

TYPO3 Core - Bug #78915

Critical performance bug in Extbase Reflection Cache in all TYPO3 versions since 6.0 (affects submits of Extbase-Forms)

2016-12-08 09:43 - Juergen Kussmann

Status:	Closed	Start date:	2016-12-08
Priority:	Must have	Due date:	
Assignee:		% Done:	100%
Category:	Caching	Estimated time:	0.00 hour
Target version:	Candidate for patchlevel	Complexity:	
TYPO3 Version:	8	Is Regression:	No
PHP Version:		Sprint Focus:	
Tags:	critical performance bug extbase reflection cache		
Description			
<p>Hi, we at AOE.com have found a critical performance-bug in Extbase-Reflection-Cache in all TYPO3-versions since 6.0.</p> <p>The bug is: The cached data of Extbase-Reflection-Cache (in DB-table cf_extbase_reflection) will not be stored completely/correct in cache-record. The data/part of property 'methodReflections' is NOT stored in the cache. The result is, that the Extbase-Reflection-Cache will be deleted/inserted each time, when the Extbase-Reflection will be used. This caused a major problem in one of our big TYPO3-installations (the DB-server crashed).</p> <p>Our bugfix (see attachment) is very simple and should be used to patch all TYPO3-versions since 6.0.</p> <p>Best regards, Jürgen Kußmann</p> <p>-----</p> <p>German description of the bug: Problem ist der Extbase-Reflection-Cache (in DB-Tabelle cf_extbase_reflection), welcher pro Extbase-basierter Extension ein Datensatz anlegt mit allen möglichen Informationen zu den PHP-Klassen, welche sich in einer Extension befinden. Dieser Reflection-Cache wird bei JEDEM Seitenaufruf (wo ein extbase-plugin verwendet wird) gelöscht und neu geschrieben. Grund dafür war, dass der Teil des Caches nicht korrekt in die DB gespeichert wurde, TYPO3 daher diesen „Teil des Caches“ immer wieder neu erstellt hat.</p> <p>Viele Grüße, Jürgen Kußmann</p>			
Related issues:			
Precedes TYPO3 Core - Bug #78977: Fatal error: Failed to retrieve the reflect...		Closed	2016-12-13

Associated revisions

Revision a5c1e222 - 2016-12-11 22:47 - Valentin Despa

[BUGFIX] Reflection Cache does not save methodReflections

The cached data of the Reflection Cache (table cf_extbase_reflection) is not stored in its complete form.

The data/part of property 'methodReflections' is NOT stored in the cache. As a result, the Reflection Cache will be deleted/inserted each time the methodReflections property is needed

Resolves: #78915

Releases: master,7.6,6.2

Change-Id: I7b2f7477132abca2e10826bed6e78cb1195d2b26

Reviewed-on: <https://review.typo3.org/50913>

Tested-by: TYPO3com <no-reply@typo3.com>

Tested-by: Wouter Wolters <typo3@wouterwolters.nl>

Reviewed-by: Andreas Fernandez <typo3@scripting-base.de>

Reviewed-by: Markus Klein <markus.klein@typo3.org>
Tested-by: Markus Klein <markus.klein@typo3.org>
Reviewed-by: Daniel Goerz <ervaude@gmail.com>
Reviewed-by: Tymoteusz Motylewski <t.motylewski@gmail.com>
Tested-by: Tymoteusz Motylewski <t.motylewski@gmail.com>

Revision b4f2dc41 - 2016-12-12 11:31 - Valentin Despa

[BUGFIX] Reflection Cache does not save methodReflections

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Resolves: #78915
Releases: master,7.6.6.2
Change-Id: I7b2f7477132abca2e10826bed6e78cb1195d2b26
Reviewed-on: <https://review.typo3.org/50929>
Tested-by: TYPO3com <no-reply@typo3.com>
Reviewed-by: Tymoteusz Motylewski <t.motylewski@gmail.com>
Tested-by: Tymoteusz Motylewski <t.motylewski@gmail.com>

Revision 8ef727a3 - 2016-12-12 14:45 - Tymoteusz Motylewski

[BUGFIX] Reflection Cache does not save methodReflections

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Resolves: #78915
Releases: master,7.6.6.2
Change-Id: I7b2f7477132abca2e10826bed6e78cb1195d2b26
Reviewed-on: <https://review.typo3.org/50930>
Tested-by: TYPO3com <no-reply@typo3.com>
Reviewed-by: Anja Leichsenring <leichsenring@ab-softlab.de>
Tested-by: Anja Leichsenring <leichsenring@ab-softlab.de>
Reviewed-by: Valentin Despa <info@vdespa.de>
Tested-by: Valentin Despa <info@vdespa.de>
Reviewed-by: Wouter Wolters <typo3@wouterwolters.nl>
Tested-by: Wouter Wolters <typo3@wouterwolters.nl>
Reviewed-by: Tymoteusz Motylewski <t.motylewski@gmail.com>
Tested-by: Tymoteusz Motylewski <t.motylewski@gmail.com>

Revision 5b7c3f6f - 2016-12-16 00:11 - Helmut Hummel

[BUGFIX] Optimize cache handling in ReflectionService

Method reflection objects are used temporarily to extract information from methods. This information is eventually stored in the cache. However the method reflection objects themselves must stay outside the cache because they cannot be serialized. They also do not provide much value as the information is stored in the cache anyway.

The only additional info these reflections provided is whether a method existed or not in the class, which we now also cache as plain array.

Furthermore the information whether cache relevant properties were updated and the cache needs to be saved again is now reset once it was written. This ensures that the cache is only written once even the ReflectionService is used multiple times.

Resolves: #78915
Resolves: #78977
Releases: master, 7.6, 6.2
Change-Id: I1d00f596633adab886c0db0dfddd71358fb67303
Reviewed-on: <https://review.typo3.org/50953>
Tested-by: TYPO3com <no-reply@typo3.com>
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Reviewed-by: Stefan Rotsch <stefan.rotsch@aoe.com>
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Reviewed-by: Markus Klein <markus.klein@typo3.org>
Tested-by: Markus Klein <markus.klein@typo3.org>

Revision 49839358 - 2016-12-16 01:18 - Helmut Hummel

[BUGFIX] Optimize cache handling in ReflectionService

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Resolves: #78915
Resolves: #78977
Releases: master, 7.6, 6.2
Change-Id: I1d00f596633adab886c0db0dfddd71358fb67303
Reviewed-on: <https://review.typo3.org/50980>
Tested-by: TYPO3com <no-reply@typo3.com>
Reviewed-by: Markus Klein <markus.klein@typo3.org>
Tested-by: Markus Klein <markus.klein@typo3.org>

Revision 5124e88a - 2016-12-16 01:46 - Helmut Hummel

[BUGFIX] Optimize cache handling in ReflectionService

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Resolves: #78915
Resolves: #78977
Releases: master, 7.6, 6.2
Change-Id: I1d00f596633adab886c0db0dfddd71358fb67303
Reviewed-on: <https://review.typo3.org/50984>
Tested-by: TYPO3com <no-reply@typo3.com>
Reviewed-by: Nicole Cordes <typo3@cordes.co>
Tested-by: Nicole Cordes <typo3@cordes.co>

History

#1 - 2016-12-08 16:43 - Tymoteusz Motylewski

- *Status changed from New to Needs Feedback*

little notes from the slack discussion on #typo3-cms-coredev
Claus could not reproduce the issue on master.

```
I can confirm that it doesn't contain methodReflections, but apart from that, cannot confirm your exact symptom that cache records are constantly rewritten (which is what I see as the core of your reported performance problem)
```

```
[11:05]
```

```
plenty ViewHelpers involved in rendering and parsing those absolutely calls on method reflections (when detecting render method arguments)
```

```
[11:07]
```

also asserted that reflection cache expiration time in DB is not changed by browsing through multiple modules and fe plugins (just to exclude that the page I profiled is an exception)

[11:08]

could you track down whether this only happens in specific cases, e.g. when calling a controller a certain way or bootstrapping plugins a certain way?

Jürgen or Valentin, can you reproduce the issue on master?
and provide more information like a stacktrace ?

#2 - 2016-12-09 08:40 - Valentin Despa

- Subject changed from Critical performance-bug in Extbase-Reflection-Cache in all TYPO3-versions since 6.0 to Critical performance bug in Extbase Reflection Cache in all TYPO3 versions since 6.0 (affects non-cacheable controller actions)

#3 - 2016-12-09 08:58 - Juergen Kussmann

- Subject changed from Critical performance bug in Extbase Reflection Cache in all TYPO3 versions since 6.0 (affects non-cacheable controller actions) to Critical performance bug in Extbase Reflection Cache in all TYPO3 versions since 6.0 (affects submits of Extbase-Forms)

Hi Tymoteusz Motylewski,

the bug occurs, when you submit an Extbase-Form and the Form is represented by an Extbase-Domain-Model. Then, Extbase checks if the Extbase-Domain-Model has a setter-method to set the values from the form into the Domain-Model.

Take a look at this stacktrace, which seems to help a lot to understand the logic:

```
0 /var/www/devbox/htdocs/typo3_src/typo3/sysext/extbase/Classes/Property/TypeConverter/ObjectConverter.php(113):
TYPO3\CMS\Extbase\Reflection\ReflectionService->hasMethod('Aoe\EftShopCheckout\Domain\Model\Order\Item\ItemizedBill',
'setDataStoring')
1 /var/www/devbox/htdocs/typo3_src/typo3/sysext/extbase/Classes/Property/PropertyMapper.php(169):
TYPO3\CMS\Extbase\Property\TypeConverter\ObjectConverter->getTypeOfChildProperty('Aoe\EftShopCheckout\Domain\Model\Order\Item\Itemized
Bill', 'dataStoring', Object(TYPO3\CMS\Extbase\Mvc\Controller\MvcPropertyMappingConfiguration))
2 /var/www/devbox/htdocs/typo3_src/typo3/sysext/extbase/Classes/Property/PropertyMapper.php(103):
TYPO3\CMS\Extbase\Property\PropertyMapper->doMapping(Array, 'Aoe\EftShopCheckout\Domain\Model\Order\Item\ItemizedBill',
Object(TYPO3\CMS\Extbase\Mvc\Controller\MvcPropertyMappingConfiguration), Array)
3 /var/www/devbox/htdocs/typo3_src/typo3/sysext/extbase/Classes/Mvc/Controller/Argument.php(378):
TYPO3\CMS\Extbase\Property\PropertyMapper->convert(Array, 'Aoe\EftShopCheckout\Domain\Model\Order\Item\ItemizedBill',
Object(TYPO3\CMS\Extbase\Mvc\Controller\MvcPropertyMappingConfiguration))
4 /var/www/devbox/htdocs/typo3_src/typo3/sysext/extbase_filter/Classes/MVC/Controller/Argument.php(61):
TYPO3\CMS\Extbase\Mvc\Controller\Argument->setValue(Array)
5 /var/www/devbox/htdocs/typo3_src/typo3/sysext/extbase/Classes/Mvc/Controller/AbstractController.php(423):
Tx_ExtbaseFilter_MVC_Controller_Argument->setValue(Array)
6 /var/www/devbox/htdocs/typo3_src/typo3/sysext/extbase/Classes/Mvc/Controller/ActionController.php(151):
TYPO3\CMS\Extbase\Mvc\Controller\AbstractController->mapRequestArgumentsToControllerArguments()
7 /var/www/devbox/htdocs/typo3_src/typo3/sysext/extbase_checkout/Classes/Controller/AbstractController.php(85):
TYPO3\CMS\Extbase\Mvc\Controller\ActionController->processRequest(Object(TYPO3\CMS\Extbase\Mvc\Web\Request),
Object(TYPO3\CMS\Extbase\Mvc\Web\Response))
8 /var/www/devbox/htdocs/typo3_src/typo3/sysext/extbase/Classes/Mvc/Dispatcher.php(69):
Aoe\EftShopCheckout\Controller\AbstractController->processRequest(Object(TYPO3\CMS\Extbase\Mvc\Web\Request),
Object(TYPO3\CMS\Extbase\Mvc\Web\Response))
9 /var/www/devbox/htdocs/typo3_src/typo3/sysext/extbase/Classes/Mvc/Web/FrontendRequestHandler.php(56):
TYPO3\CMS\Extbase\Mvc\Dispatcher->dispatch(Object(TYPO3\CMS\Extbase\Mvc\Web\Request),
Object(TYPO3\CMS\Extbase\Mvc\Web\Response))
10 /var/www/devbox/htdocs/typo3_src/typo3/sysext/extbase/Classes/Core/Bootstrap.php(195):
TYPO3\CMS\Extbase\Mvc\Web\FrontendRequestHandler->handleRequest()
11 /var/www/devbox/htdocs/typo3_src/typo3/sysext/extbase/Classes/Core/Bootstrap.php(184):
TYPO3\CMS\Extbase\Core\Bootstrap->handleRequest()
12 [internal function]: TYPO3\CMS\Extbase\Core\Bootstrap->run("", Array)
13 /var/www/devbox/htdocs/typo3_src/typo3/sysext/frontend/Classes/ContentObject/ContentObjectRenderer.php(6706): call_user_func_array(Array,
Array)
14 /var/www/devbox/htdocs/typo3_src/typo3/sysext/frontend/Classes/ContentObject/UserContentObject.php(41):
TYPO3\CMS\Frontend\ContentObject\ContentObjectRenderer->callUserFunction('TYPO3\CMS\Extba...', Array, "")
15 /var/www/devbox/htdocs/typo3_src/typo3/sysext/frontend/Classes/ContentObject/ContentObjectRenderer.php(904):
TYPO3\CMS\Frontend\ContentObject\UserContentObject->render(Array)
16 /var/www/devbox/htdocs/typo3_src/typo3/sysext/frontend/Classes/Controller/TypoScriptFrontendController.php(3733):
TYPO3\CMS\Frontend\ContentObject\ContentObjectRenderer->USER
17 /var/www/devbox/htdocs/typo3_src/typo3/sysext/frontend/Classes/Controller/TypoScriptFrontendController.php(3681):
TYPO3\CMS\Frontend\Controller\TypoScriptFrontendController->INtincScript_process(Array)
18 /var/www/devbox/htdocs/typo3_src/typo3/sysext/frontend/Classes/Controller/TypoScriptFrontendController.php(3648):
TYPO3\CMS\Frontend\Controller\TypoScriptFrontendController->recursivelyReplaceIntPlaceholdersInContent()
19 /var/www/devbox/htdocs/typo3_src/typo3/sysext/cms/tslib/index_ts.php(232):
TYPO3\CMS\Frontend\Controller\TypoScriptFrontendController->INtincScript()
20 /var/www/devbox/htdocs/typo3_src/index.php(28): require('/var/www/congst...')
21 {main}
```

We use TYPO3 6.2.26...so the bug is occurred in TYPO3 6.2.26. But i have seen, that the bug theoretically also must exist in all TYPO3-versions since 6.0.

Best Regards,
Jürgen Kußmann

#4 - 2016-12-09 09:07 - Valentin Despa

This most likely affects only extensions having non-cacheable controller actions and forms which you can POST.

Steps to reproduce in FE:

- install an Extbase extension
- insert and configure the plugin in FE
- call the page in FE (without having a BE session)
- after the page is rendered, you will see a new entry in the table cf_extbase_reflection

```
mysql> select id,identifier,expires from cf_extbase_reflection WHERE identifier = 'ReflectionData_XXXX';
```

id	identifier	expires
10	ReflectionData_XXXX	2145909600

- Delete the page cache (for the page where the plugin is located) => The reflection cache will still be in the database. This step is probably not necessary if the extension has non-cacheable controller actions
- Reload the FE page
- You will get a new entry in the reflection cache, which was actually not expected

```
mysql> select id,identifier,expires from cf_extbase_reflection WHERE identifier = 'ReflectionData_XXXX';
```

id	identifier	expires
11	ReflectionData_XXXX	2145909600

#5 - 2016-12-09 09:27 - Tymoteusz Motylewski

- Status changed from Needs Feedback to New

#6 - 2016-12-09 10:23 - 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 <https://review.typo3.org/50913>

#7 - 2016-12-09 10:24 - Gerrit Code Review

Patch set 2 for branch **master** of project **Packages/TYPO3.CMS** has been pushed to the review server.
It is available at <https://review.typo3.org/50913>

#8 - 2016-12-10 21:43 - Tymoteusz Motylewski

just found an easy way to reproduce the issue:

1. Go to the "Log" module
2. check table cf_extbase_reflection for a record with "ReflectionData_Belog" identifier
3. remember the id of the record, remember the content of the "content" column
4. change number of items per page in the Log module (e.g. from 25 to 100)
5. check the DB again,
6. the id of the ReflectionData_Belog record is now by one bigger than before, and the content column has the same value as one from step 3.

--

6. apply the patch
7. clear the cache
8. redo steps 1. to 5.
9. the id of the ReflectionData_Belog record will stay the same

#9 - 2016-12-11 22:48 - Gerrit Code Review

Patch set 1 for branch **TYPO3_7-6** of project **Packages/TYPO3.CMS** has been pushed to the review server.
It is available at <https://review.typo3.org/50929>

#10 - 2016-12-11 23:00 - Anonymous

- Status changed from Under Review to Resolved

- % Done changed from 0 to 100

Applied in changeset [a5c1e222bf9858f5a44af1007cd9e1677b9a534d](https://review.typo3.org/50930).

#11 - 2016-12-12 11:37 - Gerrit Code Review

- Status changed from Resolved to Under 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 <https://review.typo3.org/50930>

#12 - 2016-12-12 12:00 - Anonymous

- Status changed from Under Review to Resolved

Applied in changeset [b4f2dc41392ad56a9e663e48f0cff1f77a3a1192](https://review.typo3.org/50930).

#13 - 2016-12-15 01:39 - Gerrit Code Review

- Status changed from Resolved to Under Review

Patch set 4 for branch **master** of project **Packages/TYPO3.CMS** has been pushed to the review server. It is available at <https://review.typo3.org/50953>

#14 - 2016-12-15 01:43 - Helmut Hummel

- % Done changed from 100 to 90

- Complexity deleted (no-brainer)

#15 - 2016-12-15 01:51 - Gerrit Code Review

Patch set 5 for branch **master** of project **Packages/TYPO3.CMS** has been pushed to the review server. It is available at <https://review.typo3.org/50953>

#16 - 2016-12-15 03:11 - Gerrit Code Review

Patch set 6 for branch **master** of project **Packages/TYPO3.CMS** has been pushed to the review server. It is available at <https://review.typo3.org/50953>

#17 - 2016-12-15 09:43 - Gerrit Code Review

Patch set 7 for branch **master** of project **Packages/TYPO3.CMS** has been pushed to the review server. It is available at <https://review.typo3.org/50953>

#18 - 2016-12-16 00:09 - Gerrit Code Review

Patch set 1 for branch **TYPO3_7-6** of project **Packages/TYPO3.CMS** has been pushed to the review server. It is available at <https://review.typo3.org/50980>

#19 - 2016-12-16 00:30 - Helmut Hummel

- Status changed from Under Review to Resolved

- % Done changed from 90 to 100

Applied in changeset [5b7c3f6f9abeb04a0e8803b82dea5a002fd69df0](https://review.typo3.org/50984).

#20 - 2016-12-16 01:25 - Gerrit Code Review

- Status changed from Resolved to Under 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 <https://review.typo3.org/50984>

#21 - 2016-12-16 01:27 - Gerrit Code Review

Patch set 2 for branch **TYPO3_6-2** of project **Packages/TYPO3.CMS** has been pushed to the review server. It is available at <https://review.typo3.org/50984>

#22 - 2016-12-16 01:30 - Helmut Hummel

- Status changed from Under Review to Resolved

Applied in changeset [4983935849938f12ba9b5782b3121b0edc8d4550](#).

#23 - 2016-12-16 01:38 - Gerrit Code Review

- Status changed from Resolved to Under Review

Patch set 3 for branch **TYPO3_6-2** of project **Packages/TYPO3.CMS** has been pushed to the review server.
It is available at <https://review.typo3.org/50984>

#24 - 2016-12-16 02:00 - Helmut Hummel

- Status changed from Under Review to Resolved

Applied in changeset [5124e88a7f4319b593fbf2dbfac767afb7dc0435](#).

#25 - 2018-10-02 11:04 - Benni Mack

- Status changed from Resolved to Closed

Files

bugfix-add_property_methodReflections_to_reflection_cache.patch	798 Bytes	2016-12-08	Juergen Kussmann
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