

Hierarchical Classification of Test Cases

Introduction

Many users face situations, where hierarchical classification of Test Cases is required. This means that

- There is a fixed Hierarchical Structure for organizing Test Cases.
- Test Cases exist at different levels of this hierarchy.
- Different set of users may have different perspectives; say functional or structural.
- Users have need to view a set of test cases by filtering on different perspectives and options; for example a specific user may want to view all test cases belonging to a specific Component.

Custom field of type Hierarchical View can provide one possible solution for this problem; as explained in the following sections.

Defining Custom Field of type Hierarchical View

Custom Fields of type **Hierarchical View** can be created at the

- System Level
- OR Project Level

The Field Options configured for this custom field are essentially labels organized in a hierarchical format as shown below.

The screenshot displays the 'Test Cases' configuration page. It features a table for 'Custom Fields for Test Cases' with columns: Custom Field Name, Scope, Field Type, Field Unit, Field Options, Editable, and Enable. One entry is visible: 'System Hierarchy' with Scope 'Local', Field Type 'Hierarchical View', and Field Options 'Sub System 1, Component 1.1, Component 1.2, Sub System 2, Component 2.1, Sub System 3'. A 'New Field Option' dialog is open, showing 'Option Name' as 'Component 3.1' and 'Nest label under' as 'Sub System 3'. The dialog also has a 'Create another' checkbox, 'Save', and 'Cancel' buttons.

Multiple Perspectives

This kind of classification helps in defining multiple perspectives on the same set of Test Cases. A user can choose the perspectives relevant to him / her.

In the example below, two perspectives are defined

- System Hierarchy
- Test Case Type

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Test Cases

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ID	Name	Description	System Hierarchy	Test Case Type	Categories	External-ID	Depends On	Dependents	Requirements	Artifacts	Test Steps
<Move>	<Test Case Name >								----		
FIR-T10 (1)	Test Case 10	Description for Test Case 10			Performance Test Case	EXT-1	FIR-T2 (1), FIR-T3 (1)	FIR-T1 (1), FIR-T5 (1), FIR-T8 (1)	FIR-R1 (1), FIR-R2 (1), FIR-R18 (3)	FIR-2, FIR-1	5
FIR-T9 (1)	Test Case 9	Description for Test Case 9			Performance Test Case	EXT-2	FIR-T6 (1), FIR-T5 (1)	FIR-T4 (1), FIR-T1 (1)	FIR-R7 (1), FIR-R8 (1), FIR-R18 (3), FIR-R15 (1)	FIR-5, FIR-6, FIR-19	2
FIR-T8 (1)	Test Case 8	Description for Test Case 8	Sub System 1	UI Testing	Performance Test Case	EXT-3	FIR-T10 (1), FIR-T5 (1)	FIR-T8 (1), FIR-T1 (1), FIR-T4 (1)	FIR-R6 (1), FIR-R5 (1), FIR-R15 (1)	FIR-19, FIR-7, FIR-19	4
FIR-T7 (1)	Test Case 7	Description for Test Case 7	Sub System 1 / Component 1.1	DB Testing / MySQL	Performance Test Case	EXT-4		FIR-T4 (1)		FIR-15	
FIR-T6 (1)	Test Case 6	Description for Test Case 6	Sub System 1 / Component 1.2	DB Testing / MySQL	Functional Test Case	EXT-5	FIR-T8 (1)	FIR-T9 (1)		FIR-4, FIR-5	
FIR-T5 (1)	Test Case 5	Description for Test Case 5	Sub System 2 / Component 2.1	DB Testing / PostgreSQL	Functional Test Case	EXT-6	FIR-T10 (1)	FIR-T8 (1), FIR-T9 (1)		FIR-14	
FIR-T4 (1)	Test Case 4	Description for Test Case 4			Functional Test Case	EXT-7	FIR-T8 (1), FIR-T7 (1), FIR-T5 (1)		FIR-R8 (1), FIR-R7 (1)	FIR-18, FIR-17	

Now Showing 1 to 11 of 11 rows First Previous 1 Next Last

Multiple Perspectives are possible

User Views

A user can

- Enable only the perspective relevant to him / her, while there may be many perspectives defined in the system.
- Select the labels (using filter functionality) to narrow down the list of relevant test cases. For example, a tester may be interested only in the test cases of a specific Component.

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Test Cases

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ID	Name	Description	System Hierarchy	Test Case Type	Categories	External-ID	Depends On	Dependents	Requirements	Artifacts	Test Steps
<Move>	<Test Case Name >								----		
FIR-T8 (1)	Test Case 8	Description for Test Case 8	Sub System 1	UI Testing	Performance Test Case	EXT-3	FIR-T10 (1), FIR-T5 (1)	FIR-T6 (1), FIR-T1 (1), FIR-T4 (1)	FIR-R5 (1), FIR-R6 (1), FIR-R15 (1)	FIR-7, FIR-19	4
FIR-T7 (1)	Test Case 7	Description for Test Case 7	Sub System 1 / Component 1.1	DB Testing / MySQL	Performance Test Case	EXT-4		FIR-T4 (1)		FIR-15	

Now Showing 1 to 3 of 3 rows First Previous 1 Next Last

Limitations of Hierarchical View

1. This mechanism may not be suitable, when the hierarchy is very large, say of the order of 1000's
2. Since the options are defined by Administrator and cannot be dynamically created by end user; this solution will work only when the updates to the hierarchy are not very frequent.
3. It may not be possible to restrict the permissions for a subset of test cases.