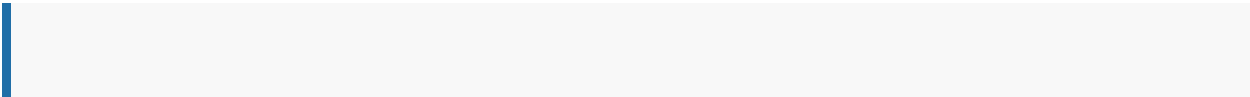


Linux



OS

1. OS GPT

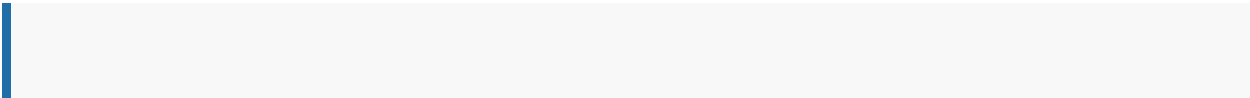
```
sudo parted -l /dev/sda | grep 'Partition Table'
```

- msdos MBR
- gpt GPT GPT

2. EFI

```
sudo ls /sys/firmware/efi
```

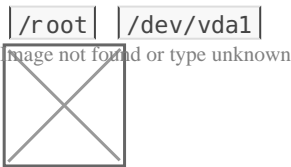
- EFI
- 



- `/etc/grub2.cfg` kernel uuid `/dev/sda` root=

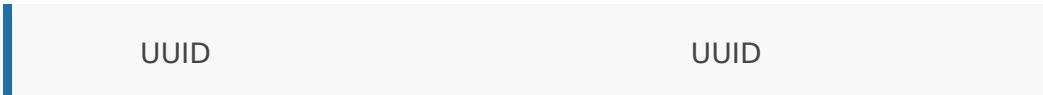
1. `/root`

```
df -TH
```



2. UUID

```
blkid /dev/vda1
```



3. `/etc/fstab`

```
vi /etc/fstab
```

4. **i**

5. **Enter**

```
UUID=d489ca1c-xxxx-4536-81cb-ceb2847f9954 / ext4 defaults 0 0
```

6. **Esc :wq Enter**

- `/etc/fstab`
- `/etc/shadow`

VMware tools Xen tools Virtualbox GuestAdditions

## virtio

[Linux](#) [Virtio](#)

## cloud-init

[Linux](#) [cloud-init](#)

- Cirrus VGA
- Virtio Disk      vda vdb
- Virtio Nic      eth0

```
mount
```

```
proc on /proc type proc (rw,nosuid,nodev,noexec,relatime)
sys on /sys type sysfs (rw,nosuid,nodev,noexec,relatime)
dev on /dev type devtmpfs (rw,nosuid,relatime,size=4080220k,nr_inodes=1020055,mode=755)
run on /run type tmpfs (rw,nosuid,nodev,relatime,mode=755)
/dev/sda1 on / type ext4 (rw,relatime,data=ordered)
securityfs on /sys/kernel/security type securityfs (rw,nosuid,nodev,noexec,relatime)
tmpfs on /dev/shm type tmpfs (rw,nosuid,nodev)
devpts on /dev/pts type devpts (rw,nosuid,noexec,relatime,gid=5,mode=620,ptmxmode=000)
tmpfs on /sys/fs/cgroup type tmpfs (ro,nosuid,nodev,noexec,mode=755)
cgroup on /sys/fs/cgroup/unified type cgroup2 (rw,nosuid,nodev,noexec,relatime,nsdelegate)
```

```

cgroup on /sys/fs/cgroup/systemd type cgroup
(rw,nosuid,nodev,noexec,relatime,xattr,name=systemd)
pstore on /sys/fs/pstore type pstore (rw,nosuid,nodev,noexec,relatime)
cgroup on /sys/fs/cgroup/cpu,cpuacct type cgroup (rw,nosuid,nodev,noexec,relatime,cpu,cpuacct)
cgroup on /sys/fs/cgroup/cpuset type cgroup (rw,nosuid,nodev,noexec,relatime,cpuset)
cgroup on /sys/fs/cgroup/rdma type cgroup (rw,nosuid,nodev,noexec,relatime,rdma)
cgroup on /sys/fs/cgroup/blkio type cgroup (rw,nosuid,nodev,noexec,relatime,blkio)
cgroup on /sys/fs/cgroup/hugetlb type cgroup (rw,nosuid,nodev,noexec,relatime,hugetlb)
cgroup on /sys/fs/cgroup/memory type cgroup (rw,nosuid,nodev,noexec,relatime,memory)
cgroup on /sys/fs/cgroup/devices type cgroup (rw,nosuid,nodev,noexec,relatime,devices)
cgroup on /sys/fs/cgroup/pids type cgroup (rw,nosuid,nodev,noexec,relatime,pids)
cgroup on /sys/fs/cgroup/freezer type cgroup (rw,nosuid,nodev,noexec,relatime,freezer)
cgroup on /sys/fs/cgroup/net_cls,net_prio type cgroup
(rw,nosuid,nodev,noexec,relatime,net_cls,net_prio)
cgroup on /sys/fs/cgroup/perf_event type cgroup (rw,nosuid,nodev,noexec,relatime,perf_event)
systemd-1 on /home/libin/work_doc type autofs (rw,relatime,fd=33,pgrp=1,timeout=0,minproto=5
,maxproto=5,direct,pipe_ino=12692)
systemd-1 on /proc/sys/fs/binfmt_misc type autofs (rw,relatime,fd=39,pgrp=1,timeout=0
,minproto=5,maxproto=5,direct,pipe_ino=12709)
debugfs on /sys/kernel/debug type debugfs (rw,relatime)
mqueue on /dev/mqueue type mqueue (rw,relatime)
hugetlbfs on /dev/hugepages type hugetlbfs (rw,relatime,pagesize=2M)
tmpfs on /tmp type tmpfs (rw,nosuid,nodev)
configfs on /sys/kernel/config type configfs (rw,relatime)
tmpfs on /run/user/1000 type tmpfs (rw,nosuid,nodev,relatime,size=817176k,mode=700,uid=1000
,gid=100)
gvfsd-fuse on /run/user/1000/gvfs type fuse.gvfsd-fuse (rw,nosuid,nodev,relatime,user_id=1000
,group_id=100)

```

/dev/sda1	/boot	/home	sda1	boot	mbr	sda
-----------	-------	-------	------	------	-----	-----

- mbr mbr
- /boot /home

- 
- 

qemu-img dd

- `qemu-img`
- `qemu-img` CentOS

```
apt-get install qemu-utils
```

- `/dev/sda` `/mnt/sdb/test.qcow2`

```
sudo qemu-img convert -f raw -O qcow2 /dev/sda /mnt/sdb/test.qcow2
```

`/mnt/sdb`

`-O`

qcow2	qcow2
vpc	vhd
vmdk	vmdk
raw	

- `dd`

raw

```
sudo dd if=/dev/sda of=/mnt/sdb/test.imag bs=1K count=$count
```

`count` `fdisk` `count`

`/dev/sda`

```
fdisk -lu /dev/sda
```

```
Disk /dev/sda: 1495.0 GB, 1494996746240 bytes
255 heads, 63 sectors/track, 181756 cylinders, total 2919915520 sectors
Units = sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 4096 bytes
I/O size (minimum/optimal): 4096 bytes / 4096 bytes
Disk identifier: 0x0008f290

   Device Boot      Start         End      Blocks   Id  System
/dev/sda1    *        2048     41945087     20971520   83  Linux
/dev/sda2             41945088     46123007      2088960   82  Linux swap / Solaris
/dev/sda3             46123008     88066047     20971520   83  Linux
/dev/sda4             88066048    2919910139    1415922046   8e  Linux LVM
```

`fdisk` `sda1` `count` `08720512` M



```
dd if=qcow2 vhd
```

```
qemu-img
```

Windows

vhd

Linux

qemu-nbd

qcow2

## 1. nbd

```
modprobe nbd
```

```
lsmod | grep nbd
```

```
CONFIG_BLK_DEV_NBD CONFIG_BLK_DEV_NBD
```

Image not found or type unknown



## 2.

```
qemu-nbd -c /dev/nbd0 xxxx.qcow2
```

```
mount /dev/nbd0p1 /mnt
```

```
qemu-nbd /dev/nbd0 xxx.qcow2 /dev/nbd0p1
```

nbd0p1

mount

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