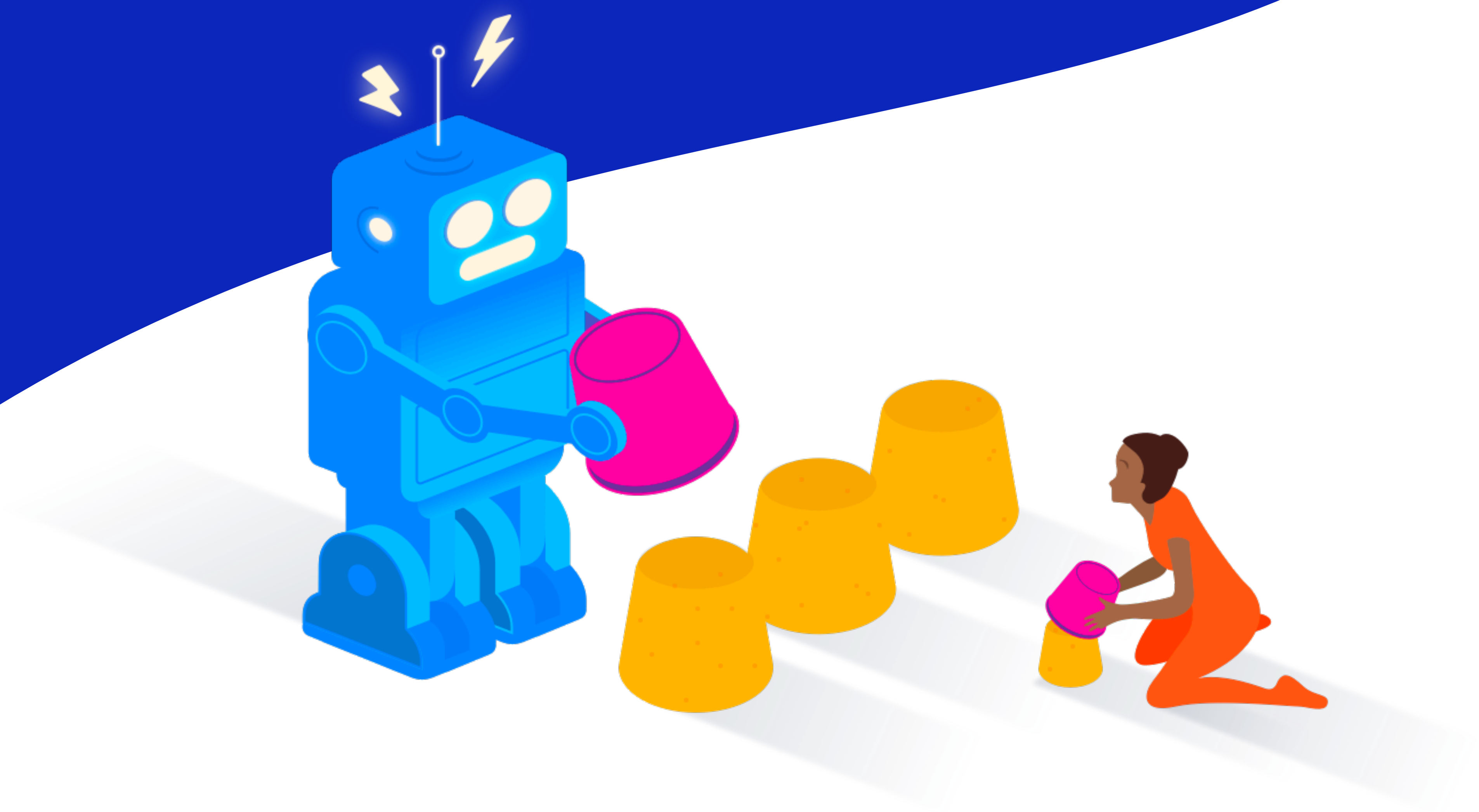
Adaptavist

14 ADMIN HACKS FOR JIRA, CONFLUENCE AND BITBUCKET

Our Ultimate Atlassian Tips and Tricks Ebook

In this ebook, our Atlassian experts and consultants share some of the tips & tricks they use to save time and energy when working in Server and Data Center instances of Jira, Bitbucket, or Confluence.

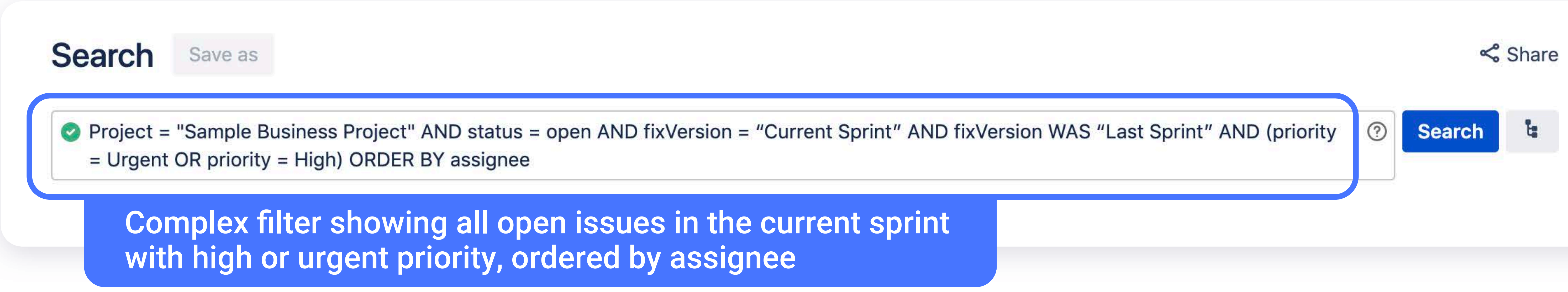


Contents

1. Use filters to drill down for info within other filters

As a Jira admin or user, you often have to create very complex filters in your work. Make your life easier by saving your complex filters and applying filters on them to focus only on certain results.

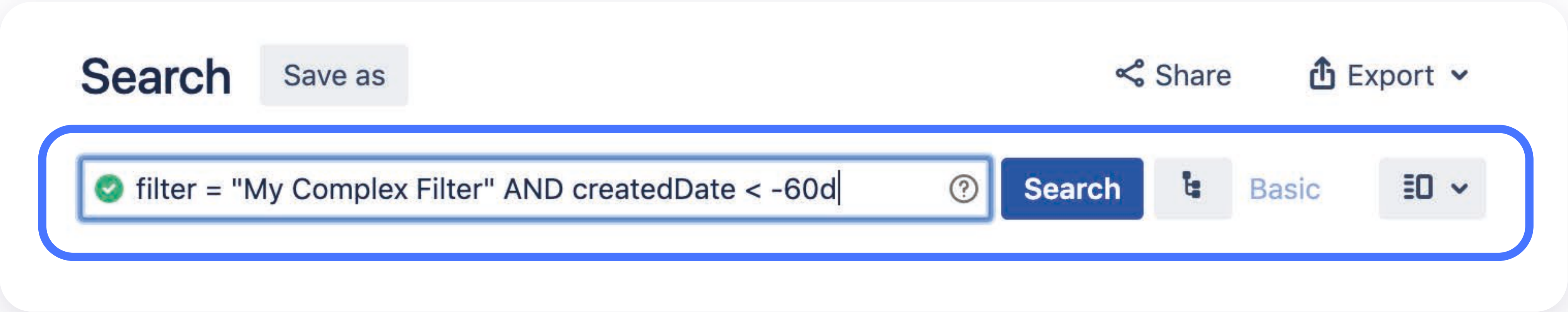
First, create your complex filter and save it in Jira.



```
Project = "Sample Business Project" AND status = open AND fixVersion = "Current Sprint" AND fixVersion WAS "Last Sprint" AND (priority = Urgent OR priority = High) ORDER BY assignee
```

Complex filter showing all open issues in the current sprint with high or urgent priority, ordered by assignee

You can reuse your saved filters inside other filters. For example, the filter below will find all tickets in the saved 'My Complex Filter' that were created earlier than 60 days ago.



```
filter = "My Complex Filter" AND createdDate < -60d
```

GOING PRO

Go beyond Jira's native JQL search capabilities

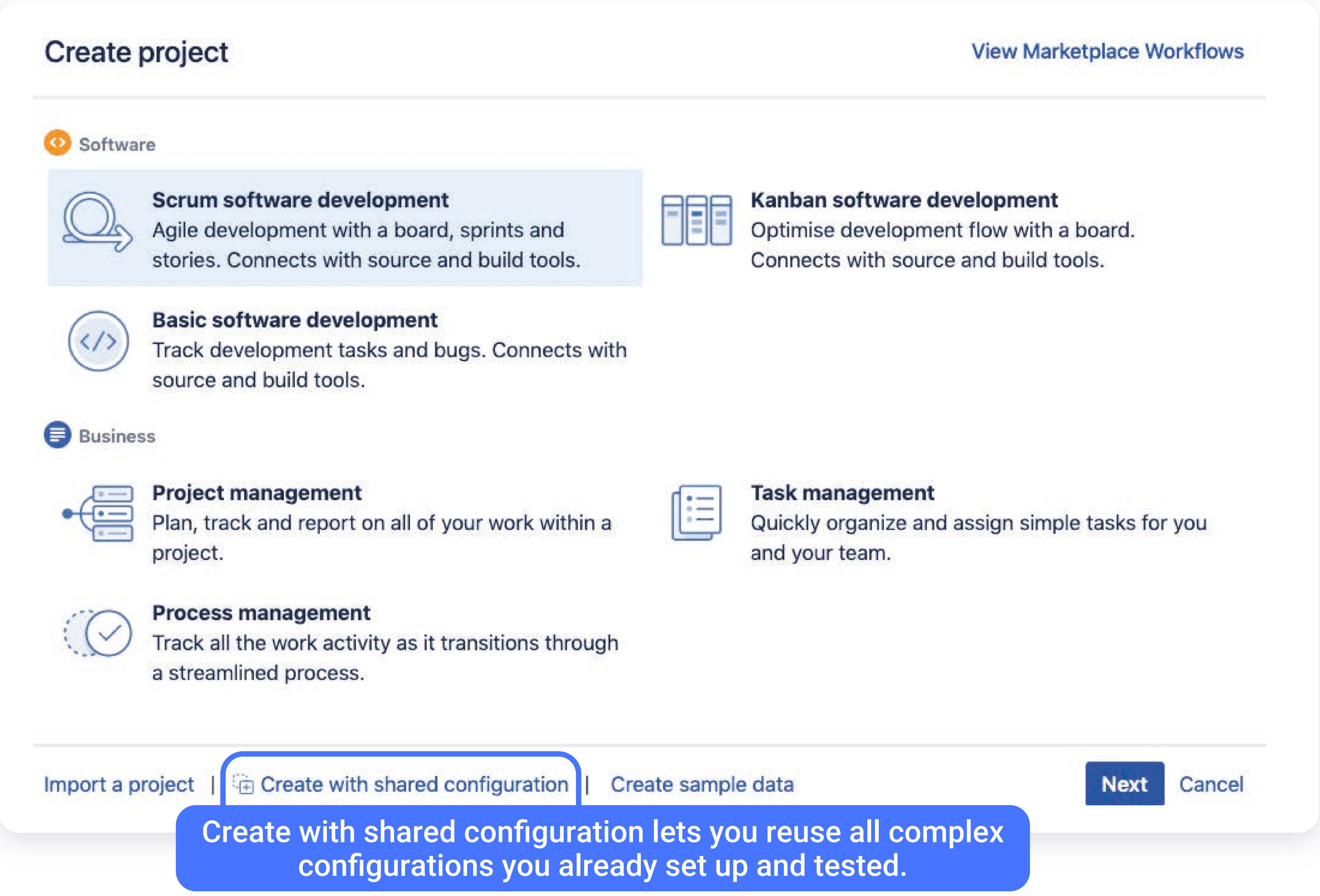
ScriptRunner for Jira offers over 40 useful JQL functions that go well beyond Jira's out-of-the box capabilities and allow you to create your own bespoke functions. Even better, with ScriptRunner for Jira you can integrate your filters into complex automations of your Jira instance.

Access the 10 most commonly use ScriptRunner JQL functions

2. Avoid manual work with Shared Configuration

When an admin creates a new project in Jira, it's too easy to select one of the predefined configurations that are front and centre in the 'Create project' box. But the most powerful option is actually at the bottom of the box, and not very visible: **'Create with shared configuration'**.

Using this allows you to reduce the ongoing administrative actions by reusing all the complex configurations you have already established and tested.



Create project

View Marketplace Workflows

Software

Scrum software development
Agile development with a board, sprints and stories. Connects with source and build tools.

Kanban software development
Optimise development flow with a board. Connects with source and build tools.

Basic software development
Track development tasks and bugs. Connects with source and build tools.

Business

Project management
Plan, track and report on all of your work within a project.

Task management
Quickly organize and assign simple tasks for you and your team.

Process management
Track all the work activity as it transitions through a streamlined process.

Import a project | Create with shared configuration | Create sample data

Next Cancel

Create with shared configuration lets you reuse all complex configurations you already set up and tested.

With 'Create with shared configuration', your new project is created with the same schemes as an already existing project of your choice.

Initially, you will have to put in the effort to set up your configuration and your schemes the way you want them to work. Once you have done this, you won't have to waste time doing it all over again.

Whenever you need to make a change to the configuration, modify the original project and the change will be applied to all other projects created with its configuration.

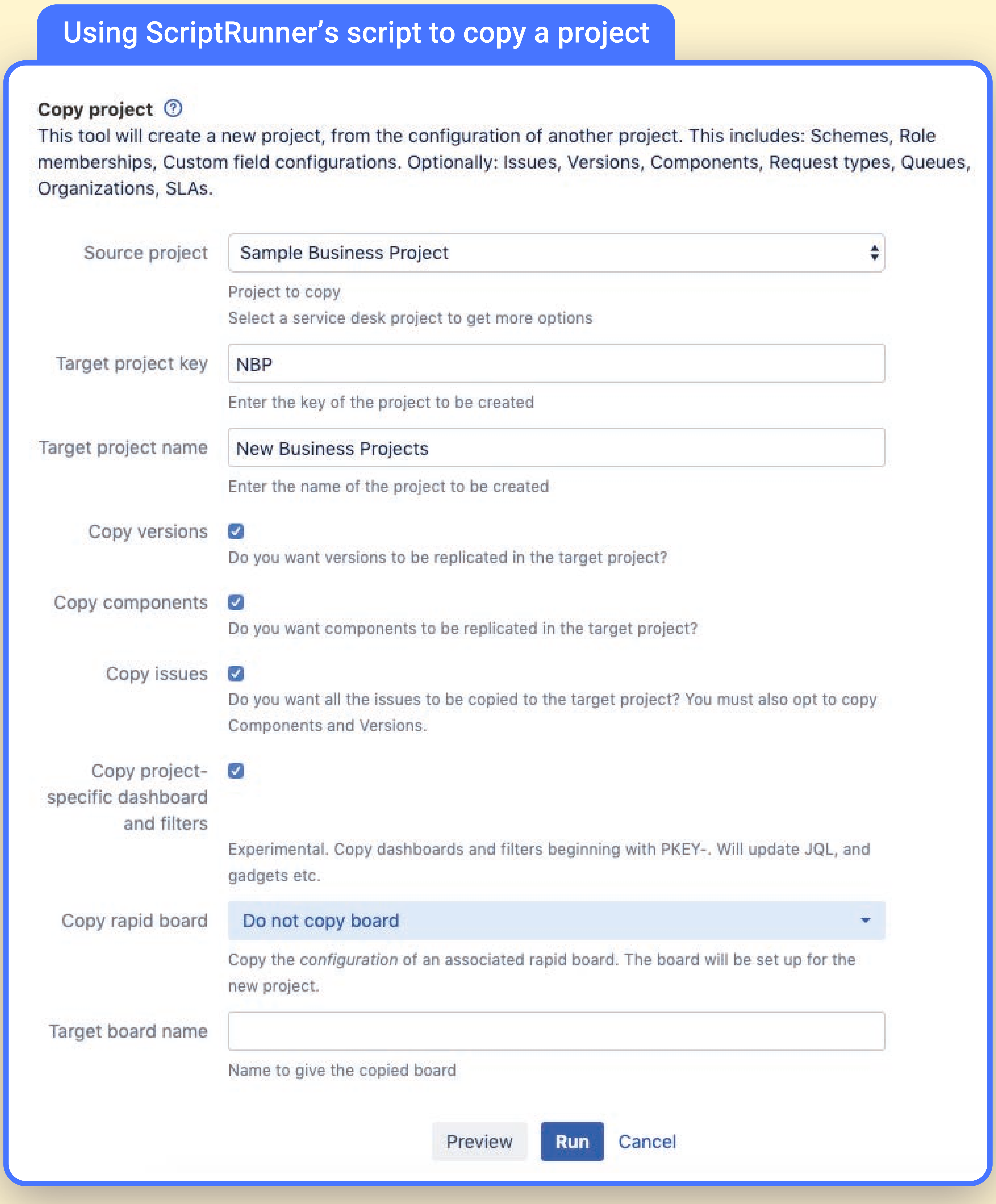
GOING PRO

Clone an existing project with all its existing components

But what if you need to create a new project that not only copies schemes from an existing project, but also role memberships, custom field configurations, agile boards related to the project and filters and dashboards?

Jira out-of-the box does not offer this option, but ScriptRunner for Jira offers a simple solution - the Copy project built-in script.

Using ScriptRunner's script to copy a project



Copy project ?

This tool will create a new project, from the configuration of another project. This includes: Schemes, Role memberships, Custom field configurations. Optionally: Issues, Versions, Components, Request types, Queues, Organizations, SLAs.

Source project: Sample Business Project
Project to copy
Select a service desk project to get more options

Target project key: NBP
Enter the key of the project to be created

Target project name: New Business Projects
Enter the name of the project to be created

Copy versions ☑
Do you want versions to be replicated in the target project?

Copy components ☑
Do you want components to be replicated in the target project?

Copy issues ☑
Do you want all the issues to be copied to the target project? You must also opt to copy Components and Versions.

Copy project-specific dashboard and filters ☑
Experimental. Copy dashboards and filters beginning with PKEY-. Will update JQL, and gadgets etc.

Copy rapid board: Do not copy board
Copy the *configuration* of an associated rapid board. The board will be set up for the new project.

Target board name:
Name to give the copied board

Our advice: Use a test environment to test your configuration changes. Many busy Jira admins take shortcuts and make changes to their configuration directly on the Jira production environment. Sometimes, something goes wrong and impacts end users in catastrophic ways. Always test in a different environment. Deploying changes from testing to production might be a long manual process, but it's worth it in the long run. And you can always use a solution like Project Configurator for Jira to automate your migration process.

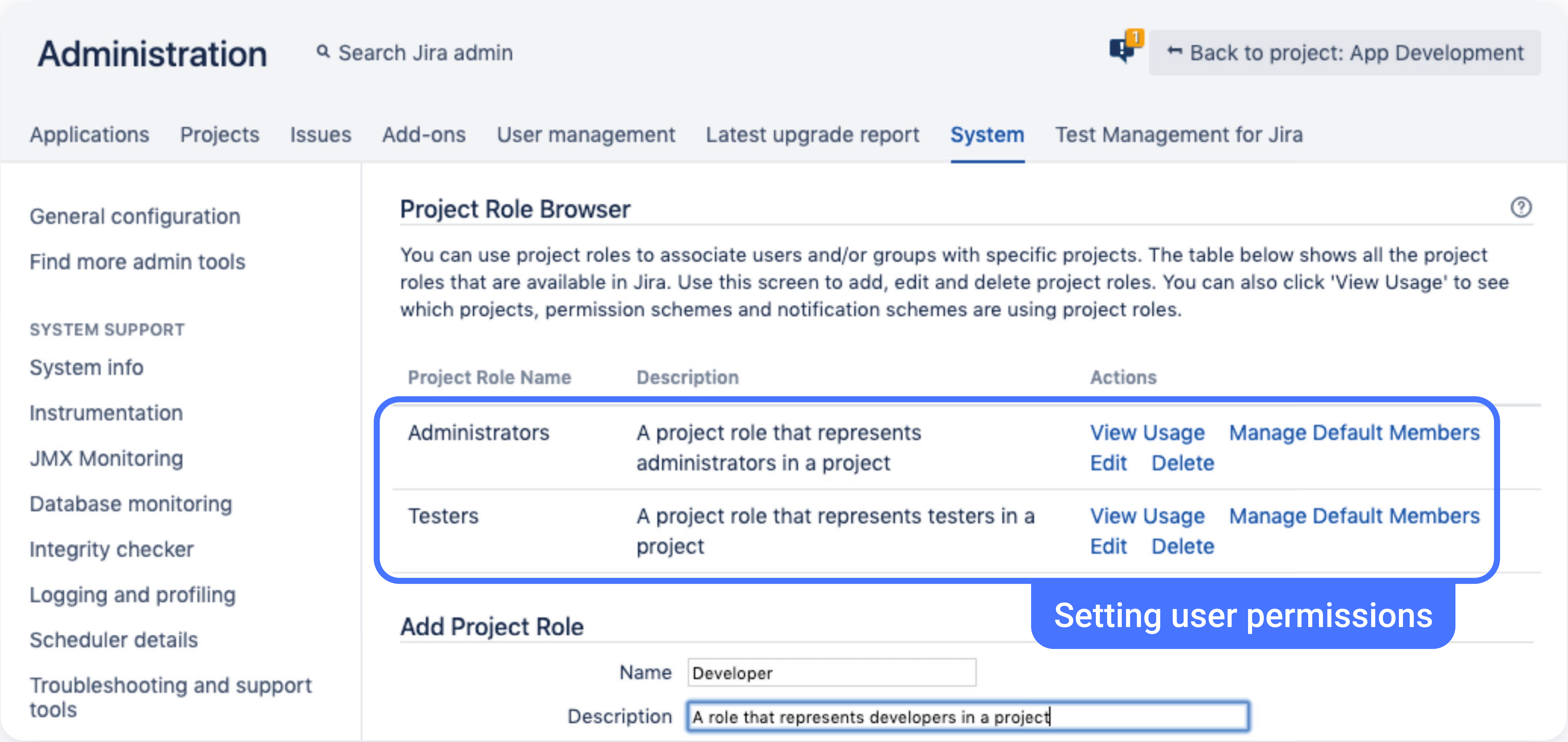
3. Define Permission Schemes on project roles to save time

When setting up a Jira instance, a lot of admins set up their permission schemes based on groups.

However, this approach can limit the scalability of your instance and have you spending a lot of time adding and removing people from groups, which will cause headaches in the future.

As most teams work on a project basis, it is actually better to set up Project Roles. This gives you the flexibility to give different people different access based on each individual project rather than needing to have a higher level view with groups.

Start by setting up a Project Administrator role and then define the other roles based on the tasks they have inside the project - developer, analysts, tester, etc. The Project Administrator will have the power to assign or remove users from specific roles themselves, so they won't need to come to you whenever a new person joins their project or is assigned to a new role.



Administration

Search Jira admin

Back to project: App Development

Project Role Browser

You can use project roles to associate users and/or groups with specific projects. The table below shows all the project roles that are available in Jira. Use this screen to add, edit and delete project roles. You can also click 'View Usage' to see which projects, permission schemes and notification schemes are using project roles.

Project Role Name	Description	Actions
Administrators	A project role that represents administrators in a project	View Usage Manage Default Members Edit Delete
Testers	A project role that represents testers in a project	View Usage Manage Default Members Edit Delete

Setting user permissions

Add Project Role

Name: Developer

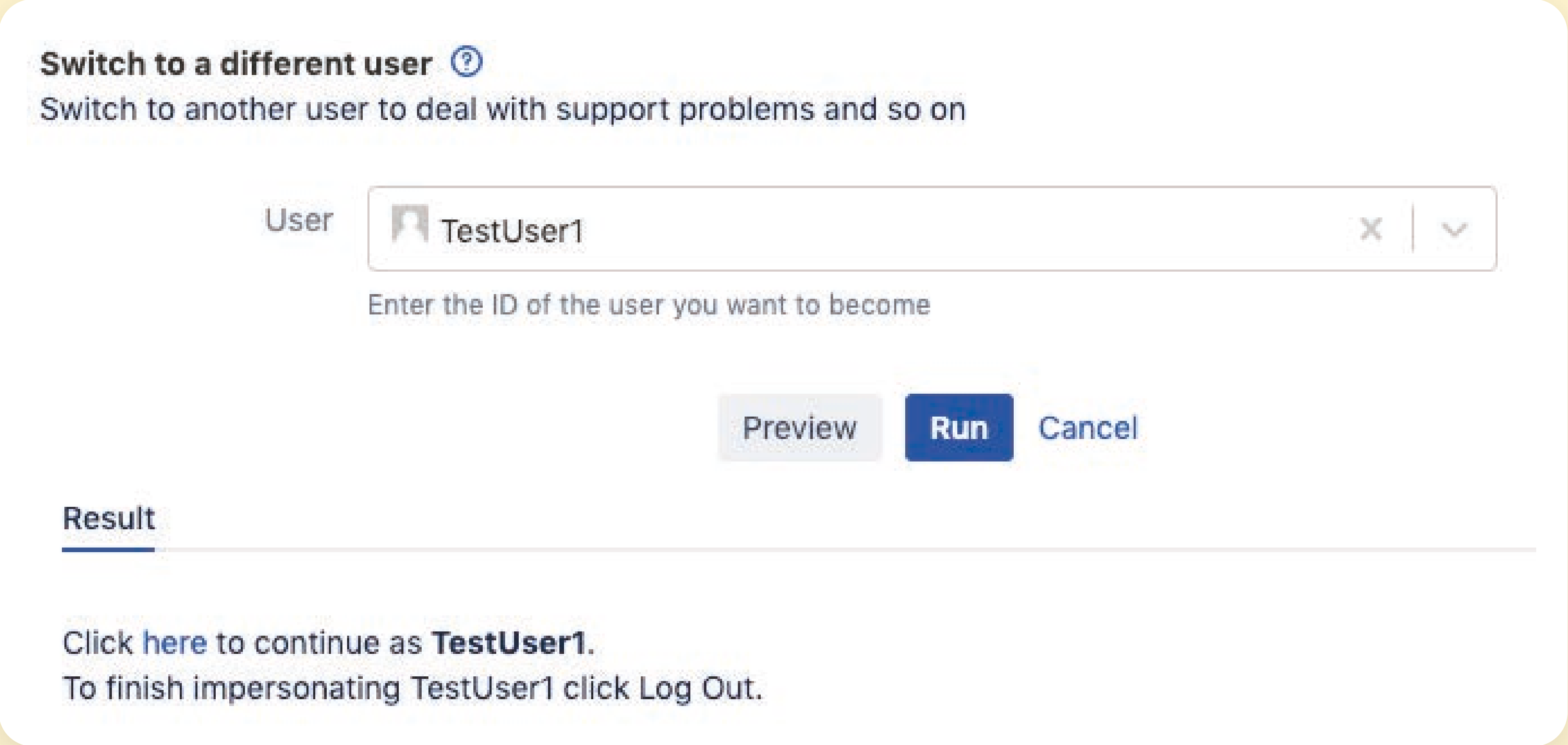
Description: A role that represents developers in a project

GOING PRO

Diagnose users' permission issues at a glance

Diagnosing user permission issues via screengrabs and messages exchanged over Slack or email can be incredibly frustrating.

Luckily, ScriptRunner for Jira's Switch to a different user built-in script allows the admin to temporarily assume the identity of another user and reproduce specific problems.



Switch to a different user

Switch to another user to deal with support problems and so on

User TestUser1

Enter the ID of the user you want to become

Click here to continue as **TestUser1**.
To finish impersonating TestUser1 click Log Out.

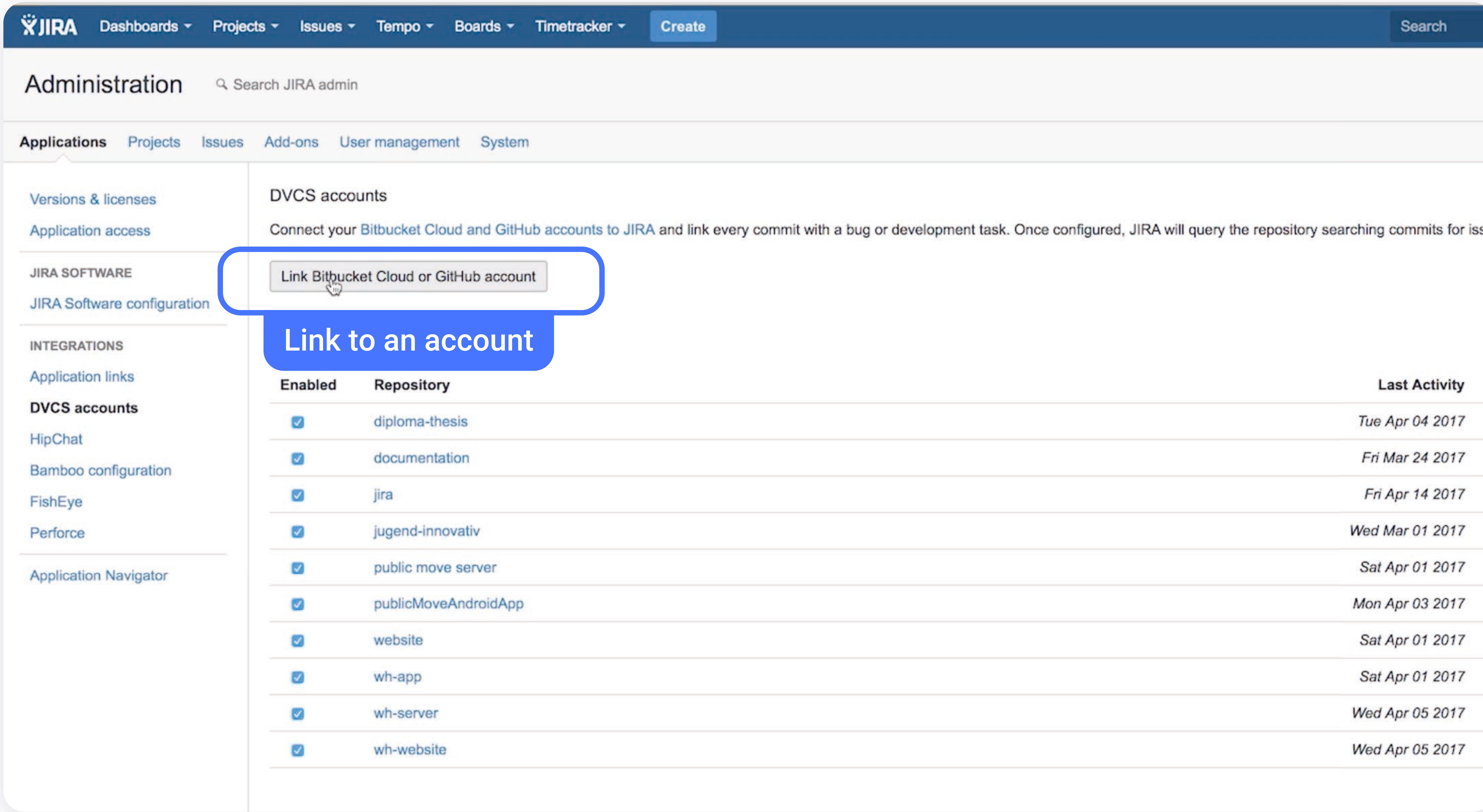
Our advice: Regularly review all permission schemes to ensure they still reflect the business needs. As time goes by, schemes will evolve and change. Keep an eye on the schemes to make sure they still meet the needs of the business and you are making full use of any new functionality that has been released.

4. Make your development team's life simpler with Smart Commits

If you use Jira Server or Data Center and your team manages repositories in Bitbucket or GitHub, you should enable Smart Commits.

It's common that a developer starts working on the code, commits and pushes it to a repository, but doesn't come back to the actual Jira issue to update the status and add a comment and a worklog.

Smart Commits allows the dev to include the Jira issue Key in the commit message and along with it update the issue as well. It's a double win: developers can just focus on the code and not worry about Jira, while your development process stays tidy.



DVCS accounts

Connect your Bitbucket Cloud and GitHub accounts to JIRA and link every commit with a bug or development task. Once configured, JIRA will query the repository searching commits for iss

Link to an account

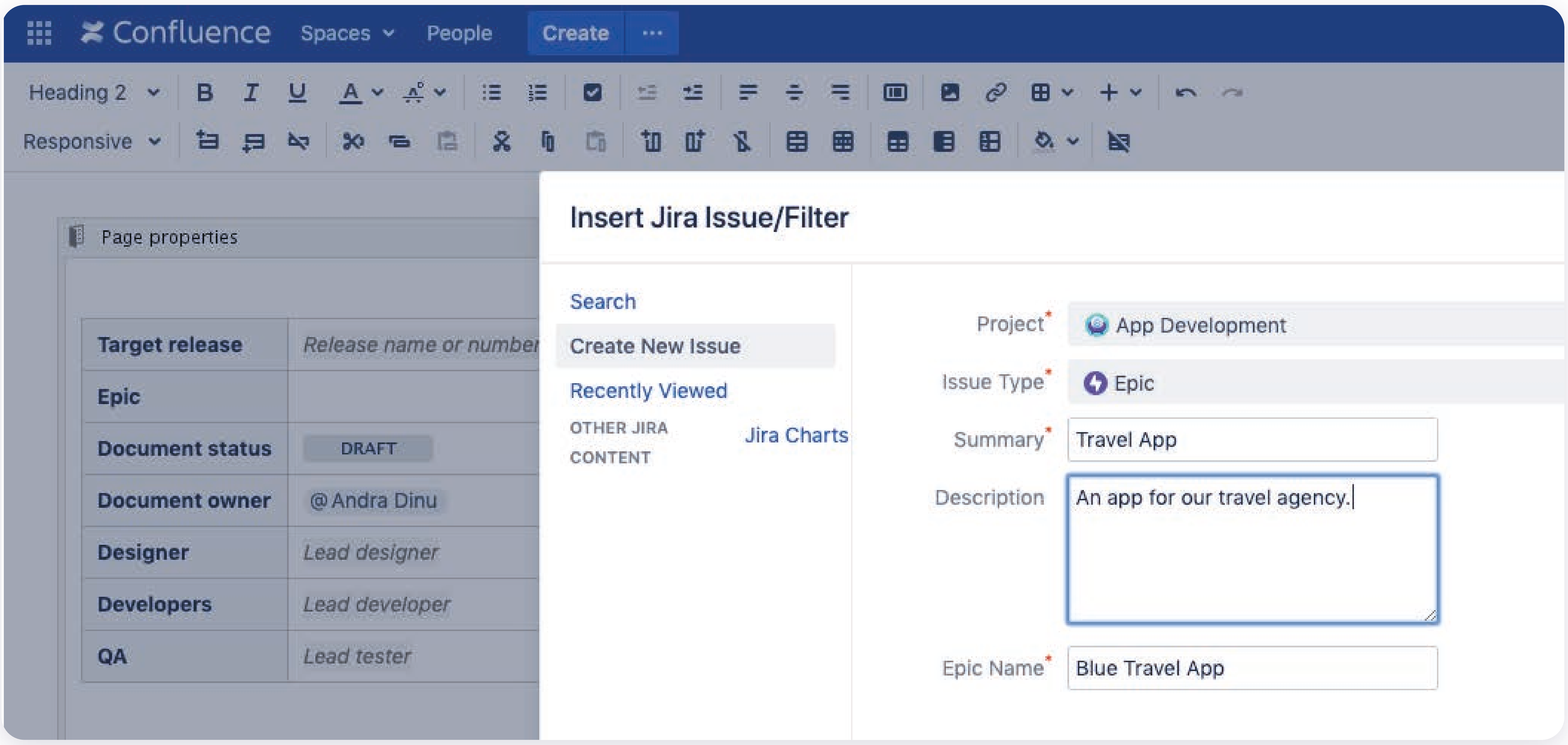
Enabled	Repository	Last Activity
☑	diploma-thesis	Tue Apr 04 2017
☑	documentation	Fri Mar 24 2017
☑	jira	Fri Apr 14 2017
☑	jugend-innovativ	Wed Mar 01 2017
☑	public move server	Sat Apr 01 2017
☑	publicMoveAndroidApp	Mon Apr 03 2017
☑	website	Sat Apr 01 2017
☑	wh-app	Sat Apr 01 2017
☑	wh-server	Wed Apr 05 2017
☑	wh-website	Wed Apr 05 2017

You can go one step further and combine Smart Commits with Workflow Triggers - which mirrors the development workflow in a Jira workflow. For example, when a new branch is created, the status of the corresponding Jira issue is changed to 'In Progress'. When a developer does a pull request, the status is changed to 'In review'. Finally, when the branch is merged, the status becomes 'Resolved' or 'Done'.

5. Foster collaborative product development with Jira and Confluence

Great products are born out of successful collaboration. When you start defining your product requirements, you have a free flowing conversation, where team members can delete and add until the team feels you've actually determined the entire scope of what you want to deliver - at which point you'll break the work into tasks and start tracking progress.

Once you've linked Jira with Confluence, start with Confluence's Product Requirements Blueprint as a home base for defining your product. Choose the placeholder text 'Link to Jira epic or feature' and create your epic in Jira directly from Confluence.



Target release	*Release name or number*
Epic	
Document status	DRAFT
Document owner	@Andra Dinu
Designer	*Lead designer*
Developers	*Lead developer*
QA	*Lead tester*

Insert Jira Issue/Filter

Project* App Development

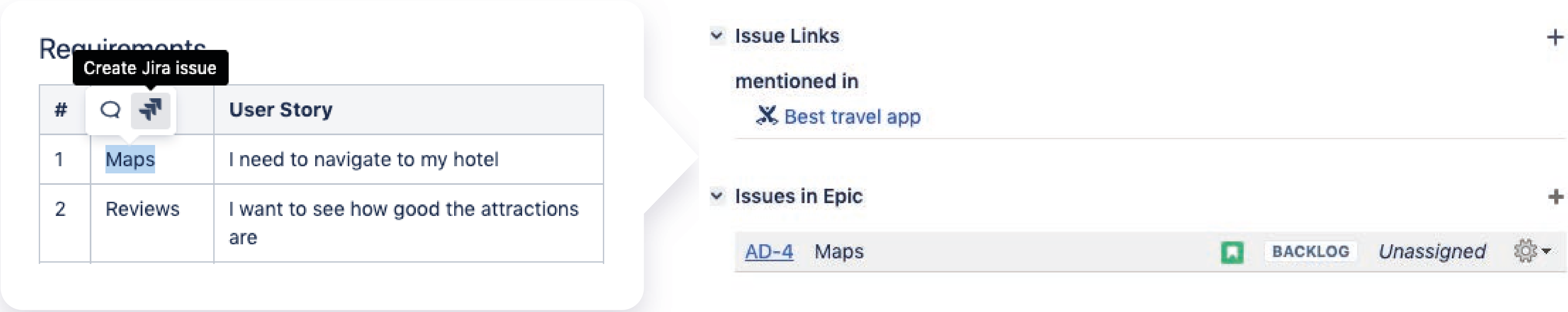
Issue Type* Epic

Summary* Travel App

Description An app for our travel agency.

Epic Name* Blue Travel App

Once you've linked Jira with Confluence, start with Confluence's Product Requirements Blueprint as a home base for defining your product. Choose the placeholder text 'Link to Jira epic or feature' and create your epic in Jira directly from Confluence.



#		User Story
1	Maps	I need to navigate to my hotel
2	Reviews	I want to see how good the attractions are

AD-4 Maps BACKLOG *Unassigned*

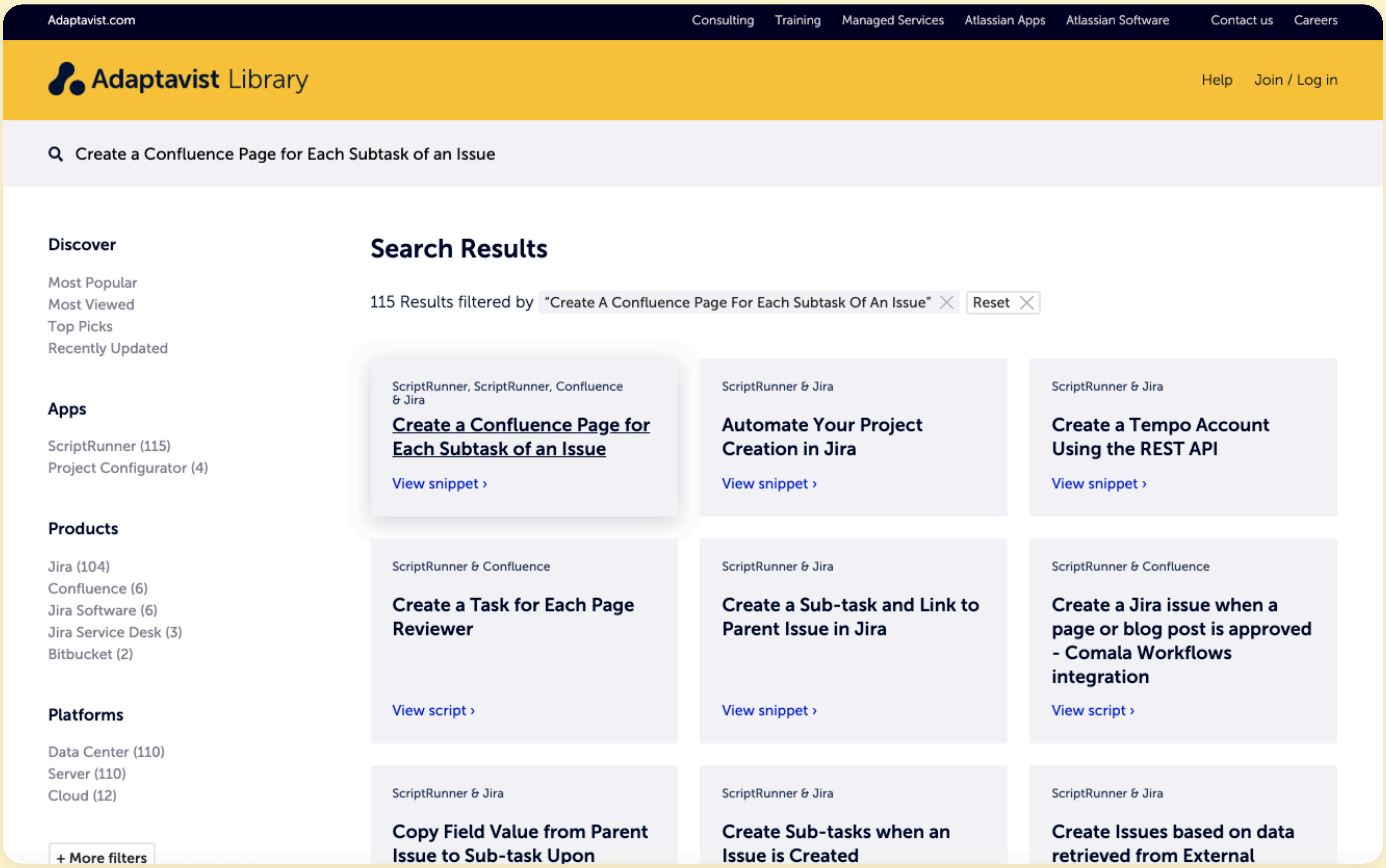
Our advice: You don't need to stick to Confluence's Product Requirements Blueprint, you can always create your own or customise the existing blueprint to meet your company's unique process.

GOING PRO

Automatically create Confluence pages for issues and sub-tasks in Jira

Depending on the needs of your team, you might also need the reverse: each issue or sub-task in Jira would need to have a corresponding Confluence page so more in-depth conversations about the feature can be carried out.

While this is not an out-of-the box Jira capability, ScriptRunner for Jira gives you the power to create complex automations using its Script Console feature. Using a Groovy script, you could automate the creation of Confluence pages for each project in Jira. Or set up an event listener which automatically creates a Confluence page for each subtask of an issue. When it comes to bespoke customisation and automation, the sky's the limit!



Create a Confluence Page for Each Subtask of an Issue

Search Results

115 Results filtered by "Create A Confluence Page For Each Subtask Of An Issue" ✕ Reset ✕

ScriptRunner, ScriptRunner, Confluence & Jira
Create a Confluence Page for Each Subtask of an Issue
View snippet ›

ScriptRunner & Jira
Automate Your Project Creation in Jira
View snippet ›

ScriptRunner & Jira
Create a Tempo Account Using the REST API
View snippet ›

ScriptRunner & Confluence
Create a Task for Each Page Reviewer
View script ›

ScriptRunner & Jira
Create a Sub-task and Link to Parent Issue in Jira
View snippet ›

ScriptRunner & Confluence
Create a Jira issue when a page or blog post is approved - Comala Workflows integration
View script ›

ScriptRunner & Jira
Copy Field Value from Parent Issue to Sub-task Upon

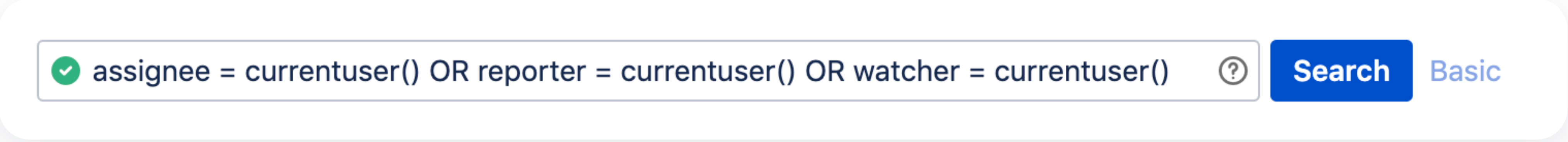
ScriptRunner & Jira
Create Sub-tasks when an Issue is Created

ScriptRunner & Jira
Create Issues based on data retrieved from External

6. Keep track of assigned, reported, and watched issues on a personal Kanban board

To keep everything else organised, you need to first keep yourself organised.

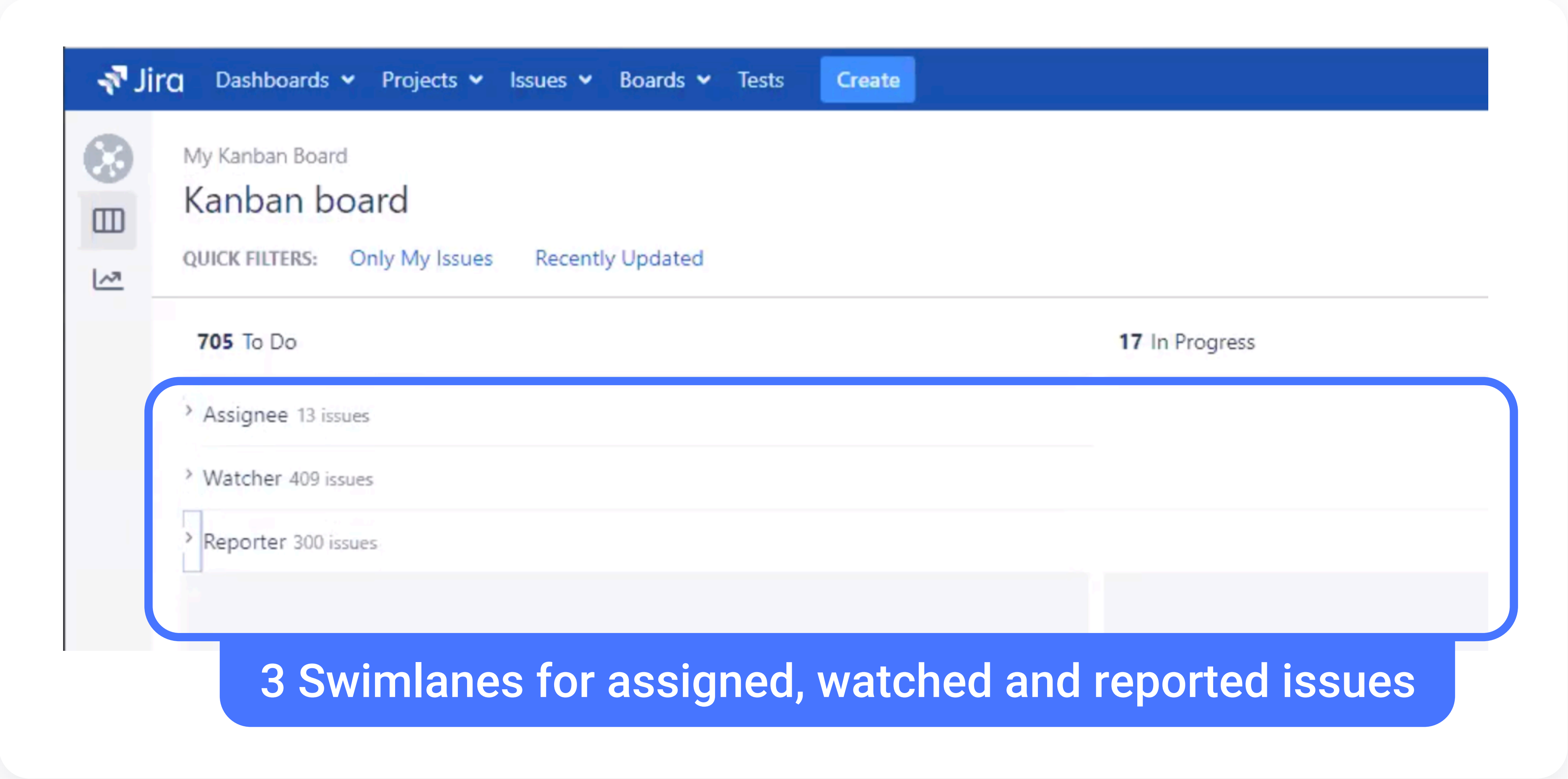
Start by creating your own Agile board based on a filter that shows everything assigned to you, everything you've reported and everything that you're watching.



```
assignee = currentuser() OR reporter = currentuser() OR watcher = currentuser()
```

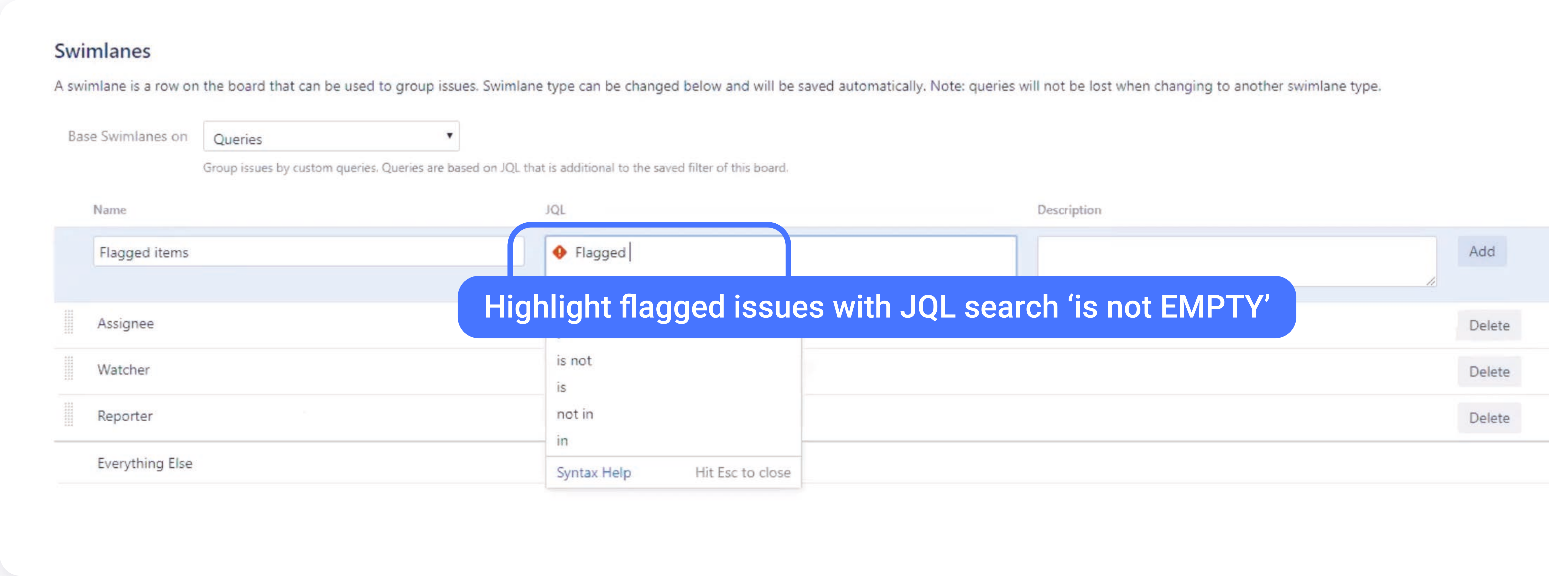
Our advice: Use **currentUser** in the filter rather than using your own name. That way you can share the filter with other people and it will still work for them.

Next, create 3 swimlanes on your Kanban board. First one with issues that are assigned to you, the second with things that are reported by you, and the third one with things that you're watching.



3 Swimlanes for assigned, watched and reported issues

Pushing a bit further, if your teams use the in-built feature of 'Add flag and comment' you will see these highlighted in each swimlane. But it can be more useful to bring them all to the top in a specific swimlane to ensure you swarm on the right events. Simply create a 4th swimlane that highlights the flagged issues using the JQL flagged 'is not EMPTY:



Swimlanes

A swimlane is a row on the board that can be used to group issues. Swimlane type can be changed below and will be saved automatically. Note: queries will not be lost when changing to another swimlane type.

Base Swimlanes on: Queries

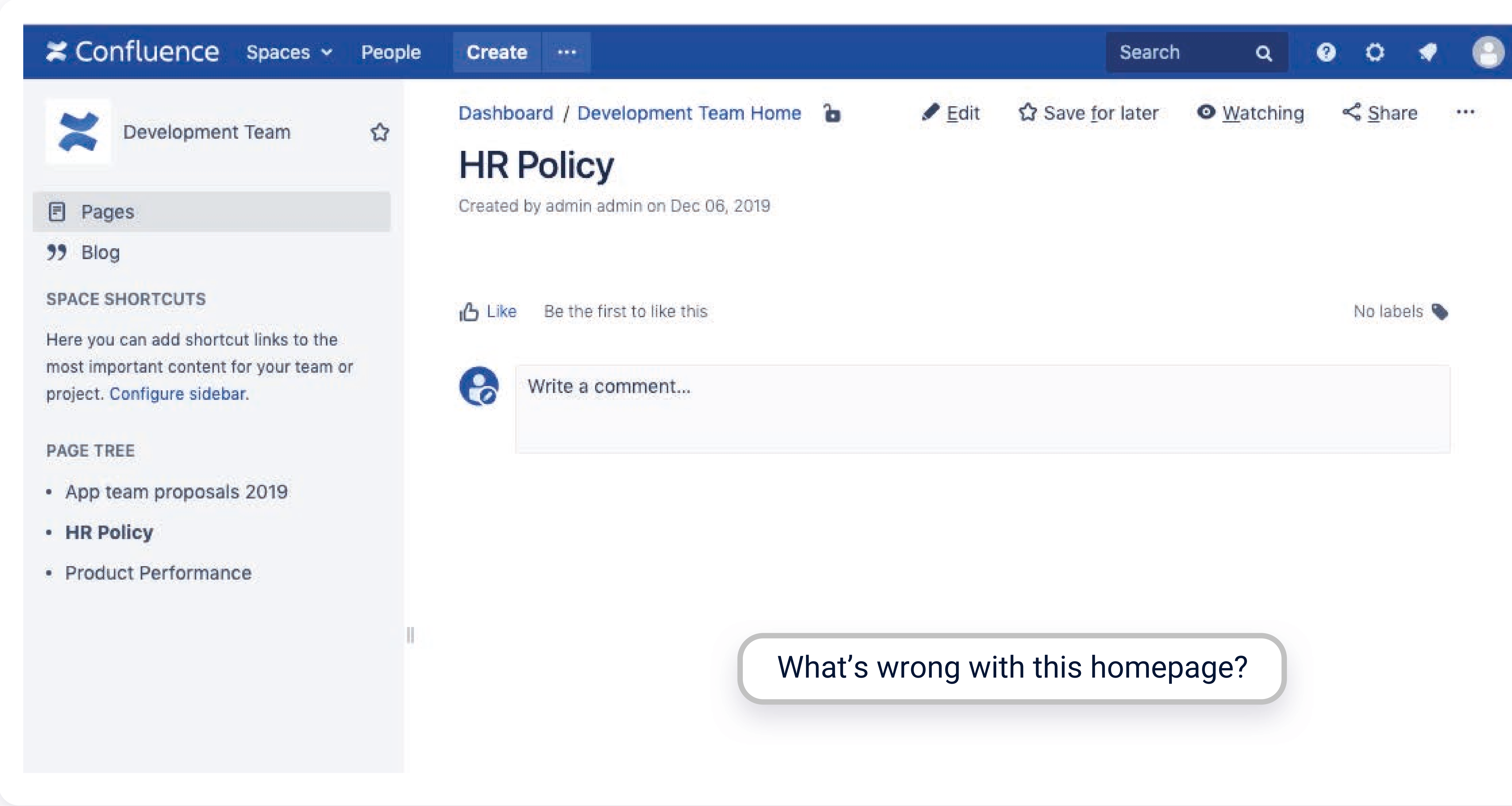
Group issues by custom queries. Queries are based on JQL that is additional to the saved filter of this board.

Name	JQL	Description	
Flagged items	Flagged		Add
Assignee			Delete
Watcher			Delete
Reporter			Delete
Everything Else			

Highlight flagged issues with JQL search 'is not EMPTY'

7. Pay attention to the homepage from the beginning

You and your team may know what the space is for when it's first created, but over time, and with more and more content, its purpose can get muddy. A bad homepage means users will either waste time searching for what they need, or they will reinvent the wheel by re-creating content which is already there.



Here you can add shortcut links to the most important content for your team or project. Configure sidebar.

HR Policy

Created by admin admin on Dec 06, 2019

Be the first to like this

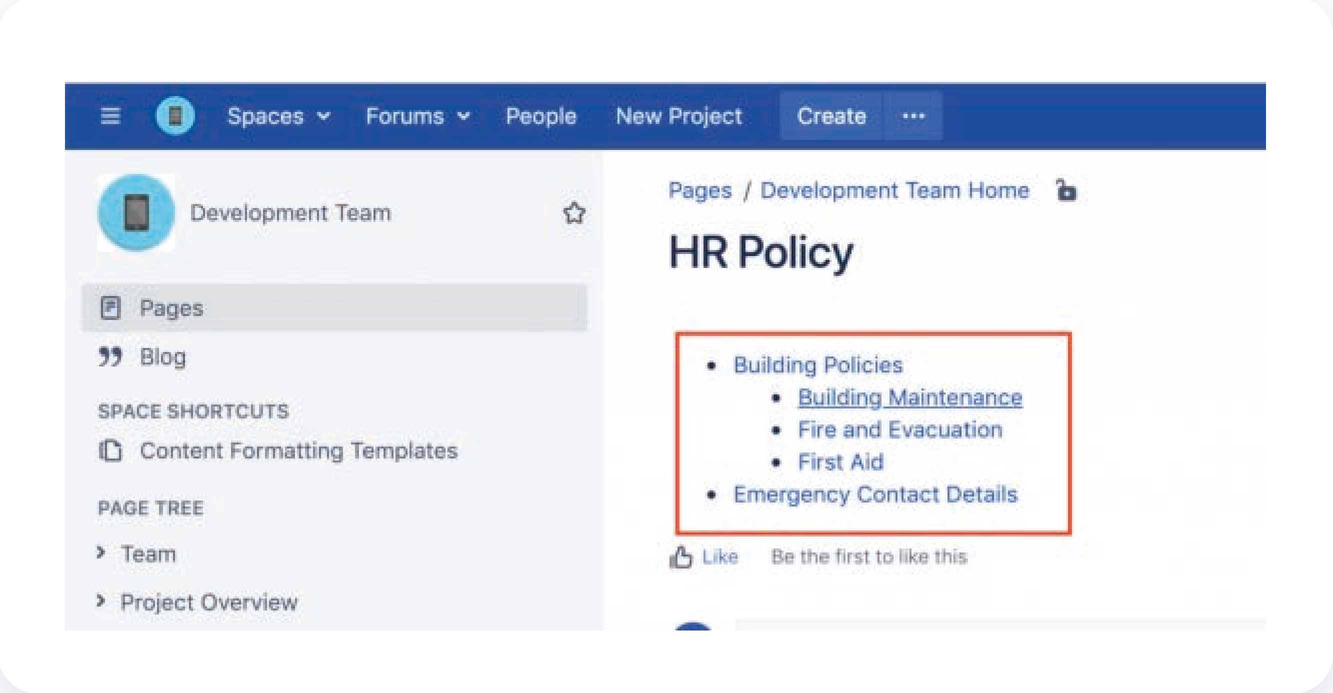
Write a comment...

What's wrong with this homepage?

Before you hit 'Create', put some thought into who your users are, what is the bare minimum they need to know about the project and where they need to go next. This information should be well presented on your homepage, and your navigation should be as clear as possible. As a rule, a good homepage should contain 3 things:

1. A table of contents

You could show a list of child pages in your project hierarchy using the Children Display Macro. Users will understand the relationship between this page and all pages in the hierarchy at a glance. You don't need to show all the pages nested under, the macro lets you choose how many levels to present.



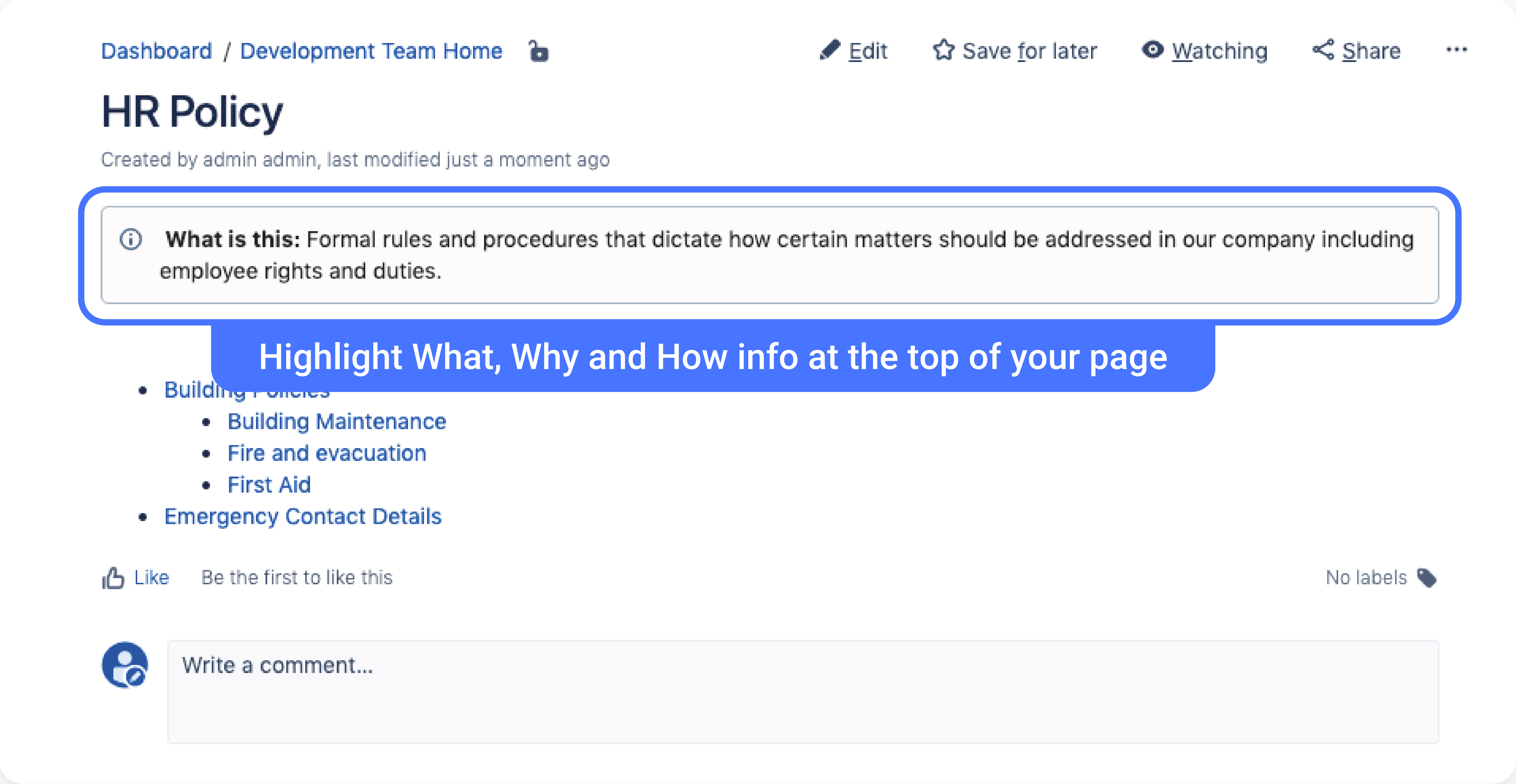
HR Policy

- Building Policies
  - Building Maintenance
  - Fire and Evacuation
  - First Aid
- Emergency Contact Details

Be the first to like this

2. A short summary covering *'What is this?'*, *'Why are we working on it?'* and *'How is it going to have an impact?'*

You can use the Info, Tip, Note, and Warning Macros to create colored boxes to highlight this info.



HR Policy

Created by admin admin, last modified just a moment ago

What is this: Formal rules and procedures that dictate how certain matters should be addressed in our company including employee rights and duties.

Highlight What, Why and How info at the top of your page

- Building Policies
  - Building Maintenance
  - Fire and evacuation
  - First Aid
- Emergency Contact Details

Be the first to like this

Write a comment...

3. The content owner name and team

Use the User Profile Macro to display a picture and contact information listed in the team members' profile.

GOING PRO

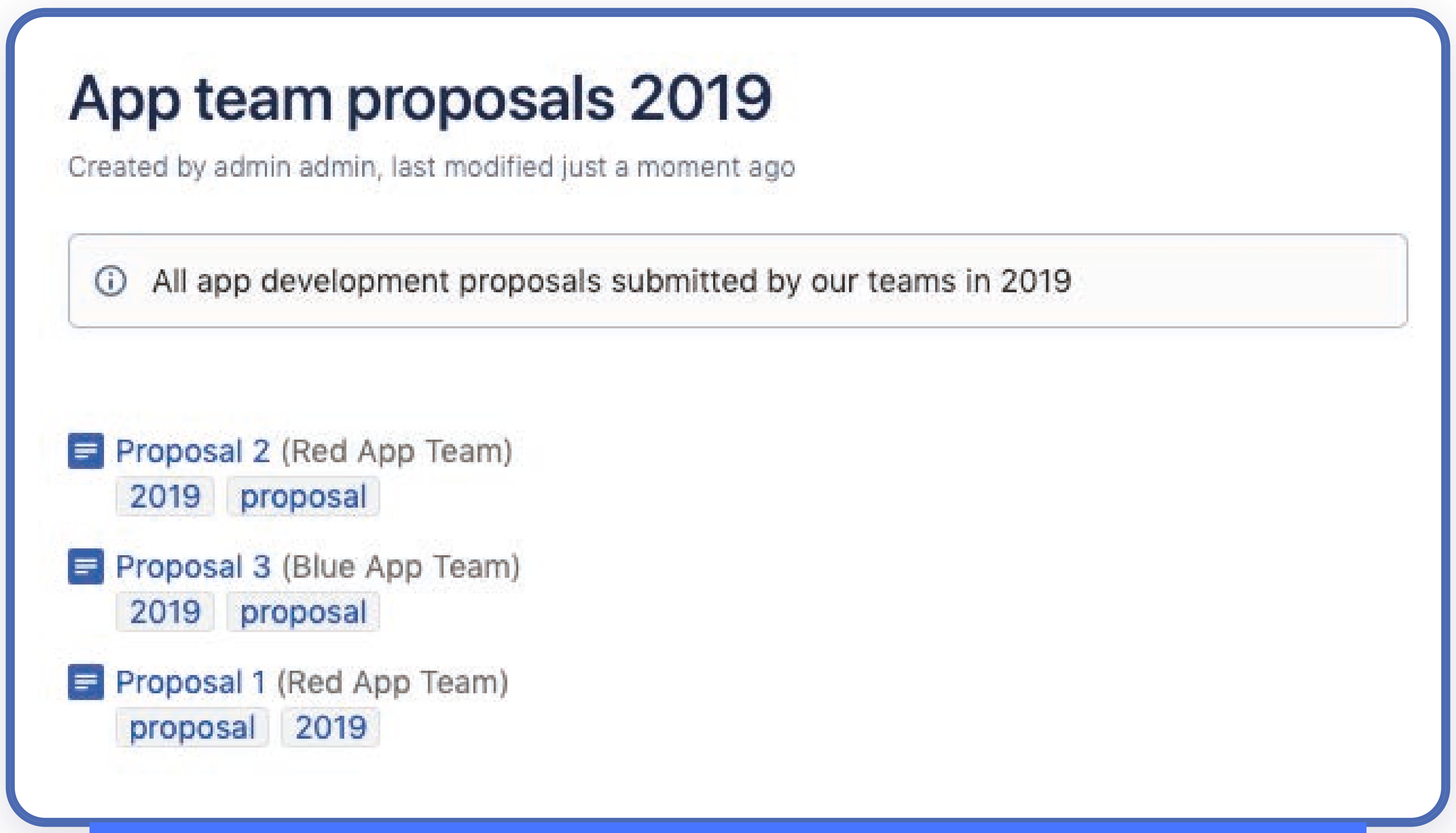
Record when a person has read a page

Use a third-party app like Forms for Confluence to record when a person acknowledges reading a page, or to ask users to provide feedback by submitting answers to a few questions right on the page. This is very useful for those HR policy and procedure pages where you need to record user having acknowledged the content.

8. Organise and highlight content with labels and macros

Confluence can quickly become a jungle where you waste hours looking for the content you need. Adding labels to pages and attachments makes content easier to group and find. But you should go one step further and use labels to systematise content by collecting related pages together and display them according to your criteria.

Use the Content by Label macro to display lists of pages, blog posts or attachments that have particular labels. For example, you can present a list of page links to all proposals created by your App team in 2019.



App team proposals 2019

Created by admin admin, last modified just a moment ago

ⓘ All app development proposals submitted by our teams in 2019

Proposal 2 (Red App Team)
2019 proposal

Proposal 3 (Blue App Team)
2019 proposal

Proposal 1 (Red App Team)
proposal 2019

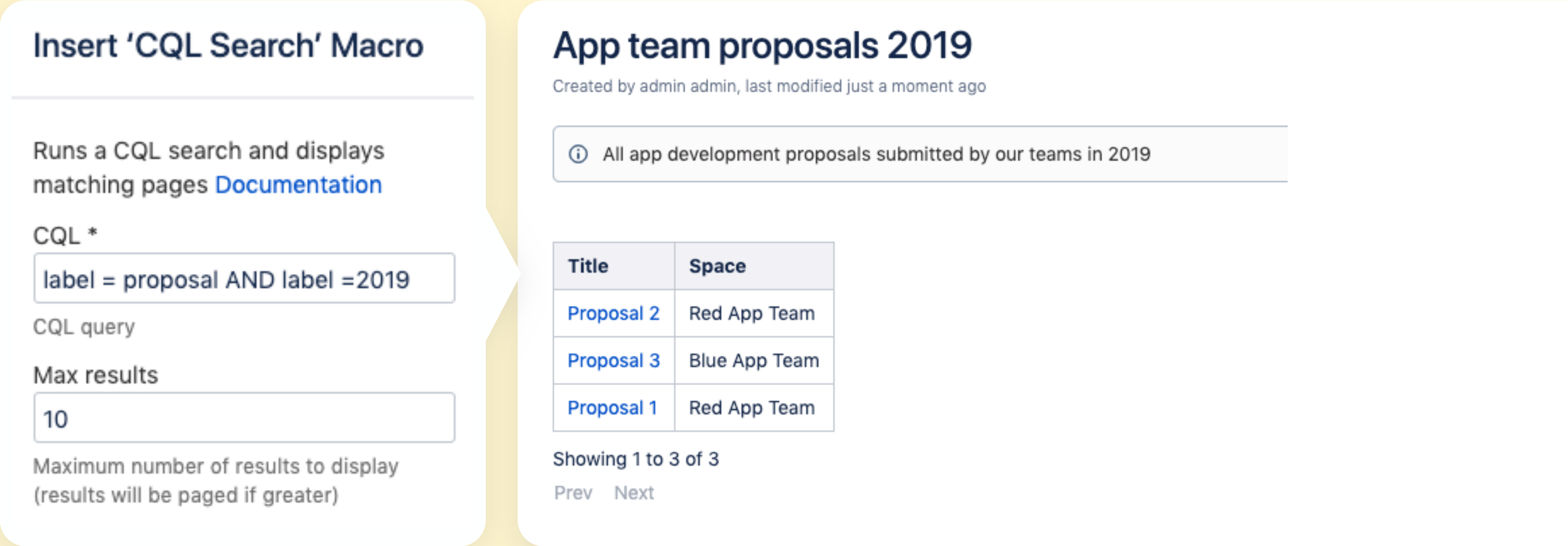
Use the 'Content by Label' macro to display content that have particular labels.

GOING PRO

Use CQL to display info based on complex label combinations

The ‘Content by Label’ macro displays all content that has a particular label - such as ‘proposal’. But in the example above, if other pages were labelled with ‘proposal’ AND other labels such as ‘2018’, ‘2019’ and you only wanted to see those proposals from 2019, the macro would not filter based on the combination of ‘proposal’ AND ‘2019’. It will display all content labelled ‘proposal’.

Instead, you could use the Custom CQL Macro in ScripRunner for Confluence to display search results based on complex CQL searches. For the example above, you would use a simple search inside the Custom CQL Macro:



Insert ‘CQL Search’ Macro

Runs a CQL search and displays matching pages Documentation

CQL *: label = proposal AND label =2019

CQL query

Max results: 10

Maximum number of results to display (results will be paged if greater)

App team proposals 2019

Created by admin admin, last modified just a moment ago

ⓘ All app development proposals submitted by our teams in 2019

Title	Space
Proposal 2	Red App Team
Proposal 3	Blue App Team
Proposal 1	Red App Team

Showing 1 to 3 of 3

GOING PRO

Manage your labels in bulk

You will not only need to establish and maintain your labelling system, but also manage it and make sure it stays relevant and orderly. Luckily, ScriptRunner for Confluence offers a series of Macros and built-in-scripts allowing you to simplify and automate label management:

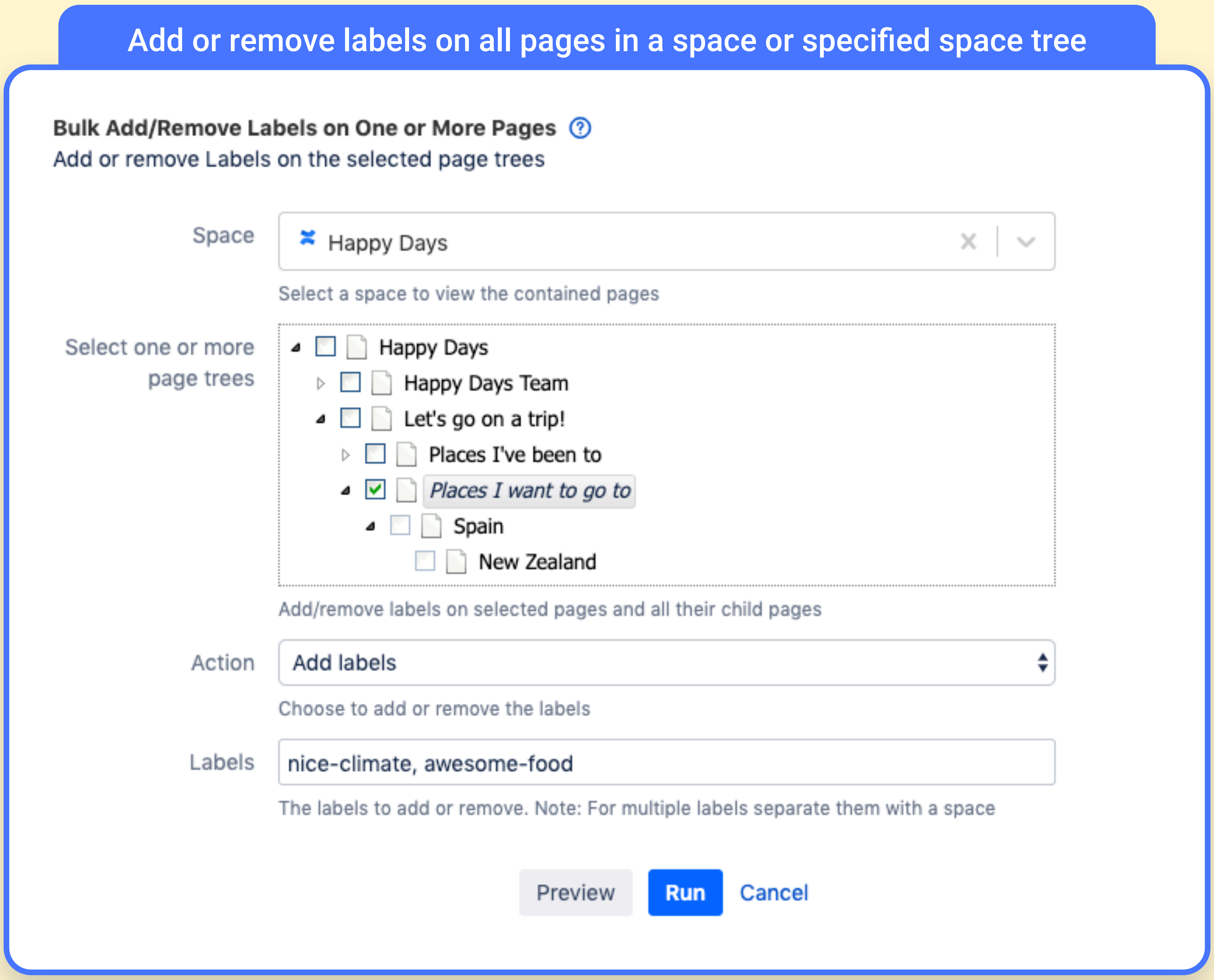
Continues

- The Choose Label Macro displays a set of predefined label suggestions for users to pick from, based on the content of the page. You can include the choose label macro on a template,so when your users are creating a page from that template, they can quickly choose the relevant label - in its proper format/spelling, which keeps things properly organized!

Admin-specific:

- The Add Label Macro adds specified labels to a page if they are not already present.
- The Bulk Add/Remove Labels built-in script allows admins to add or remove labels on all pages in a space or specified space tree
- The Rename Labels built-in script allows admins to replace the labels for specified spaces or all spaces.

Add or remove labels on all pages in a space or specified space tree



Bulk Add/Remove Labels on One or More Pages

Add or remove Labels on the selected page trees

Space: Happy Days

Select a space to view the contained pages

Select one or more page trees:

- □ Happy Days
  - □ Happy Days Team
  - □ Let's go on a trip!
    - □ Places I've been to
    - ☑ *Places I want to go to*
      - □ Spain
        - □ New Zealand

Add/remove labels on selected pages and all their child pages

Action: Add labels

Choose to add or remove the labels

Labels: nice-climate, awesome-food

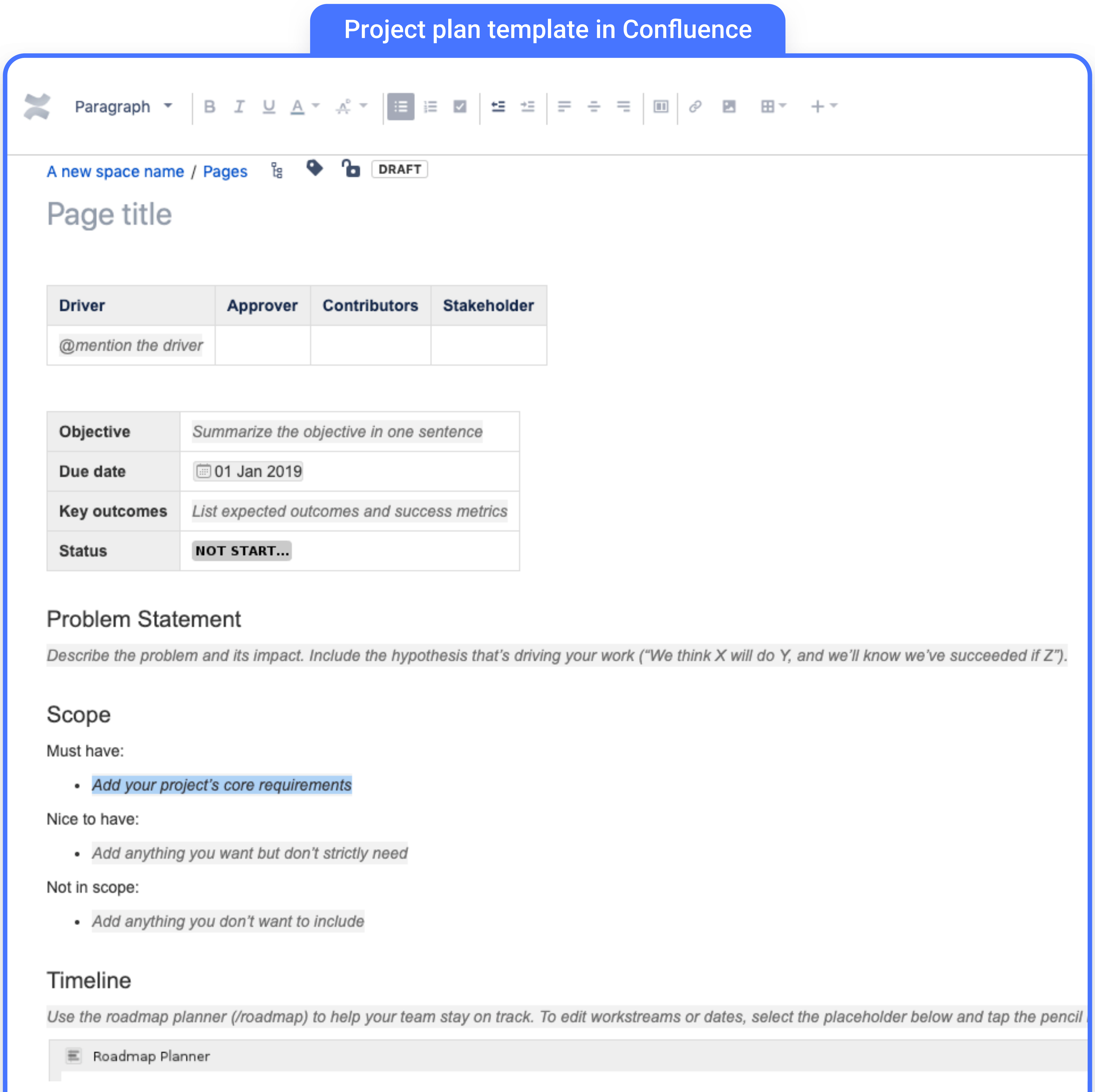
The labels to add or remove. Note: For multiple labels separate them with a space

9. Improve structure consistency and content visibility with page templates

The more users you have, the bigger the risk of ending up with pages in as many different styles, formats and locations as you have users. This makes content difficult to find and digest, and can turn users away if they can't find the info they are looking for quickly enough.

To avoid this situation, make use of [Confluence's out-of-the-box templates.]() This library of pre-made templates and blueprints covers most types of content you will need. Use them out-of the box or as a starting point to [create bespoke templates]() for your various teams. Confluence also allows you to specify page layout, enforce formatting and add suggestions for naming on your page templates.

Project plan template in Confluence



A new space name / Pages

Page title

Driver	Approver	Contributors	Stakeholder
@mention the driver			

Objective	*Summarize the objective in one sentence*
Due date	01 Jan 2019
Key outcomes	*List expected outcomes and success metrics*
Status	NOT START...

Problem Statement

Describe the problem and its impact. Include the hypothesis that's driving your work ("We think X will do Y, and we'll know we've succeeded if Z").

Scope

Must have:

- *Add your project's core requirements*

Nice to have:

- *Add anything you want but don't strictly need*

Not in scope:

- *Add anything you don't want to include*

Timeline

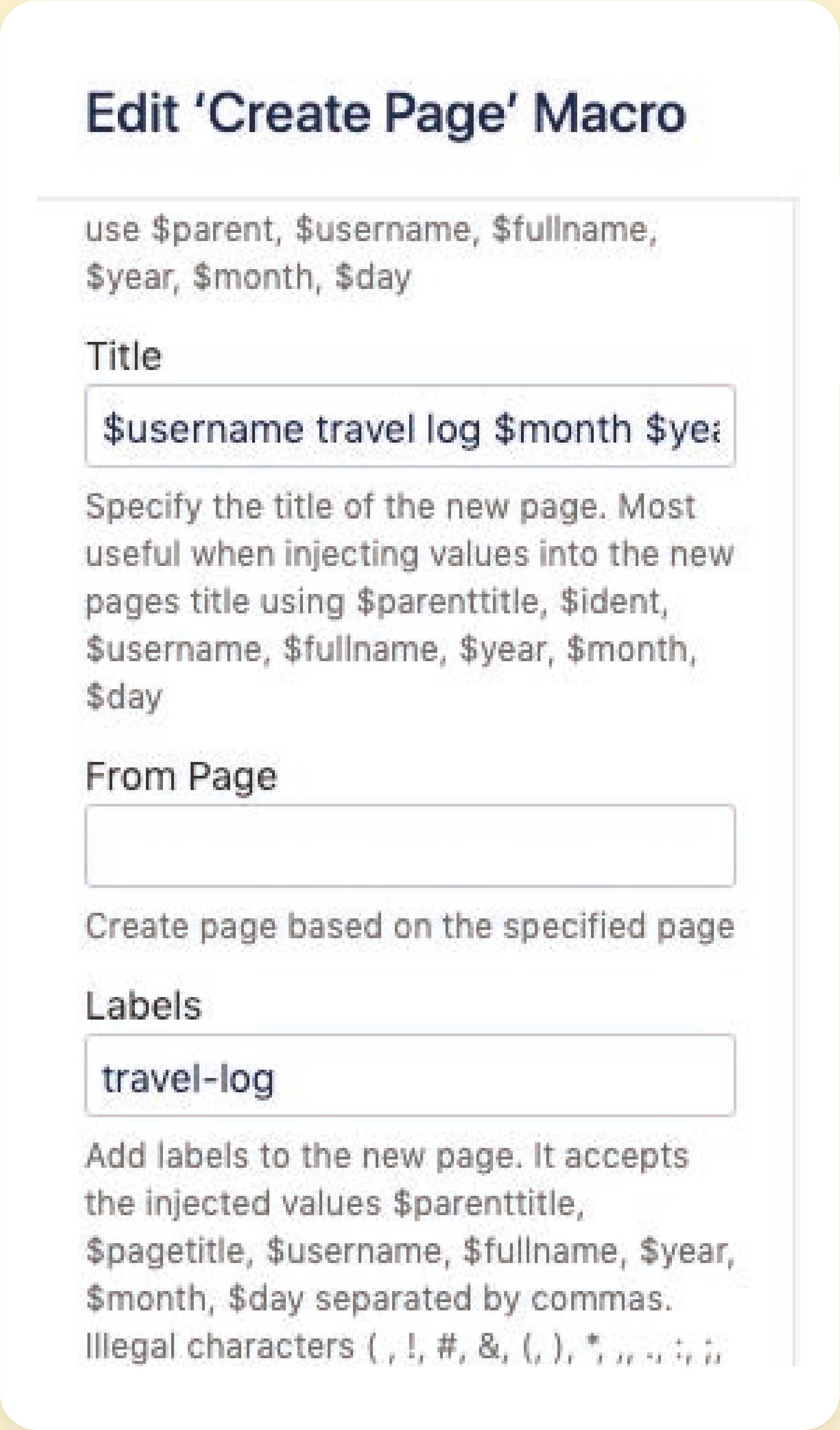
Use the roadmap planner (/roadmap) to help your team stay on track. To edit workstreams or dates, select the placeholder below and tap the pencil

Roadmap Planner

GOING PRO

Help users create pages in the right place, with the right template and with a correctly formatted page title

Using Confluence’s templates allows your teams to create content in a consistent way and helps creators “know where to start” with their pages. But you can go further, and offer them extra support and guidance to create pages in the right place in the content hierarchy, with the right template and correctly formatted page title.



Edit ‘Create Page’ Macro

use $parent, $username, $fullname, $year, $month, $day

Title

$username travel log $month $yea

Specify the title of the new page. Most useful when injecting values into the new pages title using $parenttitle, $ident, $username, $fullname, $year, $month, $day

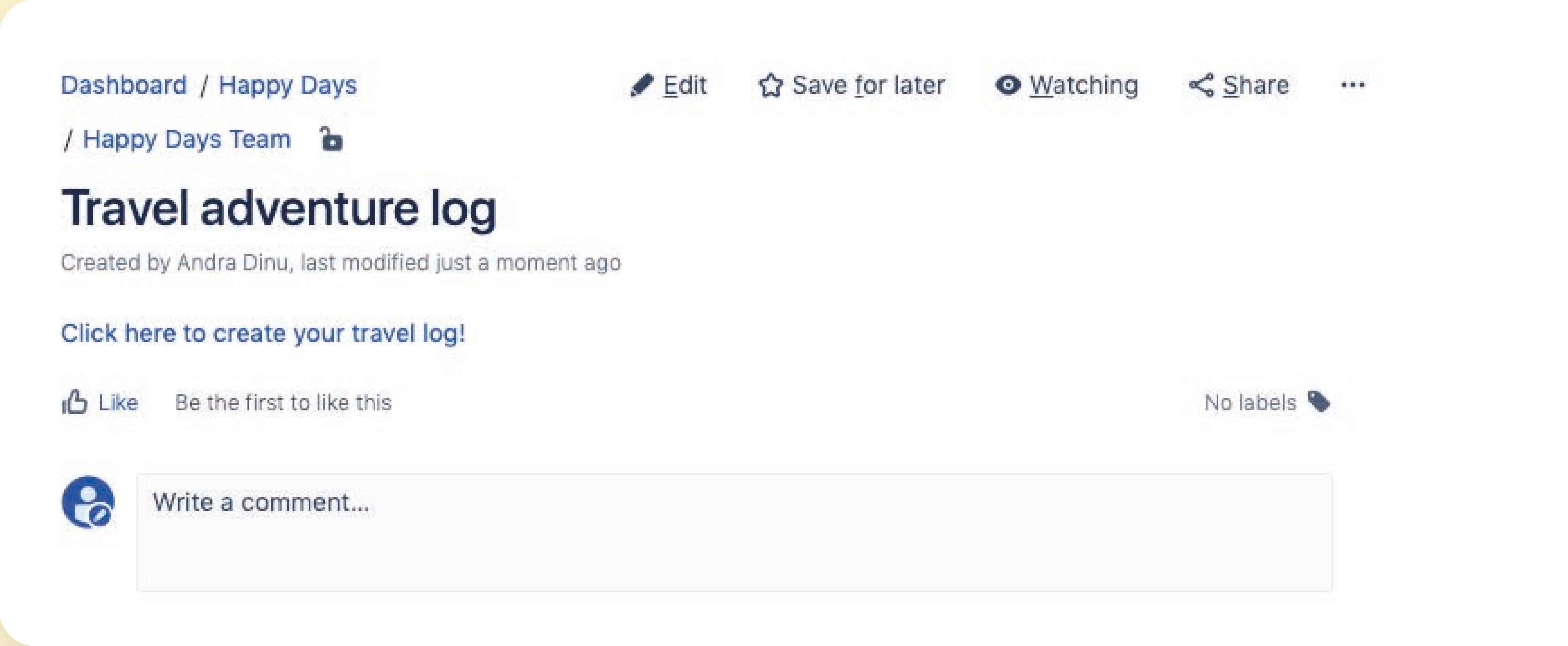
From Page

Create page based on the specified page

Labels

travel-log

Add labels to the new page. It accepts the injected values $parenttitle, $pagetitle, $username, $fullname, $year, $month, $day separated by commas. Illegal characters (, !, #, &, (,), *, ,, ., :, ;,



Travel adventure log

Created by Andra Dinu, last modified just a moment ago

Click here to create your travel log!

The Create Page Macro in ScriptRunner for Confluence is a simple solution that lets users create new pages with a pre-specified template, in a pre-specified location, with pre-added labels, and title suffixes, all at a simple click on a button or link. This way, admins keep the content structure consistent and users save hours of manual updates.

10. Don’t stop at page templates, go for entire space templates!

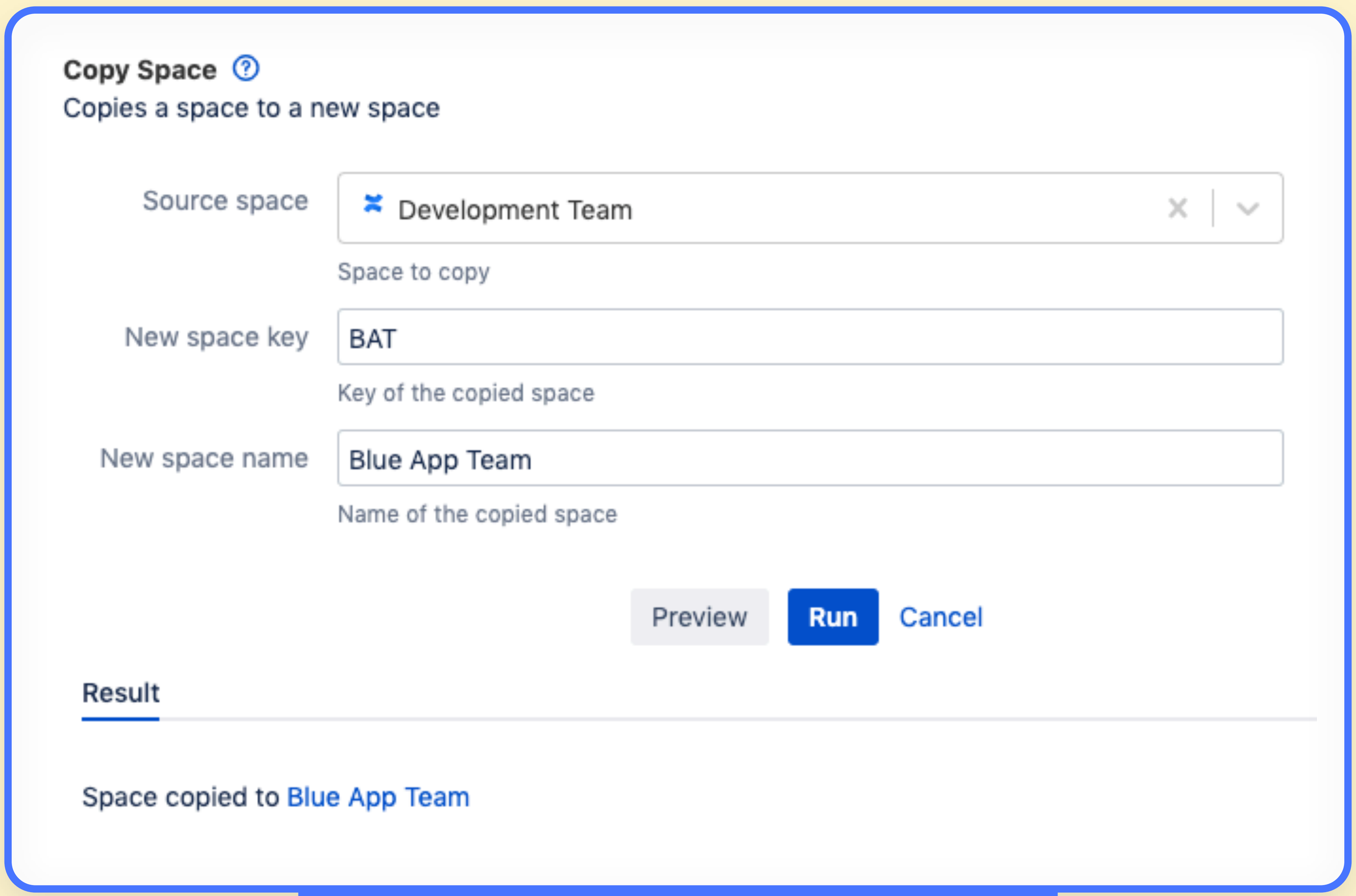
Sometimes, only using page templates is not enough. You can create entire space templates containing hierarchies of parent and child pages to reflect the team processes necessary for your teams to succeed. Once you have your space template nailed down, you can use it over and over again to set up spaces for similar teams.

GOING PRO

Going PRO: Copy an entire space with one click

If you’re using out-of-the-box Confluence, the only way to copy an entire space is quite painstaking: you’ll have to copy and paste each page of your space into the newly created space. It's painfully time-consuming to do this - especially if the spaces are large and pages include a lot of sections.

The Copy Space built-in script in ScriptRunner for Confluence is an easy and fast way to make a complete copy of an existing space. We recommend creating and using a bare bones space you can use as your model.



Copy Space
Copies a space to a new space

Source space: Development Team
Space to copy

New space key: BAT
Key of the copied space

New space name: Blue App Team
Name of the copied space

Space copied to Blue App Team

Use Copy space to make a complete copy of an existing space

11. Create a Confluence maintenance routine - and run it regularly

A regular Confluence cleaning routine doesn't only prevent clutter and keep content discoverable, it also keeps your servers healthy. If left unchecked, the number of pages, links, attachments, videos, gifs that accumulate across your spaces will take their toll on your servers and may negatively impact performance. Here are a few good practices:

- Educate users to put large files in another place and link to these files from Confluence

Our advice: Admins can set attachment size limitations to the instance so users cannot upload large files to Confluence pages.

- Start by identifying problem spaces by looking at size and attachment count
- Use labels to mark those pages that haven't been edited in a long time and list them for review with the space owner or space admin
- Make it a policy to archive or delete this old abandoned content as well as old page versions

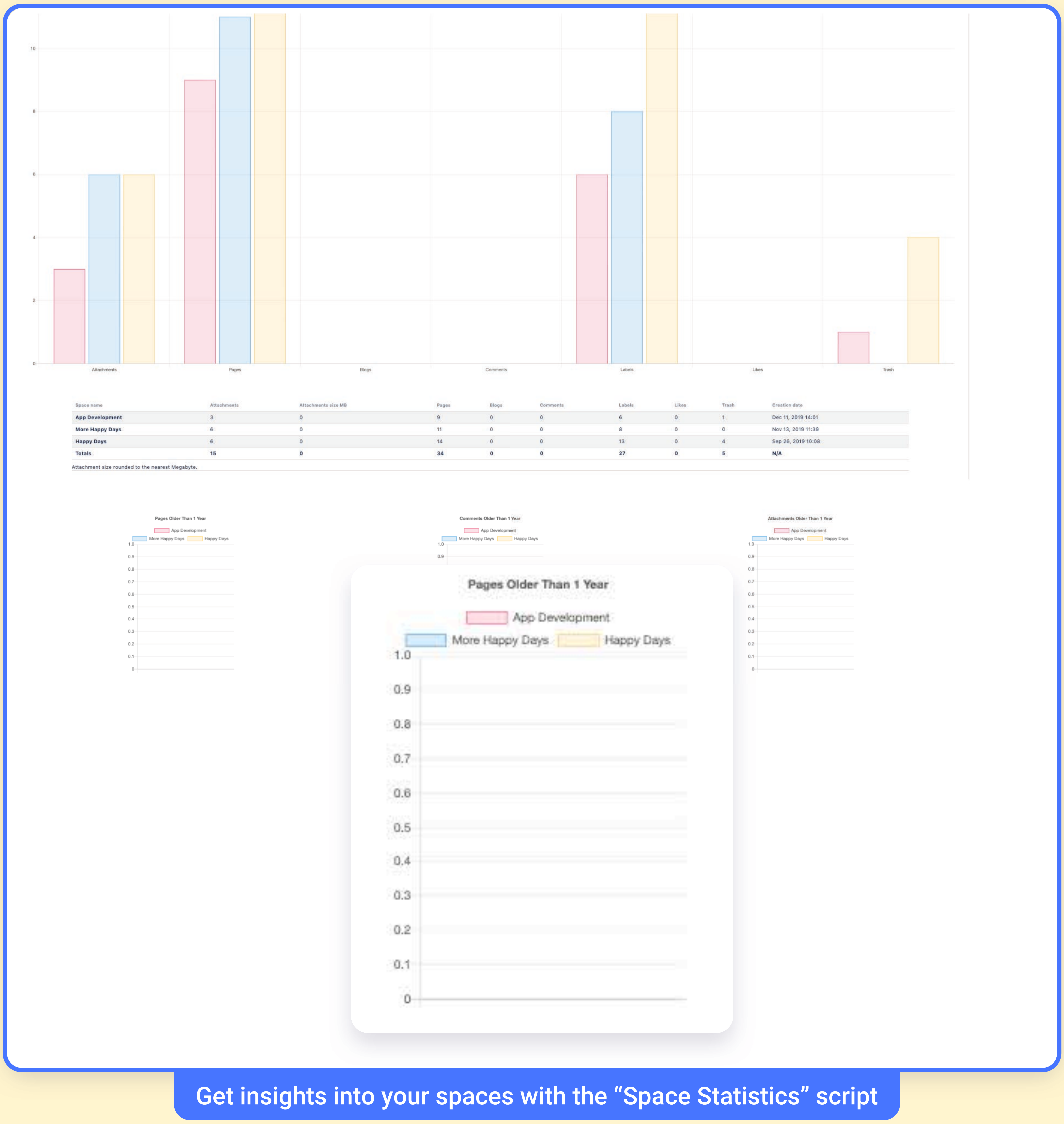
GOING PRO

Build a maintenance routine with bulk actions and automation

The above actions can be painfully time-consuming for an admin if done entirely manually. Luckily, ScriptRunner for Confluence can make things a bit easier:

- Use Space Statistics built-in script to identify the spaces with the largest attachments
- Use the Old Content Notifier to automatically get notified of content that's older than a certain age
- Use the Bulk Delete Attachments and Bulk Delete Comments built-in scripts to delete attachments and comments that are older than a certain age

Continues



Space name	Attachments	Attachments size MB	Pages	Blogs	Comments	Labels	Likes	Trash	Creation date
App Development	3	0	9	0	0	6	0	1	Dec 11, 2019 14:01
More Happy Days	6	0	11	0	0	8	0	0	Nov 13, 2019 11:39
Happy Days	6	0	14	0	0	13	0	4	Sep 26, 2019 10:08
Totals	**15**	**0**	**34**	**0**	**0**	**27**	**0**	**5**	**N/A**

Attachment size rounded to the nearest Megabyte.

Get insights into your spaces with the “Space Statistics” script

Make it completely automated:

- Use the Script Jobs function to create a check that runs regularly, flags old pages and tags the space owner or admin to take action
- Create a scheduled job that runs a regular script to archives or delete flagged pages which haven’t been actioned after the time has passed:
- Use Prune old page versions to remove old page versions on a regular schedule

12. Foster a code review culture by assigning reviewers to pull requests

Code reviews save time and money, as bugs are recognised and actioned closer to the point of inception, but they are also a great way to build company culture.

One main take from our own experience is that a company's code review approach should continuously evolve to fit teams' needs. It must also be supported by a set of ground 'human-centric' rules agreed on by the entire team. Here are three examples:

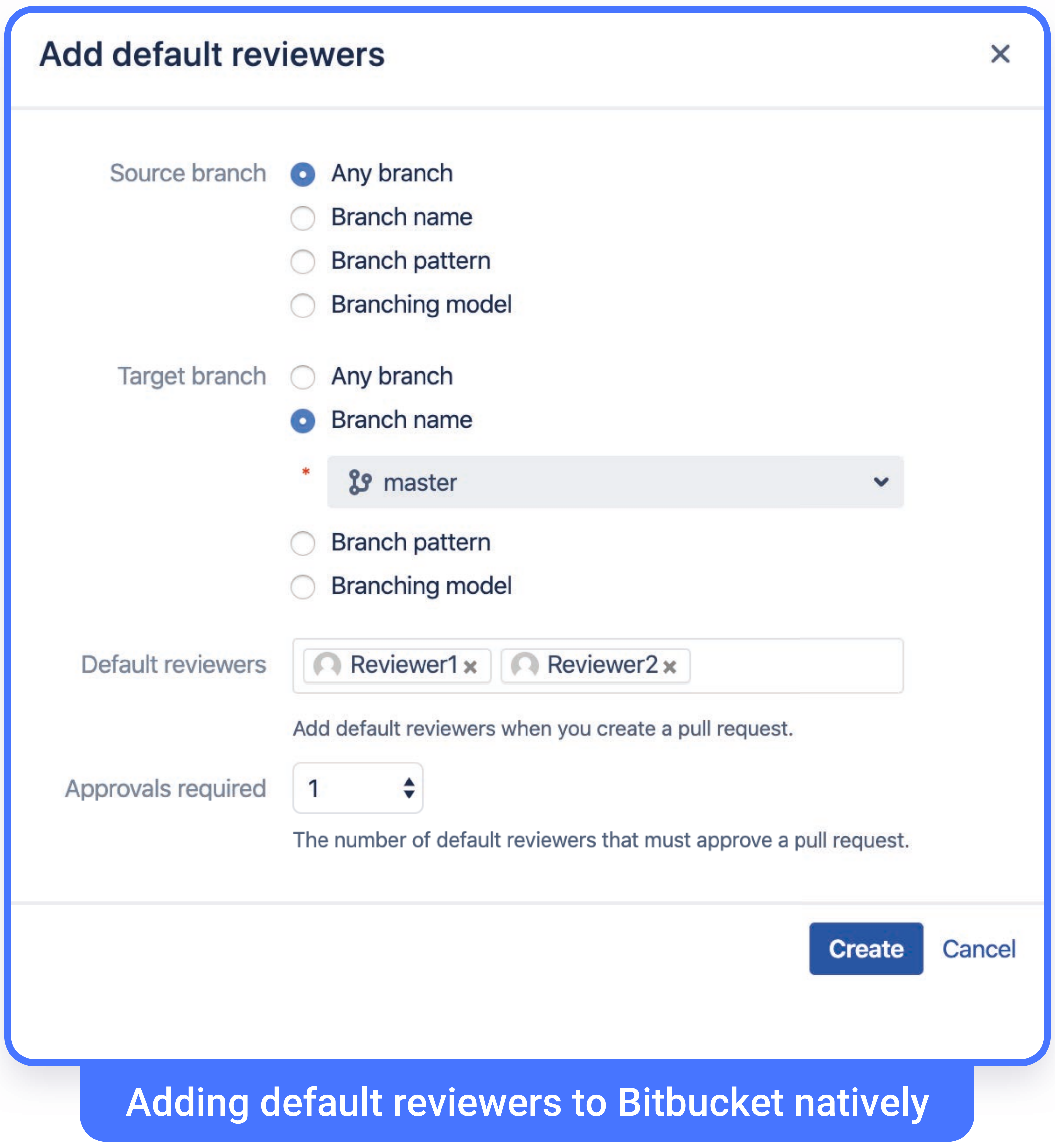
- Any recommendations you make in a code review should be backed up by documentation, formalized guidelines, and common design patterns; your colleagues need to know why they are being asked to make a particular change, and 'because I think/say so' is not an acceptable answer.

- Keep jokes and sarcasm to a minimum in code review comments if you're working in a remote multicultural team, a lot of humour gets lost in translation and in the lack of body-language and comments end up being nonsensical rather than funny.

- Let your colleagues know that you didn't miss any of their points by answering all comments or questions before merging a pull request.

Once you have your ground rules in place, automation can do a lot to help you maintain consistency in your code reviews and to make sure every line of code is actually reviewed. Bitbucket allows administrators to specify default Pull Request reviewers for either all Repositories in a Project, or for individual Repositories.

Below you can see two default reviewers have been added, and one of them is required to approve the Pull Request before it can be merged.



Add default reviewers ×

Source branch
● Any branch
○ Branch name
○ Branch pattern
○ Branching model

Target branch
○ Any branch
● Branch name
* master
○ Branch pattern
○ Branching model

Default reviewers: Reviewer1 × Reviewer2 ×

Add default reviewers when you create a pull request.

Approvals required: 1

The number of default reviewers that must approve a pull request.

Adding default reviewers to Bitbucket natively

GOING PRO

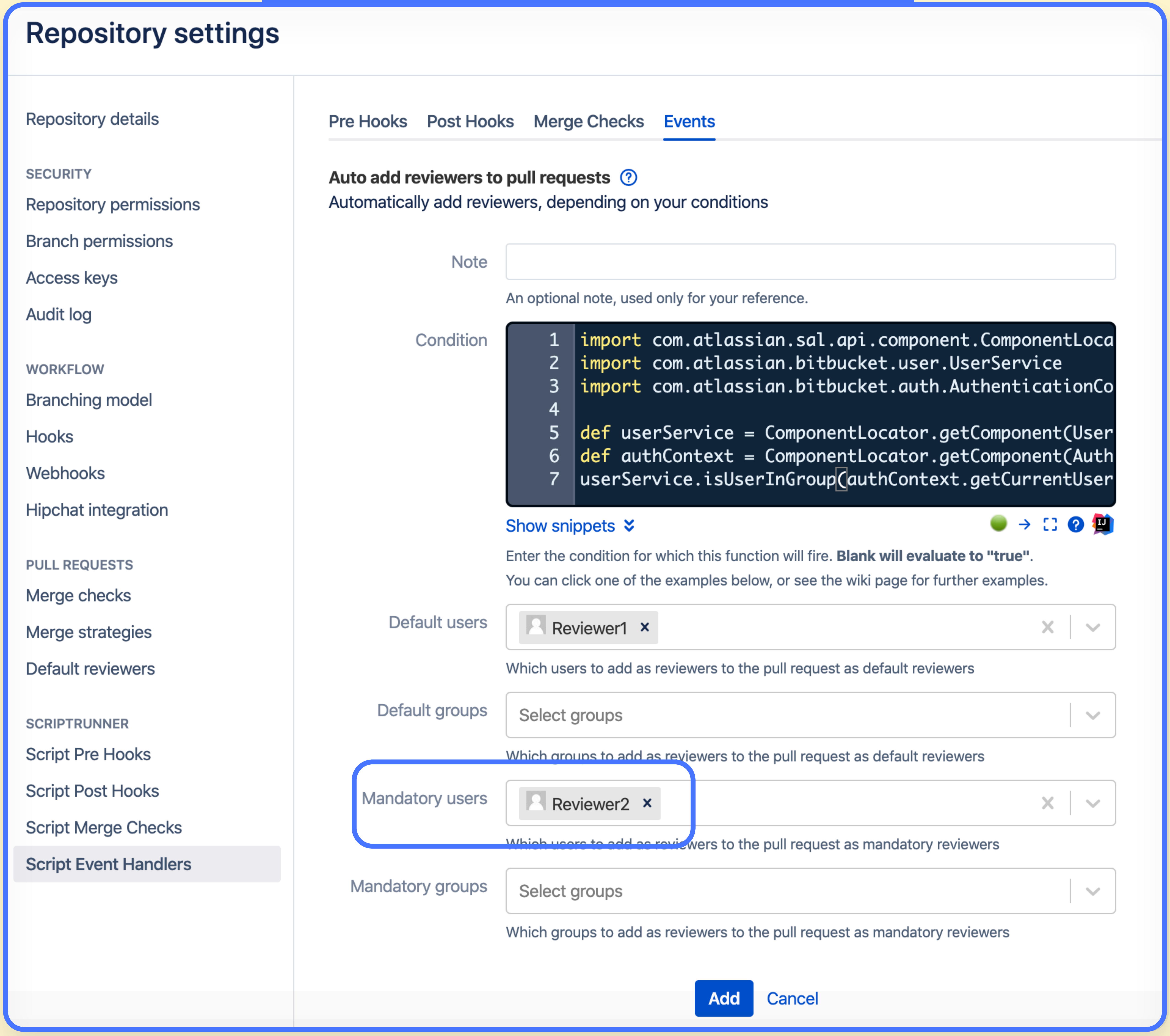
Add mandatory reviewers based on scripted conditions

Many companies working in compliance and regulatory environments have to make sure the right people are reviewing the code. For these companies, but also for other companies that need to enforce more fine-grained control over their code review process, ScriptRunner for Bitbucket offers a series of solutions for enforcing mandatory reviewers:

- Reviewers can be made mandatory for a Pull Request.
- Scripted conditions can be set to determine which Pull Requests the default and mandatory reviewers are added to.

Continues

Adding mandatory reviewers with scripted condition for all current and future Repositories



Repository settings

Repository details

SECURITY
Repository permissions
Branch permissions
Access keys
Audit log

WORKFLOW
Branching model
Hooks
Webhooks
Hipchat integration

PULL REQUESTS
Merge checks
Merge strategies
Default reviewers

SCRIPTRUNNER
Script Pre Hooks
Script Post Hooks
Script Merge Checks
Script Event Handlers

Pre Hooks | Post Hooks | Merge Checks | Events

Auto add reviewers to pull requests
Automatically add reviewers, depending on your conditions

Note:
An optional note, used only for your reference.

Condition:

```
import com.atlassian.sal.api.component.ComponentLoca
import com.atlassian.bitbucket.user.UserService
import com.atlassian.bitbucket.auth.AuthenticationCo

def userService = ComponentLocator.getComponent(User
def authContext = ComponentLocator.getComponent(Auth
userService.isUserInGroup(authContext.getCurrentUser
```

Show snippets

Enter the condition for which this function will fire. **Blank will evaluate to "true"**.
You can click one of the examples below, or see the wiki page for further examples.

Default users: Reviewer1 ×
Which users to add as reviewers to the pull request as default reviewers

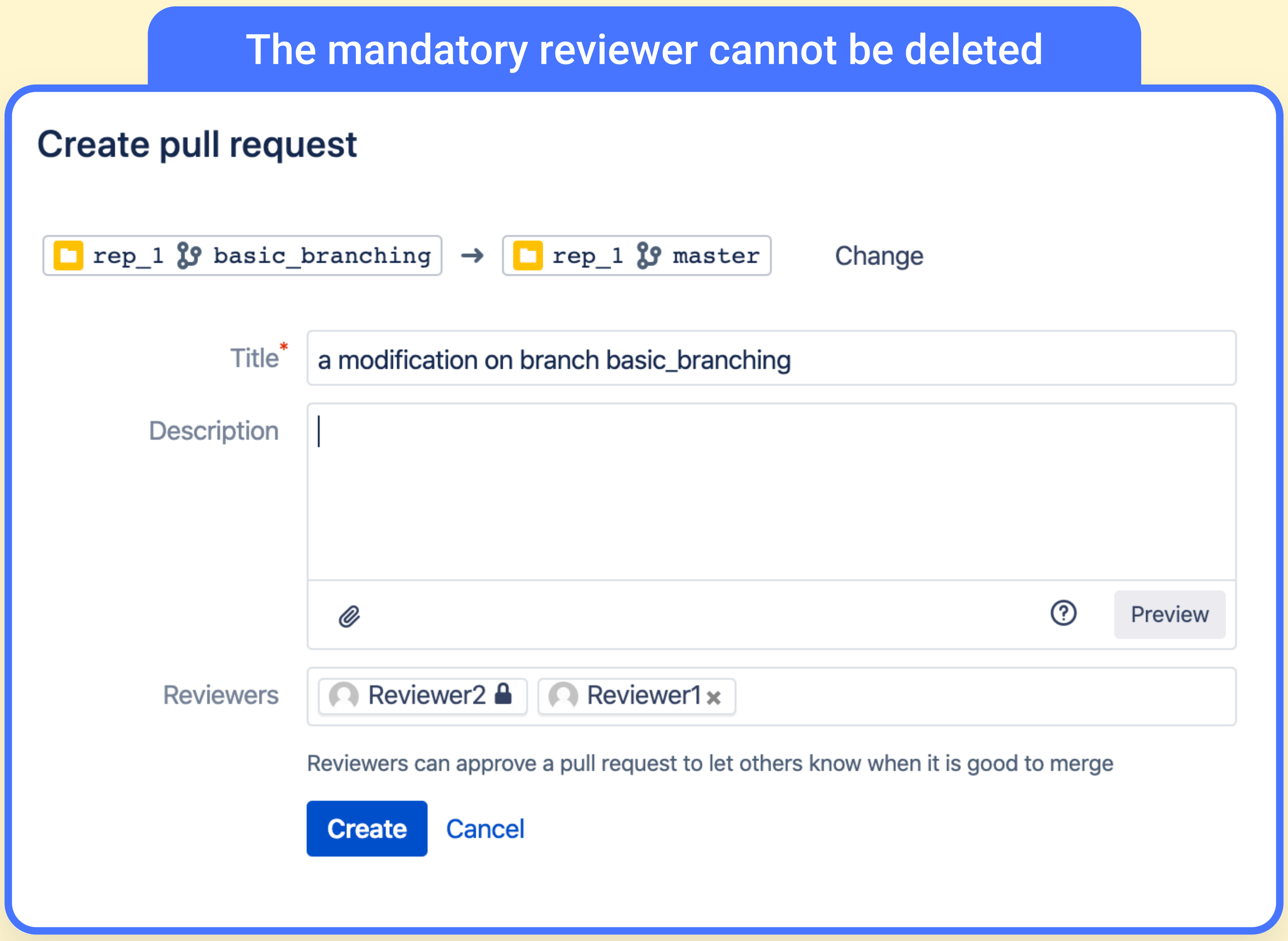
Default groups: Select groups
Which groups to add as reviewers to the pull request as default reviewers

Mandatory users: Reviewer2 ×
Which users to add as reviewers to the pull request as mandatory reviewers

Mandatory groups: Select groups
Which groups to add as reviewers to the pull request as mandatory reviewers

Add | Cancel

The mandatory reviewer cannot be deleted



Create pull request

rep_1 basic_branching → rep_1 master   Change

Title*: a modification on branch basic_branching

Description:

Preview

Reviewers: Reviewer2 🔒 Reviewer1 ×

Reviewers can approve a pull request to let others know when it is good to merge

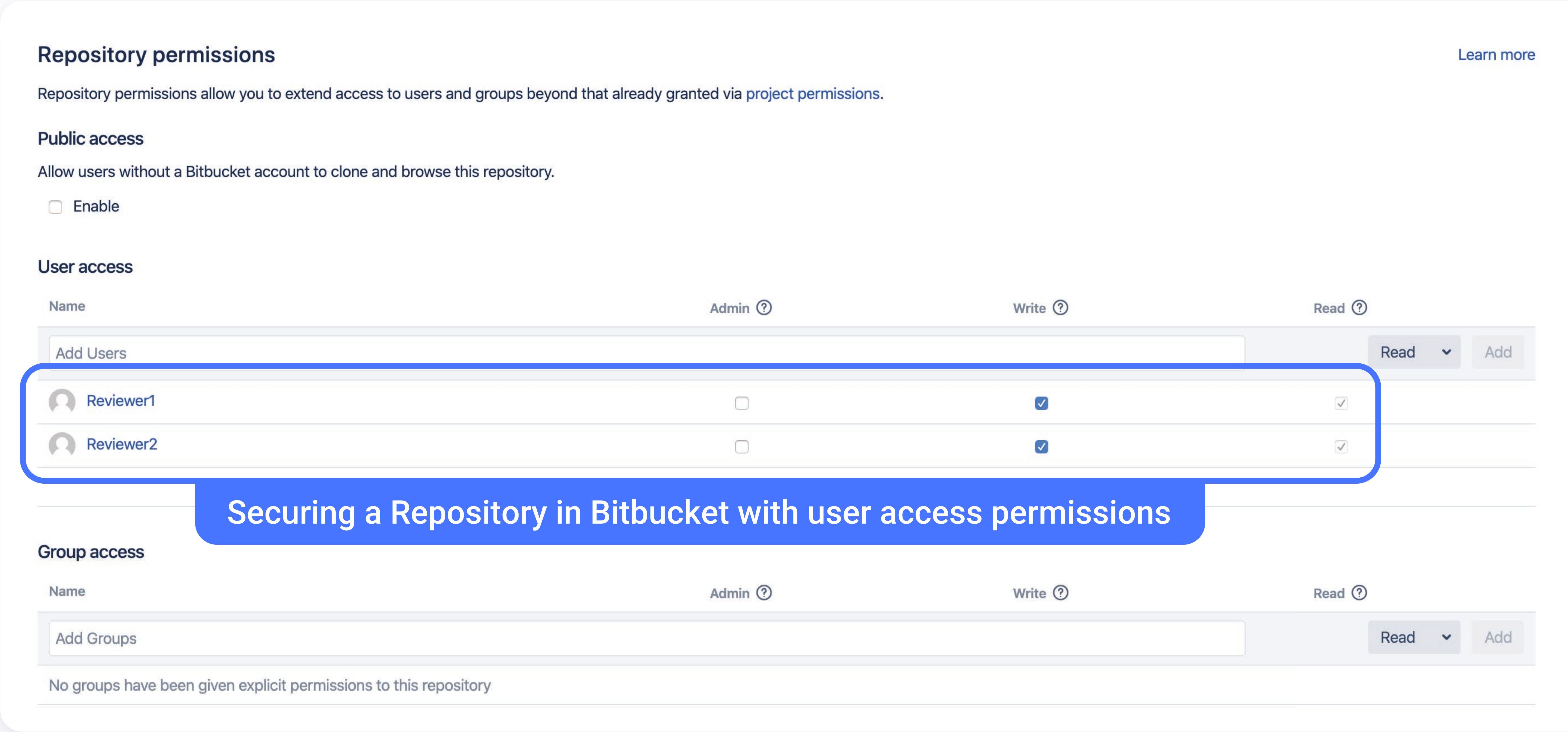
Create | Cancel

- Finally, the Projects and Repositories this configuration is applied to can be set at the administrator level or the configuration added directly to an individual Repository.

13. Secure your repositories with user access permissions

If you have a large team, are there any chances that somebody might push to the wrong repository? If you work with contractors, how safe is it to give them more access than they strictly need?

Bitbucket lets administrators manage access to their repositories in a number of ways, either by granting user or user groups Admin (1), Write or Read access for an entire project (2), or for individual repositories - this is especially important for large teams working in regulated environments.



Repository permissions

Learn more

Repository permissions allow you to extend access to users and groups beyond that already granted via project permissions.

Public access

Allow users without a Bitbucket account to clone and browse this repository.

☐ Enable

User access

Name	Admin	Write	Read	
Add Users			Read ⌄	Add
Reviewer1	☐	☑	✓	
Reviewer2	☐	☑	✓	

Securing a Repository in Bitbucket with user access permissions

Group access

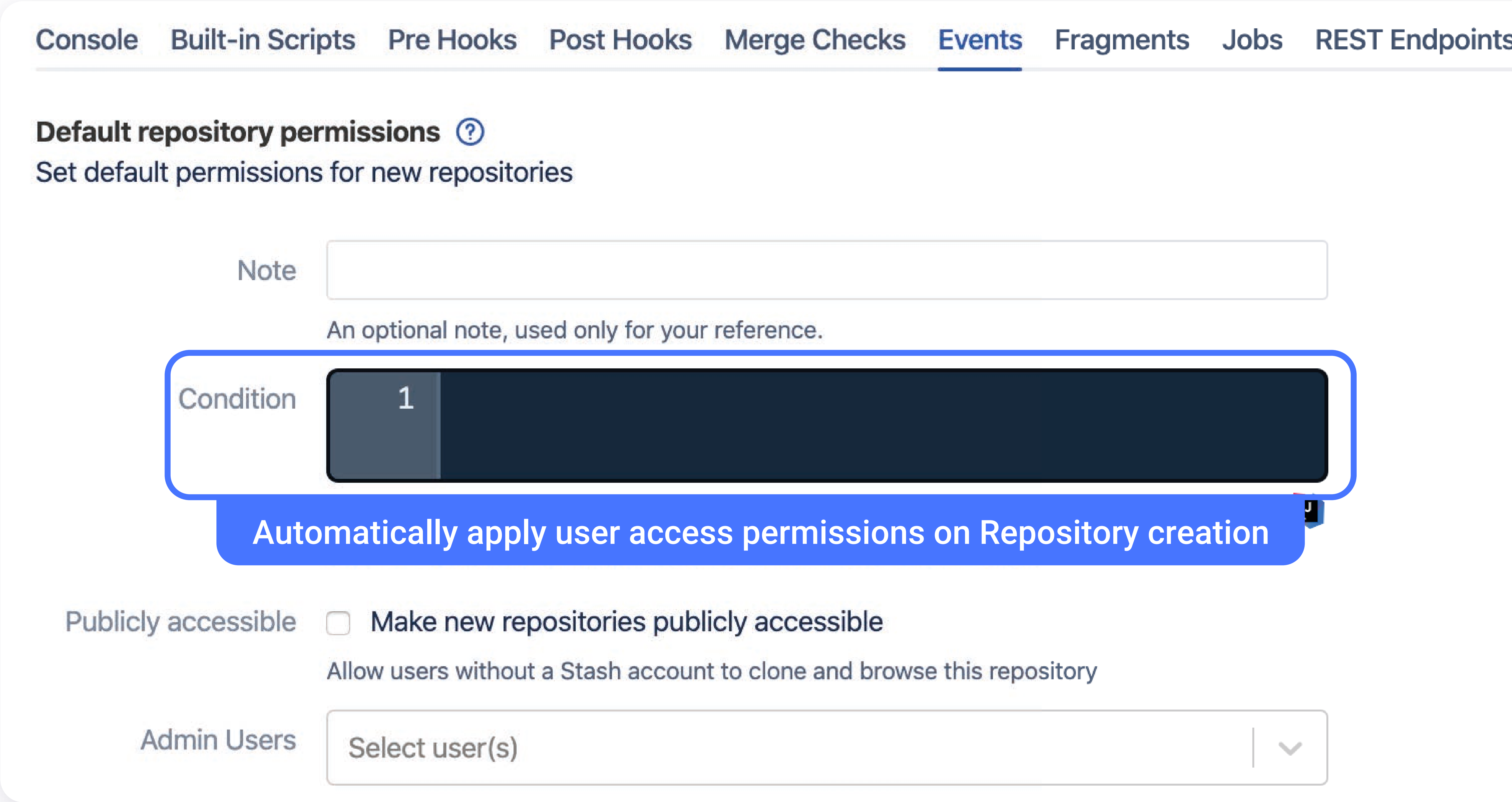
Name	Admin	Write	Read	
Add Groups			Read ⌄	Add
No groups have been given explicit permissions to this repository				

GOING PRO

Going PRO: Automatically apply the required Repository permissions on Repository creation

As an admin, you can be sure that whenever a Repository is created, it always has the appropriate user access automatically applied to it by using Default Project/Repository Permissions in ScriptRunner for BitBucket.

Continues



Default repository permissions ?

Set default permissions for new repositories

Note

An optional note, used only for your reference.

Condition

Automatically apply user access permissions on Repository creation

Publicly accessible □ Make new repositories publicly accessible

Allow users without a Stash account to clone and browse this repository

Admin Users Select user(s)

Our advice: When it comes to keeping things safe, companies often invest a lot in securing against complex attack vectors, but completely forget the simple things, such as passwords lying around on sticky notes and people who are no longer employees but still have access to the company's assets. **Remember to always deactivate Bitbucket users once they no longer need access to the instance!**

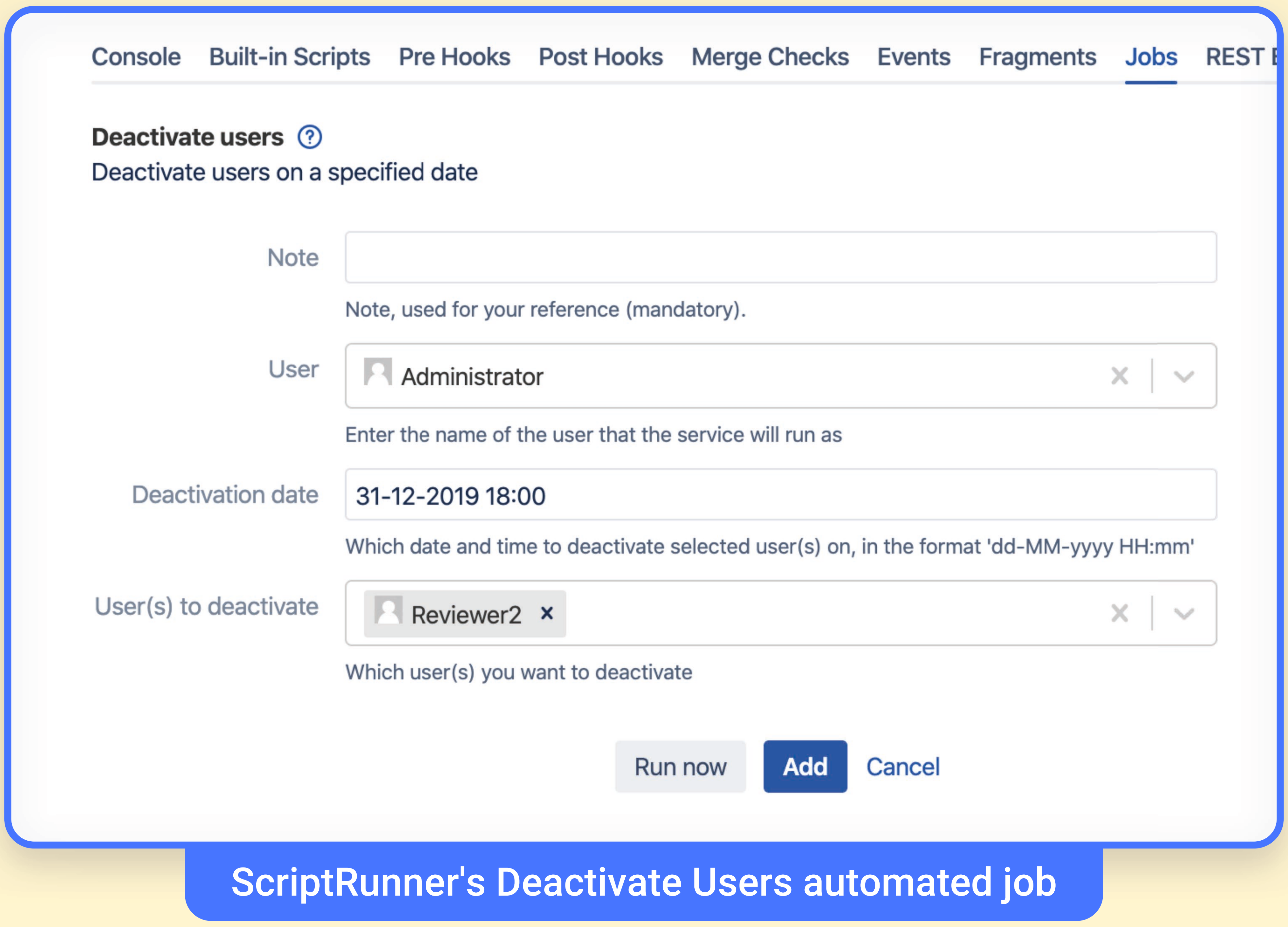
GOING PRO

Automatically deactivate old Bitbucket users

Using Bitbucket out-of-the box, an administrator would need to manually deactivate users once they no longer work for the company.

Using ScriptRunner for Bitbucket, the administrator can configure an automated job to perform the deactivation at the required time, on their behalf - ensuring the deactivation actually happens.

Continues



Deactivate users

Deactivate users on a specified date

Note	
	Note, used for your reference (mandatory).
User	Administrator
	Enter the name of the user that the service will run as
Deactivation date	31-12-2019 18:00
	Which date and time to deactivate selected user(s) on, in the format 'dd-MM-yyyy HH:mm'
User(s) to deactivate	Reviewer2 ×
	Which user(s) you want to deactivate

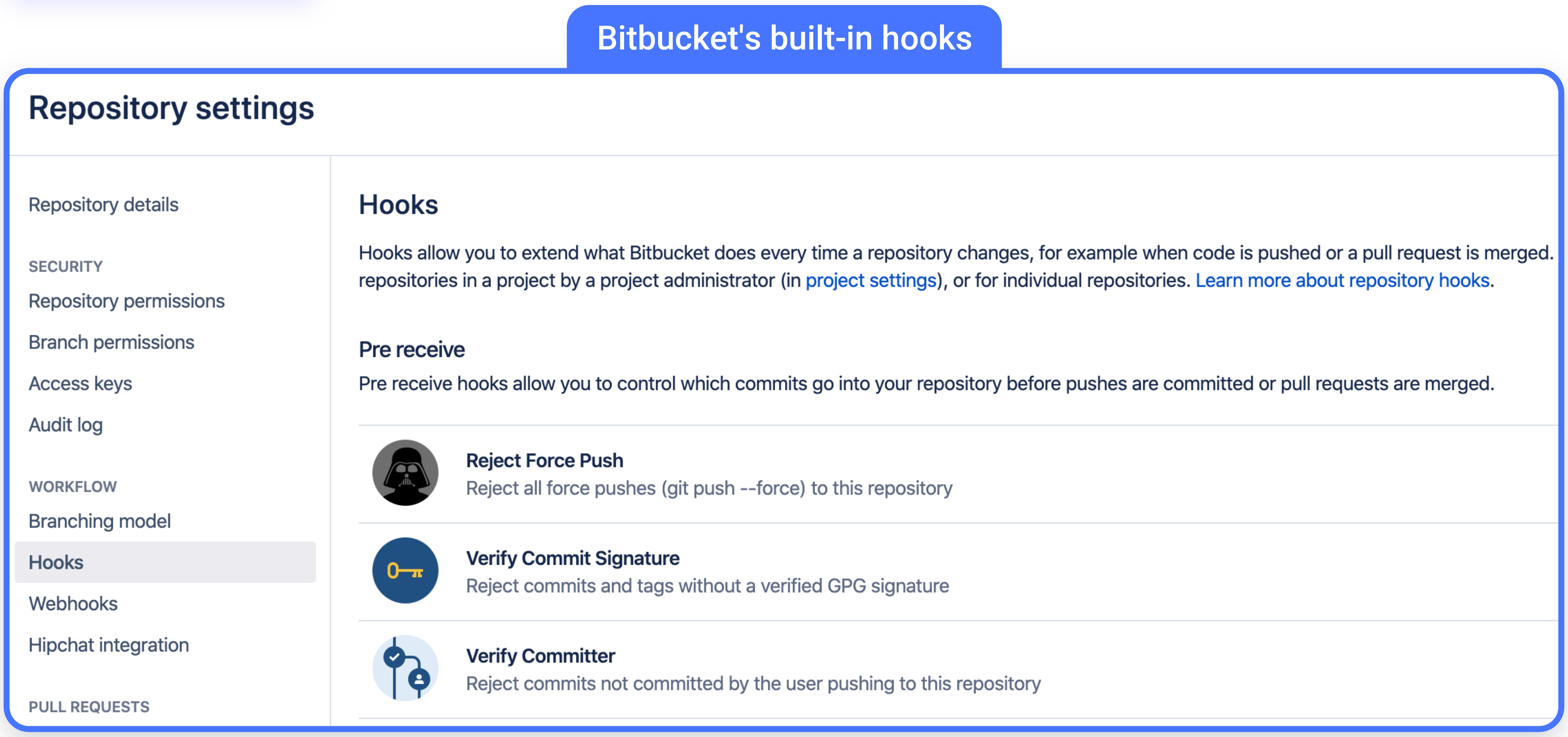
ScriptRunner's Deactivate Users automated job

14. Avoid traceability issues and encourage correct development process using Hooks and Merge Checks

Many companies have strict development processes that forbid force-pushes, but accidents can always happen. One accidental force-push to the shared repository will result in a rewrite of the Git history, which can cause an endless string of traceability troubles for any company operating in a regulated industries.

Bitbucket Server comes with a number of built-in Hooks and Merge Checks to help enforce them. For example, Reject Force Push will reject all force pushes to a repository. Bitbucket's pre-receive hooks are installed by default but disabled, you can enable them on all repositories in a project, or on individual repositories.

Bitbucket's built-in hooks



Repository settings

Hooks

Hooks allow you to extend what Bitbucket does every time a repository changes, for example when code is pushed or a pull request is merged. repositories in a project by a project administrator (in project settings), or for individual repositories. Learn more about repository hooks.

Pre receive

Pre receive hooks allow you to control which commits go into your repository before pushes are committed or pull requests are merged.

Reject Force Push
Reject all force pushes (git push --force) to this repository

Verify Commit Signature
Reject commits and tags without a verified GPG signature

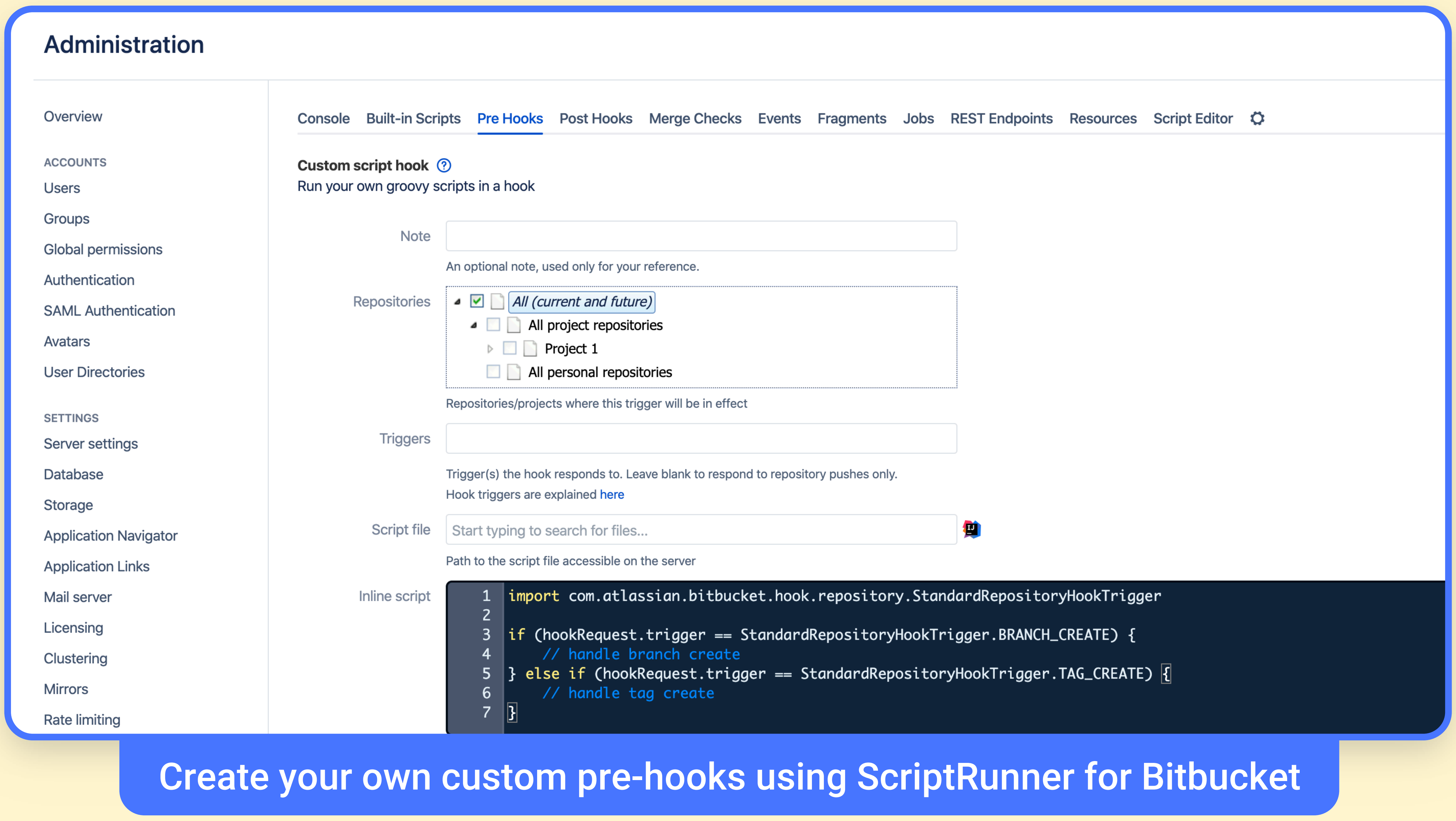
Verify Committer
Reject commits not committed by the user pushing to this repository

GOING PRO

Use bespoke hooks and merge checks to make sure your development process is respected

Based on popular user demands, ScriptRunner for Bitbucket offers an array of built-in hooks and merge checks that go beyond Bitbucket's default capabilities. You can even create your own custom hooks and merge checks. Here's a few of our built-in hooks and merge checks:

- Automatically require that all commits are associated with a Jira issue
- Enforcing the naming standards of Branches and Tags
- Restricting the size of files that can be committed to a Repository
- Enforcing only trusted authors are able to make commits



Administration

Custom script hook
Run your own groovy scripts in a hook

Note:
An optional note, used only for your reference.

Repositories:
☑ *All (current and future)*
□ All project repositories
□ Project 1
□ All personal repositories
Repositories/projects where this trigger will be in effect

Triggers:
Trigger(s) the hook responds to. Leave blank to respond to repository pushes only.
Hook triggers are explained here

Script file: Start typing to search for files...
Path to the script file accessible on the server

Inline script:

```
import com.atlassian.bitbucket.hook.repository.StandardRepositoryHookTrigger

if (hookRequest.trigger == StandardRepositoryHookTrigger.BRANCH_CREATE) {
    // handle branch create
} else if (hookRequest.trigger == StandardRepositoryHookTrigger.TAG_CREATE) {
    // handle tag create
}
```

Create your own custom pre-hooks using ScriptRunner for Bitbucket

Want to know more?

About Adaptavist

We are proud to be recognised as the world's largest Atlassian services provider. 75% of Fortune 500 companies use our products and services; our products alone are used by over 15 million users in over 30000 companies.

We help deliver competitive advantage from software. Talk to us if you want to dramatically improve how you plan, deliver and manage your information technology assets, software and processes.

About ScriptRunner

The ScriptRunner apps offer Atlassian admins a complete toolset for completely customising, automating and expanding their Jira, Confluence or Bitbucket instances.

ScriptRunner's powerful Script Console gives you direct access Atlassian's API, which opens up a staggering amount of functionalities. You don't need to write code to access many of these features. The ScriptRunner add-ons have a vast array of no-code based on the most common use-cases - you've seen a few of them exemplified above.

To implement very complex, bespoke automations or customisations, you can run Groovy scripts inside ScriptRunner. ScriptRunner has a very large and active user base, so you will find a lot of help and ideas for your scripts under the ScriptRunner tab in the Atlassian Community or in the Adaptavist Library - a free resource containing a lot of ready-made scripts you can just copy and use.

Our Contributors

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Phill is an expert in delivering client-focused solutions to some of the world's largest enterprise clients.

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