

ZFS

zfs

```
zfs status
zpool import -[zpool]
zpool import zpool[ ] -[zpool]
zpool list -[zfs]
zpool get freeing zpool[ ] --[zpool]
```

```
cat /proc/spl/kstat/zfs/arcstats --[ ]
```

```
/etc/modprobe.d/zfs.conf
```

```
options zfs zfs_arc_max=4299967296 --[4GB]zfs[4GB]
```

```
zfs set user quota@username=10gb --[none][groupquota]
zfs get quota --[ ]
zfs set reservation=10G --zpool[none]
zfs get reservation --[ ]
```

zpool destroy

```
zpool create pool[ ] /dev/sda([ ]) -[zpool]
zpool create zpool[ ] mirror /dev/sda /dev/sdb -[zpool]
zpool add zpool[ ] raidz ada2s1 ada2s2 ada2s3 ada2s4([ ])
```

Raidz1 Raid5 HD

Raidz2 Raid6 HD4HD

Raidz3 HD

-o ashift=12

-m

```
zfs create -o compression=on zpool[ ] --[zpool]
zfs create -o compression=lz4 zpool[ ] --[zpool] lz4[ ]
zfs set compression=on tank([ ]) -[zpool]
zfs set compression=lz4 tank([ ]) -[zpool] lz4([ ])
```

```
zpool destroy pool1 -f zpool(11111)
```

A horizontal number line with arrows at both ends. It is marked with numbers from 0 to 100 in increments of 10: 0, 10, 20, 30, 40, 50, 60, 70, 80, 90, 100. There are vertical tick marks at each number. A blue arrow starts at 0 and points to 10, labeled with a blue '10'.

```
zpool offline zpool< > ada2s2 —< >< >< >< >
zpool replace zpool< > ada2s2(< >) ada3s1(< >) —< >< >< >< >< >
zpool detach zpool< > /dev/sda —< >< >< >
zpool attach zpool< > /dev/sdb(< >) /dev/sda(< >) —< >< >< >< >(< >Raid1)
zpool status —< >< >< >< >< >
zpool clear -F zpool< > --< >zpool
zfs set compression=on zpool< > —< >Zpool< >< >< >
zfs set compression=lz4 zpool< > —< >Zpool< >lz4< >< >
zpool upgrade tank —< >zpool< >
zfs get compression —< >< >< >< >< >
zfs get compressratio—< >< >(< >< >< >)
zfs rename (< >) < >< >< >< >
```

ubuntu umount

```
zfs diff ---[redacted]

zfs snapshot zpool[redacted]@[redacted] --[redacted]-r[redacted]

zfs destroy zpool[redacted] --[redacted]

zfs rename zpool[redacted] zpool[redacted] --[redacted]-r[redacted]@[redacted]

zfs rollback [redacted] --[redacted]

zfs rollback [redacted] --[redacted]

zfs send zpoolA@[redacted]zfs receive zpoolB([zpoolA[redacted]zpoolB[redacted]-i[redacted])

zfs send zpoolA@[redacted] > zpoolB([zpoolA[redacted]zpoolB)

zfs list --[redacted] -t all[redacted]-t snapshot [redacted]
```

[] [] [] [] : [] [] -f [] [] [] []

zpool labelclear

--	--	--	--	--	--	--

:

```
zpool get all zpool
```

[] [] [] [] [] [] [] [] :

```
zpool list -v
```

```
#zpool:
```

```
zpool set autoexpand=on zpool
```

```
#L2ARC:remove)
```

```
zpool add -f zpool cache /dev/disk/by-id/
```

```
#ZIL:
```

```
zpool add zpool log /dev/disk/by-id/
```

```
#zpool.cache File
```

```
zpool set cachefile=/etc/zfs/zpool.cache zpool
```

```
zpool zpool
```

```
zpool iostat -v
```

```
#zpool Metadata Special Device
```

```
zpool add zpool special mirror /dev/nvme0n1 /dev/nvme1n1
```

- **Metadata** **ZFS**, **HDD** **ZFS** **SSD** **Special Device**
mirror **pool** **special device**, **special device**
- **zpool** : **zpool** add <pool> special mirror <device1> <device2>
- Exp. **pbs-zpool** /dev/nvme0n1 /dev/nvme1n1 **special device**

```
zpool iostat -v zpool --zpool
```

```
zfs scrub zpool --zpool
```

```
zpool-s
```

```
zpool
```

```
zpool
```

```
zpool online -e pool-00 adaX adaX zpool
```

```
zfszpoolswap
```

```
zfs create -V swap zfs/swap
zfs set checksum=off zfs/swap
zfs set zfs/swap=on zfs/swap
ll /dev/zvol/zfs/ #
mkswap -f /dev/zvol/zfs/swap
swapon /dev/zvol/zfs/swap
vim /etc/fstab
/dev/zvol/zfs/swap none swap sw 0 0
```

zfs

```
nano /etc/modprobe.d/zfs.conf
4GB:
    options zfs zfs_arc_max=4294967296
6GB:
    options zfs zfs_arc_max=6442450944
```

```
update-initramfs -u -k all
```

Revision #4

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