Kepler - Bug #3115

Need to check Kepler for memory leaks

01/31/2008 01:04 PM - Dan Higgins

Status:	Resolved	**Start date:**	01/31/2008
Priority:	Normal	**Due date:**	
Assignee:	Sean Riddle	**% Done:**	0%
Category:	general	**Estimated time:**	0.00 hour
Target version:	1.0.0	**Spent time:**	0.00 hour
Bugzilla-Id:	3115		

Description

Need to do some testing to see if Kepler memory leaks occur (i.e. does memory use increase even when workflows closed).

This was investigated 6 months (or more) ago, but has not been checked recently.,

History

#1 - 01/31/2008 02:10 PM - Christopher Brooks

This thread concerning memory leaks might be of use:

Jackie wrote:

I narrowed down the memory leak a bit and found out one main cause. It looks like it's coming from executing MoML change requests. For example, issuing multiple calls like NamedObj.requestChange(new MoMLChangeRequest(....)) would quickly overflow the memory.

--jackie

----- Original Message -----
From: "Christopher Brooks" <cxh@eecs.berkeley.edu>
To: "Jackie Man-Kit Leung" <jleung@berkeley.edu>
Cc: <ptresearch@chess.eecs.berkeley.edu>
Sent: Friday, November 30, 2007 2:51 PM
Subject: Re: Increasing memory usage after running multiple rounds of test

> Hi Jackie,
> Welcome to the world of memory leaks.
> See $PTII/doc/coding/performance.htm
>
> Calling MoMLParser.reset and MoMLParser.purgeAllModelRecords()
> might not free up all memory. It is easier to look
> and see what memory is leaking and fix it than it is
> to try to figure it out without leakage data.
>
> Definitely try to work within a non-gui environment at first.
> Using the test environment is the way to go.
>
> There are several products available.
>
> Check out HP's JMeter, which is free.
>
> See also JProfiler and JProbe.
> We can buy copies of these products, though it might take awhile
> to do so.
>
> Can you look over $PTII/doc/coding/performance.htm
> and updated it as necessary?
>
> _Christopher
>
> --------
> Christopher,
>
> I have been chasing a memory leak problem that causes the tcl script to
> crash during regression testing. The jvm basically throws a
> OutOfMemoryException and stop functioning for subsequent tests. This

> happens even if i call MomlParser.purgeAllModelRecord() and MomlParser.reset() in-between all the tests. Some memory is not being released but i am not sure what. I put in some print statements and found that the amount of memory leak is highly non-uniform (i.e. some model tests have zero leak). Plus, i found that the order in which these models get run change the amount of leak for a particular model test as well.
>
> I think there are two possibilities: one is because Ptolemy II is caching the actors, which is unlikely because i think calling MomlParser.purgeAllModelRecord() and MomlParser.reset() would have solved the problem, if that's the case. Another possibility i thought of is that some of the tokens may be cached by the software so it can reuse them for future computation and be efficient. However, i don't seem find any code doing that. Any suggestions?
>
> --jackie

#2 - 04/02/2008 09:08 AM - Chad Berkley

We should run each of the demo workflows with a memory usage analyzer to make sure that no major leaks are found with the demo usage.

#3 - 04/16/2008 03:30 PM - Christopher Brooks

My notes are at:
http://ptolemy.eecs.berkeley.edu/ptolemyII/ptIIlatest/ptII/doc/coding/performance.htm

#4 - 04/22/2008 05:30 PM - Sean Riddle

I did not detect significant memory leaks. From a cost-benefit perspective, there is little advantage to push to find them now versus at a later point in time. This should not impair release.

On several contiguous runs of a workflow, there was no detected leakage, and on a single long-running workflow, there was no detectable leakage.

#5 - 03/27/2013 02:22 PM - Redmine Admin

Original Bugzilla ID was 3115