

Case Study: Zimbabwe Evergreen ILS pilot

Project overview

The eIFL-FOSS ILS project provides an opportunity for evaluation of and possible migration to a free and open source software (FOSS) integrated library system (ILS). It promotes direct engagement with the FOSS communities of a chosen ILS. And it lays the groundwork for a mutual support network across eIFL.net for further libraries investigating migration to a FOSS ILS. The project focused on evaluating two FOSS ILSs with robust and open development and support communities: Koha (<http://www.koha.org/>) and Evergreen (<http://www.open-ils.org/>). Following a general call for participation in early 2008, libraries from 12 countries representing 11 language groups submitted applications to become pilot sites. From these, 7 sites were selected that represented a wide range of libraries and regions. All applicants joined an email discussion list in order to follow the progress of the pilot sites. The 7 pilot sites are: Fundamental Scientific Library of the National Academy of Sciences, **Armenia**; National Scientific Library, **Georgia**; Mzuzu University, **Malawi**; Library of the Faculty of Medicine Pharmacy and Dentistry, University of Bamako, **Mali**; Madan Puraskar Pustakalaya, **Nepal**; Midlands State University Library, **Zimbabwe**; and An-Najah National University Library, **Palestine** (West Bank). Each pilot library participating in the project was invited to participate in an intensive technical training workshop in Yerevan, Armenia, in June 2008. Case studies of each pilot draw out learning points for other libraries seeking to move to a FOSS ILS.

Pilot library

Midlands State University Library, Zimbabwe (<http://www.msu.ac.zw/libraries/index.php>) has four branches: Main Library, Batanai Library (Tourism and Hospitality Management and Banking and Finance), Law Library, and Graduate School of Business Leadership Library. These libraries are geographically spaced with the furthest library being 12 km from the Main library. They are linked with fibre optic cable. In total the library has a collection of over 70 000 volumes and a student base of 12 000.

Ephraim Makeke is the lead for this pilot. His efforts have been ably support by Zimbabwe's vibrant national library consortium, the Zimbabwe University Libraries Consortium (ZULC <http://www.uz.ac.zw/library/zulc/>). The Midlands State University Library's participation as a pilot site for this project is seen as the leading edge toward FOSS ILS adoption across the ZULC libraries.

Motivation for exploring a FOSS ILS

As with many libraries, the Midlands State University Library must exist within a tight budget. The yearly budget is never enough to cover the costs of all library related activities such as buying books and equipment, subscriptions to printed and online journals as well as payment for yearly license agreements for proprietary ILS systems. In a very real sense a FOSS ILS is a practical necessity. The economic imperatives may drive the need for FOSS but it is the possibility of continued community-based technical support that makes a FOSS ILS strategically, as opposed to tactically, attractive. And if the software can be tailored to the particular needs of Midlands State University, so much the better.

Learning point: Economic factors may be the initial motivator for exploring FOSS solutions, but often it will be the additional benefits of FOSS participation that make

FOSS solutions attractive over the long term.**FOSS ILS choice**

Midlands State University Library opted to pilot Evergreen (<http://www.open-ils.org/>). The legacy system in use is Mandarin M3, which is deployed on a Windows operating system. Likewise the systems administration skills were all Windows specific. Taking on either the Koha or Evergreen FOSS ILS would require a significant commitment in terms of new skills. Both of these ILSs deploy onto Linux operating systems, with a preference for either Debian GNU/Linux or Debain-based distributions of Linux such as Ubuntu. In order to trial Evergreen successfully, Ephraim would need to first learn Linux systems administration. This is no small undertaking. It requires significant dedication and motivation. Ephraim managed the task with the assistance of the Evergreen email discussion list and the Ubuntu forums where he was able to post questions and get answers.

Learning point: A FOSS ILS can be the right choice even if there are significant skills which need to be acquired in order to make deployment and administration practicable. However, gaining such skills (i.e. Linux systems administration) will offer tremendous advantages later for the deployment of future FOSS solutions.

Initial Installation

In order to begin working directly with Evergreen, even prior to gaining sufficient Linux systems administration skills, Ephraim took advantage of the virtual machine (VM) images that the Evergreen development community post on their development wiki. A VM is an independent operating system that can be deployed ‘virtually’ on one’s PC without affecting the base operating system. In this case, Ephraim was able to deploy VM images of Ubuntu Linux server and desktop editions on his accustomed Windows PC. This provided time to test the various functions of Evergreen while more slowly working on learning the necessary Linux skills. VM technology was entirely new to Ephraim at the time, so this too counts as a further additional skill that he had to learn. He spent 4 months working with Evergreen in this configuration, though some of this time was non-productive due to prevailing economic conditions in Zimbabwe, a forced university closure, and industrial action.

Learning point: If you are open to new technologies and new ways of working and learning, you may find substantial short cuts that will help with piloting your chosen FOSS solution.

Whilst working with the VM images, Ephraim also downloaded Ubuntu 7.10 and Ubuntu 8.04. Installation of these two Linux systems was easy enough because the installation process is straightforward. This allowed him to begin learning the basics of Linux. Ephraim used the following strategies in order to master Ubuntu:

- Use Ubuntu everyday for all computing solutions
- Join Ubuntu forums and Debian forums
- Learn the basic terminal commands to execute routine tasks
- Read widely about Linux history and its various distributions
- Learn the various installation files and file extensions in Ubuntu and how each can be installed, e.g. .deb, .tar.gz, .zip
- Think Ubuntu every time

“These strategies enabled me to learn Ubuntu very fast,” notes Ephraim.

Learning point: A concentrated learning strategy can make even the adoption of an

entirely new operating system a straightforward matter.

Infrastructure challenges

Midlands State University Library has sufficient numbers of PCs with reasonable processing power. However they are limited with respect to RAM, ranging between 256 and 512 RAM. But the single biggest infrastructure challenge is actually electricity. The electricity supply for the university may be shut down without notice and for extended periods. This is particularly frustrating if you are in the midst of downloading new version of software from the Internet at the time.

Very low Internet bandwidth is another problem especially during semester if a large number of computers on campus are browsing the Internet at the same time. The result is that even simple Internet-based tasks will take considerably longer to perform.

Learning point: Each library has a unique set of infrastructure challenges (and opportunities) that make up its working environment. Systems Librarians have to work around and through such challenges.

Data migration

The legacy Mandarin M3 system used by the library uses standardized MARC formats for its catalogue records. This is a huge advantage for this pilot. Ephraim has been able to import large number of bibliographic records in his Evergreen instance in order to test his installation. And this will make the final transference of records straightforward as well. Even with approximately 70 000 records, this will be very quick. Of course the use of standardized formats works both ways. As well as making it easy to get these records into the Evergreen ILS, it will make it easy to get them out should the library ever decide to migrate to a future ILS, whether that ILS is FOSS or proprietary. Using recognized standards for interoperability is not just a FOSS practice, it is good practice generally.

Learning point: Wherever possible, take advantage of internationally recognized standardized formats for data.

Building a wide support network

It is important for Zimbabwe to have a common ILS as a starting point to make it easier for other librarians to gain knowledge and share the effort of support. With this in mind, an Evergreen National Training Workshop was organised and run at Chinhoyi University in association with ZULC. Ephraim Makeke was the trainer for this workshop which was aimed at selling the idea of a FOSS ILS with Evergreen in mind. Zimbabwe has 12 universities and 10 participated in this event. It seems clear from the follow-up evaluations that many of these libraries will be considering adopting Evergreen in the year ahead.

Equally important to note for Zimbabwe is that there are also many librarians based at Technical and Polytechnic Colleges. They too could benefit from migrating to a FOSS ILS. Talks have already begun with the organisers of the Chinhoyi workshop to begin planning training workshop for Polytechnic libraries. This could lead to all tertiary institutions in Zimbabwe undertaking migrations to Evergreen. That result is still some way off, but the goal of Zimbabwe libraries sharing their support needs through the use of a common FOSS ILS is very attractive.

Learning point: Work to spread the knowledge of your particular FOSS ILS as wide as possible since this will significant improve the support base for your own installation.

Next steps

Midlands State University will launch its production version of Evergreen on 24 August 2009 at the start of the new semester. What follows will be an ongoing evaluation of how staff and students react to the new OPAC and how library staff deal with the new staff client interface. It is hoped that with the spread of interest in Evergreen across the libraries in the ZULC network, the training of non-technical staff will also become a shared program of work.

Learning Points from the pilot

There have been numerous learning points from this pilot. A few may be unique to Midlands State University Library, but most have wider application. They will inform our future efforts in promoting FOSS in libraries.

- Economic factors may be the initial motivator for exploring FOSS solutions, but often it will be the additional benefits of FOSS participation that make FOSS solutions attractive over the long term.
- A FOSS ILS can be the right choice even if there are significant skills which need to be acquired in order to make deployment and administration practicable. However, gaining such skills (i.e. Linux systems administration) will offer tremendous advantages later for the deployment of future FOSS solutions.
- If you are open to new technologies and new ways of working and learning, you may find substantial short cuts that will help with piloting your chosen FOSS solution.
- A concentrated learning strategy can make even the adoption of an entirely new operating system a straightforward matter.
- Each library has a unique set of infrastructure challenges (and opportunities) that make up its working environment. Systems Librarians have to work around and through such challenges.
- Wherever possible, take advantage of internationally recognized standardized formats for data.
- Work to spread the knowledge of your particular FOSS ILS as wide as possible since this will significantly improve the support base for your own installation.

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