

Install

- Download arch linux iso then flash usb

```
wget
http://archlinux.uk.mirror.allworldit.com/archlinux/iso/2024.01.01/archlinux-2024.01.01-x86_64.iso
sudo dd if=/path/to/archlinux-2024.01.01-x86_64.iso of=/dev/sdX status=progress
```

- Boot with archlinux iso
- Set the console keyboard layout - did not set
- Setup network - wifi in my case

```
iwctl
[iwd]# station wlan0 connect SSID
exit or ctrl+d
```

- verify

```
ping archlinux.org
```

- Update system clock

```
<code> timedatectl set-timezone Europe/Dublin ``
```

6. Partition the disks used fdisk to create 2 partitions `sda1 ext4 /boot type 83` (and make it bootable) `sda2 ext4 LVM - type 8e` `` \* encrypt the disk using LUKS: `cryptsetup luksFormat /dev/sda2` `` * encrypt the disk: `cryptsetup luksOpen /dev/sda2 luks` ``

7. LVM Configuration

* create the physical volume `pvcreate /dev/mapper/luks` ``

* create volume group `vgcreate vg0 /dev/mapper/luks` `` \* create the virtual volumes `lvcreate -L 8G vg0 -n swap` # make it double size of your ram `lvcreate -L 40G vg0 -n root` `lvcreate -l 100%FREE vg0 -n home` `` * make swap partition and format these partitions `mkswap /dev/mapper/vg0-swap mkfs.ext4 /dev/mapper/vg0-home mkfs.ext4 /dev/mapper/vg0-root mkfs.ext4 /dev/sda1` `` 8. Mount partition, create boot and home mount points, turn on swap part `mount /dev/mapper/vg0-root /mnt mkdir -p /mnt/{boot,home} mount /dev/mapper/vg0-home /mnt/home mount /dev/sda1 /mnt/boot swapon /dev/mapper/vg0-swap` `` 9. Install base system `pacstrap /mnt base vim lvm2 linux linux-firmware` ``

* if installation brings some issues with old keys run following and rerun `pacstrap` command `pacman -Sy archlinux-keyring` ``

10. Generate fstab `genfstab -U /mnt » /mnt/etc/fstab` ``

11. Change the root path to the new system `arch-chroot /mnt` ``

12. Timezone `timedatectl set-timezone Europe/Dublin hwclock --systohc --utc` `` 13. Set host

name `<code> echo arch > /etc/hostname `` 14. Set locale <code> vim /etc/locale.gen # uncomment: # en_US.UTF-8 UTF-8 `` then run <code> locale-gen `` then <code> echo LANG=en_US.UTF-8 > /etc/locale.conf echo LANGUAGE=en_US » /etc/locale.conf echo LC_ALL=C » /etc/locale.conf `` 15. Set root password <code> passwd root ```

16. configure the initram file system to load LVM and LUKS modules before loading the kernel `<code> vim /etc/mkinitcpio.conf # and add 'encrypt lvm2' before `filesystem` HOOKS="base udev autodetect modconf kms keyboard keymap consolefont block encrypt lvm2 filesystems fsck" `` then run <code> mkinitcpio -P ```

17. Install grub `<code> pacman -S grub networkmanager sudo grub-install -target=i386-pc /dev/sda `` * edit file `vim /etc/default/grub`, add `lvm` and `cryptdevice=/dev/sda2:luks` to following: <code> GRUB_PRELOAD_MODULES='lvm' GRUB_CMDLINE_LINUX="cryptdevice=/dev/sda2:luks" `` and run following to regenerate grub config file <code> grub-mkconfig -o /boot/grub/grub.cfg `` 18. Exit from chroot mode, unmount part and reboot machine <code> exit umount -R /mnt reboot ```

After install steps

1. Connect wire Eth0 and start Network Manager - then setup wifi `` `systemctl enable -now NetworkManager nmtui `` 2. Install xorg,lightdm and i3 `` pacman -S bash-completion xorg-server pacman -S xorg-xinit xorg-xkill pacman -S xterm firefox pacman -S i3-wm i3lock i3status dmenu network-manager-applet pacman -S lightdm lightdm-gtk-greeter systemctl enable lightdm reboot `` 3. Create user `` useradd -m karcio passwd karcio ### add user to sudo su - karcio echo "exec i3" » ~/.xinitrc `` 3. Install sound `` sudo pacman -S pulseaudio pulseaudio-alsa alsa-utils `` 4. Install notification `` sudo pacman -S notification-daemon libnotify `` then edit /usr/share/dbus-1/services` `` sudo vim /usr/share/dbus-1/services/org.freedesktop.Notifications.service `` and add following lines: `` [D-BUS Service] Name=org.freedesktop.Notifications Exec=/usr/lib/notification-daemon-1.0/notification-daemon `` 5. Install additional fonts `` sudo pacman -S ttf-font-awesome terminus-font ttf-dejavu `` 6. Install cron `` sudo pacman -S cronie sudo systemctl enable -now cronie.service `` 7. Install graph stuff `` sudo pacman -S feh `` 8. Install some tools `` sudo pacman -S git alacritty mc zip unzip ```

<https://blog.bespinian.io/posts/installing-arch-linux-on-uefi-with-full-disk-encryption/>

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Last update: **2024/01/22 21:21**

