The Reality of Hosted Voyager

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Laura

• BA in History
• Masters in Library Science
• Social Science Data Librarian and Archivist
• Systems Librarian
• Working with Voyager for 13 years
• Mostly self-taught with help from colleagues
This Year’s Change

• Technological disruption = historic challenges
  – MOOCs
  – Ubiquitous learning
  – Smartphones/Tablets (BYOD)
  – The cloud
  – Open data/source/access
  – Shared services/partnering/outsourcing
Skills for Voyager Self-Hosted

• Patient coworkers
• Technical acuity (UNIX, vi, scripting, etc.)
• Intestinal fortitude
• Knowing what do do/what not to do
• Curiosity and willingness to learn new things
• Troubleshooting skills
• Awareness of useful “tools” (WinSCP, etc).
But It’s More than just Voyager

- Voyager
- Oracle
- Apache
- Tomcat
- Operating System
- The Clients
- ODBC
Laura’s (Old) Job

- 60-ish percent was supporting Voyager
  - Systems monitoring
  - Reporting (thank goodness for Analyzer!)
  - Upgrades
  - Configuration
  - Troubleshooting
  - Shell scripting
  - Documenting
Scripting is Cool!

• Critical Task Scripts:
  – Shut down services
  – Run backup
  – Rotate logs
  – Bring services back up
  – Run Circ and Acq batch jobs
  – Patron update
But Wait! There’s More!

• Less “Critical” but still important scripts:
  – CPU, memory, disk and pagefile stats
  – Monitor logs for errors or warnings
  – Report on /data and /mfhd.data file sizes

• System monitoring tools can help
  – Nagios
  – Logwatch
Nice-to-Have Scripts

- Deletion of rotated log/report archives
- Doran’s newBooks
- Making sure the OPAC is up
- Making sure email is working
- Oracle sessions “highwater” log monitor
- Weekly restart
- Anything else you do regularly (*not* regens!)
Moving to Hosted Services

• A blessing, not a curse!
• Freed up a lot of my time to work on other things important to the Library.
• For me, this is a good change!
• Still run some of the scripts mentioned above
• Still keep an eye on log files
• Still have to do upgrades
• If necessary I can stop and start services*
Voyager Cloud Services

The table below lists the different services provided for each of Voyager cloud-based offering:

<table>
<thead>
<tr>
<th>Cloud Infrastructure</th>
<th>Direct</th>
<th>TotalCare</th>
<th>Plus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct Server Access</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hosted in the Ex Libris Cloud</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Production hardware platform with hardware maintenance</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Centralized backup system</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Redundant environmental systems (power, cooling and humidity)</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Uninterruptible power supply (UPS)</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Power generators (independent power plant)</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>At least 3 load balanced Internet Service Providers (ISP) providing redundant fiber</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Ethernet connectivity to the facility</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Redundant routers</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cloud Services (Ongoing)</th>
<th>Direct</th>
<th>TotalCare</th>
<th>Plus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disk backups to tape</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Offsite storage of backup tapes</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Recovery from backup</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Server Monitoring</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Monitor background processes</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Monitor Oracle disk and tablespace</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Hardware system upgrades, patches and maintenance</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Operating system upgrades, patches and maintenance</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>System security</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>
Lesli

- BA in English
- Masters in Library Science
- Self taught in HTML, CSS, (some) PERL & shell scripts, (some) UNIX/LINUX commands
- 5 yrs training Voyager; 4 yrs using Voyager*
- Tutoring in end-user software (various)
- etc...
Skills for Voyager Hosted

• Basic Linux (was Unix) commands

• Basic scripting (or know experts)

• Willingness to hunt for answers
90% of my job

• Writing reports

• Confirming our scripts are running (correctly)

• Answering “why does this” and “how do I”

• Other duties as assigned
10% of my job

- Writing/rewriting/editing a script
- Setting up/editing TomCat WebV
- Implementing a “3rd party” tweak to WebV
Scripts Running

• Nightly back up (set up by Endeavor)
• Nightly email of the general status of our server (set up by predecessor)
  – Oracle Errors
  – System Errors
  – Filesystem
  – Root (user) crontab
  – Voyager (user) crontab
  – Backup files list
Scripts Running

• Cronjobs for Voyager (Circ, Cat, Acq)
• Nightly browse report (special scripting)
• Nightly inp file split (5 libraries)
• Weekly
  – Patron Update
  – Patron Purge
  – Production to “Test” refresh
• Monthly file clean up
My Wishlist for the Cloud

• Welcome to the cloud document
  – My responsibilities
  – EXL responsibilities
  – Your (virtual) server is (physically) here
  – Your (virtual) server is (virtually) here

• Better communication
  – Outages (becoming rare) are still site reported
  – Reasons for outages are almost always vague