Kepler - Bug #5582

DataTurbine server crashing the JRE

03/28/2012 08:19 PM - Derik Barseghian

Status:	New	**Start date:**	03/28/2012
Priority:	Normal	**Due date:**	
Assignee:	Derik Barseghian	**% Done:**	0%
Category:	sensor-view	**Estimated time:**	0.00 hour
Target version:	sensor-view-1.x.y	**Spent time:**	0.00 hour
Bugzilla-Id:	5582		

Description

I don't think this is a Kepler bug but I want to record my notes somewhere:

I was able to get the DataTurbine server to crash the JRE around 10 times today. Sometimes the JRE would leave a log file, I submitted one to Sun. I was using DT 3.2b5 but moved to 3.2b6, but this didn't seem to help. Likewise I moved the client (Kepler DT actor) from 3.2b5 to 3.2b6, to no avail. I was able to crash the server using both Ubuntu w/ java 1.6.0_26-b03 and osX 10.6 w/ java 1.6.0_29-b11-402-10M3527. I'm in the process of doing some cleanup on the DT actor, but I verified these crashes would occur with none of the new changes. Generally the procedure was I'd run the growingDegreeDays workflow requesting 1 day of data. After about 6-10 iterations of this workflow in succession the server would crash.

This hasn't been well vetted but what seems to have "fixed" it is starting the server with a larger archiveSize -- I bumped from 500000 to 1000000. Recently I loaded a lot more data to the reap02 channels, so perhaps that's why this has only recently cropped up. I've now run the GDD workflow requesting **100** days of data 10 times, and no crash w/ the 3.2b6 DT server on my mac. I'm going to run a long stress test over night and see what happens.

History

#1 - 03/29/2012 06:05 PM - Derik Barseghian

A correction: I changed cacheSize to 1000000, not archiveSize (which my Source sets to cacheSize*10).

With that change, DT 3.2b6 has stopped crashing the JRE on my mac -- I ran 500 iterations of GDD requesting 300days each time with no failure.

However the change doesn't help nibbler (ubuntu 10.04 in a VM w/ 500MB RAM). On nibbler I also tried doubling the cache size to 2000000. Continued to crash. After that I tried recompiling my feeder program and running RBNB under jdk1.6.0_31. Continued to crash. I also tried halving the original size to 50000, but same story.

I tried on my dedicated ubuntu 10.04 ubuntu box w/ java 1.6.0_26-b03 w/ cacheSize 1000000, and successfully ran 500 iterations of GDD requesting 300days each time.

So the remaining crashing seems specific to nibbler. VM? RAM? I doubt it's java at this point, but to be thorough:

Working Mac:
nceas-macbook05:~ derik$ java -version
java version "1.6.0_29"
Java(TM) SE Runtime Environment (build 1.6.0_29-b11-402-10M3527)
Java HotSpot(TM) 64-Bit Server VM (build 20.4-b02-402, mixed mode)

Working Ubuntu PC:
barseghian@ubuntu:~$ java -version
java version "1.6.0_26"
Java(TM) SE Runtime Environment (build 1.6.0_26-b03)
Java HotSpot(TM) Client VM (build 20.1-b02, mixed mode, sharing)

Not working nibbler Ubuntu VM:
barseghian@nibbler:~$ java -version
java version "1.6.0_26"
Java(TM) SE Runtime Environment (build 1.6.0_26-b03)
Java HotSpot(TM) 64-Bit Server VM (build 20.1-b02, mixed mode)

Not working alternative nibbler:
barseghian@nibbler:~$ ./jdk-6u31/jdk1.6.0_31/bin/java -version
java version "1.6.0_31"
Java(TM) SE Runtime Environment (build 1.6.0_31-b04)
Java HotSpot(TM) 64-Bit Server VM (build 20.6-b01, mixed mode)

#2 - 04/04/2012 03:12 PM - Derik Barseghian

Nick allocated 1gb, and then 2gb to nibbler, but I continue to be able to crash DT with a few large requests.

#6 - 07/27/2012 02:05 PM - Derik Barseghian

Crashing on nibbler resolves when using older version of java (jdk-6u20-linux-x64.bin).
Probably there's an issue w/ newer versions of 64bit java and RBNB. See:
https://lists.sdsc.edu/pipermail/rbnb-dev/2012/001028.html

#7 - 07/27/2012 04:06 PM - Derik Barseghian

I ran 500 iterations of the GDD workflow configured to request 300days of data as a stress test. No crash using the older version of java on nibbler.

#8 - 03/27/2013 02:30 PM - Redmine Admin

Original Bugzilla ID was 5582

Files

hs_err_pid2306.log	29.5 KB	07/27/2012	Derik Barseghian
hs_err_pid7368.log	25.6 KB	07/27/2012	Derik Barseghian
hs_err_pid3520.log	26.7 KB	07/27/2012	Derik Barseghian