Multiple Workflow Orchestrations

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Introduction

> **Warning**: Despite our best efforts, code can change without notice due to a variety of factors. If you encounter an issue in any of the code shown here and find that a specific block of code is not correct, or is causing errors, please check with the Community to find an updated version.

Getting a workflow orchestration between 2 different workflows defined and implemented is already a challenge. The fact is that Jira allows having multiple workflows per project/issue type, and arranging that dance is a real challenge.

We assume that you already have a good understanding of the power of the StatusSync.groovy externalized script - which acts as your personal transition agent.

Defining the Orchestration

To meet this challenge, it is very important to do a throughout analysis of the different permutations.

    1. For each source workflow

        1.1. For each status

            1.1.1. For each target workflow

                1.1.1.1. For each status

                    1.1.1.1.1. What transition needs to be made

This can grow exponentially, as the semantics of each transition can be different.

The Status Matrix

The status - matrix is a first approach where you define for each source issue status the target issue status.

Transition	Open	In Progress	In Review	Closed
Todo	x			
Under development		x		
Done			x	

This results in a transition map

```
def transitionMap = {
    "Todo" : "Open",
    "Under development" : "In Progress",
    "Done" : "In Review"
}


statusSync.receive ( transitionMap, ...)
```

Seems simple, doesn't it?

Of course it is never that simple, because the source workflows can have conflicting target statuses.

Transition	Open	In Progress	In Review	Closed
Todo	x			
Under development		x		
Done			x if target issue is a bug	x if target issue is a task

How do you solve these apparently conflicting specifications? The difference is that the target status is different depending on the target status.

This translates into the following snippet:

```
//Define the different transitionMaps

def transitionMapBug = {
    "Todo" : "Open",
    "Under development" : "In Progress",
    "Done" : "In Review"
}

def transitionMapTask = {
    "Todo" : "Open",
    "Under development" : "In Progress",
    "Done" : "Closed"
}


if (issue.issueType?.name == "Bug") {
    statusSync.receive ( transitionMapBug, ...)
} else {
    statusSync.receive ( transitionMapTask, ...)
}
```

Depending on the issue type, one or another map is being used.

Using Resolutions

In many cases, it is sufficient to know if an issue is being resolved or not.

- When a remote issue is not yet resolved, the local issue should be 'waiting for development'
- When a remote issue is resolved, the local issue should be moved to status 'to review'

The code snippet is as follows:

```
/*
** Two transitions have been configured on all workflows
**
** - autoResolve - an any to resolve transition
** - autoOpen - an any to open transition
** Both transitions are hidden for the user.
** the autoResolve sets the local resolution. and the autoOpen clears the local resolution.
*/

// the following line will transition an issue in case that the resolution of the remote issue changed

if (previous.resolution?.name != replica.resolution?.name) {
    // if the replica.resolution changed compared to the previous sync, transition depending on the value of resolution
    // if the value of the replica.resolution is null - use 'autoOpen', else 'autoResolve'

    workflowHelper.transition(replica.resolution ? "autoResolve" : "autoOpen", issue)
}
```

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