Integration with Structure



Xray offers integration with Structure, enabling the ability to manage Test Sets, Test Executions and Test Plans.

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 - Show requirement and test statuses
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 - Show status overview of Tests contained within Test Sets

Features and Limitations

The current integration allows you to:

- see the Tests associated with a Test Set, Test Execution, Test Plan or Pre-conditions in the Structure Tree
- add/remove Tests to Test Sets, Test Executions or Test Plans by dragging Tests or Test Sets to other Test Sets, Test Executions Test Plans or Pre-conditions
- see and manage the association between Tests and requirements (supported indirectly by Structure)
- see Sub-Test Executions below the requirement issues (supported indirectly by Structure).

It's not possible to:

- associate Tests contained in folders to Test Sets, Test Executions and Test Plans
- manage folders inside Test Sets, Test Executions, Test Plans.

A Things to be aware

Default Structure Action - Try not to use the Structure default action as it might cause confusion and errors.

Using Structure vs Test Repository/Test Plan Board

Since Xray v3.0, you can use the Test Repository to organize Tests hierarchicaly in folders at the project level; you may also organize Tests, in an independent way, at Test Plan level, for each Test Plan.

The question arises: which approach should you use? Organize entities using Structure add-on or using Xray built-in capabilities?

Let's see the different and summarize the characteristics of each approach, focused on the related entities.

Structure

Xray's Test Repository

Xray's Test Plan Board

Pros	 can manage different entities (e.g. stories, Tests, Test Executions, etc) can be used to have an high-level visual overview, specialy for teams not used to Jira, starting at the version, then seeing all entities associated to, organized in some way not bound to a specific project, thus each "structure" can have issues from different projects can be used alternatively or complementarily to Test Sets can manage entities from several projects in the same structure (this can be a pro/con, depending on the perspective) can have the same issue multiple times within a given structure (this can be a pro/con, depending on the perspective) can be used complimentarily with Test Plan Board (i.e. manage the project/version related entities in a structure and manage the organization of the Test Runs inside each Test Plan Board) 	 focused just on organizing Test cases of each project not bound to execution aspects used as means to create or add Tests to existing entities (e.g. create Test Executions, create Test Plans) can't have the same issue multiple times within the Test Repository (this can be a pro /con, depending on the perspective; we see it as an advantage, since it simplifies its management) 	 focused on organizing the Test cases of each Test Plan gives the ability to track down the results on a per folder basis, within the Board easily rank Tests visually and take that ranking into account for new scheduled Test Executions gives the ability to analyze the results per Test Environment can contain Tests from several projects can't have the same issue multiple times within the Board (this can be a pro/con, depending on the perspective; we see it as an advantage, since it simplifies its management)
Cons	 can't create folders within Xray entities (e.g. you can just see/manage the Tests associated with a Test Execution) independent organization, i.e. does not integrate neither with the Test Repository nor the Test Plan Board concepts and their organizations unable to evaluate results for certain Test Environments unable to see/manage Test Runs nor execute them immediately unable to easily create other entities (e.g. Test Executions) for the Tests within some folder 	 does not provide an high-level overview of the project or a project version and all the related entities associated with that version unable to manage entities from several projects in the same Test Repository (this can be a pro/con, depending on the perspective) 	 does not provide an high-level overview of the project or a project version and all the related things

Installation

In order to obtain the new extenders that Xray provides, you need to:

- Install Structure plugin version 3.4.x or above;
 Install Xray version 2.1 or above.

Note: If you already had Xray before you installed Structure, you need to restart your Jira server.

For more information about the Structure plugin, refer to its documentation here.

Adding Xray Extender to the Structure:

1. Set your structure to Automation



2. Choose the correct extender

□ Add • • • • • • • • • • • • • • • • • •	ation +
≡ For Review -	∑ Filter
E FOLKEVIEW	i⊾ Sort
Key Summary	品 Group
	S Extend
▲ Add ▼ ★ ▼ ↓ √ ▶ ★ Automation	
Ter Deview	Search
∺≣ For Review +	Linked Issues
Key Summary	Stories under Epics
· 卮 For Review	Sub-tasks
	Xray Extender
3. Click "Apply" on the dialog	
Xray Extender	
Runs As 🔲 admin@admin.com	
Extend Levels All levels -	
Allow changes via Structure	
Apply Cance	21
You should see something like this, assuming your structure was empty before	
≊ For Review -	
Key Summary	
※ 信 For Review	
🗙 Enable Xray enhancements for managing Tests in Test Sets, Test E	executions and Test Plans

Test Set

With the Extender added, you can now do the following actions:

• Drag a Test Set to a structure and have its Tests dynamically appear.

0	Marca 1		December	TO	
	Key	Summary	Progress	TP	
	*	:置 For Review			
		X Enable Xray enhancements for managing Tests in Test Sets, Test Executions			
	REV-9	▼ Test Set For Review 2		S 1	
:: o	REV-4	Test 1		0↑	- 4 <u>0</u>
	REV-5	O Test 2		0 1	
	REV-8	• Test 5		0 1	ф. –

Drag a Test to a Test Set and have it automatically associated to the Test Set.
 When you drag a Test to a Test Set, a message will appear. You should **always** choose the "Add Tests to Test Set" since it's the option that will use the Test Set Extender.

Key	Summary	Progress	ТР
	:置 For Review		
	🗙 Enable Xray enhance	ments fo	
REV-9	Test Set For Review 2	2	
REV-7	O Test 4		O↑ ÷ •
REV-4	O Test 1		0↑
REV-5	O Test 2		0 1
REV-8	O Test 5		□ ↑
	would you like to	o do?	4). What Cancel
	REV-9 REV-7 REV-4 REV-5	Image: Second strain strai	Image: For Review Image: Enable Xray enhancements fo REV-9 Image: Enable Xray enhancements fo REV-9 Image: Enable Xray enhancements fo REV-7 Image: Enable Xray enhancements fo REV-7 Image: Enable Xray enhancements fo REV-9 Image: Enable Xray enhancements fo REV-7 Image: Enable Xray enhancements fo REV-8 Image: Enable Xray enhancements fo Image: Enable Xray enhancements fo REV-8 Image: Enable Xray enhancements fo Image: Enable Xray enhancement fo Image: Enable Xray enhancement fo

• Drag a Test Set to a Test Set and have all the Tests in the Test Set automatically associated to the other Test Set. When you drag a Test Set to another Test Set, you might get an extra message telling you that you might be doing an action that will affect more than 1 item. Just click Continue and you click the "Add Tests to Test Set" button.

Кеу	Summary	Progress	ТР		
*	📲 For Review				
	X Enable Xray enhancemen	ts fo			
REV-9	▼ Set Set For Review 2		• •		
∷ • ▲ REV-1	 Test Set For Review 				
REV-6	O Test 3		0 1		
TES-63	• TEst Exec some	ethin	• •		
REV-4	• Test 1		0 1		
REV-5	• Test 2		• ●		
REV-8	O Test 5		• ●		
	You are moving iss Review). As a result Fest Set and have the association automation and you have a Test selected, the Test Image: A set of the set of th	It, up to 3 items m	cancel Cancel e Test Set. e Test Set.	tomation + ♦ ♥ ♥ Q	III Basic view
Key S	ummary			Progress	ТР
*	着 For Review				
	X Enable Xray enhancements for	managing Tests in Tes	t Sets, Test Executions		
REV-9	Test Set For Review 2				↑ 🖸
• REV-4	O Test 1				⊡ ↑ ≎
REV-5	O Test 2				□ ↑
REV-8	O Test 5				□ ↑

Test Execution

With the Extender added, you can now do the following actions:

- Drag a Test Execution to a structure and have its Tests dynamically appear.
- Drag a Test to a Test Execution and have it automatically associated to the Test Execution.
- When you drag a Test to a Test Execution, a message will appear. You should **always** choose the "Add Tests to Test Execution" since it's the option that will use the Test Execution Extender.
- Drag a Test Set to a Test Execution and have all the Tests in the Test Set automatically associated to the other Test Execution. You will get the same message as above.
- Remove a Test from a Test Execution and have the association automatically removed from the Test Execution. When you click on the X and you have a Test selected, the Test will be removed from the Test Execution.

Sub-Test Execution

With the Extender added, you can now do the following actions:

- Drag a Sub-Test Execution to a structure and have its Tests dynamically appear.
- Drag a Test to a Sub-Test Execution and have it automatically associated to the Sub-Test Execution. When you drag a Test to a Sub-Test Execution, a message will appear. You should always choose the "Add Tests" since it's the option that will use the Test Execution Extender.

	rarchy -		$\overrightarrow{\mathbf{x}}$		Y	Q	III Basic	view 🔻
	Key	Summary		Prog	ress		TP	1
×		∺≣ hierarchy						
		X Enabled Xray enhancements for managir	ng Tests					
	SP-19	 The user must have a valid email 					()	
	SP-18	O As a user, I can delete my account					0 1	
• 🔺	SP-20	As a new user, i can create my according to the second	ount				0 1	۰.
		You are adding issue SP-20 (A can create). What would you ★ Add Tests ■ Add to "hierarchy	I like to		er, i			
					Can	cel		

- Drag a Test Set to a Sub-Test Execution and have all the Tests in the Test Set automatically associated to the Sub-Test Execution. You will get the same message as above
- Remove a Test from a Sub-Test Execution and have the association automatically removed from the Sub-Test Execution. When you click on the X and you have a Test selected, the Test will be removed from the Sub-Test Execution.

Test Plan

With the Extender added, you can now do the following actions:

- Drag a Test Plan to a structure and have its Tests dynamically appear.
- Drag a Test to a Test Plan and have it automatically associated to the Test Plan. When you drag a Test to a Test Plan, a message will appear. You should **always** choose the "Add Tests to Test Plan" since it's the option that will use the Test Plan Extender.
- Drag a Test Set to a Test Plan and have all the Tests in the Test Set automatically associated to the other Test Plan. You will get the same message as above.
- Remove a Test from a Test Plan and have the association automatically removed from the Test Plan. When you click on the X and you have a Test selected, the Test will be removed from the Test Plan.

Pre-Conditions

With the Extender added, you can now do the following actions:

- Drag a Pre-Condition to a structure and have its associated Tests dynamically appear.
- Drag a Test to a Pre-Condition and have it automatically associated to the Pre-Condition. When you drag a Test to a Pre-Condition, a message will appear as displayed in the image below. You should **always** choose the "Add Tests" to the Pre-Condition since it's the option that will use the Pre-Condition Extender.

Image: Hierarchy →

☆ ③ ▼ Q III Basic view

	Key	Summary	Progress	TP	E
*		·焉 hierarchy			
		X Enabled Xray enhancements for managing Tests			
	SP-19	 The user must have a valid email 		O ↑	
	SP-18	• As a user, I can delete my account		0 1	
	SP-20	• As a new user, i can create my account		•	۵.
		You are adding issue SP-20 (As a ne can create). What would you like to X Add Tests ■ Add to "hierarchy"			

• Drag a Test Set to a Pre-Condition and have all the Tests in the Test Set automatically associated to the Pre-Condition. You will get the same message as above.

Cancel

• Remove a Test from a Pre-Condition and have the association automatically removed from the Pre-Condition. When you click on the X and you have a Test selected, the Test will be removed from the Pre-Condition.

Note

When moving a Test to different issue types, the Test will not be removed from source issue.

Example: When moving Test A from Test Set B into Test Execution C, the Test will be added to Test Execution C, but not removed from Test Set B.

Other features

Association between Tests and requirements

Since the association between Tests and requirements is done using the "Tests" link, you can take advantage of the built-in Structure extender for dealing with linked issues and therefore, manage this association.

For this, you must have "Automation" enabled. Choose "Extend with..." and then "Linked issues...".

×	★ Automation	Section 2 Extend with
		Search
		Linked Issues
		Stories under Epics
		Sub-tasks
		Xray Extender

Then, choose the "Tests" link type.

Extend with Linked Issues				
Runs As	Administrator			
Link Type	Tests			
Link Direction	parent issue tests 😒 sub-issue			
Extend Levels	All levels up to 10			
	Extender does not consider groups on the current level and all nested levels.			
	✓ Allow changes via Structure			
	Apply Cancel			

As soon as you do this, you're able to see the association between Tests and requirements, as shown below. You can see the story being validated by the manual Test.

•		% Add issues linked by Tests : parent tests children
	CALC-1088	all my relevant tests
	CALC-1089	Test Execution for Test Plan CALC-1088
	CALC-1084	Generic Test As a user, I can calculate the sum of
	CALC-1085	Cucumber Test As a user, I can calculate the sum
	CALC-1083	Manual Test As a user, I can calculate the sum of
	CALC-1082	• As a user, I can calculate the sum of 2 numb
	CALC-1051	Generic Test As a user, I can calculate the sum of

You can also link your Test with other requirements just by dragging them under the Test and choose the action that will create the proper issue link between the Test and the requirement.

CALC-1083	• Manual Test As a user, I can cardian and the second s	0 ጵ			CALC-1160	Iest Execution for Test Plan CALC-1	
CALC-1163	As a user, I can calculate	0 🛠	<u>۰</u> -		CALC-1155	calculator must be turned on	o 😒
CALC-1082	As a user, I can calculate	○ ☆			CALC-1154	O Manual Test As a user, I can calculat	0 🛠
CALC-1			- 1		CALC-1164	• example 1	0 🛠
CALC-1(You are adding issue CALC-1163 (As a user			C	CALC-1163	As a user, I can calculate the sum of	○ 🛠
CALC-1	can calculate). What would you like to do?	2	- 1		CALC-1162	Test Execution for Test Plan CALC-1	
CALC-1	𝕎 Create issue links of type "Tests"		- 1		CALC-1092	• Test sum of two numbers	0 个
CALC-1		ancel			CALC-1159	all my relevant tests	 F A
CALC-1(CALC-1042	all my arithmetic operations	 S ≈

Note

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If you want, you can also manage the association from the opposite end, by looking from the requirement's perspective.

This will allow you to see and manage the Tests that validate a given requirement.

For this, you just need to create an extender for the "Tested by" link type.

Association between Sub-Test Executions and requirements

Sub-Test Executions are created as sub-tasks for requirement issues. You can take advantage of the built-in Structure extender for dealing with sub-tasks and therefore, see this association.

For this, you must have "Automation" enabled. Choose "Extend with..." and then "Sub-tasks...", and then the Sub-Test Execution issue type.

Extend with Sub-tasks				
	 Administrator All available sub-task types Sub Test Execution × 			
Extend Levels	All levels up to 10 Extender does not consider groups on the current level and all nested levels. Allow changes via Structure 			
	Apply Cancel			

Afterwards, you're able to see all the Sub-Test Executions created in the context of a requirement issue that is part of the structure.

		𝗞 Add sub-tasks: Sub Test Execution		
•	CALC-1082	 As a user, I can calculate the sum of 2 numbers 	● ◆	¢ -
	CALC-1200	Sub Test Execution for CALC-1082		

Show requirement and test statuses

You can include information about the status of your "requirements" and its current state, along with the latest status for the corresponding Tests, in the issues being shown in the structure.

For this, you need to add the "Requirement Status" and the "TestRunStatus" columns, which correspond to the "Requirement Status" custom field of requirements and the "TestRunStatus" custom field that is available for Test issues, respectively.

Please make sure that those custom fields are configured in Xray (under "Custom Field Preferences" admin settings) to show the respective information in the same way (i.e., for the same version). Refer to this configuration page, the FAQ or Using custom fields if you have questions about these fields.

≔ Ca	Sea Calculator demo structure -					≱ 🏹 🔍 川 Basic v	view* -
	Key	Summary	Progress	TP	Requirement Status	TestRunStatus	
•	CALC-1082	 As a user, I can calculate the sum of 2 numbers 		◎ 🛠	v3.0 - NOK		¢ -
	CALC-1083	• Manual Test As a user, I can calculate the sum of 2 numbers		◎ ጵ		v3.0 - FAIL	
	CALC-1084	Generic Test As a user, I can calculate the sum of 2 numbers		◎ 🛠		v3.0 - PASS	
	CALC-1085	O Cucumber Test As a user, I can calculate the sum of 2 numbers		◎ 🛠		v3.0 - PASS	
	CALC-1195	O Cucumber Test As a user, I can calculate the sum of two positive numbers		0		v3.0 - TODO	
	CALC-1196	O Cucumber Test As a user, I can use the plus sign		0		v3.0 - TODO	

Show progress information of Test Executions and Test Plans

You can include information about the progress (i.e. the "overall execution status") of (Sub) Test Executions or Test Plans. For this, you need to include the proper custom fields: "Test Execution Satus" and "Test Plan Status", respectively. More information on these fields can be found here.

Note: you need to have the latest version of Structure installed.

Summary	Progress	ТР	Test Plan Status	Test Execution Status
:置 Calculator demo structure				
% Add issues linked by Tests: parent tests or tested by children				
% Add sub-tasks: Sub Test Execution				
X Enabled Xray enhancements for managing Tests in Test Sets, Test Executions and Test P				
品 Group by Fix Version/s				
▼ S v3.0 - New features				
As a user, I can calculate the sum of 2 numbers		○ 🗙		
▼ milling relevant tests		F ×		
Generic Test As a user, I can calculate the sum of 2 numbers		0 🛠		
O Cucumber Test As a user, I can calculate the sum of 2 numbers		0 🛠		
Manual Test As a user, I can calculate the sum of 2 numbers		0 🛠		
Test Execution for Test Plan CALC-1088				

Show status overview of Tests contained within Test Sets

You can include information about the status of the Tests belonging to a Test Set, by including the "Test Set Status" custom field as a column. Although Test Sets are not related with execution aspects, sometimes it may be quite useful to have an idea how certain groups of Tests (i.e. the ones that you have in some Test Set) are.

Please make sure this custom field is configured properly in Xray (under "Custom Field Preferences" admin settings), to show the status of Tests for the version you want to.

More information on this field can be found here.

Note: you need to have the latest version of Structure installed.

Key	Summary	Progress	ТР	Test Plan Status	Test Execution Status	Test Set Status
	₩ Calculator demo structure					
	& Add issues linked by Tests: parent tests or tested by children					
	% Add sub-tasks: Sub Test Execution					
	X Enabled Xray enhancements for managing Tests in Test Sets, Test Executions and Test	PI				
	Group by Fix Version/s					
	V3.0 - New features	_				
	 In No fix version 					
CALC-1087	arithmetic operations		S 🛠			