

# What is DSpace?

In this section you will learn



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◦ Information in this section was adapted from The DSpace Course by Stuart Lewis and Chris Yates from the Repositories Support Project.

## What is DSpace?

The screenshot shows the University of Zimbabwe Institutional Repository DSpace interface. The header includes the University of Zimbabwe logo and the text 'Institutional Repository at UZ'. The main navigation bar lists 'Communities & Collections', 'Titles', 'Authors', and 'By Date'. The left sidebar contains search options (Search UZSpace, Advanced Search, Home) and browse options (Communities & Collections, Issue Date, Author, Title, Subject). The main content area features a welcome message, policies, and community information. The right sidebar includes copyright information, search by journal/publisher, and links to other repositories and open access journals.

The screenshot shows the ScholarSpace DSpace interface at the University of Hawaii. The header includes the University of Hawaii logo and the text 'SCHOLARSPACE UNIVERSITY OF HAWAII AT MANOA'. The main navigation bar lists 'HOME', 'SEARCH', 'BROWSE', 'COMMUNITIES & COLLECTIONS', 'CONTACT', 'EVOLS', and 'UHM LIBRARY'. The left sidebar contains search options (SEARCH, Advanced Search) and browse options (All of ScholarSpace, Communities & Collections, By Issue Date, Authors, Titles, Subjects). The main content area features an 'ABOUT SCHOLARSPACE' section and a 'SCHOLARSPACE SPOTLIGHT' section.

Example of DSpace home page - using the default user interface (JSP) at the University of Zimbabwe (left) and using the customizable XML User Interface (Manakin) and a customized header at the University of Hawaii (right).

DSpace is an [open source repository](#) application that allows you to capture, store, index, preserve and distribute your digital material including text, video, audio and data. DSpace provides a way to manage your materials and publications in a professionally maintained repository to give them greater visibility and accessibility over time.

There are over [1000 digital repositories](#) worldwide using the DSpace application for a variety of digital archiving needs. DSpace is most often used as an [institutional repository](#) - a platform that provides access to research output, scholarly publications, library collections, and more.

It has three main roles:

- Facilitates the capture and ingest of materials, including [metadata](#) about the materials
- Facilitates easy access to the materials, both by listing and searching
- Facilitates the long-term preservation of the materials

The DSpace application has many customizable features and tools for managing digital content, enabling digital preservation and providing accessibility to your materials. As an open source application, there is a very active [community](#) of [developers](#), researchers and users worldwide that contribute their expertise to enhance the DSpace application.

## What can DSpace be used for?

**DSpace can be used to store any type of digital materials, including:**

- Documents, such as articles, preprints, working papers, technical reports, conference papers
- Books
- Theses
- Data sets
- Computer programs
- Visualizations, simulations, and other models
- Multimedia publications
- Administrative records
- Published books
- Overlay journals
- Bibliographic datasets
- Images
- Audio files
- Video files
- e-formatted digital library collections
- Learning objects
- Web pages

## What are the benefits of using DSpace?

Example of DSpace's built-in organizational structure of Communities and Collections - using the default user interface (JSP) at the University of Zimbabwe (left) and using the customizable XML User Interface (Manakin) at the [University of Hawaii](#) (right).

Because DSpace is a turnkey repository application it may be deployed "out-of-the-box" as an institutional repository. The majority of DSpace users do little to no customization of the application beyond adding local branding. *DSpace allows you to:*

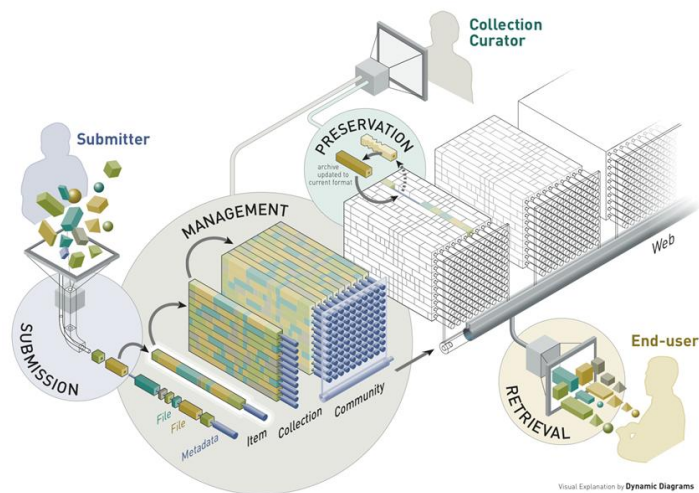
- Organize, describe and store your content easily through the built-in structure
- Archive and distribute material you would currently put on your personal website
- Get your materials out quickly, to a worldwide audience through exposure to search engines such as Google
- Have a persistent network identifier for your work, which never changes or breaks

Additionally, DSpace allows institutional repositories to:

- Preserve reusable teaching materials that you can use with course management systems
- Store examples of students' projects (with the students' permission)
- Showcase students' theses (again with permission)
- Keep track of your own publications/bibliography

## How does DSpace work?

Behind the scenes, this is a look at how DSpace works:



**Submission:** Web-based interface makes it easy for a submitter to create an archival item by depositing files. DSpace was designed to handle any format from simple text documents to datasets and digital video.

**File:** Data files, also called bitstreams, are organized together into related sets. Each bitstream has a technical format and other technical information. This technical information is kept with bitstreams to assist with preservation over time.

**Item:** An item is an "archival atom" consisting of grouped, related content and associated descriptions (metadata). An item's exposed metadata is indexed for browsing and searching. Items are organized into **collections** of logically-related material.

**Community:** A community is the highest level of the DSpace content hierarchy. They correspond to parts of the organization such as departments, labs, research centers or schools.

DSpace's modular architecture allows for creation of large, multi-disciplinary repositories that ultimately can be expanded across institutional boundaries.

**Preservation:** DSpace is committed to going beyond reliable file preservation to offer **functional preservation** where files are kept accessible as technology formats, media, and paradigms evolve over time for as many types of files as possible.

**Retrieval:** The end-user interface supports browsing and searching the archives. Once an item is located, Web-native formatted files can be displayed in a Web browser while other formats can be downloaded and opened with a suitable application program.

## How is the DSpace software licensed?

DSpace is free open source software. That means that you can download, use, and modify DSpace for free. The software is shared under a Berkeley Software Distribution (BSD) license. We have also tried to find good open-source tools to package with the DSpace application, all freely available under an open-source license (although not all the same license as the one for DSpace itself), so that you get a complete system along with the part that we created. Users are also allowed to modify DSpace to meet an organization's specific needs.

## What is the open source development model used for DSpace?

The code for DSpace is kept within a source code control system from [SourceForge](#). This system allows code to be added or modified over time, while maintaining a track of all changes and a note of why the change was made and who made it. This assists with the development of the software and ensures the quality and traceability of the code. Any past version of DSpace can be downloaded from the system in an identical state as originally distributed.

Control of the source code repository is delegated to a small group of 'committers'. Only the committers have the ability to change the code and release new versions. The committers work with the wider community of DSpace users to fix bugs and improve the software with new features.

Anyone who wants to is welcome to submit big fixes, new features or feature requests. The can all be done through the SourceForge administrative system [SourceForge administrative system](#). Support is provided on an informal basis via email lists. There are three DSpace email lists:

1. [General](#) for general questions and announcements
2. [Technical](#) for technical support
3. [Development](#) for developers and to discuss development issues

## Hungry for more?

Need more general information before moving any further? Below is a list of materials that can help you learn more about DSpace.

### General DSpace Information

- [Minute DSpace Informational Video](#)
- [DSpace Specifications Sheet](#)
- [DSpace Demo Instance](#)
- [Official DSpace Documentation](#)
- [DSpaceResources Wiki Page](#)
- DSpace Under the Hood: [video recording](#), [slides](#)

### Comparing/Evaluating Software Options

- [RSP's Repository Software Survey](#)
- [DSpace or Fedora: Which One Should I Choose?](#)

### Repository Planning Guidance

- [JISC's Guide to Setting Up and Running a Repository](#)
- [Creating an Institutional Repository: LEADIRS Workbook](#)
- [RSP's Setting Up a Repository](#)

Know of other resources? Please add them here!

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