

Jama Excel Integration using JCI

Quick Start Guide

December 2024

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Key Concepts and Considerations

JCI

- **Application – Application/System/Database that holds the artifacts like Jama Connect.**
- **Connectors – Connects JCI to the application**
 - Always use a dedicated user account for JCI to access Jama Connect to prevent lock outs.
- **Integrations - synchronization between Jama item types and another item type in another application, or in this case, Jama item types with an Excel spreadsheet.**
 - Always turn off integrations when making edits to them.

Key Concepts and Considerations

JAMA AND EXCEL

- **Instead of integrating between applications, you will be integrating Jama with an Excel spreadsheet that lives within Jama Connect.**
 - This means that you only need to create a connector to your Jama instance.
- **JCI can be used to map data to and from the fields of the target item. This is known as a field mapping group.**
 - JCI can be used to pull data from items related one level above and one level below the target item. This is known as an associated field mapping group.

Key Concepts and Considerations

JCI



- The integration connects to a single connector accesses the Jama database and the Excel spreadsheet that lives in your Jama instance.
- The integration maps fields in Jama Connect to the Excel spreadsheet.

Step 1

JAMA CONNECTOR

1. Open JCI.
2. Click on the “Connectors” in the tool bar.
3. Click on “Add Connector”.
4. Specify “Jama Connect” as the application.
5. Specify the name of the connector.
6. Specify the URL.
7. Specify the type of Authentication and your credentials.



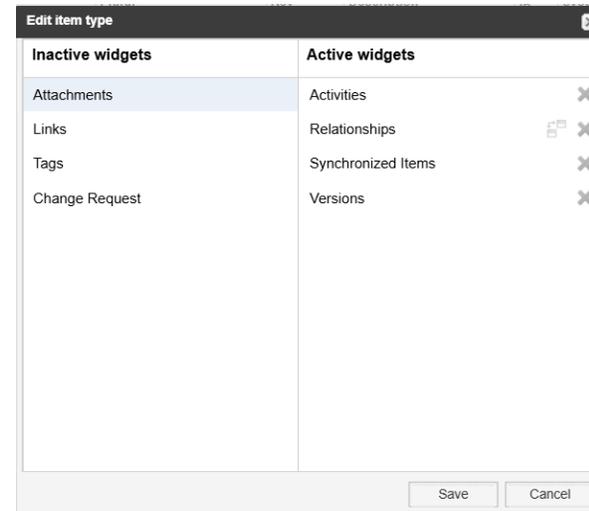
Step 2

PREPARE TO ATTACH YOUR SPREADSHEET

1. You will need to attach your spreadsheet to an item in Jama Connect, but first you will need to enable attachments for that item. Check out some [best practices](#) for selecting the item to attach your spreadsheet to.

	Component	Components	CMP	Component type	30	Yes	Edit Views
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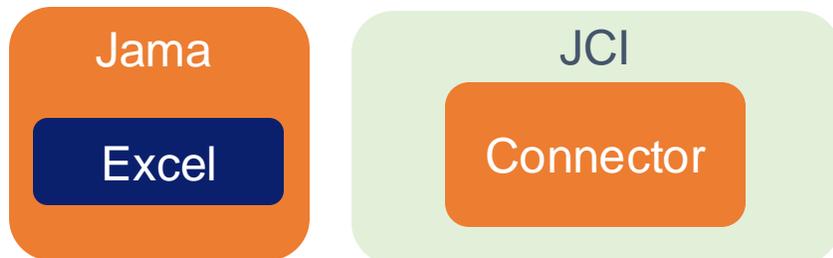
1. Go to Admin > Organization Tab > Item Types and select the item type and click on Edit.
2. Activate the “Attachments” widgets.



Step 3

ADD YOUR SPREADSHEET TO JAMA

1. Open Jama Connect and attach your spreadsheet to an item in one of your Jama projects.
2. Name the spreadsheet and click on “Attach Item”.
3. Take note of the project ID that identifies the specific item that holds your spreadsheet.



The screenshot shows a 'Add File Attachment' dialog box with two tabs: 'Upload' and 'Existing'. The 'Existing' tab is active. It contains the following fields:

- *Attachment:** A 'Choose File' button followed by the text 'MaxSeverit...tedItems.xlsx'.
- *Name:** A text input field containing 'MaxSeveritySpreadsheet'.
- Description:** A large empty text area.

At the bottom right, there are two buttons: 'Attach to Item' and 'Cancel'.

Step 4

CREATE YOUR EXCEL FUNCTIONS INTEGRATION

1. Open JCI.
2. Select “Jama Connect to Excel Functions” as your integration type.
3. Select Single Project or Multiple Projects depending on the scope of the integration.

The screenshot shows the 'Jama Connect Integration Wizard' window. At the top, there is a progress bar with four steps: 1. Integration Type (active), 2. Connectors, 3. Select Projects, and 4. Confirm. Below the progress bar, the text 'SELECT INTEGRATION TYPE:' is followed by a dropdown menu showing 'Jama Connect to Excel Functions'. Below the dropdown, there are two radio button options: 'Single project' (selected) and 'Multiple projects'. The 'Single project' option includes the text: 'Integrate a single Jama Connect project with Excel Functions. With this option, you can select individual sets within the project to integrate.' The 'Multiple projects' option includes the text: 'Integrate multiple Jama Connect projects with Excel Functions. With this option, all sets of a selected item type will be integrated.' At the bottom right of the wizard, there is a blue 'Next' button.

Step 5

SPECIFY YOUR CONNECTOR AND THE LOCATION OF THE SPREADSHEET

1. Select the connector to your Jama instance.
2. Specify the Jama Project ID of the item that holds the spreadsheet.

Jama Connect Integration Wizard

✓ Integration Type — 2 Connectors — 3 Select Projects — 4 Confirm

Select the Jama Connect instance to integrate with Excel. Then enter the ID of the Jama Connect item where the Excel template is attached. New connectors can be created on the Connectors page.

SELECT JAMA CONNECT CONNECTOR:

EXCEL TEMPLATE LOCATION (JAMA ITEM ID):

[Back](#) [Next](#)

Step 6

SELECT THE AFFECTED PROJECTS

1. Select the projects you want to include in your integration. The view you get depends on your project section in [step 4](#).
2. Click Next.

Single Project Integration

The screenshot shows the 'Jama Connect Integration Wizard' window. At the top, a progress bar indicates four steps: 'Integration Type' (checked), 'Connectors' (checked), '3 Select Projects' (active), and '4 Confirm'. Below the progress bar, the text reads 'SELECT JAMA PROJECT: Select a project or search for it using the project ID.' There is a search input field containing 'Consumables v.2.0 - SAMPLE DATA - Mask [30]' and a 'Project API ID' field. Below the search field, the selected project details are shown: 'Project: Consumables v.2.0 - SAMPLE DATA - Mask [30]' and 'Project Key: CSM2'. At the bottom of the wizard, there are 'Back' and 'Next' buttons.

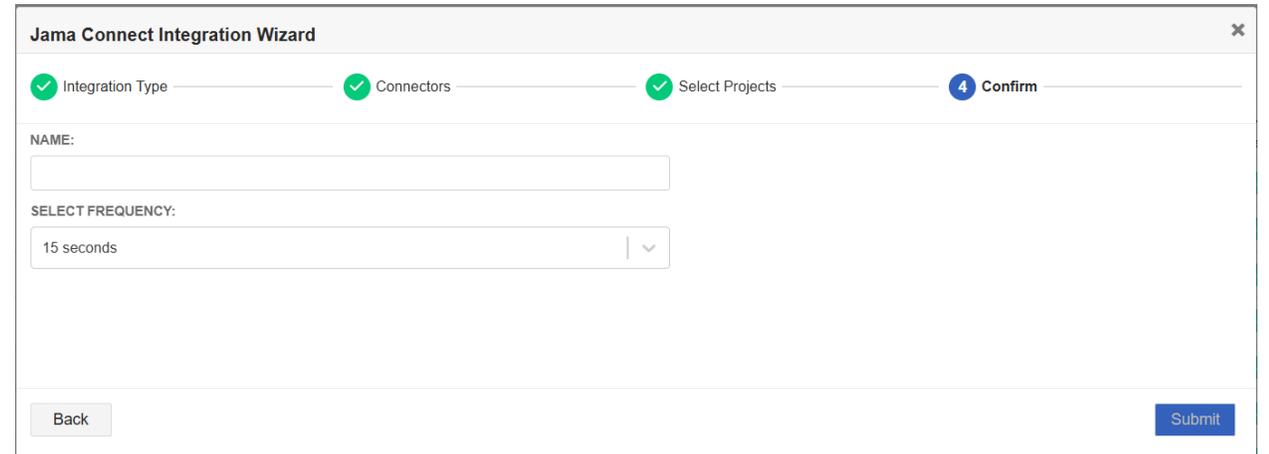
Multiple Project Integration

The screenshot shows the 'Jama Connect Integration Wizard' window. At the top, a progress bar indicates four steps: 'Integration Type' (checked), 'Connectors' (checked), '3 Select Projects' (active), and '4 Confirm'. Below the progress bar, the text reads 'SELECT PROJECTS Select projects to add. Adding organization root or folders includes all underlying projects. Integrations can include up to 100 projects.' The main area is divided into two panels. The left panel, titled 'Jama Connect project tree', shows a tree view with a search field and a list of folders: 'Project root', 'Clients [69]', 'General Demo Area [61]', 'Medical Device Framework v.2.0 [23]', 'Romerian Use Case Library [57]', and 'Use Case Library [21]'. The right panel, titled 'Added Projects', is currently empty with a search field. Between the panels are navigation arrows: '>>', '>', '<', and '<<'. At the bottom of the wizard, there are 'Back' and 'Next' buttons.

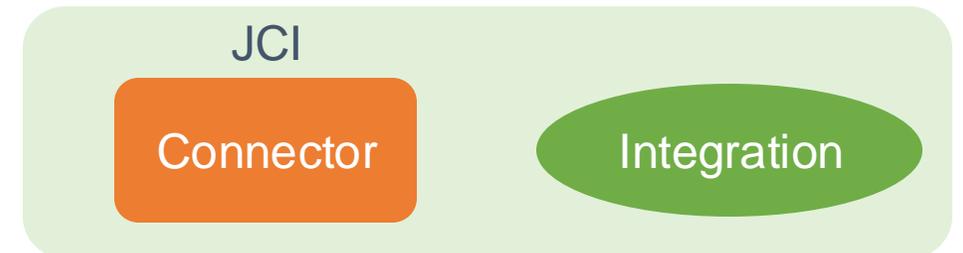
Step 7

NAME YOUR INTEGRATION

1. Name your integration.
 - Use a standardized naming convention such as [Connector]_[Spreadsheet] (e.g. “JamaProd_RiskCalculator”)
2. Do not change the select frequency for now. You can change this in the future if you need to.
3. Click Submit to create the integration.



The screenshot shows the 'Jama Connect Integration Wizard' window. At the top, there is a progress bar with four steps: 'Integration Type' (checked), 'Connectors' (checked), 'Select Projects' (checked), and '4 Confirm' (active). Below the progress bar, there is a 'NAME:' label followed by a text input field. Underneath that is a 'SELECT FREQUENCY:' label followed by a dropdown menu currently set to '15 seconds'. At the bottom left is a 'Back' button, and at the bottom right is a 'Submit' button.



Step 8

CREATE FIELD MAPPING GROUPS

1. Turn off your integration while making field mapping changes by clicking on the switch in the upper right of the display of your integration.
2. You'll create field mapping for one set of items at a time. This is known as a field mapping group. You can pull data in from items related one item above and one item below the target item type.
3. Click on "Field Mappings" tab.
4. Click on "Add new field mapping group."
5. Select "Explorer" and select the set of items you want to apply the integration to.
6. Click "Create" to create a field mapping group.

Step 9

SETUP A FIELD MAPPING GROUP

1. Select the Jama fields on the left side and the cell in the Excel spreadsheet to map it to on the right. Since you are working with a single item, you will map values to a single cell in Excel such as “A1” or “B1”.
2. Toggle the left arrow to send data from the spreadsheet to a specific field in Jama. Toggle the right arrow to send data from a specific field in Jama to the right.
3. Clicking on the  will add a new field.
4. To select items related upstream or downstream from the target item, click on the “Add new associated mapping group”.

Step 9

SETUP AN ASSOCIATED FIELD MAPPING GROUP

1. To select items related upstream or downstream from the target item, click on the “Add new associated mapping group”.
2. You’ll be given the option to select upstream, downstream, or [item of type](#). An item of type field is a picklist field that is populated by items of a specific type in your target item. Choose one of the associated item types.
3. Since an associated mapping group can represent one or more items, you’ll be mapping fields from this group to columns in your spreadsheet.
4. Toggle the left arrow to send data from the spreadsheet to a specific field in Jama. Toggle the right arrow to send data from a specific field in Jama to the right.



Spreadsheet

BEST PRACTICES

- Use color to identify cells as inputs or outputs.
- Don't nest your formulas. Simplify your formulas by breaking them up across multiple cells to make it easier to troubleshoot your formulas. You have the space so use it.
- Plug in fake data to validate the formulas prior to uploading it to Jama.
- If you are pulling or pushing data to picklists in Jama, remember that the displayed name is what is sent to and from Excel. Picklist values sent from the spreadsheet to Jama **must be an exact match!**
- It is every easy to get confused when doing field mapping. Make it easier on yourself by creating a detailed [legend](#) in your spreadsheet.

Example Legend

BEST PRACTICES

- The target item or source item in this example is a risk evaluation item that is related to one or more hazard items.
- The legend describes the use case.
- Blue indicates cells pulled into the spreadsheet from Hazard Items related to the Risk Evaluation Item.
- Yellow indicates cells pushed from the spreadsheet into the Risk Evaluation Item.

Use Case: A risk evaluation item can be connected to one and only one Hazard item. If more than one hazard is connected a message will be returned to Jama indicating the problem so it can be corrected. If no hazard is associated with the risk evaluation a message will be returned to Jama indicating that the relationship is missing.

Source Item: Risk Evaluation

Input from Related Hazards

Column A: Hazard IDs

Column B: Hazard Name

Column C: Combined Hazard ID and Name (Calculated)

Column D: Max P2 (Probability of the Hazardous Situation Leading to Harm)

Column E: Max Severity

Column F: Associated Harms

Column G: Hazardous Situation

Output to Risk Evaluation Item

Cell H1: Returns combined Hazard ID and Name if there is only one associated hazard. Returns error message if more than one hazard is connected.

Cell I1: Returns list of associated Harms, if there is only one associated hazard. Returns an error message if more than one hazard is connected.

Cell J1: Returns Hazardous Situation if only one hazard is selected. Return an error message if more than one hazard is connected.

Cell K1: Returns the Maximum P2 (Probability of the hazardous situation leading to harm)

Cell L1: Returns the Maximum Severity value if only one hazard is selected

Item Type Containing a Spreadsheet

BEST PRACTICES

- Components or sets are typical item types to attach spreadsheets to because they are containers which come with a couple benefits.
- Clicking on a container produces a list view of the items in the container and doesn't expose the attachment. To view or add attachments to a container, you must click the "View details" link.

 Component • View details

- [Project permissions](#) can be assigned to containers to prevent unauthorized editing of the attachment attached to the container. Any project permissions applied to the container also applies to the items in the container. Therefore, it is worth considering the creation of a dedicated component item type whose sole purpose is to securely hold your spreadsheet.
 - Make sure that the JCI user account can access the item that holds the spreadsheet.

JCI for Excel Functions

USE INTEGRATION WITH EXCEL TO

- Perform complex risk priority number or complex calculations.
- Perform relationship or error analysis. For example:
 - Create a formula where an error message is printed to a text field in the source item if a relationship or a combination of relationships haven't been found.
- Perform field inheritance where you take values from related items and place that information in a field in the source item. For example:
 - Concatenate a list of harms associated with a hazard item.
 - List all risk mitigating requirements related to a risk evaluation item.