

ChiliProject - Bug # 780: Setting Cache is not invalidated properly

Status:	Closed	Priority:	Normal
Author:	Gregor Schmidt	Category:	
Created:	2011-12-19	Assignee:	Holger Just
Updated:	2012-01-16	Due date:	
Remote issue URL:			
Affected version:			
Description:			
With #350 a new setting caching methodology was introduced. It is now using the default cache store instead of some home-backed class-instance hack.			
Unfortunately, it seems to miserably fail to detect an outdated cache. I can observe the behavior when using the default <code>@ActiveSupport::Cache::MemoryStore@</code> as well as two un-synchronized memcached servers and <code>@ActiveSupport::Cache::MemCacheStore@</code> .			
The problem is, that in the setting <code>@chiliproject/setting-cleared_on@</code> is only set if the cache was cleared in the past. Otherwise <code>@Time.now@</code> is assumed. ("See source on GitHub": https://github.com/chiliproject/chiliproject/blob/91070236/app/models/setting.rb#L143-L157) This results in the fact, that the cache is actually never ever cleared.			
Furthermore, if the <code>clear_cache</code> was ever triggered in conjunction with memcached, the code will break, since the <code>@ActiveSupport::Cache::MemCacheStore@</code> does not support <code>@delete_matched@</code> ("see source on APIDock": http://apidock.com/rails/ActiveSupport/Cache/MemCacheStore/delete_matched).			
I would like to propose an auto-expiring key, which would ensure, that outdated settings do not need to be cleared, but are automatically not used anymore. The Cache GC may then clear them, if memory cache becomes scarce.			

Associated revisions

2008-03-05 10:01 am - Jean-Philippe Lang

Fixes #780: Redmine fails to start with a `const_missing` error on `Redmine::MenuManager::MenuItem::GLoc` (occurs when a Redmine plugin is loaded before `GLoc`).

git-svn-id: http://redmine.rubyforge.org/svn/trunk@1187_e93f8b46-1217-0410-a6f0-8f06a7374b81

2011-12-19 05:30 pm - Gregor Schmidt

[#780] using a changing cache key to avoid the need for explicit cache invalidation

This should work on all cache stores, since only the basic cache operations `fetch` and `delete` are used. The methods `clear_cache` and `check_cache` can no longer be supported. To sweep the whole cache `Rails.cache.clear` may be used. To invalidate the Settings only, you may use `Setting.first.try(:touch)`.

2011-12-19 05:30 pm - Gregor Schmidt

[#780] Remove non-functional call to `Setting.check_cache`

2011-12-19 05:30 pm - Gregor Schmidt

[#780] Clearing (Settings) cache to make the tests pass again

2012-01-16 02:53 pm - Holger Just

[#780] Clarify deprecation of `Setting.clear_cache`

History

2011-12-19 11:00 am - Gregor Schmidt

- Assignee set to *Gregor Schmidt*

2011-12-19 04:37 pm - Gregor Schmidt

- Assignee deleted (*Gregor Schmidt*)

- Status changed from *Open* to *Ready for review*

The pull request is at <https://github.com/chiliproject/chiliproject/pull/144>.

I have tested the code manually using `MemoryStore` and `MemCacheStore` (using a single memcached and using multiple memcached). It seems to work fine. Concerning the importance of this functionality I would be happy if somebody would have a critical look on it nonetheless.

Thanks

Gregor

2011-12-21 07:47 am - Gregor Schmidt

Unfortunately the invalidation resolution is one second. I.e. multiple changes to `Settings` within one second might happen unnoticed. This should not matter in real world use cases, but it seems to be a pain in the test suite.

With our plugins we are running into nasty race conditions and tests that work on this machine but not on that. Adding calls to `Rails.cache.clear` here and there reduces the errors, but this is a solution far from perfect.

Unfortunately, timestamp columns in the DB - at least for MySQL - only store the timestamp up to the second - not milli seconds or such. Therefore I could not come up with something, that would be more accurate.

For the tests it might help, if we could disable settings caching.

Anybody how's reviewing this code, should please keep these thoughts in mind.

2012-01-16 03:12 pm - Holger Just

- Target version set to *3.0.0*

- Assignee set to *Holger Just*

- Status changed from *Ready for review* to *Closed*

I merged the pull request into `unstable`. It will be part of `3.0.0beta2`. Thanks Gregor!

I also included your code from `finnlabs' dev_tools` to completely disable the settings cache during tests in `commit:637ca24`