Hi guys,

When Redmine looks for which members it should send e-mail, it iterates one by one fetching principals. This is a N + 1 Query problem.

When we have more than 5K users in one project, it becomes a problem. So with a single line change, I drop the time for update issue from 5 to 2 seconds.

I hope this helps you.

Date: Tue Jul 12 19:37:14 2016 -0300
improve update/create speed

diff --git a/app/models/project.rb b/app/models/project.rb
index 660a486..88bd8eb 100644
--- a/app/models/project.rb
+++ b/app/models/project.rb
@@ -524,7 +524,7 @@
     # Returns the users that should be notified on project events
     def notified_users
       # TODO: User part should be extracted to User#notify_about?
-      members.select {|m| m.principal.present? && (m.mail_notification? || m.principal.mail_notification == 'all')}.collect {|m| m.principal}
+      members.includes(:principal).select {|m| m.principal.present? && (m.mail_notification? || m.principal.mail_notification == 'all')}.collect {|m| m.principal}
     end

     # Returns a scope of all custom fields enabled for project issues

---

I resolved this issue a bit differently. I changed the `includes` to `eager_load` to explicitly eager load the `principal` association and added a `find_each` to save memory when the quantity of members is too big.

```
members.eager_load(:principal).find_each()
  .select {|m| m.principal.present? && (m.mail_notification? || m.principal.mail_notification == 'all')}
  .collect {|m| m.principal}
```

I've made some tests and these are the results:
<table>
<thead>
<tr>
<th># of project members</th>
<th>current method</th>
<th>after patch</th>
</tr>
</thead>
<tbody>
<tr>
<td>6024</td>
<td>6.13s</td>
<td>1.15s</td>
</tr>
<tr>
<td>7933</td>
<td>7.57s</td>
<td>1.40s</td>
</tr>
<tr>
<td>7935</td>
<td>7.46s</td>
<td>1.32s</td>
</tr>
</tbody>
</table>

#2 - 2016-07-15 15:31 - Victor Campos

Yes, for memory it's a better solution.

=)

Thx for this patch

#3 - 2016-07-16 04:04 - Go MAEDA

- Description updated

#4 - 2016-07-16 04:21 - Go MAEDA

- Status changed from New to Needs feedback

Redmine 3.3.0 uses preload method in Project#notified_users. Please see r15518.

Could you test Redmine 3.3.0?

#5 - 2016-07-16 15:08 - Victor Campos

Go MAEDA wrote:

Redmine 3.3.0 uses preload method in Project#notified_users. Please see r15518.

Could you test Redmine 3.3.0?

Hi Go MAEDA,

What is the policy for update redmine stable branch? When 3.3-stable was lunch I update my redmine for it. When I read your comments I realided that there is a lot off new commits, with new features (redmine.lib changed a lot), performance issues fixed, etc.

About this issue, why preload and not eager_load? And I think the Lucas’s idea with find_each is good to prevent memory problems.

#6 - 2016-07-17 09:50 - Go MAEDA

- Status changed from Needs feedback to New
- Assignee set to Jean-Philippe Lang
- Target version set to Candidate for next major release

Thanks for the quick feedback.

Victor Campos wrote:

What is the policy for update redmine stable branch? When 3.3-stable was lunch I update my redmine for it. When I read your comments I realided that there is a lot off new commits, with new features (redmine.lib changed a lot), performance issues fixed, etc.
I am not a commiter, so I can't explain about the policy. But as I know, the branch was used to prepare releasing of 3.3.0. Many revisions were merged from trunk before 3.3.0 is released.

About this issue, why preload and not eager_load? And I think the Lucas's idea with find_each is good to prevent memory problems.

I would like Jean-Philippe Lang to make a judgment. Setting assignee to Jean-Philippe.

#7 - 2016-08-22 02:49 - Go MAEDA
- Category set to Performance

Files

<table>
<thead>
<tr>
<th>File</th>
<th>Size</th>
<th>Date</th>
<th>Author</th>
</tr>
</thead>
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<tr>
<td>changeset_r619e15696d9e1b674fa1e56bad4bc862c6e9df3.diff</td>
<td>904 Bytes</td>
<td>2016-07-14</td>
<td>Victor Campos</td>
</tr>
<tr>
<td>0001-Improving-performance-of-project-notified_users-by-e.patch</td>
<td>1.1 KB</td>
<td>2016-07-14</td>
<td>Lucas Arnaud</td>
</tr>
</tbody>
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