Fedora 4.5.1 Release Notes

Release date: 29 April, 2016

We are proud to announce the release of Fedora 4.5.1.

- Resources
- Team
  - Release Managers
  - Developers
  - A. Soroka, University of Virginia
  - Issue Reporters
- Summary
- References

Resources

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

Team

Release Managers

- Benjamin Armintor, Columbia University
- Jared Whiklo, University of Manitoba

Developers

- A. Soroka, University of Virginia
- Unknown User (acobum), Amherst College
- Aaron Elkiss, University of Michigan
- Andrew Woods, DuraSpace
- Bethany Seeger, Amherst College
- Esme Cowles, Princeton University
- Jared Whiklo, University of Manitoba
- Michael Durbin, University of Virginia
- Nick Ruest, York University
- Osman Din, Yale University
- Scott Prater, University of Wisconsin-Madison
- Yinlin Chen, Virginia Tech

Issue Reporters

- A. Soroka, University of Virginia
- Unknown User (acobum), Amherst College
- Andrew Woods, DuraSpace
- Unknown User (daniel-dji), discoverygarden inc.
- David Chandek-Stark, Duke University
- Elliot Metsger, Johns Hopkins University
- Esme Cowles, Princeton University
- Harsh Ummerpilia, University of Michigan
- Hélder Silva, University of Minho
- Jared Whiklo, University of Manitoba
- Jason Sherman, University of Oklahoma
- Jim Coble, Duke University
- Justin Coyne, Stanford University
- Nick Ruest, York University
- Osman Din, Yale University
- Peter Eichman, University of Maryland
- Scott Prater, University of Wisconsin-Madison
- Steve DiDomenico, Northwestern University
- Stuart Chalk, University of North Florida
- Trey Pendragon, Princeton University
- Yinlin Chen, Virginia Tech
Summary

The Fedora 4.5.1 release furthers several major objectives:

- Tighten the definition of the RESTful application programming interface (API)
- Improving the Versioning capability
- Re-establish performance test fixtures
- Improve durability with MySQL and PostgreSQL backends
- Fix bugs

Application Programming Interface

One of the technical priorities [3] of Fedora is to define a well-specified application programming interface (API) against which client applications can be written and future server-side implementations can be created. This Fedora API should be clear and detailed enough such that a corresponding technology compatibility kit [4] (TCK) would be able to indicate if any Fedora implementation fulfills or diverges from the specification. With this in mind, several issues were addressed in this release that clean up Fedora’s RESTful interaction [5].

Deprecations: The following endpoints have been marked for future deprecation:

- /fcr:import
- /fcr:export
- /fcr:nodetypes

<table>
<thead>
<tr>
<th>Key</th>
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<th>Assignee</th>
<th>Reporter</th>
<th>P</th>
<th>Status</th>
<th>Resolution</th>
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<tbody>
<tr>
<td>FCREP O-1977</td>
<td>Add Warning header to deprecated /fcr:import and /fcr:export endpoints</td>
<td>🔺</td>
<td>Apr 05, 2016</td>
<td>Jun 01, 2016</td>
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<td>The repository root should be a fedora: Resource</td>
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<td>remove internal jcr /modeshape types from RDF generation</td>
<td>🔺</td>
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<td>remove dependency on modeshape/jcr internal types in template rendering</td>
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<td>FCREP O-1921</td>
<td>Replace RdfContext enum with interfaces</td>
<td>🔺</td>
<td>Feb 19, 2016</td>
<td>Mar 02, 2016</td>
<td>A. Soroka</td>
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<td>FCREP O-1894</td>
<td>remove jcr.Property from kernel-api</td>
<td>🔺</td>
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<td>FCREP O-1893</td>
<td>remove jcr. AccessDeniedException from the kernel-api</td>
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<td>FCREP O-1892</td>
<td>add a Warning header to the /fcr:nodetypes endpoint</td>
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<td>Feb 18, 2016</td>
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<td>FCREP O-1891</td>
<td>Remove jcr.Binary from fcrepo-kernel-api</td>
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<td>FCREP O-1878</td>
<td>On creation of LDPR, Content-Type is inappropriate to response entity</td>
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Versioning

This release includes several bug fixes related to versioning [6]:

- Resolves error encountered when GETting a version of a container that itself has versioned child resources
- Resolves error encountered when GETting a version of a container that has a deleted child resource
- Resolves inability to see description of binary resource versions

Web Access Control

This release furthers the Web Access Control [7] authorization module with several fixes [8], including:

- Resolve error when creating versions in the context of WebAC
- Provide WebAC "accessControl" Link header from effective ancestor

Additional documentation of Fedora's implementation of Web Access Controls is available on the wiki [9].
Performance

One of Fedora’s perennial goals is “improved performance”. With this as a focus, a Performance and Scalability working group [10] has progressed in the creation of repeatable, scripted tests that exercise and meter basic read/write operations. The objective of these tests is to reveal application bottlenecks and to track changes in performance as the reference Fedora implementation evolves.

Preservation

From a preservation perspective, this release includes support for alternative backend object stores to the default LevelDB. New configurations now exist for MySQL and PostgreSQL [11].

Housekeeping and Bugfixes

Numerous refactorings, bugfixes, and clean-up tasks were addressed in this release [12]:
<table>
<thead>
<tr>
<th>Key</th>
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<td>FCREP O-2020</td>
<td>Non-release Vagrant versions are not useful</td>
<td>May 10, 2016</td>
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<td>FCREP O-1988</td>
<td>InternalAuditor logging SEVERE error when objects are created</td>
<td>Apr 13, 2016</td>
<td>Apr 16, 2016</td>
<td>Esmé Cowles</td>
<td>Jim Coble</td>
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<td>FCREP O-1986</td>
<td>Hash URIs are not displayed in HTML UI</td>
<td>Apr 12, 2016</td>
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<td>FCREP O-1985</td>
<td>Hash URIs are not properly cleaned up</td>
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<td>FCREP O-1978</td>
<td>Upgrade vagrant fuseki version</td>
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<td>FCREP O-1973</td>
<td>RDF integration test error on Windows: testBibframe</td>
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<td>FCREP O-1962</td>
<td>Clean up compiler warnings</td>
<td>Mar 21, 2016</td>
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<td>A. Soroka</td>
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<td>FCREP O-1955</td>
<td>change AccessRolesProvider:: getRoles to return a Collection instead of a List</td>
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<td>FCREP O-1946</td>
<td>minor refactoring of WebAC module</td>
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<td>FCREP O-1937</td>
<td>MOVE not emitting complete events</td>
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<td>FCREP O-1932</td>
<td>Refactor use of translator:: reverse...</td>
<td>Feb 29, 2016</td>
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<td>FCREP O-1926</td>
<td>change JcrPropertyFunctions:: property2values function to return a Stream</td>
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<td>FCREP O-1924</td>
<td>update FedoraResource:: getChildren to use a Stream</td>
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<td>FCREP O-1920</td>
<td>PropertyConverter logs a WARN error for every triple when there are no user-defined namespaces</td>
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<td>FCREP O-1918</td>
<td>fcrepo4-vagrant: Ensure all configurations use F4 webapp with fcr: transform</td>
<td>Feb 18, 2016</td>
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<td>FCREP O-1906</td>
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<td>FCREP O-1877</td>
<td>LDPath transform of xsd: dateTime type results in long values</td>
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<td>FCREP O-1876</td>
<td>fcrepo4 vagrant -- FEDORA AUTH=true -- when README says it is optional</td>
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</table>
FCREP O-1874  Logging for an exception that will be presented to the client should normally be at level ERROR.

  Jan 13, 2016  Feb 10, 2016  Yinlin Chen  Yinlin Chen  CLOSED  Fixed

FCREP O-1873  Error occur while using REST API to perform a binary MOVE

  Jan 07, 2016  Apr 29, 2016  Esmé Cowles  Hélder Silva  CLOSED  Fixed

FCREP O-1844  migration-utils should ignore corrupt import files

  Nov 17, 2015  Apr 29, 2016  Michael Durbin  Steve DiDomenico  CLOSED  Fixed

FCREP O-1840  Incorrect Accept header should return an appropriate 4xx status code

  Nov 16, 2015  Feb 22, 2016  Bethany Seeger  Unknown  CLOSED  Fixed

FCREP O-1838  webapp-plus: Internal Audit not active with jetty:run

  Nov 16, 2015  Apr 29, 2016  Andrew Woods  Andrew Woods  CLOSED  Fixed

FCREP O-1837  Unbalanced brackets in path results in stacktrace

  Nov 13, 2015  Apr 29, 2016  Esmé Cowles  Justin Coyne  CLOSED  Fixed

FCREP O-1823  The javadocs should contain package descriptions

  Nov 05, 2015  Apr 29, 2016  Unknown  Unknown  CLOSED  Fixed

FCREP O-1785  Jersey session injection fails with invalid transaction ids

  Oct 20, 2015  Mar 01, 2016  Unknown  Unknown  CLOSED  Fixed

FCREP O-1528  jms identifier header is malformed for URI fragments

  May 07, 2015  Apr 29, 2016  Unknown  Unknown  CLOSED  Fixed

FCREP O-1312  Rewrite RDF generation framework for Java 8

  Jan 29, 2015  Apr 29, 2016  Unknown  A. Soroka  CLOSED  Fixed

30 issues

References

[8] https://jira.duraspace.org/browse/FCREPO-1885?jql=filter%3D13609%
[10] https://wiki.duraspace.org/display/FF/Performance+and+Scalability