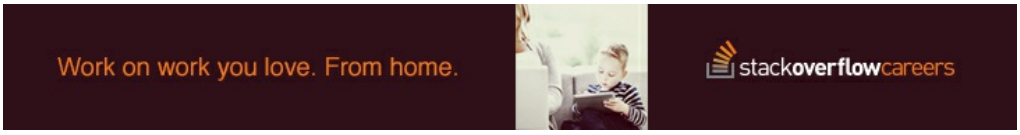
Neo4j log rotation server stops responding



asked 4 months ago

viewed 98 times

active 1 month ago

2

I'm getting an issue on Neo4j 2.2 in which the counts rotation seems to be causing the server to stop responding to requests. My graph has approximately 50M nodes and 100M relationships. I've attached the relevant log.

Once the rotation occurs, the server will no longer handle any more requests and I can no longer navigate to the web management page. What actually happens in the counts store rotation?

Eventually I have to restart the server. This always results in a forced shutdown and then it takes a long time to restart because the log indicates: "Recovery required for log with version 1361"

Thank you.

```
2015-03-31 11:15:17.576+0000 WARN  [o.n.k.EmbeddedGraphDatabase]: GC Monitor: Application threads blocked for 313ms.
2015-03-31 11:16:54.197+0000 WARN  [o.n.k.EmbeddedGraphDatabase]: GC Monitor: Application threads blocked for 2326ms.
2015-03-31 11:16:56.150+0000 WARN  [o.n.k.EmbeddedGraphDatabase]: GC Monitor: Application threads blocked for 810ms.
2015-03-31 11:17:00.609+0000 WARN  [o.n.k.EmbeddedGraphDatabase]: GC Monitor: Application threads blocked for 717ms.
2015-03-31 11:24:41.160+0000 WARN  [o.n.k.EmbeddedGraphDatabase]: GC Monitor: Application threads blocked for 217ms.
2015-03-31 11:25:57.455+0000 WARN  [o.n.k.EmbeddedGraphDatabase]: GC Monitor: Application threads blocked for 4144ms.
2015-03-31 11:25:58.791+0000 WARN  [o.n.k.EmbeddedGraphDatabase]: GC Monitor: Application threads blocked for 916ms.
2015-03-31 11:26:16.427+0000 WARN  [o.n.k.EmbeddedGraphDatabase]: GC Monitor: Application threads blocked for 1092ms.
2015-03-31 11:54:50.987+0000 WARN  [o.n.k.EmbeddedGraphDatabase]: GC Monitor: Application threads blocked for 340ms.
2015-03-31 11:58:46.750+0000 WARN  [o.n.k.EmbeddedGraphDatabase]: GC Monitor: Application threads blocked for 13138ms.
2015-03-31 11:58:48.771+0000 WARN  [o.n.k.EmbeddedGraphDatabase]: GC Monitor: Application threads blocked for 1498ms.
2015-03-31 11:59:45.124+0000 WARN  [o.n.k.EmbeddedGraphDatabase]: GC Monitor: Application threads blocked for 1667ms.
2015-03-31 12:26:19.560+0000 WARN  [o.n.k.EmbeddedGraphDatabase]: GC Monitor: Application threads blocked for 1496ms.
2015-03-31 12:26:22.975+0000 WARN  [o.n.k.EmbeddedGraphDatabase]: GC Monitor: Application threads blocked for 611ms.
2015-03-31 13:25:03.431+0000 WARN  [o.n.k.EmbeddedGraphDatabase]: GC Monitor: Application threads blocked for 296ms.
2015-03-31 13:58:00.873+0000 INFO  [o.n.k.NeoStoreDataSource]: Rotating log version:1361
2015-03-31 13:58:00.873+0000 INFO  [o.n.k.LogRotationImpl]: Log Rotation [1361]:  Awaiting all transactions closed...
2015-03-31 13:58:00.874+0000 INFO  [o.n.k.i.s.StoreFactory]: Waiting for all transactions to close...
  committed: out-of-order-sequence:26128427 [26128421]
  closed:    out-of-order-sequence:26128427 [26128421]
2015-03-31 13:58:00.897+0000 INFO  [o.n.k.LogRotationImpl]: Log Rotation [1361]:  Starting store flush...
2015-03-31 13:58:01.625+0000 INFO  [o.n.k.i.s.StoreFactory]: About to rotate counts store at transaction 26128428 to [/datadrive/neo4jdata/neo4j_2.2/data
/graph.db/neostore.counts.db.b], from [/datadrive/neo4jdata/neo4j_2.2/data/graph.db/neostore.counts.db.a].
2015-03-31 13:58:01.626+0000 INFO  [o.n.k.i.s.StoreFactory]: Successfully rotated counts store at transaction 26128428 to [/datadrive/neo4jdata/neo4j_2.2
/data/graph.db/neostore.counts.db.b], from [/datadrive/neo4jdata/neo4j_2.2/data/graph.db/neostore.counts.db.a].
root@prodgrphkickoff:~# cd ..
```

[edit]

I've added more detail about the size of the various neo4j files, including log file sizes:

```
total 7173976
drwxr-xr-x 3 root root       4096 Mar 27 05:53 index
-rw-r--r-- 1 root root        123 Mar 27 05:53 index.db
-rw-r--r-- 1 root root          0 Mar 31 15:52 lock
-rw-r--r-- 1 root root   11875038 Mar 31 15:52 messages.log
-rw-r--r-- 1 root root       8198 Mar 31 15:53 neostore
-rw-r--r-- 1 root root        978 Mar 31 15:52 neostore.counts.db.a
-rw-r--r-- 1 root root        978 Mar 31 15:51 neostore.counts.db.b
-rw-r--r-- 1 root root          9 Mar 31 15:52 neostore.id
-rw-r--r-- 1 root root         19 Mar 31 15:52 neostore.labeltokenstore.db
-rw-r--r-- 1 root root          9 Mar 31 15:52 neostore.labeltokenstore.db.id
-rw-r--r-- 1 root root        114 Mar 31 15:52 neostore.labeltokenstore.db.names
-rw-r--r-- 1 root root          9 Mar 31 15:52 neostore.labeltokenstore.db.names.id
-rw-r--r-- 1 root root  413758080 Mar 31 15:52 neostore.nodestore.db
-rw-r--r-- 1 root root          0 Mar 31 15:52 neostore.nodestore.db.id
-rw-r--r-- 1 root root         68 Mar 31 15:52 neostore.nodestore.db.labels
-rw-r--r-- 1 root root          9 Mar 31 15:52 neostore.nodestore.db.labels.id
-rw-r--r-- 1 root root 1442266430 Mar 31 15:53 neostore.propertystore.db
-rw-r--r-- 1 root root        128 Mar 31 15:52 neostore.propertystore.db.arrays
-rw-r--r-- 1 root root          9 Mar 31 15:52 neostore.propertystore.db.arrays.id
-rw-r--r-- 1 root root          9 Mar 31 15:52 neostore.propertystore.db.id
-rw-r--r-- 1 root root        117 Mar 31 15:52 neostore.propertystore.db.index
-rw-r--r-- 1 root root          9 Mar 31 15:52 neostore.propertystore.db.index.id
-rw-r--r-- 1 root root        532 Mar 31 15:52 neostore.propertystore.db.index.keys
-rw-r--r-- 1 root root          9 Mar 31 15:52 neostore.propertystore.db.index.keys.id
-rw-r--r-- 1 root root        128 Mar 31 15:52 neostore.propertystore.db.strings
-rw-r--r-- 1 root root          9 Mar 31 15:52 neostore.propertystore.db.strings.id
-rw-r--r-- 1 root root    7770725 Mar 31 15:52 neostore.relationshipgroupstore.db
-rw-r--r-- 1 root root          9 Mar 31 15:52 neostore.relationshipgroupstore.db.id
-rw-r--r-- 1 root root 2970386880 Mar 31 15:52 neostore.relationshipstore.db
-rw-r--r-- 1 root root          9 Mar 31 15:52 neostore.relationshipstore.db.id
-rw-r--r-- 1 root root         15 Mar 31 15:52 neostore.relationshiptypestore.db
-rw-r--r-- 1 root root          9 Mar 31 15:52 neostore.relationshiptypestore.db.id
-rw-r--r-- 1 root root        152 Mar 31 15:52 neostore.relationshiptypestore.db.names
-rw-r--r-- 1 root root          9 Mar 31 15:52 neostore.relationshiptypestore.db.names.id
-rw-r--r-- 1 root root        384 Mar 31 15:52 neostore.schemastore.db
-rw-r--r-- 1 root root          9 Mar 31 15:52 neostore.schemastore.db.id
-rw-r--r-- 1 root root         16 Mar 27 06:04 neostore.transaction.db.1343
-rw-r--r-- 1 root root         16 Mar 27 06:05 neostore.transaction.db.1344
-rw-r--r-- 1 root root         16 Mar 27 06:17 neostore.transaction.db.1345
-rw-r--r-- 1 root root   79833166 Mar 27 13:11 neostore.transaction.db.1346
-rw-r--r-- 1 root root   12098762 Mar 27 13:51 neostore.transaction.db.1347
-rw-r--r-- 1 root root    2260186 Mar 27 13:55 neostore.transaction.db.1348
-rw-r--r-- 1 root root  262144219 Mar 27 23:32 neostore.transaction.db.1349
-rw-r--r-- 1 root root  262209046 Mar 28 12:51 neostore.transaction.db.1350
-rw-r--r-- 1 root root  262154933 Mar 28 21:39 neostore.transaction.db.1351
-rw-r--r-- 1 root root  241977426 Mar 29 14:31 neostore.transaction.db.1352
-rw-r--r-- 1 root root   49975230 Mar 29 17:43 neostore.transaction.db.1353
-rw-r--r-- 1 root root    8979695 Mar 29 18:01 neostore.transaction.db.1354
-rw-r--r-- 1 root root    4819361 Mar 29 18:15 neostore.transaction.db.1355
-rw-r--r-- 1 root root     246660 Mar 29 18:21 neostore.transaction.db.1356
-rw-r--r-- 1 root root  262144624 Mar 29 23:55 neostore.transaction.db.1357
-rw-r--r-- 1 root root  262279253 Mar 30 11:06 neostore.transaction.db.1358
-rw-r--r-- 1 root root  262208856 Mar 30 20:17 neostore.transaction.db.1359
-rw-r--r-- 1 root root  262152920 Mar 31 04:13 neostore.transaction.db.1360
-rw-r--r-- 1 root root  262144151 Mar 31 13:58 neostore.transaction.db.1361
-rw-r--r-- 1 root root     495432 Mar 31 15:44 neostore.transaction.db.1362
-rw-r--r-- 1 root root      33152 Mar 31 15:53 neostore.transaction.db.1363
-rw-r--r-- 1 root root    2022220 Mar 31 15:53 rrd
```

[edit 06-15-2015]

Attached is a recent jstack file that display the blocked threads. Additionally, I've included a vmstat file.

Jstack file VMStat file

Blog

Why Stack Overflow is a Good Workplace for Women

Looking for a job?

Head Of Engineering (Platform & Cloud)
INRIX
Kirkland, WA
java c#

Website Merchandising Manager
MicroK12
Lynnwood, WA
drupal sql

Related

3 Neo4j log level in embedded mode

0 Neo4j Server not Loading: Logback.xml files not Found

1 Disable logging in neo4j

2 Neo4j 2.0.0 - Poor performance for dev/test in a virtual machine

3 Bad performance compared to MySql with Neo4j

0 Neo4j server timeout

1 Neo4j: Does the Windows Service Wrapper actually log anything?

performance logging neo4j hang

share improve this question

edited Jun 15 at 16:23

asked Mar 31 at 14:53
Jonathan
49 • 6

could you add more details about your type of requests, concurrency, load, size of log-files, graph-structure etc? Also if you could send me your graph.db/messages.log to michael at neo4j.org would be very helpful – Michael Hunger Mar 31 at 15:35

How long are you waiting, when the server is in this state? It's flushing changes to the store files, which can cause a lot of IO. Amazon EC2 instances with EBS volumes, for instance, don't have a lot of IOPS. – Chris Vest Mar 31 at 15:43

I waited approximately 30 minutes. Seems like a very long time to not respond? – Jonathan Mar 31 at 15:50

1 @MichaelHunger Michael, I've sent you my messages.log file. Thanks! – Jonathan Mar 31 at 16:09

1 Thanks a lot for your email, let's sort it out offline and report the solution afterwards here. – Michael Hunger Mar 31 at 19:35

add a comment

1 Answer

active oldest votes

0

The reason is that rotating the transaction log requires that all changes to the store files be forced to the storage device, before the old transaction log can be archived and a new one created. This store flushing can take a lot of time.

The good news is that Neo4j 2.3 will fix this: https://github.com/neo4j/neo4j/pull/4756

share improve this answer

answered Jun 24 at 9:10
Chris Vest
6,207 • 2 • 19 • 38

add a comment

Your Answer

Sign up or log in

Sign up using Google

Sign up using Facebook

Sign up using Stack Exchange

Post as a guest

Name

Email

required, but never shown

Post Your Answer

By posting your answer, you agree to the privacy policy and terms of service.

Not the answer you're looking for? Browse other questions tagged performance logging neo4j hang or ask your own question.

0 Neo4j randomly shutting down

0 How to debug Neo4J stalls?

2 neo4j server is not restarting or stopping

Hot Network Questions

Could an autotrophic civilisation develop, or will evolving life forms always eat each other?

Which Star Trek character appeared on screen with the most different ranks?

How to ask dumb questions

Which type of drill bit for which jobs?

The Hiding Rules Contradict Themselves. What Can I Make Of This?

Aerofoil that gives reasonably good lift for both flow directions: forward and backward

Could a communication satellite that fails to reach GEO be repurposed?

How can I grant a non-Super User group permission to force check-in of articles?

Why are my tomatoes cracking and what can I do?

Scraping High-Res image tiles from the MoMA website

How to show pagination "go to page" text box?

Is it possible to automate tests for in progress sprint

Using Emergency Fund to Sell Upside-down Car

Is "user-select: none" bad UX?

Weird performance increase in simple benchmark

Select polygons one by one and export them using arcpy

Has any Star Trek character appeared in all three division uniform colors?

more hot questions

question feed

tour help blog chat data legal privacy policy work here advertising info mobile **contact us** **feedback**

TECHNOLOGY

Stack Overflow
Server Fault
Super User
Web Applications
Ask Ubuntu
Webmasters
Game Development
TeX - LaTeX
Programmers
Unix & Linux
Ask Different (Apple)
WordPress Development
Geographic Information Systems
Electrical Engineering
Android Enthusiasts
Information Security
Database Administrators
Drupal Answers
SharePoint
User Experience
Mathematica
Salesforce
ExpressionEngine® Answers
more (13)

LIFE / ARTS

Photography
Science Fiction & Fantasy
Graphic Design
Movies & TV
Seasoned Advice (cooking)
Home Improvement
Personal Finance & Money
Academia
more (9)

CULTURE / RECREATION

English Language & Usage
Skeptics
Mi Yodeya (Judaism)
Travel
Christianity
Arqade (gaming)
Bicycles
Role-playing Games
more (21)

SCIENCE

Mathematics
Cross Validated (stats)
Theoretical Computer Science
Physics
MathOverflow
Chemistry
Biology
more (5)

OTHER

Stack Apps
Meta Stack Exchange
Area 51
Stack Overflow Careers

site design / logo © 2015 Stack Exchange Inc; user contributions licensed under cc by-sa 3.0 with attribution required

rev 2015.8.20.694