

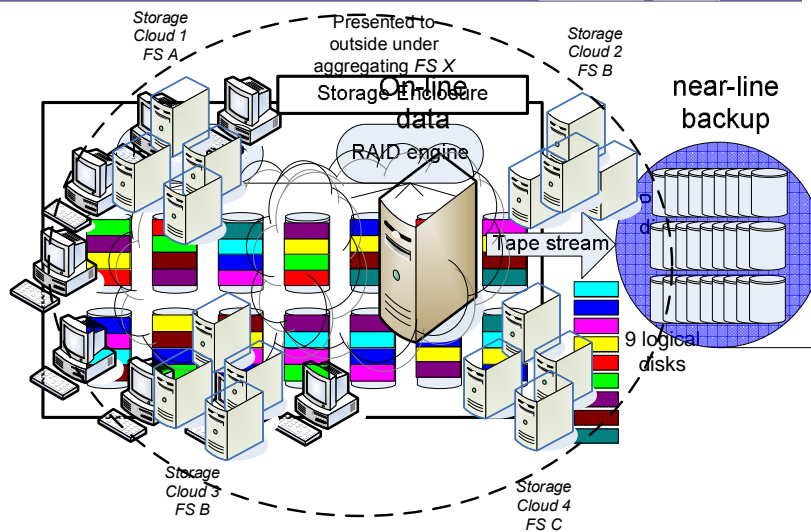


Virtualised Storage

An introduction and overview

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Storage Virtualisation



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In relation to the SOI

- Mainly the aggregating FS
 - Present the multiple storage blocks that an application has access to as single entity
 - Cloud-like FS image simply used by application
- The question is: How to integrate this into a fully virtualised architecture
 - What are the SLA terms?
 - What is the interface protocol?
 - ...

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SLA questions

- Storage services different to compute services
 - Longer typical lifetimes
 - Multiple virtual networks accesses same reserved resource (the data)
 - Variation in SLA within a single network the norm rather than the exception
- No hard guarantees
 - Today's storage media are 'intelligent'
 - Interaction of intelligence with external scheduler not simple

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Integration challenges

- Block? File? Object?
 - Block is known and understood with large per access overhead in wide area
 - File is known and understood with no options on parallelisation of access
 - Object is not widely known/ used but overcomes the above issues
- Protocol
 - Needs initiator and target end support
 - Has implications for the OS used for application layer

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Storage as a service

- 'Unacceptable' to CIO
 - Data is more valuable than processing
 - "If my butt is on the line then I want to be able to touch the equipment even if that means the risk of failure increases" - CIO quote from US organisation
- New model
 - Internalised virtual storage
 - Add 'panic' modes to replicate outside
 - About risk mitigation rather than storage provision

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Thank you!

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Further Information
<http://www.irmosproject.eu>

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