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Fedora Commons Repository Update
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Fedora 3.4 Release Manager
Agenda

- Recent releases
- Roadmap
- Upcoming release
- Community participation
Recent releases

• Release 3.4 – August 2010
  – DC, RELS-EXT, RELS-INT as Managed Content
  – REST API relationships methods
  – Enhanced Content Models
  – Optimistic Locking
  – FeSL Authentication as default (JAAS)
  – FeSL policies as Fedora Object
  – Logging reconfiguration without restart
  – Akubra low-level storage
  – REST API improvements and bug fixes
  – Deprecation of "LITE" APIs

• Release 3.4.1 – October 2010
  – Security update – DoS vulnerability
Roadmap – major themes

- London committer meeting February 2010 and Madrid committer meeting July 2010 (OR2010)
- Improving the build and release process
- Enhanced Content Models
- Fedora Command-Line interface and tools
- High Level Storage
- Module Architecture Development
- Improve service deployment
- Improve support for semantic web and linked data
- Consolidation of APIs (API-A/API-M)
Enhanced Content Models

- Extend DS_COMPOSITE_MODEL
  - include XSD references
- ONTOLOGY datastream
  - OWL LITE to declare allowed relationships, cardinality and target “classes”
- Validation (after ingest) against XSD and OWL
- Cloning objects via Fedora API, Template objects
- Repository “views” (for atomistic models)
High-Level Storage

- Pluggable storage interface in Fedora is currently “low level” – storing objects and datastreams as anonymous blobs
- Introduce a high-level storage interface
  - storage layer aware of the structural semantics of the object
  - multiplexing, transactions, locking strategies, indexing, managing
  - greater flexibility in adapting to the needs of preservation, performance, cloud and analysis-oriented use-cases
Module Architecture Development

• Long-term goal is to move to OSGi
  – but, steep learning curve, some way to go yet
• Shorter term – move to the Spring dependency injection framework
  – replacing Fedora’s “home grown” module architecture
• Enabler for many future improvements
Improve Service Deployment

• Reworking of service deployment in the current 3.x CMA
• Current implementation leaves much to be desired, e.g. current WSDL implementation
• Simpler description language for services
• Support for SOAP bindings
• Support for additional HTTP verbs – PUT, POST, DELETE
• Tooling and documentation improvements
Semantic web / Linked Data

• Extending Fedora’s current support for RDF
• Persistent http URIs for resources
  – REST API and Resource Index
• Support for less-restricted RDF
  – current limitations: objects and datastreams as triple subjects
  – eg through named graphs
• REST API support for relationships
API Consolidation

• Two APIs – API-M and API-A, two sets of code
• SOAP splits these, REST does not
• Merge these two APIs
  – current split is cumbersome, particularly for AuthZ
Release 3.5

- Currently at the planning stage
- Tentatively planned for end March 2011
- Release Manager – Aaron Birkland, NSDL, Cornell University
Release 3.5 candidate items

- improve build and release process
- improve repository scalability and performance
- move to a space-per-feature-release model for documentation
- move from SourceForge to GitHub
- move to a modern dependency injection framework (Spring)
- allow Fedora to be deployed as a WAR (without an installer)
- rework client command-line tools
- improve HTTP 1.1 support (content-length and content-range)
- out-of-box SWORD interface
- improve authentication support for externally-managed content
- remove dependency on Berkeley DB XML for FeSL

*Not a full or finalised list, this release is still at the planning stage*
Other items

• New Committer – Scott Prater, University of Wisconsin - Madison

• “Nightly” builds
  – maintenance 3.4 branch (bug fixes)
  – release artefacts available after each commit

• Mailing list configuration changes
  – reply-to default to the list
Over to you...

• Top ten enhancements, improvements, fixes that you’d like to see

• Areas for improvement – What could we do better?

• Questions
Community participation

• Fedora is a community project, your participation is vital
• tell us what you want, give us feedback
  – mailing lists
  – voting and commenting on JIRA issues
• code contributions
• documentation updates
• testing
Links

• Fedora repository project issue tracker
  – https://jira.duraspace.org/browse/FCREPO

• Fedora repository development space
  – https://wiki.duraspace.org/display/FCREPO

• Mailing lists
  – http://www.fedora-commons.org/community/userlist
  – http://www.fedora-commons.org/community/developers/devlist
The Committers

- Benjamin Armintor - Columbia University
- Asger Askov Blekinge - State and University Library, Denmark
- Steve Bayliss - Acuity Unlimited
- Aaron Birkland - NSDL, Cornell University
- Bill Branan - DuraSpace
- Daniel Davis - Cornell University
- Gert Schmeltz Pedersen - Technical University of Denmark
- Scott Prater - University of Wisconsin - Madison
- Edwin Shin - Media Shelf
- Kai Strnad - FIZ Karlsruhe
- Chris Wilper - DuraSpace
- Andrew Woods - DuraSpace