ZFS Pools and snapshots

CONCEPTS

Two commands: zpool manages disks and pools, zfs manages datasets (filesystems, volumes, snapshots) inside them.

POOLS

zpool status
Health, errors and scrub state

zpool status -x
Show only unhealthy pools

zpool list
Size, used, free and health per pool

zpool create *<pool>* **mirror** *<disk1>* *<disk2>*
Create a mirrored pool

zpool create *<pool>* **raidz** *<disk1>* *<disk2>* *<disk3>*
Create a raidz pool

zpool scrub *<pool>*
Verify all checksums, repair from redundancy

zpool import
List pools available to import

zpool import *<pool>*
Import a pool

zpool export *<pool>*
Cleanly detach a pool

zpool iostat -v *<pool>* **5**
Per-vdev I/O every 5 seconds

zpool replace *<pool>* *<old>* *<new>*
Swap a failed or old disk

DATASETS

zfs list
List filesystems and volumes

zfs list -r *<pool>*
List a pool's datasets recursively

zfs create *<pool>*/*<name>*
Create a filesystem

DATASETS (cont.)

zfs destroy *<dataset>*
Delete a dataset

zfs destroy -rn -v *<dataset>*
Dry-run a recursive destroy

zfs list -o space
Space broken down by use

PROPERTIES

zfs get all *<dataset>*
Show every property

zfs get *<prop>* *<dataset>*
Show one property

zfs set compression=lz4 *<dataset>*
Enable compression

zfs set mountpoint=*<path>* *<dataset>*
Change where it mounts

SNAPSHOTS AND CLONES

zfs snapshot *<dataset>*@*<name>*
Create a snapshot

zfs snapshot -r *<pool>*@*<name>*
Snapshot a pool and all children

zfs list -t snapshot
List snapshots

zfs rollback *<dataset>*@*<snap>*
Revert to a snapshot

zfs destroy *<dataset>*@*<snap>*
Delete a snapshot

SEND AND RECEIVE

zfs send *<dataset>*@*<snap>* **| zfs recv** *<pool>*/*<name>*
Copy a snapshot locally

zfs send *<dataset>*@*<snap>* **| ssh** *<host>* **zfs recv** *<pool>*/*<name>*
Replicate to another machine

zfs send -i *<old>* *<new>* **| zfs recv** *<ds>*
Send only changes between snapshots