

Princeton Results - Test 3

Note: These tests were run as Test 2 (files between 0B - 4KB), but an error in the JMeter configuration file ran using parameters more like the Test 3 instead (files between 0B - 100KB).

Setup

1. Version of Fedora
 - a. 4.5.1-SNAPSHOT | Build #fd6f9da9 (2016-02-19) (<https://github.com/fcrepo4/fcrepo4/pull/986> before squashing)
2. Fedora Configuration
 - a. `JAVA_OPTS="-Dfcrepo.home=/var/lib/tomcat7/fcrepo4-data -Djava.awt.headless=true -Xmx8g"`
 - b. See below
3. System details
 - a. Fedora: VMWare VM configured with 4x 2.8GHz CPU, 16GB RAM
 - b. JMeter: separate identical VM
 - c. Network: 1000Mb/s ethernet
 - d. OS: Ubuntu 14.04.3 LTS
 - e. JVM: Oracle JDK 1.8.0_66-b17
 - f. Servlet container: Tomcat 7.0.52
 - g. 100GB disk, about 70GB free at beginning of test
4. Initial State of the Repository
 - a. empty
5. Number of Client Threads
 - a. 1

Test

```
$HOME/jmeter/bin/jmeter -Dfilesize_min=0 -Dfilesize_max=4096 -Dfedora_4_server=lib-fedora1 -Dfedora_4_context=fcrepo/rest -n -t $HOME/jmeter/fedora.jmx
```

- `fedora.jmx` edited according to instructions in [fcrepo4-jmeter PR #4](#) (enabling "Fedora4 Create Binary Resource" thread group and disabling all others).
- Because of an error in `fedora.jmx`, the `filesize_max` value was the default value (100000).

Results

LevelDB

1. Summary: 584,923 in 20,746s = 28.2/s, Avg: 29, Min: 8, Max: 4202, Err: 1 (0.00%)
2. Status: Test ended when Fedora encountered the error "ARJUNA012117: TransactionReaper::check timeout for TX 0:ffff7f000101:ecc1:5737143c:238f73 in state RUN"
3. Logs:
 - a. jmeter log: [test2-leveldb.log](#)
 - b. jmeter data: [test2-leveldb.csv.gz](#)
 - c. jmeter perf: [test2-leveldb-perf.log](#)
 - d. fedora log: [test2-leveldb-fedora.log.gz](#)

PostgreSQL

1. Additional config:
 - a. `JAVA_OPTS="{JAVA_OPTS} -Dfcrepo.modeshape.configuration=classpath:/config/jdbc-postgresql/repository.json"`
 - b. PostgreSQL 9.3 running on same VM as Fedora
2. Summary: 1,019,512 in 53,750s = 19.0/s, Avg: 46, Min: 8, Max: 4618, Err: 1 (0.00%)
3. Status: Test ended when Fedora ran out of disk space (approx. 70GB)
4. Logs:
 - a. jmeter log: [test2-postgres.log](#)
 - b. jmeter data: [test2-postgres.csv.gz](#)
 - c. jmeter perf: [test2-postgres-perf.log](#)
 - d. fedora log: [test2-postgres-fedora.log.gz](#)

PostgreSQL with Modeshape 5 branch

1. Additional config:
 - a. `JAVA_OPTS="{JAVA_OPTS} -Dfcrepo.modeshape.configuration=classpath:/config/jdbc-postgresql/repository.json -XX:+UseG1GC -XX:+DisableExplicitGC"`
 - b. PostgreSQL 9.5 running on same VM as Fedora

- i. **Note:** PostgreSQL upgraded from 9.3 to 9.5 to fix an error only seen with the modeshape5 branch
2. Summary: 979,596 in 35,640s = 27.5/s, Avg: 30, Min: 1, Max: 3,403, Err: 1 (0.00%)
3. Status: Test ended when Fedora ran out of disk space (approx. 68GB)
4. Logs:
 - a. [test3-postgres-mode5.log](#)
 - b. [test3-postgres-mode5.csv.gz](#)
 - c. [test3-postgres-mode5-perf.log](#)

PostgreSQL (Modeshape 5.1)

1. Version of Fedora
 - a. 4.5.2-SNAPSHOT | Build #4f31e2f9 (2016-06-28) (modeshape5 branch with update to 5.1 from awoods:fcrepo-2062)
2. Additional config:
 - a. JAVA_OPTS="{JAVA_OPTS} -Dfcrepo.modeshape.configuration=classpath:/config/jdbc-postgresql/repository.json -XX:+UseG1GC -XX:+DisableExplicitGC"
 - b. PostgreSQL 9.5 running on the same VM as Fedora
3. Summary: 975,996 in 35,131s = 27.8/s, Avg: 29, Min: 1, Max: 4,167, Err: 1 (0.00%)
4. Status: Test ended when Fedora ran out of disk space (approx. 68GB)