TECHNICAL SPECIFICATIONS: DSPACE

Description: DSpace is an out-of-the-box open source software package for creating repositories focused on delivering digital content to end users and providing a full set of tools for managing and preserving content within the application. DSpace is the most widely used repository software platform (open source or proprietary), with more than 2,000 installations worldwide representing a continuously growing and active user community.

History: DSpace was originally developed by MIT Libraries and Hewlett-Packard (HP) Labs. Since its initial open source release in 2002, the platform has been guided by a global community of committers, developers, repository managers, and other stakeholders who contribute to project governance. DSpace became a DuraSpace project in 2009 when the Fedora Commons and DSpace organizations merged to form DuraSpace.

Cost: Open source software, no charge. DSpace is distributed under the terms of the BSD open source license.

Use case highlight: The most common use of the DSpace software is by academic and research libraries as an open access institutional repository for managing and disseminating scholarly output. There are also many organizations using the software to host and manage subject based, dataset, or media-based repositories. See examples here: http://dspace.org/use-cases .

Architectural overview	DSpace is a set of cooperating Java web applications and utility programs that maintain an asset store and an associated metadata store. The web applications provide interfaces for administration, deposit, ingest, search, and access. The asset store is maintained on a file system or similar storage system. The metadata, including access and configuration information, is stored in a relational database.
Service providers	DSpace has a global, active network of registered service providers who provided commercial support, hosting, training or site customization http://duraspace.org/service-providers/
Technical aspects	**Operating System:** Written in Java, tested under Linux, Windows, and Mac OSX **License:** BSD **Release version:** 6.0, http://www.dspace.org/latest-release **Documentation:** https://wiki.duraspace.org/display/DSDOC/ **Other prerequisite software:** Java 7 or 8, Apache Maven, Apache Ant, Relational Database (PostreSQL or Oracle), Servlet 3.0 container (Tomcat 7+ or similar).

Key features

Application Architecture: DSpace is a full stack web application, consisting of a database, storage manager and front end web interface. The architecture includes a specific data model with configurable metadata schemas, workflows and browse/search functionality.

Modern, RESTful Web UI (coming soon): DSpace 7.0 will feature a completely rewritten web user interface based on the Angular 2 javascript platform.
Built-in workflows: Originally designed for libraries, the embedded DSpace data model and approval workflows are familiar to librarians and archivists.
Built-in search engine: DSpace comes packaged with Apache Solr, an open source enterprise search platform that enables filtered (faceted) searching and browsing of all objects. The full text of common file formats is searchable, along with all metadata fields. Browse by interfaces are also configurable.
Unlimited File types: DSpace can store any type of file. In addition, it auto-recognizes files of most common formats (e.g., DOC, PDF, XLS, PPT, JPEG, MPEG, TIFF).

Metadata: By default, DSpace uses a Qualified Dublin Core (QDC) based metadata schema. Institutions can extend that base schema or add custom QDC-like schemas. DSpace can import or export metadata from other major metadata schemas such as MARC or MODS.

Tools/plugins: DSpace comes with a suite of tools (batch ingest, batch export, batch metadata editing, etc.) and plugins for translating content into DSpace objects. Additionally, commercial plugins are available through service providers.

Security: DSpace provides its own built-in authentication / authorization system, but can also integrate with existing authentication systems such as LDAP or Shibboleth.

Permissions: DSpace allows you to control read/write permissions site-wide, per community, per collection, per item and per file. You may also delegate administrative permissions per community or per collection.
Disaster Recovery: DSpace allows you to export all of your system content as AIP (Archival Information Packages) backup files. These AIPs can be used to restore your entire site, or restore individual communities, collections or items.

OAI-PMH / SWORD (v1 and v2) / OpenAIRE / Driver: DSpace complies with standard protocols and best practices for access, ingest, and export.

REST: DSpace provides RESTful APIs in accordance with modern web standards.
Configurable Database: Organizations can choose either PostgreSQL or Oracle for the database in which DSpace manages items and metadata.
Configurable File Storage: Files in DSpace can be stored either using a local filesystem (default) or a cloud-based solution, such as Amazon S3.

Data Integrity: On upload, DSpace calculates and stores a checksum for each file. Optionally, you may ask DSpace to verify those checksums to validate file integrity.

Languages: DSpace is available in over 20 languages.

Software development

Duraspace hosts a group of leading-edge open source projects characterized by thriving, consensus-driven, developer communities, including governance and membership, that strive to produce high quality products that insure sophisticated access and management of durable digital information.

DURASPACE™

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