

ORION Summit 2010

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Queen's University



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About Queen's

- New Leadership
- Academic Planning Process
 - Continued balance between quality teaching and learning and excellence in research
 - Innovation, Interdisciplinary, Internationalization, Interdisciplinary
 - Strong sense of community
- Budget Challenges
- Capital Expansion
 - Queen's School of Business, School of Medicine, Queen's Centre (student centre and athletics)

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IT @ Queen's:

- Significant initiatives across most major streams:
 - Administrative systems replacement
 - Teaching and learning replacements and enhancements
 - Enterprise offerings: enhancements and consolidation
 - Information security
- Review of governance processes
- The need to keep up to increased requirements with declining budgets

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Campus IT Directions:

- Agility, adaptability, responsiveness
- More integration and co-ordination of services and facilities from a campus wide perspective
- Integration of external offerings
- Exploration of “Software as a Service” for enterprise offerings (email?),
- Pursuit of “Infrastructure as a Service” (storage)

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External Partnerships:

- Increased external partnerships:
 - Drivers include quality, scale efficiency, collaboration,
 - Examples:
 - Shared services discussions ongoing: Canarie, ORANO, universities, local community
 - Other universities: CUCCIO: access federations, security; research (HPCVL);
 - ORION provided services: internet access, storage pilot
 - Community: GIS, human resource development

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ORION Storage Partnership

Drivers for participation:

- Cost
- Capacity on demand – agility and scalability
- Distance advantage
- Reduced management
- Outsourced skills
- Physical space
- Need to provision for increased future demand

- Support for getting collaborative efforts rolling

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Queen's Storage Profile

- Central and department based storage
- Central (excluding HPCVL)
 - Fast storage (FC) 23TB used of 32TB total
 - SATA storage: 98TB used of 163TB total
 - Backup data 40%,
 - Administrative data 30%,
 - User Files 13%
 - Web 10%
 - Applications 6%
 - Primary Site 50%
 - Secondary Site 25%
 - Disaster 25%
- Tape 144 TB

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Storage Pilot Experience:

- Worked with Windows Application Server
- Backed up fabricated administrative database – Solaris
- Various file sizes from 10-100 Gigs

- Initial speeds improved with work and opportunity exists for additional improvement
- Issues related to backup software, server and firewall on our side (windows TSM slow due to opening so many files sequentially)
- No issues related to providers or bandwidth
- Multiple server streams increased throughput significantly
- Cautions about backing up data which is highly dynamic or where large files all changed
- No reason not to move forward

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Items to Work Through

- Service level agreement
- Security assessment of provider (joint for all ORION clients?)
- Performance
- Use cases: more incremental than full image backup?
- Technical expertise (software optimization, firewalls)
- Encryption (we do ours, but they also do theirs)

- Other StoragePipe services beyond TSM (e.g. Web file share)

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Future Plans

- Participate with ORION for DR copy of administrative data
- Review other applications for participation
- Promote solution to other campus units
- Upgrade ORION network capacity

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Other ORION Services of Interest?

- Other StoragePipe services beyond TSM (e.g. Web file share)
- Virtual Servers (as a possible method for shared disaster facility?)
- Facilities Hosting (Green?)
- Hosted Educational Services
 - LMS, digital repositories, data repositories,
- Video Streaming
- Video Conferencing
- CPU on demand

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Anticipated questions:

Why ORION?

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Other stuff....

Improve recover....

Not scaled to meet 10's of taragbytes

Archiving

Next tarabyte is the million dollar tarabyte

We need to do both large and small files...

Appliance on side?

What about moving up the stack....meta

tagging...common applications,

Common digital repositories, digital repositories..