DIGITAL REPOSITORY PLATFORM

SAMVERA



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OVERVIEW : SAMVERA

Samvera is a software product launched in 2009 by a joint collaboration between Stanford University, the University of Hull, the University of Virginia and Fedora Commons.

It is designed to be an open-source digital repository software to allow access to all users. The main components of Samvera are Fedora Commons, Blacklight. Solr, and Hydrahead.

Samvera is a tremendous application in libraries and digital repositories. It allows all kinds of digital files to be stored for digital archiving and ease of access.



WHAT IS SAMVERA

- Samvera is an Icelandic word meaning “togetherness.” The Samvera Community is a global community of technologists who create and maintain repository software; you can’t install Samvera, but you can install the repository solutions we develop together including Avalon Media System, Hyrax, and Hyku. Institutions around the world rely on Samvera Community supported software to provide access to their digital content. .



WHAT IS SAMVERA

- Samvera is also a community of practice where software developers and library technologists can support and learn from one another. We have active participation from metadata specialists, repository managers, user experience professionals, and others who contribute their expertise to ensure the software stays relevant and responsive to changing needs.



WHAT IS SAMVERA

- Samvera software is free and open source, available under an Apache 2 license, and is based around four major components:
- The Fedora repository software- providing a robust, durable repository layer for persisting and managing digital objects.
- Solr indexes- providing fast access to information about an institution's repository content.
- Blacklight- a Ruby on Rails plugin that sits above Solr and provides faceted searching, browsing and tailored views on objects.
- Samvera gems- Ruby on Rails components that integrate the building blocks to form a complete, flexible and extensible digital repository solution.



WHAT IS SAMVERA

These components may be used by institutions to develop their own completely customized local solutions but are also used in three major community-supported applications, or “solution bundles”:

- Avalon – a time-based media solution
- Hyrax – a Ruby gem that includes much of Samvera’s functionality. It is the basis on which users can build their own, customized version of Samvera.
- Hyku – a feature-rich, robust, flexible, multi-tenant digital repository that is easy to install, configure, and maintain. Hyku can be installed locally or run in the cloud and is based on
- Hyrax- A number of service providers are or will soon be an offering cloud-based, hosted versions.



HOW TO ACCESSED AND EXPLORE SAMVERA

Samvera platform can be accessed and explored through the following key channels

Platforms	How to Access/Explore	What You'll Find
Official Website	Visit samvera.org	Provides an overview of the community, its mission, core technologies (Hyrax, Hyku, Avalon), and how to get involved.
Digital Repositories (Demos)	View a tour of Selected Samvera repositories	Explore live, public examples of digital repositories built using Samvera components
Code Repository	Visit the Samvera Community GitHub	Access the source code for all Samvera projects, including Hyrax (the core repository engine) and Hyku (the multi-tenant application). This is where development work happens.
Documentation & Wiki	Go to the Samvera Wiki Homepage	Find detailed technical documentation, meeting notes, community guidelines, and knowledge base articles for developers, repository managers, and metadata specialists.
Videos & Presentations	Check the Samvera YouTube Channels	Watch demos, recordings of past events, webinars, and technical presentations on the various Samvera solutions and components.
Project Specifics	Explore Hyrax.samvera.org and the Hyku Documentation	Find documentation and resources specific to the two main repository applications: the core framework Hyrax, and the multi-tenant solution Hyku.
Community & Support	Join the Samvera Slack workspace	This is the best way to interact with developers, ask questions, get help with installation, and keep up with community news in real-time.

HOW TO ACCESSED AND EXPLORE SAMVERA

avalon MEDIA SYSTEM	Hyrax	hyku
Demo site The demo site is open for anyone to search and browse previously uploaded content.	**Rails Engine**	**YouTube Demos**
To upload and edit your own content, first **create an account**. Then **contact the Avalon team** to request your account be given rights to edit content. **Signin/Login Site**	**Hyrax code in Github**	**Features and Implementations**
Features and Implementations Avalon offers an easy-to-install, easy-to-configure, feature-rich application for presenting and managing AV resources.	**Hyrax overview, features, purpose, etc.**	**Releases:** Hyku Beta 2.0.0, Hyku 3.0, Hyku 4.0, Hyku 5.0, Hyku 6.1

KEY FEATURES AND FUNCTIONALITIES

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- Flexible Workflows & Deposit/ Ingest
- Rich Metadata Handling & Schema Flexibility
- Search, Discovery & Browsing
- Access Control & Permissions
- Preservation, Versioning & File Management
- Customization, Theming & Admin Configuration
- Analytics, Usage & Reporting
- Interoperability & Harvesting/ API Access

KEY FEATURES AND FUNCTIONALITIES

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Flexible Workflows & Deposit/ Ingest

- Hyrax supports configuration workflows that institutions can adapt to their policies
- Proxy deposit and transfer of ownership are supported
- Batch metadata editing and bulk operations are facilitated

Rich Metadata Handling & Schema Flexibility

- Out of the box, Hyrax provides a metadata application profile containing core metadata basic metadata
- The profile is extensible, and administrators can customize forms
- Samvera components use linked data/ RDF vocabularies

KEY FEATURES AND FUNCTIONALITIES

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Search, Discovery & Browsing

- Full-text indexing and facet-based search over metadata are core features
- Hyrax uses Blacklight bsed components for search UI and filtering
- Administrators can define “collection types’ and “admin sets” for more structured browsing or groupings

Access Control & Permissions

- Granular, user- and group-based visibility and permissions are supported
- Visibility levels include options like open access, institution
- Workflow roles can be assigned per administrative set to manage responsibility in deposit/ review pipelines

KEY FEATURES AND FUNCTIONALITIES

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Preservation, Versioning & File Management

- Version control changes to objects are tracked so prior versions can be referenced or restored
- Fixity checking/ integrity checks help detect corruption of stored files.
- File characteristics and format identification are often supported
- Support for streaming or embedding media is possible.

Customization, Theming & Admin Configuration

- Admin dashboard features allow control over site appearance, statis pages and content blocks
- Features in Hyrax can be toggled on or off via the Features panel
- Collection types, admin sets, page content, and static block content can be managed

KEY FEATURES AND FUNCTIONALITIES

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Analytics, Usage & Reporting

- Google Analytics integration for tracking downloads, views, and usage of works and collections
- Some Samvera- based applications also support built in usage metrics, thematic dashboards, and cross-tenant analytics

Interoperability & Harvesting/ API Access

- Samvera applications often expose OAI-PMH endpoints for metadata harvesting by external harvesters
- Hyku supports ResourceSync for synchronizing metadata and content updates
- APIs allow other systems to query the repository, ingest content, or integrate with client applications

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STRENGTH AND LIMITATION

Strength	Limitations
• Flexibility & Extensibility • Rich Feature Set Out-of-the-box • Strong Community & Ongoing Development • Standards & Interoperability Support • Preservation/ Versioning, File Management • Scalability Potential	• Complexity & Technical Overhead • Performance Issues • Documentation Gaps • Maintenance & Upgrade Challenges • User Interface • Resource Requirements

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STRENGTH

- **Flexibility & Extensibility**
  - -Modular and customizable architecture
  - - can adapt to different institutional needs
  - - developers can easily add new functions

- **Rich Feature Set Out-of-the-box.**
  - - Functional repository from the start
  - -provides a wide range of ready-to-use repository tools
  - -The Hyrax and Hyku solutions provide essential repository features immediately

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STRENGTH

- **Strong Community & Ongoing Development**
  -collaboration, shared innovation, and institutional partnerships
  - backed by Stanford University, University of Hull, and the British Library
  -Collaborative open-source community

- **Standards & Interoperability Support**
  - Supports metadata and repository standards
  -international metadata and repository standards

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STRENGTH

- **Preservation / Versioning & File Management**
  - -ensures long-term digital preservation
  - -uses Fedora Commons

- **Scalability Potential**
  - - Ensures long-term digital preservation
  - -Supports metadata and repository standards
  - -international metadata and repository standards

LIMITATIONS

- **Complexity & Technical Overhead**
  - -Requires advanced technical expertise
  - -Need Ruby on Rails, Fedora, and Solr

- **Performance Issues**
  - - May slow with large datasets
  - -requires powerful servers, ample memory, and optimized database configurations

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LIMITATIONS

- **Documentation Gaps**

  -Incomplete or inconsistent documentation, can be fragmented, outdated, or highly technical

  -familiarity with Ruby on Rails or Linux command-line tools

- **Maintenance & Upgrade Challenges**

  - Upgrading requires careful management

  -Difficult upgrades due to dependencies

  -Frequent updates in related components (e.g., Fedora, Solr, Rails)

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LIMITATIONS

- **User Interface (UI) Limitations**
  - -Default interface lacks polish
  - ex. The default Hyrax UI

- **Resource Requirements**
  - - High infrastructure and staff needs
  - -Demands strong infrastructure

EXAMPLE OF USE

- Samvera is primarily used in libraries and digital repositories. It was originally developed to make use of metadata defined by the Library of Congress Metadata Object Description Schema (MODS) Standard
- Samvera implements the Opinionated metadata gem to create domain-specific languages out of complex XML standards such as MODS.





EXAMPLE OF USE

The core uses of Samvera are to provide a platform for:

1. Digital Preservation and Long-Term Storage
    a. Archiving Diverse Content
    b. Creating a Durable Home
2. Scholarly and Institutional Repositories (IRs)
    a. Managing Institutional Output
    b. Content Includes
    c. Self-Deposit
3. Special Collections and Cultural Heritage
    a. Digital Collections
    b. Advanced Viewing
    c. Audio/Video Streaming
4. Custom Digital Collection Development
    a. Flexible Framework
    b. Multiple Interfaces





EXAMPLES OF SAMVERA COMMUNITY REPOSITORY SOLUTIONS IN ACTION

1. ATLA Digital Library

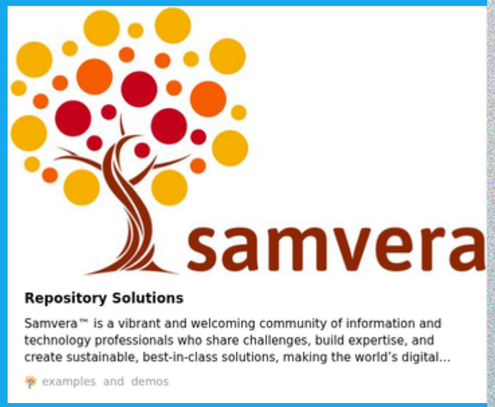
- https://dl.atla.com/
- Atla Digital Library provides Atla members and other organizations with access to aggregated theological library collections from across the US.

2. British Library Shared Research Repository

- https://iro.bl.uk/
- Institutional repositories for UK cultural heritage organisations, currently all Independent Research Organisations (IROs).
- Content includes a variety of outputs including published works, datasets, 3D models and exhibition material. Six individual repositories with a unified search layer over the top.

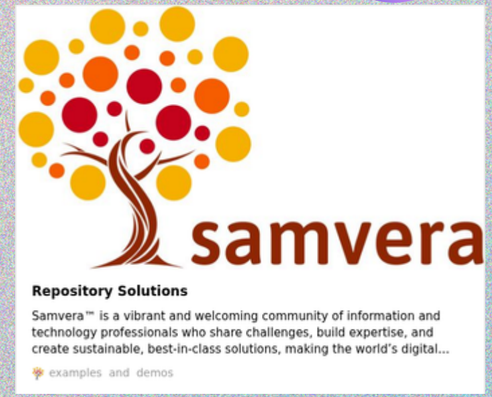
3. Carolina Digital Repository (CDR)

- https://cdr.lib.unc.edu/
- Institutional Repository for OA articles, journals, student papers, research data, posters, 3d objects, OER and more.



EXAMPLES OF SAMVERA COMMUNITY REPOSITORY SOLUTIONS IN ACTION

- Cincinnati University - Scholar@UC
- Cornell University - Southeast Asia Visions
- Didómena -
- Digital Commonwealth
- The Digital Repository of Ireland
- Duke University Digital Repository
- Duke University Research Data Repository
- Emory University - Emory Electronic Theses and Dissertations (ETD)
- George Washington University Libraries
- Indiana University - Imago
- Indiana University - Media Collections Online
- Indiana University - Pages Online
- King's Fund Digital Archive
- Linn-Benton Community College Community Archive
- MAE, Theater Institute of Barcelona
- Northeastern University Repository
- Northwestern University AVR
- Northwestern University Digital Collections
- Northwestern University Institutional Repository - ARCH
- Oregon State University - ScholarsArchive@OSU
- Oregon State University - Oregon Digital
- Princeton University Library - Figgy
- Tufts University Digital Library
- University of Alberta Education & Research Archive
- UCLA Library Digital Collections
- University of California Santa Barbara Alexandria Digital Research Library
- University of Hong Kong Libraries Digital Repository
- The University of Hull's digital repository
- University of Michigan - Deep Blue Data
- University of Michigan - Fulcrum
- University of Utah - The Hive
- University of Virginia - Libra
- University of Virginia - Virgo GIS



Source; https://samvera.org/repository-solutions/examples-and-demos

INSIGHTS



- Samvera is an open-source digital repository framework designed to help institutions manage, preserve, and provide access to digital content in a highly customizable way.
- It operates through a collaborative community of libraries, universities, and cultural institutions that co-develop and maintain its tools, ensuring its continuous improvement and sustainability.
- Built on technologies such as Fedora Commons, Solr, and Ruby on Rails, Samvera supports long-term digital preservation, interoperability, and compliance with standards like Dublin Core and OAI-PMH.

INSIGHTS

- Its modular design and applications—such as Hyrax and Hyku—provide options for institutions seeking either deep customization or easier deployment.
- However, Samvera's flexibility requires substantial technical expertise and resources, making it best suited for medium to large organizations.
- Overall, Samvera represents a balance between innovation, collaboration, and technical complexity, empowering institutions to create robust and sustainable digital repositories.

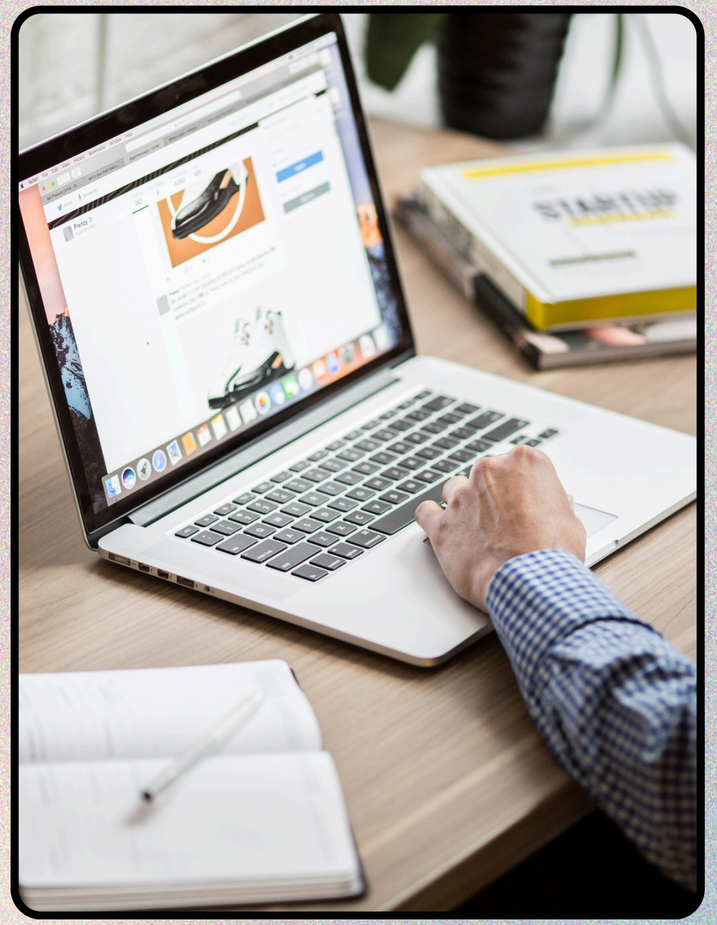






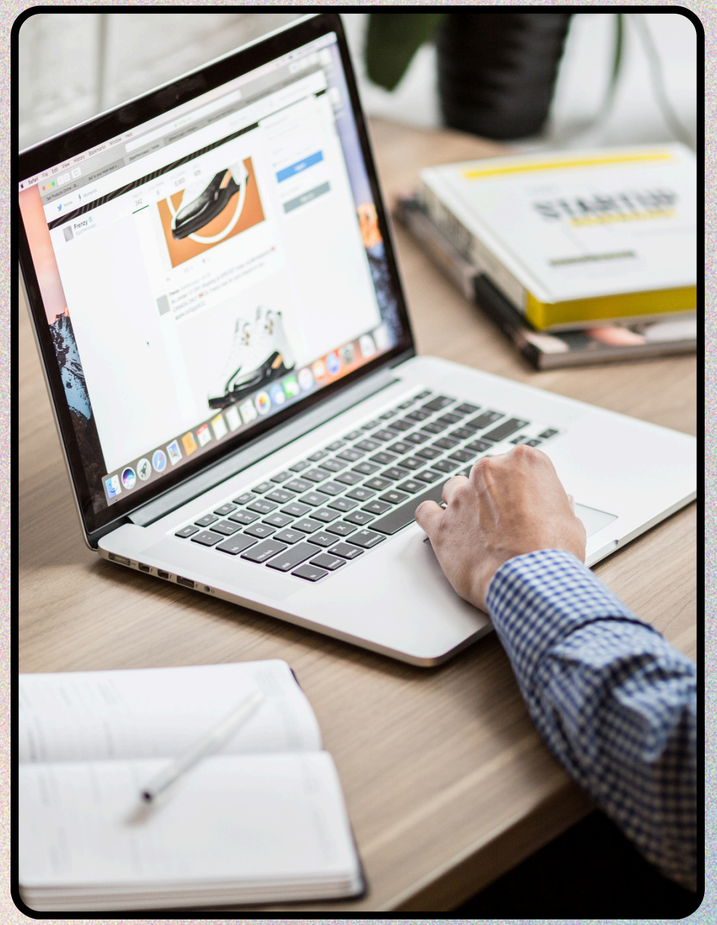
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THANK YOU!