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
cd package-query
makepkg -si
cd ~
git clone 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"
}
```