2015-11-30 Performance - Scale Meeting

Time/Place

- Time: 3:00pm Eastern Standard Time US (UTC-5)
- Dial-in Number: (712) 775-7035
  - Participant Code: 479307#
  - International numbers: Conference Call Information
  - Web Access: https://www.freeconferencecallhd.com/wp-content/themes/responsive/flashphone/flash-phone.php

Attendees

- Andrew Woods (DuraSpace)
- Brad Spry (UNC Charlotte)
- Bethany Seeger (Amherst College)
- Nick Ruest ⭐
- James R. Griffin III
- Terry Reese
- Andy Wagner

Agenda

1. Review draft test plans
2. Define/Document clear goals and timelines
   a. What outputs will this group have beyond answering the following questions:
      i. How does performance change as the size of the file increases?
      ii. How does performance change as the number of files increases?
      iii. How does performance change as the number of objects increases?
      iv. How does performance change as the number of mixed resources increases?
         Note: In all of these cases, "performance" will be measured by requesting CRUD operations after every x-number of ingest events.
   b. What is our timeline?
      i. When will test plans be finalized?
      ii. When will test plans be executed?
      iii. When will summary be posted?
      iv. Other?
3. Agree on next meeting day/time

Minutes

- Draft test plans
  - Determine the number of resources
  - Determine if any more REST methods should be added, ex. OPTIONS
  - Determine maximum inodes (small files test)
  - Terry Reese will get back to the group about capturing: Disk usage, and swapping
  - Determined single thread base line, then move to multi-threaded
  - Determined that there will be a base concurrent client, and then scale until it breaks for: Size of files, Number of files, Number of containers, and Number of mixed resources
  - Determined system resources/characteristics
    - Memory usage
    - inode count
    - Disk usage
    - Swapping (monitor tmp space usage)
    - Number CPU cores, and related how garbage collection is behaving
      - JVM configuration
      - Make sure we have a garbage collection log
    - CPU usage
    - Network performance - watch connection pools (stretch goal)
  - **How do we know when the test is complete?**
    - Non-stop full garbage collection – GAME OVER
    - Requests are taking too long – exceeds 1 minute – GAME OVER
  - Number of containers
    - 2 tests: vanilla resource, and resource with RDF
  - Number of mixed resources
    - Determine what the right mix is
  - Andrew Woods suggests using JMeter
- What can we accomplish before end of the year?
  - Finalize tests plans
  - Create an initial JMeter configuration for creating containers
- Goal: Accomplish finalizing test plans, initial JMeter configuration (both asynchronously), and meet again at the same time December 21, 2015.