

2014-08-20 - Performance Summary

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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-million 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