

CoW Snapshots on XFS

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Snapshot Goals

- Fixed point in time
- Only changes utilize disk space
- Portable/Independant

XFS

- High performance
- Stores data in a B+ tree
 - File cloning
 - Data deduping

FICLONE

- Allows sharing of duplicate extents between files
- *ioctl_ficlone(2)*

```
$ cp --reflink=always /home/hayley /snaps/$(date)
```

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Loop devices

- A way of treating a file as a block device

```
$ truncate -s 10G /home/hayley.homedir
```

```
$ mkfs.xfs /home/hayley.homedir
```

```
$ mount /home/hayley.homedir /home/hayley
```

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FIFREEZE

- Temporarily pauses all read/write operations
- Also supported by btrfs and ext4
- *xfs_freeze(8)*

```
$ mount /home/hayley.homedir /home/hayley
```

```
$ xfs_freeze -f /home/hayley
```

```
$ cp --reflink=always /home/hayley.homedir ./backup
```

```
$ xfs_freeze -u /home/hayley
```


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github.com/hugglesfox/loclone

Thanks for listening

- XFS: Teaching an Old Dog Old Tricks by Dave Chinner
 - <https://www.youtube.com/watch?v=wG8FUvSGROw>
- Blog: <https://foxes.systems>
- GH: <https://github.com/hugglesfox>
 - <https://github.com/hugglesfox/loclone>