

Infrastructure - Bug #8027

Heap memory errors from solr

2017-02-27 20:44 - Dave Vieglais

Status:	Closed	Start date:	2017-02-27
Priority:	Normal	Due date:	
Assignee:	Rob Nahf	% Done:	100%
Category:	d1_cn_buildout	Estimated time:	0.00 hour
Target version:	CCI-2.3.3	Story Points:	
Milestone:	None		
Product Version:	*		

Description

Solr is configured to use only 512mb for heap memory. Numerous out of heap memory exceptions were showing in the admin console (port 8983).

Edited /var/solr/solr.in.sh and changed SOLR_HEAP to "2048m"

The admin console shows typical heap use around 1GB, so 2GB is probably high, but will monitor and reduce if necessary.

This task is to update the install config to ensure that SOLR_HEAP setting is updated or verified during solr upgrades.

Related issues:

Related to Infrastructure - Bug #7570: Search UI requests cause Out of Memory... **In Progress** 2016-01-05

Associated revisions

Revision 18648 - 2017-03-03 22:51 - Rob Nahf

refs #8027. Increased SOLR_HEAP (jetty) to 2048m.

Revision 18648 - 2017-03-03 22:51 - Rob Nahf

refs #8027. Increased SOLR_HEAP (jetty) to 2048m.

History

#1 - 2017-02-27 20:46 - Dave Vieglais

To access the admin console, use an SSH tunnel, like: ssh -L8983:localhost:8983 cn-ucsb-1.dataone.org then <http://localhost:8983>

#2 - 2017-03-03 22:53 - Rob Nahf

- Category changed from d1_cn_solr_extensions to d1_cn_buildout

- % Done changed from 0 to 30

- Status changed from New to In Progress

also noticing very steady heap utilization at 1Gb. Found an article <http://java-monitor.com/forum/showthread.php?t=427> which says not to worry too much about the initial head size - that GC will kick it down if you sett it too high, and it will still grab from the system as needed up to the maximum.

So, I'm going to set it to '2048m', with the understanding that the GC will help make sure that jetty's not being a memory hog.

First commit is in trunk. Need to do the 2.3 branch.

#3 - 2017-03-03 23:27 - Rob Nahf

- % Done changed from 30 to 50

- Status changed from In Progress to Testing

there are two solr.in.sh files, one in /var/solr/bin/init.d/solr.in.sh and the other at /usr/share/dataone-solr/debian/server_configs/solr.in.sh. I updated both, in 2.3 branch and trunk.

#4 - 2017-03-28 16:23 - Dave Vieglais

- *Related to Bug #7570: Search UI requests cause Out of Memory Error added*

#5 - 2017-03-28 16:24 - Dave Vieglais

- *Target version changed from CCI-2.3.2 to CCI-2.3.3*

Heap use by solr is now being monitored - see <https://measure-unm-1.dataone.org>

#6 - 2017-03-30 16:06 - Rob Nahf

comparing the heap peaks on measure-unm-1 with the logs on cn-ucsb-1, there is no correlation between the number of queries per minute and heap usage.

Heap most likely due to the demands of individual queries, either the query itself, or the authorization part of it. (authorization use recursion to parse subject info).

Another possibility is solr updates happening during periods of reading.

#7 - 2017-03-30 17:02 - Rob Nahf

I'm observing that periods of high activity (rapid deltas of heap utilization) on cn-unm-1 and cn-orc-1 are usually reflected as peaks that bump cn-ucsb-1 from 60% (baseline) to 80%.

These correlated patterns don't hold for the spikes to 100%, but does help narrow the field of what to look at...

#8 - 2017-04-19 19:04 - Rob Nahf

need to bump version of DATAONE-SOLR_v2.3 in the DEBIAN control file.

#9 - 2017-04-19 19:09 - Rob Nahf

- *Status changed from Testing to Closed*

- *% Done changed from 50 to 100*

updated version in dataone-solr to 2.3.2