Fedora 4.3.0 Release Notes

Release date: 24 July, 2015

We are proud to announce the release of Fedora 4.3.0.

- Resources
- Team
  - Release Manager
  - Developers
  - Issue Reporters
- Summary
  - Updates
- References

Resources
- This release has been built against Java 8
- Downloads [1]
- Javadocs [2]

Team

Release Manager
Nick Ruest

Developers
- Yinlin Chen
- Kevin S. Clarke
- Unknown User (acoburn)
- Unknown User (escowles@ucsd.edu)
- Osman Din
- Michael Durbin
- James R. Griffin III
- Unknown User (daniel-dgi)
- Sébastien Leroux
- Nick Ruest
- Rob Sanderson
- Hélder Silva
- A. Soroka
- Jared Whiklo
- Andrew Woods

Issue Reporters
- Kevin S. Clarke
- Unknown User (acoburn)
- Hector Correa
- Stefano Cossu
- Unknown User (escowles@ucsd.edu)
- Justin Coyne
- Michael Durbin
- James R. Griffin III
- Nick Ruest
- Rob Sanderson
- A. Soroka
- Trey Pendragon
- Andrew Woods

Summary
The Fedora 4.3.0 release furthers several major objectives:
- Move Fedora towards a clear set of standards-based services
- Move Fedora towards runtime configurability
• Improve support tooling for upgration from Fedora 3.x to 4.x
• Improve support for participation in the semantic web
• Fix bugs

This release is 4.3.0 instead of 4.2.1 because there are two non-backwards compatible changes:

• Several properties (mimetype, filename, digest, and cnd update) no longer use the fedora namespace.
• The fcrepo-kernel and fcrepo-kernel-impl packages have been renamed to fcrepo-kernel-api and fcrepo-kernel-modeshape, respectively.

An update utility [3] has been included with the release - see the README [4] for how to run the utility to migrate the properties to their new namespaces and update the package names.

Updates

Strategic Direction

Fedora is moving towards a tightly defined, standards-based, set of RESTful services that are supplemented with a pattern of integrating message-driven, asynchronous services for non-core capabilities. The 4.3.0 release includes several updates that move the software in that direction.

• Aligning with LDP [5] by
  • Returning a 400 response when illegal triples are not persisted
  • Advertising constraints in responses when an update request fails due to a repository constraint
  • Showing inbound references for indirectly contained resources
• Tightening the core repository services by
  • Forbidding the update of resources that are not the target of the request
  • Removing the leakage of the underlying UUID to repository clients
  • Allowing "mimeType" and "filename" properties to be mutable
• Moving towards full OSGi [6] deployability for runtime configuration and feature activation
  • Ensuring modules are property packaged as OSGi bundles
  • Ensuring modules are importing and exporting correct dependencies and services
  • Creating a Fedora features.xml for dependable deployment into Apache Karaf [7]
• Enhancing external services with the Apache Camel [8] integration framework by
  • Adding a "reindex" endpoint
  • Adding a "fixity" invocation service
• Adding support to the REST API for the JSON-LD "Accept" header "profile" parameter

<table>
<thead>
<tr>
<th>Key</th>
<th>Summary</th>
<th>T Created</th>
<th>Updated</th>
<th>Due</th>
<th>Assignee</th>
<th>Reporter</th>
<th>P</th>
<th>Status</th>
<th>Resolution</th>
</tr>
</thead>
<tbody>
<tr>
<td>FCREPO</td>
<td>Rename fcrepo-kernel* packages</td>
<td></td>
<td></td>
<td></td>
<td>Unknown</td>
<td>Unknown</td>
<td></td>
<td></td>
<td>Closed</td>
</tr>
<tr>
<td>O-1641</td>
<td></td>
<td>Jul 19, 2015</td>
<td>Jul 28, 2015</td>
<td></td>
<td>Unknown</td>
<td>Unknown</td>
<td></td>
<td></td>
<td>Fixed</td>
</tr>
<tr>
<td>FCREPO</td>
<td>clean up OSGi package imports</td>
<td></td>
<td></td>
<td></td>
<td>Unknown</td>
<td>Unknown</td>
<td></td>
<td></td>
<td>Closed</td>
</tr>
<tr>
<td>O-1628</td>
<td></td>
<td>Jul 10, 2015</td>
<td>Jul 28, 2015</td>
<td></td>
<td>Unknown</td>
<td>Unknown</td>
<td></td>
<td></td>
<td>Fixed</td>
</tr>
<tr>
<td>FCREPO</td>
<td>Enable json-ld Accept headers with &quot;profile&quot; parameter</td>
<td></td>
<td></td>
<td></td>
<td>Andrew</td>
<td>Rob</td>
<td></td>
<td></td>
<td>Closed</td>
</tr>
<tr>
<td>FCREPO</td>
<td>Auth modules should be packaged as OSGi bundles</td>
<td></td>
<td></td>
<td></td>
<td>Unknown</td>
<td>Unknown</td>
<td></td>
<td></td>
<td>Closed</td>
</tr>
<tr>
<td>O-1591</td>
<td></td>
<td>Jun 18, 2015</td>
<td>Jul 28, 2015</td>
<td></td>
<td>Unknown</td>
<td>Unknown</td>
<td></td>
<td></td>
<td>Fixed</td>
</tr>
<tr>
<td>FCREPO</td>
<td>add a camel-toolbox service that runs fixity checks on Binary resources</td>
<td></td>
<td></td>
<td></td>
<td>Unknown</td>
<td>Unknown</td>
<td></td>
<td></td>
<td>Closed</td>
</tr>
<tr>
<td>O-1589</td>
<td></td>
<td>Jun 17, 2015</td>
<td>Jul 28, 2015</td>
<td></td>
<td>Unknown</td>
<td>Unknown</td>
<td></td>
<td></td>
<td>Fixed</td>
</tr>
<tr>
<td>FCREPO</td>
<td>add support for fixity checking in fcrepo-camel</td>
<td></td>
<td></td>
<td></td>
<td>Unknown</td>
<td>Unknown</td>
<td></td>
<td></td>
<td>Closed</td>
</tr>
<tr>
<td>FCREPO</td>
<td>create a features.xml file for provisioning fcrepo modules</td>
<td></td>
<td></td>
<td></td>
<td>Unknown</td>
<td>Unknown</td>
<td></td>
<td></td>
<td>Closed</td>
</tr>
<tr>
<td>FCREPO</td>
<td>improve the documentation for fcrepo-camel-toolbox</td>
<td></td>
<td></td>
<td></td>
<td>Unknown</td>
<td>Unknown</td>
<td></td>
<td></td>
<td>Closed</td>
</tr>
<tr>
<td>O-1566</td>
<td></td>
<td>Jun 03, 2015</td>
<td>Jul 28, 2015</td>
<td></td>
<td>Unknown</td>
<td>Unknown</td>
<td></td>
<td></td>
<td>Fixed</td>
</tr>
</tbody>
</table>
Upgrading and Migrating

A primary focus of the ongoing Fedora effort is to facilitate the upgrade/migration of Fedora3 repositories to Fedora4. To those ends, a number of improvements have been incorporated into the "migration-utils" upgrade utility.

- Packaging the utility as a standalone executable application
- Using opaque identifiers for migrated resources
- Adding support for user-provided RDF namespace mappings
- Providing specific mappings of Fedora3 to Fedora4 properties
- Improving support for migrating resources with non-existent datastreams

<table>
<thead>
<tr>
<th>Key</th>
<th>Summary</th>
<th>Created</th>
<th>Updated</th>
<th>Due</th>
<th>Assignee</th>
<th>Reporter</th>
<th>P</th>
<th>Status</th>
<th>Resolution</th>
</tr>
</thead>
<tbody>
<tr>
<td>FCREPO-1552</td>
<td>Remove UUID from default transform</td>
<td>May 20, 2015</td>
<td>Sep 03, 2015</td>
<td>Yinlin Chen</td>
<td>Andrew Woods</td>
<td>A. Soroka</td>
<td></td>
<td>CLOSED</td>
<td>Fixed</td>
</tr>
<tr>
<td>FCREPO-1539</td>
<td>Stop spewing UUIDs</td>
<td>May 14, 2015</td>
<td>Sep 03, 2015</td>
<td>Andrew Woods</td>
<td>A. Soroka</td>
<td></td>
<td></td>
<td>CLOSED</td>
<td>Fixed</td>
</tr>
<tr>
<td>FCREPO-1532</td>
<td>Allow updating mimeType and filename</td>
<td>May 11, 2015</td>
<td>Sep 03, 2015</td>
<td>Unassigned</td>
<td>None</td>
<td></td>
<td></td>
<td>CLOSED</td>
<td>Fixed</td>
</tr>
<tr>
<td>FCREPO-1531</td>
<td>Use premis:hasMessageDigest for checksums consistently</td>
<td>May 08, 2015</td>
<td>Sep 03, 2015</td>
<td>Unassigned</td>
<td>Hector Correa</td>
<td></td>
<td></td>
<td>CLOSED</td>
<td>Fixed</td>
</tr>
<tr>
<td>FCREPO-1497</td>
<td>Indirectly Contained Resources Don't Show Inbound Relationships</td>
<td>Apr 23, 2015</td>
<td>Jul 25, 2016</td>
<td>Unassigned</td>
<td>Trey Pendragon</td>
<td></td>
<td></td>
<td>CLOSED</td>
<td>Fixed</td>
</tr>
<tr>
<td>FCREPO-1488</td>
<td>add an indexing endpoint to the fcrepo-camel-toolbox projects</td>
<td>Apr 22, 2015</td>
<td>Jul 28, 2015</td>
<td>Unknown</td>
<td>Unknown</td>
<td></td>
<td></td>
<td>CLOSED</td>
<td>Fixed</td>
</tr>
<tr>
<td>FCREPO-1418</td>
<td>POST/PATCH must advertise constraints if triples not persisted</td>
<td>Mar 29, 2015</td>
<td>Sep 03, 2015</td>
<td>Jared Whiklo</td>
<td>Andrew Woods</td>
<td></td>
<td></td>
<td>CLOSED</td>
<td>Fixed</td>
</tr>
<tr>
<td>FCREPO-1417</td>
<td>PUT must fail if triples not persisted</td>
<td>Mar 29, 2015</td>
<td>Sep 03, 2015</td>
<td>Jared Whiklo</td>
<td>Andrew Woods</td>
<td></td>
<td></td>
<td>CLOSED</td>
<td>Fixed</td>
</tr>
<tr>
<td>FCREPO-1411</td>
<td>PUT/PATCH of resources that are not the target of the request</td>
<td>Mar 20, 2015</td>
<td>Sep 03, 2015</td>
<td>A. Soroka</td>
<td>Andrew Woods</td>
<td></td>
<td></td>
<td>CLOSED</td>
<td>Fixed</td>
</tr>
</tbody>
</table>

18 issues
Audit

After the completion of the Audit Service [10] sprints this spring, there remained two items to be completed:

1. Aligning the identifier of internal Audit events with the identifier of that same event found in the external triplestore
2. Publishing Audit events for runs of the Fixity service

The 4.3.0 release includes the resolution of the first item above.

Semantic Web

One of the primary goals of Fedora is to participate as a first-class member in the world of linked data. Two updates are included in the 4.3.0 release related to that goal:

- Cleaning the Fedora ontology [11] by removing the obsolete "fedora:Blanknode" class
- Creating a JSON-LD @context file for the Portland Common Data Model [12] ontology

Fedora Java Client

The Fedora Java Client library [13] was updated for this release by

- Adding support for the creation of repository resources without a user-provided identifier, i.e. using the repository identifier minter
- Adding support for resource "copy", "delete", and "move" operations
Housekeeping and Bugfixes

Numerous refactoring, bugfixes, and clean-up tasks were addressed in this release. Some of the highlights include:

- Using more Java8 idioms
- Returning a 403 response code when trying to create a resource under a PairTree element
- Returning a 400 response code when trying to create a resource with an empty element, i.e. "./"
- Updating library dependencies
- Improving wiki and source documentation

<table>
<thead>
<tr>
<th>Key</th>
<th>Summary</th>
<th>T Created</th>
<th>Updated</th>
<th>Due Created</th>
<th>Assiginee</th>
<th>Reporter</th>
<th>P</th>
<th>Status</th>
<th>Resolution</th>
</tr>
</thead>
<tbody>
<tr>
<td>FCREP O-1649</td>
<td>cannot create child objects at root node through web interface</td>
<td>Jul 24, 2015</td>
<td>Jul 28, 2015</td>
<td>Andrew Woods</td>
<td>Unknown</td>
<td>CLOSED</td>
<td>Fixed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FCREP O-1648</td>
<td>Bad test config in fcrepo-webapp</td>
<td>Jul 23, 2015</td>
<td>Jul 28, 2015</td>
<td>A. Soroka</td>
<td>A. Soroka</td>
<td>CLOSED</td>
<td>Fixed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FCREP O-1647</td>
<td>remove unnecessary use of guava in fcrepo-connector-file</td>
<td>Jul 22, 2015</td>
<td>Jul 28, 2015</td>
<td>Unknown</td>
<td>Unknown</td>
<td>CLOSED</td>
<td>Won't Fix</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FCREP O-1646</td>
<td>remove guava dependency from fcrepo-mint module</td>
<td>Jul 22, 2015</td>
<td>Jul 28, 2015</td>
<td>Unknown</td>
<td>Unknown</td>
<td>CLOSED</td>
<td>Fixed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FCREP O-1636</td>
<td>camel minimum version is incorrect</td>
<td>Jul 15, 2015</td>
<td>Jul 28, 2015</td>
<td>Unknown</td>
<td>Unknown</td>
<td>CLOSED</td>
<td>Fixed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FCREP O-1633</td>
<td>minor typo in o.f.k.i.utilis.FedoraTypeUtils</td>
<td>Jul 13, 2015</td>
<td>Jul 28, 2015</td>
<td>Unknown</td>
<td>Unknown</td>
<td>CLOSED</td>
<td>Fixed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FCREP O-1631</td>
<td>Clean up integration tests in http-api</td>
<td>Jul 12, 2015</td>
<td>Jul 28, 2015</td>
<td>A. Soroka</td>
<td>A. Soroka</td>
<td>CLOSED</td>
<td>Fixed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FCREP O-1630</td>
<td>fedora:mimeType still exists</td>
<td>Jul 11, 2015</td>
<td>Sep 03, 2015</td>
<td>Unassigned</td>
<td>Andrew Woods</td>
<td>CLOSED</td>
<td>Fixed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FCREP O-1626</td>
<td>incorrect mailing list address</td>
<td>Jul 10, 2015</td>
<td>Jul 28, 2015</td>
<td>Unknown</td>
<td>Unknown</td>
<td>CLOSED</td>
<td>Fixed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FCREP O-1625</td>
<td>fcrepo-camel github pages use a different theme than fcrepo4</td>
<td>Jul 10, 2015</td>
<td>Jul 28, 2015</td>
<td>Unknown</td>
<td>Unknown</td>
<td>CLOSED</td>
<td>Fixed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FCREP O-1624</td>
<td>fcrepo github sitepages shouldn't include alpha /beta docs</td>
<td>Jul 10, 2015</td>
<td>Jul 28, 2015</td>
<td>Unknown</td>
<td>Unknown</td>
<td>CLOSED</td>
<td>Fixed</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
References

[3]  https://github.com/fcrepo4-labs/fcrepo4-upgrade-utils/releases/tag/fcrepo4-upgrade-utils-4.3.0
[4]  https://github.com/fcrepo4-labs/fcrepo4-upgrade-utils/blob/cc77a50b3fac62f791ce2d4fa17cc6b5fc3ea33/README.md
[9]  https://github.com/fcrepo4-labs/migration-utils
[10] https://wiki.duraspace.org/display/FEDORA43/Setup+Audit+Service
[12] https://github.com/duraspace/pcdm
[13] https://github.com/fcrepo4-labs/fcrepo4-client