Backup Encrypted Debian install.

- ## Install required packages

```
#
# update package database
apt update
# install packages
apt install partclone pigz gdisk rar unrar
#
```

- ## Prepare target location

```
#
# create dir for mount point
mkdir -p /backup
# mount backup partition
mount /dev/sda1 /backup/
# prepare target dir
cd /backup
mkdir BACKUP
cd BACKUP
#
```

- ## Unlock encrypted luks partition

```
#
cryptsetup open /dev/sdb3 xyz-unlocked
#
```

- ## Make partitions backup with partclone

```
#
# root partition
partclone.ext4 -z 10485760 -c -s /dev/mapper/vg-root --output - | pigz -c --fast -b 1024 --rsyncable > root.img.gz
#
# boot partition
partclone.ext2 -z 10485760 -c -s /dev/sdb2 --output - | pigz -c --fast -b 1024 --rsyncable > boot.img.gz
```

```
#
# efi partition
partclone.vfat -z 10485760 -c -s /dev/sdb1 --output - | pigz -c --fast -b 1024 -
-rsyncable > efi.img.gz
#
# home partition
partclone.ext4 -z 10485760 -c -s /dev/mapper/vg-home --output - | pigz -c --fast
-b 1024 --rsyncable > home.img.gz
#
```

- **Backup partition table with dd util**

```
#
DISK="/dev/sdb"
dd if=${DISK} of="part_table.bin" bs=512 count=34 status=progress && sync
#
```

- **Backup swap UUID**

```
#
blkid -s UUID -o value /dev/mapper/vg-swap > swap_UUID.txt
#
```

- **Backup luks header**

```
#
CRYPT="/dev/sdb3"
cryptsetup luksHeaderBackup "${CRYPT}" --header-backup-file "luks_header.bin"
#
```

- **Backup UUID for physical volume (pv)**

```
#
blkid -s UUID -o value /dev/mapper/xyz-unlocked > pv_UUID.txt
#
```

- **Backup volue group configuration**

```
#
vgcfgbackup -f vg_backup.txt vg
#
```

- **encrypt backup with rar (optional)**

```
# go to mount point directory
cd /backup
# create encrypted rar archive
THREAD=$(nproc)
rar a -k -m1 -md32m -mt${THREAD} -rr20 -hp BACKUP.rar BACKUP/
#
# test archive
rar t BACKUP.rar
#
# clean data with shred
cd BACKUP
shred -v --iterations=3 --zero --remove=wipesync *
cd ..
rm -fr BACKUP
#
```

- **Finish things**

```
#
# umount backup partition
cd
umount /backup
# deactivate volume group
vgchange -a n vg
# lock encryped luks partition
cryptsetup close xyz-unlocked
#
```