TYPO3 Core - Bug #63087

Shared locks cannot be released

2014-11-20 00:14 - Ludwig Rafelsberger

Status:	Closed		**Start date:**	2014-11-19
Priority:	Must have		**Due date:**	
Assignee:	Ludwig Rafelsberger		**% Done:**	100%
Category:			**Estimated time:**	0.00 hour
Target version:				
TYPO3 Version:	7		**Complexity:**	easy
PHP Version:			**Is Regression:**	No
Tags:			**Sprint Focus:**	

Description

Shared locks using \TYPO3\CMS\Core\Locking\Locker::LOCKING_METHOD_FLOCK can not be released using Locker::release().
(Instead, they will be forcefully released on object destruction, e.g. on request shutdown.)

It seems that the default installation does not require releasing of shared locks, but there are use-cases in which a shared lock must be properly released during a request.

My problematic locking sequence is:

- **acquire shared lock**
- test: is (expensive) resource X cheaply available (cache)?
  - if yes:
    - use it
    - *release shared lock*
  - if not:
    - **release shared lock** and **acquire exclusive lock** (we are going to *write* soon)
      Obtaining the exclusive lock involves **waiting** for every other
      lock – shared or exclusive, and especially including our "own" shared one
      from the steps before – **to be released**
    - repeat the initial test for [cheap variant of] resource X
      (Someone else could have gone through the same process and obtained an
      exclusive lock before us, writing the cheap (cache) variant and superseding
      the need to get the (expensive) resource now.)
      - yes:
        - use it
        - *release exclusive lock*
      - no:
        - obtain (expensive) resource X
        - store it (cache)
        - use it
        - *release exclusive lock*

All lock operations marked either **bold** or *italic*, with bold being the ones that make my process stuck.

Associated revisions

Revision 9661e5da - 2014-11-20 12:24 - Ludwig Rafelsberger

[BUGFIX] Correctly remember acquired shared locks

If a shared lock is acquired, that fact must be remembered in the
Locker object, so that it can be properly released later.

Resolves: #63087
Releases: master, 6.2
Change-Id: Ic7b59d3c437a71193c580b279a6795aaad334108
Reviewed-on: http://review.typo3.org/34374
Reviewed-by: Markus Klein <klein.t3@reelworx.at>
Tested-by: Markus Klein <klein.t3@reelworx.at>
Reviewed-by: Alexander Opitz <opitz.alexander@googlemail.com>
Tested-by: Alexander Opitz <opitz.alexander@googlemail.com>

Revision c7e8c747 - 2014-11-20 12:38 - Ludwig Rafelsberger

[BUGFIX] Correctly remember acquired shared locks

If a shared lock is acquired, that fact must be remembered in the
Locker object, so that it can be properly released later.

Resolves: #63087
Releases: master, 6.2
Change-Id: Ic7b59d3c437a71193c580b279a6795aaad334108
Reviewed-on: http://review.typo3.org/34384
Reviewed-by: Wouter Wolters <typo3@wouterwolters.nl>
Reviewed-by: Alexander Opitz <opitz.alexander@googlemail.com>
Tested-by: Alexander Opitz <opitz.alexander@googlemail.com>

History

#1 - 2014-11-20 00:21 - Gerrit Code Review

- Status changed from New to Under Review

Patch set 1 for branch **master** of project **Packages/TYPO3.CMS** has been pushed to the review server.
It is available at http://review.typo3.org/34374

#2 - 2014-11-20 01:19 - Markus Klein

Well you basically have the classic reader/writer problem here with possible writer starvation. See wikipedia.
Unfortunately I've bad news as flock() is not guaranteed to work in every environment. So please check carefully if flock() is really supported with
multiple requests on your server.

#3 - 2014-11-20 12:26 - Gerrit Code Review

Patch set 1 for branch **TYPO3_6-2** of project **Packages/TYPO3.CMS** has been pushed to the review server.
It is available at http://review.typo3.org/34384

#4 - 2014-11-20 12:30 - Ludwig Rafelsberger

- Status changed from Under Review to Resolved

- % Done changed from 0 to 100

Applied in changeset 9661e5da2e32d489e4e3bfbb7a7b499daced48da.

#5 - 2018-10-02 11:49 - Benni Mack

- Status changed from Resolved to Closed