DuraSpace

DSpace Technology Overview

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DuraSpace
Open Repositories 2009
05/20/2009
Repository Platforms

• DSpace
• Fedora

Building Blocks

• Akubra – pluggable file storage interface
• DuraCloud – cross provider cloud storage and compute
• Mulgara – triple store
DSpace Development

Modularizing the Development Process

• Maven (as of 1.5)
  – Enables replacing patches with Overlays and Applications

• SVN at OSU Open Source Lab
  – Enables fine-grained access control

• Jira
  – Vote and prioritize as a community
DSpace Committers

• Apache model governance
• Weekly IRC Meetings
• New Committers:
  • Ben Bosman, @Mire
  • Kim Shepherd, Waikato Univ, NZ
DSpace 1.5.2

Released April 15, 2009

- SWORD module/version 1.3.1 supporting the sword standard version 1.3
- Cocoon upgraded to 2.2
- Fix for the UTF-8 issues with the XMLUI
- New authentication methods: Hierarchical LDAP and Shibboleth
- Full update translations: German, Italian for both XMLUI and JSPUI and Ukrainian for JSPUI
- New translations for 1.5.x: Greek and Thai
- Graceful resolver for urn in the item page for the JSPUI
DSpace 1.6: The Road Ahead

Stuart Lewis – Release Coordinator
Where are we heading?

- DSpace 2.0 (early 2010)
  - Major restructuring

- While we wait:
  - DSpace 1.6 (fall 2009)
    - Bug fixes
    - Feature requests
    - Stepping stone to 2.0
Bug fixes

- Please continue to report bugs in JIRA
- Please fix bugs if you can and submit to JIRA
- Please test bug fixes if you can, and report on JIRA

http://jira.dspace.org/
Feature requests

- We held a survey
- Top three requests:
  - Better statistics
  - An embargo facility
  - Batch metadata editing
- 3 ‘point people’ to drive these forward
  - Mark Wood (stats)
  - Richard Rodgers (embargo)
  - Stuart Lewis (batch editing)
Feature requests

• We need to work out the requirements
  - Please join the stakeholder groups so we can gather your input

• We will look at current implementations to see if they fulfil the requirements
  - (there are several stats and embargo facilities that have been implemented already)

• We will likely require further development effort
  - Please volunteer to help out if you can
Contributing code

- We love to receive code contributions. But please bear in mind:
  - They should be within the general scope of DSpace
    - (if they are not, we could look at helping you make them into a modular ‘add-on’)
  - Work with us to get your code included
    - Often changes are required to fit in with the DSpace core, and your code is more likely to get included if you work with us to do this, rather than ‘throwing code over the wall’ and leaving it there
  - The old adage: “Share early, and share often”
    - Share your development plans with the community. There may be interested parties willing to co-operate.
Other ways to get involved

• Not a techie?

• We need:
  - Testers
    • help find bugs
  - Writers
    • help improve the documentation and wiki
  - Designers
    • help improve the user interfaces
Any questions?

- Talk to Michelle, Brad or Valorie
- Talk to a long-time DSpace community member
- Talk to a committer
- Email me: s.lewis@auckland.ac.nz
Credits

• http://www.flickr.com/photos/striatic/173551273/ ‘Long Vermont roads’


• http://www.flickr.com/photos/kmevans/399406599/ ‘die computer die’

• http://www.flickr.com/photos/acrofish/344904882/ ‘help’

• http://www.flickr.com/photos/calavera/65098350/ ‘Any question???’
DSpace GSOC

2009 DSpace Google Summer of Code Projects

- Andrius Blazinskas (Richard Rodgers)
  Fedora DAO implementation for DSpace, beta release
- Gaurav Kejriwal (Claudia Juergen)
  Collection Administration Enhancements
- Ashly Markose (Jayan Kurian)
  Report Generation Tool for DSpace
- Bojan Suzic (Aaron Zeckoski)
  DSpace REST webapp
DSpace 2.0

Service Manager Core

• Based on Spring
• Services
  – StorageService
  – MetadataSchemaService
  – AuthN/AuthZ
  – Session support
  – ...
• Learn more at 1:30
DSpace 2.0 Data Model

• No more communities, collections, or items!
• Entities, relationships, and properties
• Communities, collections, and items rebuilt on top.
• DCMI based MetadataSchema service to bridge the models.
  • Other profiles supported, e.g. SWAP
• Demo to follow
DSpace 2.0 User Interfaces

JSPUI

- Freemarker template engine based rework of 1.x JSPUI
  - Familiar JSP technology
  - Templates separate the code from content
    » Cleaner working environment
    » Lowered upgrade risk
  - Themes readily applied and blended
DSpace 2.0 User Interfaces

XMLUI

- Evolution of Manakin from 1.x
- Based on Cocoon 2.2 (as is 1.5.2 and 1.6)
- Demo to follow
DSpace 2.0 Future

• Developer preview release before summer
• Community engagement required
  • Define what comes “in the box”?  
    – Early adopters solicited.
    – Drives the release schedule.
      » Fall? Winter?
• Feature parity with 1.x
  – Module developers / ports wanted.
• Test and Feedback
DSpace 2.0 Futures

• Storage modules
  • Fedora / Akubra
  • DuraCloud
• UI feature parity – or else!
• <insert your requirements here>
DSpace and Fedora

• Still two communities!
• Possible Connections:
  • DS2.0 storage layer
  • DuraCloud
  • Third party components / plugins
    − Bitstream validation (JHOVE)
  • Community infrastructure
  • DSpace 2.0 Spring bridged to future Fedora OSGi
Thanks!

- http://wiki.dspace.org/index.php/DSpace_2.0
- https://svn.dspace.org/svn/repo/
Credits

• http://www.flickr.com/photos/special/1696026/ “Umbrella”
• http://www.flickr.com/photos/oskay/265899784/ “Inside Out Lego Brick”
• http://www.flickr.com/photos/novecentino/2340521934/ “Alone”