

adaptTo()

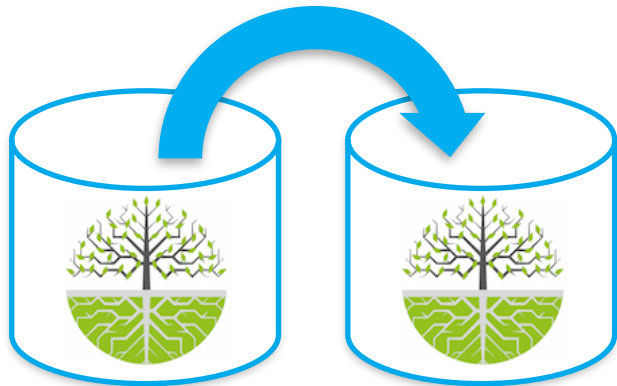
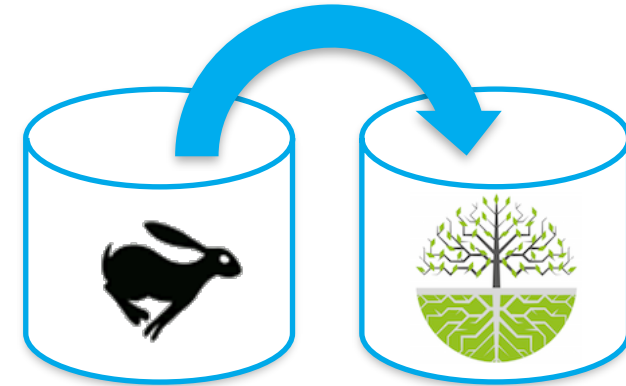
APACHE SLING & FRIENDS TECH MEETUP
BERLIN, 28-30 SEPTEMBER 2015

Oak Upgrade

Julian Sedding

Scenarios

Upgrade: Jackrabbit 2 to Oak
(aka crx2oak)



Copy: Oak to Oak



Objectives

- **Be fast**
 - Copy only differences
 - Move processing off the critical path
- **Be flexible**
 - Copy only what you want
 - Consolidate content from multiple repositories



Phases of an Upgrade

- Content copy phase
 - Workspace copy
 - Version copy (including orphaned versions)
- Post-processing phase
 - Index-generation
 - Version copy (except orphaned versions)
 - Validation

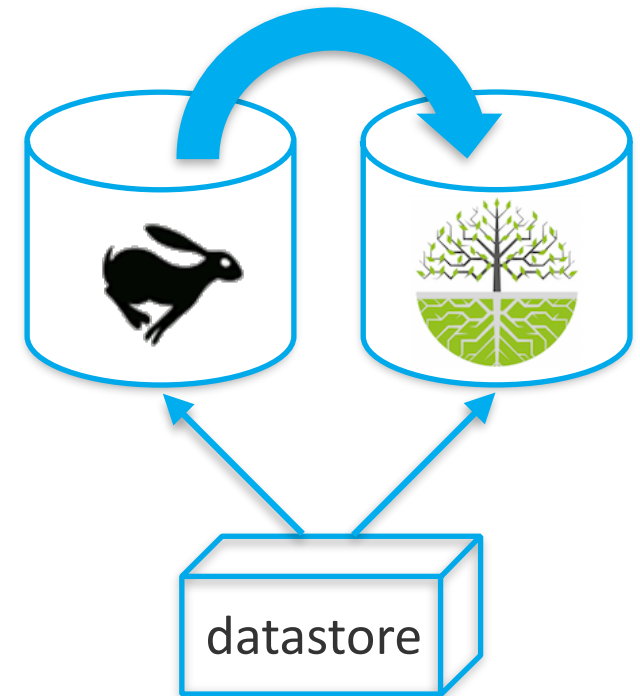


Phases of an Upgrade - Characteristics

- Content copy phase
 - Typically fast – I/O bound
 - Single full traversal of copied (sub-)trees
- Post-processing phase
 - Typically slow – I/O + CPU bound
 - Depends on the amount of content copied

Keeping the JR2 Datastore

- Oak supports JR2 datastores
 - via DataStoreBlobStore
- Shared datastore for upgrade
 - Copy binaries by reference
 - Compare binaries by reference

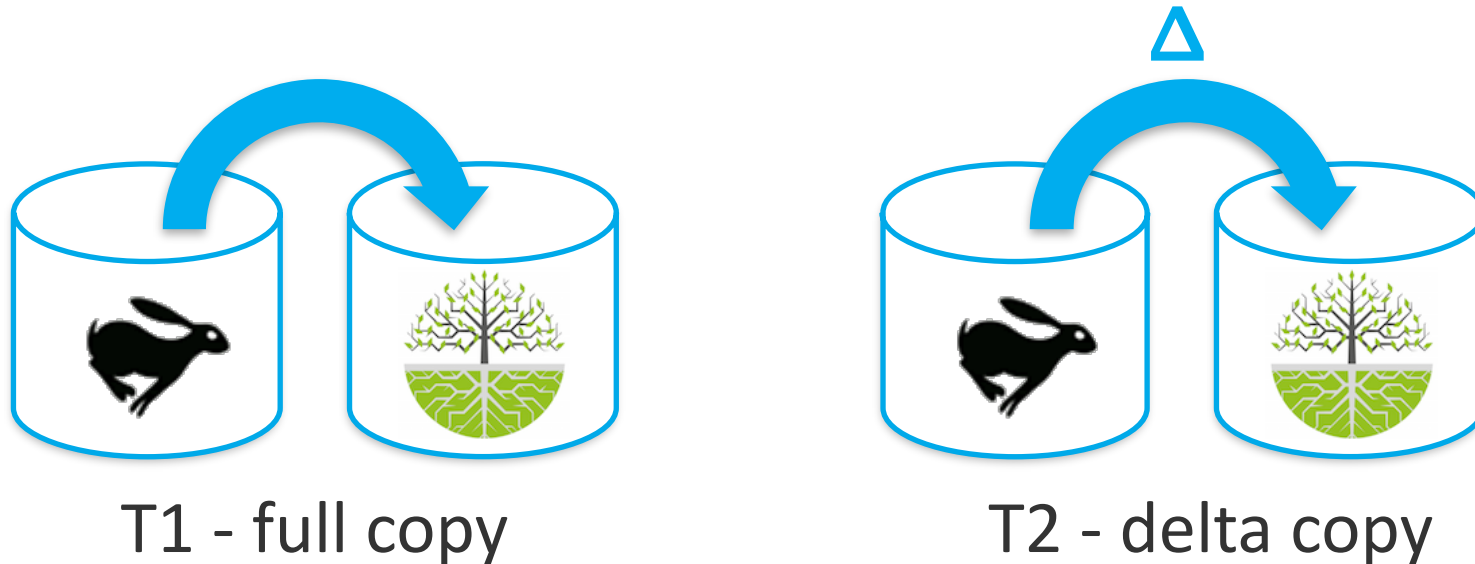




Include/Exclude – Copy less!

- Limit scope of copy by paths
 - Include paths (e.g. /content, /etc/tags)
 - Exclude paths (e.g. /var/audit, /var/classes)
 - Merge paths (advanced use-cases)
 - Add content while preserving existing content
 - Existing nodes are never deleted

Repeated Upgrade



- full traversal + comparison for delta copy
- post-processing only needed for differences
- can speed up critical path!

Version Histories

- **Keep version histories?**
 - Skip all if you don't need them
 - Skip version histories older than yyyy-mm-dd
- **Keep orphaned version histories?**
 - Used by the tree restore feature in AEM
 - Skip all if not needed or skip old orphaned version histories

→ non-orphan versions copied during post-processing



Command Line Tools

- **oak-upgrade.jar (formerly oak-run.jar)**
 - see <https://jackrabbit.apache.org/oak/docs/migration.html>
 - src <https://github.com/apache/jackrabbit-oak/tree/trunk/oak-upgrade>
- **crx2oak**
 - see <http://docs.adobe.com/docs/en/aem/6-1/deploy/upgrade.html>



Want More?

- Pre-extract text from binaries to speed up indexing
 - see OAK-2892
- Online BlobStore migration
 - see OAK-3148
- Avoid FS access – LengthCachingDatastore
 - Configured in repository.xml, see OAK-2882



The End

Questions?