

# LUKS

## Mount encrypted partition

```
cryptsetup luksOpen /dev/mmcblk1p3 mmcblk2p3_crypt
mount /dev/vgkubuntu/root /target # use lvdisplay and lsblk to find the
volume
```

## Grow partition

Note: filesystem should not be mounted when resizing

- <https://www.redhat.com/sysadmin/resize-lvm-simple>

## Change key of encrypted partition

```
cryptsetup luksChangeKey /dev/sdX
```

## Extend encrypted partition

- <https://unix.stackexchange.com/a/322631>

## Setup automatic unlock

```
apt install -y clevis clevis-luks clevis-udisks2 clevis-systemd clevis-tpm2
clevis-initramfs
clevis luks bind -d /dev/mmcblkp3 tpm2 '{"pcr_ids":"1,7","key":"rsa"}'
systemctl enable clevis-luks-askpass.path
update-initramfs -u -k all
```

## Troubleshooting

If it doesn't work it might be due to wrong pcr\_bank or key used. The PCR banks can be checked with tpm2\_pcrread.

## Regenerate

If automatic unlock does not work anymore it needs to be regenerated. First list the used slots:

```
clevis luks list -d /dev/nvme0n1p3
```

Then regenerate the used slot:

```
clevis luks regen -d /dev/nvme0n1p3 -s 1
```

## Change PCRs

To change PCRs you first need to delete the key and then re-add using the wanted PCRs.

List the used slots:

```
clevis luks list -d /dev/nvme0n1p3
```

Remove the slot:

```
clevis luks unbind -d /dev/nvme0n1p3 -s 1 -f
```

Note: -f will not ask for confirmation but is needed if there is no other slot set up.

After that re-add the key like above.

## References

- <https://tqdev.com/2023-luks-recovery-from-initramfs-shell>
- <https://fedoramagazine.org/automatically-decrypt-your-disk-using-tpm2/>
- <https://github.com/latchset/clevis/issues/165>
- <https://unix.stackexchange.com/questions/704813/ubuntu-20-04-clevis-luks-setup-auto-unlocking-not-working>
- <https://wiki.archlinux.org/title/Clevis>
- [https://wiki.archlinux.org/title/Trusted\\_Platform\\_Module#Accessing\\_PCR\\_registers](https://wiki.archlinux.org/title/Trusted_Platform_Module#Accessing_PCR_registers)
- <https://www.tuxedocomputers.com/en/Infos/Help-Support/Instructions/Change-LUKS-encryption-password.tuxedo>
- <https://discourse.nixos.org/t/full-disk-encryption-tpm2/29454/2>

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