Universidade Federal do Rio de Janeiro (UFRJ)
Processo Seletivo do Grupo de Resposta a Incidentes de Segurança (GRIS) - 2020
Tag de Linux
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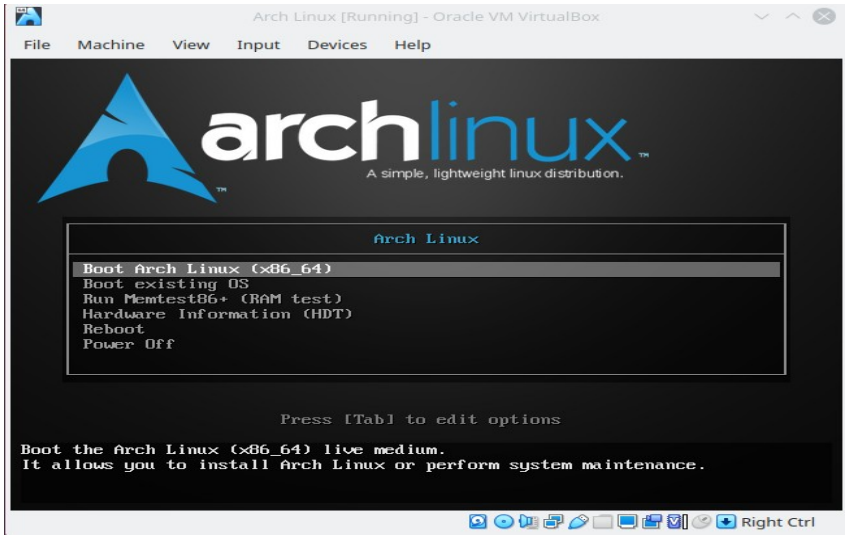
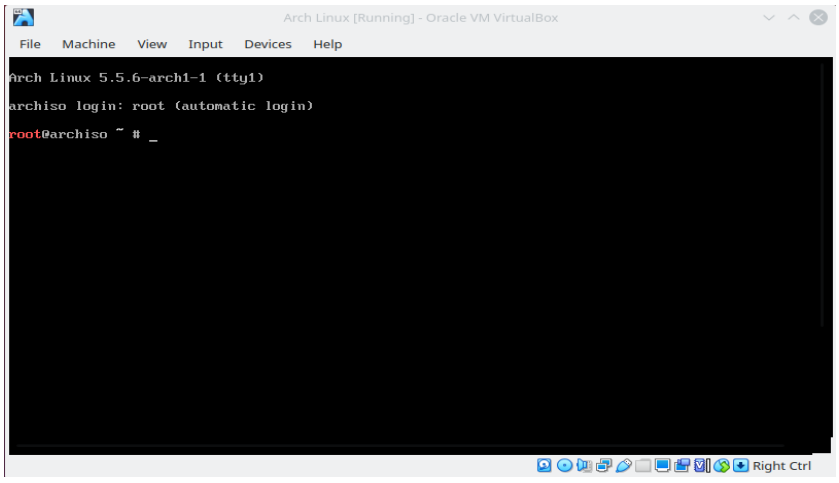
Candidato: Felipe de Jesus

Relatório de instalação de Arch Linux em Máquina Virtual

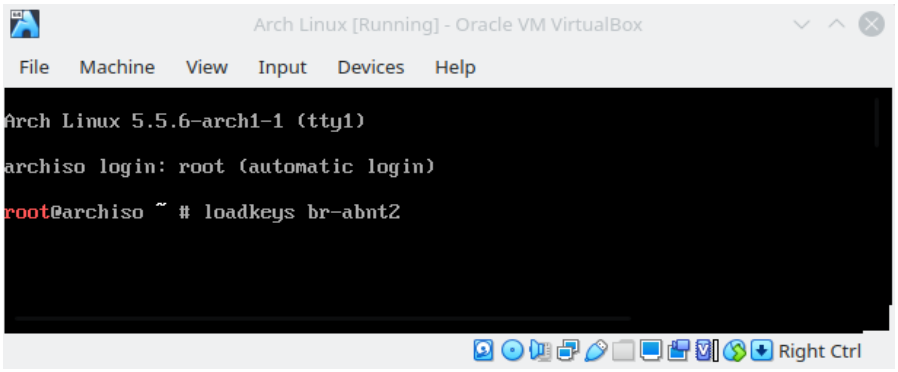
O primeiro passo é baixar ISO mais recente do site(https://www.archlinux.org/download/), em seguida temos que configurar uma máquina virtual para executar essa ISO. Estarei utilizando o Virtual Box.



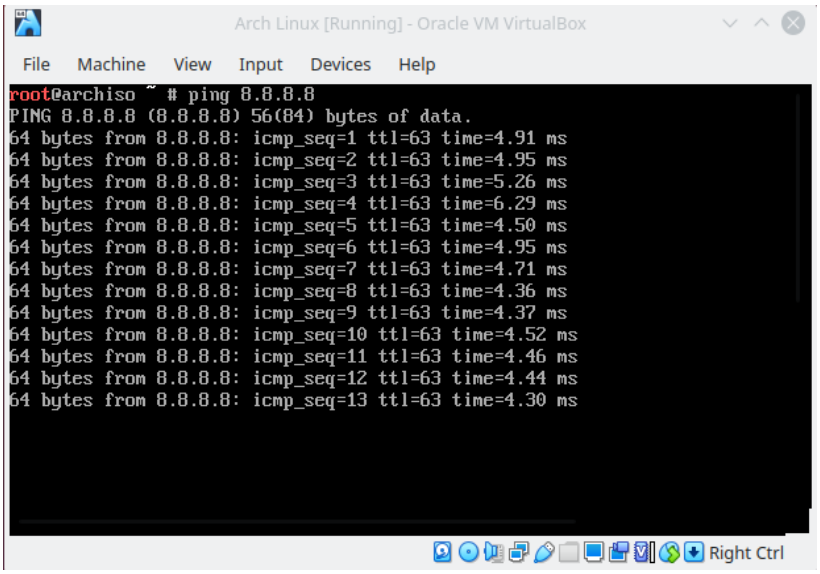
Iniciando pela primeira opção temos a tela inicial do sistema



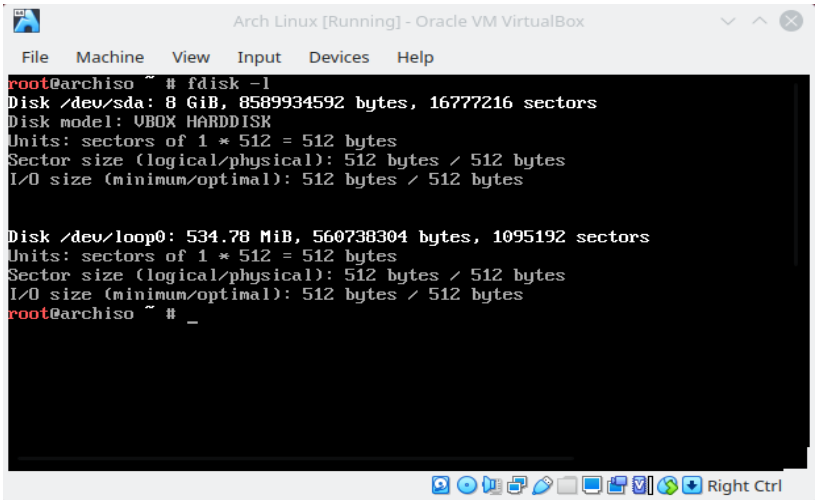
Configuar teclado para portugiês do Brasil



Verificar se internet está funcionando. Para isso podemos usar o comando “ping”. Logo, fazendo ping com o DNS do google(8.8.8.8) podemos perceber que a internet está funcionando normalmente.



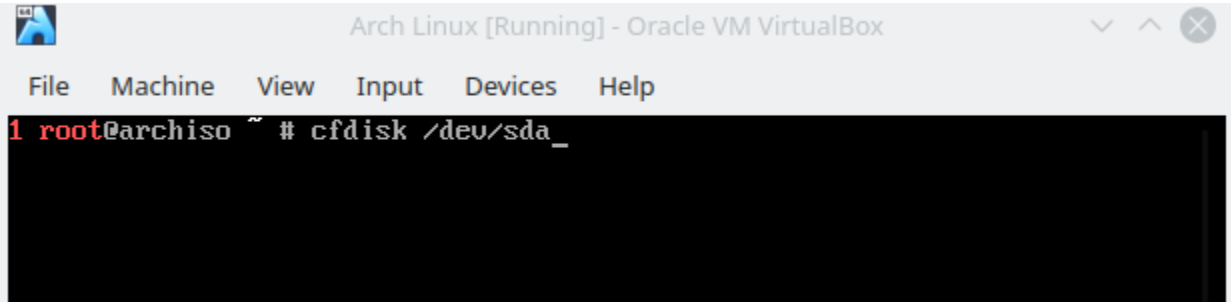
Rodando o comando fdisk -l para ver os discos e partições temos:

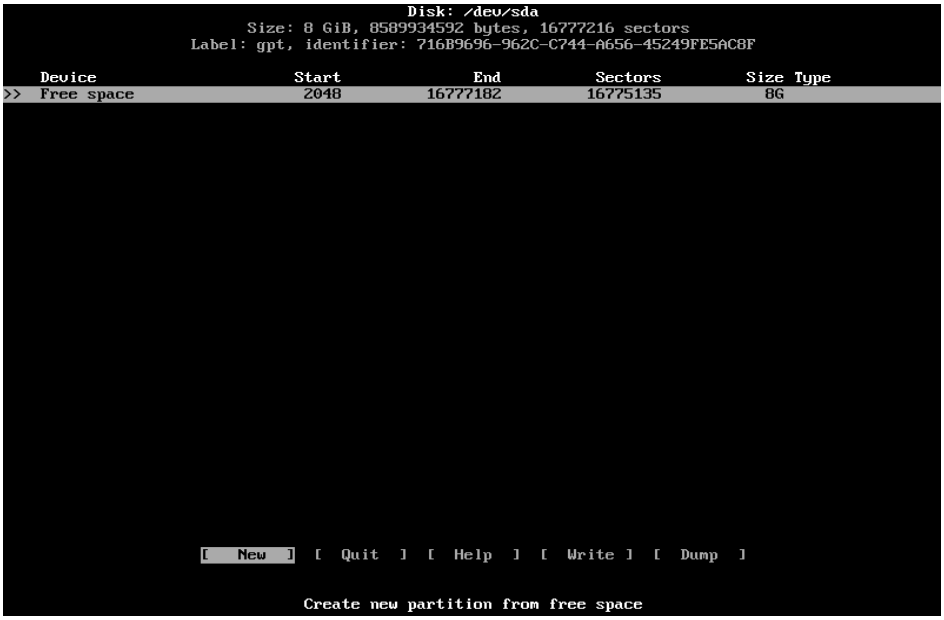


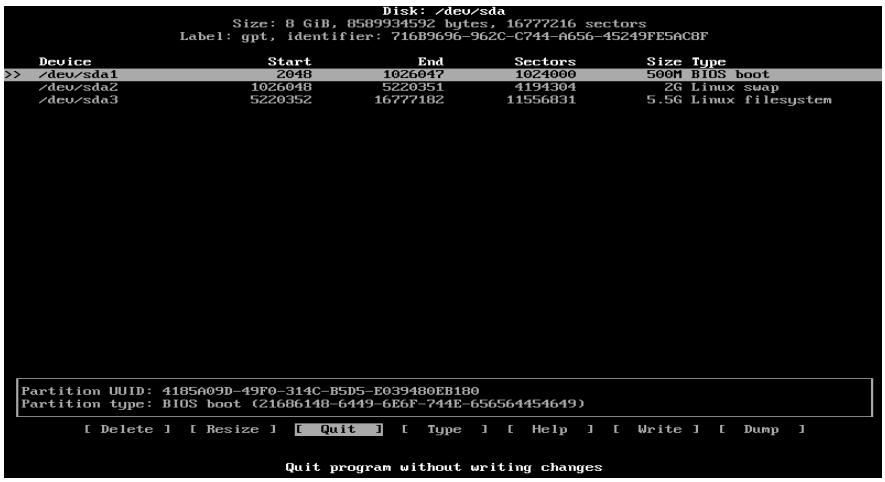
O próximo passo é criar as partições para o sistema. Vamos criar três partições inicialmente. Neste caso temos:

- /dev/sda1 (500MB para o /boot/efi) --> Boot UEFI
- /dev/sda2 (2GB para swap)
- /dev/sda3 (todo o resto para /)

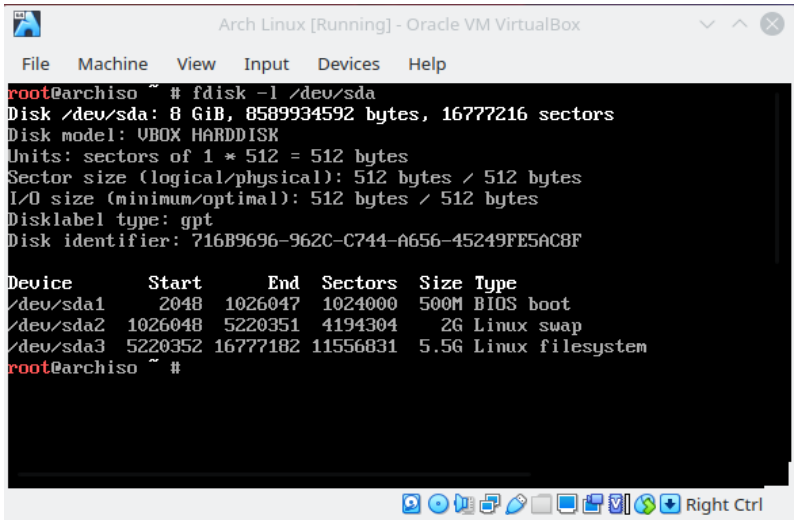
Esta criação de partições pode ser vista no fluxo de imagens abaixo ...



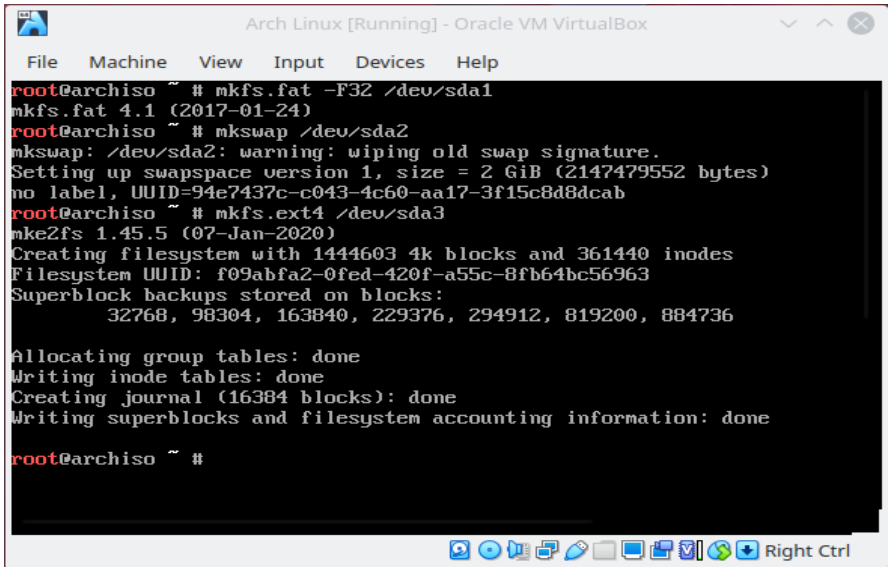




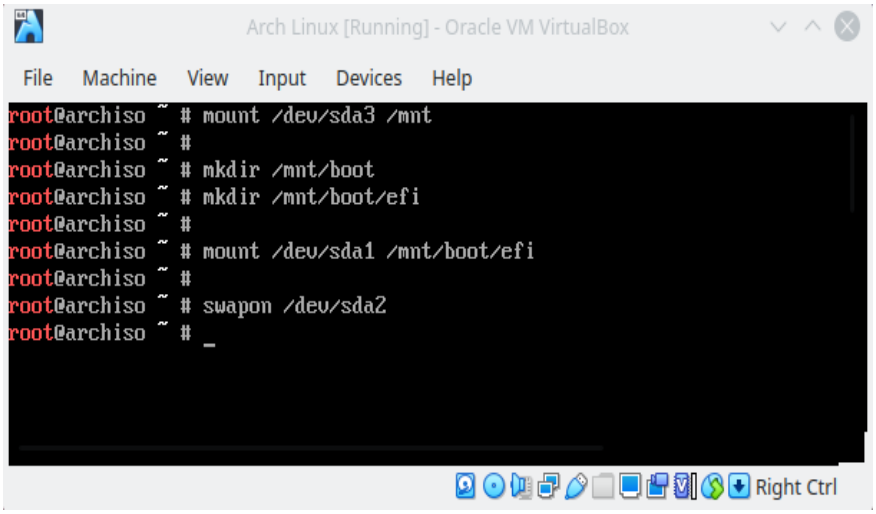
Ao término podemos ver o resultado com o comando na imagem abaixo:



O próximo passo é formatas as partições

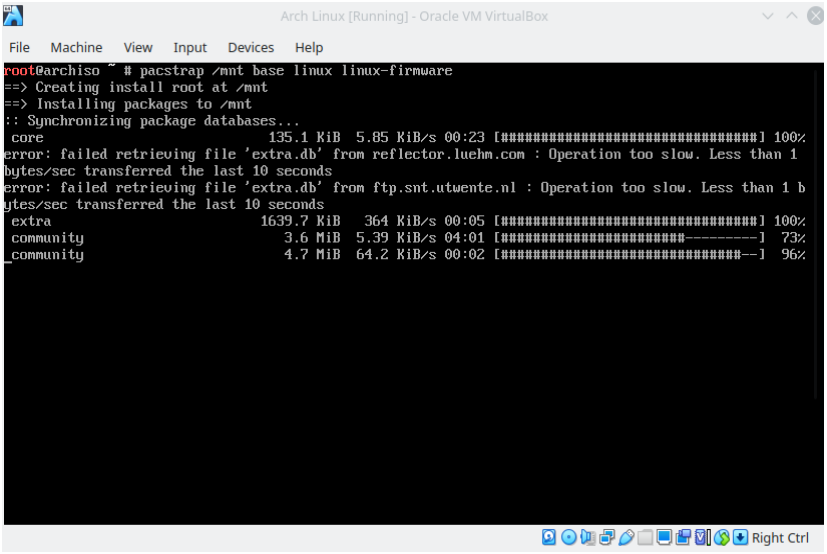


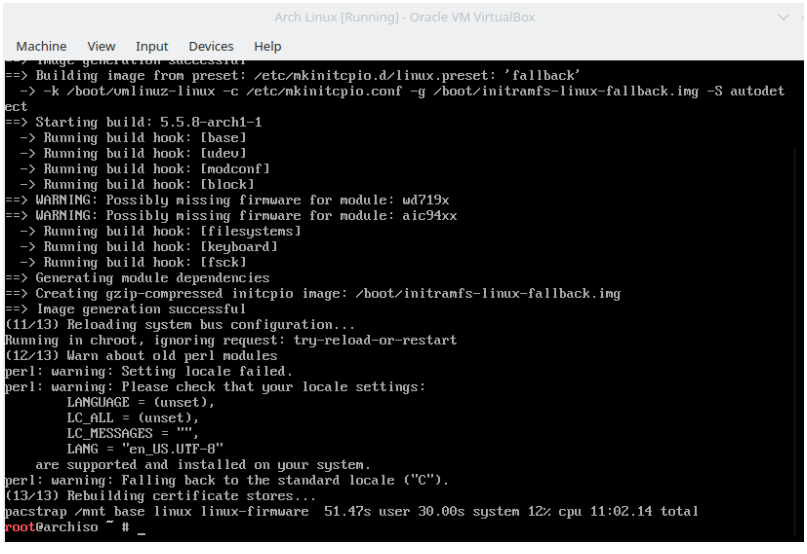
Montar partições no sistema:



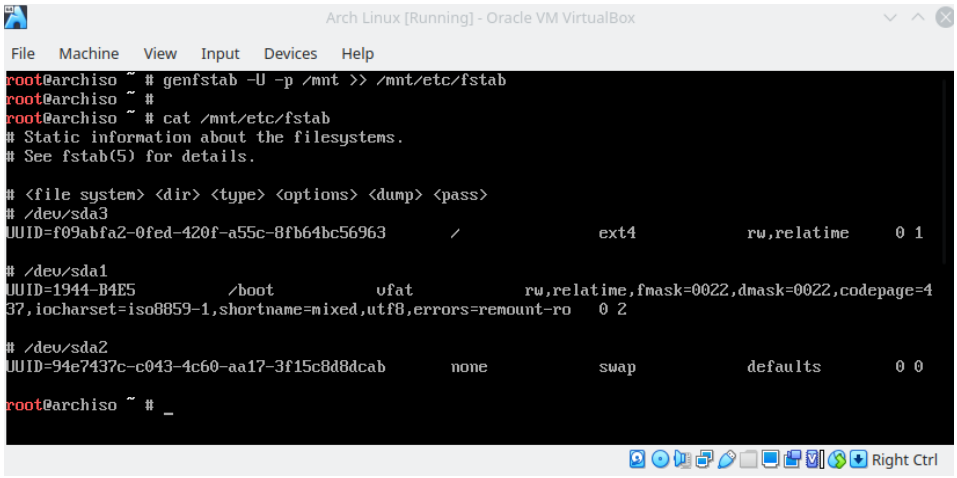
Instalação dos pacotes da base do Arch na partição ext4 com o comando:

pacstrap /mnt base linux linux-firmware

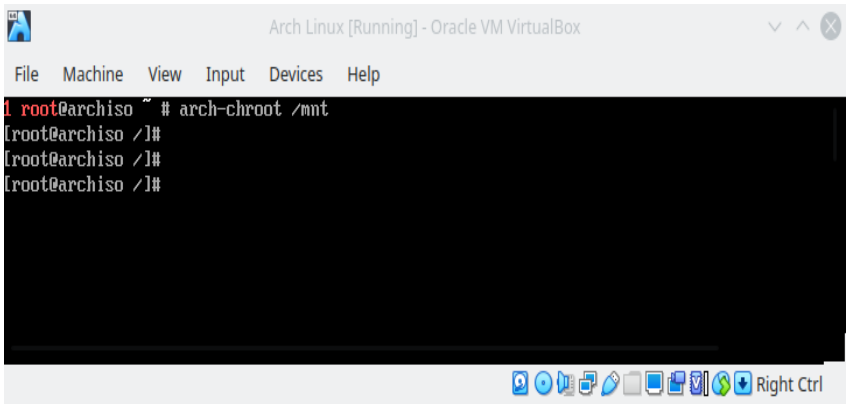




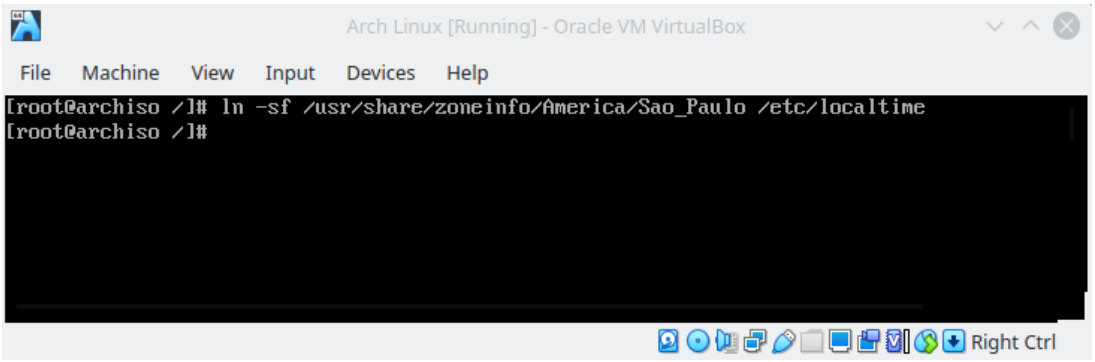
Gerar tabela FSTAB, com comando: *genfstab -U -p /mnt >> /mnt/etc/fstab*



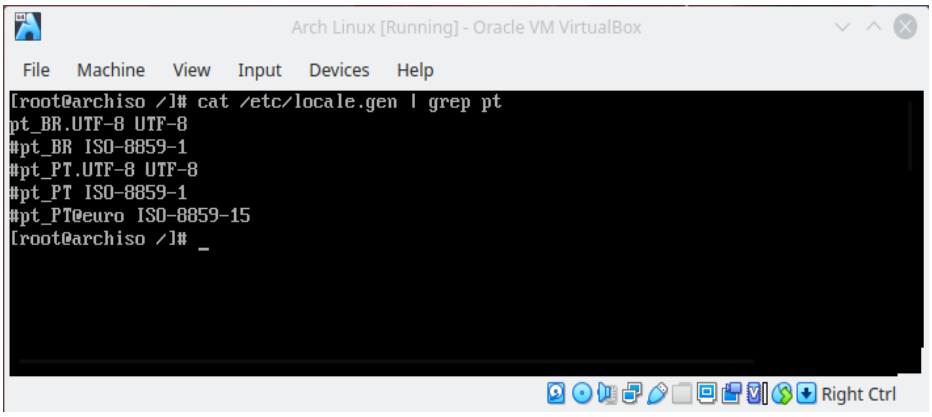
Agora vamos logar no sistema para fazer alterações internas. Podemos logar com o comando: *arch-chroot /mnt*



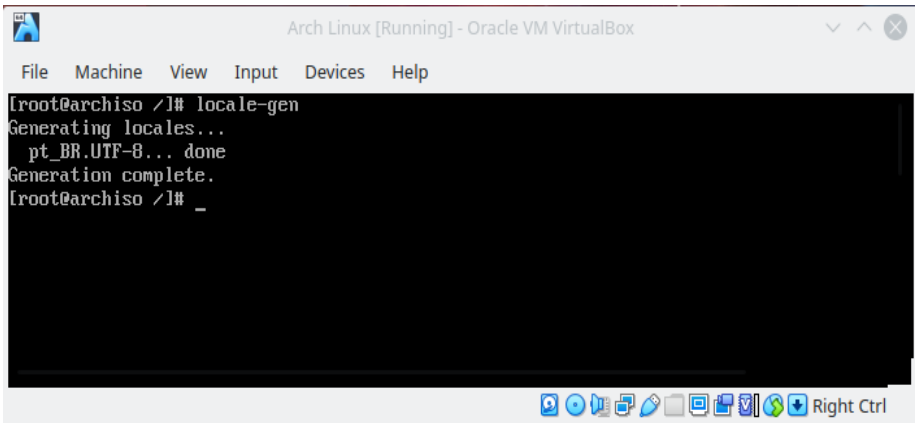
Alterar data e hora do sistema:



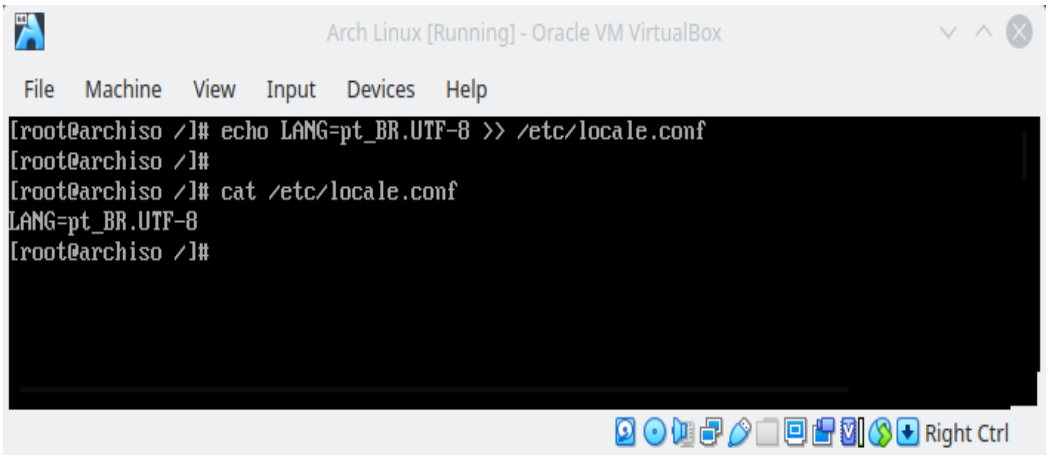
Vamos alterar o idioma do sistema para português brasileiro. Para isso utilizando o nano(editor de texto de terminal) temos que descomentar a linha *“pt_BR.UTF-8 UTF-8”* do arquivo */etc/locale.gen.* Na primeira linha da imagem abaixo podemos perceber que a linha foi descomentada com sucesso.



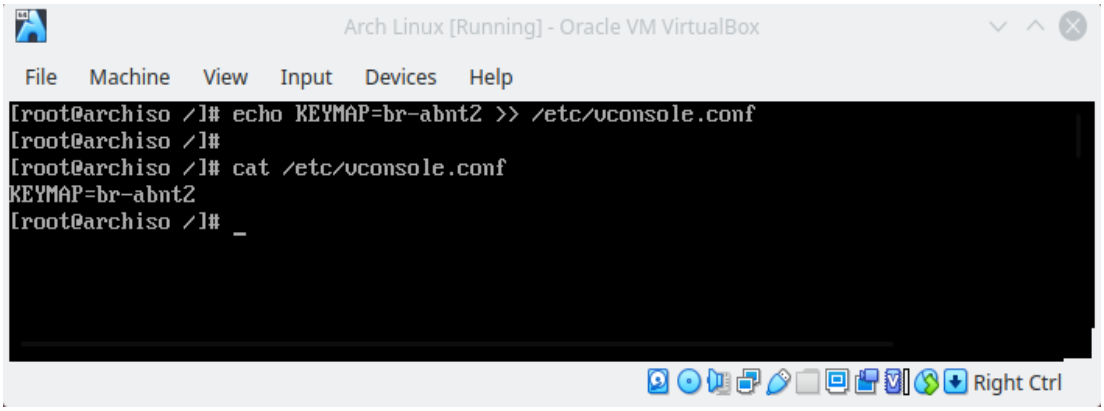
Quando isso for feito, precisamos rodar o comando abaixo:



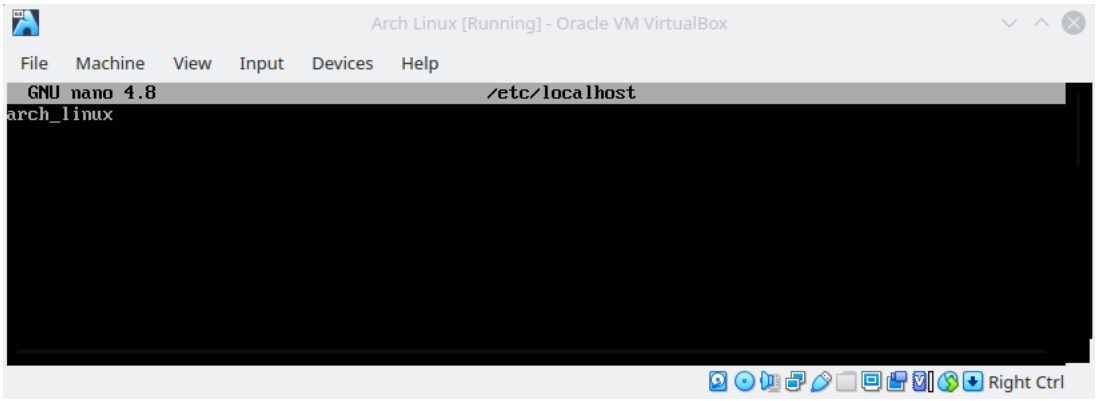
Por fim vamos usar o comando abaixo para configurar a variavel de linguagem em locale.conf:

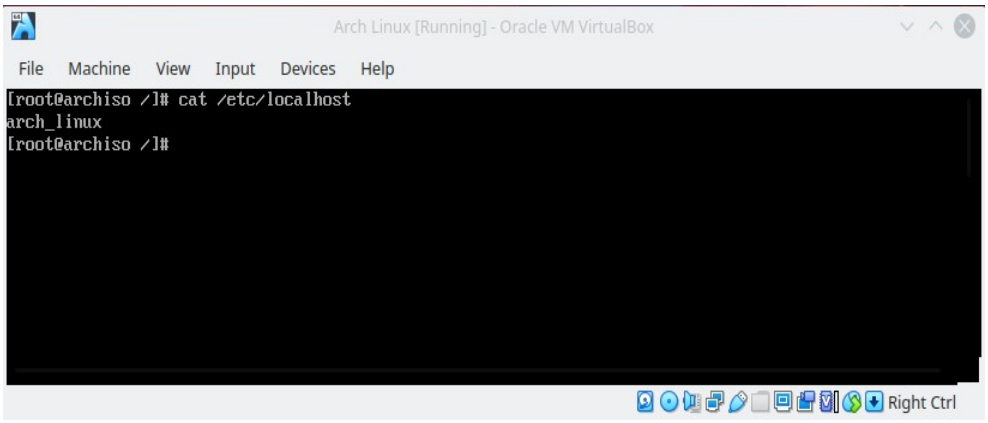


Com o comando abaixo vamos configurar o teclado com a forma abnt2 do brasil

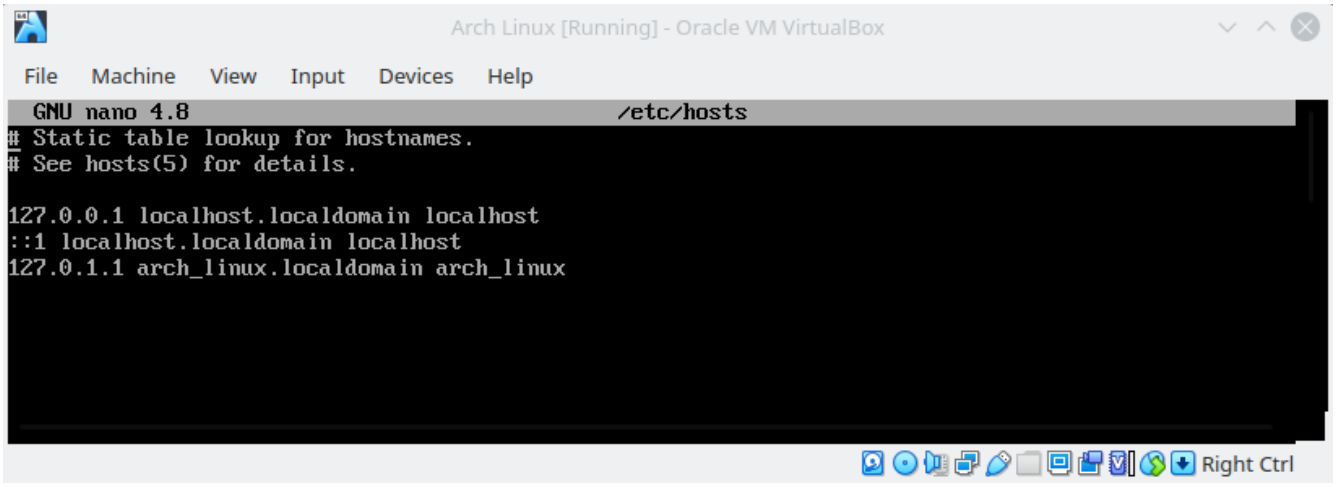


Configurar nome do host(dispositivo) para a rede

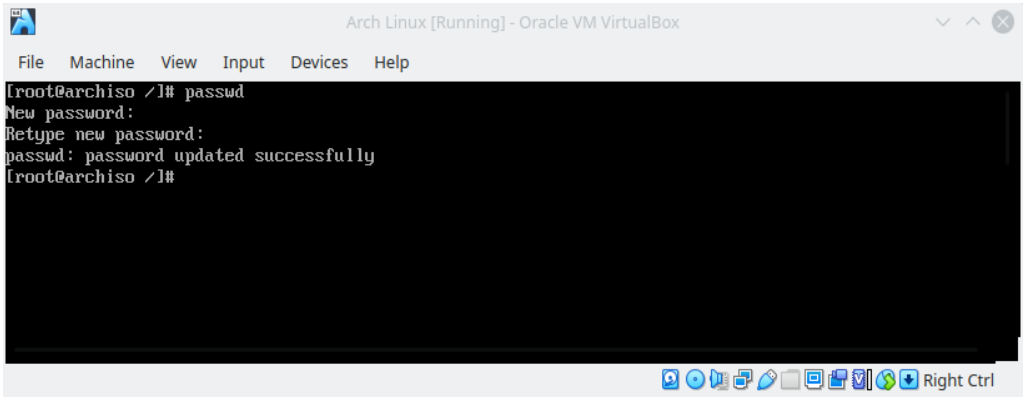




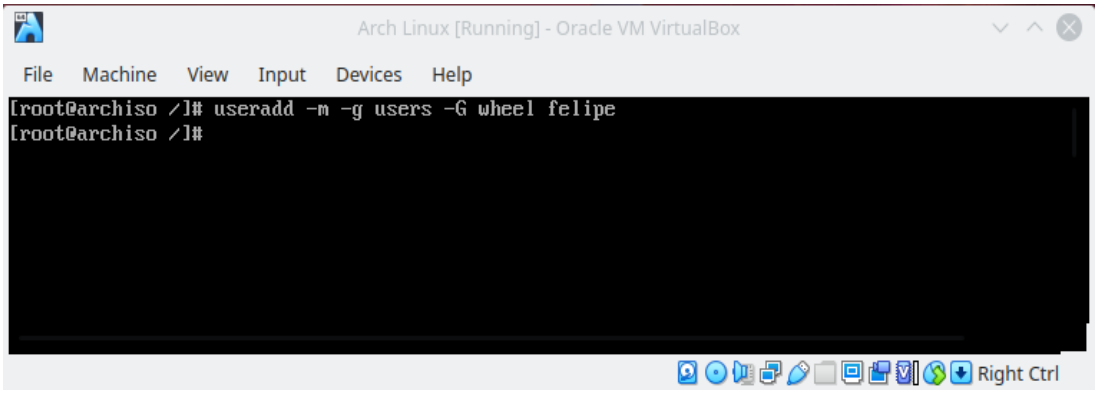
Alterando o arquivo /etc/hosts com o comando nano /etc/hosts temos:



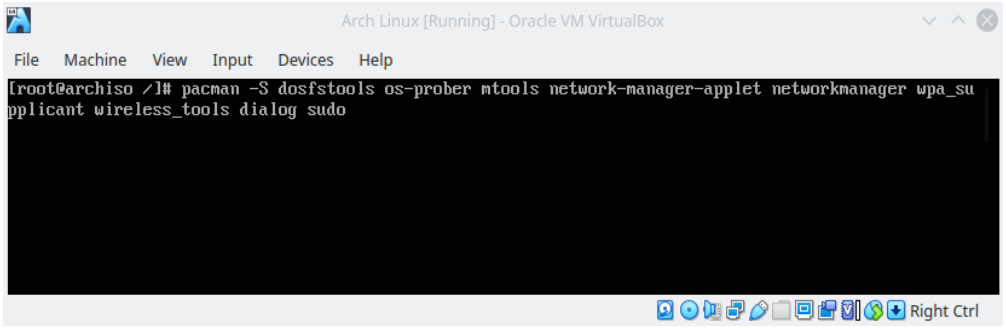
Com o comando *passwd* vamos configurar uma senha para o usuário root

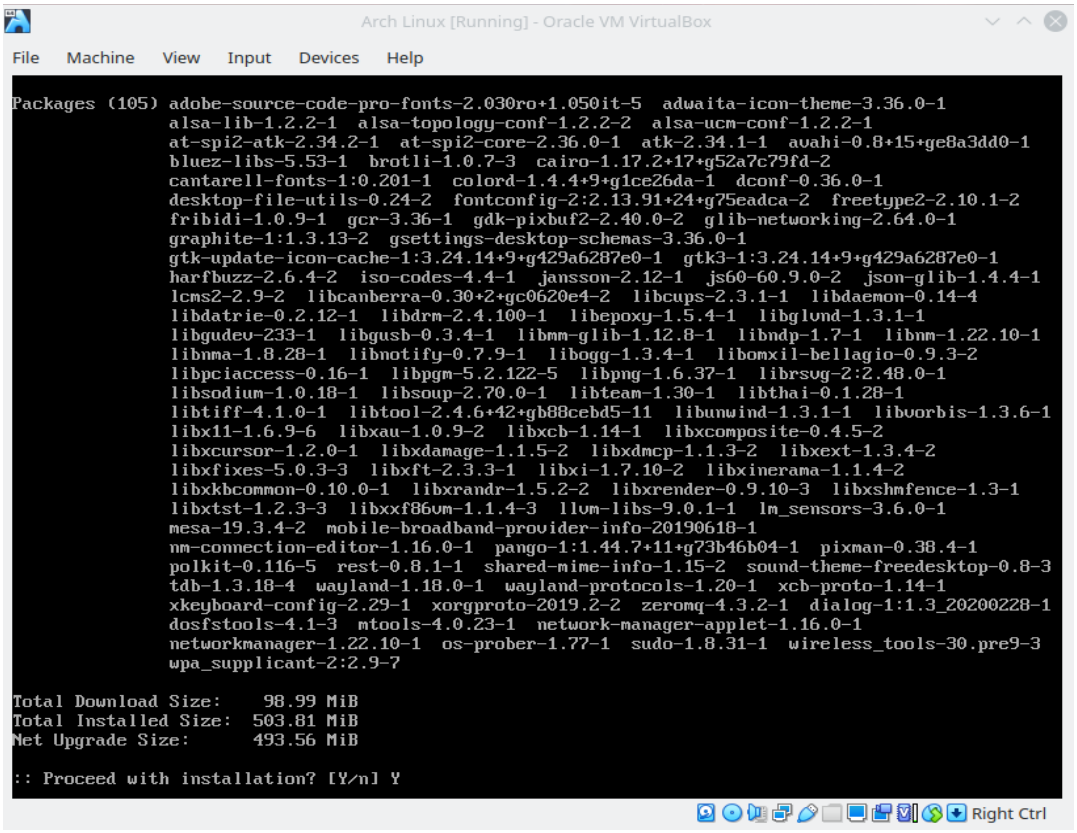


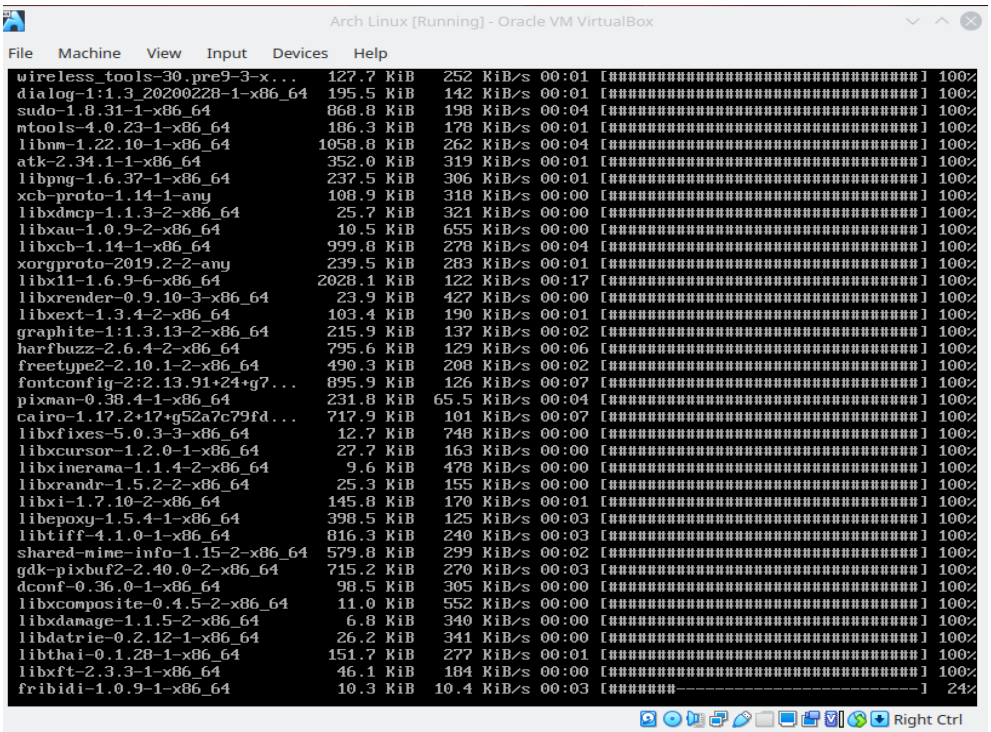
Agora vamos adicionar um novo usuário ao sistema



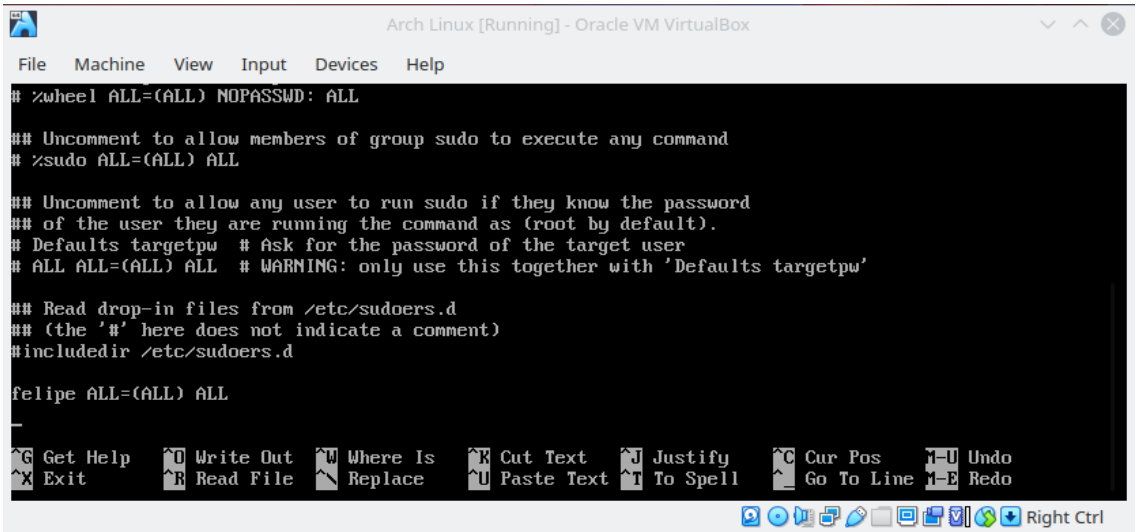
Prosseguindo, vamos instalar alguns pacotes que serão uteis na Pós-instalação do sistema


Arch Linux [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
[root@archiso /]# pacman -S dosfstools os-prober mtools network-manager-applet networkmanager wpa_supplicant wireless_tools dialog sudo
Right Ctrl

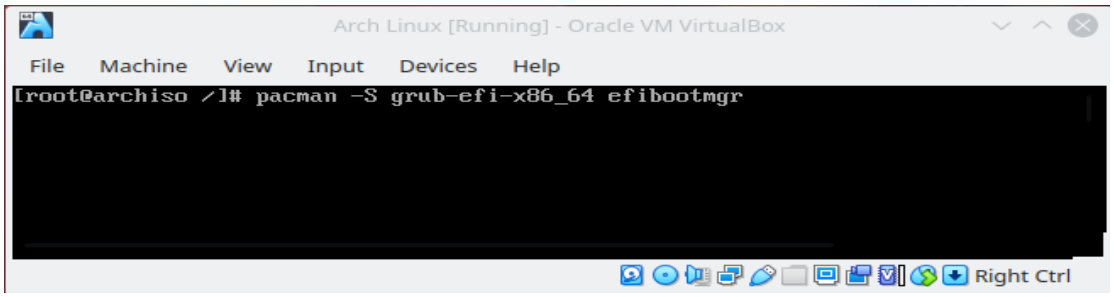

Arch Linux [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Packages (105) adobe-source-code-pro-fonts-2.030ro+1.050it-5 adwaita-icon-theme-3.36.0-1
alsa-lib-1.2.2-1 alsa-topology-conf-1.2.2-2 alsa-ucm-conf-1.2.2-1
at-spi2-atk-2.34.2-1 at-spi2-core-2.36.0-1 atk-2.34.1-1 avahi-0.8+15+ge8a3dd0-1
bluez-libs-5.53-1 brotli-1.0.7-3 cairo-1.17.2+17+g52a7c79fd-2
cantarell-fonts-1:0.201-1 colord-1.4.4+9+g1ce26da-1 dconf-0.36.0-1
desktop-file-utils-0.24-2 fontconfig-2:2.13.91+24+g75eadca-2 freetype2-2.10.1-2
fribidi-1.0.9-1 gcr-3.36-1 gdk-pixbuf2-2.40.0-2 glib-networking-2.64.0-1
graphite-1:1.3.13-2 gsettings-desktop-schemas-3.36.0-1
gtk-update-icon-cache-1:3.24.14+9+g429a6287e0-1 gtk3-1:3.24.14+9+g429a6287e0-1
harfbuzz-2.6.4-2 iso-codes-4.4-1 jansson-2.12-1 js60-60.9.0-2 json-glib-1.4.4-1
lcms2-2.9-2 libcanberra-0.30+2+gc0620e4-2 libcups-2.3.1-1 libdaemon-0.14-4
libdatrie-0.2.12-1 libdrm-2.4.100-1 libepoxy-1.5.4-1 libglvnd-1.3.1-1
libgudev-233-1 libgusb-0.3.4-1 libmm-glib-1.12.8-1 libndp-1.7-1 libnm-1.22.10-1
libnma-1.8.28-1 libnotify-0.7.9-1 libogg-1.3.4-1 libomxil-bellagio-0.9.3-2
libpciaccess-0.16-1 libpgm-5.2.122-5 libpng-1.6.37-1 librsvg-2:2.48.0-1
libsodium-1.0.18-1 libsoup-2.70.0-1 libteam-1.30-1 libthai-0.1.28-1
libtiff-4.1.0-1 libtool-2.4.6+42+gb88cebd5-11 libunwind-1.3.1-1 libvorbis-1.3.6-1
libx11-1.6.9-6 libxau-1.0.9-2 libxcb-1.14-1 libxcomposite-0.4.5-2
libxcursor-1.2.0-1 libxdamage-1.1.5-2 libxdmcp-1.1.3-2 libxext-1.3.4-2
libxfixes-5.0.3-3 libxft-2.3.3-1 libxi-1.7.10-2 libxinerama-1.1.4-2
libxkbcommon-0.10.0-1 libxrandr-1.5.2-2 libxrender-0.9.10-3 libxshmfence-1.3-1
libxtst-1.2.3-3 libxxf86vm-1.1.4-3 llvm-libs-9.0.1-1 lm_sensors-3.6.0-1
mesa-19.3.4-2 mobile-broadband-provider-info-20190618-1
nm-connection-editor-1.16.0-1 pango-1:1.44.7+11+g73b46b04-1 pixman-0.38.4-1
polkit-0.116-5 rest-0.8.1-1 shared-mime-info-1.15-2 sound-theme-freedesktop-0.8-3
tdb-1.3.18-4 wayland-1.18.0-1 wayland-protocols-1.20-1 xcb-proto-1.14-1
xkeyboard-config-2.29-1 xorgproto-2019.2-2 zeromq-4.3.2-1 dialog-1:1.3_20200228-1
dosfstools-4.1-3 mtools-4.0.23-1 network-manager-applet-1.16.0-1
networkmanager-1.22.10-1 os-prober-1.77-1 sudo-1.8.31-1 wireless_tools-30.pre9-3
wpa_supplicant-2:2.9-7
Total Download Size: 98.99 MiB
Total Installed Size: 503.81 MiB
Net Upgrade Size: 493.56 MiB
:: Proceed with installation? [Y/n] Y
Right Ctrl

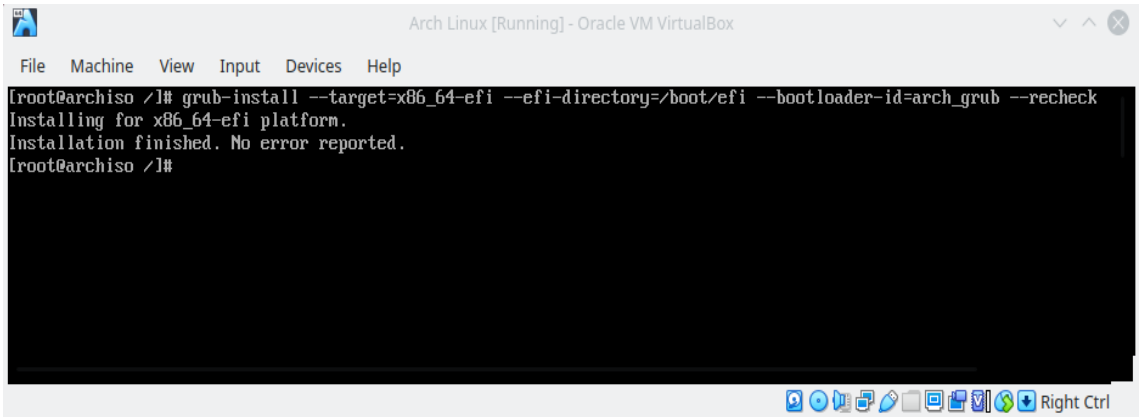

Arch Linux [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
wireless_tools-30.pre9-3-x... 127.7 KiB 252 KiB/s 00:01 [##########] 100%
dialog-1:1.3_20200228-1-x86_64 195.5 KiB 142 KiB/s 00:01 [##########] 100%
sudo-1.8.31-1-x86_64 868.8 KiB 198 KiB/s 00:04 [##########] 100%
mtools-4.0.23-1-x86_64 186.3 KiB 178 KiB/s 00:01 [##########] 100%
libnm-1.22.10-1-x86_64 1058.8 KiB 262 KiB/s 00:04 [##########] 100%
atk-2.34.1-1-x86_64 352.0 KiB 319 KiB/s 00:01 [##########] 100%
libpng-1.6.37-1-x86_64 237.5 KiB 306 KiB/s 00:01 [##########] 100%
xcb-proto-1.14-1-any 108.9 KiB 318 KiB/s 00:00 [##########] 100%
libxdmcp-1.1.3-2-x86_64 25.7 KiB 321 KiB/s 00:00 [##########] 100%
libxau-1.0.9-2-x86_64 10.5 KiB 655 KiB/s 00:00 [##########] 100%
libxcb-1.14-1-x86_64 999.8 KiB 278 KiB/s 00:04 [##########] 100%
xorgproto-2019.2-2-any 239.5 KiB 283 KiB/s 00:01 [##########] 100%
libx11-1.6.9-6-x86_64 2028.1 KiB 122 KiB/s 00:17 [##########] 100%
libxrender-0.9.10-3-x86_64 23.9 KiB 427 KiB/s 00:00 [##########] 100%
libxext-1.3.4-2-x86_64 103.4 KiB 190 KiB/s 00:01 [##########] 100%
graphite-1:1.3.13-2-x86_64 215.9 KiB 137 KiB/s 00:02 [##########] 100%
harfbuzz-2.6.4-2-x86_64 795.6 KiB 129 KiB/s 00:06 [##########] 100%
freetype2-2.10.1-2-x86_64 490.3 KiB 208 KiB/s 00:02 [##########] 100%
fontconfig-2:2.13.91+24+g7... 895.9 KiB 126 KiB/s 00:07 [##########] 100%
pixman-0.38.4-1-x86_64 231.8 KiB 65.5 KiB/s 00:04 [##########] 100%
cairo-1.17.2+17+g52a7c79fd... 717.9 KiB 101 KiB/s 00:07 [##########] 100%
libxfixes-5.0.3-3-x86_64 12.7 KiB 748 KiB/s 00:00 [##########] 100%
libxcursor-1.2.0-1-x86_64 27.7 KiB 163 KiB/s 00:00 [##########] 100%
libxinerama-1.1.4-2-x86_64 9.6 KiB 478 KiB/s 00:00 [##########] 100%
libxrandr-1.5.2-2-x86_64 25.3 KiB 155 KiB/s 00:00 [##########] 100%
libxi-1.7.10-2-x86_64 145.8 KiB 170 KiB/s 00:01 [##########] 100%
libepoxy-1.5.4-1-x86_64 398.5 KiB 125 KiB/s 00:03 [##########] 100%
libtiff-4.1.0-1-x86_64 816.3 KiB 240 KiB/s 00:03 [##########] 100%
shared-mime-info-1.15-2-x86_64 579.8 KiB 299 KiB/s 00:02 [##########] 100%
gdk-pixbuf2-2.40.0-2-x86_64 715.2 KiB 270 KiB/s 00:03 [##########] 100%
dconf-0.36.0-1-x86_64 98.5 KiB 305 KiB/s 00:00 [##########] 100%
libxcomposite-0.4.5-2-x86_64 11.0 KiB 552 KiB/s 00:00 [##########] 100%
libxdamage-1.1.5-2-x86_64 6.8 KiB 340 KiB/s 00:00 [##########] 100%
libdatrie-0.2.12-1-x86_64 26.2 KiB 341 KiB/s 00:00 [##########] 100%
libthai-0.1.28-1-x86_64 151.7 KiB 277 KiB/s 00:01 [##########] 100%
libxft-2.3.3-1-x86_64 46.1 KiB 184 KiB/s 00:00 [##########] 100%
fribidi-1.0.9-1-x86_64 10.3 KiB 10.4 KiB/s 00:03 [#######----------] 24%
Right Ctrl

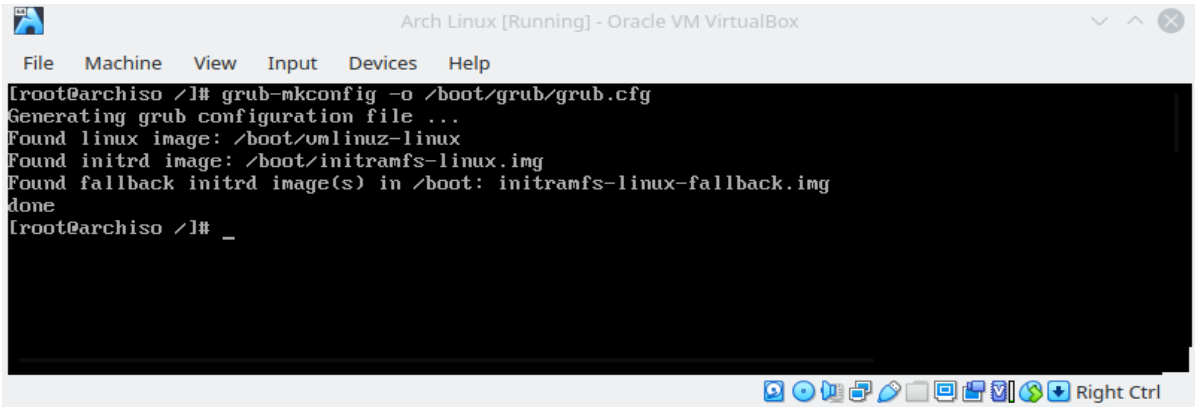
Adicionando usuário felipe em */etc/sudoers* temos:



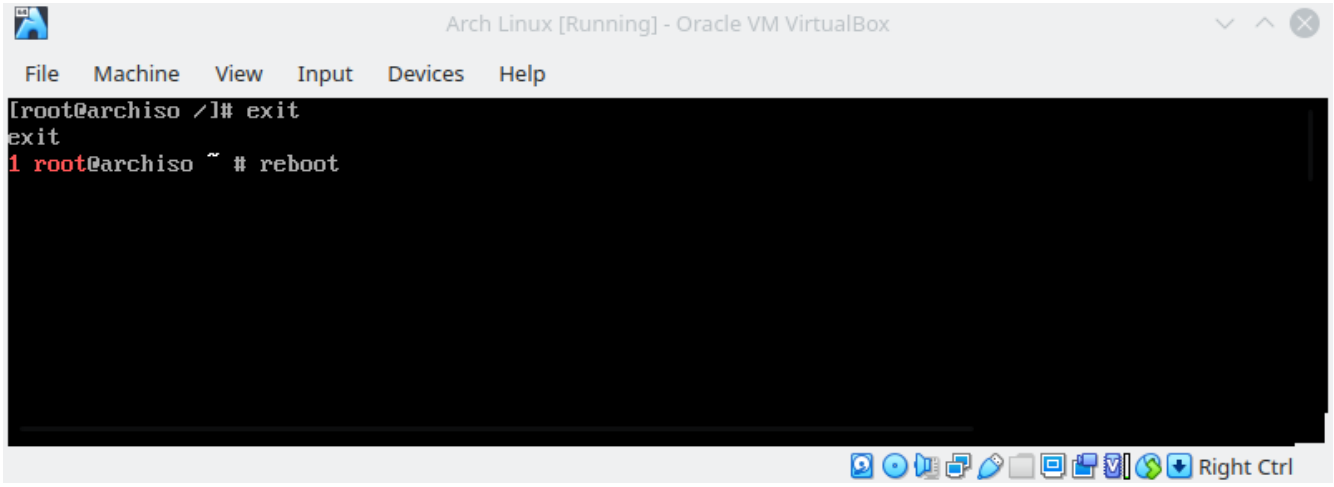
Instalando o GRUB



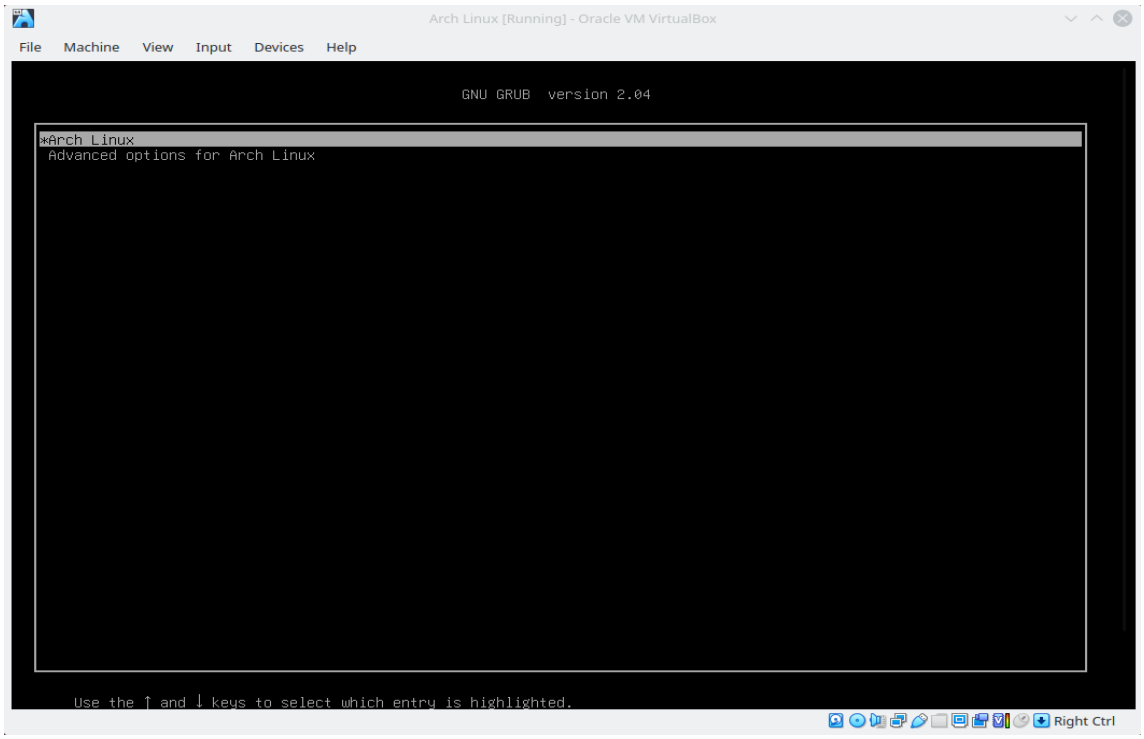




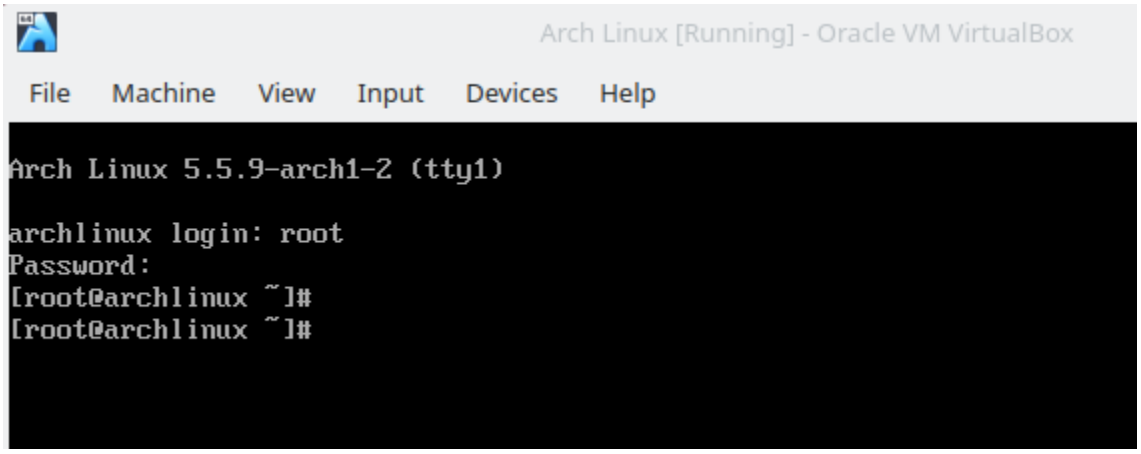
Reniciando o sistema



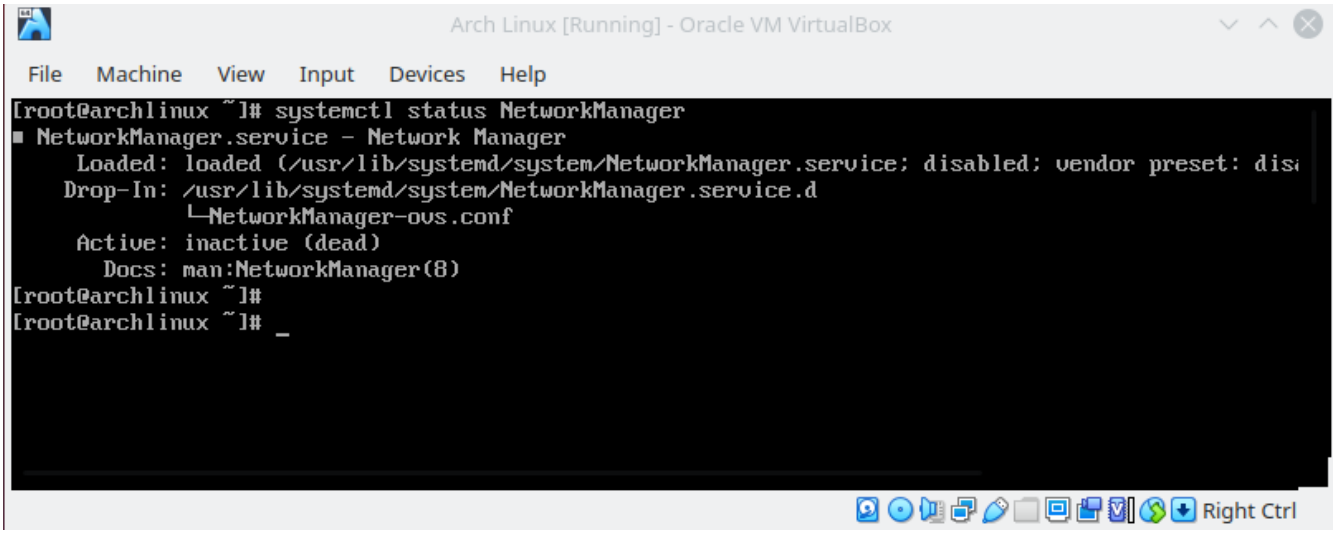
Podemos perceber que o GRUB foi instalado com sucesso, pois essa tela abaixo é a tela inicial do GRUB que permite escolher o sistema linux para inciar



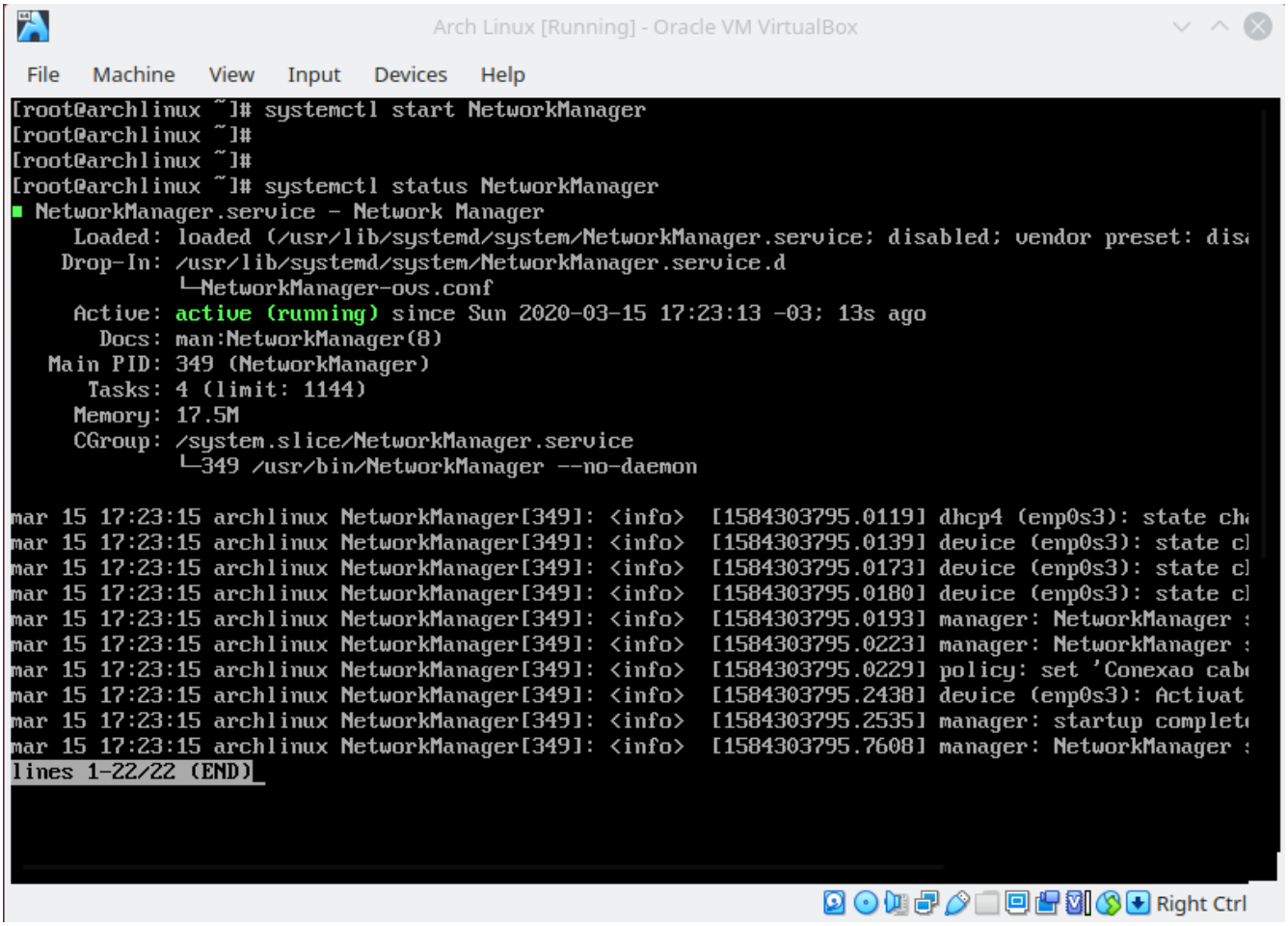
Logando como root



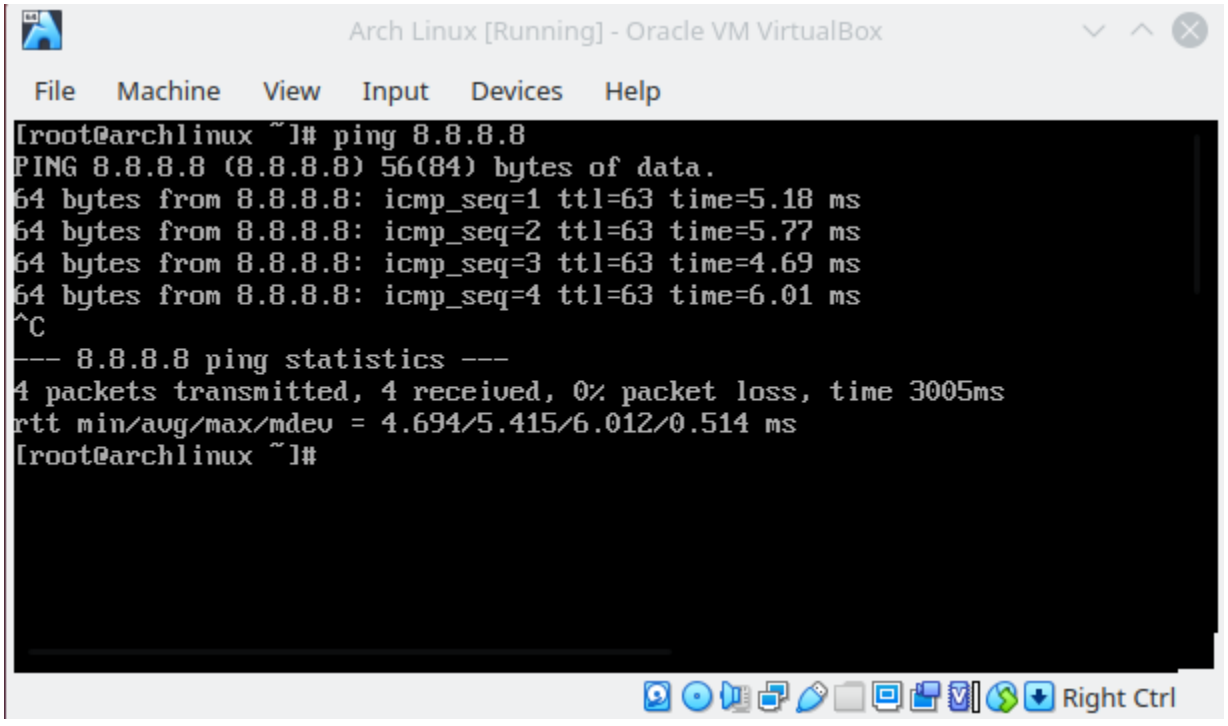
Vericando status do servico de internet



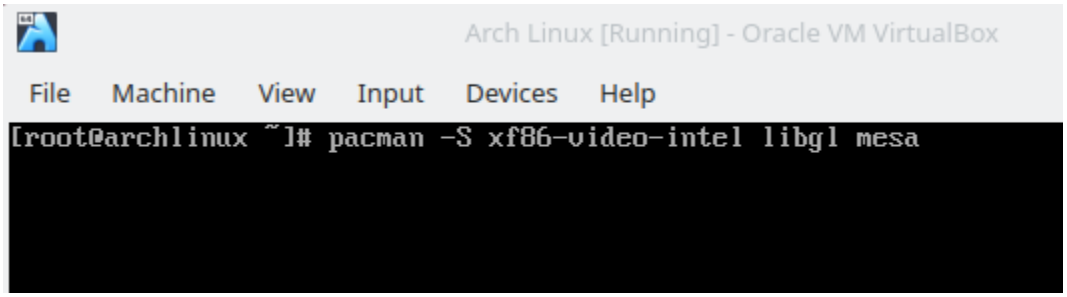
Ativando serviço de internet



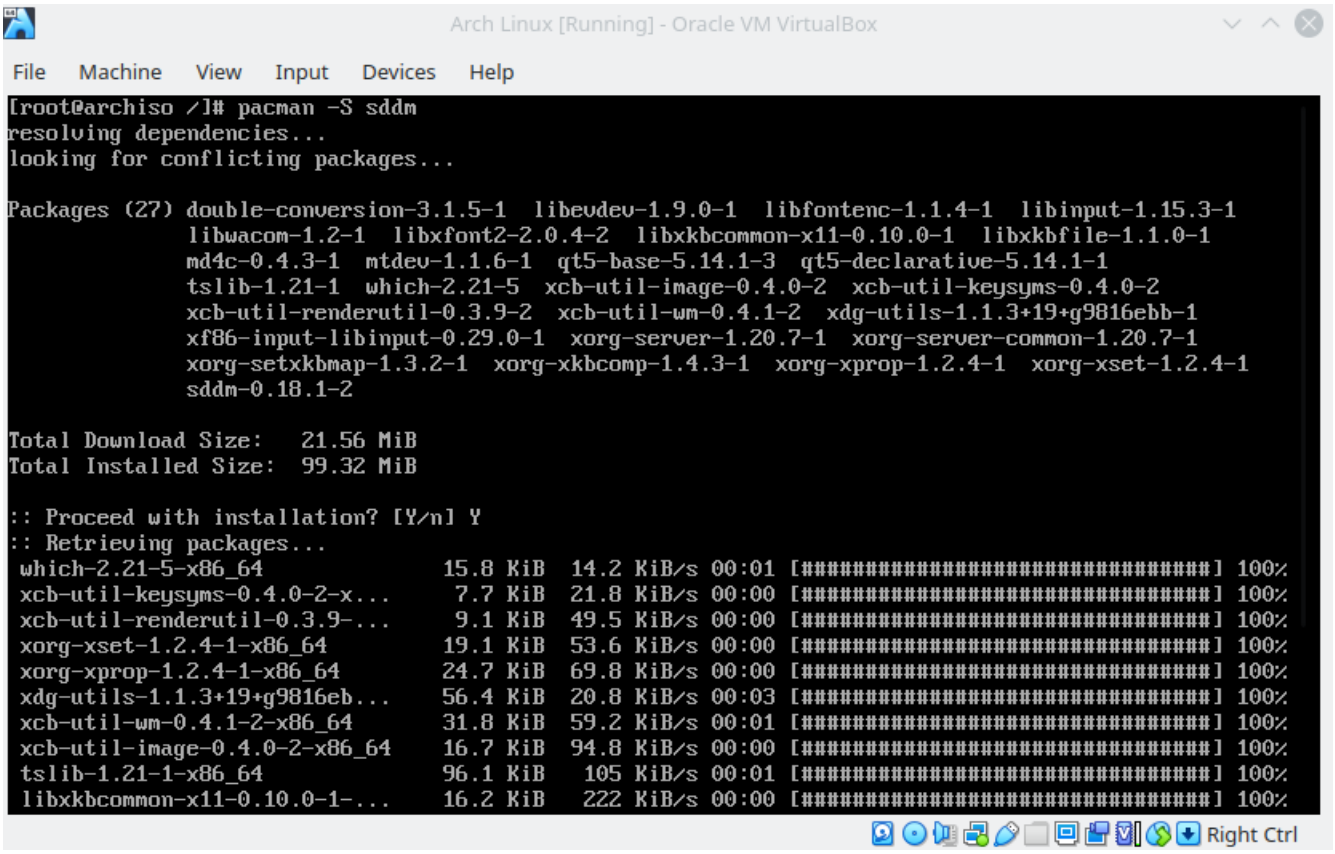
Testando funcionamento da internet com *ping.*



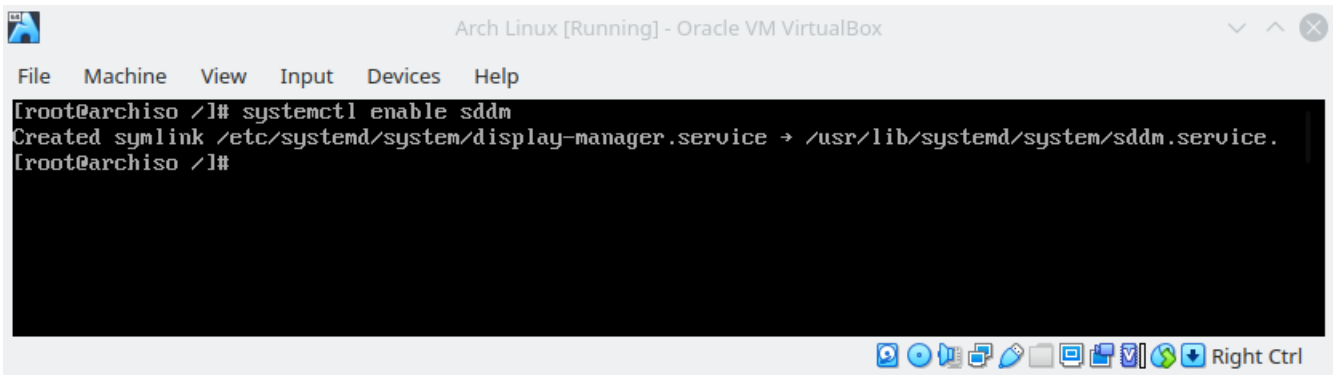
Instalando drivers da intel



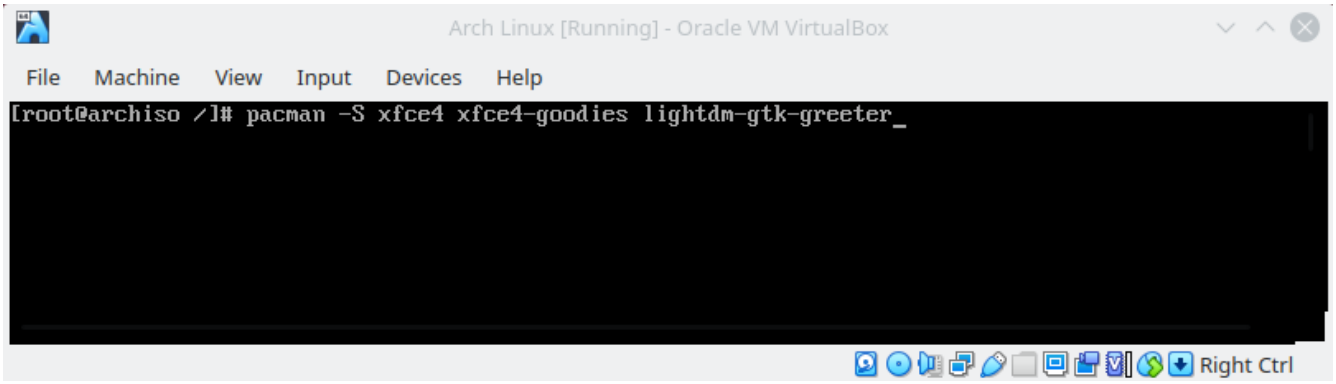
Instalando pacotes *sddm* para interface gráfica XFCE

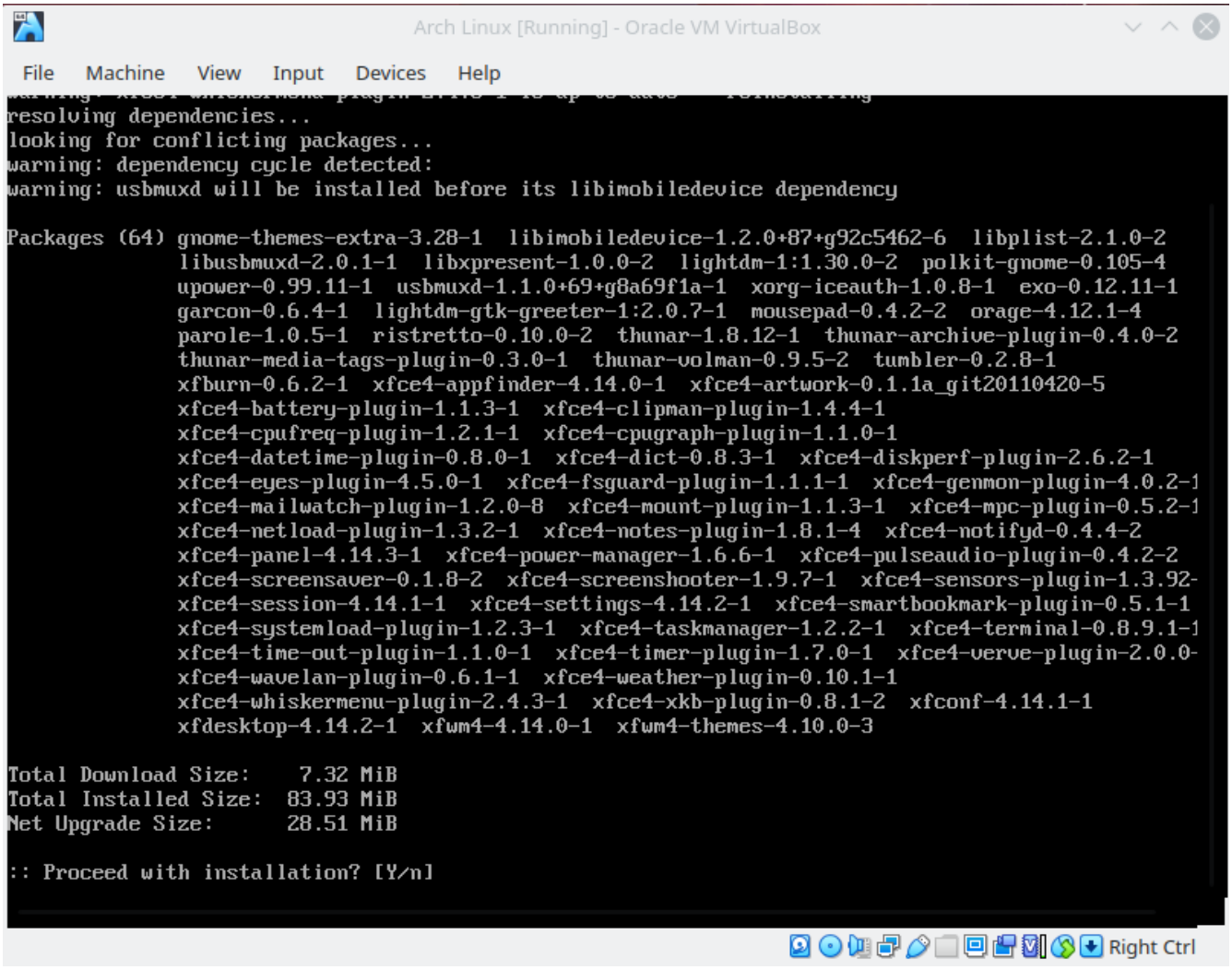


Abilitando *sddm* na inicialização do sistema

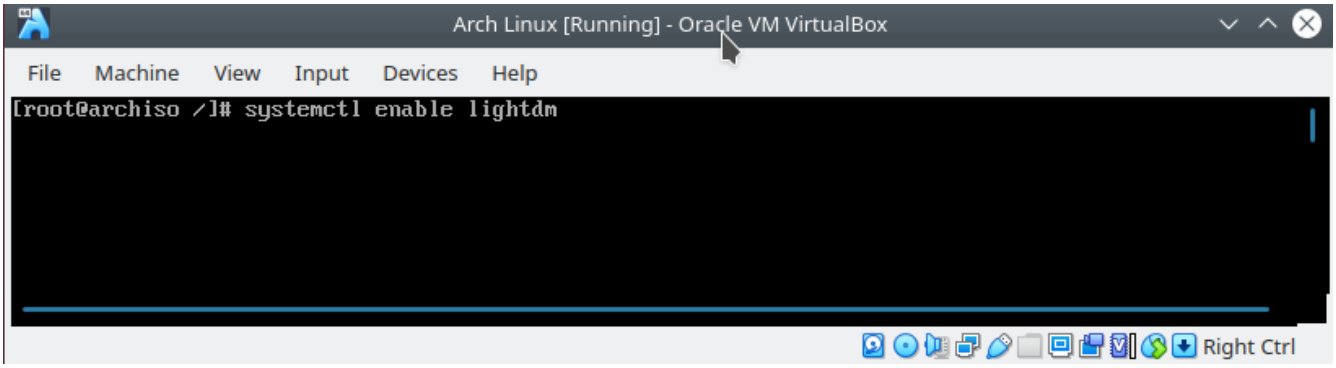


Instalando pacotes de interface gráfica XFCE

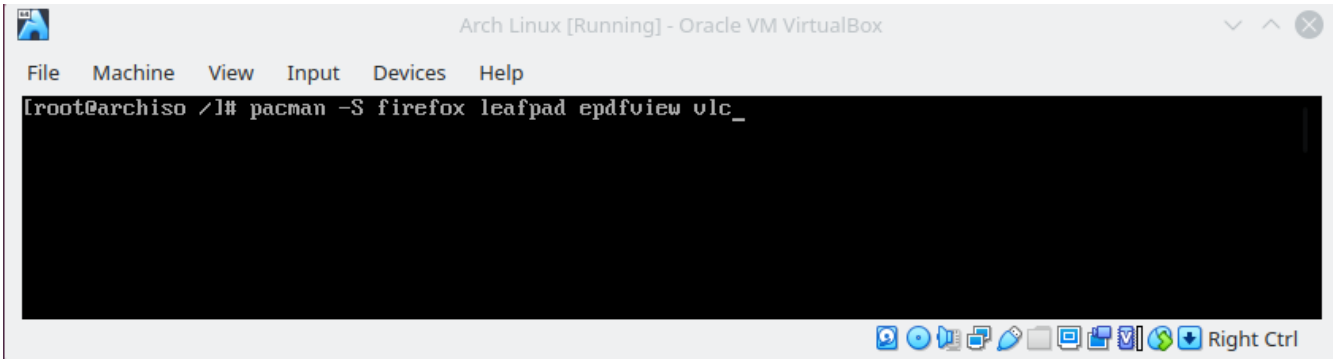




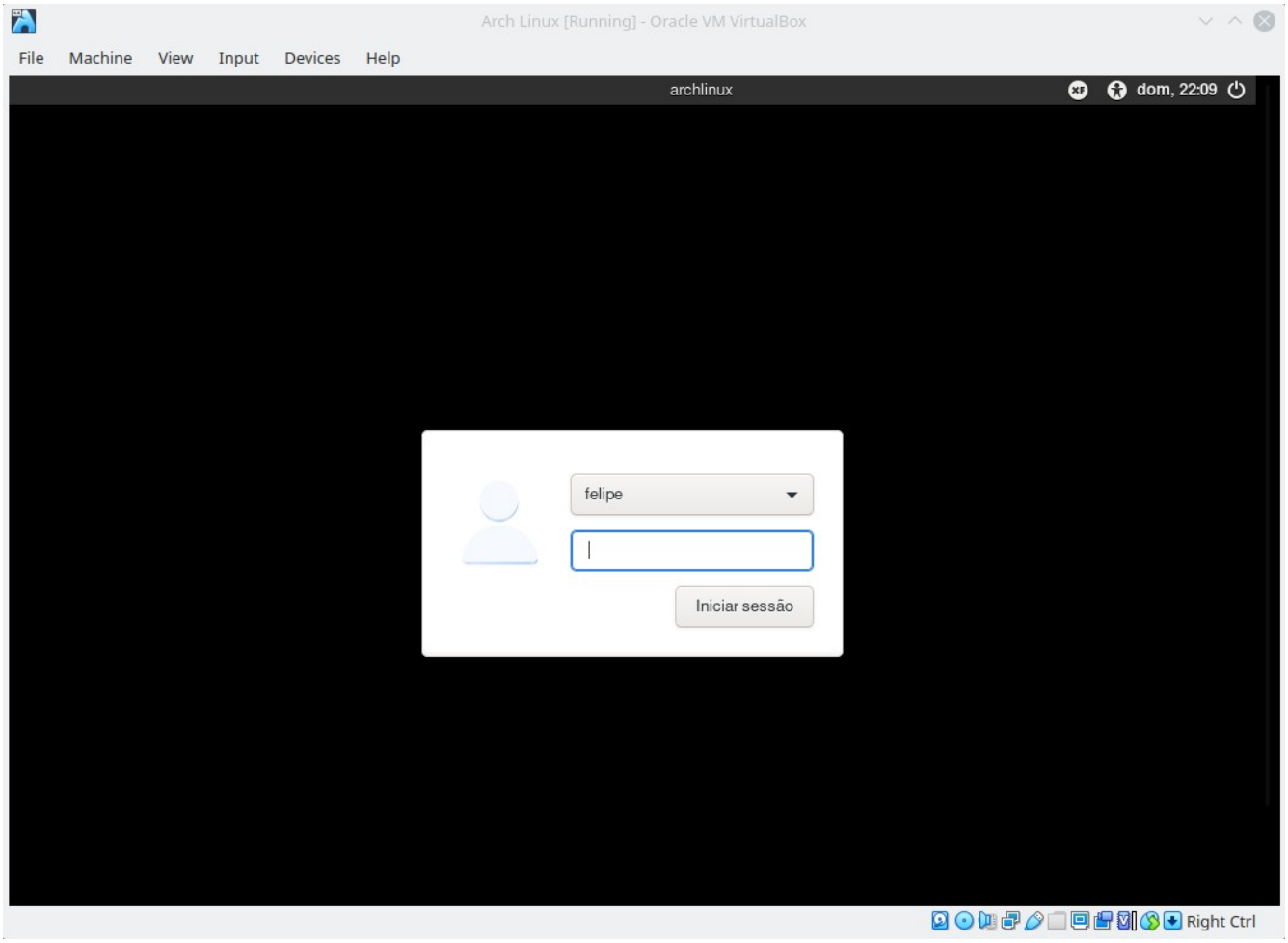
Abilitando lightdm



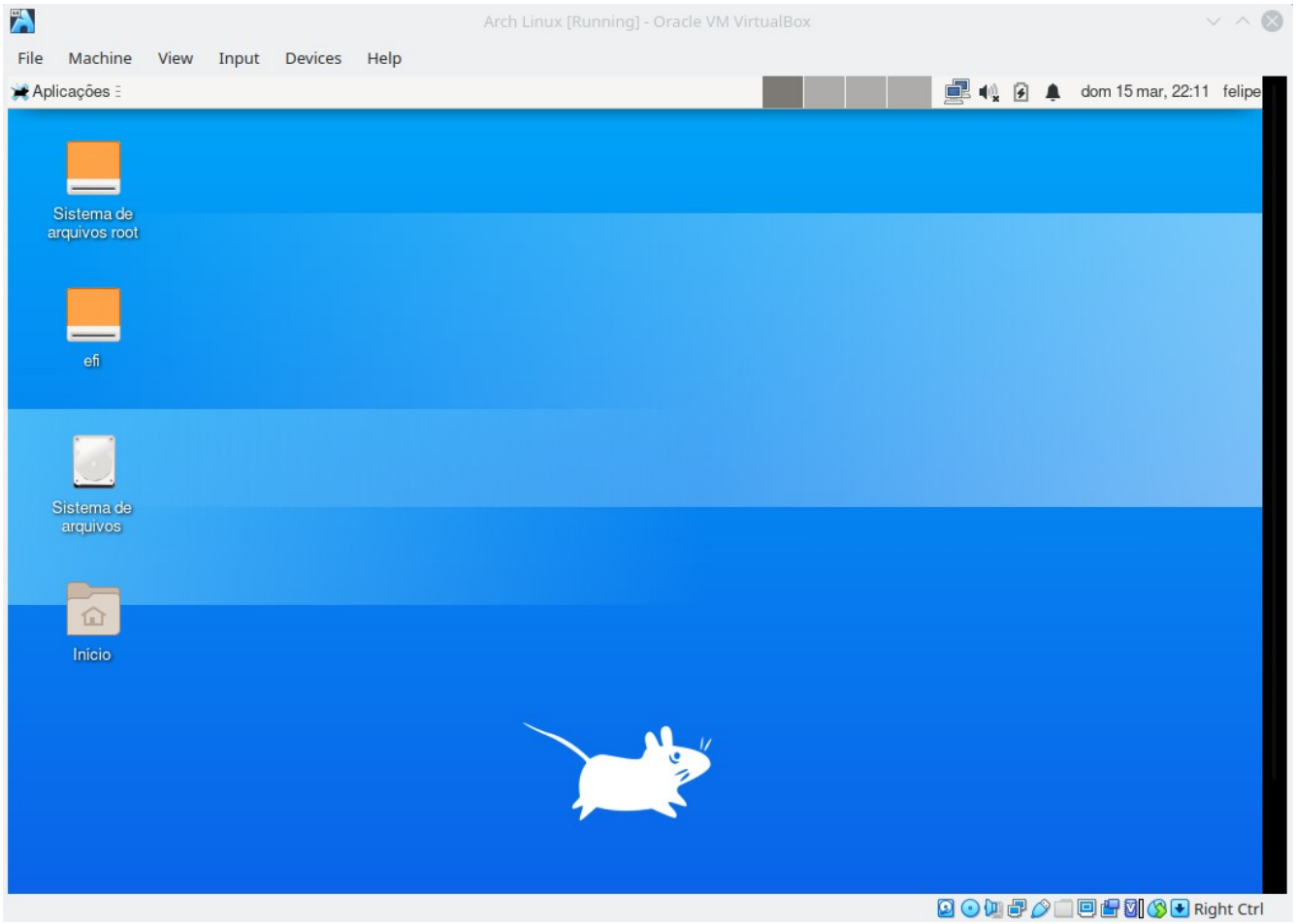
Instalando programas básicos como *firefox*, *leafpad*, *vlc* e *epdfview*.



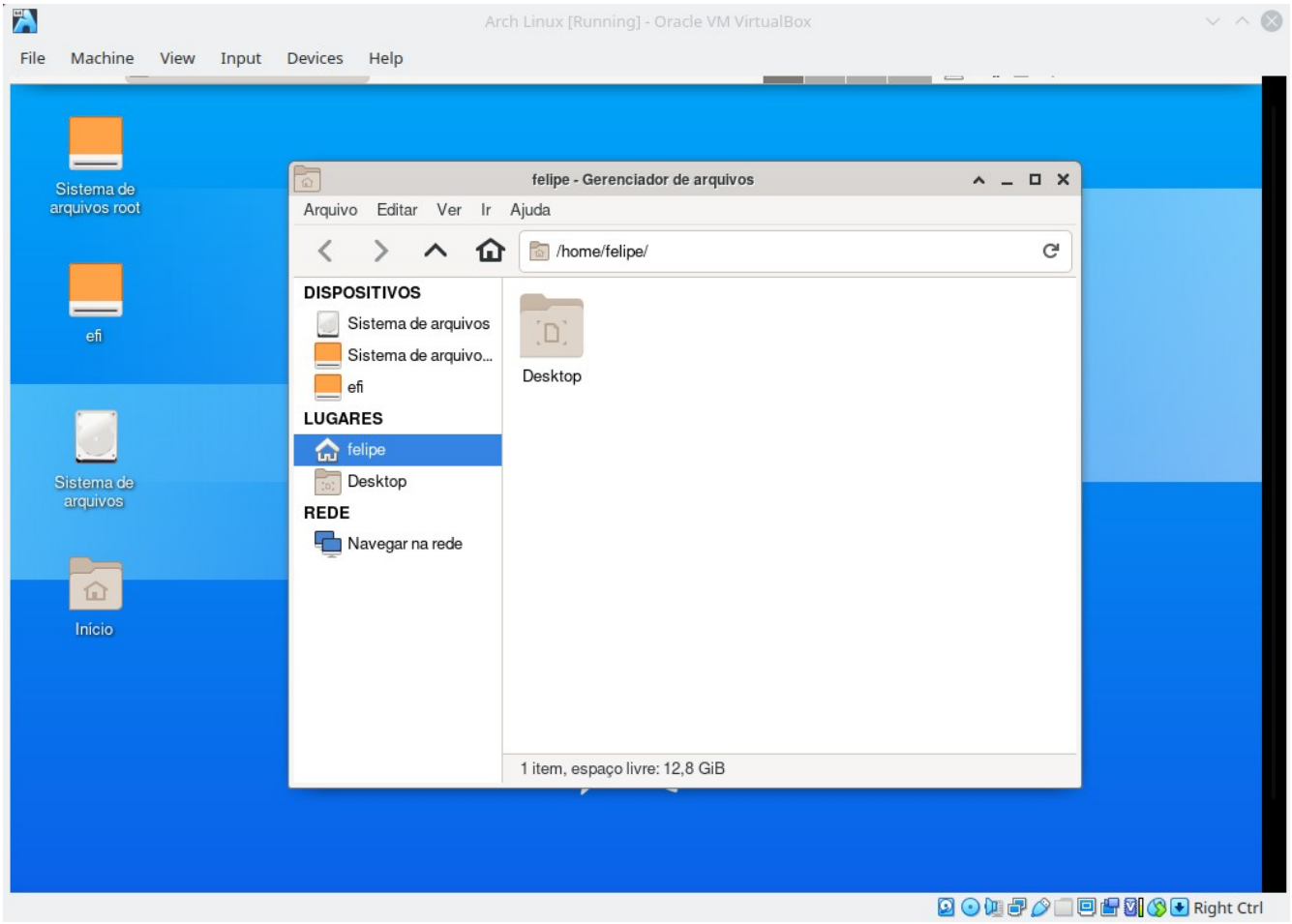
Ao reiniciar o sistema temos a tela de login abaixo:

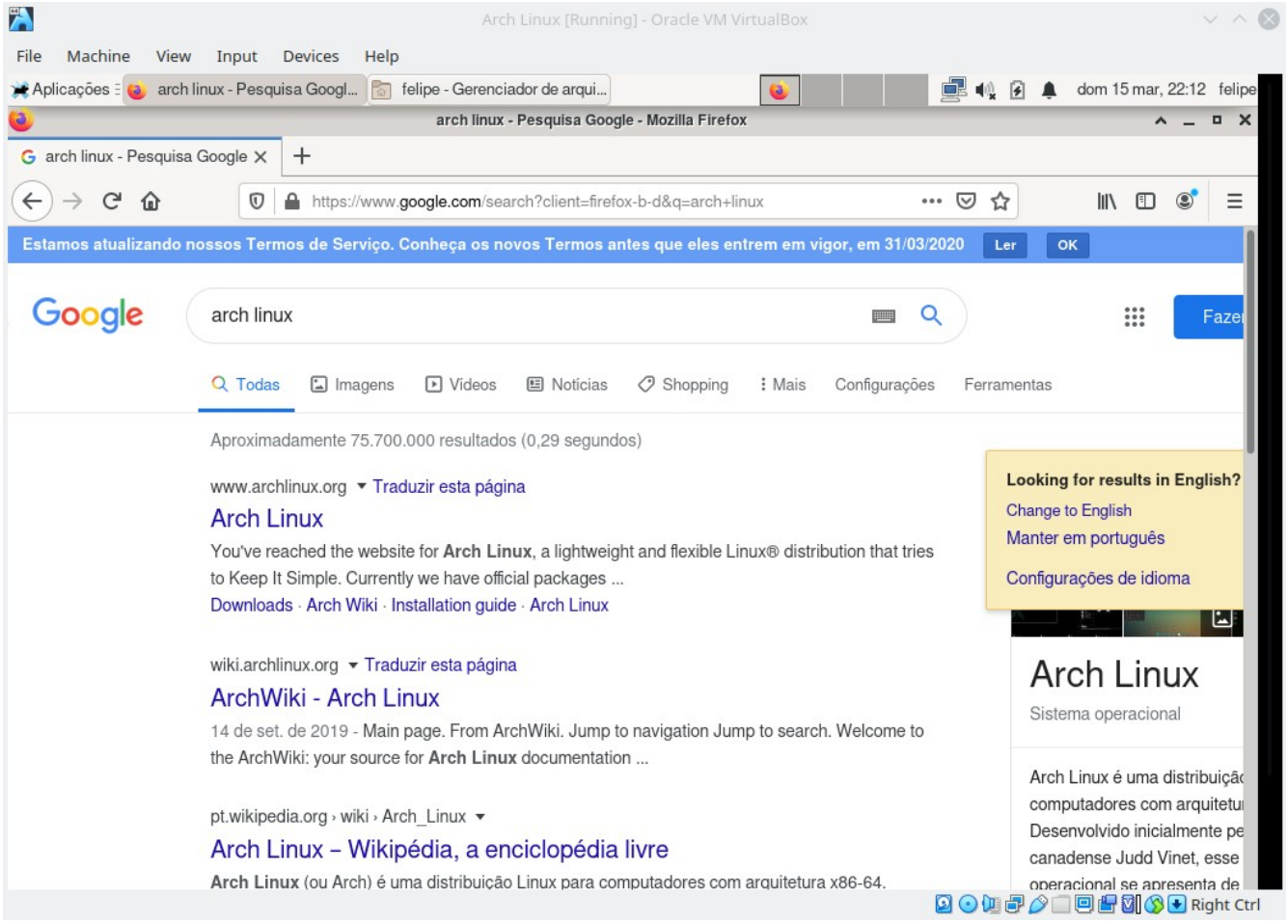


Efetuando o login, temos a tela inicial:



Testando alguns programas do sistema, temos:


Arch Linux [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Sistema de arquivos root
efi
Sistema de arquivos
Início
felipe - Gerenciador de arquivos
Arquivo Editar Ver Ir Ajuda
/home/felipe/
DISPOSITIVOS
Sistema de arquivos
Sistema de arquivo...
efi
LUGARES
felipe
Desktop
REDE
Navegar na rede
Desktop
1 item, espaço livre: 12,8 GiB
Right Ctrl



Por fim, essa instalação do Arch Linux com interface XFCE foi terminada com sucesso.