CTA site report of AARNET

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Snapshot of 2023

- Storage platforms (CloudStor) decommissioned

- Implemented tape offsite vaulting

- Implemented monthly tape limiting

- Final full backup of cold data post-decomm

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Tape Vaulting – Why?

- Backup infrastructure in single site – CTA and Tape Library

- Losing backup site means losing all backups

Tape Vaulting – How?

- Vault tapes offsite every month

- Losing backup site means we lose 1 month of backups = good RPO
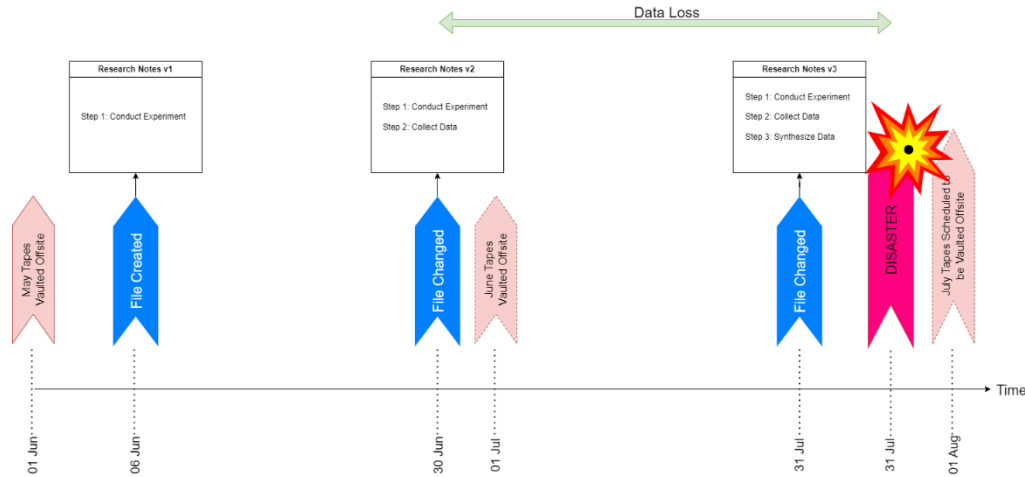
Tape Limiting – Why?

- Potentially low tape utilization (eg: 12 x tapes @ 10% full)

- Vaulting mostly empty tapes is not desirable

- Customer data delta relatively small due to decommissioning

- 12 tape drives

Tape Limiting – How?

- Limit number of tapes we can write to in a month (tape state = DISABLED)

- 2 tapes @ 60% utilization > 12 tapes @ 10% utilization

- 2 tapes vault > 12 tapes vaulted

- Pro: higher tape utilization

- Con: extra monitoring required

How many tapes to enable?

- Analyse tape pool growth over previous months
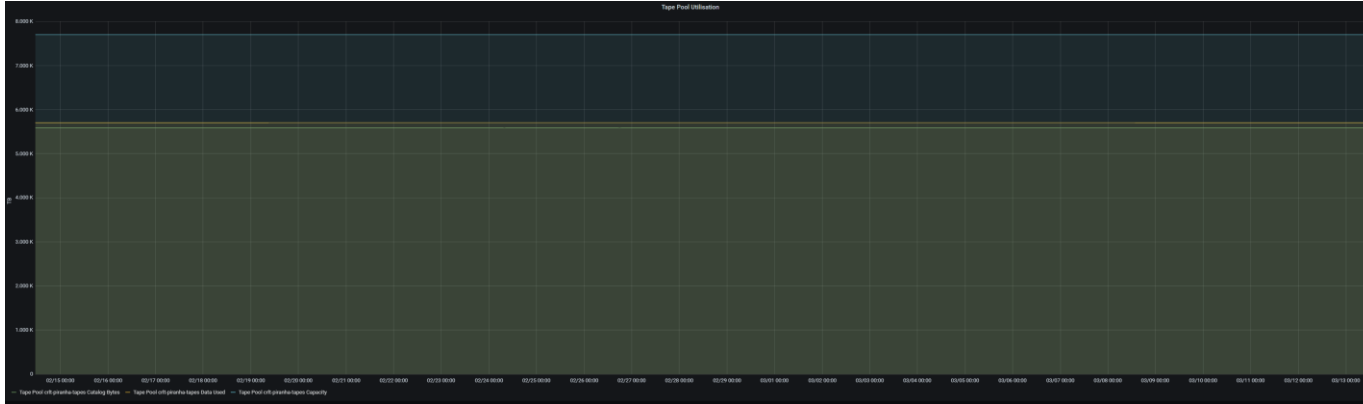
- 6 tapes per month conservatively decided

Putting it all together

- 90% process

- 10% tech

- On chosen date, limit tapes to 6 by setting others to "DISABLED"

- After one month, script will record, eject "ACTIVE" non-empty tapes and mark them as "EXPORTED"

- Limit tapes to 6 by choosing 6 random "DISABLED" tapes

- We send list of tapes to vaulting vendor

- We collect tapes, set write-protect switch and pass to vendor

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Storage platform decommissioning

- Cloudstor (EOS/Owncloud + EOS/MinIO) decommissioned on 15/12/2023

- Final full restic backup required for each user fileset

- Purchased 500 x LTO7 tapes – brand new tape pool

- Have 720 empty tapes leftover from previous cycles – brand new tape pool

- Taking full backup with 2 x tape copies, one into each pool

- Backup currently ongoing

- Will vault 500 x new tapes after completion

- Will retain 720 tapes in library for ease of restore

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Thank You

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