

Design Document:

Enhancement:

To improve the performance of tree loading with 9000 plus testcases.

Version:

Testlink 1.9.5

File Name:

TestLink_1.9.5_QASourceContribution.pdf

Last Saved:

30 May 2013.

Last Changed By:

QASource.Inc

Table Contents

[1. Document History](#)

[2. Requirements](#)

[3. Areas Covered](#)

[3.1 Algorithm](#)

[3.1.1 UI Implementation](#)

[3.1.2 HTML/JS Changes](#)

[3.1.3 PHP Changes](#)

[3.1.4 DB Changes](#)

[3.1.5 Configuration changes\(my.ini\)](#)

[3.1.6 Architecture changes \(high level flow\)](#)

[3.1.7 Deployment Steps](#)

1.Document History

Author	Date	Description
QASource	30/05/13	Version 1.9.5

2. Requirements

1. Test execution interface was slow (taking almost 50 seconds) to populate/render the tree with 9000 test cases in a folder.
2. Concurrent users with simultaneous hit was taking more than 50 seconds to show the tree in test execution.
3. The system hangs up if the test cases count reaches to 16000 in a folder.

This is confidential document

3. Areas Covered

3.1 Algorithm

3.1.1 UI Implementation

File Name	Method Name	Description
lib/functions/treeMenu.inc.php	renderExecTreeNode()	Implemented the function name ajaxRequest() in every folder hit. This function is being called in /gui/templates/execute/execNavigator.tpl file.

3.1.2 HTML/JS changes

File Name	Method Name	Description
/gui/templates/execute/execNavigator.tpl	ajaxRequest()	This function redirects ajax call to /lib/functions/testplan.class.filter.manual_test.php

3.1.3 PHP Changes

Page Name/Class Name	Method Name/changes in code	Description
Page Name : /lib/execute/execNavigator.php	\$a=\$control->setting	Created a session variable of build id. This is used in case test execution filter

This is confidential document

Class Name : None	s; \$_SESSION['t_build_id']=\$_a['setting_build'] ['selected']; jmx(c)	functionality. Removed 2 filters(Nobody, Somebody)
Page Name : lib/functions/testplan.class.php	_get_sutree_rec()	Changed the if else clauses Created the new page testplan.class.filter.manual_test.php where we implemented the code for tree load along with the db functions and filters.
Page Name : lib/functions/execTreeMenu.inc.php	execTree()	Implemented the execution filter functionality by writing the if else conditions. Because the same function also runs for other functionality too.
Page Name : lib/functions/treeMenu.inc.php	renderExecTreeNode()	Added ajax function as ajaxRequest. Also changed the behavior to show test case count.
Page Name : lib/ajax/loadTreeAjax_test.php	Full page	Created the whole new page with ajax call for every hit on the node or testcases.
Page Name : gui/templates/execute/execNavigator.tpl	ajaxRequest()	Created this function for ajax call to page /lib/functions/testplan.class.filter.manual_test.php

3.1.4 DB Changes (mysql)

Function Name	changes in query	Description
Function Name : hierarchy()		Embedded this hierarchy() function in original query to get the test case count.

This is confidential document

		<p>Function gets the count of pass, fail, blocked test cases</p> <p>We call this function from pages /lib/functions/testplan.class.filter.manual_test.php and /lib/ajax/loadTreeAjax_test.php</p> <p>This function is embedded in query so as to get the count of its testcases</p> <p>Here we have created two temp tables</p>
--	--	---

3.1.5 Configuration changes(my.ini)

File Name	changes in parameters	Description
MY.cnf	max_allowed_packet = 64M tmp_table_size = 16M max_heap_table_size=64M table_cache = 512	<p>All these parameters are to increase the performance.</p> <p>Changed mysql default engine from myisam to innodb.</p>

3.1.6 Architecture changes (high level flow).

Description
<ul style="list-style-type: none"> We have changed the query processing in function __get_subtree_rec() multiple times to single Created and embed DB function(UDF) in this query. Function name : hierarchy() Made the array of record set and converted it to JSON and then pass it to EXTJS to populate the tree. While converting array to JSON made some manual changes in functionality of function renderExecTreeNode() in file (/lib/functions/execTreeMenu.inc.php) to

show test cases count.

- Since the same code is being used on other areas, we have implemented "if else" conditions to reduce the collision.

- **Use of temp tables:**

We have used temp tables to get the count of pass fail test cases.

Before executing the original query in test case execution we create temp table and the whole record set is being inserted into temp table.

- With execution of the main query along with DB function returns the record set along with testcase count.

3.1.7 Deployment Steps:

Test link Deployment steps with our new implementation. Only valid for mysql database.

1. Download and Deploy the project according to testlink1.9.5 guidelines for mysql database.
2. Find a mysql function hierarchy() in file : db_functions/hierarchy_final_test.sql. Install this function in mysql database.