

Core - Bug # 67155

Status:	Resolved	Priority:	Should have
Author:	Morton Jonuschat	Category:	DBAL
Created:	2015-05-26	Assigned To:	
Updated:	2015-07-22	Due date:	
TYPO3 Version:	7		
PHP Version:	5.6		
Complexity:			
Is Regression:	No		
Sprint Focus:			
Subject:	Invalid SQL Query for sys_categories		
Description			
DBAL/AdoDB Error message:			
#1421053336: ADOdb could not run this query: SELECT "uid" FROM "sys_category" WHERE FIND_IN_SET('0', "parent") != 0 OR "parent" = "			
Environment: TYPO3 7.3-dev, PostgreSQL 9.4			
How to reproduce: Open the „Backend User Listing” and try to add a new account.			
Related issues:			
related to Core - Bug # 46271: DB-error with postgresSQL		Resolved	2013-03-14
related to Core - Epic # 64459: Make TYPO3 run on PostgreSQL		New	2015-01-23
related to Core - Bug # 67172: AdoDB error on editing a page		Resolved	2015-05-27

Associated revisions

Revision 14f04a6a - 2015-07-22 18:50 - Morton Jonuschat

[BUGFIX] dbal: Cast field to CHAR for FIND_IN_SET()

Implement explicit casting of fields to a character representation.
Most DBMS are stricter in regard to data type checking and emit an error when trying to use FIND_IN_SET() on non-text field types.

On the DBAL side of things the DBMS specifics are used to define that an explicit cast is required for FIND_IN_SET() so that a query including the CAST statement gets generated.

A PostgreSQL Specific has been added to enable the explicit casting in conjunction with DBAL. To avoid checking repeatedly if a DBMS has defined specific requirements a NullSpecific has been implemented that gets used as a default.

In the DatabaseTreeDataProvider the listFieldQuery() function has been changed to use an explicit CAST instead of relying on the implicit cast done by MySQL when comparing it to an empty string.

The SqlParser has been extended with the support for CAST.

Resolves: #67155
Resolves: #67172
Resolves: #46271
Releases: master, 6.2
Change-Id: lc77d1700e0fb4e3723c90b34e131dafb456038e0
Reviewed-on: <http://review.typo3.org/39779>
Reviewed-by: Andreas Fernandez <typo3@scripting-base.de>
Tested-by: Andreas Fernandez <typo3@scripting-base.de>
Reviewed-by: Markus Klein <markus.klein@typo3.org>
Tested-by: Markus Klein <markus.klein@typo3.org>

Revision a780e46a - 2015-07-22 20:23 - Morton Jonuschat

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Reviewed-by: Markus Klein <markus.klein@typo3.org>
Tested-by: Markus Klein <markus.klein@typo3.org>
Reviewed-on: <http://review.typo3.org/41842>

History

#1 - 2015-05-26 21:27 - Morton Jonuschat

Additional information:

ERROR: function find_in_set(unknown, bigint) does not exist

A `find_in_set()` on an integer column doesn't make any sense, even on MySQL.

The query originates at \TYPO3\CMS\Core\Tree\TableConfiguration\DatabaseTreeDataProvider::getChildrenUidsFromParentRelation, line #382 where a query for a child with possibly multiple parents is being created

The problem seems to be in `\TYPO3\CMS\Core\Database\DatabaseConnection::exec_SELECTgetRows()`. There, a query is performed but `sql_fetch_assoc()` returns a 'false' on it.

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/39779>

The impact of the explicit cast on MySQL seems very low according to the query profile. The dataset used for the set was a tree consisting of 100.000 nodes, 100 of which were on the top level, the rest randomly distributed on varying levels of depth.

Using `FIND_IN_SET()` make indexes unusable so there is no difference according to `EXPLAIN` for a statement:

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```
| id | select_type | table      | type | possible_keys | key          | key_len | ref | rows | Extra          |
+----+-----+-----+-----+-----+-----+-----+----+-----+-----+
| 1 | SIMPLE      | sys_category | index | category_parent | category_parent | 4       | NULL | 100479 | Using where; Using index |
+----+-----+-----+-----+-----+-----+-----+----+-----+-----+
1 row in set (0,00 sec)
```

```
mysql> EXPLAIN SELECT uid FROM sys_category WHERE FIND_IN_SET('0', parent) != 0 OR CAST(parent AS CHAR) = "";
+----+-----+-----+-----+-----+-----+-----+----+-----+-----+
| id | select_type | table      | type | possible_keys | key          | key_len | ref | rows | Extra          |
+----+-----+-----+-----+-----+-----+-----+----+-----+-----+
| 1 | SIMPLE      | sys_category | index | NULL          | category_parent | 4       | NULL | 100479 | Using where; Using index |
+----+-----+-----+-----+-----+-----+-----+----+-----+-----+
1 row in set (0,01 sec)
```

#6 - 2015-05-29 08:51 - 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 <http://review.typo3.org/39779>

#7 - 2015-06-08 09:14 - 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 <http://review.typo3.org/39779>

#8 - 2015-06-08 09:19 - 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 <http://review.typo3.org/39779>

#9 - 2015-06-09 18:41 - 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 <http://review.typo3.org/39779>

#10 - 2015-06-17 23:19 - 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 <http://review.typo3.org/39779>

#11 - 2015-07-17 10:33 - 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 <http://review.typo3.org/39779>

#12 - 2015-07-22 19:00 - Morton Jonuschat

- *Status changed from Under Review to Resolved*
- *% Done changed from 0 to 100*

Applied in changeset commit:14f04a6a526ce654c86e7e62bcf4cb09cfca6eb2.

#13 - 2015-07-22 20:06 - 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 <http://review.typo3.org/41842>

#14 - 2015-07-22 20:29 - Morton Jonuschat

- *Status changed from Under Review to Resolved*

Applied in changeset commit:a780e46ad709bcf5df9253182c620cec8c748bc4.