[Xray Server] Triggering automation from Xray

Sometimes, it may be useful to trigger CI jobs directly from Jira and see the results in the test management tool (i.e. Xray).

Currently (as of v3.6), this is not possible out-of-the-box yet. However, with some minor customization, this can already be achieved as depicted in these ScriptRunner-related instructions.

Depending on the use case, this may be quite simple or a little more complex to implement.

Requirements

In order to implement triggering from Xray, and while it is not built-in, you'll need to use an additional Jira app/plugin for that. This app must provide some sort of Jira customization, giving you the ability to add an action (e.g. button) on the UI; besides that, it shall also provide a way of implementing the corresponding code/action that will invoke the CI tool.

Which app to use depends on your context (e.g. existing apps installed in your Jira instance) and the exact use case you aim to implement; depending on that, simpler apps may be used; as a last resource, you may use ScriptRunner even though it requires coding skills.

Possible (tested) apps include:

- Jenkins Integration for Jira (simpler)
- Automation for Jira (has a broader scope than "Jenkins integration for Jira" app but may be used to implement some simple scenarios)
- ScriptRunner (useful, especially if you already have it, and more flexible; more complex though)

Other (untested) apps include:

- PowerScripts

Ultimately, advanced users may prefer to implement a very simple Jira app for this.

Use Cases

Trigger a CI job blindly

In this scenario, we're assuming that:

- you just want to trigger a CI job, period; this job may be totally unrelated to the issue from where you triggered it
- what the CI job will do, including if it will report the results back to Xray or not, is not relevant

For most CI tools, this only requires that you perform some HTTP request passing the CI job as an argument, somehow.

"Jenkins integration for Jira", "Automation for Jira", "ScriptRunner" apps can be used to implement this scenario.

Examples

- Automation for Jira
    - Trigger a Jenkins project build from an issue
- Jenkins Integration for Jira
    1. configure your Jenkins "site" (server) in the app setting
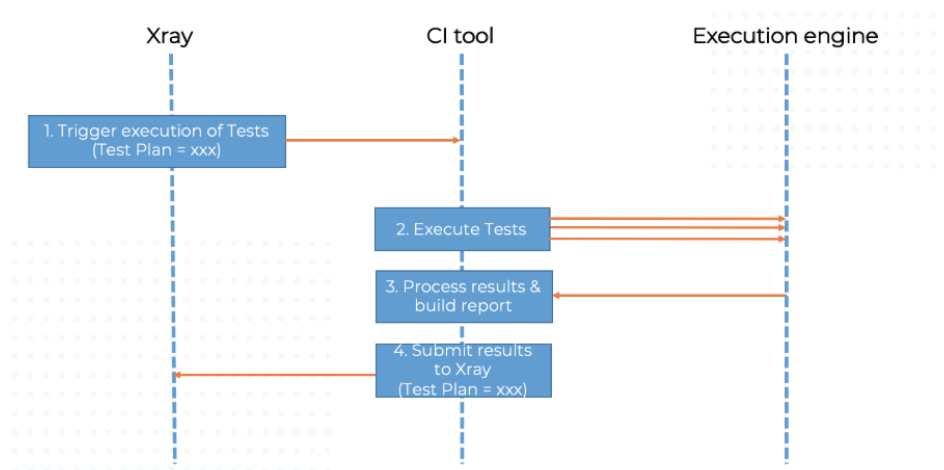   2. trigger the Jenkins "build"

3.

4.

- ScriptRunner (these examples also report the results back to the current issue)
    - Trigger a Jenkins project build from a Test Plan
    - Trigger a Bamboo plan build from a Test Plan

Trigger a CI job and report back to the current issue

In this scenario, we're assuming that:

- you want to trigger a CI job and report back the results to the current issue (e.g. Test Plan)
- the tests that will run are <u>unrelated</u> with the caller issue; it's up to the logic built into the CI job to decide which tests to run
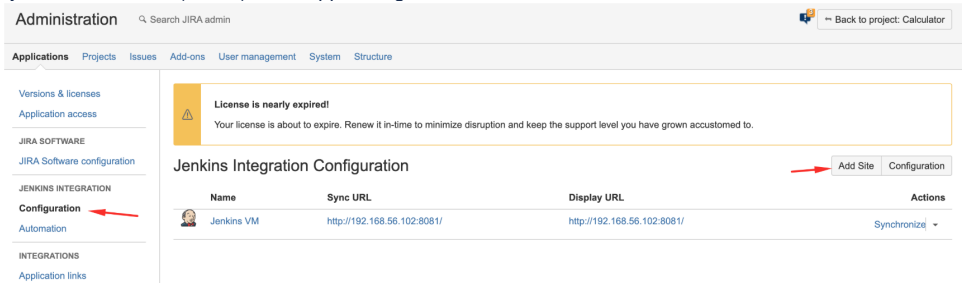

"Jenkins Integration for Jira", "Automation for Jira", "ScriptRunner" apps can be used to implement this scenario.
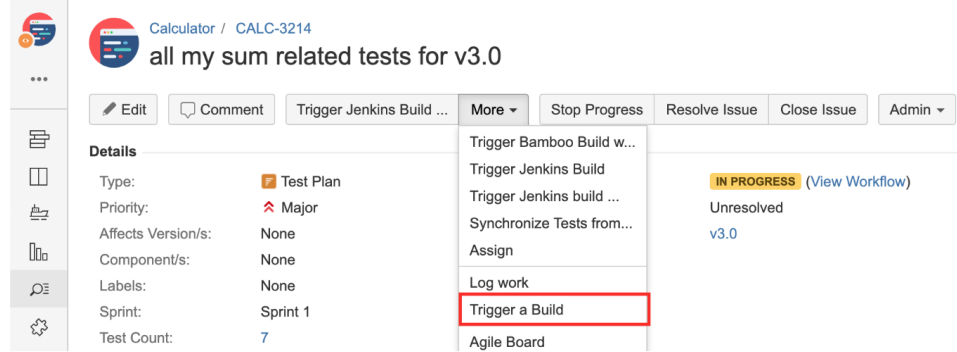
Examples

- Jenkins Integration for Jira

- in this case, you would need to use pipeline-based Jenkins projects where you would use a snippet of code to obtain the calling Jira issue which could be used later on in the step for uploading the results to Xray; you may need to enable the usage of these classes in Jenkins settings
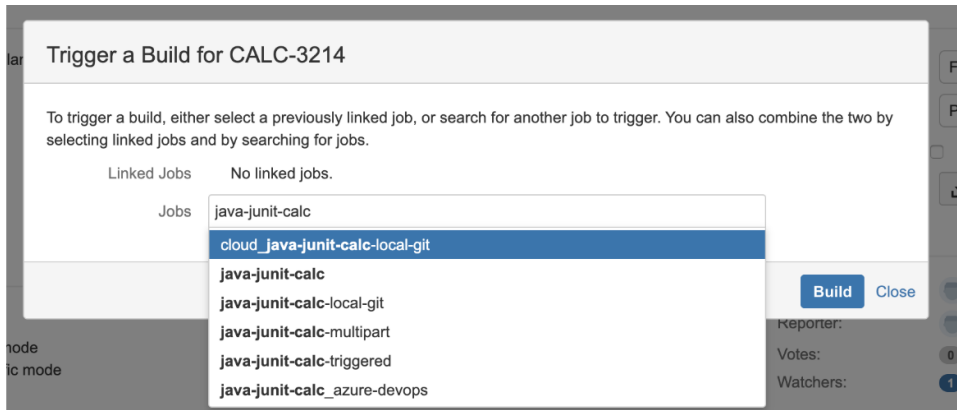 - *def sourceIssueKey = currentBuild.getRawBuild().getCause(org.marvelution.jji.trigger.JiraCause).getIssueKey()*
    1. configure your Jenkins "site" (server) in the app setting

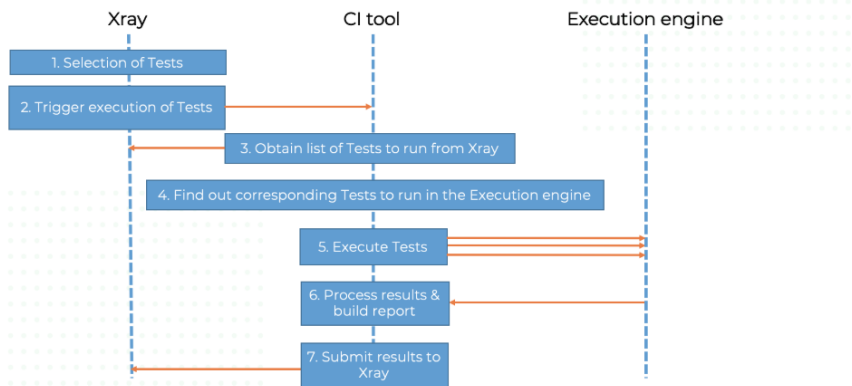   a.

    2. trigger the Jenkins "build"

    3.

    4.

- Automation for Jira
  - Trigger a Jenkins project build from a Test Plan and report the results back to it
- ScriptRunner
  - Trigger a Jenkins project build from a Test Plan
  - Trigger a Bamboo plan build from a Test Plan

Trigger a CI job for the selected tests and report back to the current issue

In this scenario, we're assuming that:

- you want to trigger a CI job and report back the results to the current, caller issue (e.g. Test Plan, Test Execution)
- the tests that you want to run are the automated ones present in the caller issue (e.g. Test Plan, Test Execution)

Trigger executions from Xray for selected Tests

This scenario, though feasible, is a bit more complex for two reasons:

1. because you'll need to pass the information about the tests that you run to the CI tool
2. the CI job needs to process the previous information and somehow orchestrate test runner; this is highly dependent on the automation framework

"ScriptRunner" app can be used to implement this scenario.

Examples

- ScriptRunner
    - Trigger a Jenkins project build from a Test Plan, for the Tests contained in the Test Plan
    - Trigger a Bamboo plan/stage build from a Test Plan, for the Tests contained in the Test Plan

References

- https://docs.automationforjira.com/
- https://docs.automationforjira.com/reference/smart-values.html