Implementing the Notify protocol and standard practices in DSpace

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4SCIENCE
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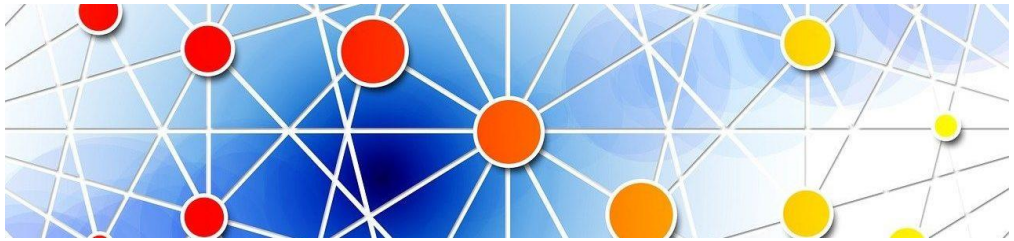


The Notify Project

COAR Confederation of Open Access Repositories

What are we talking about?

DSPACE

HOW WE GOT HERE ?

- A minimum viable product (MVP) was funded by the University of Minho as part of the PUBIN (www.pubin.pt/) project (2019-2022) at the end of 2021
- The implementation was delivered by 4Science in January/February 2022 for DSpace 5 & 6
- Harvard proposed a new use case to the Notify project and offered help to move the MVP to DSpace 7
- Initial code for version 7 is available at 4Science's and Harvard's GitHub repositories, official PRs will come for evaluation in DSpace 7.4 (Fall 2022)

The goals of the MVP

Quick & effective

Working on the most adopted versions currently

Supporting the open review scenarios but extensible

The MVP was implemented for DSpace v5 and v6 JSPUI only

https://github.com/4Science/DSpace/tree/coar-notify-5

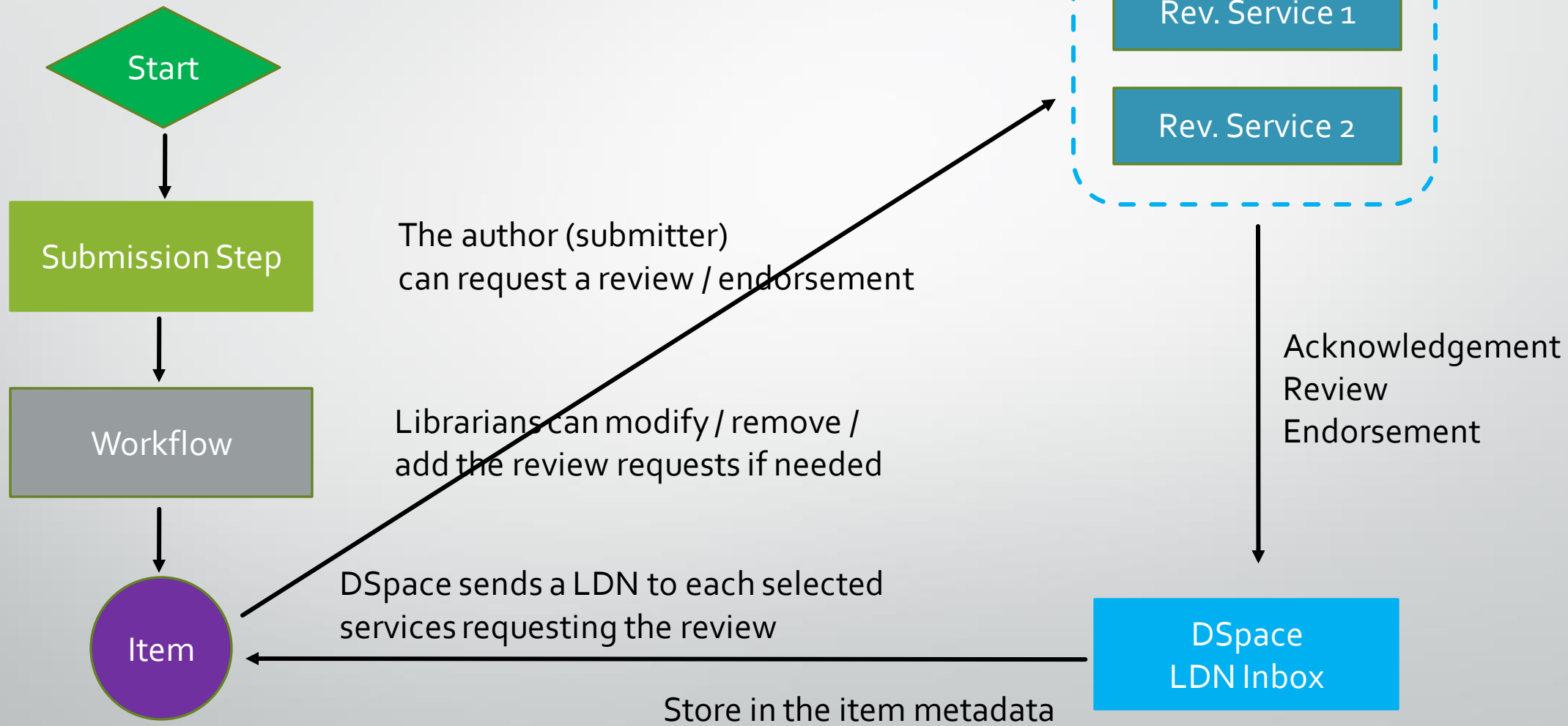
https://github.com/4Science/DSpace/tree/coar-notify-6

Documentation is available in GitHub as README.md

ID	Scenario	Use-case(s)	Participating Systems
1	Author requests review with possible endorsement (via overlay journal)	Peer-review, Endorsement	Overlay Journal <-> Repository
2	Author requests review with possible endorsement (via repository)	Peer-review, Endorsement	Repository <-> Overlay Journal
3	Overlay Journal Announces Review and Endorsement of Pre-print to Aggregator	Peer-review, Endorsement, Dissemination	Overlay Journal <-> Aggregator
4	Overlay Journal Endorses Pre-print (Initiated by Author)	Endorsement	Overlay Journal <-> Repository
5	Repository requests review (on behalf of corresponding author)	Peer-review	Repository <-> Review Servic
6	Author submits to overlay journal using repository to host resource and reviews	Peer-review, Endorsement	Overlay Journal <-> Repository
7	Review Service Announces Review of Pre-print to Aggregator	Peer-review, Dissemination	Review Service <-> Aggregator
8	Review Service Announces Review of Pre-print to Repository	Peer-review	Review Service <-> Repositor
9	Author requests reviews from review service, via repository	Peer-review	Repository <-> Review Servic

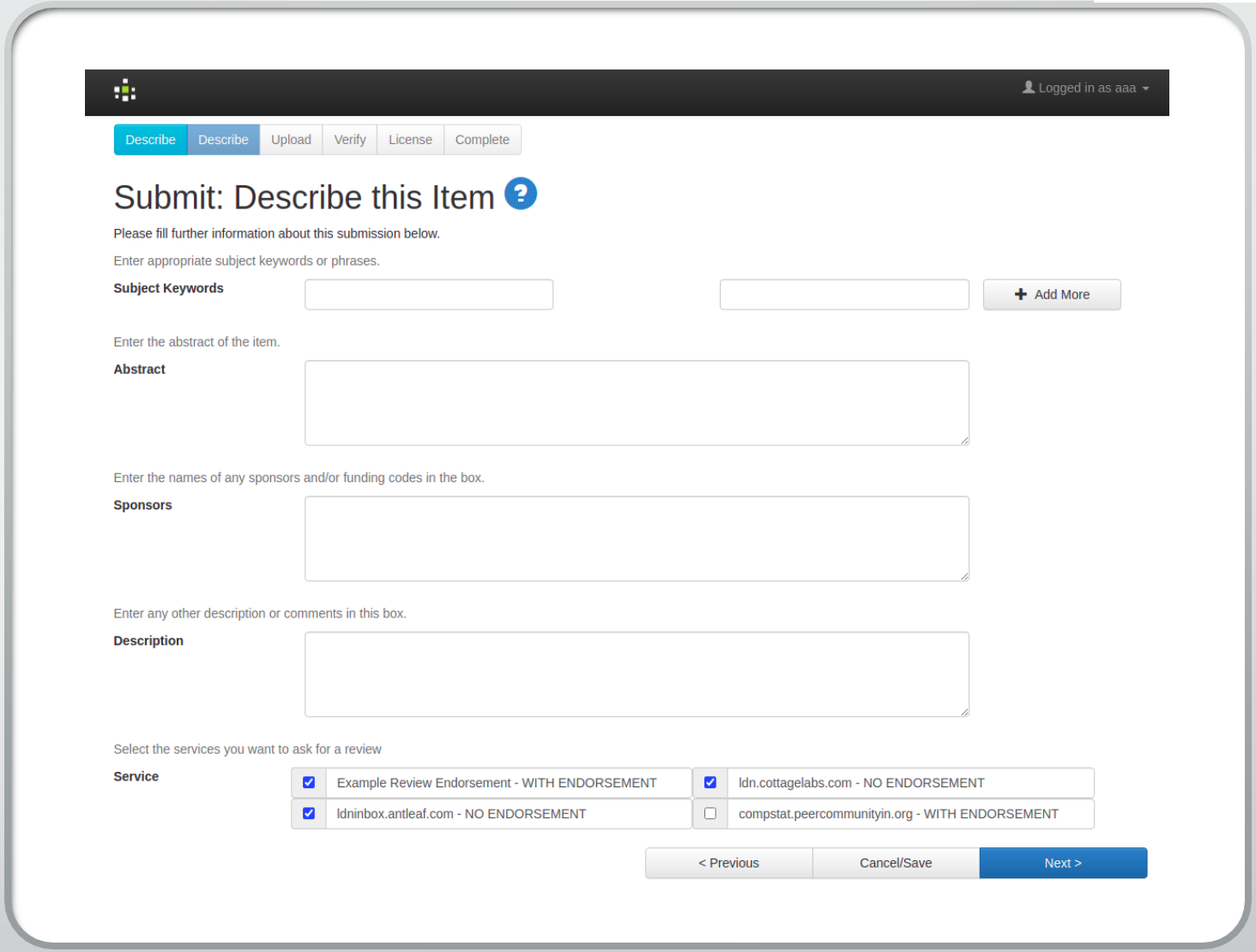
Supported scenarios

The Notify Workflow

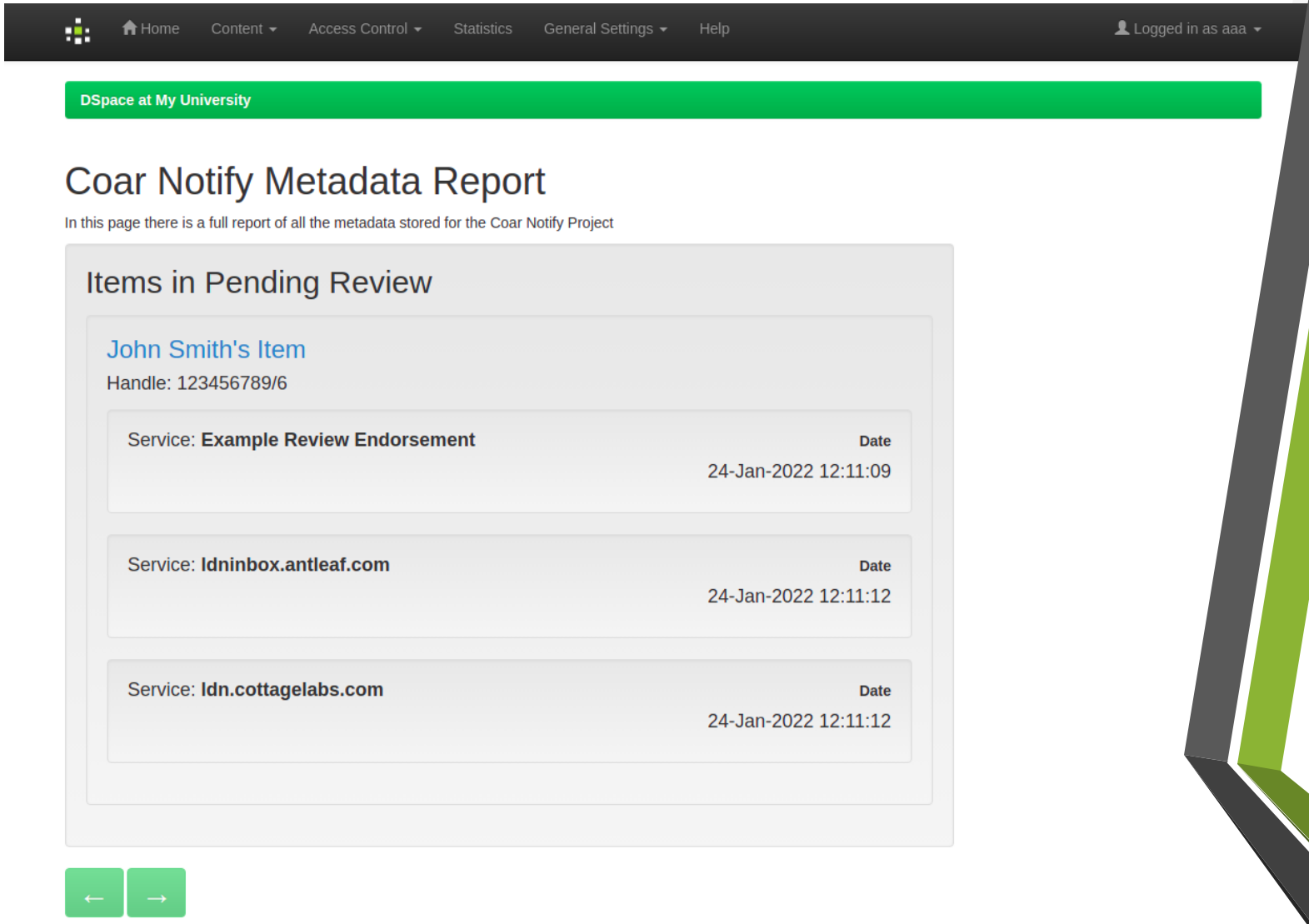


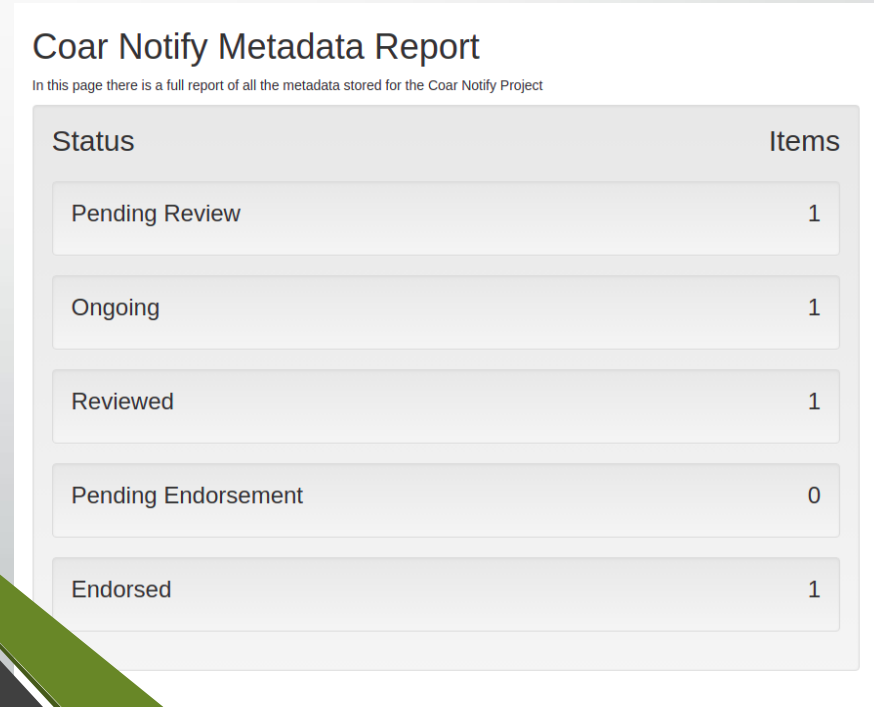
Asking Review during the submission is the first step

The list of services is configurable but known in advance to the repository system administrator



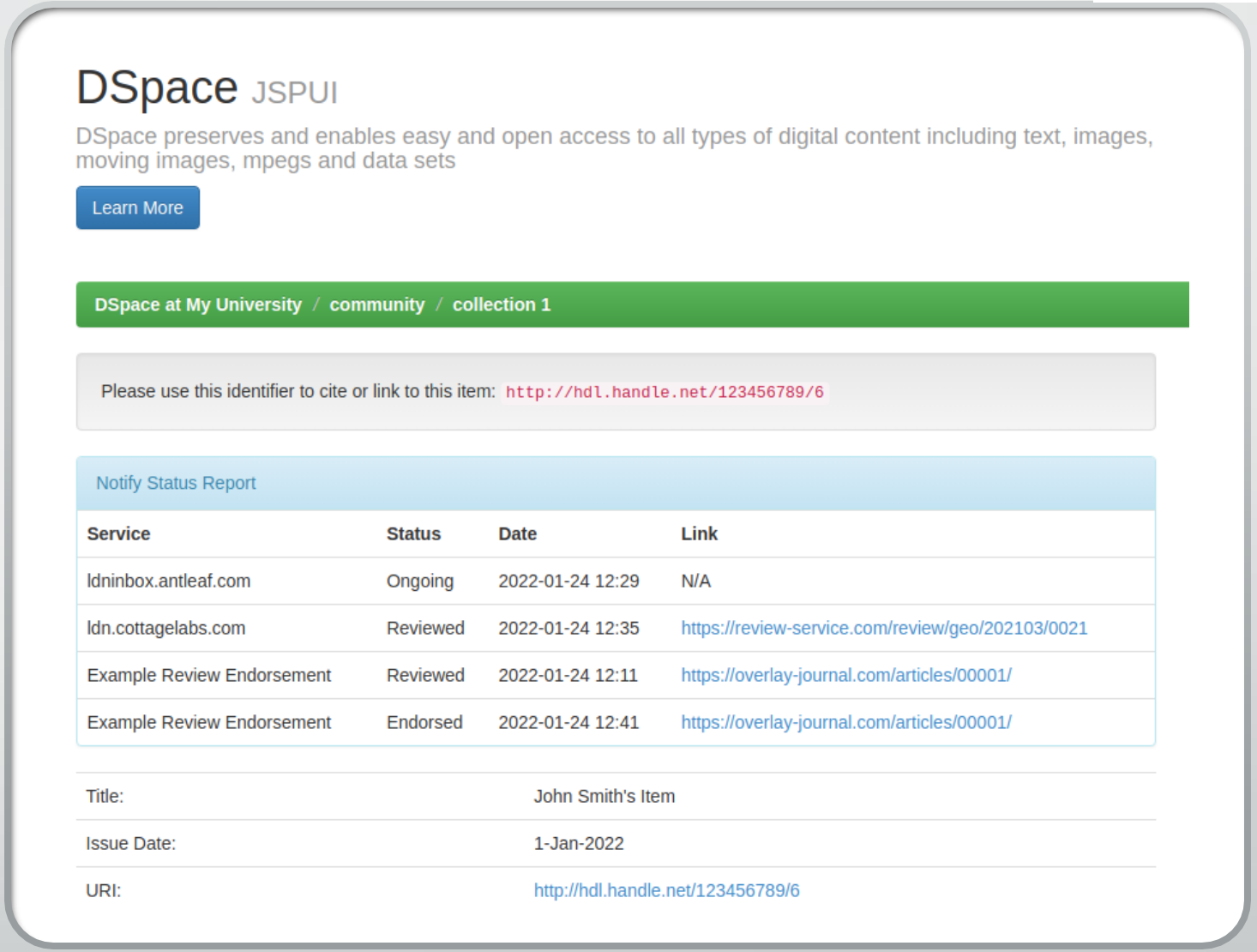
Monitor the status of the notify conversation





Results

links to
the review and/or
to the endorsement
(overlay journal) from
the repository



DSpace JSPUI

DSpace preserves and enables easy and open access to all types of digital content including text, images, moving images, mpegs and data sets

Learn More

DSpace at My University / community / collection 1

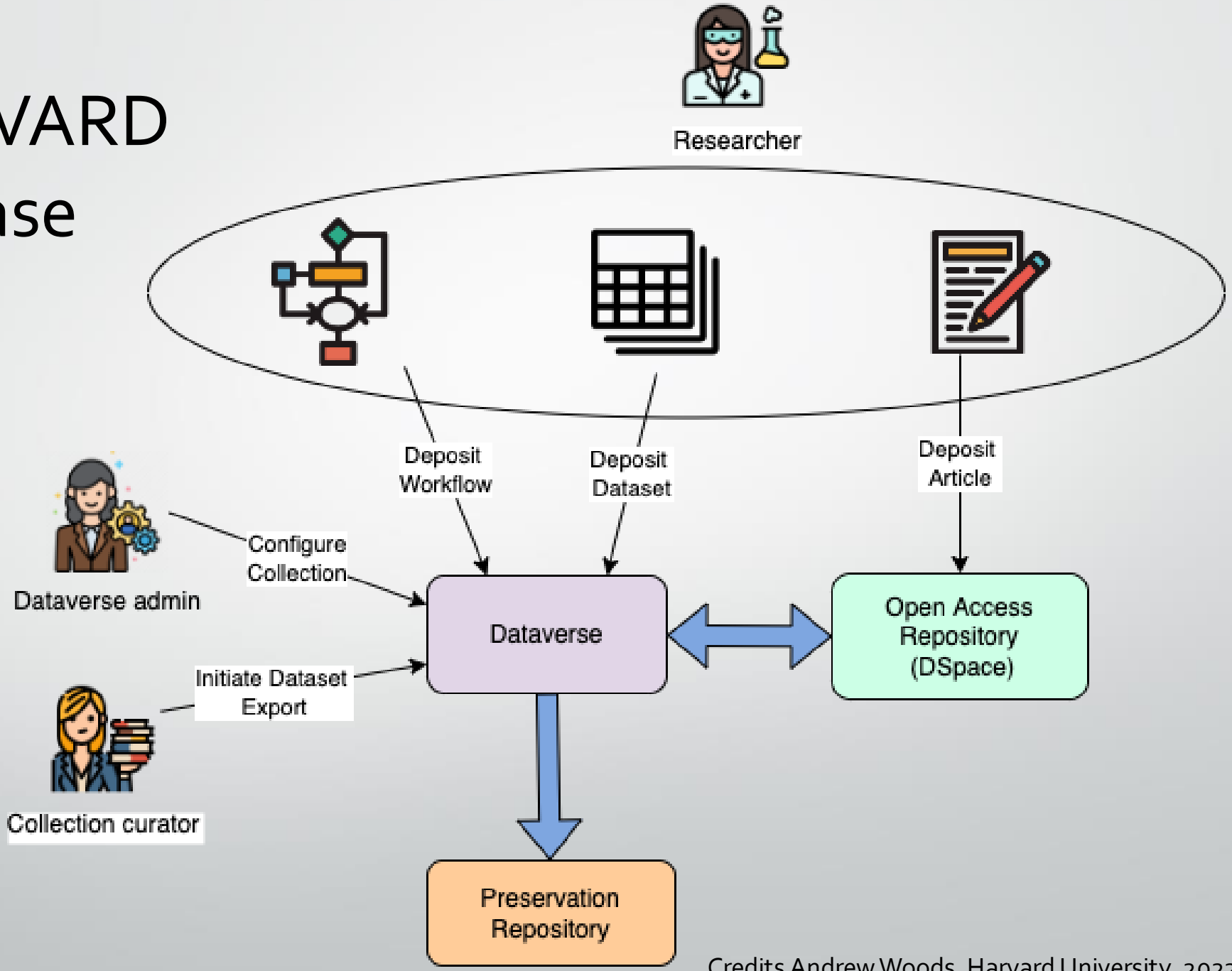
Please use this identifier to cite or link to this item: http://hdl.handle.net/123456789/6

Notify Status Report

Service	Status	Date	Link
ldninbox.antleaf.com	Ongoing	2022-01-24 12:29	N/A
ldn.cottagelabs.com	Reviewed	2022-01-24 12:35	https://review-service.com/review/geo/202103/0021
Example Review Endorsement	Reviewed	2022-01-24 12:11	https://overlay-journal.com/articles/00001/
Example Review Endorsement	Endorsed	2022-01-24 12:41	https://overlay-journal.com/articles/00001/

Title:	John Smith's Item
Issue Date:	1-Jan-2022
URI:	http://hdl.handle.net/123456789/6

The HARVARD use case



Credits Andrew Woods, Harvard University, 2022

A short demo of the DSpace / Dataverse integration from William

Porting to version 7 is ongoing, help and feedback are welcome!

Latest code:

- https://github.com/4Science/DSpace/tree/main-coar-notify
- https://github.com/harvard-lts/DSpace/tree/main-coar-notify

Issue tracking pending subtasks for MVP

https://github.com/harvard-lts/DSpace/issues/2

Architecture

- LDN Receiver and Consumer are coupled and embedded in DSpace: "easier deployment option"
- Metadata (in the new COAR schema) are used to flag which services need to be notified about an item, sent and received notification
- Security: services are known and trusted in advance. Incoming message are accepted by IP addresses
- DSpace 5 – 6 : A servlet is used to implement the INBOX
- DSpace 7: a separate maven web project has been created that if activated contributes a controller to the server webapp (as the OAI, SWORD, etc.)
- According to the notification type a chain of actions are executed to process the message (add metadata, send email notification)
- Notify Announcements are sent by a DSpace Consumer once an item is archived or updated with a coar.notify.initialize metadata

A note about use of Metadata

- Several metadata have been defined in COAR schema, one for each "status" of conversation (coar.notify. initialize|request|examination|refused|review|endorsment)
- It was the easier/quicker solution with minimal impact for future migration and that could work as is on versions 5, 6 and 7
- As the status is stored in a metadata it is available on SOLR and can be efficiently queried for the monitoring dashboard
- The following information from the LDN Message is stored as metadata value using || separator: Timestamp, Service ID, In Reply To, URL (review, endorsement)

Future plans

- Keep the implementation aligned with the COAR Notify project
- Move the status information outside the metadata
- Add support for auto-discover the Inbox
- Add support for an external inbox
- Decouple the consumer from the inbox
- Identify authors via ORCID

Thanks for your attention!

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