

Fedora: Foundational Considerations

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Outline

- Mutually Assured Construction - Ben Armintor
- Import/Export Bags @PennState Developer Concentrate - Karen Estlund
- “Them” is “Us”; Fedora as a Hydra component - Tom Cramer
- Discussion

Mutually Assured Construction

interfaces & boundaries
the vast and pliable outside

The light dove, in free flight cutting through the air the resistance of which it feels, could get the idea that it could do even better in airless space.

Kant in *Critique of Pure Reason*

Rats who build the labyrinth from which they
plan to escape.

Raymond Queneau describing OULIPO

negotiation & discipline
the set of all agonists

Art is born of constraint, lives on struggle,
dies of freedom.

André Gide in *Amyntas*, after Leonardo

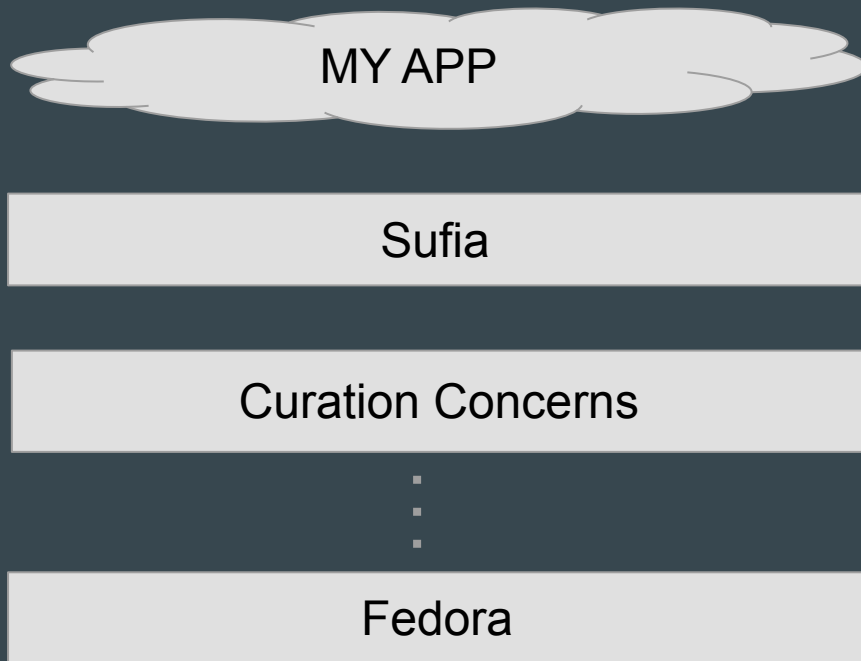
Art lives only on the constraints it imposes on itself; it dies of all others. Conversely, if it does not constrain itself, it indulges in ravings and becomes a slave to mere shadows.

Albert Camus in *The Artist and his Time*

specification & serendipity
a mutually assured construction

Case: Import / Export Bags

Problem / Feature Request - What Level of the Stack?



Communication and Requirements

Use cases

1. Transfer between Fedora and external preservation systems, such as APTrust, MetaArchive, LOCKSS, DPN, Archivematica, etc
2. Package [Export] the content of a single Fedora container and all its descendant resources
3. Transfer between fedora instances or (more generally) from Fedora to an LDP archive
4. load [Import] the contents of a package into a specified container.
5. Round-tripping resources in Fedora in support of backup/restore
 - a. A start has been made on this in [FCREPO-1990](#);
 - b. The implementation referenced in the above ticket is not dead, though not actively being worked on at the moment; pull requests welcomed (though others may well wish to take it in a different direction).
 - c. A rebuilder that:
 - i. Is not solely dependent on an intact backup of the repository index
 - ii. Works off shredded serializations that can be supported with file preservation techniques
 - iii. Can recover as much as possible of a repository in the face of integrity issues (supports partial recovery)
 - iv. Supports gathering copies of the shreds (serializations) from multiple sources to recover a repository
6. Round-tripping resources in Fedora in support of Fedora repository version upgrades
7. Batch loading arbitrary sets of resources from metadata spreadsheet and binaries (may well be difficult—or not worth it—to try to generalize such a feature).
8. Import or export containers or binaries using add, overwrite, or delete operations. Configure the data model and the source and the target for each resource that will be updated. Allow target containers to be non-empty before import and source containers to be non-empty after export. Maintain ordering, etc. Version or backup to restore. Examples: add issues to a publication; add fragments to a manuscript; add data sets to a longitudinal study; add time-series images from telescopes; remove resources determined to be under copyright; release resources after restrictions on access have expired.

<https://wiki.duraspace.org/display/FF/Design+-+Import+-+Export>

Organizing for Action at Hydra Sprint



Progress & Outcomes

Exporting Resources Using the Export Tool

The command line tool is part of the [Import Export Utility](#). This tool can export an entire repository, or a subset, and is intended as a method for creating a complete backup of a single Fedora container and all its descendant resources. From there, it can be imported back into the same Fedora repository, a different Fedora Repository, or into another external system.

Installing the import-export utility

Fedora 4

The import/export utility is designed to work against the Fedora 4 REST API. Therefore, you first must have a running Fedora repository.

There are several ways to install a Fedora repository if you do not have one already available, see either:

1. [Quick Start](#), or
2. [Fedora Vagrant](#)
 - a. (optional step to turn off user authentication) edit the file at `install_scripts/config` and change `FEDORA_AUTH=true` to `FEDORA_AUTH=false` and save the file

Import/Export Utility

The import/export utility maybe be installed in one of two ways:

1. Download executable jar (TBD)
2. [Build from source](#)

What Worked and What Didn't Work So Well



The only thing that makes life possible is
permanent, intolerable uncertainty; not
knowing what comes next.

Ursula Le Guin in *The Left Hand of Darkness*

“Them” is “Us”

Fedora is

- ...a layer in the Hydra stack

- ...that specifically addresses persistence & preservation

- ...designed in from the start

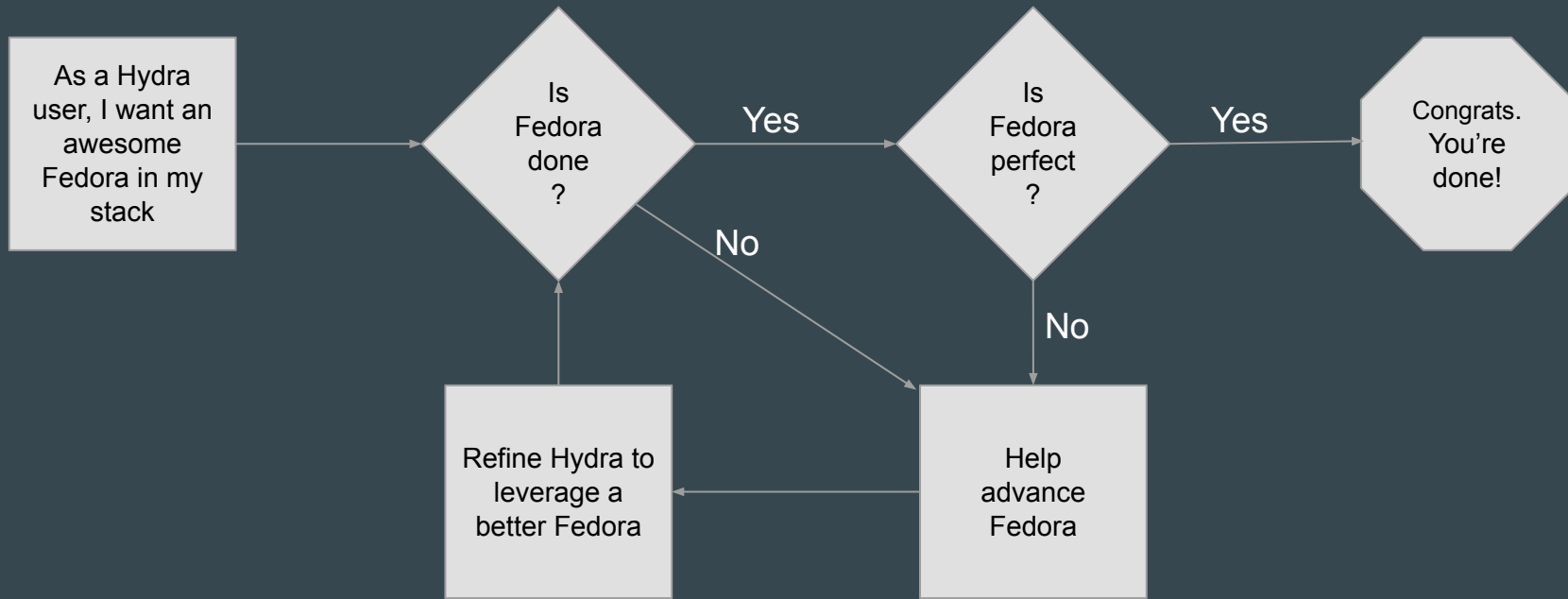
- ...and has co-evolved with Hydra

- ...supported greatly by the Hydra community

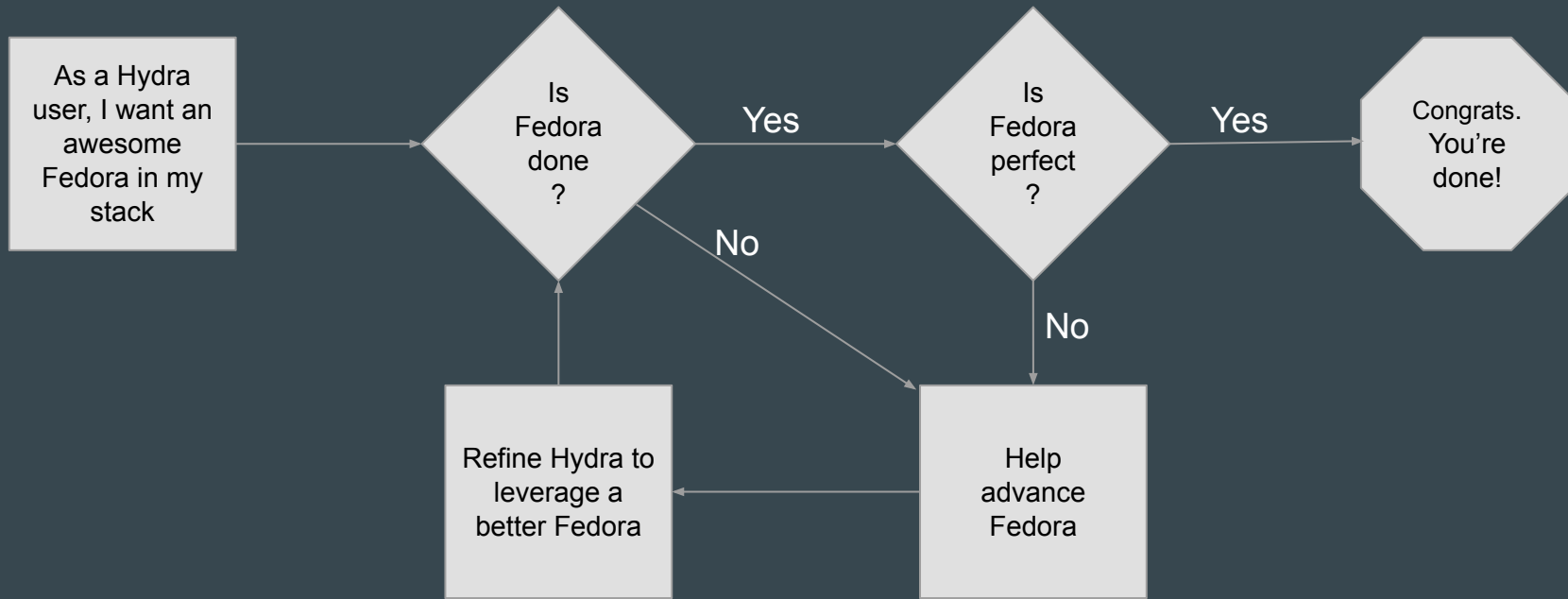
- ...37 out of 74 Fedora Members are also Hydra users

- ...a source of new Hydra adopters

- ...a boat we're all in together



**The Hydra community needs an evolving platform.
Fedora development needs to be resourced.**



How can Hydra advance Fedora to meet its needs?

Islandora Foundation's Strategic Goals

- **Grow and sustain the Islandora Community.**
 - Retain and expand Islandora Foundation membership.
 - Promote the use of Islandora in larger institutions.
 - Promote and facilitate use of Islandora in library schools and related educational programs.
 - Research and pursue grant opportunities and partnerships.
- **Focus Islandora development resources on Islandora CLAW**
 - Produce a clear communication plan and messaging around Islandora CLAW and contributions needed.
 - Hire a Technical Lead to focus on the technical direction of Islandora CLAW development.
(editor's note: ✓)
 - Continue Islandora CLAW development with Fedora 4 and Drupal 8.
 - **Support the Fedora 4 community and development efforts.**
 - Support the PCDM community.
 - Continue to pursue open source repository interoperability, such as Hydra and Archivematica.
- **Support legacy installations of Islandora**
 - Continue support for Islandora 7.x-1.x releases as long as needed by the community.
- **Clarify and communicate Islandora Foundation Governance**
 - Review our governance and structure against peer organizations

One More Case: Fedora performance in HyBox

DISCUSSION

**What's the best way to determine where
a feature belongs in the stack?**

**How can we structure Hydra
development to best inform and
advance Fedora development?**

**Why is it important and valuable
to Hydra that Fedora has other
uses, users and contributors?**

**Can/should/will Fedora support be
a plank in the Hydra platform?**