**Note:** This guide was created from my personal experience installing Arch Linux and is not intended to serve as official documentation. I found myself constantly searching and browsing various Arch Wiki pages in order to correctly install the OS, so I decided to compile the steps into this step-by-step document as I executed the commands. This made subsequent installations MUCH easier and streamlined for me, so I thought I’d share it for others. Your mileage may vary, but hopefully this makes the process easier even if it isn’t exactly the same process on your system.

This was done on a system using an Intel CPU and Intel GPU. The biggest difference comes in the display drivers, though other parts of this guide may be incorrect if the hardware is different.

**How to use this guide:** The majority of this guide is simply the exact commands to be executed in the command line, the purely informational lines are preceded by a #. Whenever there is a word in italics, that indicates the specific information will change based on your system. For example, *boot* under “Format Partitions” refers to whichever partition you have created to be your boot partition after using cfdisk. Ex. You would execute the command, “mkfs.ext /dev/sdb1”, replacing *boot* with the partition.

Again, this was done for personal use, so specific options are added (such as making a sudoer NOPASSWD). You may change or remove such options as you wish.

**ARCH LINUX STEP-BY-STEP INSTALLATION AND CONFIGURATION**

**Set up partitions using cfdisk**

#Boot partition, 10+ GB

#Swap partition, 2x RAM (though equal to RAM should be acceptable)

#Extended partition, variable size

**Format partitions**

mkfs.ext4 /dev/*boot*

mkfs.ext4 /dev/*extended*

mkswap /dev/*swap*

swapon /dev/*swap*

**Mount partitions**

mount /dev/*boot* /mnt

mkdir /mnt/home

mount /dev/*extended* /mnt/home

**Network Configuration for USB Live Boot**

#If using wired network, it should already be working.

#If using wi-fi, it must be configured at this stage.

iw dev

#provides the name of the wireless interface. Should start with a “w”.

ip link set *interface* up

iw dev *interface* scan | less

#provides information on AP’s in range, including SSID and security(RNS = WPA2)

**No Encryption**

iw dev *interface* connect *SSID*

**WEP**

iw dev *interface* connect “*SSID”* key 0:*your\_key*

**WPA/WPA2**

wpa\_supplicant -D n180211,wext -i *interface* -c <(wpa\_passphrase “*SSID”* “*your\_key*”)

dhcpd *interface*

**Install Base Packages**

pacstrap /mnt base

**Generate fstab**

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

**Change Root**

arch-chroot /mnt

**Time Zone**

ln -s /usr/share/zoneinfo/US/Eastern /etc/localtime

hwclock –systohc

**Locale**

nano /etc/locale.gen

#Uncomment en\_US.UTF-8 UTF-8

locale-gen

nano /etc/locale.conf

#Add line: LANG=en\_US.UTF-8

**Create & Change Hostname**

nano /etc/hostname

#Add line: *myhostname*

nano /etc/hosts

#Add line: 127.0.1.1 *myhostname*.localdomain *myhostname*

**Network Configuration for Environment**

Install iw, wpa\_supplicant, dialog packages

Install appropriate firmware packages

linux-firmware

#(should be installed already)

nano /etc/wpa\_supplicant/control.conf

ctrl\_interface=/run/wpa\_supplicant

update\_config=1

wpa\_supplicant -B -i *interface* -c /etc/wpa\_supplicant/control.conf

wpa\_passphrase *SSID* *passphrase* > /etc/wpa\_supplicant/wpa\_supplicant-*interface*.conf

systemctl enable wpa\_supplicant@*interface*

**Install GRUB**

pacman -S grub os-prober

grub-install /dev/*drive*

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

**Unmount, Reboot**

exit

umount /mnt/home

umount /mnt

reboot

**Add New User**

useradd -m -g users -s /bin/bash *username*

passwd *username*

**Install sudo, Make New User a sudoer**

pacman -S sudo

EDITOR=nano visudo

#Add line: *username* ALL=(ALL) NOPASSWD: ALL

**Install Some Packages**

pacman -S net-tools pkgfile base-devel

**Configure Sound (assuming Intel chip)**

pacman -S alsa-utils

pacman -S alsa-firmware

nano /etc/modprobe.d/alsa-base.conf

#Add line: options snd\_hda\_intel index=1

modprobe -rv snd\_hda\_intel

mobprobe -v snd\_hda\_intel

**Install Video Drivers**

#In most cases, “vesa” will work. But you should install native drivers for better functionality.

pacman -S xf86-video-vesa

pacman -S xf86-video-intel

**Install Synaptics (For Laptop Touchpad)**

pacman -S xf86-input-synaptics

**Install GUI**

pacman -S gnome

systemctl enable gdm.service

reboot