

# Virginia Tech Results - Test 3

## Setup

1. Version of Fedora
  - a. fcrepo-webapp-4.5.2-SNAPSHOT.war built on Jun 28
2. Fedora configuration details (/usr/share/tomcat/conf/tomcat.conf)
  - a. leveldb

```
JAVA_OPTS="-Djava.awt.headless=true -XX:+UseG1GC -XX:+DisableExplicitGC -Xms512m -Xmx110g -XX:NewSize=256m -XX:MaxNewSize=2g -XX:MetaspaceSize=64m -XX:MaxMetaspaceSize=2g -Dfile.encoding=UTF-8 -Xloggc:/var/log/tomcat/java-gc.log -XX:+PrintGCDetails -XX:+PrintGCDateStamps -Dfcrepo.modeshape.configuration=classpath:/config/minimal/repository.json -Dfcrepo.home=/mnt/fedora-data"
```

- b. MySQL

```
JAVA_OPTS="-Djava.awt.headless=true -XX:+UseG1GC -XX:+DisableExplicitGC -Xms512m -Xmx110g -XX:NewSize=256m -XX:MaxNewSize=2g -XX:MetaspaceSize=64m -XX:MaxMetaspaceSize=2g -Dfile.encoding=UTF-8 -Xloggc:/var/log/tomcat/java-gc.log -XX:+PrintGCDetails -XX:+PrintGCDateStamps -Dfcrepo.modeshape.configuration=classpath:/config/jdbc-mysql/repository.json -Dfcrepo.home=/mnt/fedora-data -Dfcrepo.ispn.mysql.username= -Dfcrepo.ispn.mysql.password= -Dfcrepo.ispn.mysql.host=localhost -Dfcrepo.ispn.mysql.port=3306"
```

- c. PostgreSQL

```
JAVA_OPTS="-Djava.awt.headless=true -XX:+UseG1GC -XX:+DisableExplicitGC -Xms512m -Xmx110g -XX:NewSize=256m -XX:MaxNewSize=2g -XX:MetaspaceSize=64m -XX:MaxMetaspaceSize=2g -Dfile.encoding=UTF-8 -Xloggc:/var/log/tomcat/java-gc.log -XX:+PrintGCDetails -XX:+PrintGCDateStamps -Dfcrepo.modeshape.configuration=classpath:/config/jdbc-postgresql/repository.json -Dfcrepo.home=/mnt/fedora-data -Dfcrepo.ispn.postgresql.username= -Dfcrepo.ispn.postgresql.password= -Dfcrepo.ispn.postgresql.host=localhost -Dfcrepo.ispn.postgresql.port=5432"
```

3. System details (OS, memory, processors, hardware specs or virtualization, JVM, etc)
  - a. CentOS 7

```
128GB RAM, 24vCPU
$ uname -a
Linux test 3.10.0-327.10.1.el7.x86_64 #1 SMP Tue Feb 16 17:03:50 UTC 2016 x86_64 x86_64 x86_64 GNU/Linux

$ java -version
java version "1.8.0_66"
Java(TM) SE Runtime Environment (build 1.8.0_66-b17)
Java HotSpot(TM) 64-Bit Server VM (build 25.66-b17, mixed mode)
```

4. Initial state of the repository
  - a. empty
5. Number of client processes/threads (ideally clients are on a separate machine)
  - a. 1
6. Fedora
  - a. leveldb
  - b. MySQL
  - c. PostgreSQL

## Test

Command:

```
date > /home/cc/summary.log; ./jmeter -Dfedora_4_server=localhost -Dfedora_4_context=fcrepo/rest -Dfilesize_min=10000 -Dfilesize_max=100000 -Dbinary_threads=1 -n -t /home/cc/fcrepo4-jmeter/fedora.jmx >> /home/cc/summary.log;
```

# Results

- leveldb
  - Length of run: Tue Jun 28 14:08:17 UTC 2016 to Thu Jun 30 01:57:05 UTC 2016
  - Summary:  
  
summary = 3515059 in 35:47:43 = 27.3/s Avg: 32 Min: 1 Max: 39166 Err: 0 (0.00%)  
summary + 14 in 00:01:04 = 0.2/s Avg: 4478 Min: 798 Max: 36380 Err: 1 (7.14%) Active: 1 Started: 1 Finished: 0  
summary = 3515073 in 35:48:47 = 27.3/s Avg: 32 Min: 1 Max: 39166 Err: 1 (0.00%)
  - Logs: [test3.leveldb.tar.gz](#)
- MySQL
  - Length of run: Tue Jun 28 14:09:39 UTC 2016 to Tue Jun 28 23:03:52 UTC 2016
  - Summary:  
  
summary + 285 in 00:00:22 = 13.0/s Avg: 74 Min: 11 Max: 2623 Err: 1 (0.35%) Active: 0 Started: 1 Finished: 1  
summary = 428398 in 08:54:12 = 13.4/s Avg: 71 Min: 1 Max: 22315 Err: 1 (0.00%)
  - Logs: [test3.mysql.tar.gz](#)
- PostgreSQL
  - Length of run: Tue Jun 28 16:29:00 UTC 2016 to Sat Jul 02 22:33:49 UTC 2016
  - Summary:  
  
summary + 7 in 00:01:13 = 0.1/s Avg: 8911 Min: 16 Max: 23599 Err: 1 (14.29%) Active: 0 Started: 1 Finished: 1  
summary = 3508266 in 102:04:48 = 9.5/s Avg: 101 Min: 1 Max: 122723 Err: 1 (0.00%)
  - Logs: [test3.pqsl.tar.gz](#)
- R scripts graphic:
  - [test3.tar.gz](#)