

Formatting Drives

1. You should now be inside the Arch shell. Below is a screenshot of what it looks like.



```
Arch Linux 6.1.8-arch1-1 (tty1)

archiso login: root (automatic login)

To install Arch Linux follow the installation guide:
https://wiki.archlinux.org/title/Installation_guide

For Wi-Fi, authenticate to the wireless network using the iwctl utility.
For mobile broadband (WWAN) modems, connect with the mmcli utility.
Ethernet, WLAN and WWAN interfaces using DHCP should work automatically.

After connecting to the internet, the installation guide can be accessed
via the convenience script Installation_guide.

root@archiso ~ #
```

2. With the command below, you can list all currently attached drives. In that list, there should at least be your main Hard Drive and your Flash Drive.

```
root@archiso ~ # lsblk

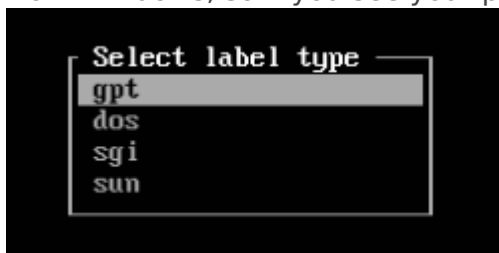
NAME MAJ:MIN RM SIZE RO TYPE MOUNTPOINTS
loop0  7:0    0 710.1M 1 loop /run/archiso/airootfs
sr0    11:0    1 824.3M 0 rom
vda    254:0    0  20G  0 disk
```

In my case, my Hard Drive I'll be installing Arch to is `vda` because I am in a Virtual Machine. Yours might be called `sda`, `nvme0n1p` or `hda`, depending on if you've installed an SSD, an NVMe SSD or an HDD respectively.

3. We are now going to format this drive using `cfdisk`. You can also format your drive with `fdisk`, but `cfdisk` has a simple to navigate interface.

```
root@archiso ~ # cfdisk /dev/vda
```

1. If your Hard Disk is empty, you're now going to be met with the following options. This will not show up if you've already partitioned your drive, like if you're coming from Windows, so if you see your partitions already, go to step 2.



Here, choose `gpt` (GUID Partition Table) for drives bigger than 2 TB and machines using UEFI and `dos` (Master Boot Record) otherwise. Once you come to this screen, you can skip the next step.

```

Disk: /dev/vda
Size: 20 GiB, 21474836480 bytes, 41943040 sectors
Label: gpt, identifier: D8AC5C6B-A535-C346-B80D-88D94AB5A3AC

Device      Start      End      Sectors    Size Type
>> Free space 2048      41943006 41940959    20G

[ New ] [ Quit ] [ Help ] [ Write ] [ Dump ]

Create new partition from free space
```

2. If you come from another operating system, you're going to have a few entries here. You can either remove all the partitions, or create new ones to install Arch into. To remove partitions, use your arrow keys to navigate to the delete option and hit enter for each partition you'd like to delete.

```

[ Delete ] [ Resize ] [ Quit ] [ Type ] [ Help ] [ Write ] [ Dump ]

Delete the current partition
```

3. Once you've got an empty slate, we can start creating all the necessary partitions. Create them in the order and sizes shown below.

Partition	Size
Boot	100M
Swap	Half your RAM
Root	The rest of your storage

Tip: You can also create a Home partition now, if you want to be able to change distros without deleting your user data

Your Partitions should look something similar to this:

```

Device      Start      End      Sectors    Size Type
/dev/vda1    2048      206847    204800     100M Linux filesystem
/dev/vda2    206848    4401151   4194304    2G Linux filesystem
>> /dev/vda3  4401152   41940991 37539840   17.9G Linux filesystem
```

4. Once you're done partitioning your drive, you can go over to the Write option, hit enter, and confirm the partitioning process by typing `yes`. Then you can quit out of `cfdisk`.

Danger! This process will permanently delete any partitions you chose to delete. Double-check your partitioning scheme, so that you do not delete important data.

```
Partition UUID: 97D61332-967C-734A-9BAC-8185FD2D7007
Partition type: Linux filesystem (0FC63DAF-8483-4772-8E79-3D69D8477DE4)
```

```
Are you sure you want to write the partition table to disk? yes
```

Type "yes" or "no", or press ESC to leave this dialog.

4. We can now properly format the drives. For that, we need to know how the new partitions are called. Run `lsblk` again. In the guide above, we created the partitions like in the table below, and `lsblk` reflects that.

Partition	Name
Boot	/dev/vda1
Swap	/dev/vda2
Root	/dev/vda3

1. Let's first format the boot and root partitions with the following commands. Note that the boot partition has to be in FAT32, otherwise it won't be recognized:

```
#==> Important: replace /dev/vda with your drive!
root@archiso ~ # mkfs.fat -F 32 /dev/vda1 root@archiso ~ # mkfs.ext4 /dev/vda3
```

Note: You can also format your root partition to be in the BTRFS format, which allows snapshots. Just replace ext4 with btrfs in the command above.

2. Formatting the swap partition is a little different:

```
#==> Important: replace /dev/vda with your drive!
root@archiso ~ # mkswap /dev/vda2
```

You're done! You can now go to the next step of mounting the drives and installing Arch!

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