

root@ubuntu: ~



En



10:15 AM



```
root@ubuntu:~# cryptsetup luksFormat -c aes-xts-plain64:sha512 -h sha512 /dev/sda2
```

WARNING!

=====

This will overwrite data on /dev/sda2 irrevocably.

Are you sure? (Type uppercase yes): YES

Enter passphrase:

Verify passphrase:

```
root@ubuntu:~# cryptsetup luksOpen /dev/sda2 sda2-crypt
```

Enter passphrase for /dev/sda2:

```
root@ubuntu:~# pvcreate /dev/mapper/sda2-crypt
```

Physical volume "/dev/mapper/sda2-crypt" successfully created

```
root@ubuntu:~# vgcreate ubu /dev/mapper/sda2-crypt
```

Volume group "ubu" successfully created

```
root@ubuntu:~# lvcreate -C y -L 4G -n swap ubu
```

Logical volume "swap" created.

```
root@ubuntu:~# lvcreate -C n -L 15G -n root ubu
```

Logical volume "root" created.

```
root@ubuntu:~# lvcreate -C n -l 100%FREE -n home ubu
```

Logical volume "home" created.

```
root@ubuntu:~# lvscan
```

ACTIVE '/dev/ubu/swap' [4.00 GiB] contiguous

ACTIVE '/dev/ubu/root' [15.00 GiB] inherit

ACTIVE '/dev/ubu/home' [10.50 GiB] inherit

```
root@ubuntu:~# █
```

```
root@ubuntu:~# mount
sysfs on /sys type sysfs (rw,nosuid,nodev,noexec,relatime)
proc on /proc type proc (rw,nosuid,nodev,noexec,relatime)
udev on /dev type devtmpfs (rw,nosuid,relatime,size=1525644k,nr_inodes=381411,mode=755)
devpts on /dev/pts type devpts (rw,nosuid,noexec,relatime,gid=5,mode=620,ptmxmode=000)
tmpfs on /run type tmpfs (rw,nosuid,noexec,relatime,size=308060k,mode=755)
/dev/sr0 on /cdrom type iso9660 (ro,noatime)
/dev/loop0 on /rofs type squashfs (ro,noatime)
/cow on / type overlay (rw,relatime,lowerdir=//filesystem.squashfs,upperdir=/cow/upper,workdir=/cow/work)
securityfs on /sys/kernel/security type securityfs (rw,nosuid,nodev,noexec,relatime)
tmpfs on /dev/shm type tmpfs (rw,nosuid,nodev)
tmpfs on /run/lock type tmpfs (rw,nosuid,nodev,noexec,relatime,size=5120k)
tmpfs on /sys/fs/cgroup type tmpfs (ro,nosuid,nodev,noexec,mode=755)
cgroup on /sys/fs/cgroup/systemd type cgroup (rw,nosuid,nodev,noexec,relatime,xattr,release_agent=/lib/systemd/systemd-cgroups-agent,name=systemd,nsroot=/)
pstore on /sys/fs/pstore type pstore (rw,nosuid,nodev,noexec,relatime)
cgroup on /sys/fs/cgroup/devices type cgroup (rw,nosuid,nodev,noexec,relatime,devices,nsroot=/)
cgroup on /sys/fs/cgroup/blkio type cgroup (rw,nosuid,nodev,noexec,relatime,blkio,nsroot=/)
cgroup on /sys/fs/cgroup/memory type cgroup (rw,nosuid,nodev,noexec,relatime,memory,nsroot=/)
cgroup on /sys/fs/cgroup/perf_event type cgroup (rw,nosuid,nodev,noexec,relatime,perf_event,nsroot=/)
cgroup on /sys/fs/cgroup/pids type cgroup (rw,nosuid,nodev,noexec,relatime,pids,nsroot=/)
cgroup on /sys/fs/cgroup/hugetlb type cgroup (rw,nosuid,nodev,noexec,relatime,hugetlb,nsroot=/)
cgroup on /sys/fs/cgroup/cpuset type cgroup (rw,nosuid,nodev,noexec,relatime,cpuset,nsroot=/)
cgroup on /sys/fs/cgroup/cpu,cpuacct type cgroup (rw,nosuid,nodev,noexec,relatime,cpu,cpuacct,nsroot=/)
cgroup on /sys/fs/cgroup/net_cls,net_prio type cgroup (rw,nosuid,nodev,noexec,relatime,net_cls,net_prio,nsroot=/)
cgroup on /sys/fs/cgroup/freezer type cgroup (rw,nosuid,nodev,noexec,relatime,freezer,nsroot=/)
systemd-1 on /proc/sys/fs/binfmt_misc type autofs (rw,relatime,fd=25,pgrp=1,timeout=0,minproto=5,maxproto=5,direct)
mqueue on /dev/mqueue type mqueue (rw,relatime)
hugetlbfs on /dev/hugepages type hugetlbfs (rw,relatime)
debugfs on /sys/kernel/debug type debugfs (rw,relatime)
fusectl on /sys/fs/fuse/connections type fusectl (rw,relatime)
tmpfs on /tmp type tmpfs (rw,nosuid,nodev,relatime)
tmpfs on /run/user/999 type tmpfs (rw,nosuid,nodev,relatime,size=308060k,mode=700,uid=999,gid=999)
gvfsd-fuse on /run/user/999/gvfs type fuse.gvfsd-fuse (rw,nosuid,nodev,relatime,user_id=999,group_id=999)
root@ubuntu:~# ls /dev/mapper/
control sda2-crypt ubu-home ubu-root ubu-swap
root@ubuntu:~# mount /dev/mapper/ubu-root /mnt
root@ubuntu:~# mount /dev/sda1 /mnt/boot
root@ubuntu:~# cd /mnt
```

root@ubuntu: /



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```
root@ubuntu:/mnt# mount --rbind /dev dev
root@ubuntu:/mnt# mount --rbind /sys sys
root@ubuntu:/mnt# mount --rbind /run run
root@ubuntu:/mnt# mount --bind /proc proc
root@ubuntu:/mnt# chroot . /bin/bash -l
root@ubuntu:/#
```

t@ubuntu: /



En



10:29 AM



root@ubuntu: /



ubuntu@ubuntu: ~



root@ubuntu:/# vi /etc/crypttab

root@ubuntu:/# update-initramfs -u

update-initramfs: Generating /boot/initrd.img-4.4.0-21-generic

root@ubuntu:/# grub-install --recheck /dev/sda

Installing for i386-pc platform.

Installation finished. No error reported.

root@ubuntu:/# grub-mkconfig -o /boot/grub/grub.cfg

Generating grub configuration file ...

Warning: Setting GRUB_TIMEOUT to a non-zero value when GRUB_HIDDEN_TIMEOUT is set is no longer supported.

Found linux image: /boot/vmlinuz-4.4.0-21-generic

Found initrd image: /boot/initrd.img-4.4.0-21-generic

Found memtest86+ image: /memtest86+.elf

Found memtest86+ image: /memtest86+.bin

done

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