

SURFnet storage plans update

Rogier.Spoor@SURFnet.nl

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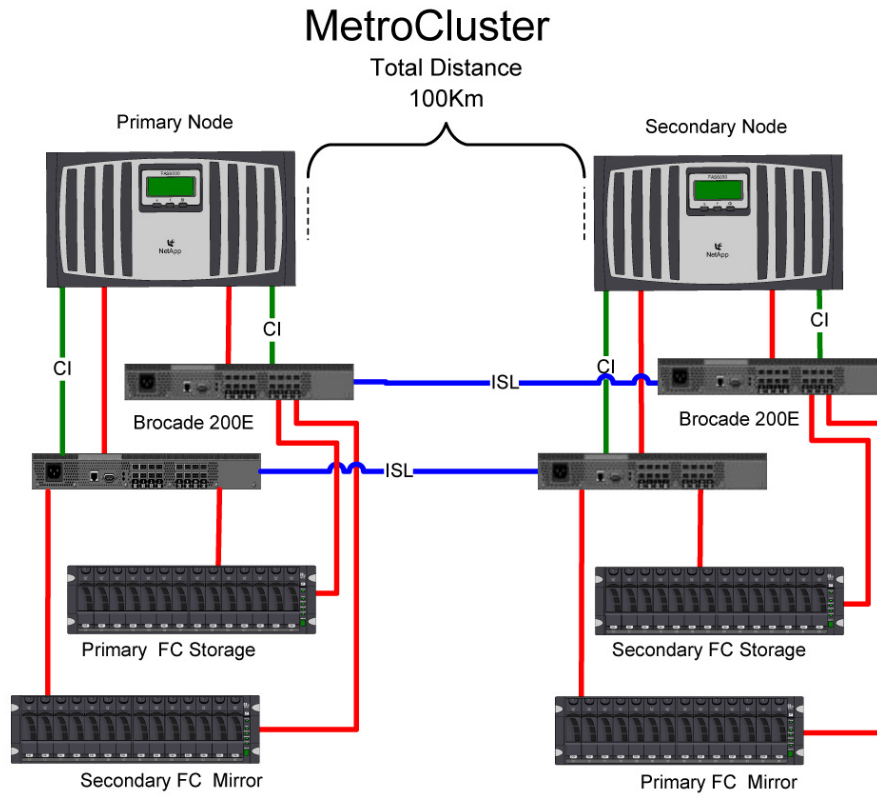
Past remote storage project



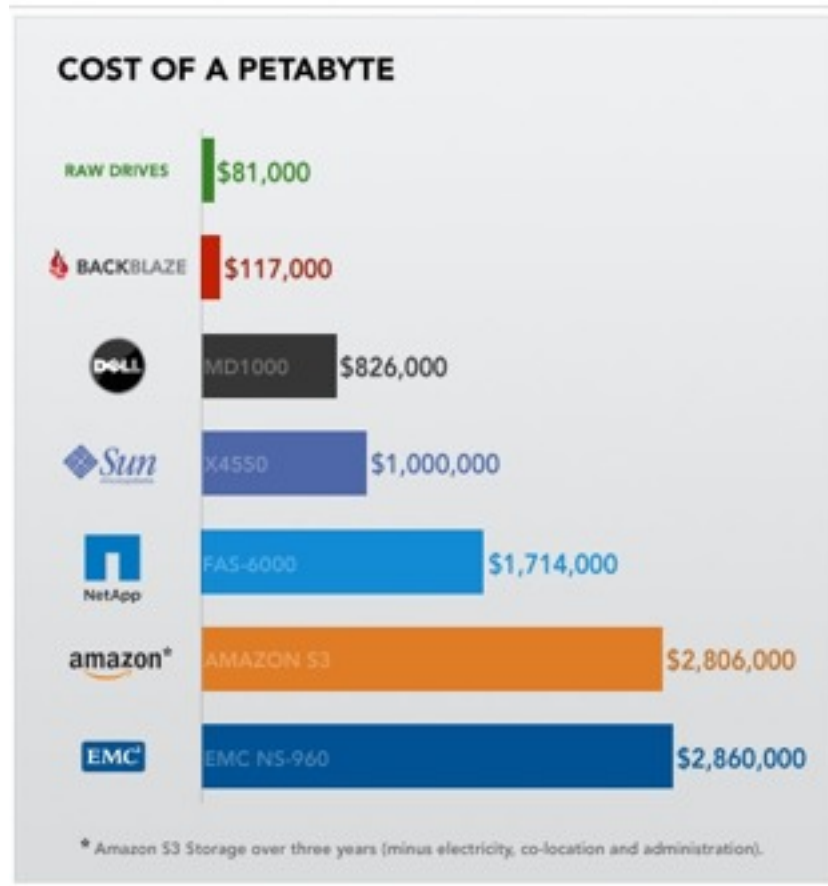
- Small project (in 2007)
 - Remote storage strategies paper
 - Practical test:
 - How to outsource storage via lightpaths
 - Use of lightpaths versus IP
 - Long distance (500 km)
 - Only ethernet (no FC in backbone)
 - Ethernet -> FC converters

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Netapp



Storage costs



<http://blog.backblaze.com/2009/09/01/petabytes-on-a-budget-how-to-build-cheap-cloud-storage/>

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How to satisfy storage needs



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When cloud storage?

- ★ Parallel streaming writes: video surveillance (private clouds)
- ★ Long-term storage: backup and archival files (private clouds)
- ★ Geographically shared files: access from different geographical locations (public clouds)
- ★ Larger files with lots of read access: digital content, streaming, media, video, music, etc.

When traditional SAN/ NAS storage?



- highly transactional file like a database or virtual machine image



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Our storage project

- Combine cloud storage with traditional storage
- Store VM images, media content
- Offer a single mount point
- hierarchical/tiered storage
- Easy scalable (multiple peta)
- Low cost/petabyte
- open standards/protocols and maybe open-source
- (hardware) vendor independent (let's combine different vendors)

Start project: Q4 2009

End: Q4 2010

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Timeline

- sidetrack: whitepaper on p2p & cloud storage (done)
- Build test environment on 2 locations (done)
- Connect test locations with 5G lightpath and 10G IP (done)
- test DRBD as cheapo "SAN/NAS" (ongoing, finished in March)
- GPFS testing (start-up in March)
- in Q2 2010 test other products
- in Q3 design new architecture
- setup new storage architecture

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Questions/ Suggestions?

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