GRIS - Processo Seletivo - Linux
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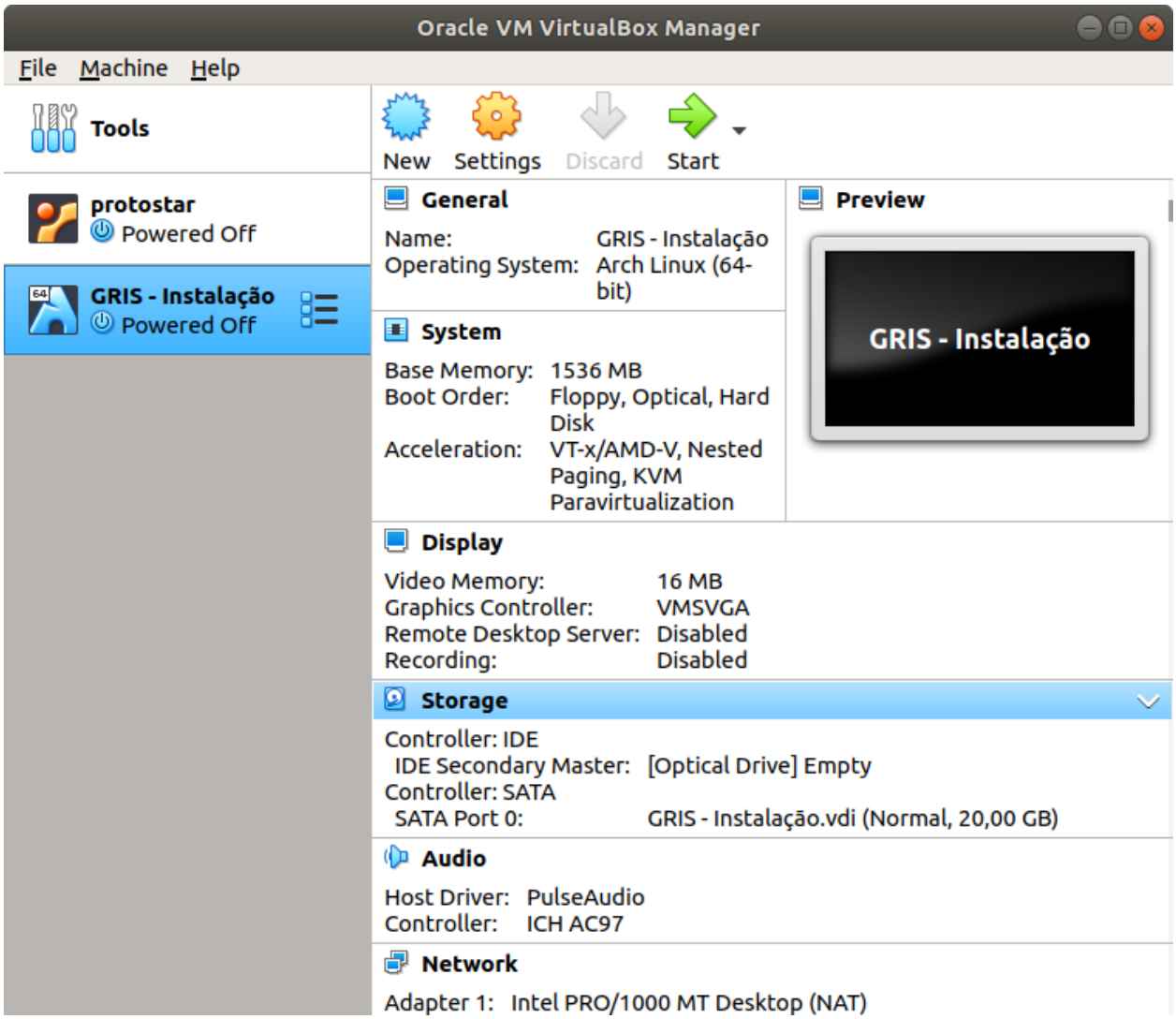
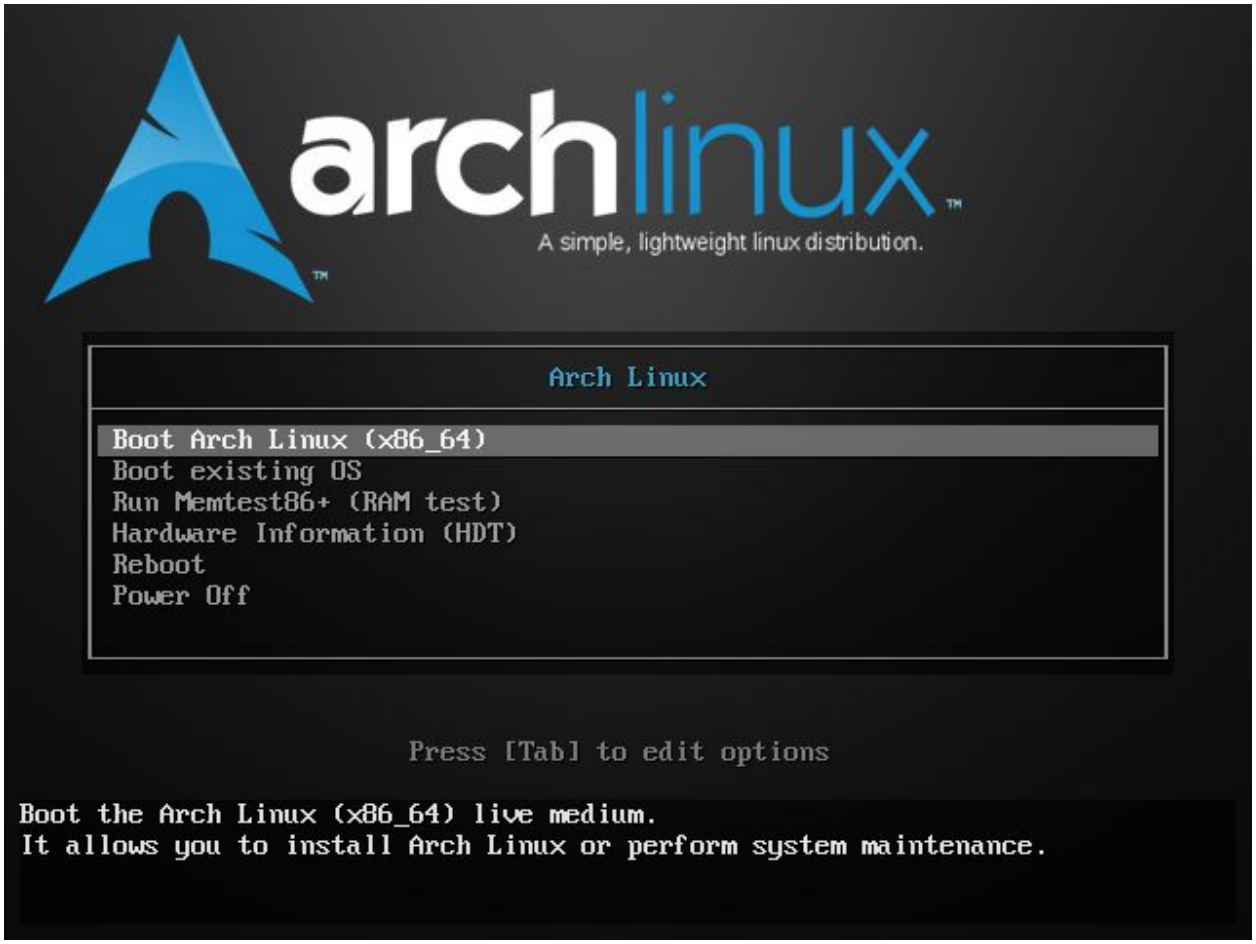
INSTALAÇÃO DO SISTEMA OPERACIONAL ARCH LINUX

Primeiramente, instalei o virtualbox e preparei o ambiente para a instalação do linux.




Select start-up disk
ORACLE
Please select a virtual optical disk file or a physical optical drive containing a disk to start your new virtual machine from.
The disk should be suitable for starting a computer from and should contain the operating system you wish to install on the virtual machine if you want to do that now. The disk will be ejected from the virtual drive automatically next time you switch the virtual machine off, but you can also do this yourself if needed using the Devices menu.
archlinux-2020.03.01-x86_64.iso (651,00 MB)
< Back
Start
Cancel

Depois disso, iniciei o sistema operacional com a ISO mostrada.



O primeiro passo foi escolher o layout do teclado para poder configurar os demais itens corretamente.

```
root@archiso ~ # localectl list-keymaps | grep -i br-latin1-abnt2
br-latin1-abnt2
root@archiso ~ # loadkeys br-latin1-abnt2
root@archiso ~ # _
```

Selecionado o padrão correto, o teclado está funcionando corretamente.
Agora, procuro checar a conexão com a internet.

```
root@archiso ~ # ping -c 3 google.com
PING google.com (172.217.29.142) 56(84) bytes of data.
64 bytes from gru10s01-in-f14.1e100.net (172.217.29.142): icmp_seq=1 ttl=63 time=24.5 ms
64 bytes from gru10s01-in-f14.1e100.net (172.217.29.142): icmp_seq=2 ttl=63 time=40.1 ms
64 bytes from gru10s01-in-f14.1e100.net (172.217.29.142): icmp_seq=3 ttl=63 time=24.2 ms

--- google.com ping statistics ---
3 packets transmitted, 3 received, 0% packet loss, time 2003ms
rtt min/avg/max/mdev = 24.177/29.585/40.109/7.442 ms
root@archiso ~ # _
```

Uma vez que verifiquei que temos acesso à internet, configura o Network Time Protocol (NTP) para permitir o sistema atualizar o horário pela rede.

```
root@archiso ~ # timedatectl set-ntp true
root@archiso ~ #
```

Próximo, devo criar uma partição no disco rígido. Criarei uma para o Arch Linux e outro de SWAP. Assim, lista-se os drives disponíveis.

```
root@archiso ~ # fdisk -l
Disk /dev/sda: 20 GiB, 21474836480 bytes, 41943040 sectors
Disk model: VBOX HARDDISK
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes


Disk /dev/loop0: 534.78 MiB, 560738304 bytes, 1095192 sectors
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes
root@archiso ~ # cfdisk /dev/sda_
```

Configuração final:

```
                                Disk: /dev/sda
                Size: 20 GiB, 21474836480 bytes, 41943040 sectors
                        Label: dos, identifier: 0xd011c25b

    Device          Boot          Start         End      Sectors     Size    Id Type
    /dev/sda1       *              2048    35653631     35651584      17G    83 Linux
>>  /dev/sda2                  35653632    41943039      6289408       3G    82 Linux swap / Solaris

 Partition type: Linux swap / Solaris (82)

Are you sure you want to write the partition table to disk? yes_

                    Type "yes" or "no", or press ESC to leave this dialog.
```

Crio o filesystem “ext4”, assim como o espaço de SWAP, ativo a SWAP e faço o “mount” no diretório “/mnt”.

```
root@archiso ~ # mkfs.ext4 /dev/sda1
mke2fs 1.45.5 (07-Jan-2020)
Creating filesystem with 4456448 4k blocks and 1114112 inodes
Filesystem UUID: 70708541-7be3-47ed-b940-4a986b0daf27
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 ~ # _
```

```
root@archiso ~ # mkswap /dev/sda2
Setting up swapspace version 1, size = 3 GiB (3220172800 bytes)
no label, UUID=b74d2a79-9010-472e-b02b-73c1cdfd9c5e
root@archiso ~ # _
```

```
root@archiso ~ # mount /dev/sda1 /mnt
root@archiso ~ # swapon /dev/sda2
root@archiso ~ #
```

Agora, utilizo o utilitário pactrap para instalar todos os componentes necessários do Arch.

```
root@archiso ~ # pacstrap /mnt base base-devel_
```

Gero o arquivo fstab.

```
root@archiso ~ # genfstab -U /mnt >> /mnt/etc/fstab
root@archiso ~ # _
```

Dou um chroot no diretório “mouted”.

```
root@archiso ~ # arch-chroot /mnt
[root@archiso /]# _
```

Escolho o zona de horário e atualizo o relógio do hardware.

```
[root@archiso /]# cd /usr/share/zoneinfo/
[root@archiso zoneinfo]# ls
Africa      CET      Egypt    GMT+0      Iran       MST7MDT  Poland     UTC          posixrules
America     CST6CDT  Eire     GMT-0      Israel     Mexico   Portugal   Universal    right
Antarctica  Canada   Etc      GMT0       Jamaica    NZ       ROC        W-SU         tzdata.zi
Arctic      Chile    Europe   Greenwich  Japan      NZ-CHAT  ROK        WET          zone.tab
Asia        Cuba     Factory  HST        Kwajalein  Navajo   Singapore  Zulu         zone1970.tab
Atlantic    EET      GB       Hongkong   Libya      PRC      Turkey     iso3166.tab
Australia   EST      GB-Eire  Iceland    MET        PST8PDT  UCT        leapseconds
Brazil      EST5EDT  GMT      Indian     MST        Pacific  US         posix
[root@archiso zoneinfo]# cd Brazil
[root@archiso Brazil]# ls
Acre  DeNoronha  East  West
[root@archiso Brazil]# cd East
bash: cd: East: Not a directory
[root@archiso Brazil]# ln -sf East /etc/localtime
[root@archiso Brazil]# hwclock --systohc
[root@archiso Brazil]#
```

Gero o arquivo “locale” e escolho o Português. Em seguida, escolho o hostname para esta nova distribuição.

```
[root@archiso Brazil]# locale-gen
Generating locales...
Generation complete.
[root@archiso Brazil]# echo "LANG=pt_BR.UTF-8" > /etc/locale.conf
[root@archiso Brazil]# cat /etc/hostname
cat: /etc/hostname: No such file or directory
[root@archiso Brazil]# echo "augustoarch" > /etc/hostname
[root@archiso Brazil]#
```

Ativo o DHCP e crio uma nova senha do root.

```
root@archiso ~ # systemctl enable dhcpcd
Created symlink /etc/systemd/system/multi-user.target.wants/dhcpcd.service → /usr/lib/systemd/system
/dhcpcd.service.
root@archiso ~ # passwd
New password:
Retype new password:
passwd: password updated successfully
root@archiso ~ #
```

Agora é a hora de instalar o Boot Loader utilizando o utilitário pacman.

```
[root@archiso ~]# pacman -S grub os-prober
resolving dependencies...
looking for conflicting packages...

Packages (2) grub-2:2.04-5  os-prober-1.77-1

Total Download Size:    6.69 MiB
Total Installed Size:  32.65 MiB

:: Proceed with installation? [Y/n] Y
:: Retrieving packages...
 grub-2:2.04-5-x86_64             6.7 MiB   121 KiB/s 00:56 [##################################] 100%
 os-prober-1.77-1-x86_64         16.8 KiB  51.6 KiB/s 00:00 [##################################] 100%
(2/2) checking keys in keyring                             [##################################] 100%
(2/2) checking package integrity                           [##################################] 100%
(2/2) loading package files                                [##################################] 100%
(2/2) checking for file conflicts                          [##################################] 100%
(2/2) checking available disk space                        [##################################] 100%
:: Processing package changes...
(1/2) installing grub                                      [##################################] 100%
Generate your bootloader configuration with:
  grub-mkconfig -o /boot/grub/grub.cfg
Optional dependencies for grub
    freetype2: For grub-mkfont usage
    fuse2: For grub-mount usage
    dosfstools: For grub-mkrescue FAT FS and EFI support
    efibootmgr: For grub-install EFI support
    libisoburn: Provides xorriso for generating grub rescue iso using grub-mkrescue
    os-prober: To detect other OSes when generating grub.cfg in BIOS systems [pending]
    mtools: For grub-mkrescue FAT FS support
(2/2) installing os-prober                                 [##################################] 100%
:: Running post-transaction hooks...
(1/2) Arming ConditionNeedsUpdate...
(2/2) Updating the info directory file...
[root@archiso ~]#
```

```
[root@archiso ~]# grub-install /dev/sda
Installing for i386-pc platform.
Installation finished. No error reported.
[root@archiso ~]#
```

```
[root@archiso ~]# grub-mkconfig -o /boot/grub/grub.cfg
Generating grub configuration file ...
done
[root@archiso ~]# _
```

Para instalar o ambiente de desktop, começo instalando o gnome e o xorg.

```
[root@archiso /]# pacman -S gnome
```

```
root@archiso ~ # pacman -S xorg-twm xorg-xclock xterm
resolving dependencies...
looking for conflicting packages...

Packages (15) fontconfig-2:2.13.91+24+g75eadca-2  libice-1.0.10-2  libsm-1.2.3-1
              libutempter-1.1.6-3  libxaw-1.0.13-2  libxft-2.3.3-1  libxmu-1.1.3-1  libxpm-3.5.13-1
              libxrender-0.9.10-3  libxt-1.2.0-1  xbitmaps-1.1.2-1  xorg-luit-1.1.1-3
              xorg-twm-1.0.10-1  xorg-xclock-1.0.9-1  xterm-353-1

Total Download Size:   1.90 MiB
Total Installed Size:  8.93 MiB

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

Habilito o gdm.service.

```
[root@archiso /]# systemctl start gdm.service
Running in chroot, ignoring request: start
[root@archiso /]# systemctl enable gdm.service
Created symlink /etc/systemd/system/display-manager.service → /usr/lib/systemd/system/gdm.service.
[root@archiso /]# systemctl enable NetworkManager.service
Created symlink /etc/systemd/system/multi-user.target.wants/NetworkManager.service → /usr/lib/system
d/system/NetworkManager.service.
Created symlink /etc/systemd/system/dbus-org.freedesktop.nm-dispatcher.service → /usr/lib/systemd/sy
stem/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@archiso /]# _
```

Reinicio a máquina virtual e aparece o terminal GRUB.

```
                        GNU GRUB  version 2.04

   Minimal BASH-like line editing is supported. For the first word,
   TAB lists possible command completions. Anywhere else TAB lists
   possible device or file completions.


grub> _
```

A partir desse então, não consegui prosseguir. Todas as tentativas de instalar a interface do “gnome”, assim como o “lightdm”, foram frustradas. O terminal GRUB não consegue carregar o kernel do sistema operacional.