2014-08-20 - Performance Summary

Performance summary

https://wiki.duraspace.org/display/FF/Performance

https://wiki.duraspace.org/display/FF/Performance+Testing

- Defined testing profiles
  - platform profiles
  - workflow profiles
  - repository profiles
  - setup profiles

Single node

Properties CRUD

https://wiki.duraspace.org/display/FF/Fedora+4+Properties+CRUD+Performance+Testing

Objects CRUD

https://wiki.duraspace.org/display/FF/Fedora+4+Objects+CRUD+Performance+Testing

Large file

https://wiki.duraspace.org/display/FF/Large+File+Ingest+and+Retrieval

- Upload and Download as large as 1-TB via REST-API
- Likewise, using Federation
- Range retrieval verified on 1-TB on repo and federation

Large numbers

https://wiki.duraspace.org/display/FF/Large+Numbers+of+Objects

- Tested up to 10-millon objects
- Performance degrades linearly in proportion to:
  - number of children of a resource
  - number of resources in the repository
- Federation
  - ~3000 files in a directory before performance degradation
  - 16.7 million object in 4-level hierarchy out-performs 3-level directory hierarchy

Versioning

https://wiki.duraspace.org/display/FF/Versioning+Performance

- Up to 100,000 version of a single object created
  - Timing collected for each new version creation
- Timing collected for creating new version of object with multiple datastreams

Flat hierarchy

https://wiki.duraspace.org/display/FF/Flat+Hierarchies+Testing

- Benchtool results are suspect

- Steady increase in response time as more children objects added to single parent
- Tests also included with transactions in use

Authz/no-Authz

https://wiki.duraspace.org/display/FF/AuthZ+-+No+AuthZ+Fedora+4+Comparison+Performance+Testing

- Read, update, delete tests performed
- Impact of AuthZ is 10% or less

F3/F4 comparison

https://wiki.duraspace.org/display/FF/Single-Node+Test+Results

Cluster

https://wiki.duraspace.org/display/FF/Response+Time+Comparison+of+Single+Fedora+VS+Cluster

- Load balancing over 3-F4 servers rotates serving requests as expected
- New servers can be added, existing servers can be removed
- Note: cluster was running on single machine