

[zfs, libvirt]

# ZFS

```
apt install zfsutils-linux
```

```
sudo zfs list
```

create filesystem 'lab' on 'LXD' pool

```
sudo zfs create LXD/lab  
sudo zfs set mountpoint=/lab LXD/lab
```

```
sudo zfs destroy LXD/lab
```

## create pool

Pool can be created on disk or partition. In case of partition this is an example

Number	Start (sector)	End (sector)	Size	Code	Name
1	1026048	74426367	35.0 GiB	8300	Linux filesystem
2	2048	1026047	500.0 MiB	EF02	
3	74426368	76474367	1000.0 MiB	8200	
4	76474368	976756735	429.3 GiB	BF01	# <----- zfs
5	976756736	976773119	8.0 MiB	BF07	# ???

```
zpool create lxd /dev/sda4
```

## libvirt

add ZFS pool to libvirt

```
# create zfs filesystem  
zfs create rpool/libvirt  
  
virsh pool-define-as --name zfspool --source-name rpool --type zfs  
virsh pool-start zfspool  
virsh pool-autostart zfspool
```

create volume (not possible in virt-manager)

```
virsh vol-create-as --pool zfspool --name maas2 --capacity 10G
```

destroy volume

```
virsh vol-delete --pool zfspool maas2
```

## tuning

pool on SSD <https://storagetuning.wordpress.com/2011/12/01/zfs-tuning-for-ssds/>

[/etc/systctl.conf](#)

```
vfs.zfs.l2arc_noprefetch=0
```

## zfs root from live system

```
zpool export rpool
zfs import -R /mnt rpool
zfs mount rpool/ROOT/ubuntu

zfs set devices=off rpool
mount --rbind /dev /mnt/dev
mount --rbind /proc /mnt/proc
mount --rbind /sys /mnt/sys
chroot /mnt /bin/bash --login

... work here

exit
mount | grep -v zfs | tac | awk '/\/mnt/ {print $3}' | xargs -i{} umount -lf {}
zpool export rpool
reboot
```

## remote replication

in origin make a snapshot of volume

```
zfs snap storage/cimateriali@snap1
```

destination volume cannot be exists

```
zfs snap storage/cimateriali@snap1
zfs send storage/cimateriali@snap1 | pv -s 20G | ssh zfs1 zfs recv
rpool/cimateriali
# zfs destroy storage/cimateriali@snap1
```

on destination destroy snapshot to have volume

```
zfs destroy rpool/cimateriali@snap1

# volsize ?
zfs get volsize,reservation rpool/cimateriali
zfs set volsize=20G rpool/cimateriali
zfs get volsize,reservation rpool/cimateriali
```

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