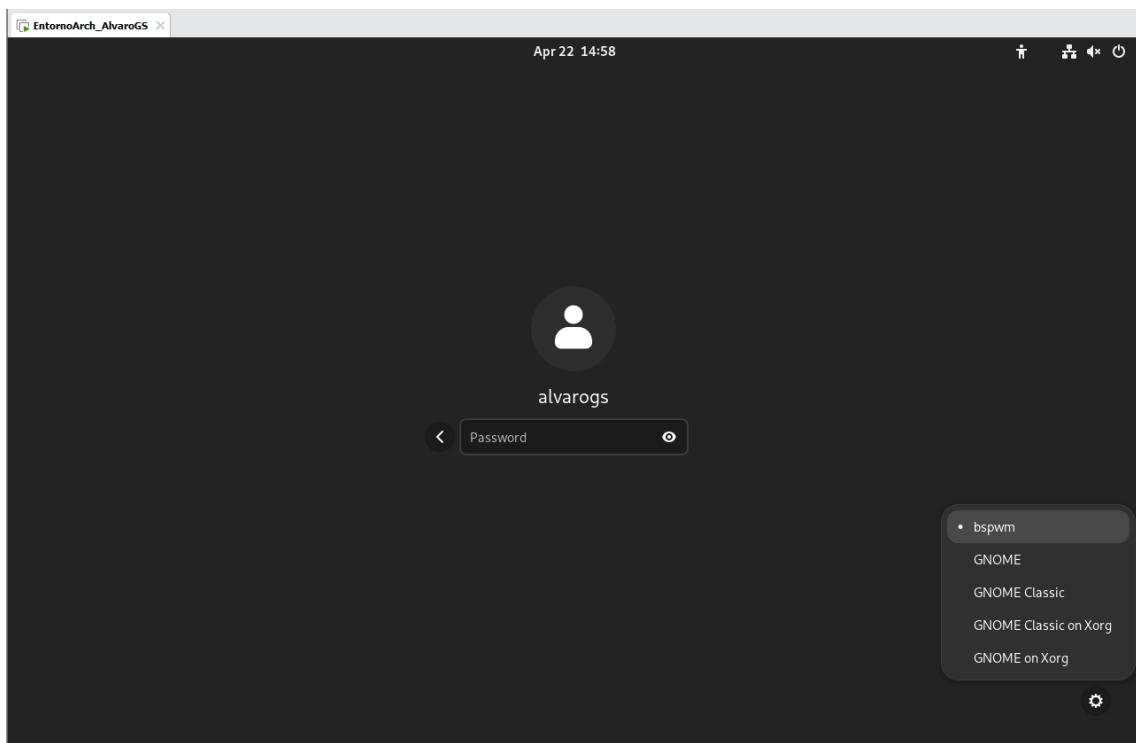
```
mkdir repos
cd repos/
git clone https://github.com/rxhynn/tokyo.git
Cloning into 'tokyo'...
remote: Enumerating objects: 185, done.
remote: Counting objects: 100% (40/40), done.
remote: Compressing objects: 100% (30/30), done.
remote: Total 185 (delta 11), reused 11 (delta 10), pack-reused 145
Receiving objects: 100% (185/185), 29.87 MiB | 2.79 MiB/s, done.
Resolving deltas: 100% (41/41), done.
[alvarogs@EntornoArch repos]$ |
```



```
cd tokyo/
mkdir -p $HOME/.config/ && cp -r ./config/* $HOME/.config/
mkdir -p $HOME/.local/bin/ && cp -r ./bin/* $HOME/.local/bin/
cp -r ./misc/* $HOME/
sudo reboot now
```

3 Configuration from BSPWM

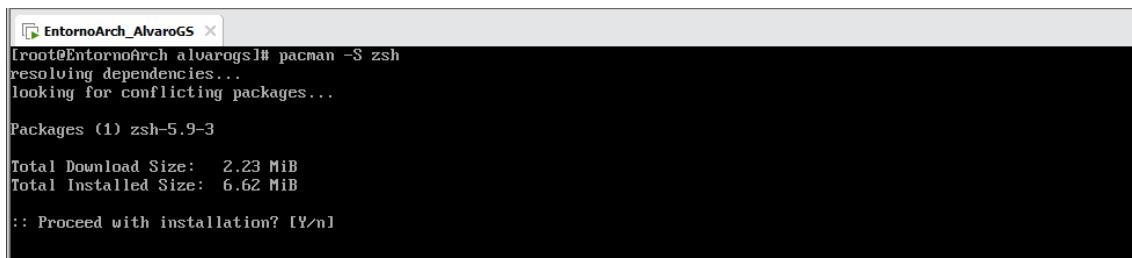
Step 29.We choose the BSPWM interface.



Step 30.We open a secondary TTY (CTRL+ALT+F4)



Step 31.We install the ZSH and reboot.



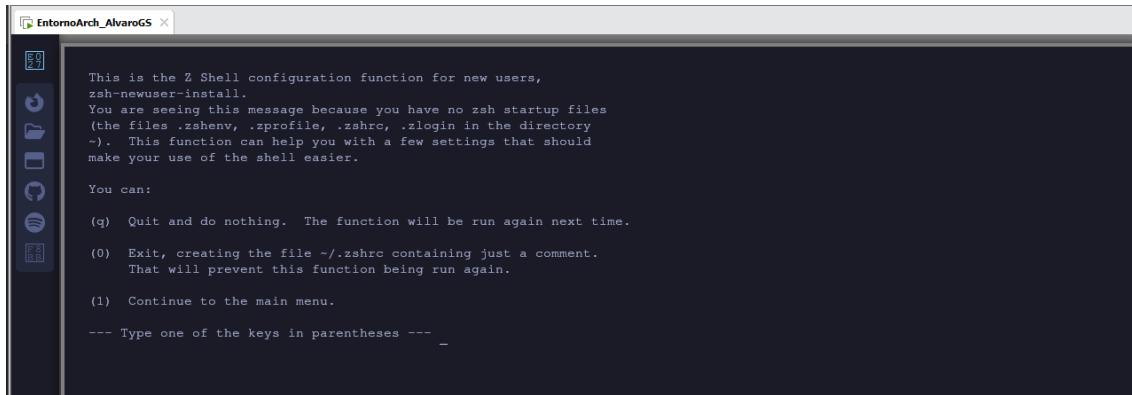
```
[root@EntornoArch alvaroGS]# pacman -S zsh
resolving dependencies...
looking for conflicting packages...

Packages (1) zsh-5.9-3

Total Download Size: 2.23 MiB
Total Installed Size: 6.62 MiB

:: Proceed with installation? [Y/n]
```

Step 32.When opening the terminal (SUPER+ENTER) we press Q and execute the following command to change keyboard language temporarily.

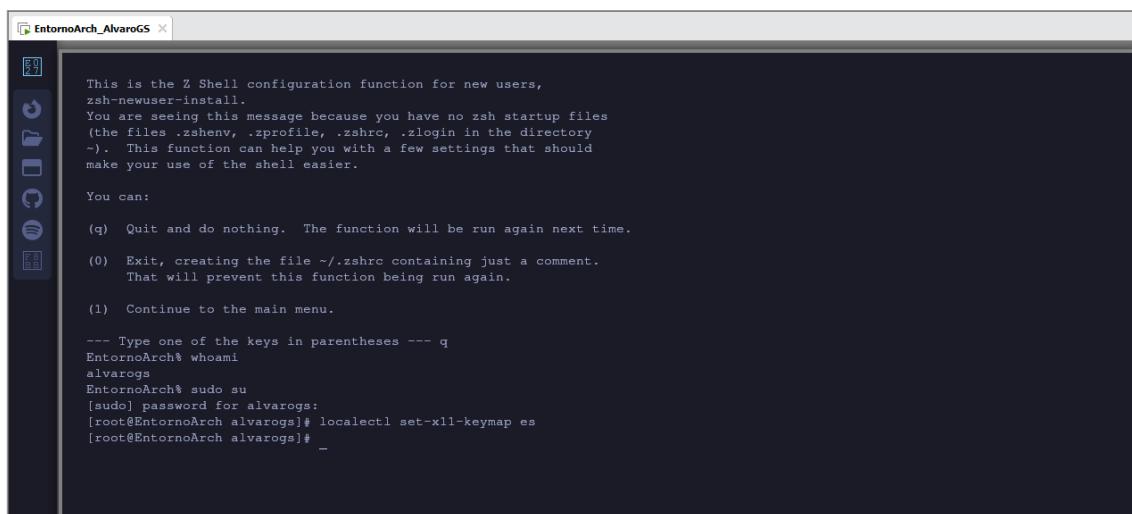


```
This is the Z Shell configuration function for new users,
zsh-newuser-install.
You are seeing this message because you have no zsh startup files
(the files .zshenv, .zprofile, .zshrc, .zlogin in the directory
~). This function can help you with a few settings that should
make your use of the shell easier.

You can:

(q) Quit and do nothing. The function will be run again next time.
(0) Exit, creating the file ~/.zshrc containing just a comment.
    That will prevent this function being run again.
(1) Continue to the main menu.

--- Type one of the keys in parentheses --- _
```



```
This is the Z Shell configuration function for new users,
zsh-newuser-install.
You are seeing this message because you have no zsh startup files
(the files .zshenv, .zprofile, .zshrc, .zlogin in the directory
~). This function can help you with a few settings that should
make your use of the shell easier.

You can:

(q) Quit and do nothing. The function will be run again next time.
(0) Exit, creating the file ~/.zshrc containing just a comment.
    That will prevent this function being run again.
(1) Continue to the main menu.

--- Type one of the keys in parentheses --- q
EntornoArch% whoami
alvaroGS
EntornoArch% sudo su
[sudo] password for alvaroGS:
[root@EntornoArch alvaroGS]# localectl set-x11-keymap es
[root@EntornoArch alvaroGS]# _
```

Step 33. We open Firefox from the Applications Menu (SUPER+M), we install a couple of useful extensions and we take the opportunity to configure it.

The screenshot shows the Firefox Add-ons page for the "Dark Reader" extension. The extension is marked as "Recommended". It has 1,000,927 users, 4,961 reviews, and a rating of 4.6 Stars. The description states: "Dark mode for every website. Take care of your eyes, use dark theme for night and daily browsing." A large "Add to Firefox" button is visible. Below the main card, there are sections for "Rate your experience" and "Screenshots".

Rating	Count
5★	3,904
4★	519
3★	179
2★	123
1★	236

The screenshot shows the Firefox Add-ons page for the "Cookie-Editor" extension. It has 50.315 users, 121 comments, and a rating of 4.3 estrellas. A warning message states: "⚠ This add-on is not actively monitored for security by Mozilla. Make sure you trust it before installing." A "Saber más" button is present. The description says: "Cookie-Editor lets you efficiently create, edit and delete a cookie for the current tab. Perfect for developing, quickly testing or even manually managing your cookies for your privacy." A large "Agregar a Firefox" button is visible. Below the main card, there are sections for "Califica tu experiencia" and "Capturas de pantalla".

Rating	Count
5★	88
4★	12
3★	2
2★	4
1★	15

EntornoArch_AlvaroGS

Dark Reader – Get this Ext. × Cookie-Editor – Consigue × Wappalyzer – Consigue × +

https://addons.mozilla.org/es/firefox/addon/wappalyzer/

Firefox Add-ons Blog Taller de extensiones Central del desarrollador Log in

Firefox Browser ADD-ONS Extensiones Temas Más... ▾

Buscar complementos

Wappalyzer

108.940 Usuarios 439 Comentarios 4,4 estrellas

5 ★ 321
4 ★ 46
3 ★ 25
2 ★ 15
1 ★ 32

This add-on is not actively monitored for security by Mozilla. Make sure you trust it before installing.

Saber más

Identify technologies on websites Agregar a Firefox

Califica tu experiencia

¿Cuál es tu experiencia con Wappalyzer?

Capturas de pantalla

15 20

EntornoArch_AlvaroGS

Dark Reader – Get this Ext. × HackTools – Get this Ext. × +

https://addons.mozilla.org/en-US/firefox/addon/hacktools/?utm_source=addons.mozilla.org&utm

Firefox Add-ons Blog Extension Workshop Developer Hub Log in

Firefox Browser ADD-ONS Extensions Themes More... ▾

Find add-ons

HackTools

4,250 Users 32 Reviews 4.9 Stars

5 ★ 30
4 ★ 0
3 ★ 2
2 ★ 0
1 ★ 0

This add-on is not actively monitored for security by Mozilla. Make sure you trust it before installing.

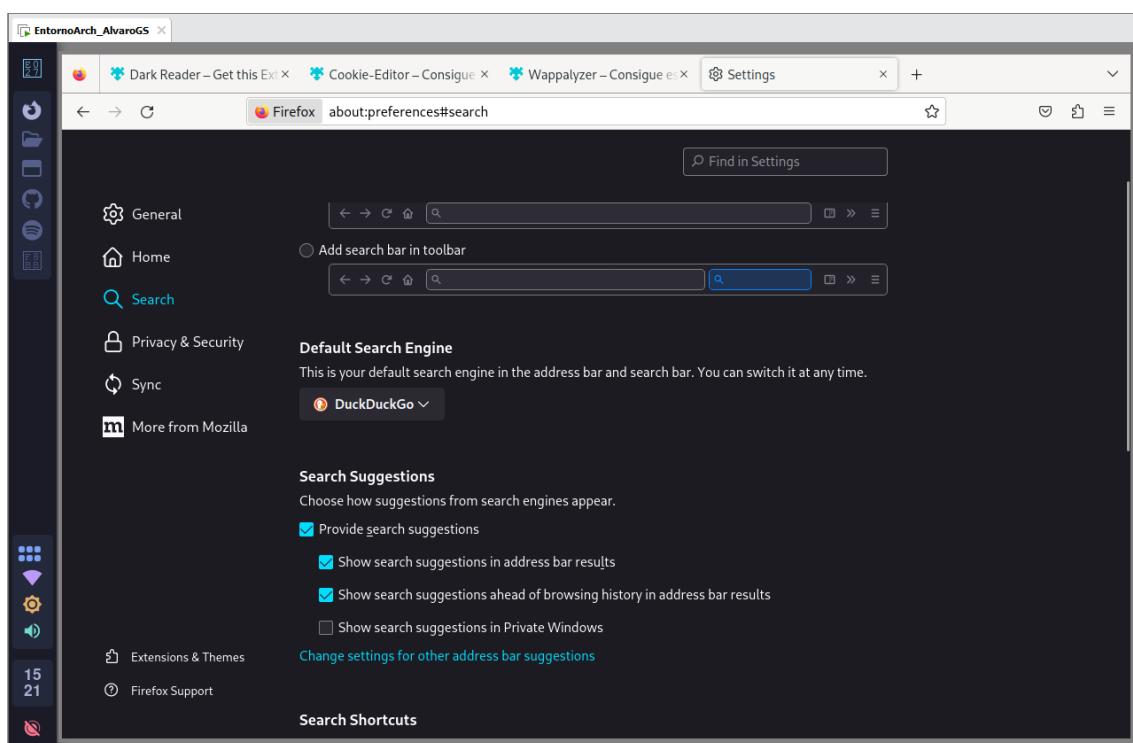
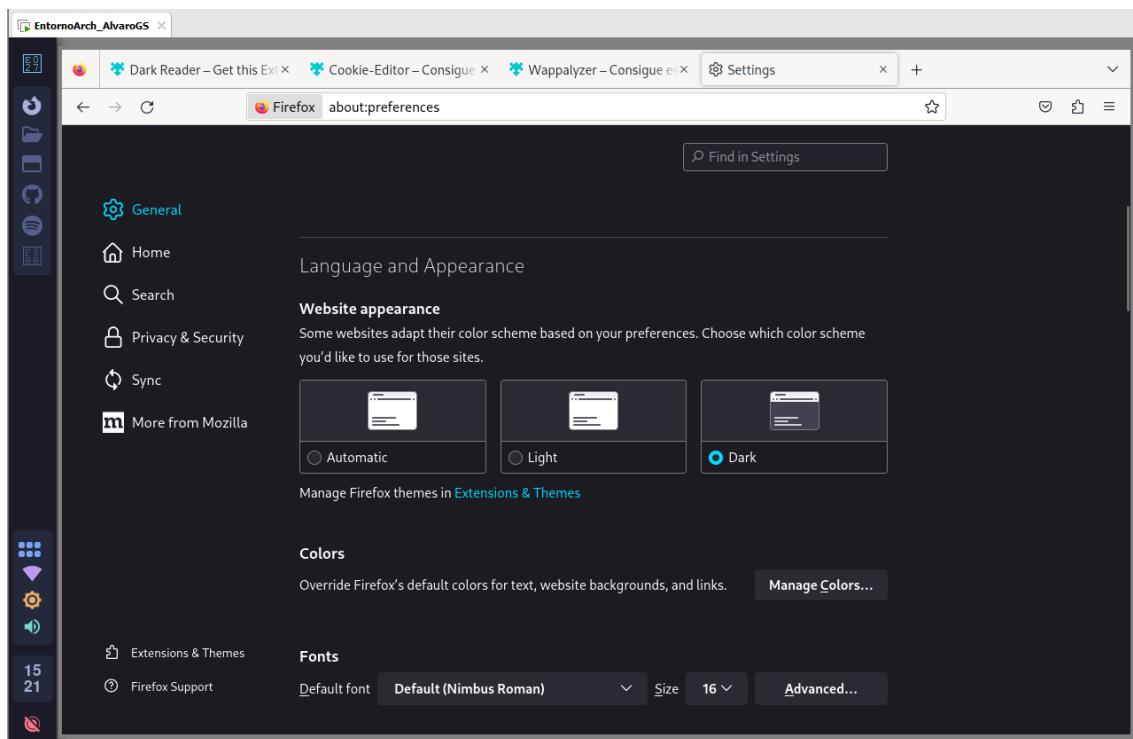
Learn more

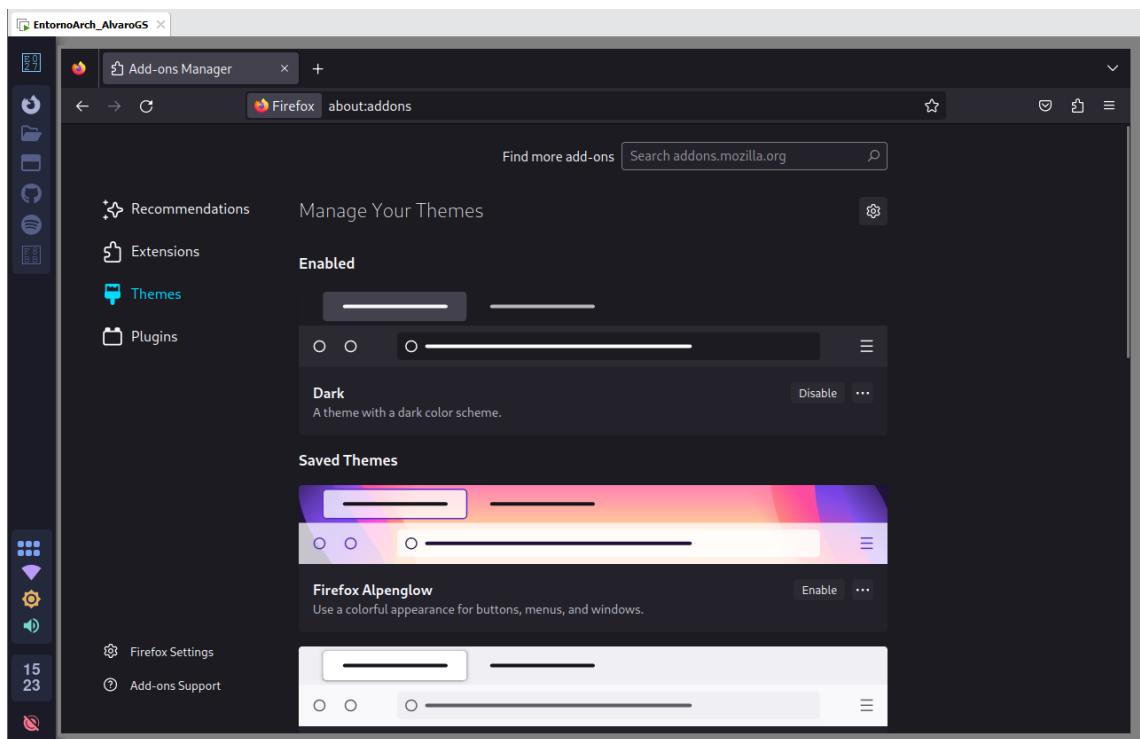
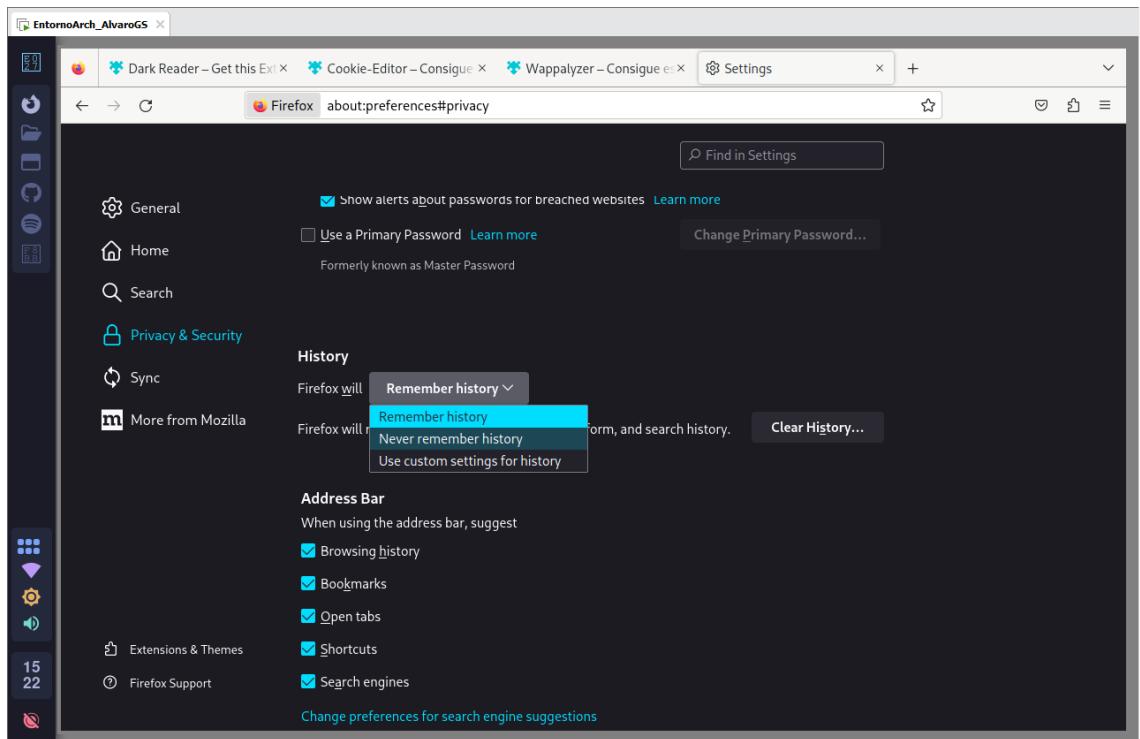
Add to Firefox

Hacktools, is a web extension facilitating your web application penetration tests, it includes cheat sheets as well as all the tools used during a test such as XSS payloads, Reverse shells to test your web application.

Rate your experience Screenshots

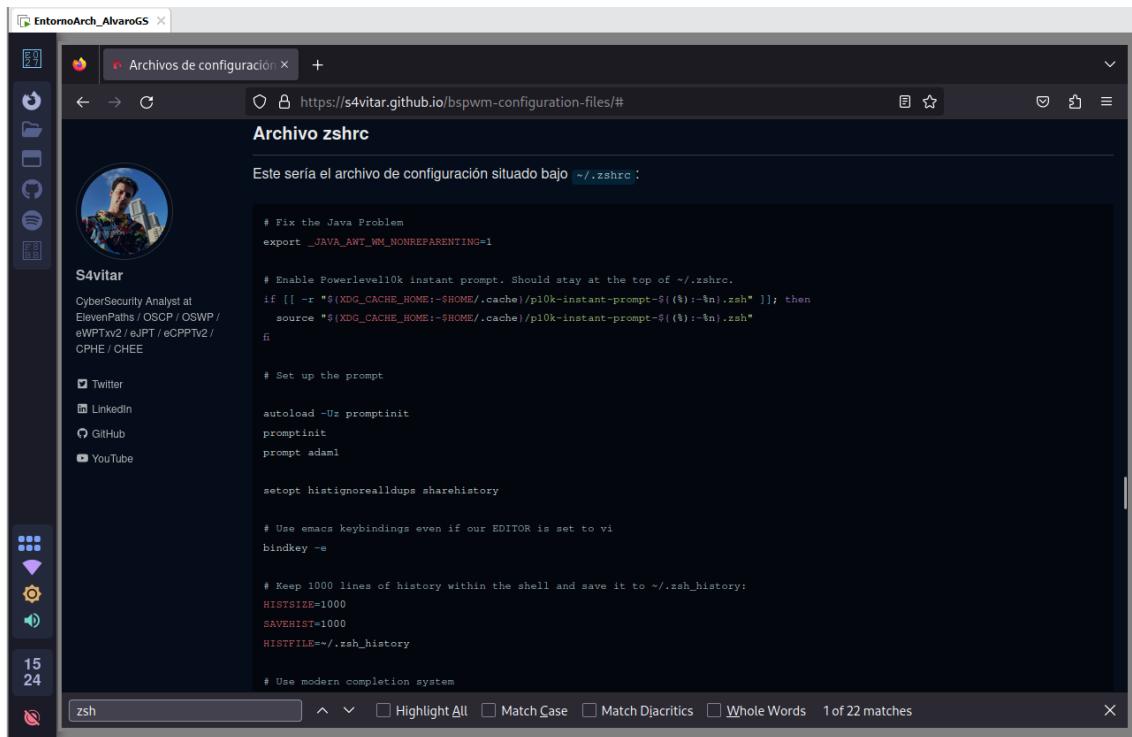
15 23





Step 34. We make use of the S4vitar ZSHRC file. We will copy it in the .zshrc of our home.

<https://s4vitar.github.io/bspwm-configuration-files/#>



The screenshot shows a terminal window titled "EntornoArch_AlvaroGS" with the command "GNU nano 7.2" running. The file path "/home/alvarogs/.zshrc" is shown in the title bar. The terminal content is identical to the one in the browser, containing the zsh configuration file. The bottom of the terminal window shows the nano editor's status bar with various keyboard shortcuts for file operations like Help, Exit, Write Out, Read File, Where Is, Replace, Cut, Paste, Execute, Justify, Location, Go To Line, Undo, Redo, Set Mark, and Copy.

```
# Fix the Java Problem
export _JAVA_AWT_WM_NONREPARENTING=1

# Enable Powerlevel10k instant prompt. Should stay at the top of ~/.zshrc.
if [[ -r "$XDG_CACHE_HOME:-$HOME/.cache)/p10k-instant-prompt-$((%:-n)).zsh" ]]; then
    source "$XDG_CACHE_HOME:-$HOME/.cache)/p10k-instant-prompt-$((%:-n)).zsh"
fi

# Set up the prompt

autoload -Uz promptinit
promptinit
prompt adam1

setopt histignorealldups sharehistory

# Use emacs keybindings even if our EDITOR is set to vi
bindkey -e

# Keep 1000 lines of history within the shell and save it to ~/.zsh_history:
HISTSIZE=1000
SAVEHIST=1000
HISTFILE=-./.zsh_history

# Use modern completion system
autoload -Uz compinit
compinit

zstyle ':completion:*' auto-description 'specify: %d'
zstyle ':completion:' completer _expand _complete _correct _approximate
zstyle ':completion:' format 'Completing %d'
zstyle ':completion:' group-name ''
zstyle ':completion:' menu select=2
eval "$(dircolors -b)"
zstyle ':completion::default' list-colors ${(%.:.)LS_COLORS}
```

Step 35.We install the following 3 packages.

```
EntornoArch_AlvaroGS ×

[ 1 ] ~ % paru -S zsh-syntax-highlighting zsh-autosuggestions locate
[sudo] password for alvaroogs:
warning: zsh-syntax-highlighting-0.7.1-1 is up to date -- reinstalling
warning: zsh-autosuggestions-0.7.0-2 is up to date -- reinstalling
resolving dependencies...
looking for conflicting packages...

Packages (4) liburing-2.3-1  plocate-1.1.18-1  zsh-autosuggestions-0.7.0-2  zsh-syntax-highlighting-0.7.1-1

Total Download Size:  0.27 MiB
Total Installed Size:  0.91 MiB
Net Upgrade Size:  0.73 MiB

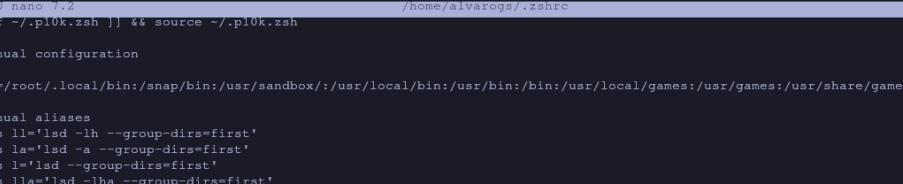
:: Proceed with installation? [Y/n]
```

Step 36.We use locate to locate the newly downloaded zsh files and configure them in zshrc.

```
EntornoArch_AlvaroGS ✘

[ENTORNOS] [ARCHITECTURE] [HOME] [LOGOUT]

/home/alvaroogs/.zshrc:source:46: no such file or directory: /home/s4vitar/powerlevel10k/powerlevel10k.zsh-theme
/home/alvaroogs/.zshrc:source:66: no such file or directory: /usr/share/zsh-syntax-highlighting/zsh-syntax-highlighting.zsh
/home/alvaroogs/.zshrc:source:67: no such file or directory: /usr/share/zsh-autosuggestions/zsh-autosuggestions.zsh
/home/alvaroogs/.zshrc:source:68: no such file or directory: /usr/share/zsh-sudo/sudo.plugin.zsh
[REPO] ~ % locate zsh-syntax-highlighting.zsh
/usr/share/zsh/plugins/zsh-syntax-highlighting/zsh-syntax-highlighting.zsh
[REPO] ~ % locate zsh-autosuggestions.zsh
/usr/share/zsh/plugins/zsh-autosuggestions/zsh-autosuggestions.zsh
[REPO] ~ % nano ~/.zshrc
Completing file
.zsh_history .zshrc
```



```
GNU nano 7.2                                     /home/alvarogs/.zshrc                                         Modified

[ -f ~/.p10k.zsh ] && source ~/.p10k.zsh

# Manual configuration

PATH=/root/.local/bin:/snap/bin:/usr/sandbox:/usr/local/bin:/usr/bin:/bin:/usr/local/games:/usr/games:/usr/share/games:/usr/local/games

# Manual aliases
alias ll='lsd -lh --group-dirs=first'
alias la='lsd -a --group-dirs=first'
alias l='lsd --group-dirs=first'
alias lla='lsd -lha --group-dirs=first'
alias ls='lsd --group-dirs=first'
alias cat='bat'

[ -f ~/.fzf.zsh ] && source ~/.fzf.zsh

# Plugins
source /usr/share/zsh/plugins/zsh-syntax-highlighting/zsh-syntax-highlighting.zsh
source /usr/share/zsh/plugins/zsh-autosuggestions/zsh-autosuggestions.zsh
source /usr/share/zsh-sudo/sudo.plugin.zsh

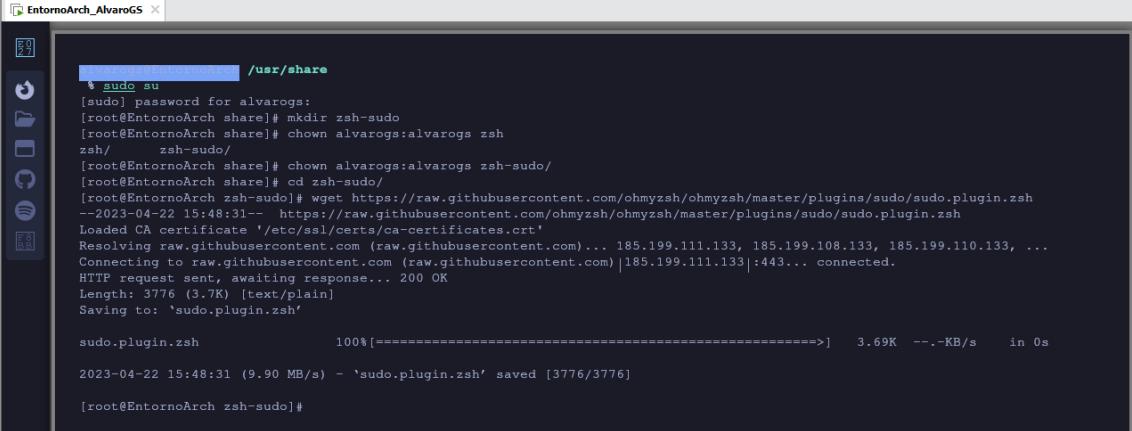
# Fonctions
function mkt() {
    mkdir {nmap,content,exploits,scripts}
}
```

```
EntornoArch_AlvaroGS ✘

[?] ~ % cat /etc/passwd | grep "test"
```

Step 37. Download the sudo plugin for ZSH. This will allow us to put "sudo" in the lines in a much faster way.

<https://raw.githubusercontent.com/ohmyzsh/ohmyzsh/master/plugins/sudo/sudo.plugin.zsh>



```
EntornoArch_AlvaroGS ×

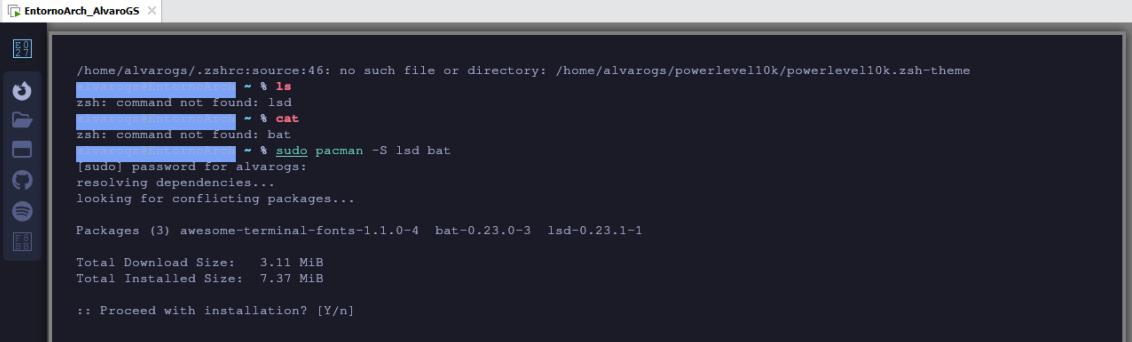
[sudo] password for alvarogs:
[root@EntornoArch share]# mkdir zsh-sudo
[root@EntornoArch share]# chown alvarogs:alvarogs zsh
zsh/
zsh-sudo/
[root@EntornoArch share]# chown alvarogs:alvarogs zsh-sudo/
[root@EntornoArch share]# cd zsh-sudo/
[root@EntornoArch zsh-sudo]# wget https://raw.githubusercontent.com/ohmyzsh/ohmyzsh/master/plugins/sudo/sudo.plugin.zsh
--2023-04-22 15:48:31-- https://raw.githubusercontent.com/ohmyzsh/ohmyzsh/master/plugins/sudo/sudo.plugin.zsh
Loaded CA certificate '/etc/ssl/certs/ca-certificates.crt'
Resolving raw.githubusercontent.com (raw.githubusercontent.com)... 185.199.111.133, 185.199.108.133, 185.199.110.133, ...
Connecting to raw.githubusercontent.com (raw.githubusercontent.com)|185.199.111.133|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 3776 (3.7K) [text/plain]
Saving to: 'sudo.plugin.zsh'

sudo.plugin.zsh          100%[=====] 3.69K --.-KB/s   in 0s

2023-04-22 15:48:31 (9.90 MB/s) - 'sudo.plugin.zsh' saved [3776/3776]

[root@EntornoArch zsh-sudo]#
```

Step 38. We installed LSD and BAT for a more visual interface.



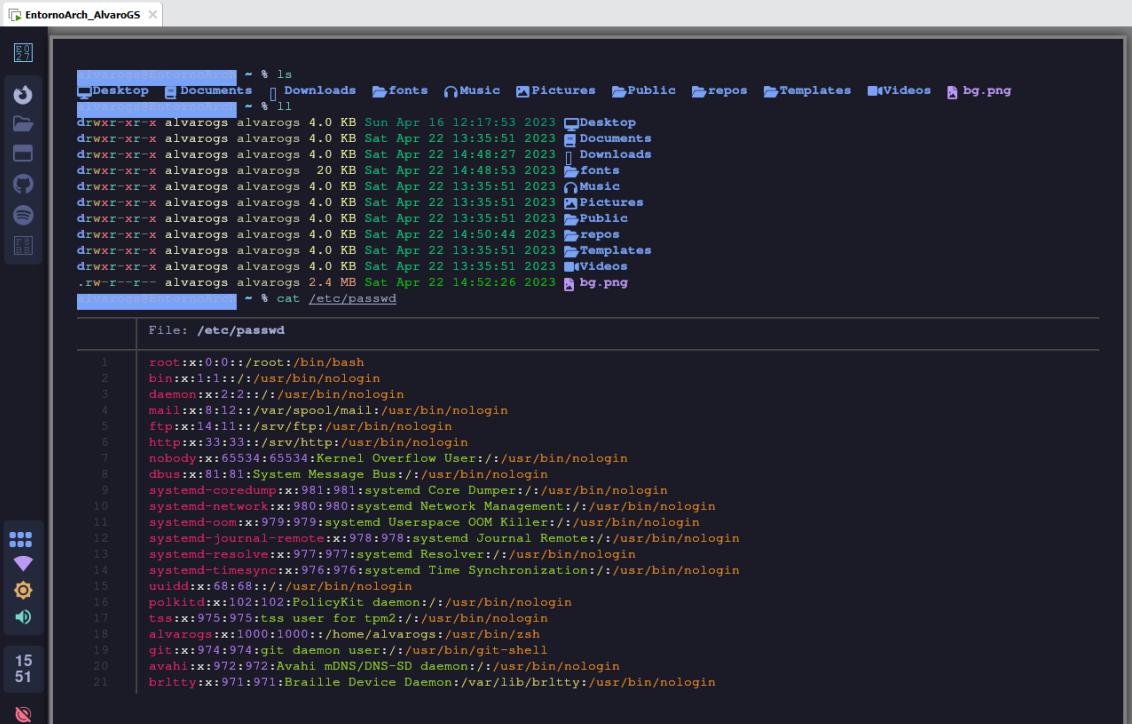
```
EntornoArch_AlvaroGS ×

/home/alvarogs/.zshrc:source:46: no such file or directory: /home/alvarogs/powerlevel10k/powerlevel10k.zsh-theme
[~] % ls
zsh: command not found: lsd
[~] % cat
zsh: command not found: bat
[~] % sudo pacman -S lsd bat
[sudo] password for alvarogs:
resolving dependencies...
looking for conflicting packages...

Packages (3) awesome-terminal-fonts-1.1.0-4  bat-0.23.0-3  lsd-0.23.1-1

Total Download Size: 3.11 MiB
Total Installed Size: 7.37 MiB

:: Proceed with installation? [Y/n]
```



```
EntornoArch_AlvaroGS ×

[~] % ls
Desktop  Documents  Downloads  fonts  Music  Pictures  Public  repos  Templates  Videos  bg.png
[~] % ll
drwxr-xr-x  alvarogs  alvarogs  4.0 KB  Sun Apr 16 12:17:53 2023 Desktop
drwxr-xr-x  alvarogs  alvarogs  4.0 KB  Sat Apr 22 13:35:51 2023 Documents
drwxr-xr-x  alvarogs  alvarogs  4.0 KB  Sat Apr 22 14:48:27 2023 Downloads
drwxr-xr-x  alvarogs  alvarogs  20 KB   Sat Apr 22 14:48:53 2023 fonts
drwxr-xr-x  alvarogs  alvarogs  4.0 KB  Sat Apr 22 13:35:51 2023 Music
drwxr-xr-x  alvarogs  alvarogs  4.0 KB  Sat Apr 22 13:35:51 2023 Pictures
drwxr-xr-x  alvarogs  alvarogs  4.0 KB  Sat Apr 22 13:35:51 2023 Public
drwxr-xr-x  alvarogs  alvarogs  4.0 KB  Sat Apr 22 14:50:44 2023 repos
drwxr-xr-x  alvarogs  alvarogs  4.0 KB  Sat Apr 22 13:35:51 2023 Templates
drwxr-xr-x  alvarogs  alvarogs  4.0 KB  Sat Apr 22 13:35:51 2023 Videos
.rw-r--r--  alvarogs  alvarogs  2.4 MB   Sat Apr 22 14:52:26 2023 bg.png

[~] % cat /etc/passwd
File: /etc/passwd

1  root:x:0:0::/root:/bin/bash
2  bin:x:1::1:::/usr/bin/nologin
3  daemon:x:2:2:::/usr/bin/nologin
4  mail:x:8:12::/var/spool/mail:/usr/bin/nologin
5  ftp:x:14:11::/srv/ftp:/usr/bin/nologin
6  http:x:33:33::/srv/http:/usr/bin/nologin
7  nobody:x:65534:65534:Kernel Overflow User:/:/usr/bin/nologin
8  dbus:x:81:81:System Message Bus:/:/usr/bin/nologin
9  systemd-coresdump:x:981:981:systemd Core Dumper:/:/usr/bin/nologin
10  systemd-network:x:980:980:systemd Network Management:/:/usr/bin/nologin
11  systemd-ooom:x:979:979:systemd Userspace OOM Killer:/:/usr/bin/nologin
12  systemd-journal-remote:x:978:978:systemd Journal Remote:/:/usr/bin/nologin
13  systemd-resolve:x:977:977:systemd Resolver:/:/usr/bin/nologin
14  systemd-timesync:x:976:976:systemd Time Synchronization:/:/usr/bin/nologin
15  uiddid:x:68:68:::/usr/bin/nologin
16  polkitd:x:102:102:PolicyKit daemon:/:/usr/bin/nologin
17  tss:x:975:975:tss user for tpm2:/:/usr/bin/nologin
18  alvarogs:x:1000:1000:/home/alvarogs:/usr/bin/zsh
19  git:x:974:974:git daemon user:/:/usr/bin/git-shell
20  avahi:x:972:972:Avahi mDNS/DNS-SD daemon:/:/usr/bin/nologin
21  brltty:x:971:971:Braille Device Daemon:/var/lib/brltty:/usr/bin/nologin
```

Step 39. We install Scrub.

```
[root@alvaro ~] ~ % paru -S scrub
:: Resolving dependencies...
:: Calculating conflicts...
:: Calculating inner conflicts...

Aur (1) scrub-2.6.1-1

:: Proceed to review? [Y/n]: _
```

Step 40. We check our base functions. MKT to create a pentest-ready directory structure, and RMK for secure file deletion.

```
[root@alvaro ~] ~ % which mkt
mkt () {
    mkdir {nmap,content,exploits,scripts}
}
[root@alvaro ~] ~ % which rmk
rmk () {
    scrub -p dod $1
    shred -zun 10 -v $1
}
[root@alvaro ~] ~ %
```

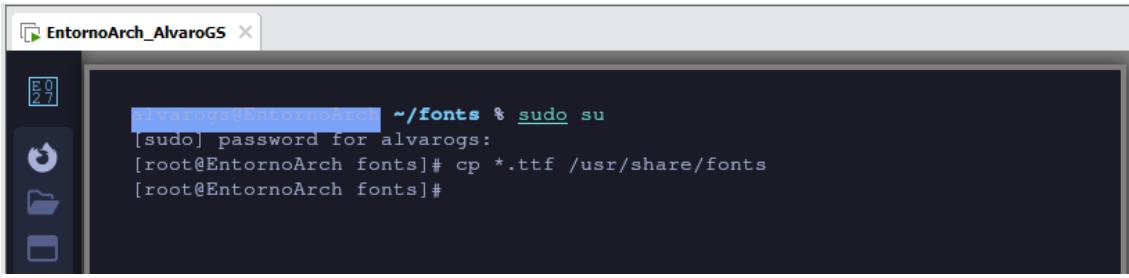
Step 41. We download HackNerdFont from the official page.

<https://www.nerdfonts.com/font-downloads>

```
[root@alvaro ~] ~/Fonts % mv ./Downloads/Hack.zip .
~/Fonts %
```

The browser window displays the Nerd Fonts website at <https://www.nerdfonts.com/font-downloads>. The 'Hack Nerd Font' section is highlighted, showing a preview of the font's characters and a green 'Download' button.

Step 42. We unzip the zip in our sources folder, and copy all the .ttf from our folder to the system fonts.

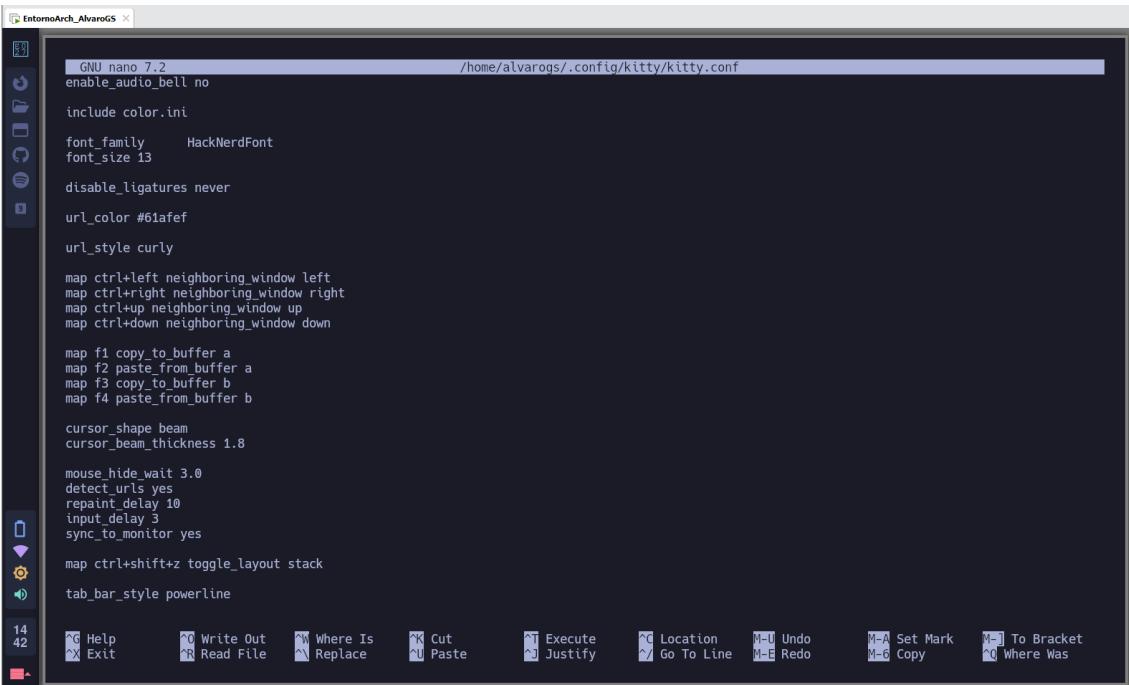


```
alvaro@entornoarch ~ /fonts % sudo su
[sudo] password for alvaro:
[root@EntornoArch fonts]# cp *.ttf /usr/share/fonts
[root@EntornoArch fonts]#
```

Step 43. We make use of these two files in the BSPWM theme repository and the edit as follows:

<https://github.com/rxyhn/tokyo/blob/main/config/kitty/kitty.conf>

<https://github.com/rxyhn/tokyo/blob/main/config/kitty/color.ini>



```
GNU nano 7.2                               /home/alvaro/.config/kitty/kitty.conf
enable_audio_bell no
include color.ini
font_family      HackNerdFont
font_size 13
disable_ligatures never
url_color #61aef
url_style curly
map ctrl+left neighboring_window left
map ctrl+right neighboring_window right
map ctrl+up neighboring_window up
map ctrl+down neighboring_window down
map f1 copy_to_buffer a
map f2 paste_from_buffer a
map f3 copy_to_buffer b
map f4 paste_from_buffer b
cursor_shape beam
cursor_beam_thickness 1.8
mouse_hide_wait 3.0
detect_uris yes
repaint_delay 10
input_delay 3
sync_to_monitor yes
map ctrl+shift+z toggle_layout stack
tab_bar_style powerline
```

EntornoArch_AlvaroGS

GNU nano 7.2 /home/alvaroogs/.config/kitty/kitty.conf

```
map ctrl+left neighboring_window left
map ctrl+right neighboring_window right
map ctrl+up neighboring_window up
map ctrl+down neighboring_window down

map f1 copy_to_buffer a
map f2 paste_from_buffer a
map f3 copy_to_buffer b
map f4 paste_from_buffer b

cursor_shape beam
cursor_beam_thickness 1.8

mouse_hide_wait 3.0
detect_urls yes
repaint_delay 10
input_delay 3
sync_to_monitor yes

map ctrl+shift+z toggle_layout stack

tab_bar_style powerline

inactive_tab_background #b8ffff
active_tab_background #3bc4d4
inactive_tab_foreground #000000
tab_bar_margin_color white

map ctrl+shift+enter new_window_with_cwd
map ctrl+shift+t new_tab_with_cwd

background_opacity 0.90

shell zsh
```

14 45

FG Help ^X Exit ^Q Write Out ^R Read File ^W Where Is ^K Cut ^U Paste ^T Execute ^G Location ^Y Go To Line M-U Undo M-E Redo M-A Set Mark M-B Copy M-Q To Bracket M-Q Where Was

EntornoArch_AlvaroGS

```
/home/alvaroogs/.zshrc:source:46: no such file or directory: /home/alvaroogs/powerlevel10k/powerlevel10k.zsh-theme ~ %
```

```
/home/alvaroogs/.zshrc:source:46: no such file or directory: /home/alvaroogs/powerlevel10k/powerlevel10k.zsh-theme ~ %
```

```
/home/alvaroogs/.zshrc:source:46: no such file or directory: /home/alvaroogs/powerlevel10k/powerlevel10k.zsh-theme ~ %
```

```
/home/alvaroogs/.zshrc:source:46: no such file or directory: /home/alvaroogs/powerlevel10k/powerlevel10k.zsh-theme ~ %
```

```
/home/alvaroogs/.zshrc:source:46: no such file or directory: /home/alvaroogs/powerlevel10k/powerlevel10k.zsh-theme ~ %
```

```
/home/alvaroogs/.zshrc:source:46: no such file or directory: /home/alvaroogs/powerlevel10k/powerlevel10k.zsh-theme ~ %
```

14 40

~CTRL+SHIFT... > Testing > ~ > ~ > ~ > ~ > ~ > ~

```

GNU nano 7.2                               /home/alvarogs/.config/kitty/color.ini
cursor_shape      Underline
cursor_underline_thickness 1
window_padding_width 20

# Special
foreground #a9b1d6
background #13131c

# Black
color0 #414868
color8 #414868

# Red
color1 #f7768e
color9 #f7768e

# Green
color2 #73daca
color10 #73daca

# Yellow
color3 #e0af68
color11 #e0af68

# Blue
color4 #7aa2f7
color12 #7aa2f7

# Magenta
color5 #bb9af7
color13 #bb9af7

# Cyan
color6 #7dcfff
color14 #7dcfff


```

Terminal menu bar: EntornoArch_AlvaroGS

Toolbar icons: Help, Write Out, Where Is, Cut, Paste, Execute, Justify, Location, Undo, Set Mark, Copy, To Bracket, Exit, Read File, Replace, Go To Line, Undo, Redo.

Step 44. The same with the picom.conf file.

<https://github.com/rxyhn/tokyo/blob/main/config/picom/picom.conf>

```

GNU nano 7.2                               picom.conf
window_type = 'dock';
window_type = 'desktop';
-_GTK_FRAME_EXTENTS@:c
};

#####
#           GENERAL          #
#####

# Daemonize process. Fork to background after initialization. Causes issues with certain (badly-written) drivers.
# daemon = false

# Specify the backend to use: `xrender`, `glx`, or `xr_glx_hybrid`.
# `xrender` is the default one.
#
# backend = 'glx';
backend = "glx";

# Enable/disable VSync.
# vsync = false
vsync = false

# Enable remote control via D-Bus. See the *D-BUS API* section below for more details.

```

```

GNU nano 7.2                               picom.conf
Modified

# Do not fade on window open/close.
# no-fading-openclose = false

# Do not fade destroyed ARGB windows with WM frame. Workaround of bugs in Openbox, Fluxbox, etc.
# no-fading-destroyed-argb = false

#####
#           OPACITY          #
#####

# Opacity of inactive windows. (0.1 - 1.0, defaults to 1.0)
inactive-opacity = 1.0

# Opacity of window titlebars and borders. (0.1 - 1.0, disabled by default)
frame-opacity = 1.0

# Default opacity for dropdown menus and popup menus. (0.0 - 1.0, defaults to 1.0)
popup-opacity = 1.0

# Let inactive opacity set by -i override the '_NET_WM_OPACITY' values of windows.
# inactive-opacity-override = true
inactive-opacity-override = false;
```

```
GNU nano 7.2                                     picom.conf                                         Modified
#
# mark-overdir-focused = false
mark-overdir-focused = true;

# Try to detect windows with rounded corners and don't consider them
# shaped windows. The accuracy is not very high, unfortunately.
#
# detect-rounded-corners = false
detect-rounded-corners = true;

# Detect '_NET_WM_OPACITY' on client windows, useful for window managers
# not passing '_NET_WM_OPACITY' of client windows to frame windows.
#
# detect-client-opacity = false
detect-client-opacity = true;

# Specify refresh rate of the screen. If not specified or 0, picom will
# try detecting this with X RandR extension.
#
# refresh-rate = 60
# refresh-rate = 0

# Limit picom to repaint at most once every 1 / 'refresh rate' second to
```

```
GNU nano 7.2                                     picom.conf                                         Modified
#####
# BLUR
#####

# Parameters for background blurring, see the *BLUR* section for more information.
# blur-method = "gaussian"
# blur-size = 14
# blur-strength = 10

# Blur background of semi-transparent / ARGB windows.
# Bad in performance, with driver-dependent behavior.
# The name of the switch may change without prior notifications.
#
# blur-background = false

# Blur background of windows when the window frame is not opaque.
# Implies:
#   blur-background
# Bad in performance, with driver-dependent behavior. The name may change.
#
# blur-background-frame = false

# Use fixed blur strength rather than adjusting according to window opacity.
# blur-background-fixed = false
```

```
GNU nano 7.2                                     picom.conf                                         Modified
#
# GLX backend: Avoid using stencil buffer, useful if you don't have a stencil buffer.
# Might cause incorrect opacity when rendering transparent content (but never
# practically happened) and may not work with blur-background.
# My tests show a 15% performance boost. Recommended.
#
# glx-no-stencil = false

# GLX backend: Avoid rebinding pixmap on window damage.
# Probably could improve performance on rapid window content changes,
# but is known to break things on some drivers (LLVMpipe, xf86-video-intel, etc.).
# Recommended if it works.
#
# glx-no-rebind-pixmap = false

# Disable the use of damage information.
# This cause the whole screen to be redrawn everytime, instead of the part of the screen
# has actually changed. Potentially degrades the performance, but might fix some artifacts.
# The opposing option is use-damage
#
# no-use-damage = false
use-damage = false

# Use X Sync fence to sync clients' draw calls, to make sure all draw
# calls are finished before picom starts drawing. Needed on nvidia-drivers
# with GLX backend for some users.
```

```
GNU nano 7.2                                     picom.conf                                         Modified
#####
# CORNERS
#####

# requires: https://github.com/sdhand/compton
corner-radius = 5;
rounded-corners-exclude = [
    "#window_type = 'normal'",
    "#class_g = 'firefox'",
];
round-borders = 20;
round-borders-exclude = [
    "#class_g = 'TelegramDesktop'",
];

# Specify a list of border width rules, in the format 'PIXELS:PATTERN',
# Note we don't make any guarantee about possible conflicts with the
# border_width set by the window manager.
#
```

```
EntornoArch_AlvaroGS x
GNU nano 7.2                                     picom.conf                                         Modified
# Exclude conditions for background blur.
# blur-background-exclude = []
# blur-background-exclude = [
#   "! name=~'*',
#   "name *= 'slop',
#   "window_type = 'dock',
#   "window_type = 'desktop',
#   "_GTK_FRAME_EXTENTS@:c"
# ];

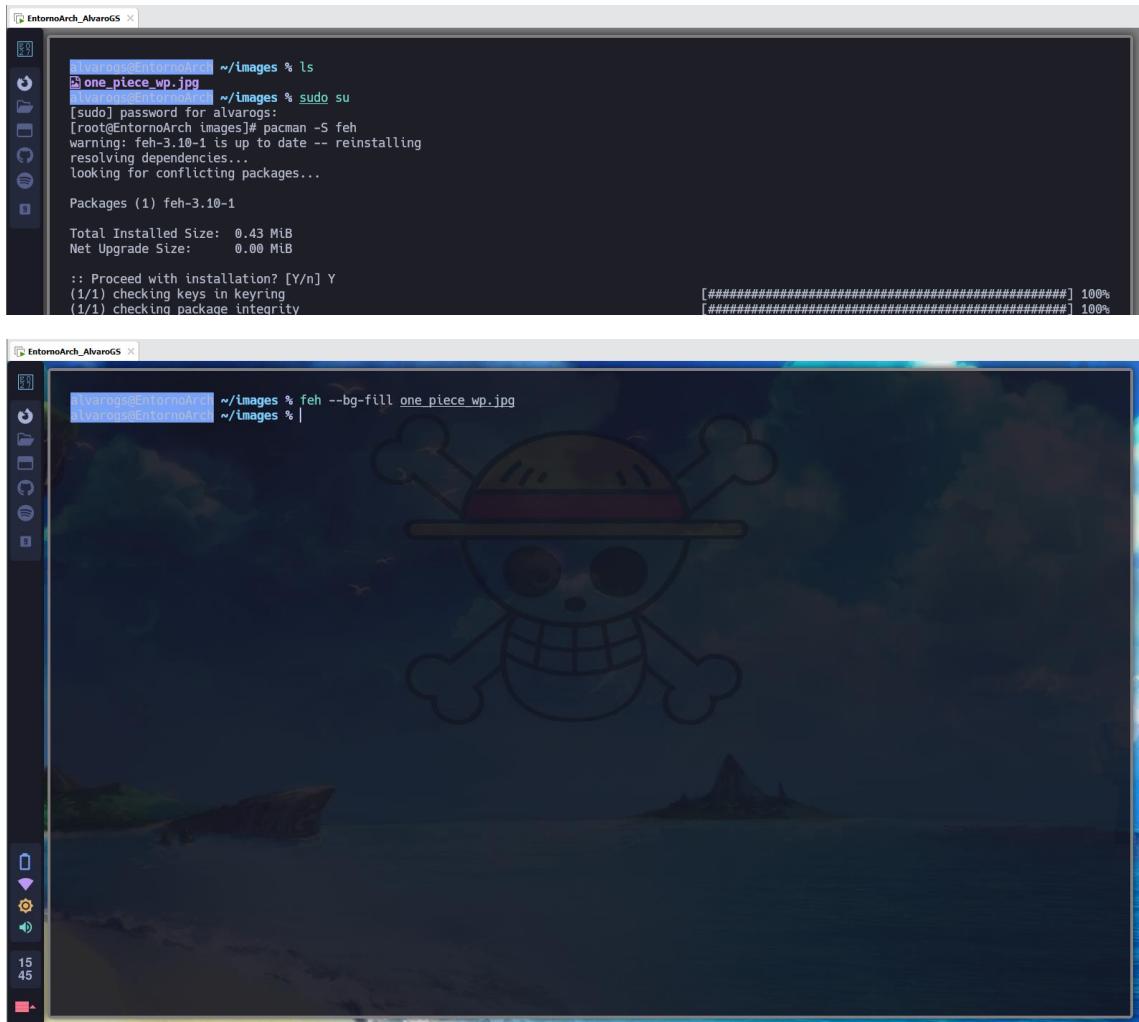
#####
# GENERAL
#
#####


# Daemonize process. Fork to background after initialization. Causes issues with certain (badly-written) drivers.
# daemon = false

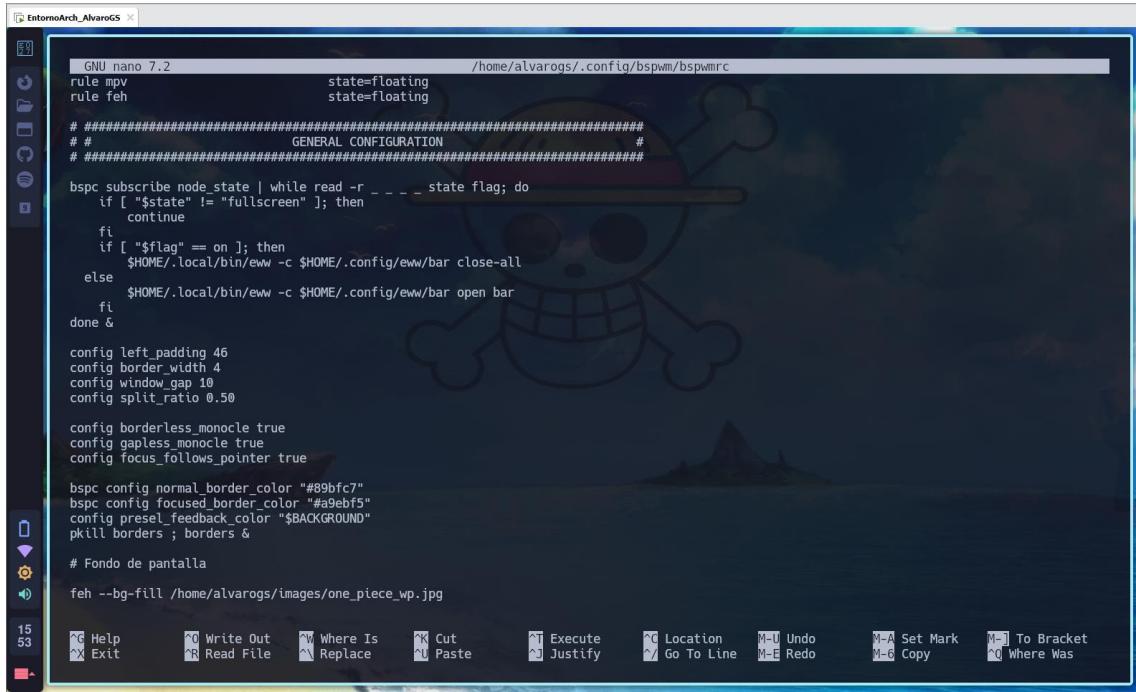
# Specify the backend to use: `xrender`, `glx`, or `xr_glx_hybrid`.
# `xrender` is the default one.
#
# backend = 'glx'
backend = "xrender";

# Enable/disable VSync.
# vsync = false
vsync = false
```

Step 45. We install FEH to configure our background.



Step 46. We set a line in our bspwmrc to set the background automatically.



```
GNU nano 7.2          /home/alvarogs/.config/bspmrc
rule mpv           state=floating
rule feh           state=floating

# ##### GENERAL CONFIGURATION #####
# # bspc subscribe node_state | while read -r --state flag; do
#   if [ "$state" != "fullscreen" ]; then
#     continue
#   fi
#   if [ "$flag" == on ]; then
#     $HOME/.local/bin/eww -c $HOME/.config/eww/bar close-all
#   else
#     $HOME/.local/bin/eww -c $HOME/.config/eww/bar open bar
#   fi
# done &

config left_padding 46
config border_width 4
config window gap 10
config split_ratio 0.50

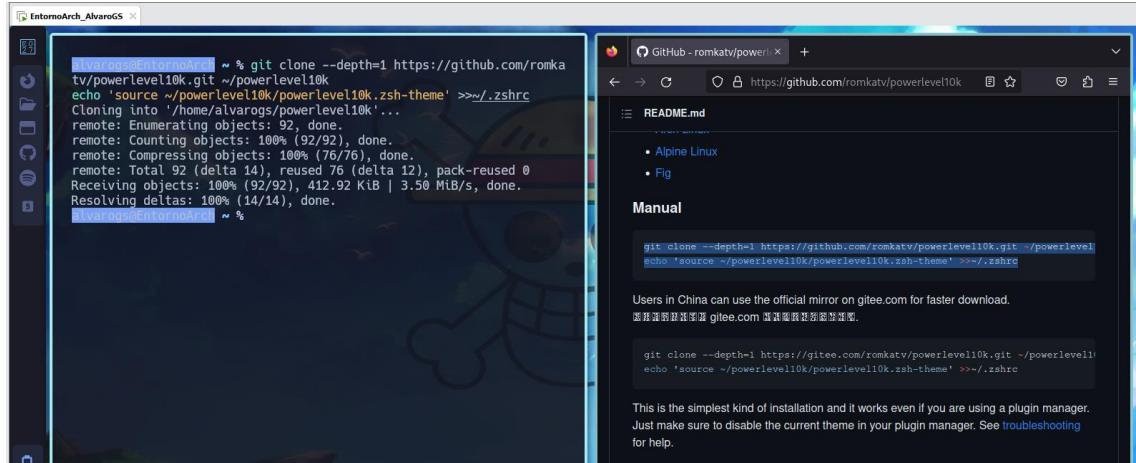
config borderless_monocle true
config gapless_monocle true
config focus_follows_pointer true

bspc config normal_border_color "#00bfc7"
bspc config focused_border_color "#9ebf5"
config presel_feedback_color "$BACKGROUND"
pkill borders ; borders &

# Fondo de pantalla
feh --bg-fill /home/alvarogs/images/one_piece_wp.jpg
```

Step 47. We installed the Powerlevel10k.

<https://github.com/romkatv/powerlevel10k>



```
alvarogs@arch ~ % git clone --depth=1 https://github.com/romkatv/powerlevel10k.git ~/powerlevel10k
echo 'source ~/powerlevel10k/powerlevel10k.zsh-theme' >> ~/.zshrc
Cloning into '/home/alvarogs/powerlevel10k'...
remote: Enumerating objects: 92, done.
remote: Counting objects: 100% (92/92), done.
remote: Compressing objects: 100% (76/76), done.
remote: Total 92 (delta 14), reused 76 (delta 12), pack-reused 0
Receiving objects: 100% (92/92), 412.92 KiB | 3.50 MiB/s, done.
Resolving deltas: 100% (14/14), done.
```

GitHub - romkatv/powerlevel10k

README.md

- Alpine Linux
- Fig

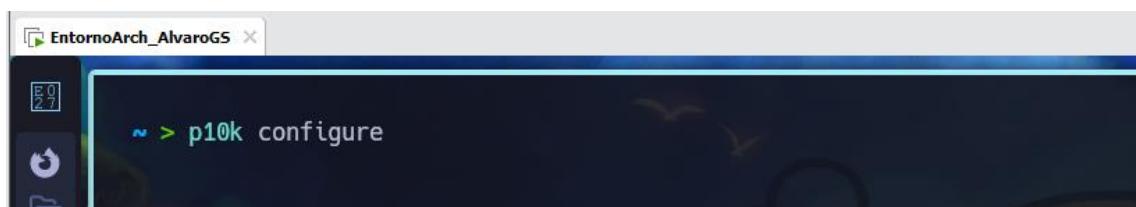
Manual

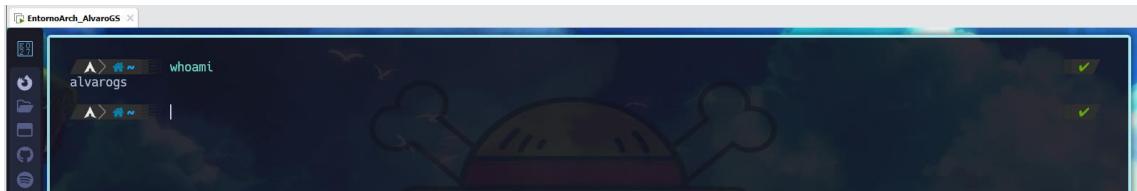
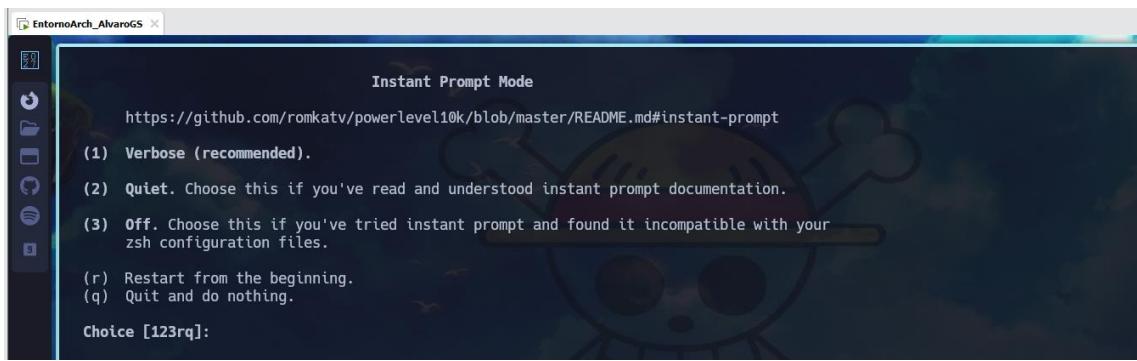
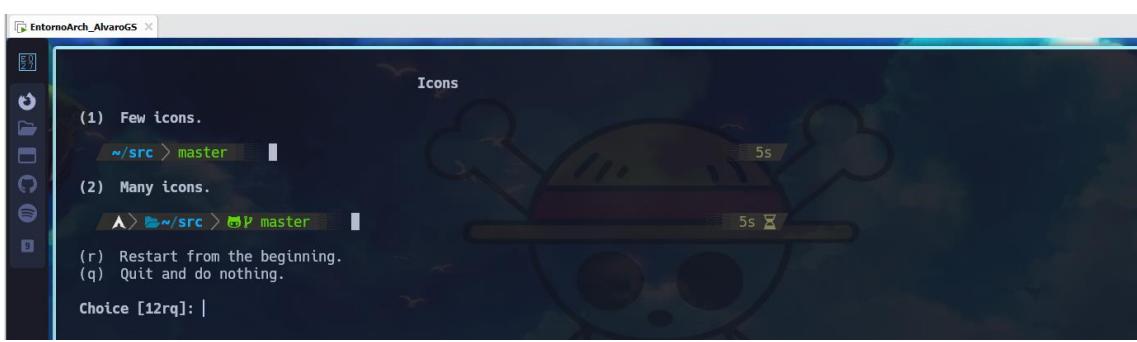
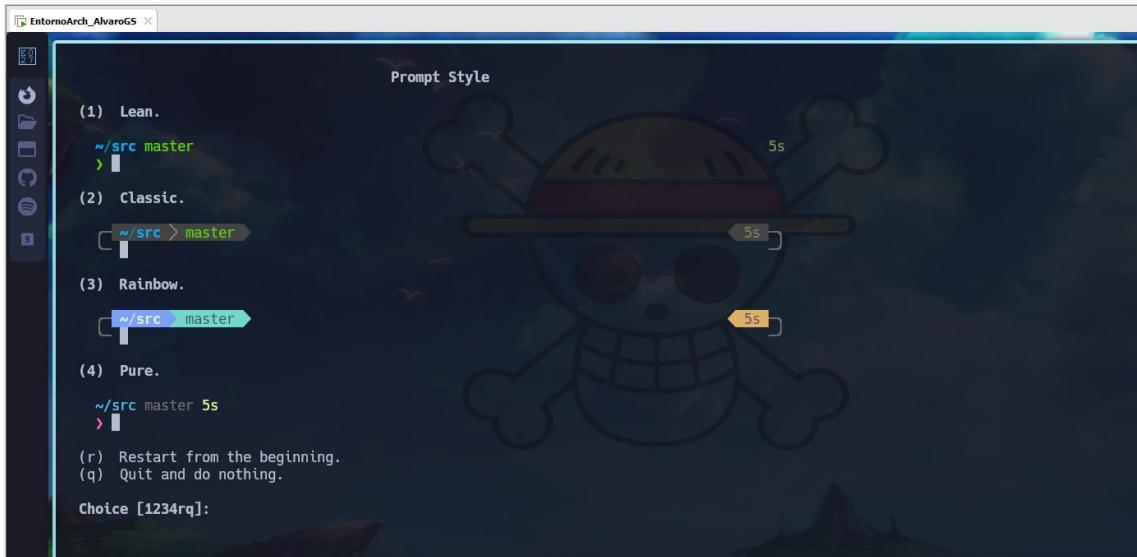
```
git clone --depth=1 https://github.com/romkatv/powerlevel10k.git ~/powerlevel10k
echo 'source ~/powerlevel10k/powerlevel10k.zsh-theme' >> ~/.zshrc
```

Users in China can use the official mirror on gitee.com for faster download.

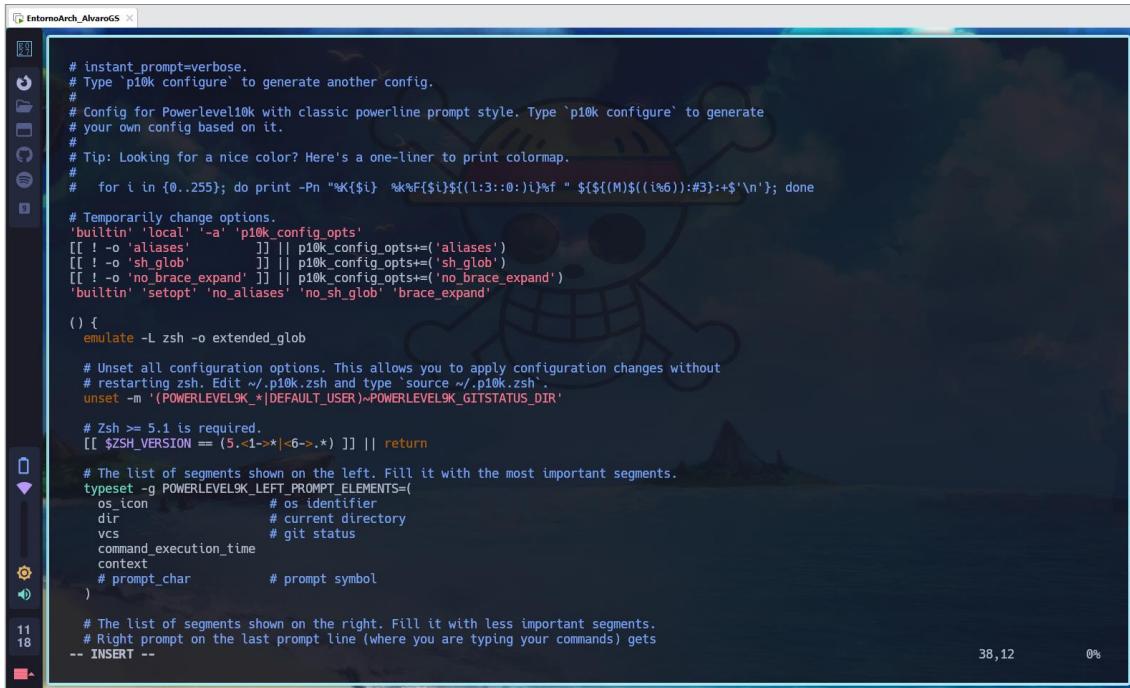
```
git clone --depth=1 https://gitee.com/romkatv/powerlevel10k.git ~/powerlevel10k
echo 'source ~/powerlevel10k/powerlevel10k.zsh-theme' >> ~/.zshrc
```

This is the simplest kind of installation and it works even if you are using a plugin manager. Just make sure to disable the current theme in your plugin manager. See [troubleshooting](#) for help.





Step 48. We access the .p10k.zsh file that is in our home.



```
# instant_prompt=verbose.
# Type `p10k configure` to generate another config.
#
# Config for Powerlevel10k with classic powerline prompt style. Type `p10k configure` to generate
# your own config based on it.
#
# Tip: Looking for a nice color? Here's a one-liner to print colormap.
#
# for i in {0..255}; do print -Pn "%K{$i} %k%F{$i}$((l:3::0))f \" ${${(M)${((i%6)):#3)}:+$'\n'}"; done
#
# Temporarily change options.
'builtin' 'local' '-a' 'p10k_config_opts'
[[ ! -o 'aliases' ]] || p10k_config_opts+=('aliases')
[[ ! -o 'sh_glob' ]] || p10k_config_opts+=('sh_glob')
[[ ! -o 'no_brace_expand' ]] || p10k_config_opts+=('no_brace_expand')
'builtin' 'setopt' 'no_aliases' 'no_sh_glob' 'brace_expand'

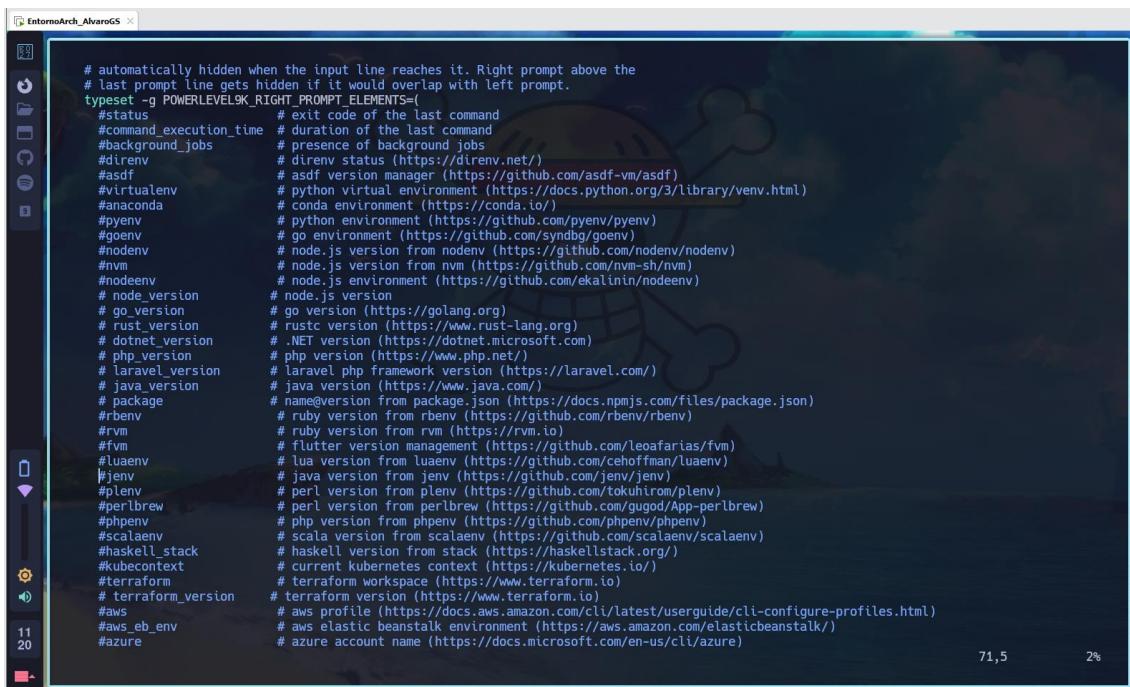
() {
    emulate -L zsh -o extended_glob

    # Unset all configuration options. This allows you to apply configuration changes without
    # restarting zsh. Edit ~/.p10k.zsh and type `source ~/.p10k.zsh`.
    unset -m 'POWERLEVEL9K_*' DEFAULT_USER POWERLEVEL9K_GITSTATUS_DIR

    # Zsh >= 5.1 is required.
    [[ $ZSH_VERSION == (5.<1>*|<6>.* ) ]] || return

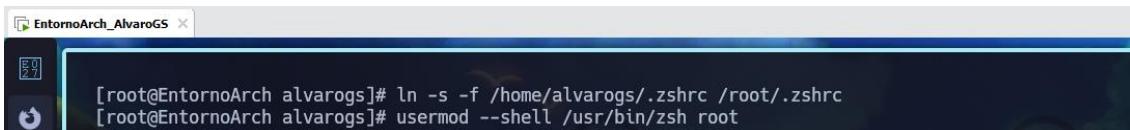
    # The list of segments shown on the left. Fill it with the most important segments.
    typeset -g POWERLEVEL9K_LEFT_PROMPT_ELEMENTS=(
        os_icon           # os identifier
        dir               # current directory
        vcs               # git status
        command_execution_time
        context
        # prompt_char      # prompt symbol
    )

    # The list of segments shown on the right. Fill it with less important segments.
    # Right prompt on the last prompt line (where you are typing your commands) gets
-- INSERT --
```



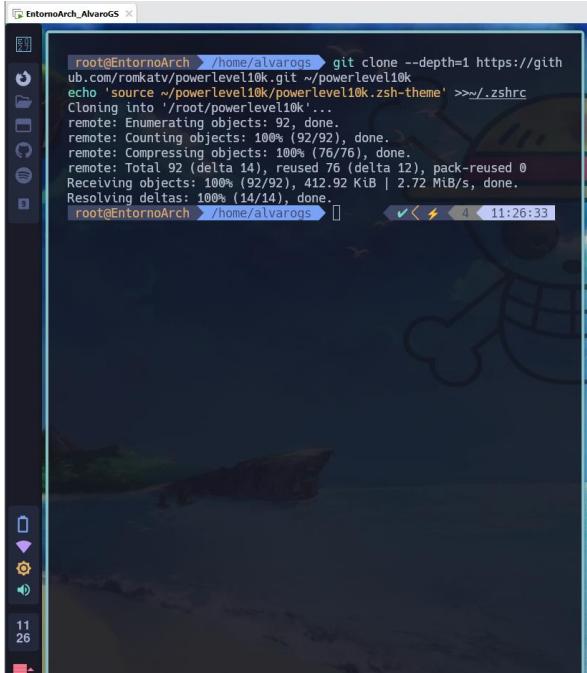
```
# automatically hidden when the input line reaches it. Right prompt above the
# last prompt line gets hidden if it would overlap with left prompt.
typeset -g POWERLEVEL9K_RIGHT_PROMPT_ELEMENTS=(
    #status          # exit code of the last command
    #command_execution_time # duration of the last command
    #background_jobs   # presence of background jobs
    #direnv          # direnv status (https://direnv.net/)
    #asdf            # asdf version manager (https://github.com/asdf-vm/asdf)
    #virtualenv       # python virtual environment (https://docs.python.org/3/library/venv.html)
    #anaconda         # conda environment (https://conda.io/)
    #pyenv            # python environment (https://github.com/pyenv/pyenv)
    #goenv            # go environment (https://github.com/syndbg/goenv)
    #nodenv           # node.js version from nodenv (https://github.com/nodenodenv)
    #nvm              # node.js version from nvm (https://github.com/nvm-sh/nvm)
    #nodeenv          # node.js environment (https://github.com/ekalinin/nodeenv)
    #node_version     # node.js version
    #go_version        # go version (https://golang.org)
    #rust_version      # rustc version (https://www.rust-lang.org)
    #dotnet_version    # .NET version (https://dotnet.microsoft.com)
    #php_version       # php version (https://www.php.net/)
    #laravel_version   # laravel php framework version (https://laravel.com/)
    #java_version      # java version (https://www.java.com/)
    #package           # name@version from package.json (https://docs.npmjs.com/files/package.json)
    #rbenv             # ruby version from rbenv (https://github.com/rbenv/rbenv)
    #rvm               # ruby version from rvm (https://rvm.io)
    #fvm               # flutter version management (https://github.com/leofarias/fvm)
    #luauenv          # lua version from luauenv (https://github.com/cehoffman/luauenv)
    #jenv              # java version from jenv (https://github.com/jenv/jenv)
    #plenv             # perl version from plenv (https://github.com/tokuhiro/plenv)
    #perlbrew          # perl version from perlbrew (https://github.com/gugod/App-perlbrew)
    #phpenv            # php version from phpenv (https://github.com/phpenv/phpenv)
    #scalenav          # scala version from scalenav (https://github.com/scalenav/scalenav)
    #haskell_stack     # haskell version from stack (https://haskellstack.org/)
    #kubecontext       # current kubernetes context (https://kubernetes.io/)
    #terraform         # terraform workspace (https://www.terraform.io)
    #terraform_version # terraform version (https://www.terraform.io)
    #aws               # aws profile (https://docs.aws.amazon.com/cli/latest/userguide/cli-configure-profiles.html)
    #aws_eb_env        # aws elastic beanstalk environment (https://aws.amazon.com/elasticbeanstalk/)
    #azure             # azure account name (https://docs.microsoft.com/en-us/cli/azure)
```

Step 49. We create a symbolic link from our user's .zshrc to root's.

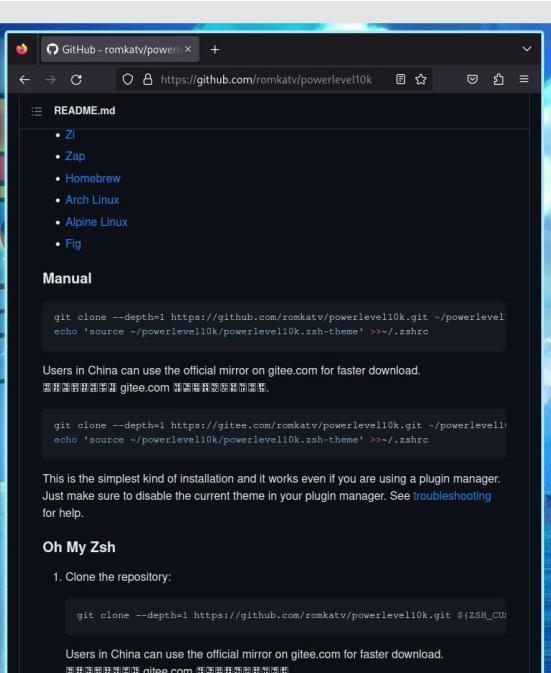


```
[root@EntornoArch alvaro]# ln -s -f /home/alvaro/.zshrc /root/.zshrc
[root@EntornoArch alvaro]# usermod --shell /usr/bin/zsh root
```

Step 50. We also configure the p10k in the root user.



```
root@EntornoArch ~% git clone --depth=1 https://github.com/romkatv/powerlevel10k.git ~/powerlevel10k
echo 'source ~/powerlevel10k/powerlevel10k.zsh-theme' >> ~/.zshrc
Cloning into '/root/powerlevel10k'...
remote: Enumerating objects: 92, done.
remote: Counting objects: 100% (92/92), done.
remote: Compressing objects: 100% (76/76), done.
remote: Total 92 (delta 14), reused 76 (delta 12), pack-reused 0
Receiving objects: 100% (92/92), 412.92 KiB | 2.72 MiB/s, done.
Resolving deltas: 100% (14/14), done.
root@EntornoArch ~%
```



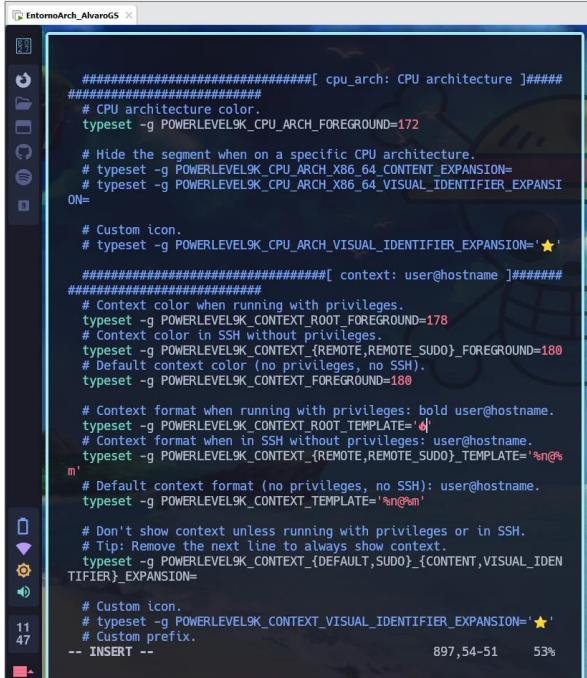
The screenshot shows the GitHub README page for the powerlevel10k repository. It includes instructions for cloning the repository, a note about users in China using gitee.com, and a section titled "Oh My Zsh" with a link to its configuration file.



```
root@EntornoArch ~% p10k configure
New config: ~/.p10k.zsh.
File feature requests and bug reports at https://github.com/romkatv/powerlevel10k/issues
A > ~/home/alvarogs |
```

Step 51. We access the following page to look for an icon that we like to differentiate our ROOT user from the normal one, we copy and paste it in the following line:

<https://www.nerdfonts.com/cheat-sheet>



```
#####
[ cpu_arch: CPU architecture ]#####
# CPU architecture color.
typeset -g POWERLEVEL9K_CPU_ARCH_FOREGROUND=172

# Hide the segment when on a specific CPU architecture.
# typeset -g POWERLEVEL9K_CPU_ARCH_X86_64_CONTENT_EXPANSION=
# typeset -g POWERLEVEL9K_CPU_ARCH_X86_64_VISUAL_IDENTIFIER_EXPANSION=

# Custom icon.
# typeset -g POWERLEVEL9K_CPU_VISUAL_IDENTIFIER_EXPANSION='★'

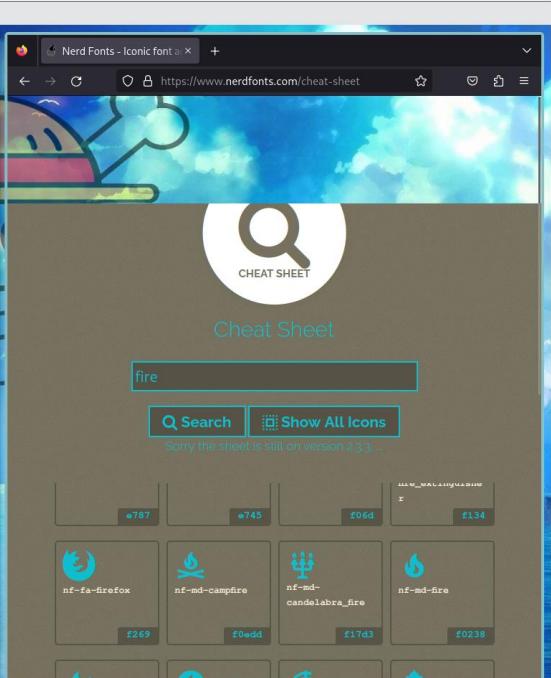
#####
[ context: user@hostname ]#####
# Context color when running with privileges.
typeset -g POWERLEVEL9K_CONTEXT_ROOT_FOREGROUND=178
# Context color in SSH without privileges.
typeset -g POWERLEVEL9K_CONTEXT_{REMOTE,REMOTE_SUDO}_foreground=180
# Default context color (no privileges, no SSH).
typeset -g POWERLEVEL9K_CONTEXT_FOREGROUND=180

# Context format when running with privileges: bold user@hostname.
typeset -g POWERLEVEL9K_CONTEXT_ROOT_TEMPLATE='bold %n@%m'
# Context format when in SSH without privileges: user@hostname.
typeset -g POWERLEVEL9K_CONTEXT_{REMOTE,REMOTE_SUDO}_TEMPLATE='%n@%m'

# Default context format (no privileges, no SSH): user@hostname.
typeset -g POWERLEVEL9K_CONTEXT_TEMPLATE='user@hostname'

# Don't show context unless running with privileges or in SSH.
# Tip: Remove the next line to always show context.
typeset -g POWERLEVEL9K_CONTEXT_{DEFAULT,SUDO}_{CONTENT,VISUAL_IDENTIFIER}_EXPANSION=

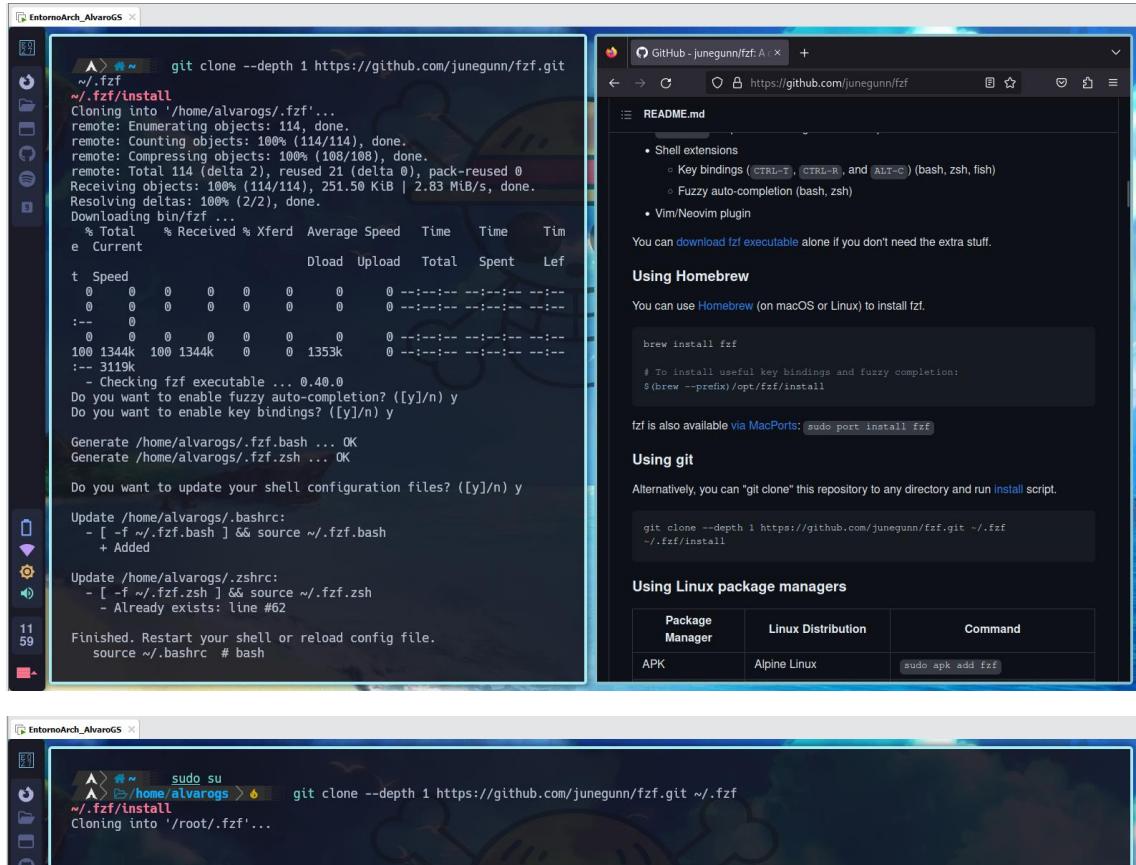
# Custom icon.
# typeset -g POWERLEVEL9K_CONTEXT_VISUAL_IDENTIFIER_EXPANSION='★'
# Custom prefix.
-- INSERT --
897,54-51      53%
```



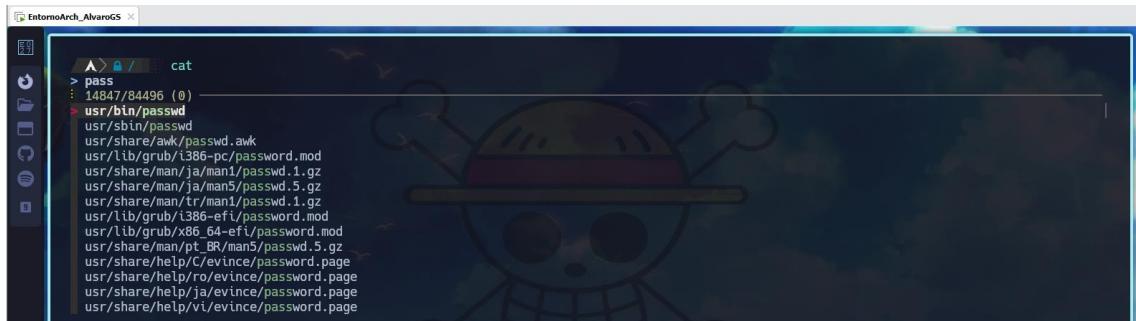
The screenshot shows the Nerd Fonts Cheat Sheet website. It features a search bar, a "Show All Icons" button, and a grid of icons with their corresponding hex codes. One icon, nf-md-fire, is highlighted.

Step 52. We installed FZF to speed up our commands.

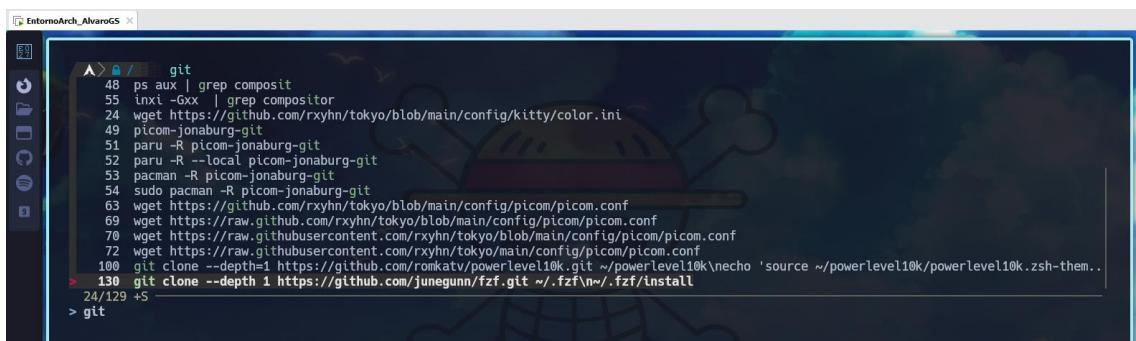
<https://github.com/junegunn/fzf>



CTRL T for smart search in real time.



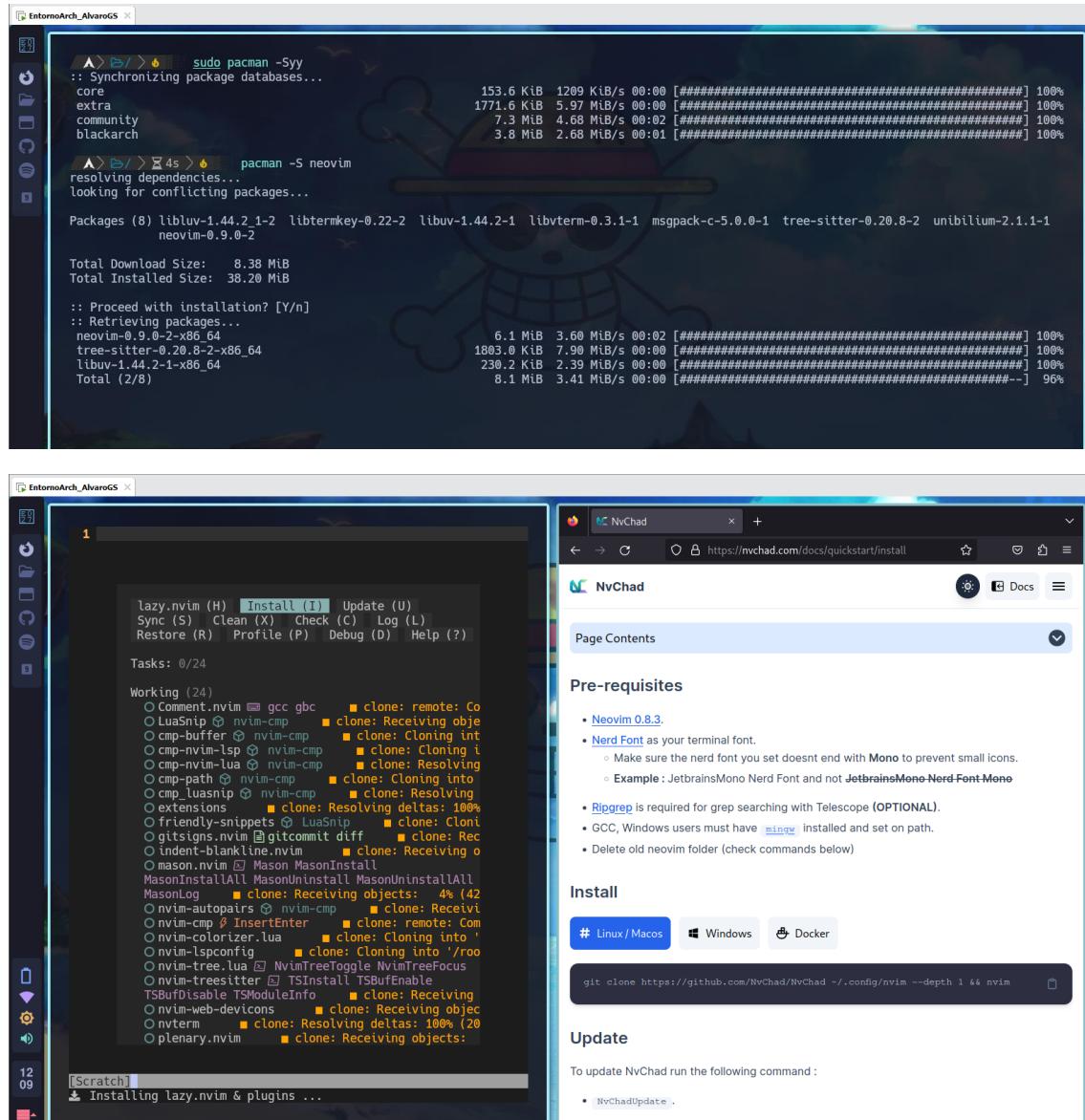
CTRL R for smart history.

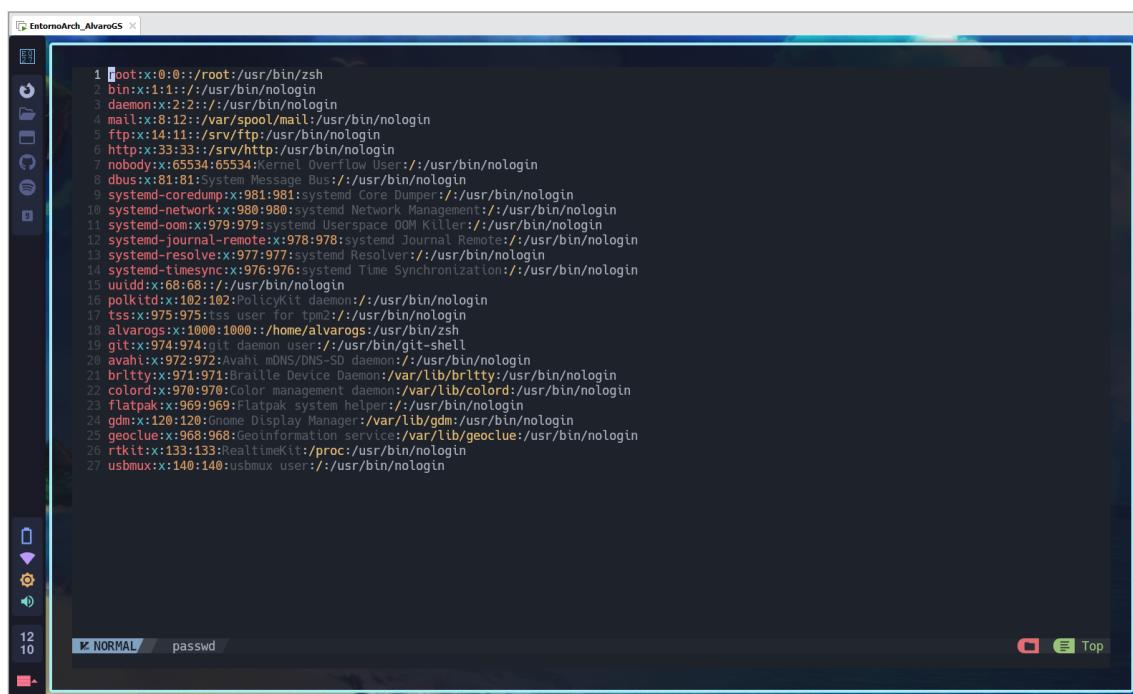
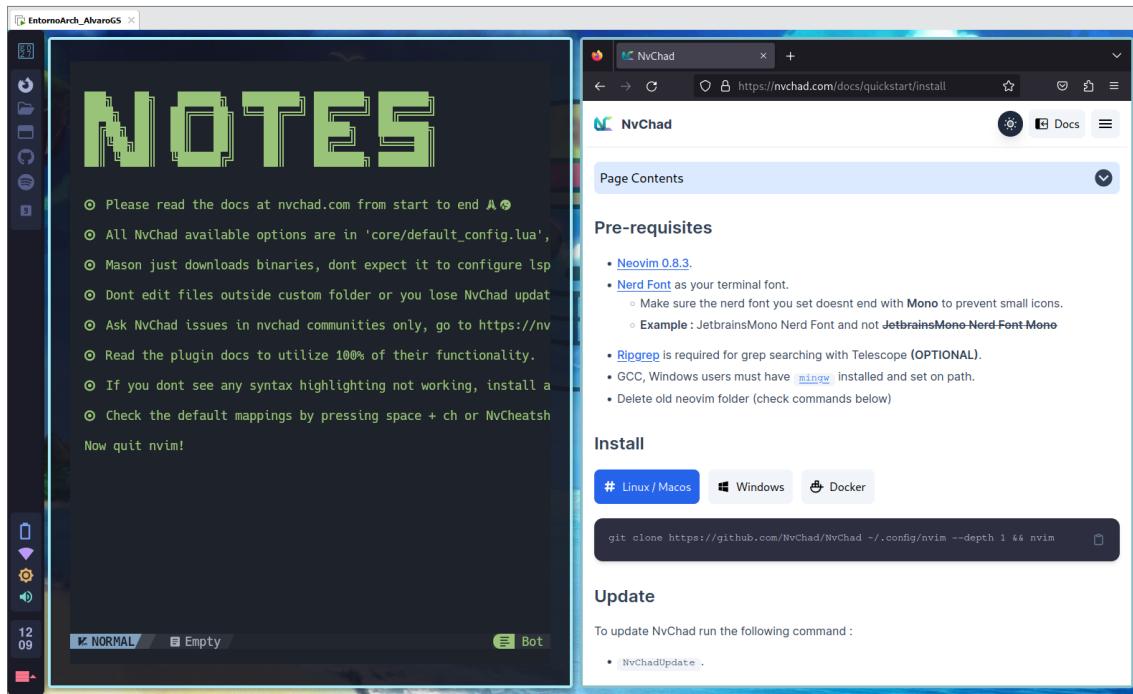


Step 53. We update our database and install neovim and then install NvChad.
Once installed we will do the same in the root user.

<https://github.com/NvChad/NvChad>

<https://nvchad.com/docs/quickstart/install>





```

EntornoArch_AlvaroGS x
mailcap          1 root:x:0:0::/root:/usr/bin/zsh
makepkg.conf     2 bin:x:1:1:::/usr/bin/nologin
man_db.conf      3 daemon:x:2:2:::/usr/bin/nologin
mdadm.conf       4 mail:x:8:12::/var/spool/mail:/usr/bin/nologin
mine_types       5 ftp:x:14:11::/srv/ftp:/usr/bin/nologin
mke2fs.conf      6 http:x:33:33::/srv/http:/usr/bin/nologin
mkinitcpio.conf  7 nobody:x:65534:65534:Kernel Overflow User:/usr/bin/nologin
mtab - proc/304595/mou 8 dbus:x:81:81:System Message Bus:/usr/bin/nologin
nanorc          9 systemd-coredump:x:981:981:systemd Core Dumper:/usr/bin/nologin
netconfig        10 systemd-network:x:988:988:systemd Network Management:/usr/bin/nologin
nscd.conf        11 systemd-oom:x:979:979:systemd Userspace OOM Killer:/usr/bin/nologin
nsswitch.conf   12 systemd-journal-remote:x:978:978:systemd Journal Remote:/usr/bin/nologin
os-release - usr/lib/o 13 systemd-resolve:x:977:977:systemd Resolver:/usr/bin/nologin
ostree-mkinitcpio.conf 14 systemd-timesync:x:976:976:systemd Time Synchronization:/usr/bin/nologin
pacman.conf     15 uitdd:x:68:68:::/usr/bin/nologin
papersize       16 polkitd:x:102:102:PolicyKit daemon:/usr/bin/nologin
paperspecs     17 tss:x:975:975:ss user for tpm2:/usr/bin/nologin
paru.conf       18 alvaro: x:1000:1000::/home/alvaro:zsh
passwd          19 git:x:974:974:git daemon user:/usr/bin/git-shell
password        20 avahi:x:972:972:avahi mDNS/DNS-SD Daemon:/usr/bin/nologin
profile         21 brltty:x:971:971:Braille Device Daemon:/var/lib/brltty:/usr/bin/nologin
protocols       22 colord:x:970:970:Color management daemon:/var/lib/colord:/usr/bin/nologin
rc_maps.cfg    23 flatpak:x:969:969:Flatpak system helper:/usr/bin/nologin
request-key.conf 24 gdm:x:120:120:GNOME Display Manager:/var/lib/gdm:/usr/bin/nologin
resolv.conf     25 geoclue:x:968:968:Geoinformation service:/var/lib/geoclue:/usr/bin/nologin
rpc             26 rtkit:x:133:133:RealtimeKit:/proc:/usr/bin/nologin
rygel.conf      27 usbmux:x:140:140:usbmux user:/usr/bin/nologin
sensors3.conf  28
services        29
shadow          30
shadow-         31
shells          32
slsh.rc         33
subgid          34
subgid-         35
subuid          36
subuid-         37
subuid-         38
subuid-         39
NORMA / NvimTree_1 :NvimTreeToggle 76%

```

Step 54.We installed the BurpSuite to analyze, modify and capture packets.

```

EntornoArch_AlvaroGS x
A > ~/home/alvaregs/.config > 6  pacman -S burpsuite
resolving dependencies...
:: There are 3 providers available for java-runtime>=9:
:: Repository extra
  1) jre-openjdk 2) jre11-openjdk 3) jre17-openjdk

Enter a number (default=1):
looking for conflicting packages...

Packages (5) java-runtime-common-3-5 jre-openjdk-20.0.1.u9-3 jre-openjdk-headless-20.0.1.u9-3 libnet-1:1.1.6-1 burpsuite-1:2023.2.3-1

Total Download Size: 590.78 MiB
Total Installed Size: 748.40 MiB

:: Proceed with installation? [Y/n]
:: Retrieving packages...
burpsuite-1:2023.2.3-any
Total (0/5) 4.0 MiB 3.84 MiB/s 02:22 [-----] 0% 4.0 MiB 3.84 MiB/s 02:33 [-----] 0%

```

Step 55.We define the shortcuts we want in the SXHKDRC file, in my case one for BurpSuite and another for Firefox.

```

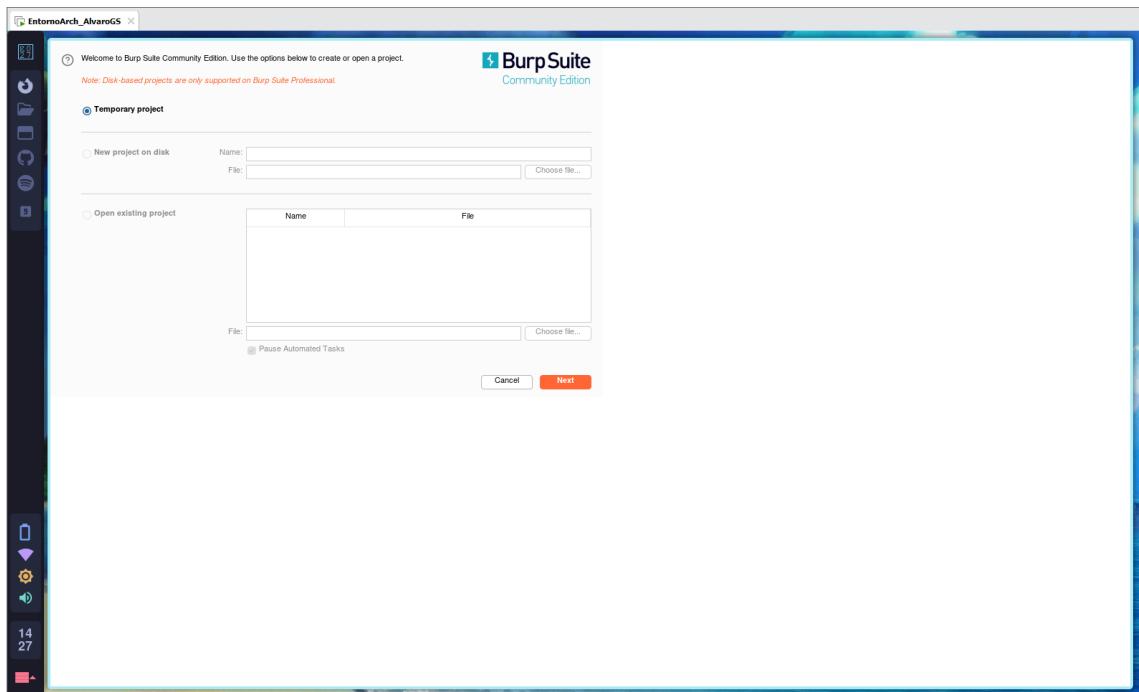
EntornoArch_AlvaroGS x
GNU nano 7.2 .config/sxhkd/sxhkdrc
# Lockscreen
ctrl + alt + l betterlockscreen -l

##----- Applications -----##
# Launch Apps
super + shift + {f,w,e} {thunar,firefox,code}

super + shift + b burpsuite

##----- System Keys -----##
# Take a screenshot

```



Step 56. We downloaded a few more packages for pentesting.

The following four screenshots show terminal windows from Arch Linux (EntornoArch_AlvaroGS) displaying the output of various `pacman` commands used for downloading pentesting tools:

- Screenshot 1:** Shows the command `pacman -Syu` running, synchronizing package databases and updating core, extra, and community repositories. Progress bars indicate download speeds and completion percentages.
- Screenshot 2:** Shows the command `pacman -S evil-winrm python-pip responder nmap rustscan whatweb wfuzz gobuster`. It lists dependencies, shows warning messages about dependency cycles and rubygem/ruby-abbrev conflicts, and begins the download process.
- Screenshot 3:** Shows the command `sudo pacman -S mdcat`. It lists the package `mdcat-2.0.3-1`, provides download and installed size information, and asks if the user wants to proceed with the installation.
- Screenshot 4:** Shows the command `pacman -S metasploit`. It lists packages `inetutils-2.4-1`, `postgresql-libs-15.2-2`, and `metasploit-6.3.15-1`, provides download and installed size information, and asks if the user wants to proceed with the installation.

```
EntornoArch_AlvaroGS > A > /home/alvarogs > msfconsole

[3KOM SuperHack II Logon]

User Name: [ security ]
Password: [ ] [ OK ]

https://metasploit.com

=[ metasploit v6.3.15-dev
+ --=[ 2312 exploits - 1208 auxiliary - 412 post
+ --=[ 975 payloads - 46 encoders - 11 nops
+ --=[ 9 evasion ]]

Metasploit tip: Save the current environment with the
save command, future console restarts will use this
environment again
Metasploit Documentation: https://docs.metasploit.com/
msf6 > |
```

```
EntornoArch_AlvaroGS >
msf6 > search jenkins

Matching Modules
=====
#  Name
- -----
0  exploit/windows/misc/ibm_websphere_java_deserialize 2015-11-06   excellent  No   IBM WebSphere RCE Java Deserialization Vulnerability
1  exploit/multi/http/[REDACTED]_metaprogramming      2019-01-08   excellent  Yes  ACL Bypass and Metaprogramming RCE
2  exploit/linux/http/[REDACTED]_cli_deserialization    2017-04-26   excellent  Yes  CLI Deserialization
3  exploit/linux/misc/[REDACTED]_ldap_deserialize       2016-11-16   excellent  Yes  CLI HTTP Java Deserialization Vulnerability
4  exploit/linux/misc/[REDACTED]_java_deserialize        2015-11-18   excellent  Yes  CLI RMI Java Deserialization Vulnerability
5  post/multi/gather/[REDACTED]_gather                  normal     No   Credential Collector
6  auxiliary/gather/[REDACTED]_cred_recovery            normal     Yes  Domain Credential Recovery
7  auxiliary/scanner/[REDACTED]_udp_broadcast_enum     normal     No   Server Broadcast Enumeration
8  exploit/multi/http/[REDACTED]_xstream_deserialize    2016-02-24   excellent  Yes  XStream Groovy classpath Deserialization Vulnerability
9  auxiliary/scanner/http/[REDACTED]_enum               normal     No   -CI Enumeration
10 auxiliary/scanner/http/[REDACTED]_login              normal     No   -CI Login Utility
11 exploit/multi/http/[REDACTED]_script_console         2013-01-18   good    Yes  -CI Script-Console Java Execution
12 auxiliary/scanner/http/[REDACTED]_command            normal     No   -CI Unauthenticated Script-Console Scanner
13 exploit/linux/misc/opennms_java_serialize           2015-11-06   normal    No   OpenNMS Java Object Unserialization Remote Code Execution

Interact with a module by name or index. For example info 13, use 13 or use exploit/linux/misc/opennms_java_serialize
msf6 >
```

Step 57. We configure in the .zshrc file some lines to enable special keys.

```
GNU nano 7.2          /home/alvarogs/.zshrc          Modified
coderay {} ||
rougtify {} ||
cat {} 2>/dev/null | head -500'
}

function rmk(){
    scrub -p dod $1
    shred -zun 10 -v $1
}

# Finalize Powerlevel10k instant prompt. Should stay at the bottom of ~/.zshrc.
(! ${functions[p10k-instant-prompt-finalize]} )|| p10k-instant-prompt-finalize
source ~/powerlevel10k/powerlevel10k.zsh-theme

# Lineas para habilitar FIN INICIO y DELETE
bindkey "^[H" beginning-of-line
bindkey "^[F" end-of-line
bindkey "^[3~" delete-char

# Moverse entre palabras
bindkey "^[;3C" forward-word
bindkey "^[;3D" backward-word
```

14 00

File Edit Insert View Search Help

^G Help ^Q Write Out ^W Where Is ^K Cut ^T Execute ^C Location ^Y Go To Line M-U Undo M-A Set Mark M-X Exit ^R Read File ^W Replace ^L Paste ^J Justify M-E Redo M-G Copy M-] To Bracket M-] Where Was

End of Installation :)