UCSD Library DAMS Streaming

Open Repositories 2013

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DAMS Architecture

- DAMS Manager
  - High Level Curator Front End
  - Batch Ingest

- DAMS Hydra Head
  - User Front End
  - Discovery and Display
  - Curator Editor

- DAMS API (with some Fedora Support)

- DAMS Repository
  - Metadata Triple Store

- Storage
  - Local Disk
  - Cloud

- Preservation
  - Chronopolis

- Streaming Server rtmp with Auth (Wowza)

- Solr Index
Problem: Streaming Server is Enumerable

- Someone guessing, or enumerating, all the ARKs can get to protected objects
  - `jwplayer("myElement").setup({ file: "rtmp://example.com/application/mp4:bb12345678x.mp4" });`

- Use encryption to protect the object’s stream
  - `jwplayer("myElement").setup({ file: "rtmp://example.com/application/mp4:asdf12431aweta34awerawfa3wrawe4f" });`
1. Browse DAMS4

DAMS4 Hydra Head

2. Request Object

Controller

3. load_and_authorize_resource

DAMS4 REST API/ Solr

4. Render View (IF AUTHORIZED)

View

5. Encrypt FileName/Client IP

Streaming Key

Decrypt w/ Key

Auth Module

6. Request Stream With Encrypted FileName/Client IP

Wowza

7. Validate Stream

8. Receive Stream with Decrypted FileName (IF VALIDATED)
Links

- DAMS4 Data Model
  - https://libraries.ucsd.edu/blogs/dams/about-our-data-model/
  - https://github.com/ucsdlib

- DAMS4 Hydra Head
  - https://github.com/ucsdlib/damspas