

Valkyrizing the Duke Digital Repository

Samvera Virtual Connect
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Will Sexton

Head, Software Services
Duke University Libraries

will.sexton@duke.edu

Here Are Some Bullet Points About The Project

- Named “DDR Evolution” or DDREvo
- Concluded with release of DDR 2.0.0 replacing DDR 1.X (DDR-C)
- No new functionality was developed for the repository
- Kicked off in November 2018, shortly after completing our Hyrax-based Duke Research Data Repository
- Sprint 0 ended in January 2019, followed by 16 two-week sprints by a four-person team (Hugh Cayless, David Chandek-Stark, Jim Coble, Ayse Durmaz)
- Final steps completed outside of sprint cycles, and a fifth developer (Cory Lown) joining the team
- Also separately did a new DDR home page



DUKE UNIVERSITY LIBRARIES

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Computers have added a new dimension to the services provided by the Libraries. Articles inside describe the new automated systems and reveal the reactions they have prompted from staff and patrons.

The next five slides were used for a lightning talk explaining why we were using all of one developer's time for more than a year, as well as parts of four others'.

User
Interface

Public UI

Staff
UI

Middleware

ActiveFedora

Backend

Fedora 3

Digital object
management

Metadata

Solr

User
Interface

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Fedora 3

&



ActiveFedora

- Fedora 3 nearing end of life
 - Last release December 2014
 - DUL tried to migrate away (to F4) in 2016
- Version of ActiveFedora that works with Fedora 3 no longer supported

User
Interface

Public UI

Staff
UI

Middleware



Valkyrie

Backend

File system

PostgreSQL

Digital object
management

Metadata

Solr



Valkyrie



- Software “for enabling multiple backends for storage of files and metadata in Samvera”
- Released from Samvera Labs as full Samvera community project March 11, 2019
- Currently in use (production) at Princeton, Penn State, UCSD, UCSB, Northeastern, and soon Emory
- Planned middleware component for Hyrax (basis of DUL’s Research Data Repository)

But ... Valkyrie ... Why?



We considered three alternatives:

- A. Upgrade Existing Code to Latest Fedora/ActiveFedora Version
- B. Reimplement Existing Functionality in Hyrax-Based Application
- C. Replace ActiveFedora with Valkyrie

Quoting from Jim's analysis (Jan. '19):

"While Fedora 3 has proven to be a relatively stable, reliable platform for the DDR, subsequent versions of Fedora (4 and now 5) are completely different products...."

"...I imagine it is nearly as much work as the Valkyrie option..."

"There are a number of factors that I think make Fedora 4/5 a less attractive platform than Fedora 3 (e.g., in Fedora 4, data is stored in a largely opaque manner and I don't think this has changed in Fedora 5)."

But ...



Valkyrie

... Why?



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- B. Reimplement Existing Functionality in Hyrax-Based Application
- C. Replace ActiveFedora with Valkyrie

Quoting from Jim's analysis (Jan. '19):

"The Hyrax option (B) is the one that would move us most squarely back into mainstream Samvera community code but is, I believe, a significantly bigger project than the Valkyrie option (C)"

"To be successful, I think it would require active participation of DDR stakeholders to negotiate where native Hyrax functionality can replace that of the current DDR, even if it is different, and where Hyrax functionality would have to be customized to meet stakeholder needs."

But ...



Valkyrie

... Why?



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Quoting from Jim's analysis (Jan. 19):

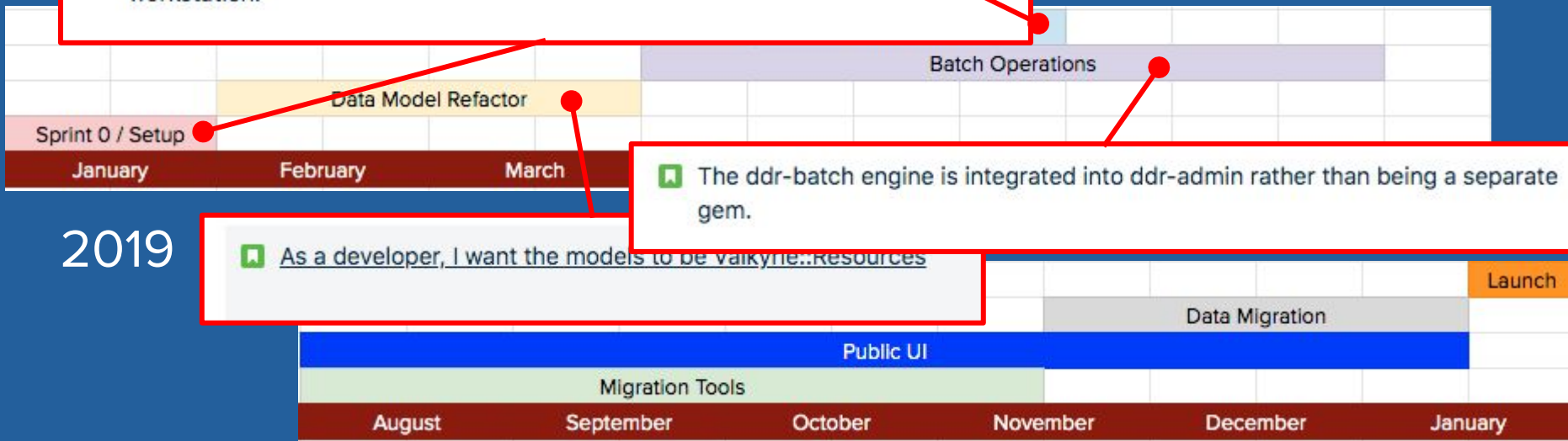
"The Valkyrie option (C) is the one that I believe would provide the simplest, most direct path out of our dependence on unsupported software (Fedora 3, ActiveFedora 7)."

"There is perhaps some level of risk in the Valkyrie option since it is a new project and, as noted above, still a 'labs' project but there seems to be a good bit of community interest and energy in it and I would expect it to become officially supported soon"

DDR Evolution Timeline 2019-2020

As a developer I want a pre-configured workstation.

Make ddr-admin resource show page more or less look and behave like dul-hydra model show page.



2019

2020

Resource Migration



Created by Jim Coble (Unlicensed)

Last updated Nov 05, 2019 • Analytics

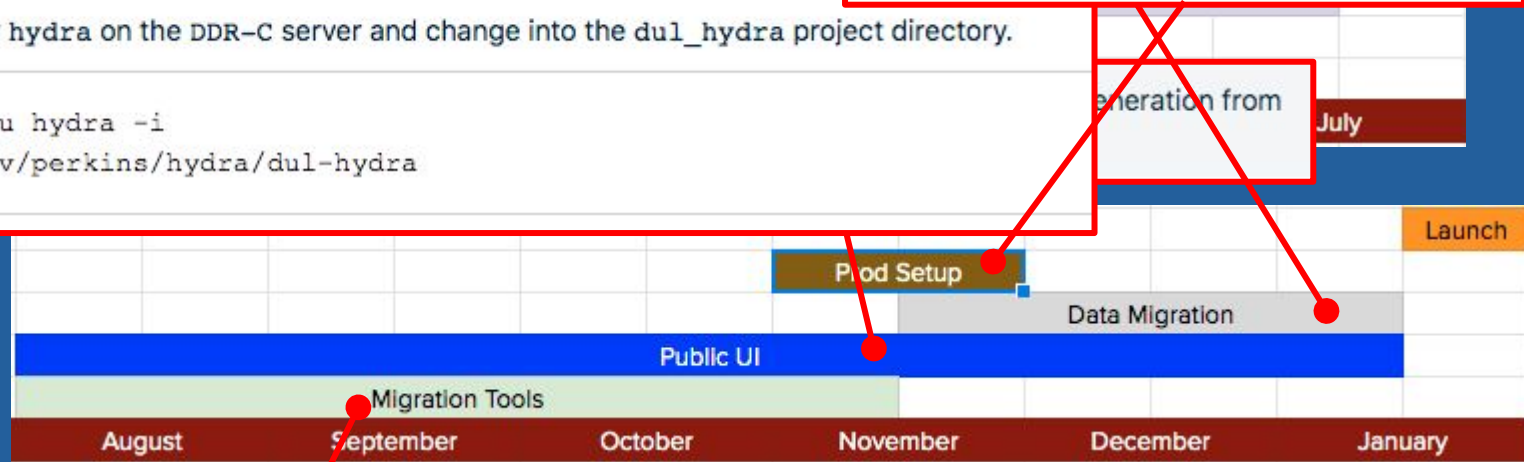
IMPORTANT: These steps are to be run FOR EACH LIST OF COLLECTIONS that is being migrated

Migrating a list of collections from DDR-C to DDRevo involves the following steps:

1. Become user `hydra` on the DDR-C server and change into the `dul_hydra` project directory.

```
$ sudo -u hydra -i  
$ cd /srv/perkins/hydra/dul-hydra
```

☒ DDRevo DevOps production punch list



☒ As a migrator, I can create DDRevo resources based on the contents of a DDR-C metadata export.

19-2020

2020

User
Interface

Public UI

Staff
UI

Middleware

ActiveFedora

Backend

Fedora 3

Digital object
management

Metadata

Solr

User
Interface

ddr-public

ddr-portals

Middleware

ddr-aux

ddr-models

dul-hydra

ddr-batch

ActiveFedora

Backend

Fedora 3

Digital object
management

Metadata

Solr

User
Interface

ddr-public

ddr-portals

Middleware

ddr-aux

ddr-models

dul-hydra

ddr-batch

ActiveFedora

Backend

Fedora 3

Digital object
management

Metadata

Solr

User Interface

ddr-xenon

(public UI)

ddr-admin

(staff app)

write

ddr-aux

ddr-core

Middleware



samvera

read

Vakkvrie

ddr-models
refactored
here

Backend

File system

Digital object management

SQL

Metadata

staff app from
dul-hydra and
ddr-batch
refactored here

olr

New
repository
home page at
repository.duke.edu

DUKE UNIVERSITY
LIBRARIES

REPOSITORY
COLLECTIONS & ARCHIVES


Search In: ▼ photographs, advertisements, texts a Q

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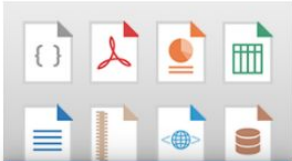


— LIBRARY COLLECTIONS —



Digitized Collections


Search digitized historic photographs, advertisements and more from Duke's unique library collections



Acquired Materials


Search digital materials licensed or purchased by the library, including e-books, data sets, and more

— DUKE SCHOLARSHIP —




Research Data Repository

Find and submit research data and produced by faculty and



DukeSpace

Find public theses, and dissertations by faculty and



Cor

Repositories at Duke

411 C
Durham, NC 27708
(919) 660-5870
Perkins Library Service Desk

with the repositories

About digital repositories at Duke

Accessibility Policy

Deaccession and DMCA Takedown Policy

These are in the
Duke Digital
Repository

Separate
Hyrax-based
repository for
research data

DSpace open
access
repository

Headers & Footers

a mini-project

The image shows a screenshot of the Duke University Libraries Research Data Repository website. The header features the Duke University Libraries logo and the text "REPOSITORY COLLECTIONS & ARCHIVES". A search bar is present with the text "Search In:" and a dropdown menu showing "photographs, advertisements, texts a". The main content area has a blue background with a grid pattern and a central white box containing the text: "The Research Data Repository is a service of the Duke University Libraries that provides curation, access, and preservation of research data produced by the Duke community. [Learn more »](#)". Below this text are two buttons: "Deposit your data" and "Browse datasets". The footer section includes a sidebar with "What We Collect" and "Recently Added Datasets", and a main content area with "Why Deposit in the Research Data Repository?". The right sidebar contains links for "TAKE YOUR WORK AVAILABLE HERE", "ROWSE", "DISCOVER", "STATISTICS", and "FEEDS".

DUKE UNIVERSITY LIBRARIES **REPOSITORY** COLLECTIONS & ARCHIVES

Search In: photographs, advertisements, texts a

DUKE UNIVERSITY LIBRARIES **DIGITAL REPOSITORY** **RESEARCH DATA**

Enter search terms

The Research Data Repository is a service of the Duke University Libraries that provides curation, access, and preservation of research data produced by the Duke community. [Learn more »](#)

[Deposit your data](#) [Browse datasets](#)

What We Collect

The Duke Research Data Repository accepts data, documentation, and software code related to the teaching and research mission of Duke University, including data linked to a publication, research project, and/or class projects. Data deposit is open to all members of the Duke Community with a valid netid.

- [Policies](#)
- [Readying your data for deposit](#)
- [Frequently Asked Questions](#)
- [Contact us](#)

Need to write a **data management plan**? Visit the [DMPTool.org](#) to get started.

We can also provide you with boilerplate language if you plan to use the Duke Research Data Repository for preserving and publishing your data.

Recently Added Datasets

- Chavez, S. P., Silva, Y., & Barros, A. P. (2020). Data from: High-elevation monsoon precipitation processes in the Central Andes of Peru. Duke Research Data Repository. <https://doi.org/10.7924/r4n877f1k>
- Flanagan, N., Wang, H., Winton, S., Richardson, C. (2020). Data from: Low-severity fire as a mechanism of organic matter protection in global peatlands: thermal alteration slows decomposition. Duke Research Data Repository. <https://doi.org/10.7924/r4s46nm6p>
- Lin, Y., Kouznetsova, T., Chang, C., Craig, S. (2020). Data from: Enhanced polymer mechanical degradation through mechanochemically unveiled lactonization. Duke Research Data Repository. <https://doi.org/10.7924/r49s1r065>

[Browse more](#)

Why Deposit in the Research Data Repository?

TAKE YOUR WORK AVAILABLE HERE

[How to Deposit](#)

ROWSE

All of DukeSpace

DISCOVER

Author

Date Issued

Type

Subject

Department

Affiliation of Duke Author(s)

STATISTICS

[View Usage Statistics](#)

FEEDS

RSS 2.0

Thank You!



[Samvera logo by Samvera](#) (CC BY 4.0)



Valkyrie logo: <https://github.com/samvera/valkyrie>

Questions?