**Arch Linux ( Core )**

A Step-by-step guide to install the system

Created by Eng. Turky Abdulaziz Abdulhafiz via open-source software LibreOffice and publishd on Monday October 23, 2017

**1- Partitioning**

use (cfdisk) or your preferred disk partitioning software and create at least the following partitions ( Partitioning Type: dos )

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Partition | Bootable | Type | Mount Point | File Format | Size |
| /dev/sda1 | Yes | Primary | / | Linux | %80 |
| /dev/sda2 | No | Primary | swap | Linux | 2x RAM |
| /dev/sda3 | No | Extended | home | Extended | %20 |
| /dev/sda5 | No | Extended | home | Linux |

**2- Making File System**

make file-system for the created partitions as follows

|  |  |  |
| --- | --- | --- |
| Partition | File System | Command |
| /dev/sda1 | Ext4 | **mkfs.ext4 /dev/sda1** |
| /dev/sda5 | Ext4 | **mkfs.ext4 /dev/sda5** |
| /dev/sda2 | swap | **mkswap /dev/sda2**  **swapon /dev/sda2** |

**3- Mount Partitions**

**mount /dev/sda1 /mnt**

**mkdir /mnt/home**

**mount /dev/sda5 /mnt/home**

**4- Rank Mirrorlist (** *optional* **)**

* backup current mirrorlist:

**mv /etc/pacman.d/mirrorlist /etc/pacman.d/mirrorlist.BAK**

* rank mirrorlist:

**rankmirrors /etc/pacman.d/mirrorlist.BAK > /etc/pacman.d/mirrorlist**

**5- Install Arch Base System**

**pacstrap /mnt base base-devel**

**6- Generate File-System Tables**

* generate: **genfstab /mnt >> /mnt/etc/fstab**
* verify: **cat /mnt/etc/fstab**

**7- Configure Installed Arch System**

\*\***[ Localization ]\*\***

\* Switch to installed system: **arch-chroot /mnt /bin/bash**

\* Configure System Lnaguages:

- Edit locale.gen file: **vi /etc/locale.gen**

\*\* Uncomment these lines: **en\_US.UTF-8 UTF-8**

**ar\_SA.UTF-8 UTF-8**

- Generate locale: **locale-gen**

- Create locale configuration file: **vi /etc/locale.conf**

\*\* Write this line inside: **LANG=en\_US.UTF-8**

\*\***[ Timezone ]\*\***

\* Configure time-zone:

**ln -sf /usr/share/zoneinfo/Asia/Riyadh /etc/localtime**

\* Set UTC time: **hwclock -–systohc -–utc or ( hwclock -w -u )**

\*\***[ Root Password ]\*\***

\* Set root password: **passwd**

\*\***[ Host Name ]\*\***

\* Set host name: **vi /etc/hostname**

- Write this line inside: **<your-hostname>**

\*\***[ Host IP ]\*\***

\* Set host ip: **vi /etc/hosts**

- Write this line inside:

**127.0.0.1 localhost.localdomain <your-hostname>**

\* Configure DHCP: **systemctl enable dhcpcd**

\* Install and configure GRUB bootloader:

- Installation: **pacman -S grub os-prober**

- Configuration: **grub-install /dev/sda**

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

**8- End the installation**

\* Exit: **exit**

\* Unmount all partitions: **umount /mnt/home && umount /mnt**

\* Restart: **reboot**

**9- First boot**

\* Login as root: **root**

\* make sure swap is on: **swapon -s**

\* if not: **mkswap /dev/sda2**

**blkid | grep swap**

**swapon /dev/sda2**

\* add swap to file system table: **vim /etc/fstab**

|  |
| --- |
| # UUID=67dff2b7-dd22-4bcc-9d5d-65f0bda2428b                                       /dev/sda2                swap        swap        defaults    0   0 |

**Arch Linux ( GUI )**

A Step-by-step guide to install GUI

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1- Login as root

2- Update the system: **sudo pacman -Syu**

3- Include 32-bit packages

\* Edit pacman configuration file: **vi /etc/pacman.conf**

\* Uncomment the following line under **#[multilib]** section:

**Include = /etc/pacman.d/mirrorlist**

4- Create normal user account:

**useradd -m -g users -G wheel,storage,power -s /bin/bash <username>**

5- Set Password for the created user account: **passwd <username>**

6- Install sudoers:

\* Install sudo: **pacman -S sudo**

\* Edit sudoers file: visudo

\* Uncomment the following line: **%wheel ALL=(ALL) ALL**

7- Install X.Org:

**pacman -S xorg xorg-server xorg-init xorg-setmode xorg-setpointer**

8- Install Desktop Environment: (choose one of the following DE)

\* ***MATE:***

- Install packages: **pacman -S lxdm mate mate-extra**

- Enable Display Manager: **systemctl enable lxdm.service**

\* ***Budgie:***

- Install packages:

**pacman -S lxdm budgie-desktop gnome-control-center**

- Enable Display Manager: **systemctl enable lxdm.service**

\* ***KDE Plasma:***

- Install packages: **pacman -S lxdm plasma-desktop plasma-meta**

- Enable Display Manager: **systemctl enable lxdm.service**

\* ***Cinnamon:***

- Install packages: **pacman -S lxdm cinnamon nemo xarchive**

- Enable Display Manager: **systemctl enable lxdm.service**

\* ***LXDE:***

- Install packages: **pacman -S lxdm lxde( or lxde-gtk3\* )**

- Enable Display Manager: **systemctl enable lxdm.service**

\* ***Xfce:***

- Install packages:

**pacman -S lxdm xfce4 xfce4-goodies linux-headers**

- Enable Display Manager: **systemctl enable lxdm.service**

9- Enable Sound:

**pacman -S pulseaudio pulseaudio-alsa alsa-utils gnome-alsamixer ntfs-3g moc most cmatrix sl kcolorchooser screenfetch**

10- Enable wifi:

\* Install packages:

**pacman -S wpa\_supplicant networkmanager network-manager-applet**

\* Disable NetCtl: **systemctl disable netctl.service**

\* Enable NetworkManager: **systemctl enable NetworkManager.srvice**

11- Install Basic Software:

**pacman -S smbclient gvds-smb terminology konsole git gvim gedit pluma adobe-source-code-pro-fonts firefox chromium atril qt4 vlc libreoffice folder-color-switcher folder-color-dzr gnome-icon-theme lxde-icon-theme nuovext-icon-theme papirus-icon-theme arc-gtk-theme breeze-default-cursor-theme bibata-cursor-theme archlinux-appsream-data archlinux-wallpaper archlinux-themes-slim**

12- Reboot: **reboot**

13- Install Yaourt ( CLI installer pacman front-end ):

**git clone** [**https://aur.archlinux.org/package-query.git**](https://aur.archlinux.org/yaourt.git)

**cd package-query**

**makepkg -si**

**cd ~**

**git clone** [**https://aur.archlinux.org/yaourt.git**](https://aur.archlinux.org/yaourt.git)

**cd yaourt**

**makepkg -si**

14- Install Yay ( Yet another yogurt. CLI Pacman wrapper and AUR helper written in go. ):

**yaourt -S --noconfirm yay**

15- Install Pamac ( GUI installer for cinnamon, mate, kde, and budgie DEs):

**yaourt -S --noconfirm pamac-aur**

16- Install TkPacman ( GUI installer for xfce4 Desktop Environment):

**yaourt -S tkpacman**

**Arch Linux ( extra )**

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\*\* ***Enable colors in manuals:***

1- install most: **pacman -S most**

2- configure system:

**sudo echo ‘PAGER=”most”’ >> ~/.bashrc && source ~/.bashrc**

\*\* ***For Virtualbox users:***

1- Install guest utilities: **pacman -S virtualbox-guest-utils mesa**

2- Edit configuration file: **vi /etc/modules-load.d/virtualbox.conf**

add three lines: **vboxguest**

**vboxsf**

**vboxvideo**

3- Enable service: **systemctl enable vboxservice.service**

**\*\*** **wpa\_supplicant.conf (example)**

**# Allow frontend for all users**

**ctrl\_interface = DIR = /var/run/wpa\_supplicant GROUP=wheel**

**# Home wifi network**

**network = {**

**ssid=”home”**

**scan\_ssid=1**

**key\_mgmt=WPA-PSK**

**psk=”password”**

**}**