Test Coverage

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Within a Requirement issue, a web panel named "Test Coverage" is provided by Xray. This panel allows users to cover an issue with Tests (or Test Sets) and also analyze the status of the requirement in terms of testing based on the latest execution results for different scopes.

This web panel will only be available if the issue type is mapped as a Requirement issue type in Xray global configuration. The project must also be enabled for Requirement Coverage.

In this panel, you can perform actions such as creating *Tests* automatically linked to the requirement and/or link existing *Tests* and *Test Sets* to the requirement. *Sub-Test Execution* issues can also be created directly from this location.

A data table is used to manage all the Tests and Test Stets that are associated with the issue. The data table can be filtered, sorted and configured by setting the visible columns. Using the data table is also possible to remove Tests (or Test Sets) individually or via bulk action.

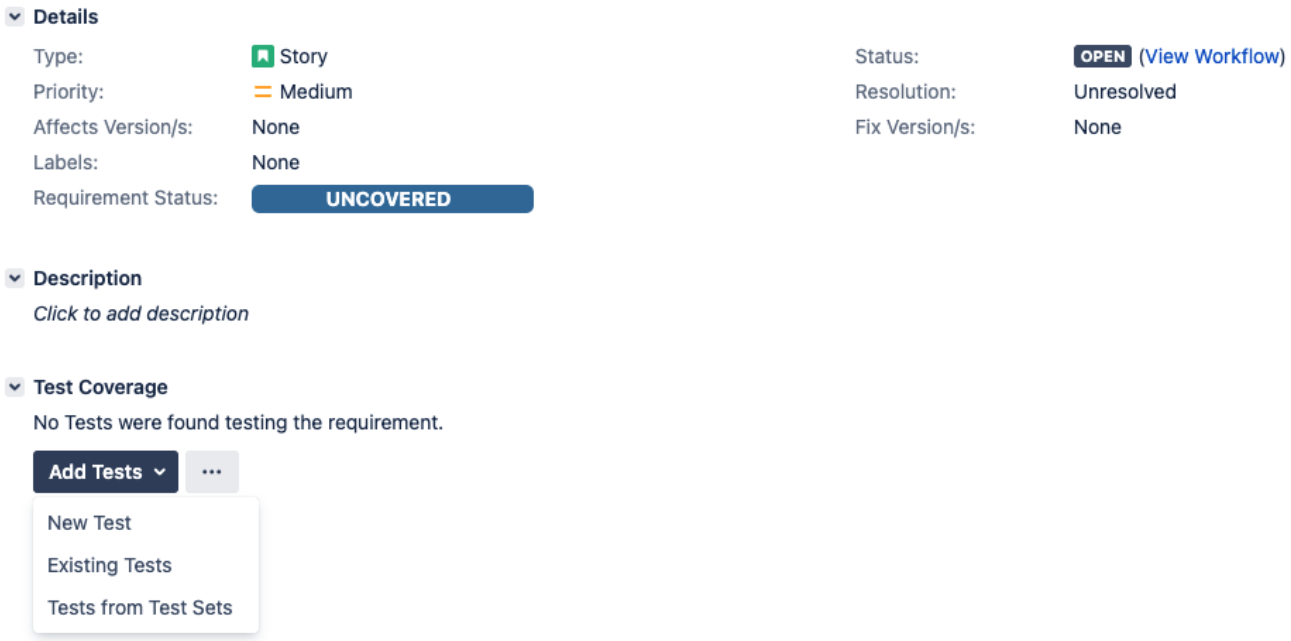
What about defects?

Defect issues can also be covered by Test cases just like Requirements. In this case, the defect issue types (e.g. Bug) must also be mapped as a Requirements issue types in Xray global configuration.

How to cover a Requirement

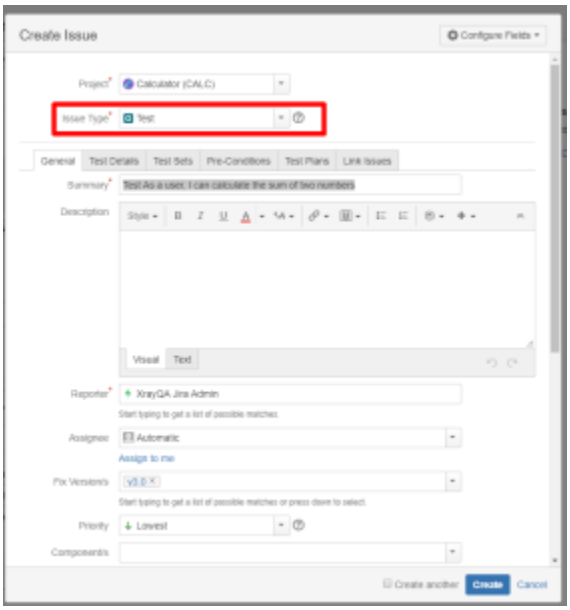
In order to cover a requirement issue with Test cases, you need to create Jira issue links between the requirement and Test or Test Set issues. It is also possible to create new Tests directly from the Requirement issue.

- Create Tests
- Associate Tests or Test Sets (using the Xray issue picker)
- Associate Tests or Test Sets (using plain Jira issue Links)



Create Tests

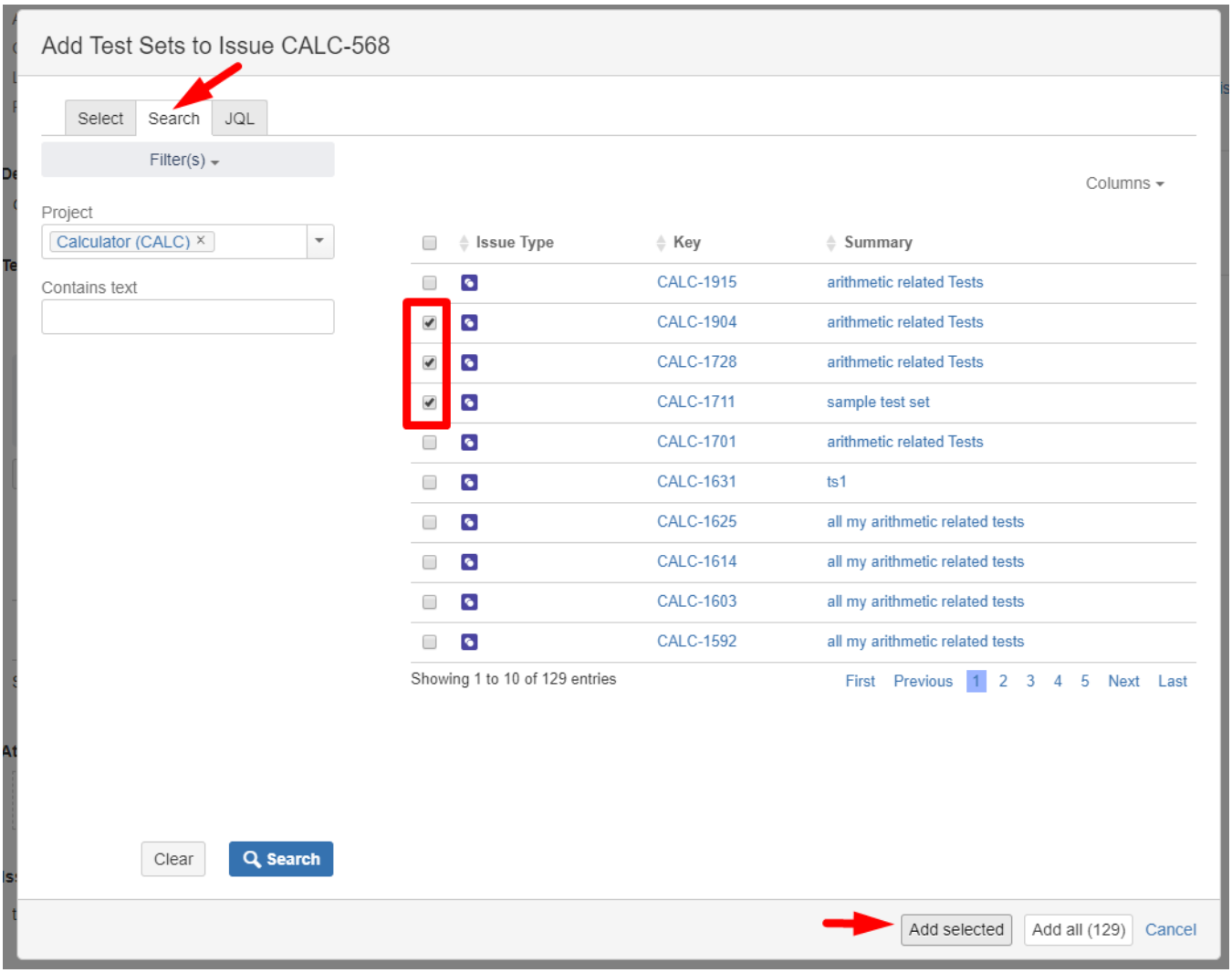
This action allows you to access the create issue dialog, with some preset field values such as "Test" issue type and link to the requirement issue.



Associate Tests or Test Sets (using the Xray issue picker)

This option allows you to create Jira issue links between the Requirement and Test or Test Set issues thus covering the requirement with Test cases.

This operation can be performed using the Issue Picker Dialog which allows you to search, and select multiple issues to link with the Requirement. JQL searches are also possible. This dialog replaces the native Jira issue link dialog making it easy to associate Tests (or Test Sets) with requirement issues.



Associate Tests or Test Sets (using plain Jira issue Links)

Because the association between Requirement issues and Test (or Test Set) issues is done using Jira issue Links, you can just use the Jira issue linking actions as well.

Issue Link Types

Xray uses specific Jira issue link types for associating Requirements and Tests (or Test Sets). These issue link types are installed by Xray automatically. They are:

Tests	*outbound*: tests	*inbound*: tested by
Defect	*outbound*: created	*inbound*: created by

These issue link types can be used explicitly by users to associate Requirements with Tests.

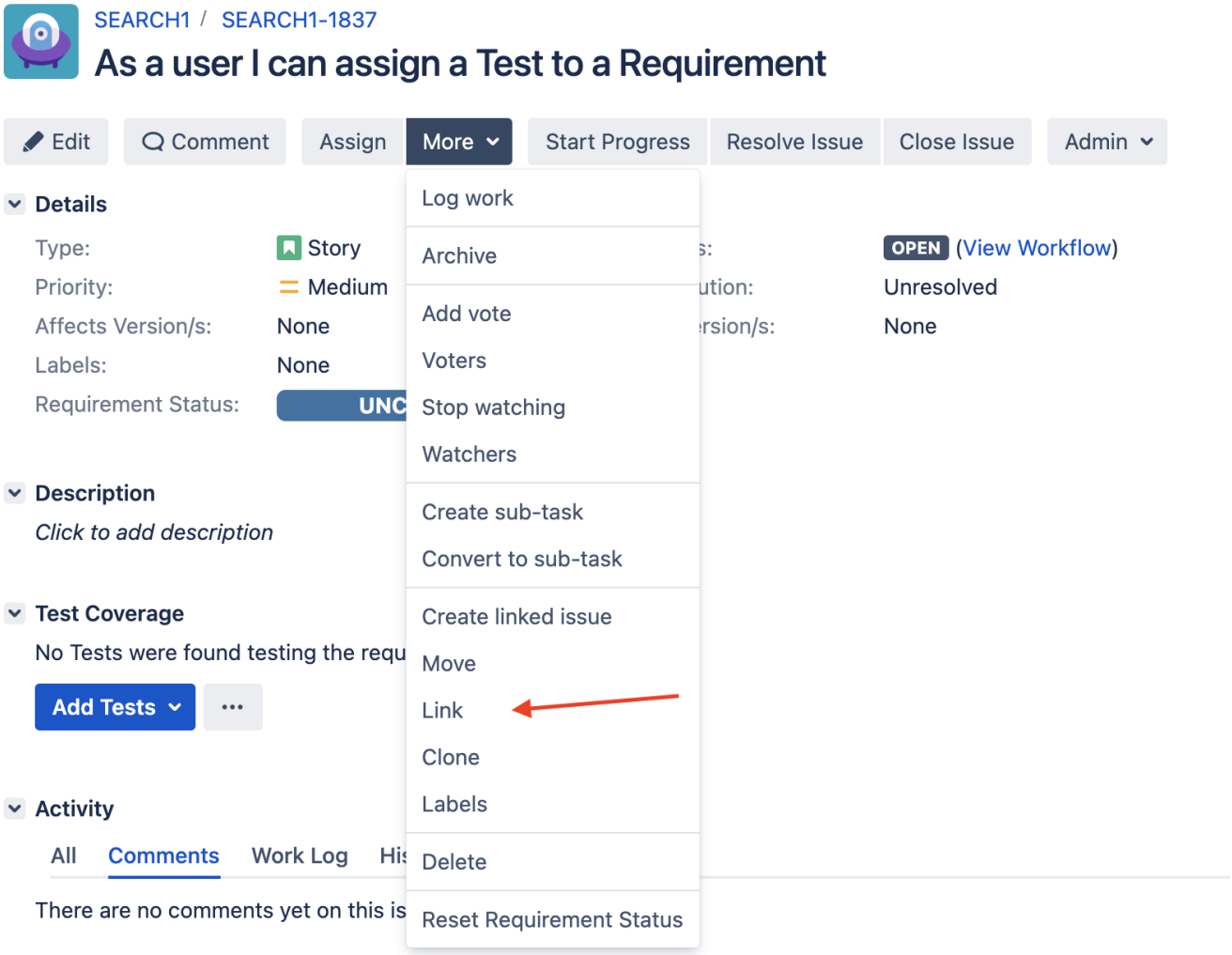
The **Defect** issue link type is used by Xray when defects are created upon executing tests. In this case, we have relations such as *Defect1* "**created by**" *Test1*.

Whenever creating Tests from Requirements or Defects, Xray will always default to the "**Tests**" issue link type.

From the Requirement issue view screen

Step 1: Open the Requirement you wish to associate a Test with. In the given example, New Feature issue types are mapped as Requirements.

Step 2: Select **More > Link.** The **Link** screen will appear.

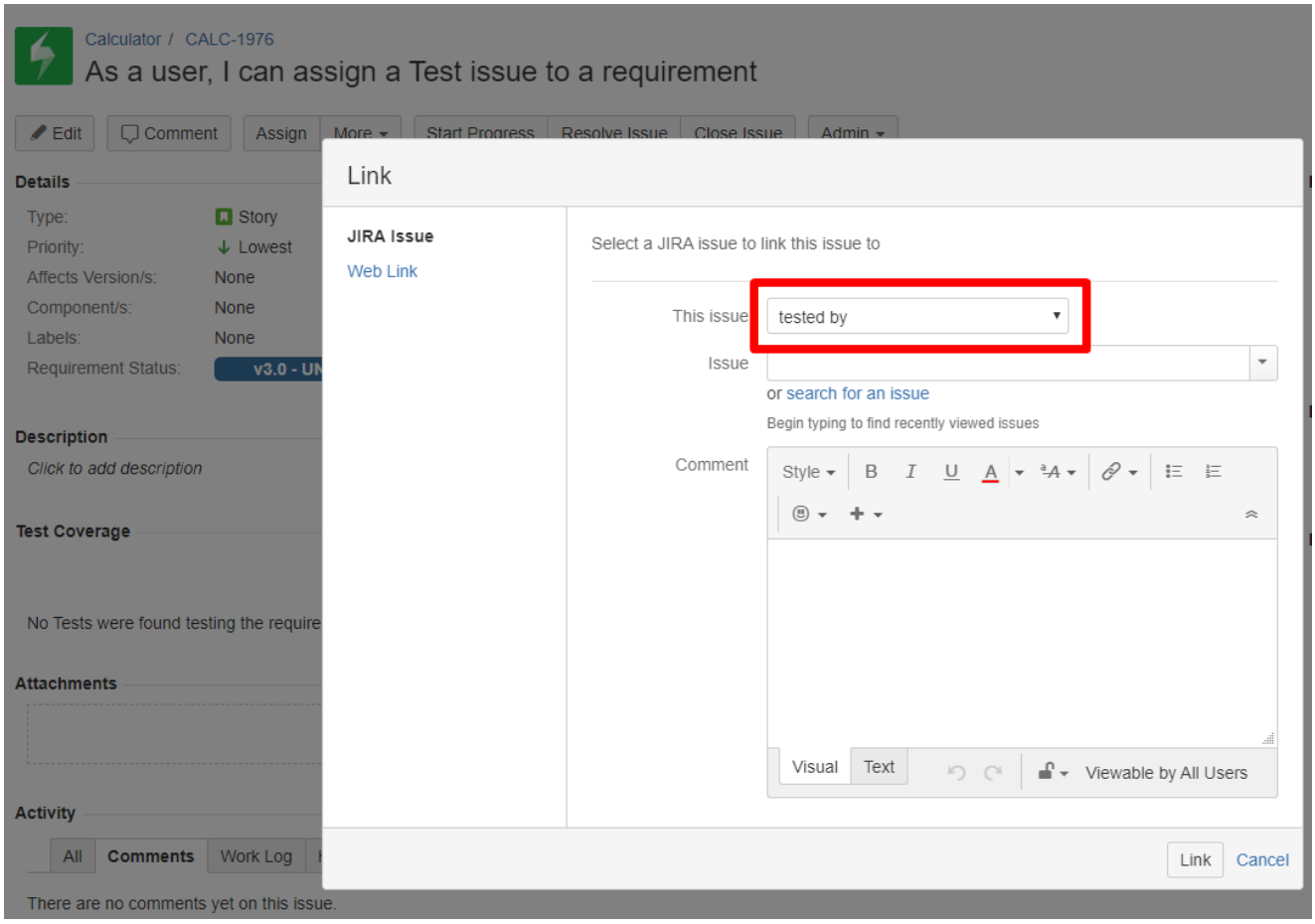


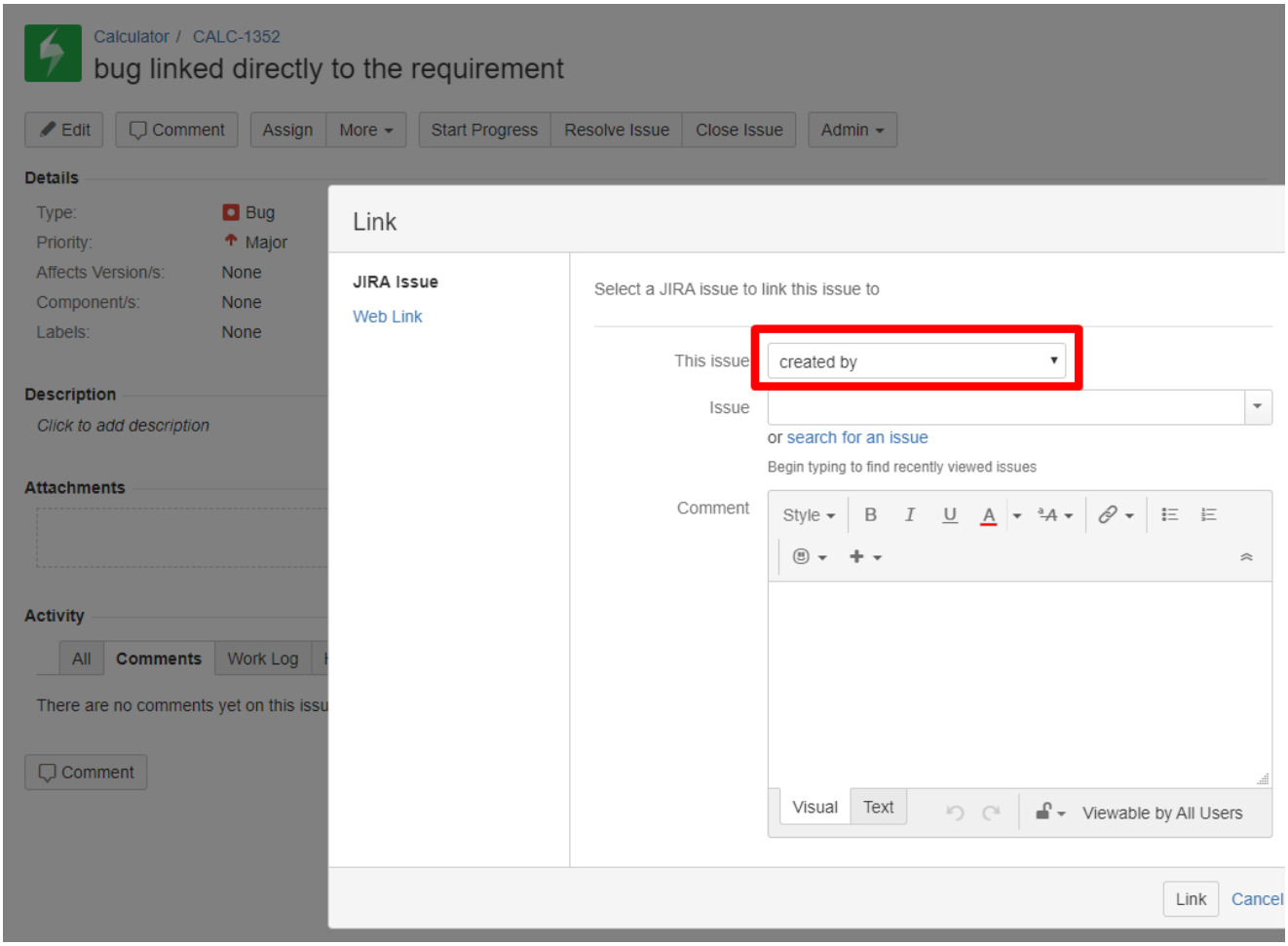
Step 3: On the **This issue** field, select the **tested by** option.

Step 4: In order to select the **Tests or Test Sets** to be associated, you can:

- Input the desired Test/Test Set **Issue Key** on the **Issue** field;
- Click on the **Down Arrow** on the Issue field and select the Test from its **History Search** list;
- Click on the **search for an issue** link to use the **Find Jira issues** browser;

Step 5: Click **Link**.

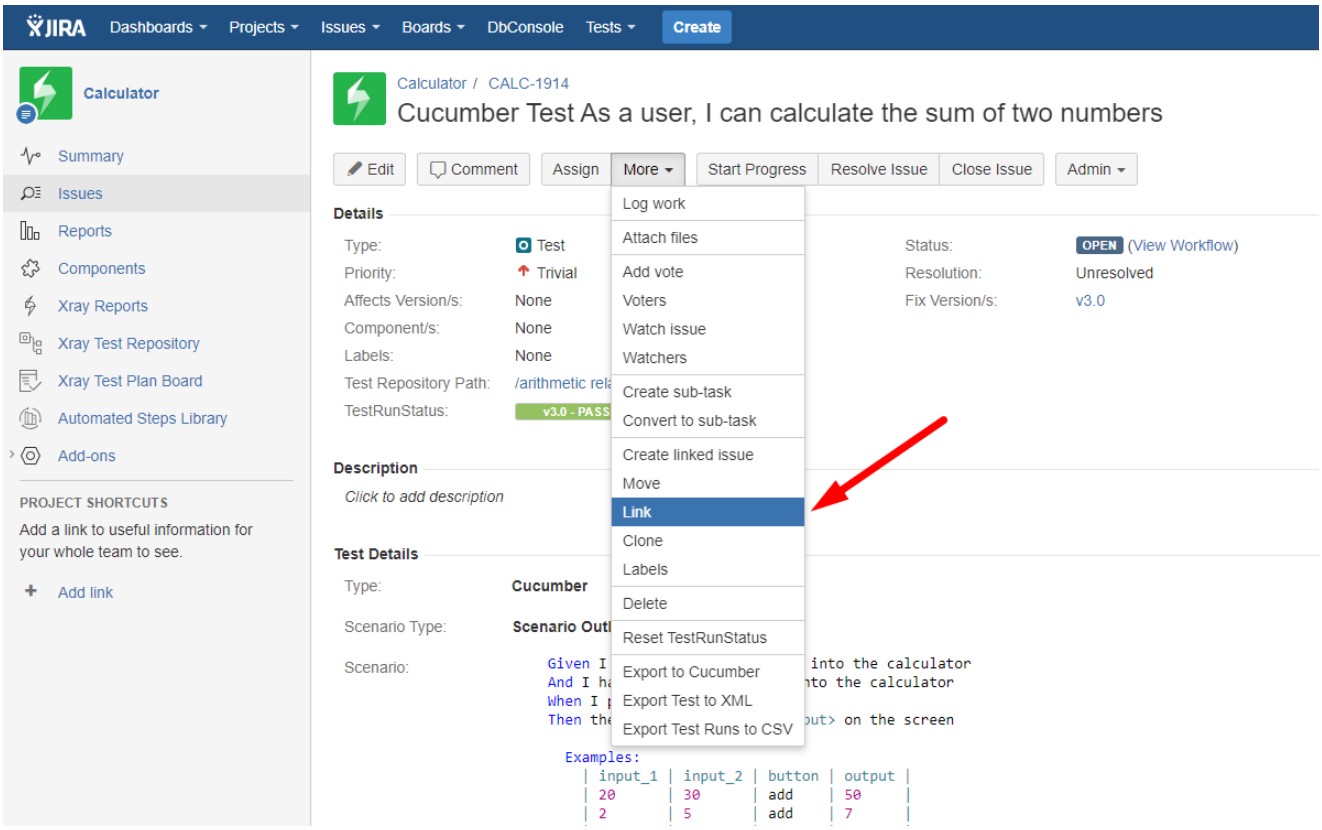

Calculator / CALC-1976
As a user, I can assign a Test issue to a requirement
Edit
Comment
Assign
More
Start Progress
Resolve Issue
Close Issue
Admin
Details
Type:
Story
Priority:
Lowest
Affects Version/s:
None
Component/s:
None
Labels:
None
Requirement Status:
Description
Click to add description
Test Coverage
No Tests were found testing the require
Attachments
Activity
All
Comments
Work Log
There are no comments yet on this issue.
Link
JIRA Issue
Web Link
Select a JIRA issue to link this issue to
This issue
tested by
Issue
or search for an issue
Begin typing to find recently viewed issues
Comment
Style
Visual
Text
Viewable by All Users
Link
Cancel



From the Test issue view screen

Step 1: Open the **Test** you wish to associate a **Requirement** with.

Step 2: Select **More > Link.** The **Link** screen will appear.

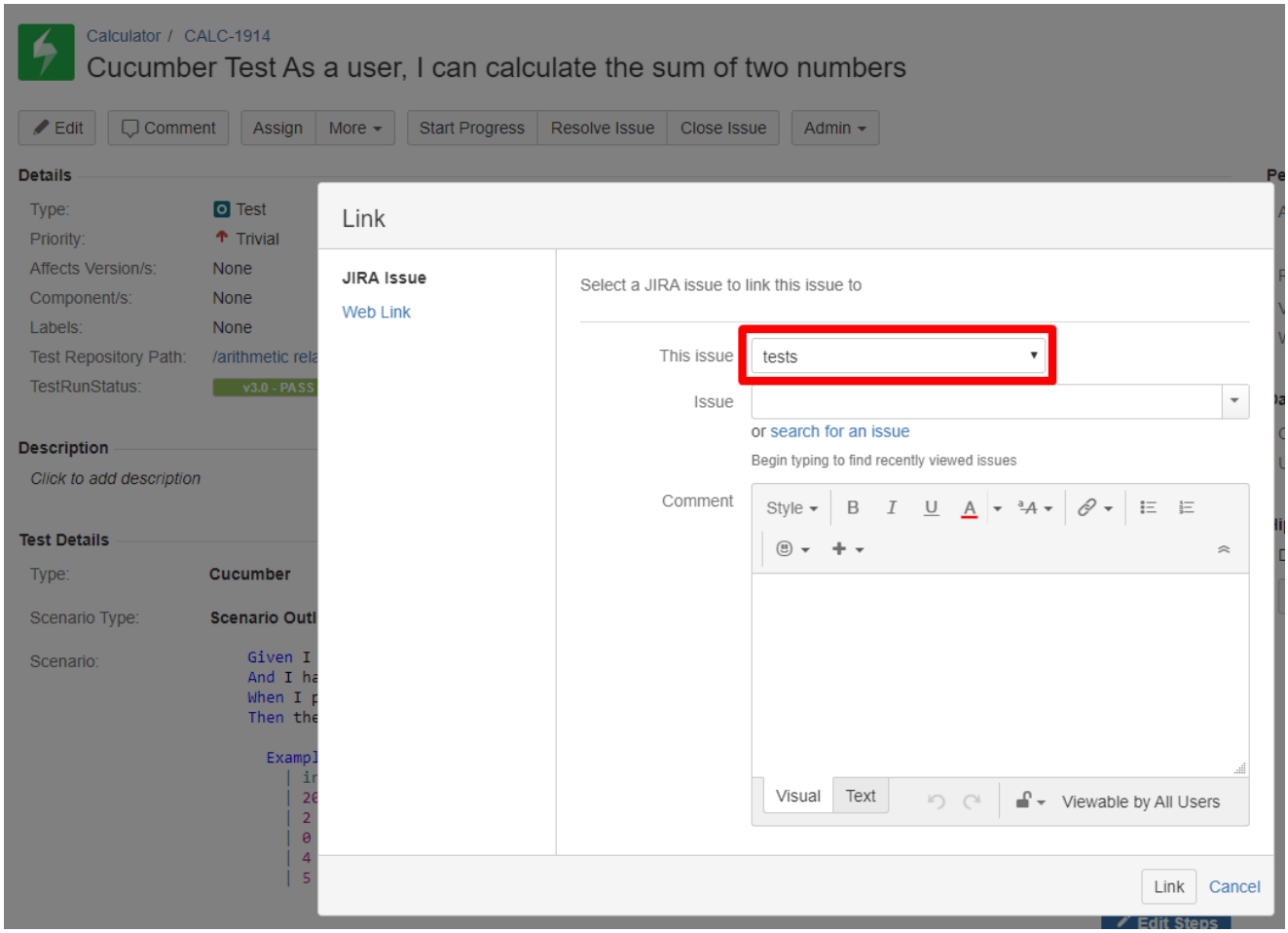


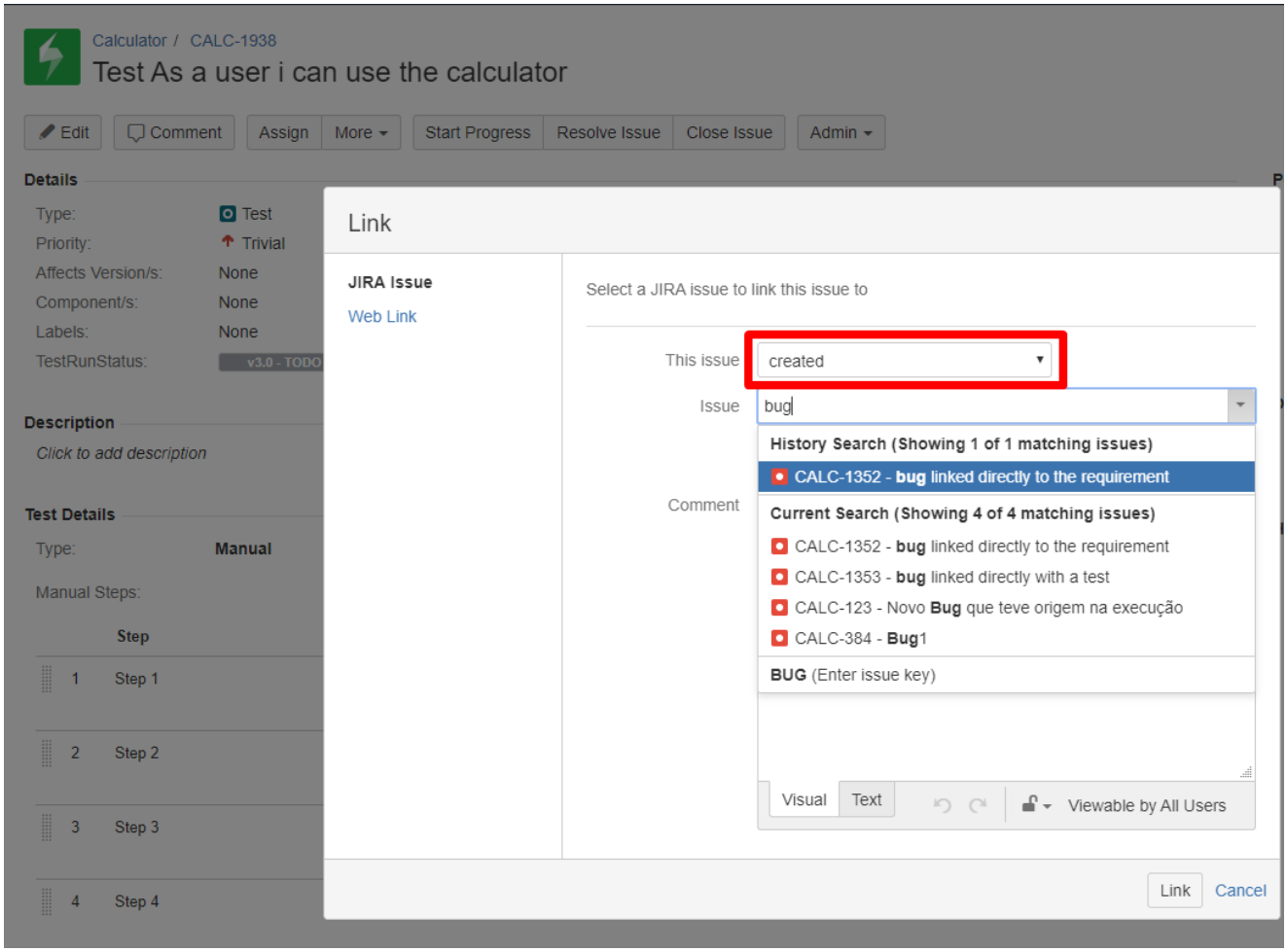
Step 3: On the "**This issue"** field, select the "**tests"** issue link type.

Step 4: In order to select the **Requirements** to be associated, you can:

- Input the desired Requirement **Issue Key** on the **Issue** field;
- Click on the **Down Arrow** on the Issue field and select the Requirement from its **History Search** list;
- Click on the **search for an issue** link to use the **Find Jira issues** browser;

Step 5: Click **Link**.


Calculator / CALC-1914
Cucumber Test As a user, I can calculate the sum of two numbers
Edit
Comment
Assign
More
Start Progress
Resolve Issue
Close Issue
Admin
Details
Type:
Test
Priority:
Trivial
Affects Version/s:
None
Component/s:
None
Labels:
None
Test Repository Path:
/arithmetic rela
TestRunStatus:
v3.0 - PASS
Description
Click to add description
Test Details
Type:
Cucumber
Scenario Type:
Scenario Outl
Scenario:
Given I
And I ha
When I p
Then the
Exampl
Link
JIRA Issue
Web Link
Select a JIRA issue to link this issue to
This issue
tests
Issue
or search for an issue
Begin typing to find recently viewed issues
Comment
Style
Visual
Text
Viewable by All Users
Link
Cancel
Edit Steps



Tests data table

Once you have already Tests or Test Sets covering a requirement issue, you'll be able to see a data table directly below the Test Coverage analysis scope section.

This data table contains all the Tests that are associated with the Requirement. Test Sets are automatically expanded. This means that all the Tests from Test Sets associated with the Requirement will be also displayed on the table direclty.

The rightmost column on this data table is the **status** column that displays the latest execution status of each Test, according to the analysis scope selected.

The data table features the following topics.

- Filtering
- Sorting
- Configurable Columns
- Removing Test Links

Filtering

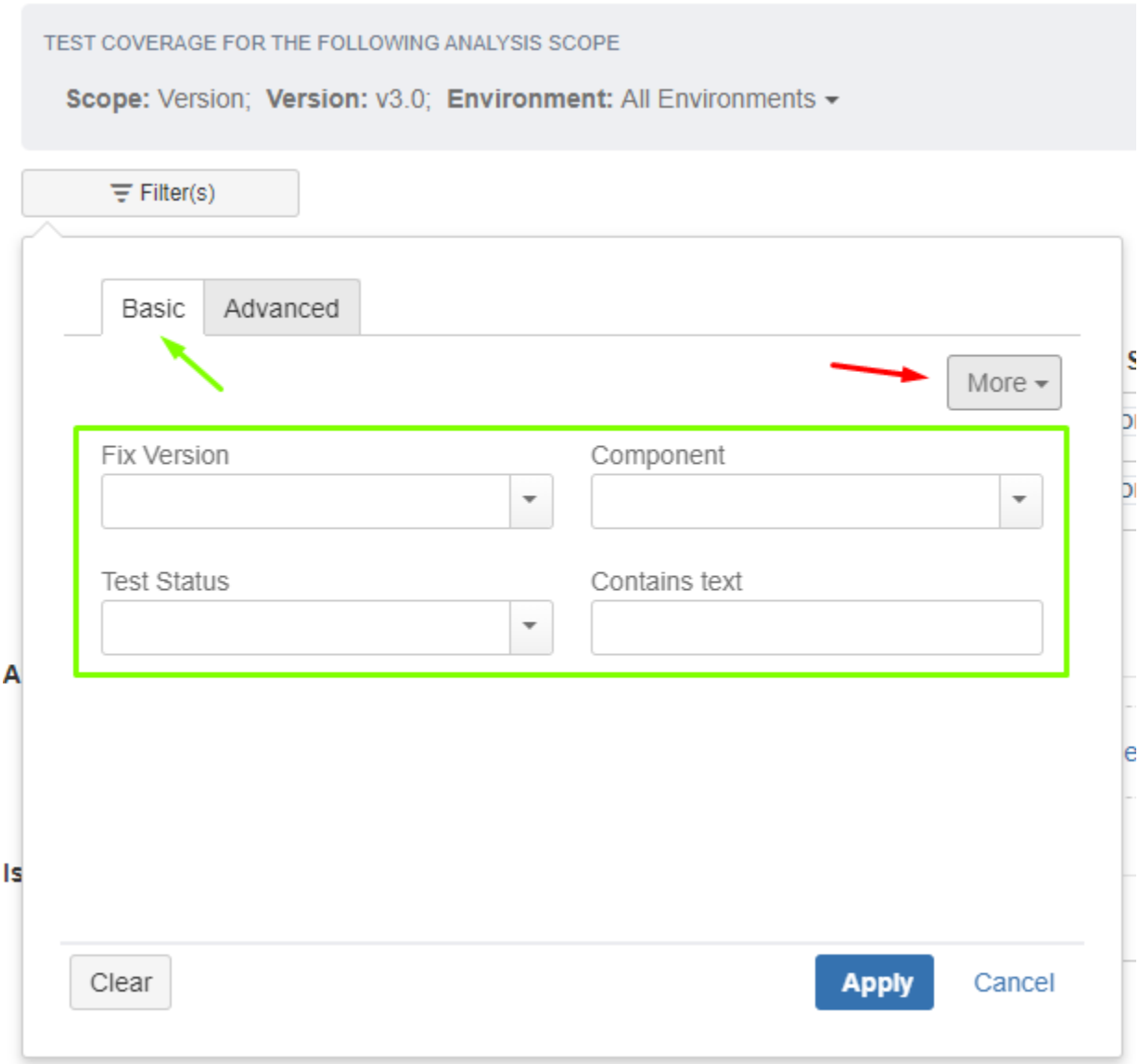
The tests presented as a result of the selected analysis scope can be filtered using a dynamic filter component.

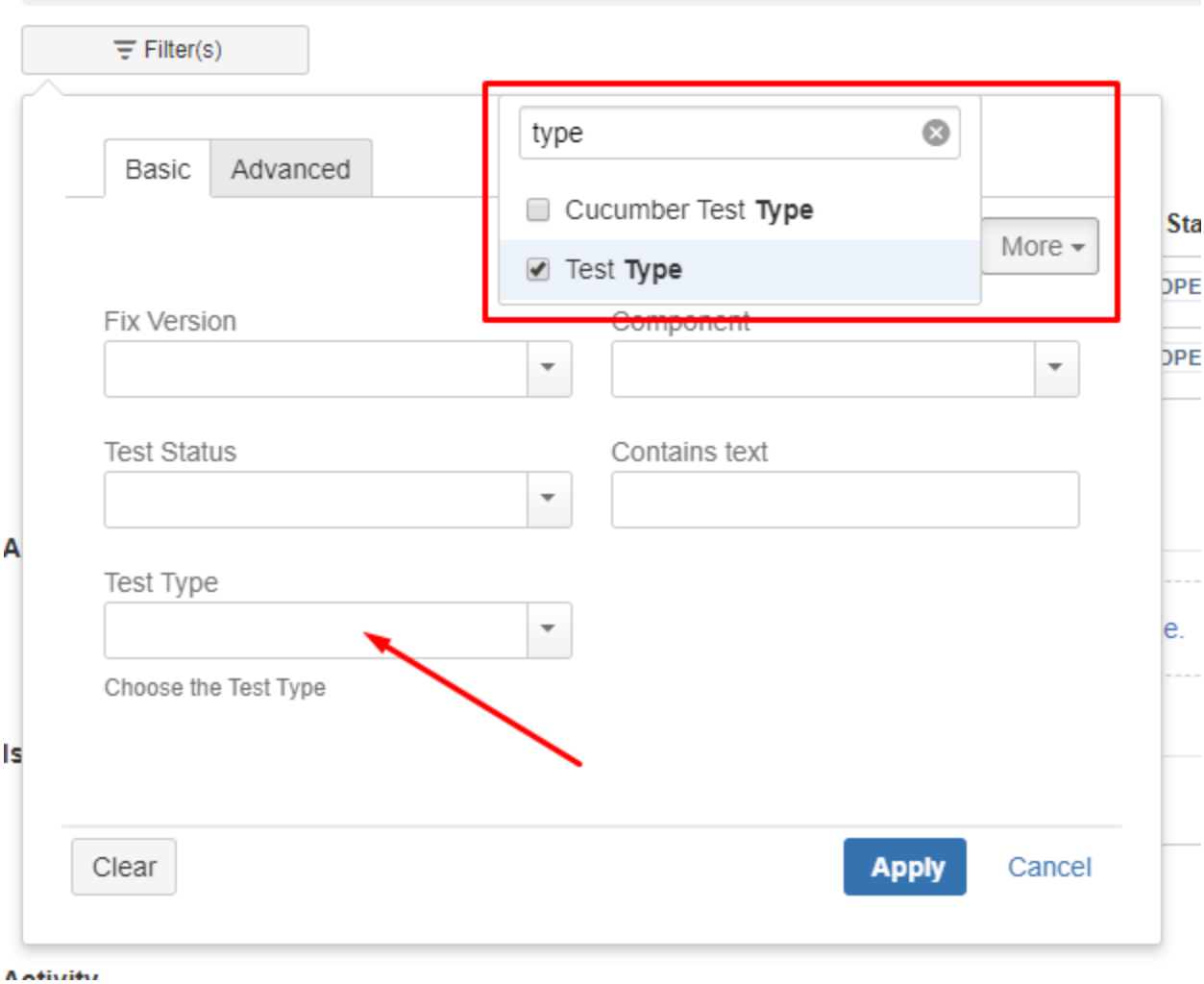
The dynamic filter component has the following operating modes:

- Basic
- Advanced
- Summary view

Basic

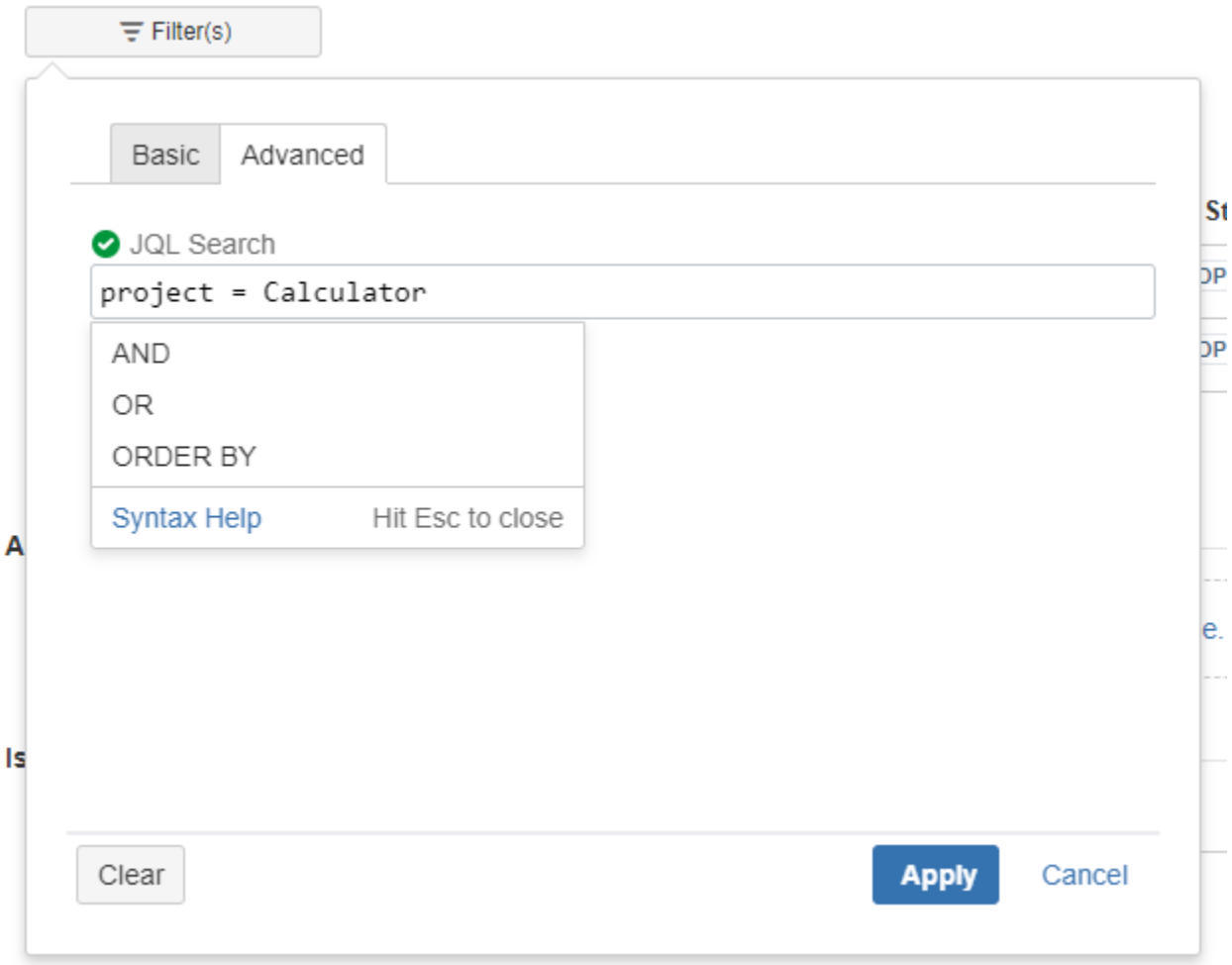
The Basic mode has a set of default fields but you can also search and select other fields from the More option.


TEST COVERAGE FOR THE FOLLOWING ANALYSIS SCOPE
Scope: Version; Version: v3.0; Environment: All Environments
Filter(s)
Basic
Advanced
More
Fix Version
Component
Test Status
Contains text
Clear
Apply
Cancel



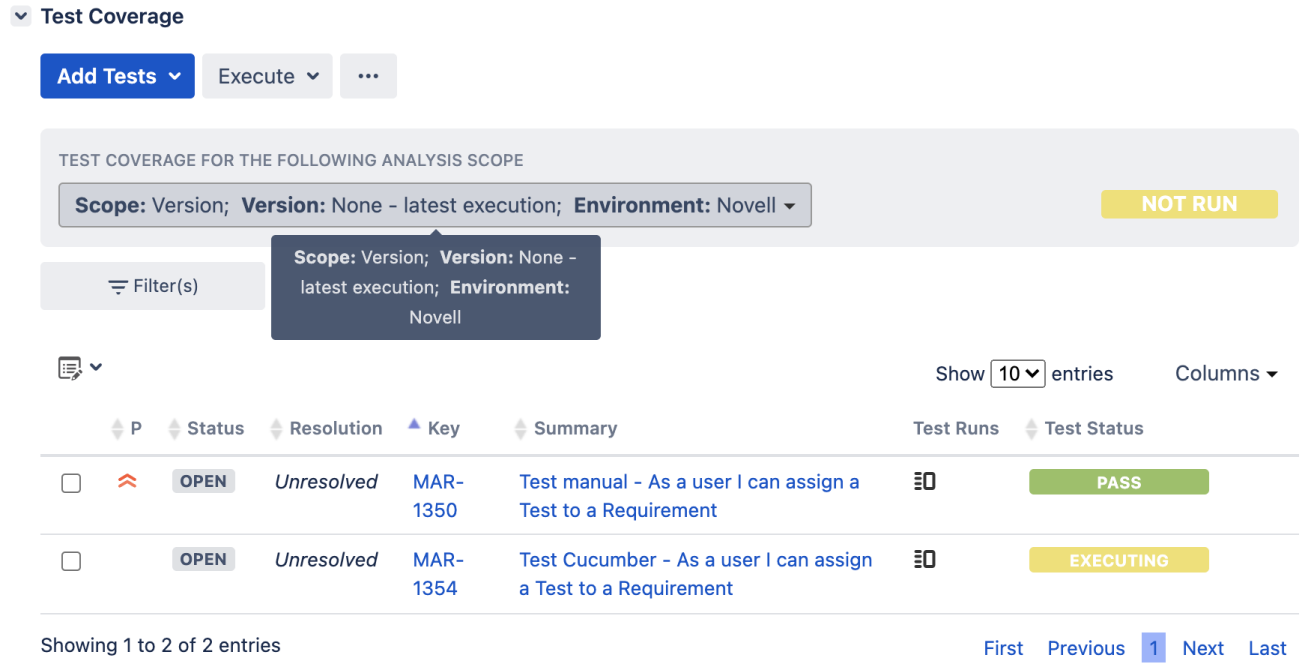
Advanced

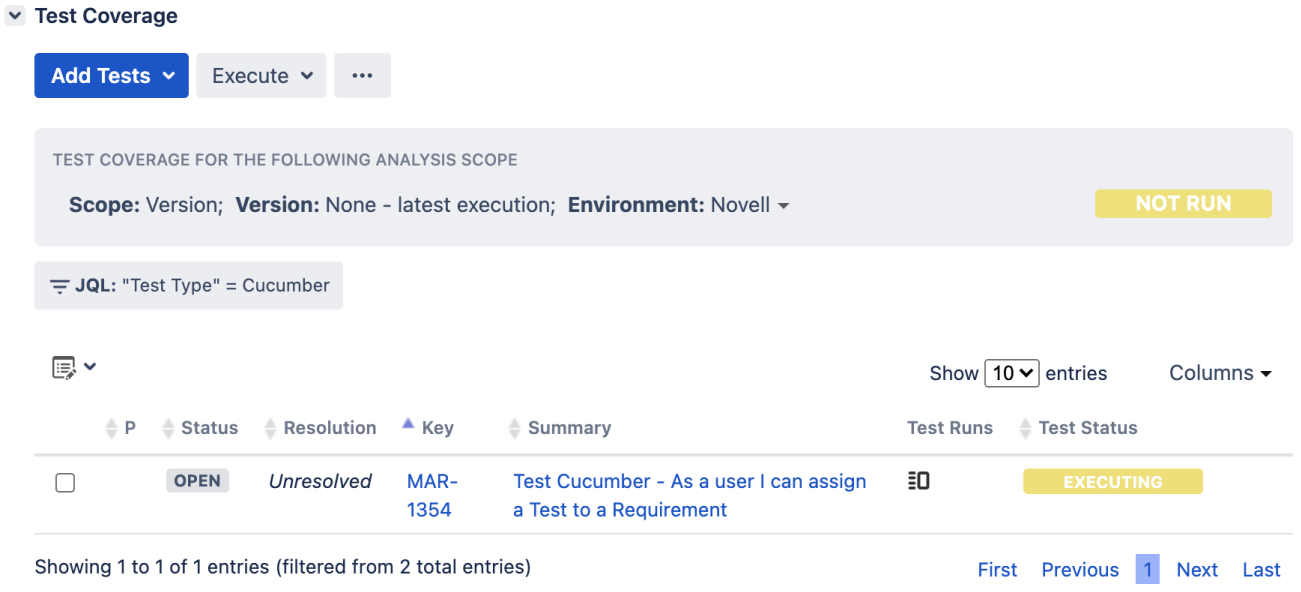
The Advanced mode allows you to search based on a specific JQL.



Summary view

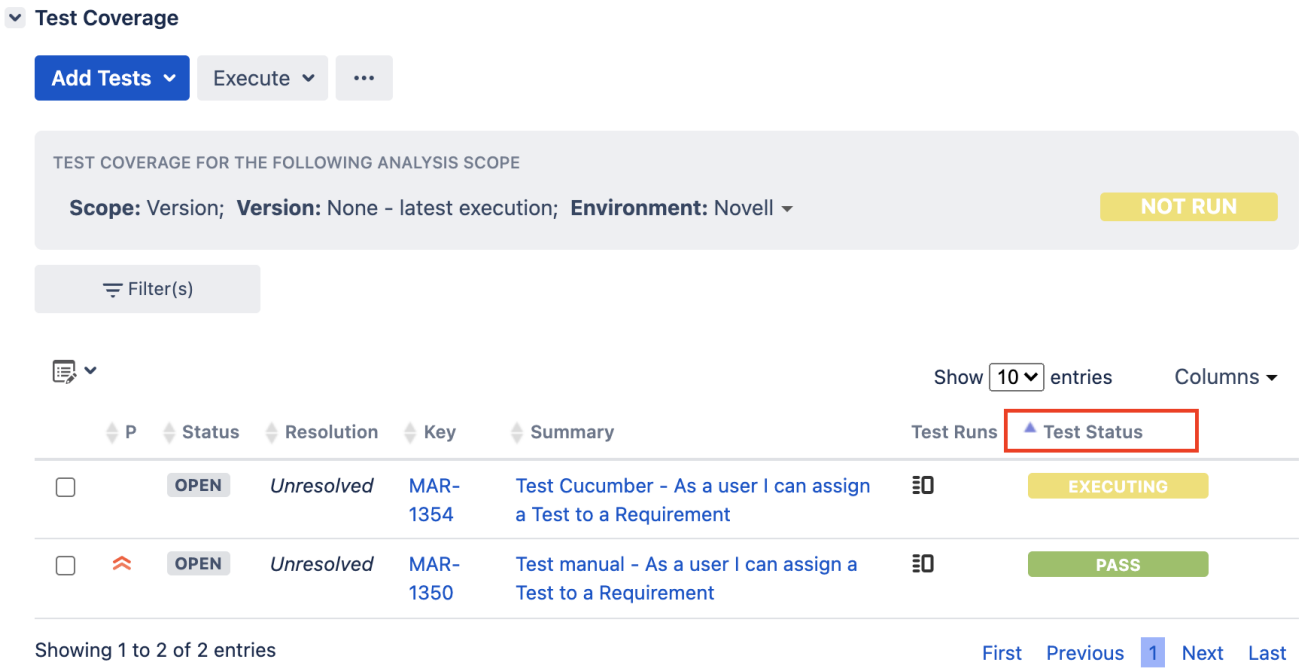
The summary view presents the field names and values applied in the active filter. When these exceed the available space "..." are added and all information is visible in the tooltip.





Sorting

The list can be sorted by the columns you can add or remove to and from the list using the Columns dropdown menu.

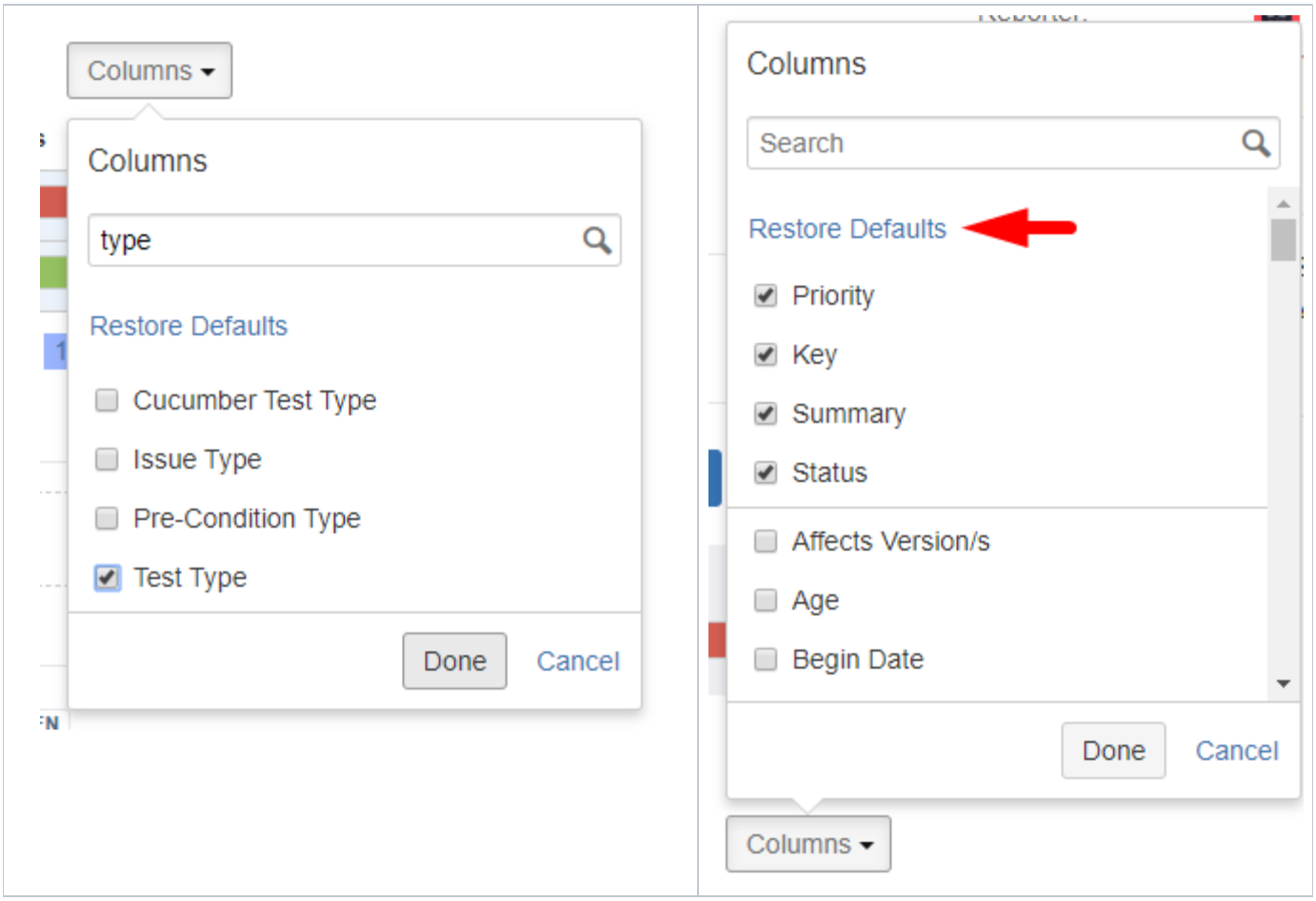


Sort preferences

The list sort criteria is kept in user preferences.

Configuring Columns

Columns can be quickly **added** to the list using the columns search, this allows to locate and select the desired field(s) in a practical manner.	Columns can also be quickly **removed** from the list using the Restore Defaults link or by unselecting the undesired field(s).



Restore Defaults

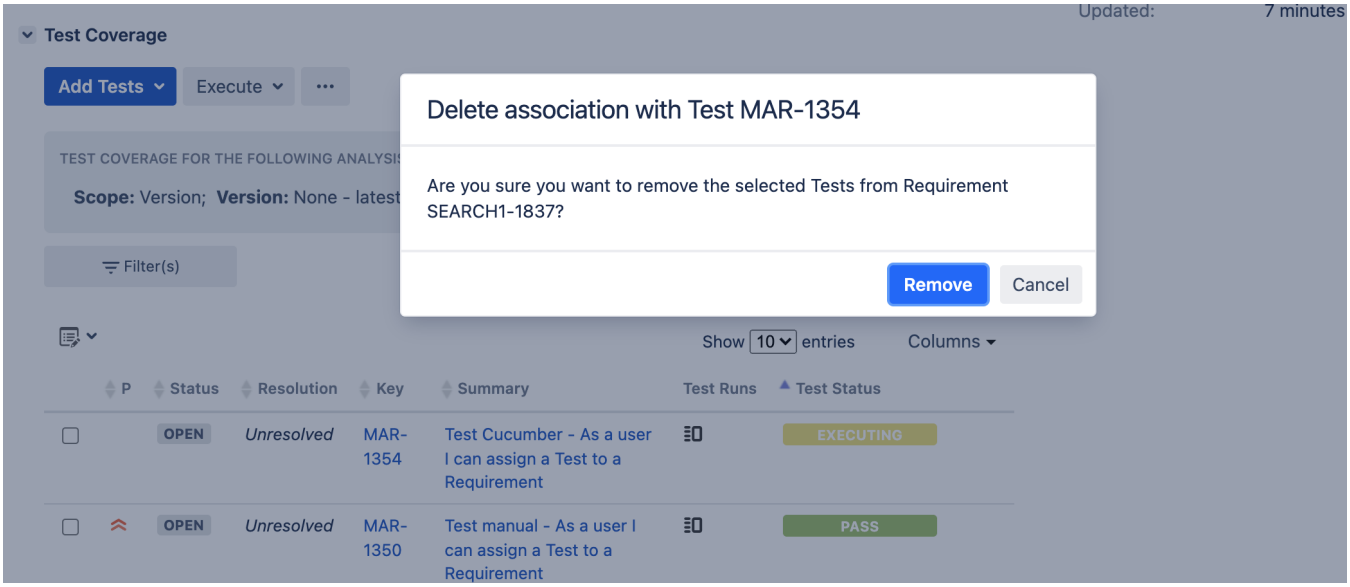
The changes made to the selected columns are kept in user preferences if you wish to change the defaults those are set in Xray Administration > Default Column Layouts under the Test Coverage Columns field.

Removing Test Links

A linked test can be removed directly in the test coverage list using the following operations:

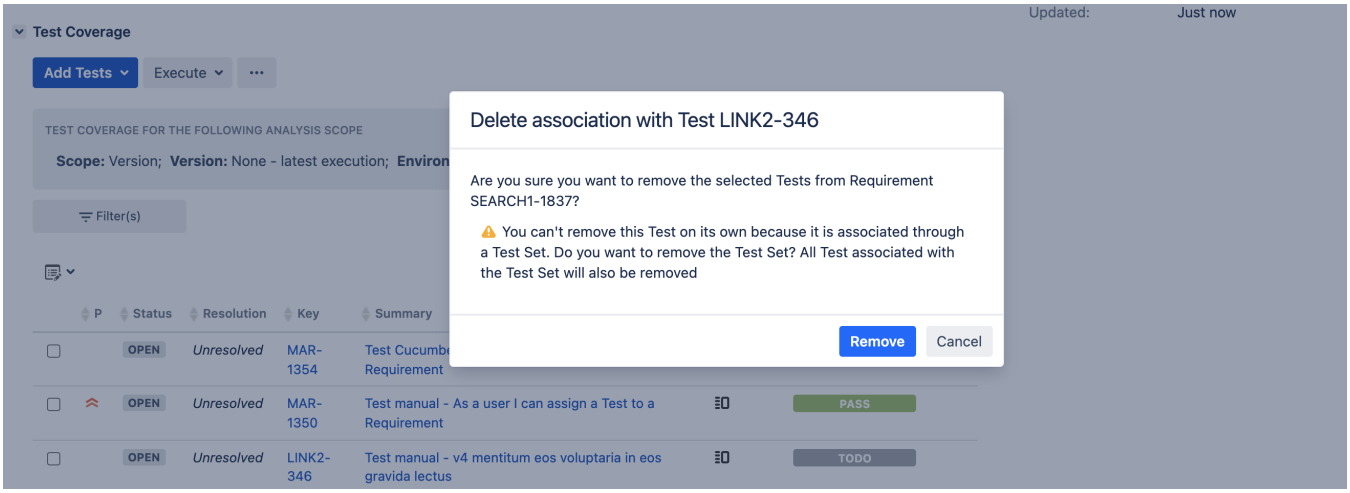
Inline remove

A confirmation message is always presented. When the selected test was added via a Test Set link, it cannot be removed separately, so by confirming the operation, the test set link to the requirement as well as the links to all the tests it includes will be removed.



Bulk selection for removal

A confirmation message is always presented. When within the selected tests, are tests that were added via a Test Set link(s), they cannot be removed separately, so by confirming the operation, the test set link(s) to the requirement as well as the links to all the tests they include will be removed.



Analyzing Test Coverage

Xray makes it very easy to analyze the status of a Requirement in terms of testing. The status of a Requirement is clearly visible on the Test Coverage web panel.

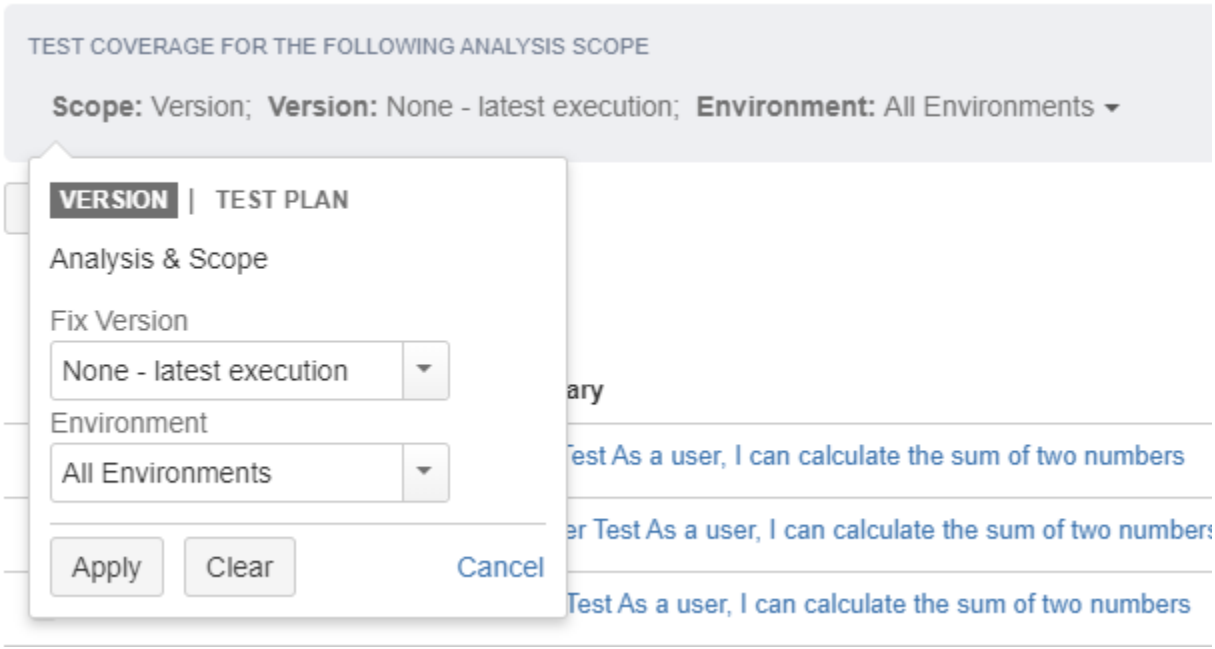
The coverage status can be calculated for different analysis scopes.

The test coverage analysis scope is based on:

- Version
- Test Plan

In combination with all or a specific Environment.

Once the analysis scope is changed, the status is automatically recalculated for the new scope. The status of the Tests within the data table will also be affected by the selected analysis scope.

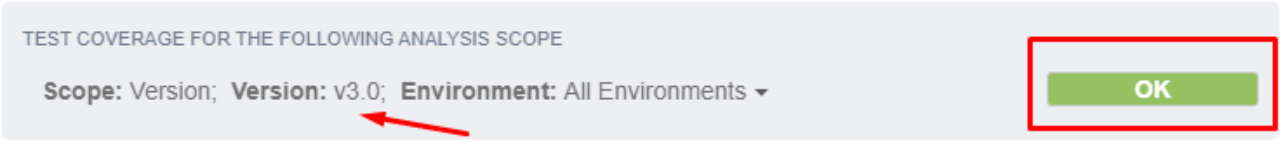


Analysis Scope preferences

The user analysis scope preferences are kept, per project and based on the last configuration.

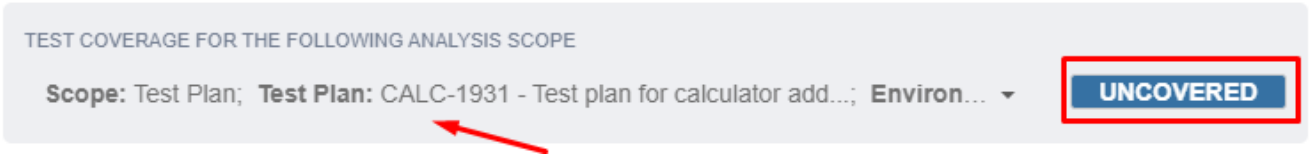
Version

When the analysis scope is set per version it allows you to see the Requirement status for each project´s version.



Test Plan

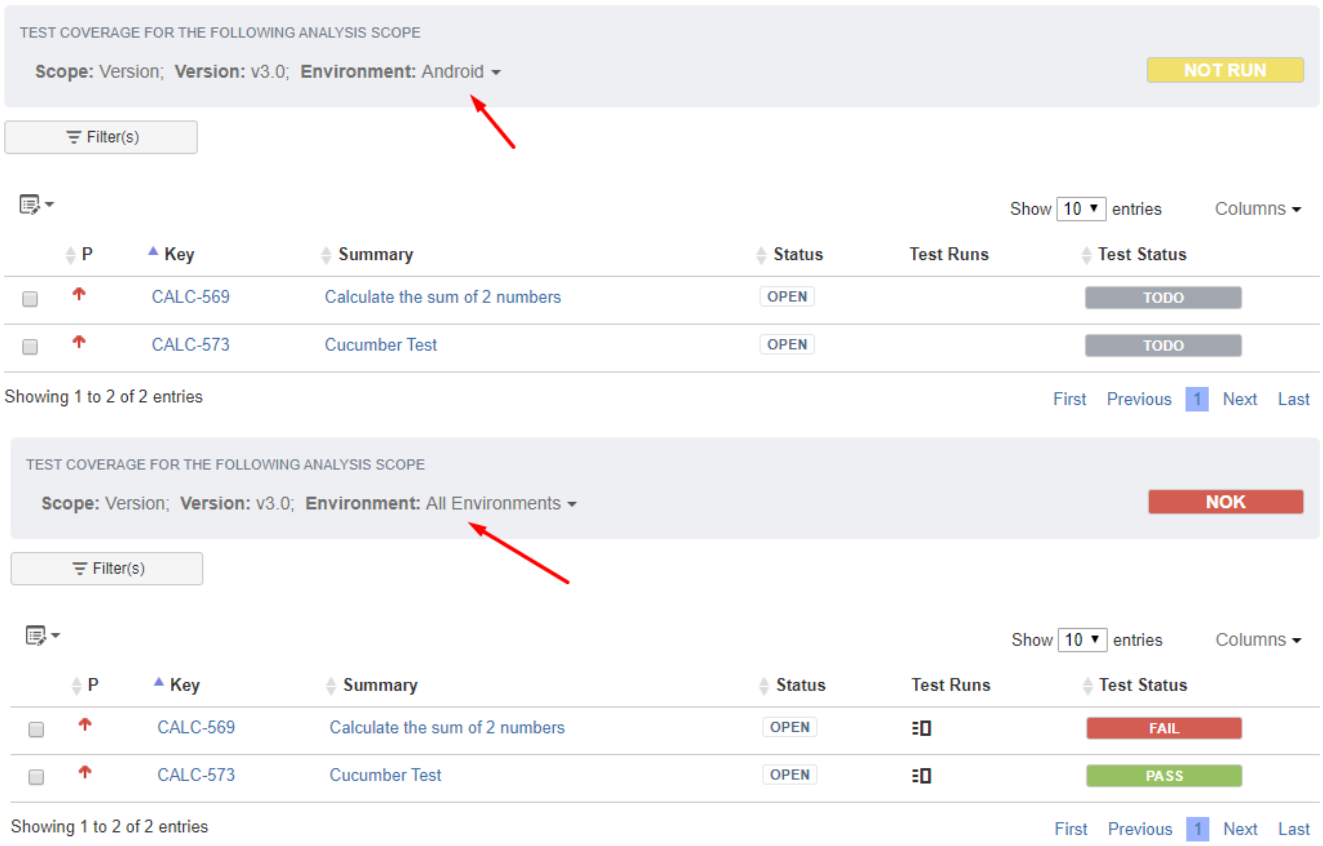
When the analysis scope is set per Test Plan it allows you to see the Requirement status for the selected Test Plan.



Environments

The statuses presented in the context of an analysis scope also depend on the Environments.

Therefore you can see both the requirement status and the test statuses based on the combination of scope and test environment you have selected.

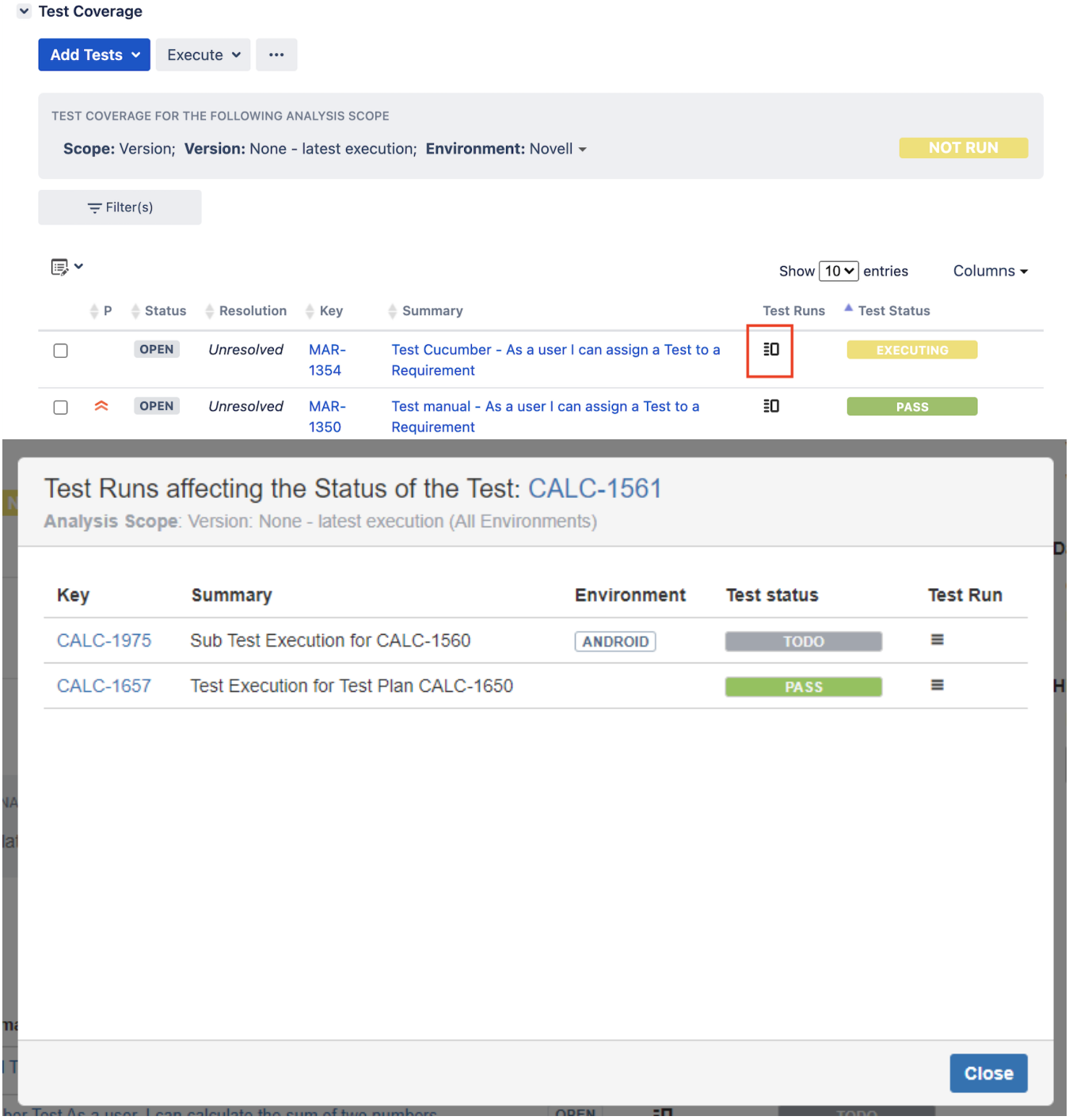


Test Runs

The Test Runs column will present the link to the Test Run affecting a particular status of a Test.

If only a given Test Run is responsible for the result (no environments are involved), then the link should take the user directly to the Test Run page otherwise it will present a dialog listing all the Test Runs affecting the status.

The user can then click on the Test Run to go to the execution page.



Coverage Analysis

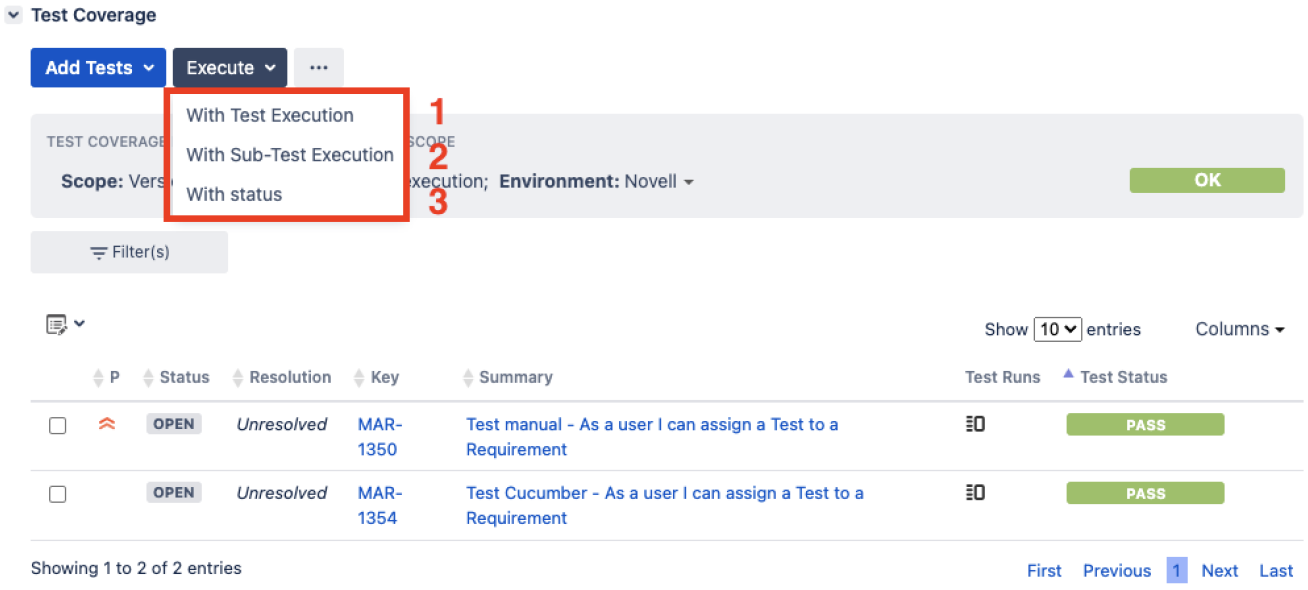
For more details, please check the Coverage Analysis page. Here you can find all the areas where you can take advantage of the coverage analysis such as the entities (Requirements, Tests, Test Sets) and also reports.

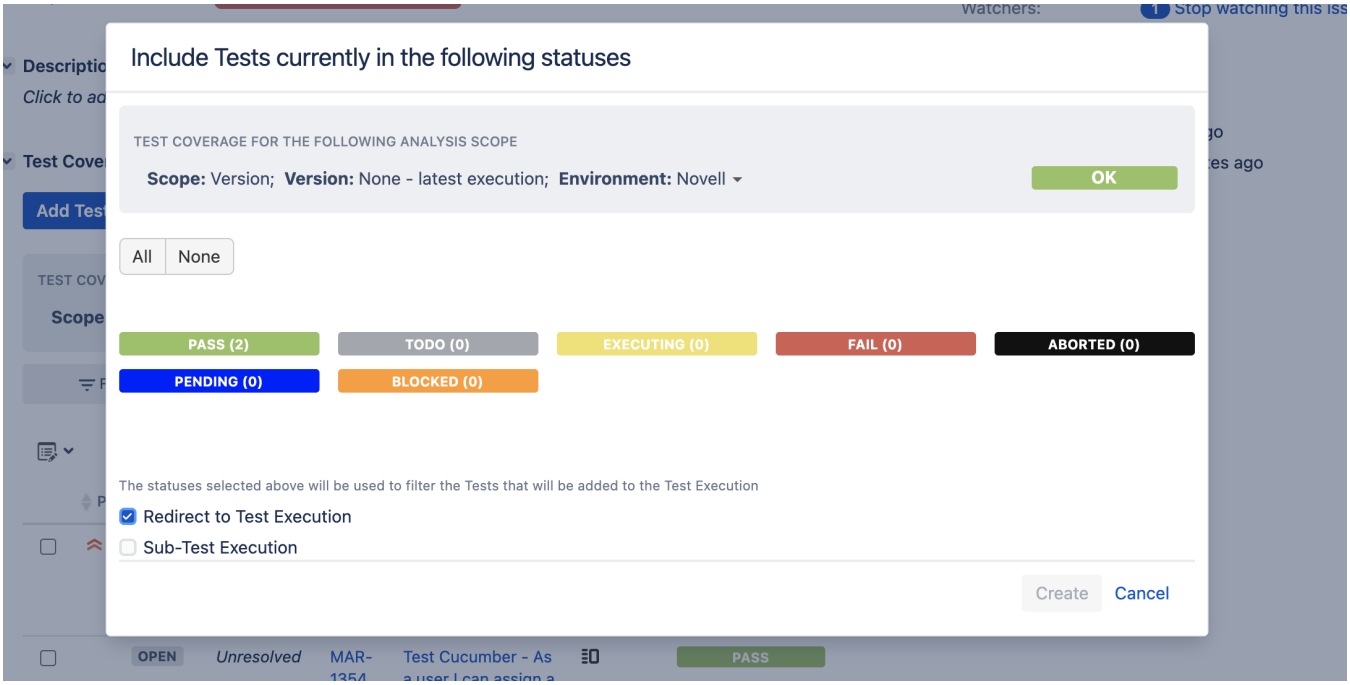
Also, make sure to check the Understanding coverage and the calculation of Test and requirement statuses TTT article if you need to learn how is the Coverage status calculated in more detail.

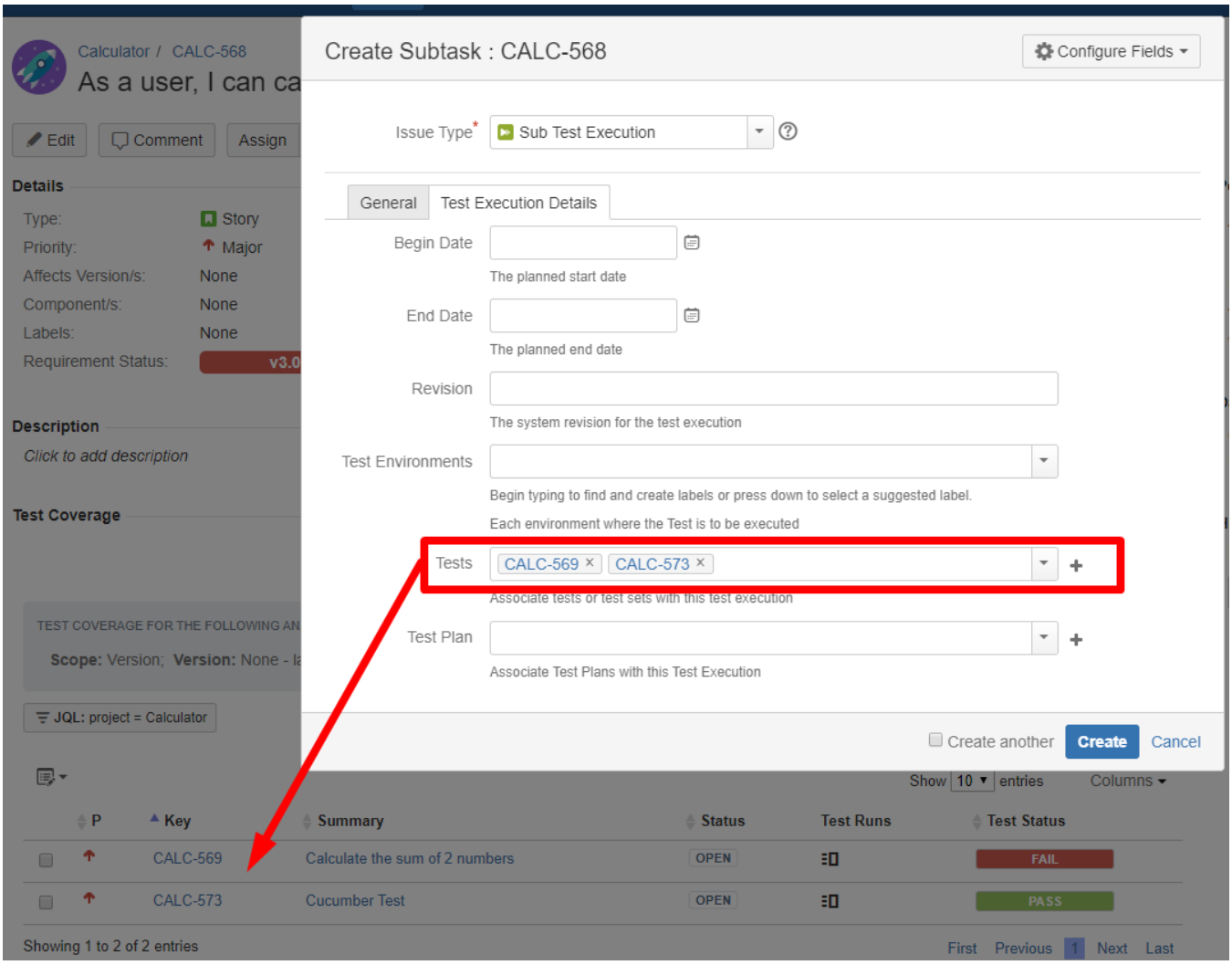
Creating Test Execution / Sub-Test Executions

This action allows you to create a Test Execution (1) or a Sub-Test Execution (2) with some preset field values such as the links to all the tests currently covering the requirement issue. You can also create a Test Execution/Sub-Test Execution with a subgroup of the tests based on their status (3).

This action is useful if you create one Test execution per Requirement issue. Working in an agile context, this is a usual pattern. If you are using Scrum or Kanban boards in Jira, creating Test Executions / Sub-Test Executions allows the Tests to be just another work item for a given Requirement.






Calculator / CALC-568
As a user, I can ca
Edit
Comment
Assign
Details
Type: Story
Priority: Major
Affects Version/s: None
Component/s: None
Labels: None
Requirement Status:
Description
Click to add description
Test Coverage
TEST COVERAGE FOR THE FOLLOWING AN
Scope: Version; Version: None - la
JQL: project = Calculator
Create Subtask : CALC-568
Configure Fields
Issue Type* Sub Test Execution
General
Test Execution Details
Begin Date
The planned start date
End Date
The planned end date
Revision
The system revision for the test execution
Test Environments
Begin typing to find and create labels or press down to select a suggested label.
Each environment where the Test is to be executed
Tests CALC-569 × CALC-573 ×
Associate tests or test sets with this test execution
Test Plan
Associate Test Plans with this Test Execution
Create another
Create
Cancel
Show 10 entries
Columns
P
Key
Summary
Status
Test Runs
Test Status
CALC-569
Calculate the sum of 2 numbers
OPEN
FAIL
CALC-573
Cucumber Test
OPEN
PASS
Showing 1 to 2 of 2 entries
First
Previous
1
Next
Last