

TYPO3 Core - Bug #86945

Epic # 88474 (Closed): Page tree performance in 9.5

Performance PageTree in Workspace

2018-11-16 17:46 - Alexander Opitz

Status:	Closed	Start date:	2018-11-16
Priority:	Should have	Due date:	
Assignee:	Alexander Opitz	% Done:	100%
Category:	Workspaces	Estimated time:	0.00 hour
Target version:		Complexity:	hard
TYPO3 Version:	8	Is Regression:	
PHP Version:		Sprint Focus:	
Tags:			

Description

All nodes of a PageTree will call TYPO3\CMS\Workspaces\Service\WorkspaceService::hasPageRecordVersions(\$workspaceId, \$pageId) which themselves call TYPO3\CMS\Workspaces\Service\WorkspaceService::fetchPagesWithVersionsInTable(\$workspaceId, \$tableName); for every versionised table. This function leads to a SQL Statement, which will get very slow on large tables.

SQL Statement:

```
SELECT `B`.`pid` AS `pageId` FROM `sys_file_reference` `B` WHERE (
(`B`.`uid` IN (
    SELECT `A`.`t3ver_oid` FROM `sys_file_reference` `A` WHERE (`A`.`pid` = -1) AND (`A`.`
t3ver_wsid` = 14) AND (`A`.`t3ver_state` <> 4) AND (`A`.`deleted` = 0)))
OR (`B`.`t3ver_move_id` IN (
    SELECT `A`.`t3ver_oid` FROM `sys_file_reference` `A` WHERE (`A`.`pid` = -1) AND (`A`.`
t3ver_wsid` = 14) AND (`A`.`t3ver_state` = 4) AND (`A`.`deleted` = 0))))
AND (`B`.`deleted` = 0) GROUP BY `B`.`pid`
```

The problem is the OR between the two IN with SQL Subselect, cause this leads in MySQL/MariaDB to processing the OUTER SQL before the INNER SQL. (IMHO in MariaDB this issue is tried to address)

TIME: 10.424 s

EXPLAIN:

id	select_type	table	type	possible_keys	key	key_len	ref	rows	
Extra									
1	PRIMARY	B	index	deleted	parent	5	NULL	11273	Us
ing where									
3	DEPENDENT SUBQUERY	A	ref	parent,deleted	parent	5	const,const	653	Usin
g where									
2	DEPENDENT SUBQUERY	A	ref	parent,deleted	parent	5	const,const	653	Usin
g where									

Which needs around 10 seconds on demo system.

Better use JOIN Statement:

```
SELECT `B`.`pid` AS `pageId` FROM `sys_file_reference` `B`
JOIN (SELECT `t3ver_oid` FROM `sys_file_reference` WHERE (`pid` = -1) AND (`t3ver_wsid` = 14) AND
(`t3ver_state` <> 4) AND (`deleted` = 0)) `A`
    ON `B`.`uid` = `A`.`t3ver_oid`
WHERE
(`B`.`deleted` = 0) GROUP BY `B`.`pid`
UNION SELECT `B`.`pid` AS `pageId` FROM `sys_file_reference` `B`
JOIN (SELECT `t3ver_oid` FROM `sys_file_reference` WHERE (`pid` = -1) AND (`t3ver_wsid` = 14) AND
(`t3ver_state` = 4) AND (`deleted` = 0)) `C`
```

```
ON `B`.`t3ver_move_id` = `C`.`t3ver_oid`
WHERE
(`B`.`deleted` = 0) GROUP BY `B`.`pid`
```

TIME: 0.002 s
EXPLAIN

id	select_type	table	type	possible_keys	key	key_len	ref	rows	Extra
1	PRIMARY	<derived2>	ALL	NULL	NULL	NULL	NULL	26	Using temporary; Using filesort
1	PRIMARY	B	eq_ref	PRIMARY,deleted	PRIMARY	4	A.t3ver_oid	1	Using where
2	DERIVED	sys_file_reference	ref	parent,deleted	parent	5		653	Using where
3	UNION	NULL	NULL	NULL	NULL	NULL	NULL	Impossible WHERE	noticed after reading const tables
4	DERIVED	sys_file_reference	ref	parent,deleted	parent	5		653	Using where
NULL	UNION RESULT	<union1,3>	ALL	NULL	NULL	NULL	NULL	NULL	

Using UNION to merge both results (like OR) together. But Union is not possible with QueryBuilder but IMHO it would be sufficient in speed to get the data with 2 SQL statements.

This issue happened on a larger custom system after migrating from 7LTS to 8LTS, will check what changed and what may help.

Related issues:

Related to TYPO3 Core - Bug #89464: PageTree in workspace not loading	Closed	2019-10-21
Related to TYPO3 Core - Bug #80898: No page tree in a workspaces	Closed	2017-04-19

Associated revisions

Revision 98c74eb2 - 2019-09-09 11:53 - Alexander Opitz

[TASK] Speed up DB query for tables with versions

Eliminating OR combination of subselects within same table, as they get wrongly managed by DBMS (mostly MySQL). Using JOIN and UNION reduces time to execute (on larger data sets) from 10 s to 0.01 s. This helps to get the page tree view working if an editor is inside workspace.

Resolves: #86945

Releases: master, 9.5, 8.7

Change-Id: I7a5aa66baa6cef160de66fff3f80aec49b46295f

Reviewed-on: <https://review.typo3.org/c/Packages/TYPO3.CMS/+59037>

Tested-by: TYPO3com <noreply@typo3.com>

Tested-by: Susanne Moog <look@susi.dev>

Tested-by: Benni Mack <benni@typo3.org>

Reviewed-by: Susanne Moog <look@susi.dev>

Reviewed-by: Benni Mack <benni@typo3.org>

Revision 0dab9b41 - 2019-09-09 12:10 - Alexander Opitz

[TASK] Speed up DB query for tables with versions

Eliminating OR combination of subselects within same table, as they get wrongly managed by DBMS (mostly MySQL). Using JOIN and UNION reduces time to execute (on larger data sets) from 10 s to 0.01 s. This helps to get the page tree view working if an editor is inside workspace.

Resolves: #86945

Releases: master, 9.5, 8.7

Change-Id: I7a5aa66baa6cef160de66fff3f80aec49b46295f

Reviewed-on: <https://review.typo3.org/c/Packages/TYPO3.CMS/+61604>

Tested-by: TYPO3com <noreply@typo3.com>

Tested-by: Benni Mack <benni@typo3.org>

Reviewed-by: Benni Mack <benni@typo3.org>

Revision 28c285e7 - 2019-09-09 12:21 - Alexander Opitz

[TASK] Speed up DB query for tables with versions

Eliminating OR combination of subselects within same table, as they get wrongly managed by DBMS (mostly MySQL). Using JOIN and UNION reduces time to execute (on larger data sets) from 10 s to 0.01 s. This helps to

get the page tree view working if an editor is inside workspace.

Resolves: #86945
Releases: master, 9.5, 8.7
Change-Id: I7a5aa66baa6cef160de66fff3f80aec49b46295f
Reviewed-on: <https://review.typo3.org/c/Packages/TYPO3.CMS/+61605>
Tested-by: TYPO3com <noreply@typo3.com>
Tested-by: Benni Mack <benni@typo3.org>
Reviewed-by: Benni Mack <benni@typo3.org>

History

#1 - 2018-11-16 17:49 - Alexander Opitz

- Description updated

#2 - 2018-12-04 11:41 - Alexander Opitz

TYPO3 7 LTS

```
SELECT `B`.`uid` as `live_uid`, `B`.`pid` as `live_pid`, `A`.`uid` as `offline_uid`  
FROM `sys_file_reference` `A`, `sys_file_reference` `B`  
WHERE  
`A`.`pid`=-1 AND `A`.`t3ver_wsid`= 14 AND (`A`.`t3ver_oid` = `B`.`uid` AND `A`.`t3ver_state` <> 4  
OR  
`A`.`t3ver_oid` = `B`.`t3ver_move_id` AND `A`.`t3ver_state` = 4) AND `A`.`deleted` = 0 AND `B`.`deleted` = 0  
GROUP BY `live_pid`
```

TIME: 0.047 s

EXPLAIN

id	select_type	table	type	possible_keys	key	key_len	ref	rows	Extra
1	SIMPLE	A	ref	parent,deleted	parent	5	const,const	653	Using where; Using temporary ; Using filesort
1	SIMPLE	B	ALL	PRIMARY,deleted	NULL	NULL	NULL	11154	Using where; Using join buffer

#3 - 2018-12-04 11:58 - Alexander Opitz

- Description updated

#4 - 2018-12-05 11:53 - 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/59037>

#5 - 2018-12-05 16:13 - 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/59037>

#6 - 2018-12-14 11:18 - Gerrit Code Review

Patch set 3 for branch **master** of project **Packages/TYPO3.CMS** has been pushed to the review server.
It is available at <https://review.typo3.org/59037>

#7 - 2018-12-17 17:10 - Gerrit Code 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/59037>

#8 - 2019-06-03 10:03 - Tymoteusz Motylewski

- Parent task set to #88474

#9 - 2019-09-09 11:54 - Gerrit Code Review

Patch set 1 for branch **9.5** of project **Packages/TYPO3.CMS** has been pushed to the review server.
It is available at <https://review.typo3.org/c/Packages/TYPO3.CMS/+61604>

#10 - 2019-09-09 12:00 - Alexander Opitz

- Status changed from Under Review to Resolved

- % Done changed from 0 to 100

Applied in changeset [98c74eb212b728db2818c256994c501a6173ab7b](#).

#11 - 2019-09-09 12:10 - Gerrit Code Review

- Status changed from Resolved to Under Review

Patch set 1 for branch **TYPO3_8-7** of project **Packages/TYPO3.CMS** has been pushed to the review server. It is available at <https://review.typo3.org/c/Packages/TYPO3.CMS/+61605>

#12 - 2019-09-09 12:30 - Alexander Opitz

- Status changed from Under Review to Resolved

Applied in changeset [0dab9b4183208040c76e84ea845396b742d91fab](#).

#13 - 2019-10-31 14:43 - Oliver Hader

- Related to Bug #89464: PageTree in workspace not loading added

#14 - 2019-11-06 19:25 - Oliver Hader

Alexander Opitz wrote:

TYPO3 7 LTS

[...]

TIME: 0.047 s

EXPLAIN

[...]

Actually this looks like the code that was used earlier which lead to timeouts, see <https://review.typo3.org/c/Packages/TYPO3.CMS/+52853>

#15 - 2019-11-06 19:26 - Oliver Hader

- Related to Bug #80898: No page tree in a workspaces added

#16 - 2019-11-07 22:37 - Oliver Hader

→ reverted in issue [#89464](#)

#17 - 2019-11-12 18:10 - Alexander Opitz

Added a final note here <https://forge.typo3.org/issues/89464#note-20>

#18 - 2019-12-23 22:49 - Benni Mack

- Status changed from Resolved to Closed