Kepler - Bug #4642

memory usage & slowdowns

12/18/2009 07:45 PM - Oliver Soong

Status:	New	**Start date:**	12/18/2009
Priority:	Normal	**Due date:**	
Assignee:	jianwu jianwu	**% Done:**	0%
Category:	general	**Estimated time:**	0.00 hour
Target version:	2.X.Y	**Spent time:**	0.00 hour
Bugzilla-Id:	4642		

Description

I just hit a big slowdown caused by OOM problems. This bug is mostly a place to put down some of the stuff I found out. I used jmap to produce histograms when Kepler was crawling and immediately after a fresh restart. When Kepler was slow, there was a single workflow open with 4 actors and the Check System Settings window. The fresh Kepler retained the wrm and cache content, but discarded the 4 actors and all the accumulated memory leaking cruft.

A few things jump out at me, and I'd say I'm pretty uninformed. I've formatted as Object: stale #, fresh #.

org.kepler.util.WorkflowRun: 39206, 29
javax.swing.JMenuItem: 3411, 96
java.util.HashMap: 689643, 22885
org.kepler.objectmanager.lsid.KeplerLSID: 120115, 1339
java.util.LinkedList: 95565, 4468
ptolemy.kernel.util.Location: 1837, 45

Interestingly enough, I have 28 wrm entries. I think something's up with the wrm, but also a lot of GUI objects seem to be hanging around as well, so there may be other things going on as well.

And on a side note, jps -> jmap -> jhat produces some pretty cool results.

Related issues:

Blocked by Kepler - Bug #5095: test kepler and wrp for memory leaks	**In Progress**	**07/14/2010**

History

#1 - 01/13/2010 02:52 PM - Derik Barseghian

I've done some refactoring of the WRM so that I'm no longer creating so many runs so frequently -- hopefully this will help here.

Something I've noticed is that some things (e.g. objects and listeners created in WorkflowRunManagerPanel) are sticking around and still being utilized even after the frame containing the WorkflowRunManagerPanel TabPane has been closed. This is definitely an area for improvement.

#2 - 07/16/2010 08:49 AM - Christopher Brooks

See also bug 5095.

This bug should be primarily about performance, though memory management
will take part.

For information about performance, see
http://ptolemy.eecs.berkeley.edu/ptolemyII/ptIIlatest/ptII/doc/coding/performance.htm

The easiest way to track down performance issues is to create a small
non-gui Java program that runs the model and use a commercial tool like
JProfiler. Oliver suggests jps -> jmap -> jhat.

To close this bug a requirement should be that a wiki page is created about
how to track down performance and memory problems in Kepler.

Also, the performance test cases should be checked in. Ideally, there
would be tests that would exercise these test cases and report an error
if the times changed more than a certain amount. This is hard to do because
the times change depending on the machine and the load.

#3 - 07/16/2010 12:32 PM - Ilkay Altintas

Seems similar to 5095. Derik will further analyze.

#4 - 01/19/2011 12:43 PM - David Welker

Postponing to 2.3.

#5 - 03/27/2013 02:27 PM - Redmine Admin

Original Bugzilla ID was 4642

#6 - 08/23/2015 02:28 PM - Daniel Crawl

- Target version changed from 2.5.0 to 2.X.Y

Files

histograms.zip	89.4 KB	12/19/2009	Oliver Soong