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Concerns of library directors

- Security
- Control
- Branding
- Service
The benefits of cloud computing

- Agility
- Reliability
- Security
- High performance
- Multi-tenancy
- Virtualization of infrastructure
- Easy sharing of data
The benefits of cloud computing for a vendor

- Subscription-based business model
- Centralized deployment, no local installations
- Faster implementation and upgrades
- Hardware neutrality
- Data as a service
- Foundation for the future
Business Model

Application Architecture

Operating Structure
Organizational Changes
Organizational design principles

- A single point of contact per life cycle stage
- A single unit serving all customers
A new unit: Cloud Services

- Led by VP Cloud Services
- Responsible for:
  - Computing centers
  - Deploying cloud tool
  - Optimizing processes
  - Installation
  - Security
  - Sizing
- Provides 24/7 hub
Initial implementation

Customers

Ongoing support

Implementation and training

Professional services

Support

Ongoing support

TotalCare services

Customer handover
Current status

- > 1000 institutions
- > 300 terabytes of storage
- > 600 virtual servers
- > 40 network devices
- > 25 fully populated racks
<table>
<thead>
<tr>
<th>Service</th>
<th>Uptime</th>
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<tbody>
<tr>
<td>Aleph</td>
<td>99.93%</td>
</tr>
<tr>
<td>Voyager</td>
<td>99.70%</td>
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<td>SFX</td>
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<tr>
<td>Primo</td>
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<td>MetaLib</td>
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<tr>
<td>bX</td>
<td>99.85%</td>
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</table>

Average uptime: 99.95%
Impressive growth

Number of installations: October 2010 - March 2011
Stats, helping the monitoring

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<thead>
<tr>
<th>Month</th>
<th>Total Searches</th>
<th>Peak Searches/ min</th>
<th>Anomalies (&gt;3 sec)</th>
<th>% Anomalies</th>
<th>Average Search Time (ms)</th>
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<td>Dec-10</td>
<td>148,510</td>
<td>69</td>
<td>1,361</td>
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<td>Jan-11</td>
<td>1,708,136</td>
<td>174</td>
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<td>Feb-11</td>
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<td>154</td>
<td>5,292</td>
<td>0.30%</td>
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<td>Mar-11</td>
<td>3,392,738</td>
<td>347</td>
<td>12,544</td>
<td>0.37%</td>
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Data Centers
Data Centers
Some details about the Ex Libris cloud

• SAS 70 type II certified
• Safe Harbor certified for EU and Switzerland
• Manned 24/7
• Fully secured:
  • 4 security layers
  • Firewalls + IPS/IDS
  • Network segmentation
  • Secure configuration
  • Secure wireless bridge
  • Monitoring, alerting and reporting
Network Redundancy

Load Balancers

Edge Routers redundancy

Multiple ISP

Firewalls redundancy

Network Redundancy

Database & Storage redundancy
Concerns of library directors?

• Security: fully secured system
• Control: flexible—TotalCare or just hosted
• Branding: compliant
• Service: 24X7
• And more:
  • Subscription-based service
  • Instant start and scale
  • Continuous upgrades; always on the latest release
  • Disaster recovery
Thank You!

Tamar Sadeh

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