Release Notes

Online Version of Documentation also available

This documentation was produced with Confluence software. A PDF version was generated directly from Confluence. An online, updated version of this 4.x Documentation is also available at: https://wiki.duraspace.org/display/DSDOC4x

Welcome to Release 4.9, a security release for the DSpace 4.x platform. For information on upgrading to DSpace 4, please see Upgrading DSpace.

4.9 Release Notes

We highly recommend ALL JSPUI users of DSpace 4.x upgrade to 4.9

DSpace 4.9 contain security fixes for the JSPUI (only). To ensure your 4.x site is secure, **we highly recommend ALL JSPUI DSpace 4.x users upgrade to DSpace 4.9**.

DSpace 4.9 upgrade instructions are available at: Upgrading DSpace

DSpace 4.9 is a security fix release to resolve issues located in DSpace 4.x JSPUI (only). As it only provides security fixes, DSpace 4.9 should constitute an easy upgrade from DSpace 4.x for most users. No additional configuration changes should be necessary when upgrading from DSpace 4.x to 4.8.

This release addresses the following security issues discovered in DSpace 4.x and below:

- DSpace JSPUI security fixes:
  - *[HIGH SEVERITY] A user can inject malicious Javascript into the names of EPeople or Groups. This is most severe in sites which allow anyone to register for a new account.* (https://jira.duraspace.org/browse/DS-3866 - requires a JIRA account to access.)
    - Reported by Julio Brafman
  - *[MEDIUM SEVERITY] Any user was able to export metadata to CSV format if they knew the correct JSPUI path/parameters. Additionally, the exported CSV included metadata fields which are flagged as hidden in configuration.* (https://jira.duraspace.org/browse/DS-3840 - requires a JIRA account to access.)
    - Reported by Eike Kleiner (ZHAW, Zurich University of Applied Sciences)

In addition, this release fixes minor bugs in the 4.x releases. For more information, see the Changes in 4.x page.

4.9 Acknowledgments

The 4.9 release was led by the Committers.

The following individuals provided code or bug fixes to the 4.9 release: Julio Brafman, Tim Donohue (tdonohue), Eike Kleiner, Kim Shepherd (kshepherd), Mark Wood (mwood).

4.8 Release Notes

We highly recommend ALL users of DSpace 4.x upgrade to 4.8

DSpace 4.8 contain security fixes for both the XMLUI and JSPUI. To ensure your 4.x site is secure, **we highly recommend ALL DSpace 4.x users upgrade to DSpace 4.8**.

DSpace 4.8 upgrade instructions are available at: Upgrading DSpace

DSpace 4.8 is a security fix release to resolve issues located in DSpace 4.x XMLUI and JSPUI. As it only provides security and bug fixes, DSpace 4.8 should constitute an easy upgrade from DSpace 4.x for most users. No additional configuration changes should be necessary when upgrading from DSpace 4.x to 4.8. **It is necessary to run a database update script. See** Upgrading From 4.0 to 4.x for details.

This release addresses the following security issues discovered in DSpace 4.x and below:

- DSpace API security fixes:
  - *[HIGH SEVERITY] BasicWorkflow system is vulnerable to unauthorized manipulations (DS-3647 - requires a JIRA account to access)*
    - Reported by Pascal-Nicolas Becker
  - *[LOW SEVERITY] Apache Commons Collections vulnerability (COLLECTIONS-580) (DS-3520 - requires a JIRA account to access)*
    - Reported by Alan Orth

In addition, this release fixes minor bugs in the 4.x releases. For more information, see the Changes in 4.x page.

4.8 Acknowledgments

The 4.8 release was led by the Committers.

The following individuals provided code or bug fixes to the 4.8 release: Pascal-Nicolas Becker (pnbecker), Tim Donohue (tdonohue), Samuel Cambien (samuelcambien), Jonas Van Goolen (Jonas VG (atmire)), Mark Wood (mwood).

4.7 Release Notes

We highly recommend ALL users of DSpace 4.x upgrade to 4.7

DSpace 4.7 contain security fix for both the XMLUI and JSPUI. To ensure your 4.x site is secure, **we highly recommend ALL DSpace 4.x users upgrade to DSpace 4.7**.

DSpace 4.7 upgrade instructions are available at: Upgrading DSpace

DSpace 4.7 is a security fix release to resolve an issue located in DSpace 4.x XMLUI and JSPUI. As it only provides a security-fix, DSpace 4.7 should constitute an easy upgrade from DSpace 4.x for most users. No database changes or additional configuration changes should be necessary when upgrading from DSpace 4.x to 4.7.

This release addresses the following security issues discovered in DSpace 4.x and below:

- JSPUI, XMLUI, REST security fixes:
  - JSPUI and XMLUI
    - *[MEDIUM SEVERITY] XML External Entity (XXE) vulnerability in pdfbox. (DS-3309 - requires a JIRA account to access) (NOTE: this ticket was actually fixed in an earlier, unannounced 4.6 release, but it is also included in 4.7)*
      - Reported by Seth Robbins
  - JSPUI, XMLUI and REST
    - *[MEDIUM SEVERITY] Bitstreams of embargoed and/or withdrawn items can be accessed by anyone. (DS-3097 - requires a JIRA account to access)*
      - Reported by Franziska Ackermann
- JSPUI security fix:
  - *[HIGH SEVERITY] Any registered user can modify inprogress submission. (DS-2895 - requires a JIRA account to access)*
    - Reported by Andrea Bollini

In addition, this release fixes minor bugs in the 4.x releases. For more information, see the Changes in 4.x page.

4.7 Acknowledgments

The 4.7 release was led by Andrea Pascarelli (4Science) and the Committers.

The following individuals provided code or bug fixes to the 4.7 release: Pascal-Nicolas Becker (pnbecker), Andrea Bollini (abollini), Andrea Pascarelli (lap82)

4.6 Release Notes

We highly recommend ALL users of DSpace 4.x upgrade to 4.6

DSpace 4.6 contain security fix for both the XMLUI and JSPUI. To ensure your 4.x site is secure, **we highly recommend ALL DSpace 4.x users upgrade to DSpace 4.6**.

DSpace 4.6 upgrade instructions are available at: Upgrading DSpace

DSpace 4.6 is a security fix release to resolve an issue located in DSpace 4.x XMLUI and JSPUI. As it only provides a security-fix, DSpace 4.6 should constitute an easy upgrade from DSpace 4.x for most users. No database changes or additional configuration changes should be necessary when upgrading from DSpace 4.x to 4.6.

This release addresses the following security issues discovered in DSpace 4.x and below:

- security fix:
  - *[MEDIUM SEVERITY] XML External Entity (XXE) vulnerability in pdfbox. (DS-3309 - requires a JIRA account to access)*
    - Reported by Seth Robbins
- other fixes:
  - *It was not possible to send mails using an ssl secured connection to the mail server (DS-2702)*

In addition, this release fixes minor bugs in the 4.x releases. For more information, see the Changes in 4.x page.

4.6 Acknowledgments

The 4.6 release was led by Andrea Pascarelli (4Science) and the Committers.

The following individuals provided code or bug fixes to the 4.6 release: Pascal-Nicolas Becker (pnbecker), Andrea Bollini (abollini), Roeland Dillen (rradillen), Tim Donohue (tdonohue), Bram Luyten (bram-atmire), Andrea Pascarelli (lap82), Mark Wood (mwoodiupui)

4.5 Release Notes

We highly recommend ALL users of DSpace 4.x upgrade to 4.5

⚠ DSpace 4.5 contains security fixes for both the XMLUI and JSPUI. To ensure your 4.x site is secure, **we highly recommend ALL DSpace 4.x users upgrade to DSpace 4.5**.

DSpace 4.5 upgrade instructions are available at: Upgrading DSpace

DSpace 4.5 is a security fix release to resolve several issues located in DSpace 4.x XMLUI and JSPUI. As it only provides security-fixes, DSpace 4.5 should constitute an easy upgrade from DSpace 4.x for most users. No database changes or additional configuration changes should be necessary when upgrading from DSpace 4.x to 4.5.

This release addresses the following security issues discovered in DSpace 4.x and below:

- XMLUI security fixes:
  - *[HIGH SEVERITY] The XMLUI "themes/" path is vulnerable to a full directory traversal. (DS-3094 - requires a JIRA account to access.) This means that ANY files on your system which are readable to the Tomcat user account may be publicly accessed via your DSpace website.*
    - Reported by Virginia Tech
- JSPUI security fixes:
  - *[MEDIUM SEVERITY] The JSPUI "Edit News" feature (accessible to Administrators) can be used to view/edit ANY files which are readable to the Tomcat user account (DS-3063 - requires a JIRA account to access.)*
    - Reported by CINECA

4.5 Acknowledgments

The 4.5 release was led by Tim Donohue (DuraSpace) and the Committers.

The following individuals provided code or bug fixes to the 4.5 release: Andrea Bollini (abollini), Tim Donohue (tdonohue), Ivan Masar (helix84), Mark Wood (mwoodiupui)

4.4 Release Notes

We highly recommend any JSPUI users of DSpace 4.x upgrade to 4.4

⚠ DSpace 4.4 contains security fixes for the JSPUI only. To ensure your 4.x site is secure, **we highly recommend JSPUI DSpace 4.x users upgrade to DSpace 4.4**.

DSpace 4.4 is a security fix release to resolve several issues located in DSpace 4.x JSPUI. As it only provides security-fixes, DSpace 4.4 should constitute an easy upgrade from DSpace 4.x for most users. No database changes or additional configuration changes should be necessary when upgrading from DSpace 4.x to 4.4.

This release addresses the following security issues discovered in DSpace 4.x and below:

- JSPUI security fixes:
  - *[MEDIUM SEVERITY] Cross-site scripting (XSS injection) is possible in JSPUI search interface (in Firefox web browser). (DS-2736 - requires a JIRA account to access for two weeks, and then will be public): This vulnerability could allow someone to embed dangerous Javascript code into links to search results. If a user was emailed such a link and clicked it, the javascript would be run in their local browser. This vulnerability has existed since DSpace 3.x*
    - Discovered by Genaro Contreras
  - *[LOW SEVERITY] Expression language injection (EL Injection) is possible in JSPUI search interface. (DS-2737 - requires a JIRA account to access for two weeks, and then will be public): This vulnerability could allow someone to obtain information from the site /server using JSP syntax. This vulnerability has existed since DSpace 3.x*
    - Discovered by Genaro Contreras

4.4 Acknowledgments

The 4.4 release was led by Tim Donohue (DuraSpace), Andrea Schweer (U of Waikato) and the Committers.

The following individuals provided code or bug fixes to the 4.4 release: Pascal-Nicolas Becker (pnbecker), CTU Developers (ctu-developers), Roeland Dillen (rradillen), Tim Donohue (tdonohue), Àlex Magaz Graça (rivaldi8), Bram Luyten (bram-atmire), Ivan Masar (helix84), Christian Scheible (christian-scheible), Andrea Schweer (aschweer), Jonas Van Goolen (jonas-atmire), Mark Wood (mwoodiupui)

4.3 Release Notes

We highly recommend any users of DSpace 4.x upgrade to 4.3

DSpace 4.3 contains security fixes for both the XMLUI and JSPUI. To ensure your 4.x site is secure, **we highly recommend all DSpace 4.x users upgrade to DSpace 4.3**.

We also highly recommend removing any "allowLinking=true" settings from your Tomcat's <Context> configuration. Previously our installation documentation erroneously listed examples which included "allowLinking=true", while the Tomcat documentation lists it as a possible security concern. The XMLUI Directory Traversal Vulnerability (see below) is also exacerbated by this setting.

DSpace 4.3 is a security fix release to resolve several issues located in DSpace 4.x. As it only provides security-fixes, DSpace 4.3 should constitute an easy upgrade from DSpace 4.x for most users. No database changes or additional configuration changes should be necessary when upgrading from DSpace 4.x to 4.3.

This release addresses the following security issues discovered in DSpace 4.x and below:

- XMLUI Security Fixes
  - *[HIGH SEVERITY] XMLUI Directory Traversal Vulnerabilities* (DS-2445 - requires a JIRA account to access for two weeks, and then will be public): These vulnerabilities allow someone to potentially access *any file* on your local filesystem which is readable to the Tomcat user account. This includes files which are unrelated to DSpace or Tomcat, but are readable to all users on the filesystem (e.g. /etc /passwd, /etc/hosts, etc.). This also includes Tomcat configuration files (which may or may not contain passwords). These vulnerabilities have existed since DSpace 1.5.2.
    - Discovered by: Khalil Shreateh, with additional (related) vulnerabilities discovered by the DSpace Committer Team
  - In some configurations of Tomcat, simply removing any "allowLinking=true" settings from your Tomcat's <Context> configuration will limit the directory traversal vulnerability's severity to only allow access to files within the XMLUI web application directory. In addition, the Tomcat documentation details "allowLinking=true" as a possible security concern. However, you still must upgrade or patch your DSpace in order to completely resolve this vulnerability.
- JSPUI Security Fixes
  - *[MEDIUM SEVERITY] JSPUI Directory Traversal Vulnerability* (DS-2448 - requires a JIRA account to access for two weeks, and then will be public): This vulnerability allows someone to potentially access any file within the JSPUI web application directory (e.g. WEB-INF /web.xml). This vulnerability is believed to have existed in all prior versions of DSpace.
    - Discovered by Khalil Shreateh
  - *[LOW SEVERITY] Cross-site scripting (XSS injection) is possible in JSPUI Recent Submissions listings* (DS-1702 - requires a JIRA account to access for two weeks, and then will be public): This vulnerability could allow a depositor/submitter to embed dangerous Javascript code into the metadata of a new submission, thus causing that code to be run across other user accounts. However, this vulnerability is only possible by someone with privileges to add content to your DSpace site. This vulnerability has existed since DSpace 1.5.x.
    - Discovered by: Jean-Paul Zhao of University of Toronto
  - *[LOW SEVERITY] Cross-site scripting (XSS injection) is possible in JSPUI Discovery search form* (DS-2044 - requires a JIRA account to access for two weeks, and then will be public): This vulnerability could allow someone to embed dangerous Javascript code into links to search results. If a user was emailed such a link and clicked it, the javascript would be run in their local browser. This vulnerability has existed since DSpace 3.x
    - 4.x / 5.x vulnerability discovered by Gabriela Mircea of McMaster University and Khalil Shreateh
    - 3.x vulnerability discovered by Iyas Orak of Biznet Bilisim A.S.

4.3 Acknowledgments

The 4.3 release was led by Tim Donohue (DuraSpace) and the Committers.

The following individuals provided code or bug fixes to the 4.3 release: Terry Brady (terrywbrady), Roeland Dillen (rradillen), Tim Donohue (tdonohue), Ivan Masar (helix84), Andrea Pascarelli (lap82), Avi Romanoff (aroman), Christian Scheible (christian-scheible), Robin Taylor (robintaylor)

4.2 Release Notes

DSpace 4.2 provides bug-fixes and minor improvements to the 4.x platform. As it only provides bug-fixes, DSpace 4.2 should constitute an easy upgrade from DSpace 4.x for most users. No database changes or additional configuration changes should be necessary when upgrading from DSpace 4.x to 4.2 (except for DS-2036 which may affect some Oracle users ; see Fixing the effects of DS-2036).

Issues which have been resolved in 4.2 include:

- Fixed occasional "Out of Memory" errors when indexing large bitstreams/files in Discovery (DS-1958)
- Fixed issue where REST API was not releasing "context" and ignored database pooling (DS-1986)
- Fixed Solr commit delays when "did you mean" functionality is enabled in Discovery (DS-2060)
- Fixed the "dspace classpath" command (DS-1998)
- Fixed issue where thumbnails were not displayed when using JSPUI + Oracle database (DS-2013)
- Fixed validation of OAI-PMH response (DS-1928)
- Fixed several Oracle database upgrade script errors (DS-2036, DS-2038, DS-2056, and DS-1957)
- Fixed Maven build issue on Windows operating systems (DS-1940)
- Other minor fixes See Changes in 4.x section for a list of all fixes.

4.2 Acknowledgments

The 4.2 release was led by Robin Taylor (U of Edinburgh) and the Committers.

The following individuals provided code or bug fixes to the 4.2 release: Pascal-Nicolas Becker (pnbecker), Peter Dietz (peterdietz), Roeland Dillen (rradillen), Tim Donohue (tdonohue), Denis Fdz, Keith Gilbertson (keithgee), Panagiotis Koutsourakis (kutsurak), Bram Luyten (bram-atmire), Mini-Pillai, Ivan Masar (helix84), Thomas Misilo (misilot), Hardy Pottinger (hardyoyo), Antoine Snyers (antoine-atmire), Robin Taylor (robintaylor), Kevin Van de Velde (KevinVdV), Mark Wood (mwoodiupui)

4.1 Release Notes

DSpace 4.1 provides bug-fixes and minor improvements to the 4.x platform. As it only provides bug-fixes, DSpace 4.1 should constitute an easy upgrade from DSpace 4.x for most users. No database changes or additional configuration changes should be necessary when upgrading from DSpace 4.x to 4.1 (except for DS-1536; see Fixing the effects of DS-1536).

Issues which have been resolved in 4.1 include:

- Fixed issue where having a period (.) in your handle prefix generated incorrect identifiers (DS-1536)
- Fixed broken quick build (from [dspace-src]/dspace) (DS-1867)
- Fixed a crash of DSpace during CSV import via BTE (DS-1857)
- Fixed collection harvesting to DSpace via ORE (DS-1848)
- Fixed deposit of new items via SWORD (DS-1846)
- Fixed search hit highlighting in XMLUI (DS-1907)
- Fixed broken 'stat-initial' script (DS-1795)
- Other minor fixes. See Changes in 4.x section for a list of all fixes.

4.1 Acknowledgments

The 4.1 release was led by Mark Wood (IUPUI) and the Committers.

The following individuals provided code or bug fixes to the 4.1 release: Andrea Bollini (abollini), Roeland Dillen (rradillen), Tim Donohue (tdonohue), Àlex Magaz Graça (rivaldi8), Panagiotis Koutsourakis (kutsurak), marsaoua, Ivan Masar (helix84), João Melo (lyncodev), Thomas Misilo (misilot), Andrea Pascarelli (lap82), Adán Román Ruiz, Andrea Schweer (aschweer), Kim Shepherd (kshepherd), Kostas Stamatis (kstamatis), Kevin Van de Velde (KevinVdV), Mark Wood (mwoodiupui)

4.0 Release Notes

The following is a list of the new features included for the 4.x platform (not an exhaustive list):

DSpace 4.0 ships with a number of new features. Certain features are automatically enabled by default while others require deliberate activation. The following non-exhaustive list contains the major new features in 4.0 that are enabled by default:

Discovery: Search & Browse is now enabled by default in both XMLUI and JSPUI.

Note: The Lucene/DB-based search & browse backend is still supported, but is deprecated and might be removed in a future release. Any new features should use the Discovery API instead of tying directly to Lucene, Solr or Elastic Search.

- Discovery general enhancements
  - Solr libraries were upgraded to version 4.4 (JSPUI, XMLUI and OAI modules) - by lap
  - Solr search accent insensitive - by ab
  - Solr-based item counter - by im, ab
- Discovery UI enhancements (both JSPUI and XMLUI)
  - Query spell checking ("did you mean") - XMLUI by kv, JSPUI by lap, ab

Contributors:
lap - Luigi Andrea Pascarelli with the support of CINECA
ab - Andrea Bollini with the support of CINECA
kv - Kevin Van de Velde with the support of @mire
im - Ivan Masár

A new Bootstrap-based default look and feel for JSPUI (see DS-1675 for screenshots)

Kindly contributed by Andrea Bollini & Luigi Andrea Pascarelli with the support of CINECA

JSPUI new features

- Bibliographic import and lookup in Submission, by CINECA and Greek National Documentation Centre/EKT
- AJAX progress bar for file upload the submission upload step (DS-1639), by Andrea Bollini with the support of CINECA
- Sherpa/Romeo integration in the submission upload step (DS-1633), by Andrea Bollini with the support of CINECA

JSPUI porting of features previously available only on XMLUI

- Advanced Embargo feature
- Item level versioning feature
- Curation tasks administrative UI
- "Login as" feature

Kindly contributed by Keiji Suzuki & Luigi Andrea Pascarelli with the support of CINECA

UI support for metadata batch import from various bibliographic formats

- Update to Biblio-Transformation-Engine 0.9.2.2
- Added data loader for OAI-PMH
- New configuration format to support simultaneous input mappings from the various supported metadata formats
- New interface for administrators in JSPUI (for file data loaders like bibtex, csv, tsv, endnote and ris)

Kindly contributed by the Greek National Documentation Centre/EKT

SWORDv2 module update, which provides the following improvements:

- some general bug fixes including: bitstream url construction, config options, context management and connection pool, ORIGINAL bundle problem (DS-1149)
- proper METSDSpaceSIP support in both deposit and update
- proper authentication for accessing actionable bitstreams (i.e. those that can be replaced via sword), tightened security options around mediated actions, and add extra security to the access of descriptive documents (deposit receipts, statements)
- more configuration options: bundles to expose in Statements, DepositMO extensions (for individual files), and many more
- some general refactoring
- addition of 404 responses where necessary
- better support for add/replace of metadata, and how metadata updates are handled on archived items
- update to latest version of Java Server library
- new bitstream formats in the bitstream registry

Kindly contributed by Richard Jones with the support of Cottage Labs

Improved command line features

- Run commands in batch
- Display DSpace instance information including version and enabled modules (DS-1456)
- Create users from command line (DS-1355)

Kindly contributed by Mark H. Wood with the support of IUPUI University Library

Support simple embargo in XMLUI item display and in AIP import/export

Unable to locate Jira server for this macro. It may be due to Application Link configuration.

Unable to locate Jira server for this macro. It may be due to Application Link configuration.

Kindly contributed by Ivan Masar and Terry Brady with the support of Georgetown University

Language switch for xmlui and some basic i18n stuff

Unable to locate Jira server for this macro. It may be due to Application Link configuration.

Kindly contributed by Claudia Jürgen with the support of TU Dortmund University

Filtering of web spiders from statistics can now match by the spider host's DNS name or the spider's User-Agent string.

Unable to locate Jira server for this macro. It may be due to Application Link configuration.

Kindly contributed by Mark H. Wood with the support of IUPUI University Library

Several improvements to help Google Scholar better index your content (requested by Google Scholar team). See also Search Engine Optimization recommendations, for ways to further enhance Google Scholar (and other search engine) findability.

Unable to locate Jira server for this macro. It may be due to Application Link configuration.

Unable to locate Jira server for this macro. It may be due to Application Link configuration.

Unable to locate Jira server for this macro. It may be due to Application Link configuration.

Kindly contributed by several members of the DSpace Committer team (see individual tickets for more details).

The following list contains all features that **are** included in the DSpace 4.0 release, but need to be enabled manually.
Review the documentation for these features carefully, especially if you are upgrading from an older version of DSpace.

DOI Support

- Support for minting new DOIs
- Support for the DataCite and EZID DOI providers

uration.

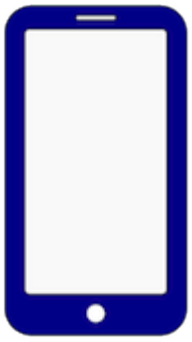
Unable to locate Jira server for this macro. It may be due to Application Link configuration.

Kindly contributed by Pascal-Nicolas Becker & Mark Wood with the support of TU Berlin and IUPUI University Library

Support running handle server and application container on separate machines

Unable to locate Jira server for this macro. It may be due to Application Link configuration.

Kindly contributed by Pascal-Nicolas Becker, Andrea Bollini & Mark Wood with the support of TU Berlin and CINECA



Mobile Theme for XMLUI matures from beta (DS-1679)

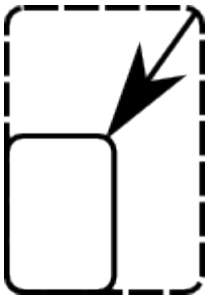
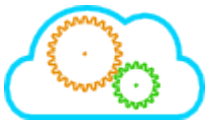
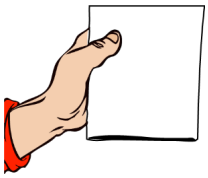
- New feature:
- Documentation

Kindly contributed by Elias Tzoc and James Russell with the support of Miami University

Improvements to LDAP Authentication

- New option to map LDAP attribute-based group membership to internal DSpace groups

Kindly contributed by Ivan Masár and Sam Ottenhoff of Longsight for Allegheny College (DS-1078).

	Media filter generates better looking thumbnails Unable to locate Jira server for this macro. It may be due to Application Link configuration. Kindly contributed by Jason Sherman with the support of University of Science and Arts of Oklahoma
	Curation Task for Consuming Web Services Unable to locate Jira server for this macro. It may be due to Application Link configuration. Kindly contributed by Richard Rodgers with the support of Massachusetts Institute of Technology
	Request a Copy for JSPUI and XMLUI (DS-824) • For items with restricted access, allows users to ask the original author for a copy of the item Original contribution of Adán Román Ruiz (Arvo Consultores). JSPUI version adapted from the Universidade do Minho. XMLUI version funded by Instituto Oceanográfico de España. Additional improvements/bug fixes by Andrea Bollini (CINECA).
	A new REST web service API module based on Jersey (a JAX RS 1.0 implementation) (DS-1696) Provides: • Read-only access to unrestricted communities, collections, items and bitstreams • Handle lookup • JSON (and XML) output formats Kindly contributed by Peter Dietz with the support of Ohio State University Libraries

A full list of all changes / bug fixes in 4.x is available in the Changes in 4.x section.

The following individuals have contributed directly to this release of DSpace: Adan Roman, Alan Orth, Alexey Maslov, Àlex Magaz Graça, Andrea Bollini, Andrea Schweer, Andrew Waterman, Anja Le Blanc, Bavo Van Geit (@mire), Bram Luyten (@mire), Brian Freels-Stendel, Cedric Devaux, Christian Scheible, Christos Rodosthenous, Claudia Jürgen, Clint Bellanger, Denis Fdz, DSpace @ Lyncode, Elias Tzoc, Fabio Bolognesi, Hardy Pottinger, Hélder Silva, Hilton Gibson, Ian Boston, Ivan Masár, james bardin, James Halliday, Jason Sherman, João Melo, Jonathan Blood, Jose Blanco, Juan Corrales Correyero, Keiji Suzuki, Kevin Van de Velde, Kim Shepherd, Kostas Maistrelis, Kostas Stamatis, LifeH2O, Luigi Andrea Pascarelli, Marco Fabiani, Marco Weiss, Marina Muilwijk, Mark Diggory, Mark H. Wood, Michael White, Moises A., Moises Alvarez, Onivaldo Rosa Junior, Pascal-Nicolas Becker, Peter Dietz, Rania Stathopoulou, Raul Ruiz, Richard Jones, Richard Rodgers, Robert Ruiz, Robin Taylor, Roeland Dillen, Samuel Ottenhoff, Sara Amato, Sean Carte, Stuart Lewis, Terry Brady, Thomas Autry, Thomas Misilo, Tiago Murakami, Tim Donohue, Toni Prieto, usha sharma, and others who reviewed and commented on their work. Many of these could not do this work without the support (release time and financial) of their associated institutions. We offer thanks to those institutions for supporting their staff to take time to contribute to the DSpace project.

A big thank you also goes out to the DSpace Community Advisory Team (DCAT), who helped the developers to prioritize and plan out several of the new features that made it into this release. The current DCAT members include: Amy Lana, Augustine Gitonga, Bram Luyten, Ciarán Walsh, Claire Bundy, Dibyendra Hyoju, Elena Feinstein, Elin Stangeland, Iryna Kuchma, Jim Ottaviani, Leonie Hayes, Maureen Walsh, Michael Guthrie, Sarah Molloy, Sarah Shreeves, Sue Kunda, Valorie Hollister and Yan Han.

We apologize to any contributor accidentally left off this list. DSpace has such a large, active development community that we sometimes lose track of all our contributors. Our ongoing list of all known people/institutions that have contributed to DSpace software can be found on our DSpace Contributors page. Acknowledgments to those left off will be made in future releases.

Want to see your name appear in our list of contributors? All you have to do is report an issue, fix a bug, improve our documentation or help us determine the necessary requirements for a new feature! Visit our Issue Tracker to report a bug, or join dspace-devel mailing list to take part in development work. If you'd like to help improve our current documentation, please get in touch with one of our Committers with your ideas. You don't even need to be a developer! Repository managers can also get involved by volunteering to join the DSpace Community Advisory Team and helping our developers to plan new features.

The Release Team consisted of Mark H. Wood, Hardy Pottinger and Andrea Bollini.

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