Foreman - Bug #10133
Massive db deadlocks in postgres from hosts_counter updates with counter_cache_fix.rb
04/14/2015 09:18 AM - Chuck Schweizer

| Status: | Closed |
| Priority: | Normal |
| Assignee: | Tomer Brisker |
| Category: | Database |
| Target version: | 1.9.1 |
| Difficulty: | Pull request: https://github.com/theforeman/foreman/pull/2362 |
| Triaged: | Fixed in Releases: |
| Bugzilla link: | Found in Releases: 1.8.0 |

Description
https://gist.github.com/csschwe/4cc4d9be58e1cb96ec6c

After updating the Foreman 1.8 rc3 I am seeing a massive amount of DB Deadlocks. This issue was not present in 1.7

Related issues:
- Related to Foreman - Bug #5692: Puppet environment counters not updated
- Related to Foreman - Bug #12241: Counter cache update didn't pick up changes ...
- Related to Foreman - Bug #7246: Remove counter workaround for #5692 on upgrad...
- Has duplicate Chef - Bug #11232: Occassional error in tasks when importing fa...
- Has duplicate Foreman - Bug #5990: multiple calls to create or update domain ...

Fixed in Releases: 1.8.0

Found in Releases:
- 1.8.0

Associated revisions
Revision 7fad1fa0 - 07/29/2015 04:08 AM - Tomer Brisker
Fixes #10133 - Prevent deadlocks when fixing counter_cache

Revision a1e75a0b - 09/09/2015 10:50 AM - Tomer Brisker
Fixes #10133 - Prevent deadlocks when fixing counter_cache
(cherry picked from commit 7fad1fa0e253e793511df1cde24d8b1885d640c4)

History
#1 - 04/14/2015 09:20 AM - Chuck Schweizer
This is in a 40K node environment.

#2 - 04/14/2015 09:25 AM - Ohad Levy
quick google shows a few things:
- https://stackoverflow.com/questions/11911087/ruby-on-rails-is-a-counter-cache-transaction-safe
- https://github.com/magnusvk/counter_culture

#3 - 04/15/2015 03:13 AM - Tomer Brisker
- Related to Bug #5692: Puppet environment counters not updated added

#4 - 04/15/2015 06:57 AM - Tomer Brisker
- Category set to Database
Which PostgreSQL version are you using?
This sounds like it might be related to a problem that was fixed in 9.3: [http://mina.naguib.ca/blog/2010/11/22/postgresql-foreign-key-deadlocks.html](http://mina.naguib.ca/blog/2010/11/22/postgresql-foreign-key-deadlocks.html)

#5 - 04/15/2015 08:14 AM - Lukas Zapletal
There are three users in the comments complaining that 9.3 version is even worse and it was not fixed for them :-(
Alvaro Herrera describes the solution in introducing new keyword SELECT ... FOR KEY. That would mean you need both new PostgreSQL 9.3 and newer Rails which takes advantage of that approach? Or some change in Foreman would be required I assume.

#6 - 04/15/2015 08:17 AM - Tomer Brisker
This specific deadlock should be prevented when we upgrade to Rails 4, as it is caused by a workaround for a bug in cached counters that existed only in Rails 3

#7 - 04/15/2015 08:25 AM - Lukas Zapletal
Oh I see. Maybe to make this workaround optional so users with heavy load can turn it off?

#8 - 04/16/2015 09:33 AM - Tomer Brisker
- Status changed from New to Assigned
- Assignee set to Tomer Brisker
The counter_cache fix was already in 1.7, so I'm trying to understand what caused this.
Chuck, what operation causes the deadlocks? Did you upgrade anything other then the foreman?

#9 - 04/16/2015 10:41 AM - Tomer Brisker
Digging into the log it would seem the deadlock is caused by a race between the counter_cache_fix and rails' original update_counters trying to update the same counter at the same time. Will continue investigating.

#10 - 04/21/2015 12:51 PM - Chuck Schweizer
My environment is a fully updated RHEL 6 install using the foreman installer.
foreman 1.8 rc3
postgres 8.4
The foreman server is only setup to receive reports and facts from the puppet masters, it is not acting as a puppet server or external node configurator.

From what I can tell the uploading of reports and facts from the 40K nodes, through the puppet masters, is causing the deadlocks. Commenting out the logic that updates the DB in counter_cache_fix.rb made the deadlocks stop.

The only thing that was change going from foreman 1.7.1 to 1.8 rc3 was foreman. Nothing else on the system was updated or changed. The foreman install was run after installing the 1.8 rc3 rpms.

#11 - 05/07/2015 10:46 AM - The Foreman Bot
- Status changed from Assigned to Ready For Testing
- Pull request https://github.com/theforeman/foreman/pull/2362 added
- Pull request deleted ()

#12 - 05/20/2015 06:04 AM - Daniel Lobato Garcia
Hi Chuck,

Tomer has prepared a proposed fix for this issue - https://github.com/theforeman/foreman/pull/2362
Could you report if it works for your case?

Thanks!

#13 - 05/26/2015 06:19 PM - Chuck Schweizer
After reducing the number of puppet masters in my environment I have been unable to reproduce the issue.

Daniel Lobato Garcia wrote:

    Hi Chuck,
    Tomer has prepared a proposed fix for this issue - https://github.com/theforeman/foreman/pull/2362
    Could you report if it works for your case?
    Thanks!

#14 - 06/11/2015 05:00 AM - Dominic Cleal
- Status changed from Ready For Testing to New
- Assignee deleted (Tomer Brisker)

If anybody reproduces this, we'll retry the patch.

#15 - 07/28/2015 08:35 AM - Tomer Brisker
- Has duplicate Bug #11232: Occasional error in tasks when importing facts from foreman-chef added

#16 - 07/28/2015 10:48 AM - The Foreman Bot
- Status changed from New to Ready For Testing

#17 - 07/29/2015 04:10 AM - Marek Hulán
- Assignee set to Tomer Brisker
- Legacy Backlogs Release (now unused) set to 72

#18 - 07/29/2015 05:02 AM - Anonymous
- Status changed from Ready For Testing to Closed
- % Done changed from 0 to 100
#19 - 10/18/2015 04:07 AM - Tomer Brisker
- Has duplicate Bug #5990: multiple calls to create or update domain throws deadlock error added

#20 - 10/21/2015 09:45 AM - Tomer Brisker
- Related to Bug #12241: Counter cache update didn't pick up changes from after_commit callback added

#21 - 06/10/2016 10:35 AM - Tomer Brisker
- Related to Bug #7246: Remove counter workaround for #5692 on upgrade to rails 4.x added