



cottage labs

# Comparing three institutional software repository platforms

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# Three repository software platforms

DSpace 8	Website: <a href="https://or24-dspace.cottagelabs.com/">https://or24-dspace.cottagelabs.com/</a> Code: <a href="https://github.com/cottagelabs/or24-dspace-angular">https://github.com/cottagelabs/or24-dspace-angular</a>
Invenio v12 (12.0.0b2.dev0)	Website: <a href="https://or24-invenio.cottagelabs.com">https://or24-invenio.cottagelabs.com</a> Code: <a href="https://github.com/cottagelabs/or2024-invenio">https://github.com/cottagelabs/or2024-invenio</a>
Hyrax 5	Website: <a href="https://or24-hyrax.cottagelabs.com">https://or24-hyrax.cottagelabs.com</a> Code: <a href="https://github.com/cottagelabs/or2024-hyrax">https://github.com/cottagelabs/or2024-hyrax</a>



# InvenioRDM

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**INVENIORDM**

Communities My dashboard

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## OR2024 Demo Instance by Cottage Labs

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### Recent uploads

June 10, 2015 (v1) Presentation Open

#### Indexing repositories: pitfalls and best practices

Acharya, Anurag

Featured talk by Anurag Acharya, Distinguished Engineer, Google, at Open Repositories 2015 (OR2015), the 10th International Conference on Open Repositories, Indianapolis, Indiana.

Part of [Open Repositories 2024](#)

Uploaded on June 3, 2024

1 1

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June 3, 2024 (v1) Dataset Open

#### Original dataset for ID 226 Y2O3 in Thermophysical Property Database

Ishikawa, Takehiko; Ishii, Masashi

This is the original dataset for ID 226 Y2O3 in Thermophysical Property Database (<https://thermophys.nims.go.jp/thermophysicalproperty/experiments/226>). The dataset was obtained at Japan Aerospace Exploration Agency (JAXA), and is a part of [Thermophysical Property Original Datasets](#) (<https://doi.org/10.48505/nims.3877>) as a collection of MDR.

# InvenioRDM V12

- Packaged version of utilities powering Zenodo; from CERN + numerous partners. Zenodo ported in 2023
- Python & Flask web application with Semantic UI & React



# Developing the OR24 InvenioRDM

- On a fresh VM, install CLI tool to bootstrap an instance  
`invenio-cli init rdm`
- Minor changes to the included docker-compose; replaced self-signed SSL certificate with LetsEncrypt.  
`invenio-cli containers setup --no-demo-data`  
`invenio-cli containers build`
- Customisation via override files: sass, jinja template  
`invenio-cli containers start`
- Deposit via admin user + webform

# InvenioRDM USP

- Backed by CERN
- Developer-friendly tech stack
- Extensible metadata schema & controlled vocabularies
- Very scalable and performant
- The Invenio community

# InvenioRDM Challenges

- A young platform; some features hotly anticipated
- Featureset heavily influenced by Zenodo's needs
- Something of a maze of interconnected packages can make development tricky

# Hyrax

OR24 Hyrax

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Charles Dickens

  
Thermophysical Property Original Datasets

View all collections

A service of Samvera.

OR24 Hyrax v5.0.1

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# Hyrax

“Hyrax is a [Ruby on Rails Engine](#) built by the [Samvera community](#). Hyrax provides a foundation for creating many different digital repository applications.” ([doc](#))

*Hyrax is not a web application.*



## Developing the OR24 Hyrax based application

- Reused existing docker-compose scripts
- Created a new Hyrax v5 application
- Created two new worktypes
  - Monograph (copied from Koppie)
  - Dataset (to showcase a nested metadata example)
- Commissioned a new machine and deployed the application
- Manually submitted the 15 records

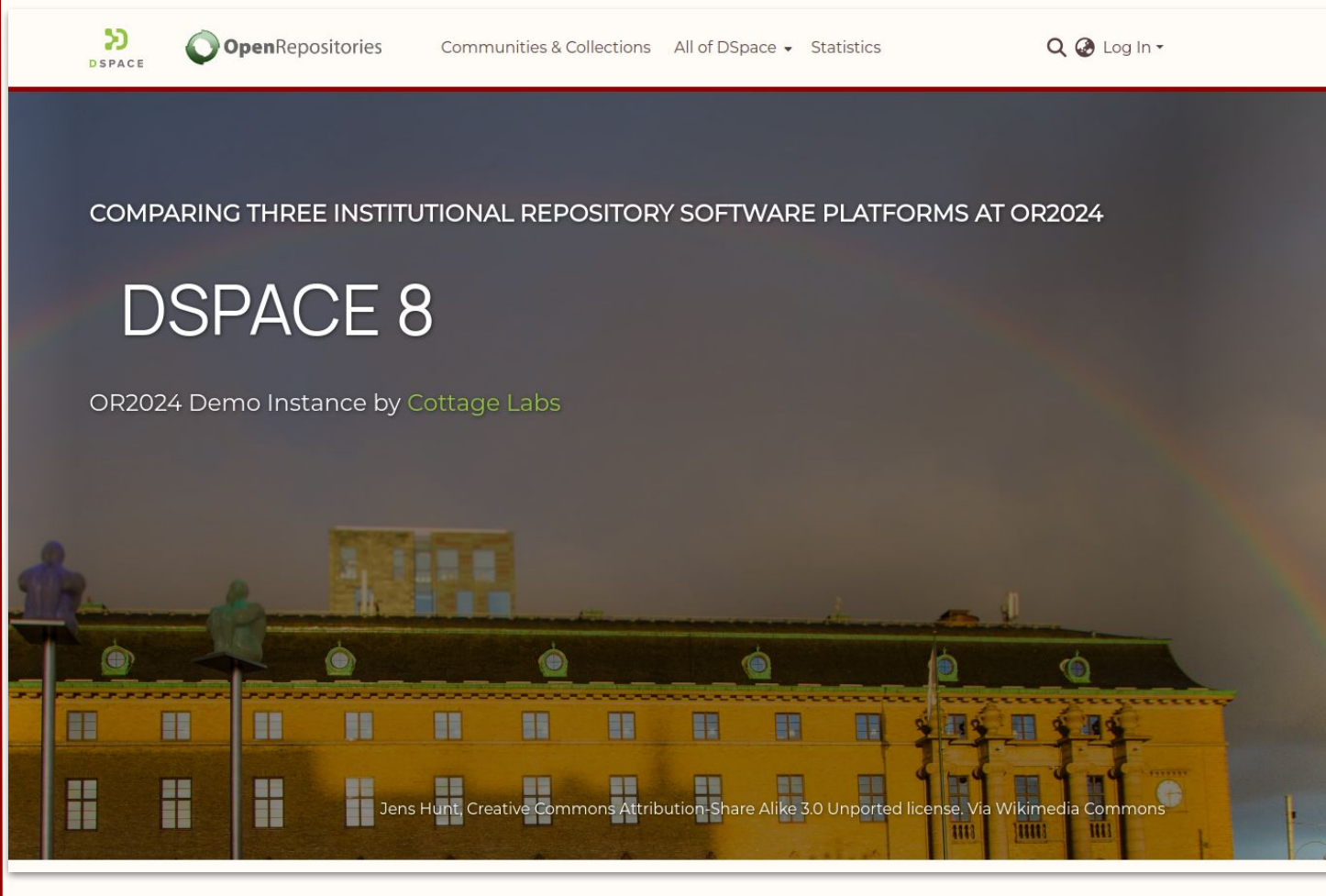
# Hyrax USP

- Develop any number of work types with
  - custom metadata model
  - custom workflow and administrative sets (admin sets - curated collections)
- Flexible adapters for metadata and storage with Valkyrie
- Custom workflows
- Integration with other services
- The Samvera community

# Hyrax Challenges

- It's written in Ruby ;) and not a traditional RoR application
- It's got a long dependency chain of gems
- Need to strike a balance between feature richness and code complexity

# DSpace



# DSpace

- Turn key institutional repository software
- Using the main branches for version 8



## Developing the OR24 DSpace

- Commissioned a new machine and deployed the application
- Forked the DSpace Angular repository and the DSpace backend
- Created a community and a collection
  - Manually submitted the 15 records as an administrator
- Applied basic custom theming and set up certificates
- Ran filter media process to generate thumbnails and extract and index text

# DSpace USP

- Highly customisable
- Modern architecture
- Strong community
- Integration with other services



# DSpace Challenges

- Arbitrary two level container structure imposed
- Resource intensive
- Complex technologies
- No way to ingest files in different directories

# Differences 1/3

	<b>DSpace</b>	<b>InvenioRDM</b>	<b>Hyrax</b>
Setup effort	2 to 3 days to deploy a basic repository	~1 day to deploy a basic repository	3 to 4 days to deploy a basic repository
Versioning	Record level	File level	File level
Language	Java	Python	Ruby
Maturity	2001	2015 - Invenio3	2010
Customizing metadata	Administrator	Developer	Developer
Configurable submission workflows	Yes	No	Yes - greater control

# Differences 2/3

	<b>DSpace</b>	<b>InvenioRDM</b>	<b>Hyrax</b>
PIDs	Handle, DOI	DOI	DOI
Communities/ Collections	Needs both	Communities	User and administrative collections
Usage statistics	Yes	(yes)	(yes)
Lease	No	No	Yes
Embargo management	Automatic	Automatic	Dashboard
Sharing, proxy deposit and ownership transfer	No	(yes)	Yes

# Differences 3/3

	<b>DSpace</b>	<b>InvenioRDM</b>	<b>Hyrax</b>
Lease	No	No	Yes
Embargo management	Automatic	Automatic	Dashboard
Sharing, proxy deposit and ownership transfer	No	No	Yes
Meta tags for discoverability	Google scholar, Signposting	No	Google scholar, Schema.org
Multilingual support	Yes	(Yes)	Yes

# Factors for choosing

- The object versioning model, types of metadata model and workflows you need to represent
- The skill set available to support the repository
- Community involvement