Chronopolis and DuraCloud: Doing integration right
• Hosted digital preservation service
• Storage mediation system
• Preservation services
• Simple pathway to cloud-based digital content storage
• Open source - built to support the library and archives community
Chronopolis

• Digital preservation storage network spanning multiple institutions and geographic regions

• Focused on long-term digital content preservation

• System based on active preservation – constant checking of items
Digital content preservation is important to the future of society

All preserved digital content should be handled equally

Need to provide an economically viable option to support the preservation needs of all institutions, regardless of size or technical capability

Need to simplify the preservation process as much as possible

Each organization has focused on different parts of the service spectrum
Integration

- **DuraCloud as a pathway to Chronopolis**
  - Provides a hosted user interface and tooling which simplifies the process of moving content

- **Chronopolis as a storage provider for DuraCloud**
  - Extends the DuraCloud network to include a non-commercial, highly distributed, dark archive option
Providing an end-to-end DPN node solution

- Agnostic to content format, type, and size
  - All data is welcome

- Provides an open and straight-forward pathway to storing content in DPN

- Extended DPN - full access to content through DuraCloud
The integration problem

- Two very independent existing systems with different workflows and processes
- DuraCloud works with real-time data, Chronopolis works with well defined data collections
SyncTool and REST API provide a convenient means for transferring content

- Content remains online and accessible until the choice is made to perform a snapshot

- DuraCloud communicates with a "bridge" application
Snapshots

- Collections of content which are bundled together as a group for preservation

- Contents of the snapshot completely determined by user

- Snapshot content list and metadata remains visible in DuraCloud

- Snapshots can be restored back to DuraCloud, making content available for download
The Bridge

- Infrastructure software layer written to bridge the gap between the DuraCloud and Chronopolis systems

- Moves content from DuraCloud to Chronopolis staging - with verification via manifest along the way
● Content pulled from staging, then verified and bundled

● Copies created in each of the distributed data centers

● Coordination with DPN to push content to nodes within DPN
Status

- Primary functionality is complete
- Initial DPN pilot with Dartmouth proved capability
- Secondary pilot scheduled to begin in April
- Production offering later this year
TakeAways

- Sometimes the best way to integrate two systems is to not require either system to know anything about the other.

- DPN is one of the most exciting initiatives in the academic preservation space in many years.

- Keep your ears open for the launch of the DuraCloud and Chronopolis service.
Contact
- David Minor: dminor@ucsd.edu
- Bill Branan: bbranan@duraspace.org

Web sites
- Chronopolis: chronopolis.ucsd.edu
- DuraSpace: www.duraspace.org
- DuraCloud: www.duracloud.org
- DPN: www.dpn.org