Arch Linux Installation (BIOS)

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Contents

1 Setting Our Timedate

```
timedatectl set-ntp true
```

2 Disk Partitioning

First we should decide about in which disk drive we're going to install our arch linux.

```
lsblk #For printing out our current disk
fdisk /dev/sda
```

Instead of 'sdb' you should write the name of the disk you want your linux to be installed. Now we're on a new command prompt called fdisk. Type in 'p' for listing out your partitions. Type in 'n' for creating a new partition, partition number and first sector are in default so press enter. Type in 'd' to format your partitions. But for the last sector, we want to put the size to create our partition.

- Boot: +200M
- Swap: 1.5 Times your memory
- Root: Depends on how much program are you going to install on your linux - at least +15G
- Home: Rest of your space - just leave the last sector empty and automatically does that for you

And last but not least for the fdisk environment: Type in 'w' for writing out your partitions on the device. Now we're going to make file system on out 'root', 'boot' and 'home' partition.

```
mkfs.ext4 /dev/sda1
mkfs.ext4 /dev/sda3
mkfs.ext4 /dev/sda4
```

And for our Swap:

```
mkswap /dev/sda2
swapon /dev/sda2
```

3 Mounting

Now we're going to mount our 'root' partition into '/mnt'.

```
mount /dev/sda3 /mnt
```

Check '/mnt' with 'ls' command:

```
ls /mnt
```

3.1 Making Directories

```
mkdir /mnt/home
mkdir /mnt/boot
```

3.2 Mounting Directories

Now we should mount our ‘/home‘ and ‘/boot‘ into the file that we’ve just created.

```
mount /dev/sda1 /mnt/boot
mount /dev/sda4 /mnt/home
```

4 Updating Pacman Mirrorlist

First we install ‘reflector‘ package.

```
pacman -S reflector
```

Then we should update our mirrorlist based on download speed.

This will increase a huge amount of download speed

```
reflector --latest 200 --sort rate --save /etc/pacman.d/mirrorlist
```

5 Installtion

```
pacstrap /mnt base base-devel linux linux-firmware
```

This will install our base core arch linux and our linux kernel. You can also install the ‘amd-ucode‘ or if you have a intel cpu ‘intel-ucode‘ and this will improve your cpu performance.

6 Fstab

This will generate UUID for our partitions.

```
genfstab -U /mnt >> /mnt/etc/fstab
```

7 Chroot

Change root into the new system.

```
arch-chroot /mnt
```

8 Timezone

```
ln -sf /usr/share/zoneinfo/Europe/Switzerland /etc/localtime
```

8.1 Hardware Clock Sync

This will generate '/etc/adjtime'

```
hwclock --systohc
```

9 Locale

Uncomment your suited language.

```
vim /etc/locale.gen
```

9.1 Generate Locale

```
locale-gen
```

9.2 Create a Locale Config

```
vim /etc/locale.conf
```

And put this in it:

```
LANG = en_US.UTF-8
```

10 Host Name

```
vim /etc/hostname
```

10.1 Local IP For Host

```
vim /etc/hosts
```

And put this in it:

```
127.0.0.1 localhost
::1 localhost
127.0.1.1 Username.localdomain Username
```

11 Initramfs (Not Necessary)

```
mkinitcpio -P
```

12 Set Password

```
passwd
```

13 Boot Loader

```
pacman -S grub
```

13.1 Grub

```
grub-install --target=i386-pc /dev/sda
```

13.1.1 Grub Config

```
grub-mkconfig -o /boot/grub/grub.cfg
```

14 Installing Useful Software

pacman -S networkmanager network-manager-applet wireless-tools wpa-supplicant dialog mtools dosfstools linux-headers cups bluez bluez-utils git pulseaudio pulseaudio-bluetooth pulseaudio-jack pulseaudio-equalizer xdg-utils xdg-user-dirs

14.1 Enabling Software In Systemctl

```
systemctl enable NetworkManager
systemctl enable org.cups.cupsd
```

15 Adding Users

```
useradd -mG wheel <Username>
```

15.1 Sudo Permissions / Sudoers

Uncomment your wheel section in this file:

```
EDITOR=vim visudo
```

15.2 Set Password For Your User

```
passwd <Username>
```

16 Exit Chroot

```
exit
```

17 Unmount

This will unmount all disks:

```
umount -a
```

18 Reboot and Have Fun!

```
reboot
```