Hardware Failure

On Saturday afternoon, August 29 at approximately 4:00 p.m., a major disk system lost power and shut down instantly. After working on the disk system for 32 hours, the vendor finished repairing the hardware and turned it over to us at 12:30 am Monday. We worked literally around the clock to restore all the Aleph data we could and run tests. We were finally able to return Aleph back to all SULs by late Tuesday afternoon. We recovered all but the last two to two and a half hours of library activity. Depending on the library, the transactions that were lost occurred between approximately 1:30 and 4:00 on Saturday afternoon when the disk system failed.

We have been working on re-establishing the Aleph batch services that are normally scheduled to run at preset times, re-activating system software monitors that report problems, and returning other services affected by the outage. All services should be restored by Sept. 10. We are also working with all libraries on problems that staff have uncovered as services are restored. We are also resuming updates to the coop servers once each service is reactivated in Gainesville.

The immediate cause of the failure was with the power supplies. The box has three power supplies, but only two are required to keep the box running. One power supply failed on Friday, the day before the crash. When the hardware maintenance team started to replace it on Saturday, a second power supply went down causing the entire box to do a hard shut down. The second failure may have been caused by the maintenance personnel, they have not admitted that. They have promised us a full accounting after they have completed their analysis. Human error is a strong possibility.

Losing power with a hard shut down is not the serious problem in all this. That can happen at any computer center. It’s what happened next that is the serious problem. Or rather I should say what did not happen next. Systems like this are supposed to come back up and find all the data on the disks. At most, only a few transactions that had been in progress at the time of failure might be lost. But this box could not recover its top level directory which had the information on where all the records were written. Over 40 terabytes of data were on the disks, and the system could not find a single byte! That’s why maintenance worked for over 30 hours on the box. They were trying desperately to recover the data as the box was designed to do. The power supply repair took one hour, and the box came back up. The rest of the 32 hours was spent trying to recover the data. They finally admitted to us that they had made a mistake when they installed the box. They had failed to set up the data recovery feature correctly, and they had spent the 30 hours writing scripts to try to figure out and rebuild the missing directory information. Had they given us sooner and let us have the box, we would have had Aleph back on Monday afternoon instead of Tuesday afternoon.

We could have activated Aleph coop in full production mode, but at the time of the failure, it did not have any of Saturday’s transactions. We decided to leave it in read-only mode until we could get the Saturday transactions off tape and up to Tallahassee. By the time we had done that, it looked like we could be back up in Gainesville within another 24 hours and would not have to deal with the additional huge steps of bringing coop updates back to Gainesville. Prior to Aleph 19, we were shipping updates every half hour to Tallahassee. While we were in the process of upgrading 18 to 19, we reduced our shipping of updates to once a day after midnight. This change had nothing to do with Aleph. It was temporarily necessary because we were changing the Aleph server hardware at the same time. In fact, we had scheduled the final hardware change in Tallahassee for this week so we would be back to sending Aleph updates again every half hour. Needless to say, we did not make the hardware change this week. As FCLA’s head of systems told me, “One more week, and we would have had an up-to-date coop available.” Just to emphasize the point, however, Aleph coop could have been turned into full production and had our down time in Gainesville been much longer, we would have done that and dealt with the issue of returning data to Gainesville later.

The box itself is a very successful disk storage system. Over 1,000 of them are installed, many of them in America’s largest corporations and containing vital corporate financial data. We now have the distinction of being the only site with such a complete failure. Inside the box, all data are mirrored. As long as the box runs, any data lost from one disk can be copied back from its mirror disk with no down time. The one mistake we made was to put our Oracle logs on the same disk system. We are going to correct that by putting the Oracle logs on disks in a separate box. While the chances of a total outage happening again are highly improbable, having the Oracle logs on independent disks will avoid losing the last two and a half hours of data.

SUL staff had to do extra work during the outage too. They communicated to their staff what was happening, updated websites, put messages up in the library and had to rearrange their work to accommodate the loss of service. This outage was certainly hard on people at the front line, dealing with patron impatience and having to record lots of numbers manually. They also went out of their way to allow us to concentrate on restoring data. We were very grateful for the cooperation we received from library staff.

Aleph V19

Aleph Version 19 FCLA completed site visits to all SULs. The visits included an update on FCLA activities, overview of new Mango features and overview of V.19. Separate site visits were arranged for specific training in Aleph Course Reserves. June was spent testing/refining the upgrade process. On July 17th we successfully upgraded UWF, our first production upgrade. New College was the final upgrade on August 4th. The upgrades were done in the early morning hours and on weekends to minimize disruption to the libraries’ staff and patrons. During the actual upgrade, detailed steps of the process were recorded on our website so library staff could track their institution’s upgrade. A few days after each upgrade, the Aleph Report server was upgraded and released.

MANGO

Series enhancements: new features have been added to Mango to aid users in finding materials in a series. The new series title facet will appear after any type of search. If a series title is selected a volume facet is provided for further refinement. A series title sort option is available when a series search or facet is used. The series title is also shown in the results list when a series search is performed or when a series title facet is selected (see screenshot at end of report).
Digital Library Services

It is now possible to flag DigiTool content for automatic archiving in the Florida Digital Archive. The files to be archived must be ingested into DigiTool with a preservation level of “critical” and information about the FDA account and project in “partition_c”. A nightly batch process downloads copies of all correctly flagged files from DigiTool, and assembles the files into Submission Information Packages (SIPs) for the archive. The SIPs are then transferred to the FDA for subsequent ingest. The appropriate Affiliate receives an FDA Ingest or Error report for each SIP. This can be a useful, time-saving procedure when preservation masters are loaded into DigiTool; for example, for ETDs, when the PDF format serves as both the service copy and the preservation master.

New version of the Citation Server

In early September, Inspec, Compendex and several other databases hosted by FCLA using Citation Server will be migrating to a new version. The migration is being driven by cost savings, the obsolescence of current hardware and software, and the ability to use a new open source search engine (Solr/Lucene). This migration will change the user interface for those using the Citation Server databases. The new version will have features such as search facets and relevance ranked result sets. Current features such as Marking/Emailing and link resolver buttons will be retained as well.

New FCLA Website

We are adding features to our new website on a regular basis, some recent examples are: new "FDA file formats table" which lists extensive details about the treatment of each file format; "temporary status page" was created during the hardware outage as a communication tool; "RSS feeds" were added so staff could keep up-to-date with our news; and the "News archive" was created so that older news could be easily accessed.

Highlights/Lowlights

The new website proved to be a valuable tool in communicating in the most up to date way with the libraries during the recent outage and recovery.

FCLA hosted the newest SUL Director, Brian Doherty, for a general orientation, on August 10th.

Budget and Planning

2009/10 - budget down 6.76% to $10,969,697

- Investigating ways to reduce rent
- Reviewing options for reducing Ex Libris software maintenance fees

Planning Activities for 09/10 include:

- UBorrow pilot project
- Single Bib pilot project
- Department of Education study of library technology (Appropriations 81)
- Storage growth for the Florida Digital Archive
- H1N1 (Swine Flu) contingency planning
Community Contribution
FCLA has an ongoing culture on community support and the following contributions reflect this spirit of giving back:
- Donated 158 pounds of food to Bread of the Mighty.
- Raised $170 for Puppy Hill Farm Animal Rescue, plus bags and cans of pet food for the Humane Society’s Meals on Wheels for Pets program during its annual Take Your Dog to Work Day event.
- The candy jar users contributed $75 for the Heifer Foundation. Keep up the good work all you Sweet Tooths!

Elluminate: A new product that gives us new services
- Purchased licenses for FCLA staff use
- Did internal training and created FCLA Guide to Using Elluminate on the website
- FCLA sessions: Acquisitions support, Web tour of new FDA formats, Mango new feature presentations during OPAC subcommittee call, Permissions presentation, Circulation support, internal staff meetings
- FCLA setup and hosted Elluminate trials for TAG and TSPC, in these sessions the audio was used as a replacement for conference calls.

Library Services

MANGO
- Quick Articles Released for Testing - Quick Articles uses the Ex Libris Metalib X-Server to find and display articles with links to get the full-text or resource via the SFX or 360Link service. The articles that are retrieved are the same that you can search and find using the Metalib User Interface and selecting the General Quickset to search.
- UFDC Records live in Mango - UF Digital Collections with thumbnail images are now being loaded into the Endeca search engine for retrieval in Mango.
- Series enhancements going live in Mango - This enhancement aids in the searching of numbered series by providing a search option for series and contextual facets.
- CRL Records - set up in Testcat for USF and FIU
- Headings Did You Mean” Live in Mango - In the production versions of MANGO if you do an Author, Subject, or Title search, depending on the search you do, you may see a “Did You Mean” suggestion that is based on the headings indexes for each SUL. If there is a proximal “See” heading in Aleph (within three entries) of your search term, this will display as a search suggestion.
- BIB record problem report form in Testcat - Each full BIB record view in Mango has a link to report a problem with a BIB record. Clicking on this link opens a short form where someone can describe the problem and optionally enter their email address. When they click send, an email with details about the record will be sent to catalogers at the library.
- Summary (if available) now displays on the main results list.

E-Resource Access and Management Activities

SFX
- Run monthly updates from Ex Libris which add and update targets (ie. ejournal packages) and software.
- Add and configure targets for libraries on request.
- Continued to write and install custom software to expand the functionality of the SFX system (example: custom OCLC FirstSearch ECO target parser that links to the issue list of a journal in production at USF.
- Provide ongoing user support in target content, product problems and functional use.
- Continue working with interested libraries to incorporate print holdings into the SFX display and A-Z list.
- Assist SUL librarians with customization of the SFX interface and other configuration issues (example: changes in SFX templates for UCF)

MetaLib
- Run monthly updates from Ex Libris which add and update databases and configurations to search them.
- Provide ongoing user support with product problems and functional use.
- Continue to work toward improving access to usage statistics.
- Coordinate with Mango team for the article searching module.
- Assist SUL librarians with customization of the MetaLib interface and other configuration issues (example: changes for UWF)

Citation Server
The FCLA-developed Citation Server that supports Engineering Index, Compendex and several small, locally-developed indexing databases is migrating to new version because the current hardware and software is becoming obsolete. Built on the new open source search engine (Solr/Lucene), it includes new features such as search facets and relevance ranked results sets Links to all of the hosted databases can be found at: http://fclaweb.fcla.edu/content/citation-server
E-resource Licensing

- Negotiated a 0% increase on the majority of FCLA funded databases for 2010, reducing the necessity to cancel databases in order to balance the FCLA e-resource budget.
- Worked with Elsevier to reduce the 2010 costs of the ScienceDirect contract below the fees listed in the current contract.
- Worked with the CPC/ERS to identify low-use Springer titles to drop from the upcoming 2010 contract. Negotiations with Springer are ongoing.
- Hosted the annual CPC/ERS meetings in Gainesville at FCLA August 12-14, 2009.

Aleph Integrated Library System

Upgrade to V.19

- Installed and configured new Linux hardware for Production and Report
- Successfully tested upgrade procedures for all eleven SULs on Prod servers
- Continued Aleph Table configuration for V19
- Supported library staff in their testing of V19 in all functional areas
- Production Upgrades for all SULs from July 17 - August 4
- Setup and Upgrade for all SULs on Report Server (COOP)

Training and Consultation

- Completed V19 Site Visits to all eleven SULs
- Course Reserves training for 8 sites
- USF Florida Institute of Phosphate Research site visit, August 6th
- Presented “Connecting Users to Collections” at UF
- Version 19 Staff Privileges Webinar, July 15th
- Reports and Statistics Webinar for Access Services Subcommittee, August 28

Authorities

- Backlog of weekly updates that accumulated during reindexing and upgrades are now loading into LC resource authority file (LCA10) on prod19

Batch Processing

- Modifications to patron load script to accommodate visiting faculty and other patrons with unique campus relationships

Support Examples

ALL - Fiscal Year Rollover procedures for 2009-2010
ALL - MARC updates from OCLC Technical Bulletin 257
Object Codes and Material Types added for 6 libraries (FAU, FIU, FSU, FGCU, NCF, UNF) for pilot project for E-Resources fiscal reports
FIU - setup and coordination for APFeed (Aleph to PeopleSoft interface) with PantherSoft developers and with Library staff for invoice payments, live July 15th
UWF - custom Aleph service created for loading object codes after EDI invoice load
UNF - setup and coordination for APFeed (Aleph to Banner interface) with Banner implementers and with Library staff for invoice payments (in test)
UF - Order status changed to closed for Monographic orders paid through EDI invoicing using SQL
FIU - set up emailing order Arrival Message to Initiator for Law Library
UNF - added serials object code to EBSCO’s line items using SQL
UF - campus delivery system pilot
UF - new fine policies and notices
New College - setup single Aleph client to connect to both New College and USF
FGCU - consulted on Serials Solutions load - deletion of old-format records and load of new-format records
UCF - College of Medicine: set up means for staff to import catalog records as suppressed and then unsuppress them when they opened
USF Polytechnic - helped staff with producing shelflist report, problem was identified and reported to Ex Libris. Confirmed workaround with staff
Data Warehouse was moved to the new Linux COOP server and all ETLs modified to read from both the v.18 or v.19 tables during the transition then exclusively the v.19 Aleph tables.

### New ARROW reports this quarter include:

- Development of ARROW reports using the obsolete Net.Data software was suspended. Time was spent converting existing ARROW reports to use Oracle.

### Examples of ad hoc reports:

- USF - Audiovisuals with no recent loans
- FSU - Turkey Creek records to be suppressed
- FAMU - special report of patron activity

### Projects

#### OCLC Reclamation

Finalized UF reclamation extract process
- Scheduled and ran extract of BIBs to send to OCLC, August 23rd
- Currently processing MARC files to send to OCLC

#### UBorrow

- Setup of 3 pilot schools (in progress)
- MANGO setup underway for identifying UB-eligible items and placing requests
- Pace of work increasing, including internal FCLA UBorrow team meetings moving to once weekly

#### RapidILL

- Jim Corey completed the contract for all 11 SULS and payment for the 8 SULs that chose to participate this year.
- FCLA staff are working with each of the participating SULs to extract records from Aleph and Sfx (where appropriate) to send on schedule for UBorrow release in Test planned for mid-October
- FCLA UBorrow project page available at http://fclaweb.fcla.edu/content/uborrow-pilot-project

#### Digital Library Services

### Digital Collections

- A DigiTool-to-FDA pilot successfully created 680 packages of ETDs exported from FAU’s DigiTool for import into the Florida Digital Archive. Any library wanting to take advantage of this new automated process should contact the FDA Manager, Lydia Motyka.
- DigiTool collection usage reports are on the FCLA Web through the end of FY2008-2009. An interface for libraries to pull dynamic monthly usage reports is in process.
- DigiTool Service Pack 24 was installed in test on 06/11/09 and in production on 06/21/09.
- DigiTool Test and Production were moved to new server hardware in June and July, and the operating system and Oracle database were upgraded. This was done with Resource Discovery (the public user interface) running on the COOP server, so that no public downtime was perceived.
- The Yiddish Children’s Books collection was migrated from DLXS to DigiTool (See figure on next page). Literature for Children and the Wolfsonian Dutch Collection migrations are expected to be complete by the time of the September Board meeting.

### Digital Archives

- As of September 1 the FDA contained 175,188 packages (17,928,946 files) 38.9 TB (one copy). This represents a growth of 38,861 packages (13.6 TB) since the last quarterly report.
- FSU became our tenth FDA Affiliate. Packages were ingested for the first time for FSU and UNF.
- A status page for Affiliates was added to the FCLA website at http://fclaweb.fcla.edu/content/fda-affiliates-status
- The quarterly Affiliates conference call was held twice, on August 17 and 19, recorded on Elluminate and posted to the FDA website. The topic was the handling of file formats by the FDA.
- A Package Tracker function was put into production in June, which gives FDA operations staff the ability to track submissions from the point of receipt to their current state of processing, and to quickly look up package status. A new reporting function allows FDA operations to re-extract Reject Reports and send them to Affiliates when necessary.
- DAITSS 2.0 development has slipped roughly a quarter and is now expected to be complete 2Q 2010. A presentation on DAITSS 2 was accepted for presentation at the Sun Preservation and Archiving Interest Group (PASIG) meeting in October.
- Franco Lazarino and Marly Wilson attended a TIPR (Towards Interoperable Preservation Repositories) project meeting at Cornell June 29 - Aug 1. A paper on TIPR was accepted for presentation at the International Conference on Preservation of Digital Objects (IPRES 2009) in October.
- FCLA hosted an intern from the University of Michigan School of Information’s PhD program in June. Devan Donaldson worked on benchmark performance testing for the FDA.
**FCLA Staff Professional Activities**

- Priscilla Caplan accepted an appointment to the Editorial Board of NISO’s Information Standards Quarterly.
- Jean Phillips was elected Vice-Chair of the ELUNA Aleph Product Group.
- Michele Newberry, as a member of the IGeLU Steering Committee, served as the Program Planning Committee Chair for the 2009 annual meeting.
- Jennifer Kuntz is serving on the Ex Libris URM “Fulfillment and Patron Management” Focus Group.
- Mark Needleman was elected Vice-Chair of the ELUNA SFX Product Working Group; he also continues to write a column on standards for Elsevier peer reviewed journal Serials Review.
- Michele Newberry is serving on the Ex Libris URM “ Consortia” Focus Group.
FY2009 Circulation Stats - Total= 3,108,946 -- Loans and Renewals

FY2008 Circulation Stats - Total= 2,993,801 -- Loans and Renewals
Statistics

The table below shows the Library Management System Record Counts for various universities as of July 2009. The columns include University, BIBS, COPIES, ORDERS, ITEMS, and Authority.

<table>
<thead>
<tr>
<th>University</th>
<th>BIBS</th>
<th>COPIES</th>
<th>ORDERS</th>
<th>ITEMS</th>
<th>Authority</th>
</tr>
</thead>
<tbody>
<tr>
<td>FAMU</td>
<td>870,413</td>
<td>930,627</td>
<td>54,153</td>
<td>615,357</td>
<td>0</td>
</tr>
<tr>
<td>FAU</td>
<td>1,699,032</td>
<td>1,803,586</td>
<td>20,006</td>
<td>831,372</td>
<td>808</td>
</tr>
<tr>
<td>FGCU</td>
<td>410,475</td>
<td>413,078</td>
<td>16,108</td>
<td>267,407</td>
<td>4,015</td>
</tr>
<tr>
<td>FIU</td>
<td>1,512,099</td>
<td>1,760,158</td>
<td>80,766</td>
<td>1,023,623</td>
<td>41,329</td>
</tr>
<tr>
<td>NCF</td>
<td>2,546,338</td>
<td>2,646,759</td>
<td>95,953</td>
<td>2,535,077</td>
<td>72,814</td>
</tr>
<tr>
<td>UF</td>
<td>6,890,468</td>
<td>5,439,762</td>
<td>140,394</td>
<td>4,061,286</td>
<td>99,923</td>
</tr>
<tr>
<td>UNF</td>
<td>734,928</td>
<td>747,600</td>
<td>52,169</td>
<td>854,809</td>
<td>19,285</td>
</tr>
<tr>
<td>USF</td>
<td>2,016,824</td>
<td>2,755,044</td>
<td>81,430</td>
<td>2,212,440</td>
<td>75,399</td>
</tr>
<tr>
<td>UWF</td>
<td>796,807</td>
<td>801,268</td>
<td>56,655</td>
<td>666,584</td>
<td>15,085</td>
</tr>
<tr>
<td>TOTAL</td>
<td>16,956,946</td>
<td>19,169,026</td>
<td>635,334</td>
<td>15,182,655</td>
<td>8,444,192</td>
</tr>
<tr>
<td>Shared</td>
<td>8,088,935</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The Usage Statistics for FY 08-09 are also shown. The table includes columns for University, FT, Number, % of Total, and Per FTE for both Library Catalogs and FCLA Licensed E-Resources.

<table>
<thead>
<tr>
<th>University</th>
<th>Number</th>
<th>% of Total</th>
<th>Per FTE</th>
</tr>
</thead>
<tbody>
<tr>
<td>FAMU</td>
<td>7,946</td>
<td>1.48%</td>
<td>30.50</td>
</tr>
<tr>
<td>FAU</td>
<td>15,044</td>
<td>7.56%</td>
<td>81.10</td>
</tr>
<tr>
<td>FGCU</td>
<td>5,731</td>
<td>2.01%</td>
<td>57.33</td>
</tr>
<tr>
<td>FIU</td>
<td>28,170</td>
<td>15.43%</td>
<td>88.71</td>
</tr>
<tr>
<td>NCF</td>
<td>663</td>
<td>0.78%</td>
<td>190.91</td>
</tr>
<tr>
<td>UCF</td>
<td>624</td>
<td>13.36%</td>
<td>69.75</td>
</tr>
<tr>
<td>UF</td>
<td>38,656</td>
<td>25.67%</td>
<td>201.46</td>
</tr>
<tr>
<td>UNF</td>
<td>10,743</td>
<td>6.75%</td>
<td>64.08</td>
</tr>
<tr>
<td>USF</td>
<td>20,086</td>
<td>14.29%</td>
<td>84.53</td>
</tr>
<tr>
<td>UWF</td>
<td>6,247</td>
<td>3.21%</td>
<td>84.23</td>
</tr>
<tr>
<td>TOTAL</td>
<td>196,357</td>
<td>100.00%</td>
<td>83.49</td>
</tr>
</tbody>
</table>

MANGO - Series Facet Enhancement

The image shows a screenshot of a library catalog database interface with a search box for narrowing results by Library/Collections, Author, Subject, Topic, and Format. The screenshot also includes a search for mathematica, and a browse results by call number option.