

Keeping everyone in the loop

Optimizing the Jira and Confluence Integration

Gal Fatal / June 15, 2020 / Berlin ACE



You may not have heard of HP Indigo, but there's a chance you've seen the products we've helped to create...



About HP Indigo

Develops, manufactures and markets digital printing solutions

Founded in Israel in 1977 and acquired by HP in 2001

Market leader and one of the top 10 exporters in Israel, with customers in 130 countries

Over 2500 employees in Israel, ranging from physicists and chemists to mechanical, system, software engineers, to top marketing and operations experts



About Gal

7 years at HP Indigo

Manage DevOps and Atlassian teams

Located in Israel

Community leader since 2018

Public speaker

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About Gal

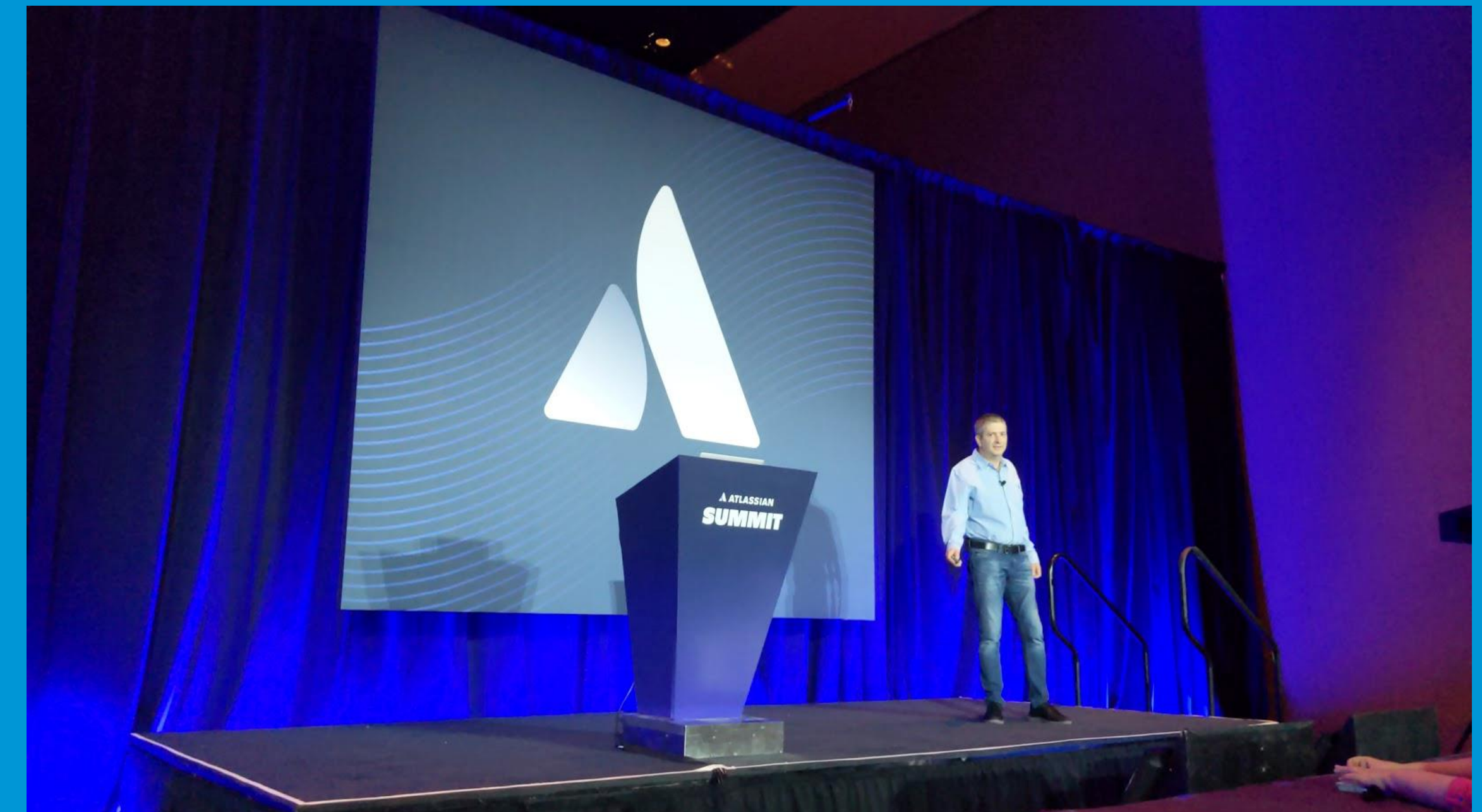
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About the team

Established 3 tears ago to implement and support Atlassian tools to all R&D

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The team support: (on premise instances)

1000  Jira Users ,














2000  Confluence users

500  Bitbucket users














With 10  Jira Service Desk agents.

Apps we use













Jira

>  Adaptavist ScriptRunner for JIRA
>  Atlassian Troubleshooting and Support Tools
>  BigPicture
>  Bob Swift Atlassian Apps - Jira Command Line Interface (CLI)
>  eazyBI Reports and Charts for Jira
>  Issue Matrix
>  Jira Misc Workflow Extensions
>  JSU Automation Suite for Jira Workflows
>  Similar Issues Finder
>  TemplateMe!
>  Tempo Timesheets
>  Xray
>  Atlassian Universal Plugin Manager Plugin

Confluence

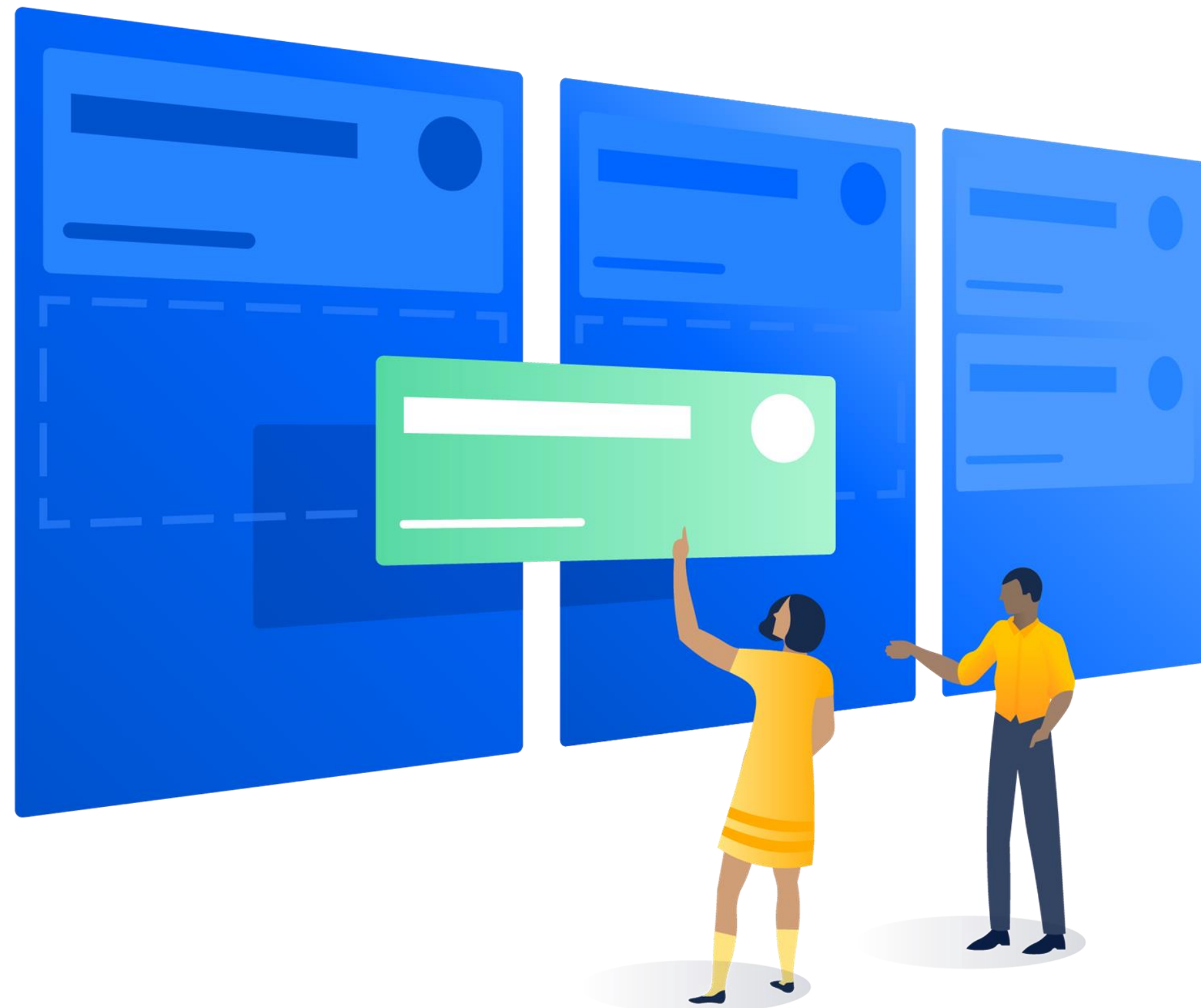
>  Smart Terms
>  Adaptavist ScriptRunner for Confluence
>  Atlassian Troubleshooting and Support Tools
>  Atlassian Universal Plugin Manager Plugin
>  Attachment Filter Tool
>  Bob Swift Atlassian Apps - Confluence Command Line Interface (CLI)
>  Brikit Targeted Search
>  Cloud Migration Assistant for Confluence
>  Confluence Mobile Plugin
>  Confluence Source Editor
>  Content Rating
>  LaTeX Math
>  Linchpin User Profiles

Confluence

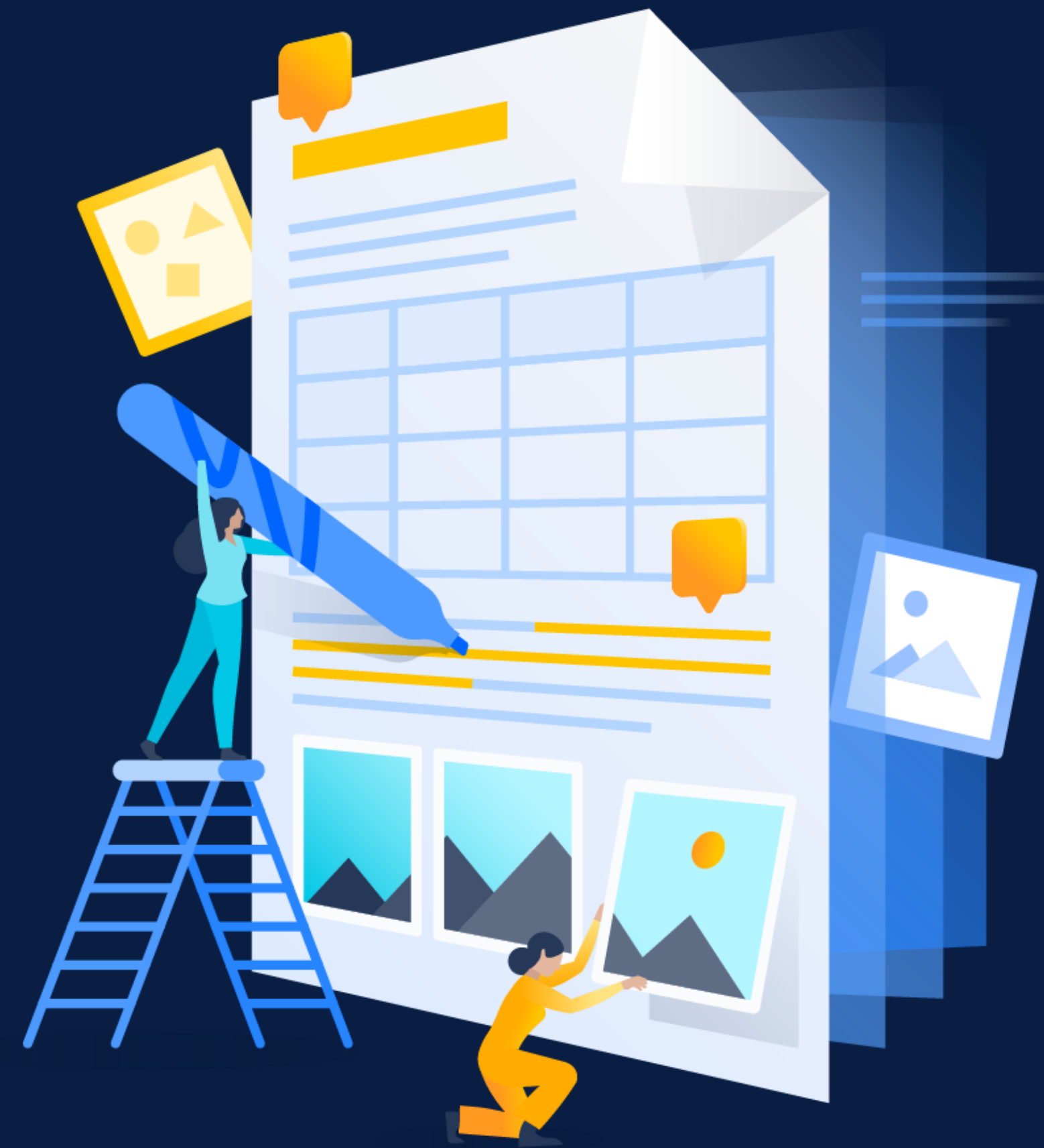
>  Lucidchart OnPrem for Confluence
>  Mail Page
>  Multiexcerpt Plugin4
>  Multivote for Confluence
>  Numbered Captions
>  Numbered Headings
>  Smart Questions and Answers
>  Table Filter and Charts for Confluence
>  Tree View
>  Viewtracker - Analytics for Confluence
>  E-Mail this Page
>  Task Reminder for Atlassian Confluence

**Successful Projects
Start With Collaboration**

JIRA



CONFLUENCE



JIRA



Tasks Management
Bug Tracking
Planning Team Work
Agile



CONFLUENCE



Documentation
Knowledge
Meeting Notes



Jira - Confluence Out-of-the-box Integration





Link issue to a Confluence page

Using the issue links in Jira



Link

Jira Issue

Confluence Page

Web Link

Enter a Confluence page URL to link this issue to

Page URL

or [search for a page](#)

Comment

Style ▾ | **B** *I* U A ▾ | ^o ▾ | ▾ | ☰ ☰

▾ + ▾ ⌆

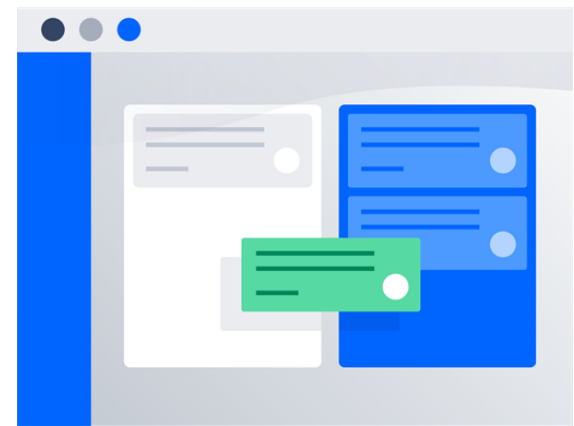
Visual Text | ▾ Viewable by All Users ⌆

Link Cancel



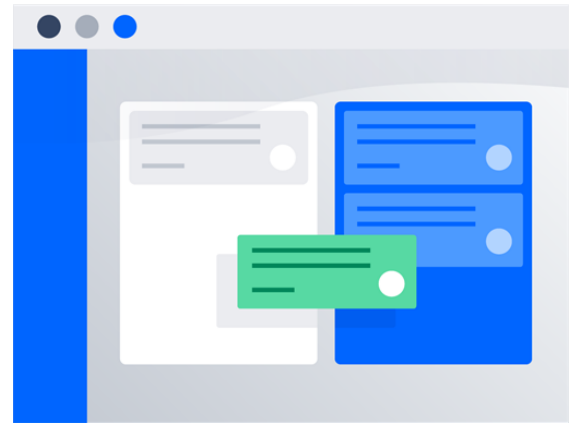
Link issue to a Confluence page

Using the issue links in Jira



Display issues in Confluence

Using Jira issues Macro



Insert Jira Issue/Filter

Search

Create New Issue

Recently Viewed

OTHER JIRA
CONTENT

Jira Charts

project = DevOps AND assignee = fatal



Search using any issue key, search URL, Jira link, JQL, plain text or filter



Key

Summary



⚡ DEVOPS-1183

For all general DevOps tasks



⚡ DEVOPS-1182

Build optimization support and development



⚡ DEVOPS-1174

Pre-Press team support



⚡ DEVOPS-1115

Build Optimization for Series 3



🕒 DEVOPS-685

HLD solution to Third party build/istall



Display options

Select Macro Hint: type "Ctrl+Shift+J" in the editor to quickly access this dialog.

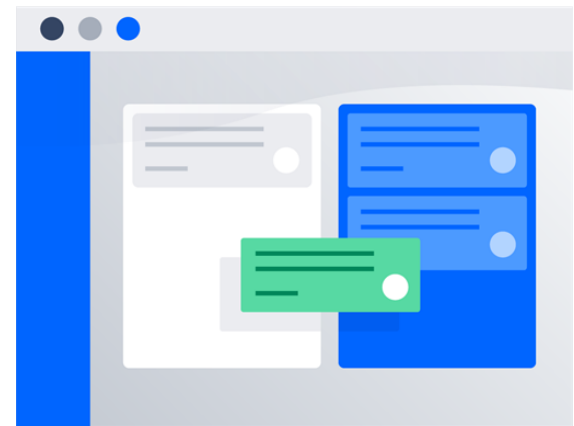
Insert

Cancel



Link issue to a Confluence page

Using the issue links in Jira



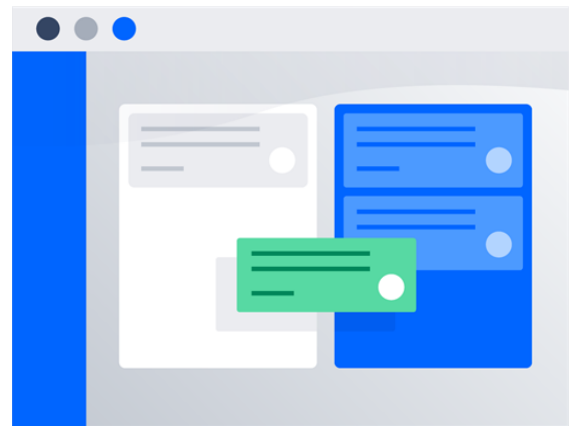
Display issues in Confluence

Using Jira issues Macro



Display data as a chart in Confluence

Using Jira Chart Macro



Insert Jira Chart

Pie Chart

Created vs Resolved

Two Dimensional

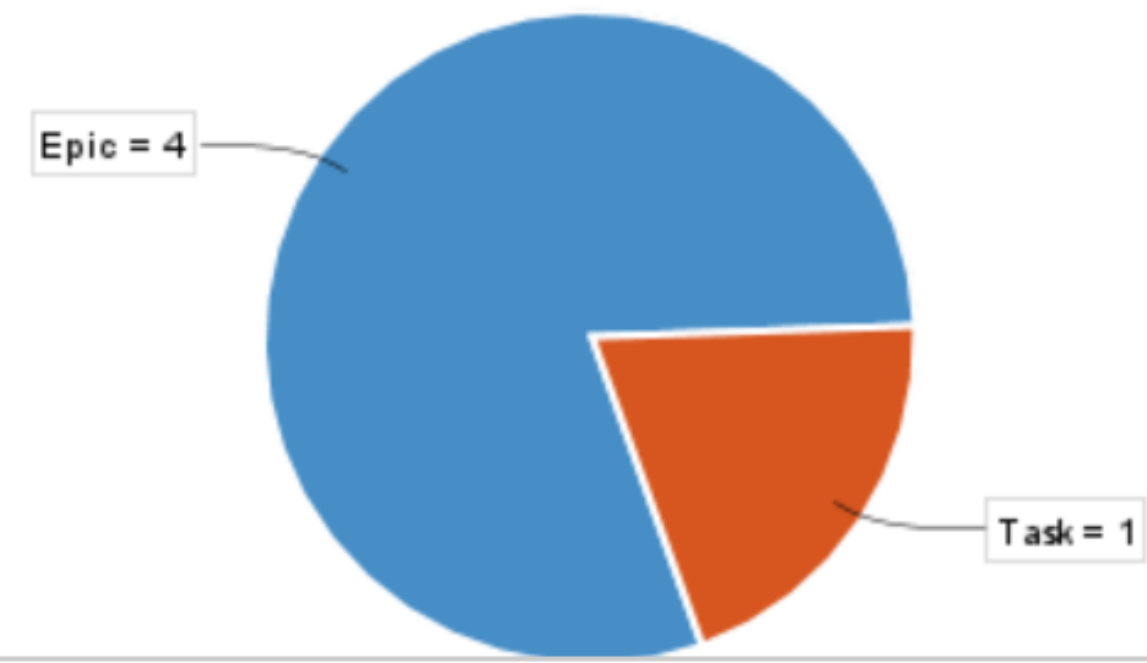
OTHER JIRA
CONTENT

Jira
Issue/Filter

project = DevOps AND assignee = fatal

Preview

Search using any issue key, search URL, Jira link, JQL, plain text or filter



Display options

Chart by Issue Type

Width

Show border

Show chart information

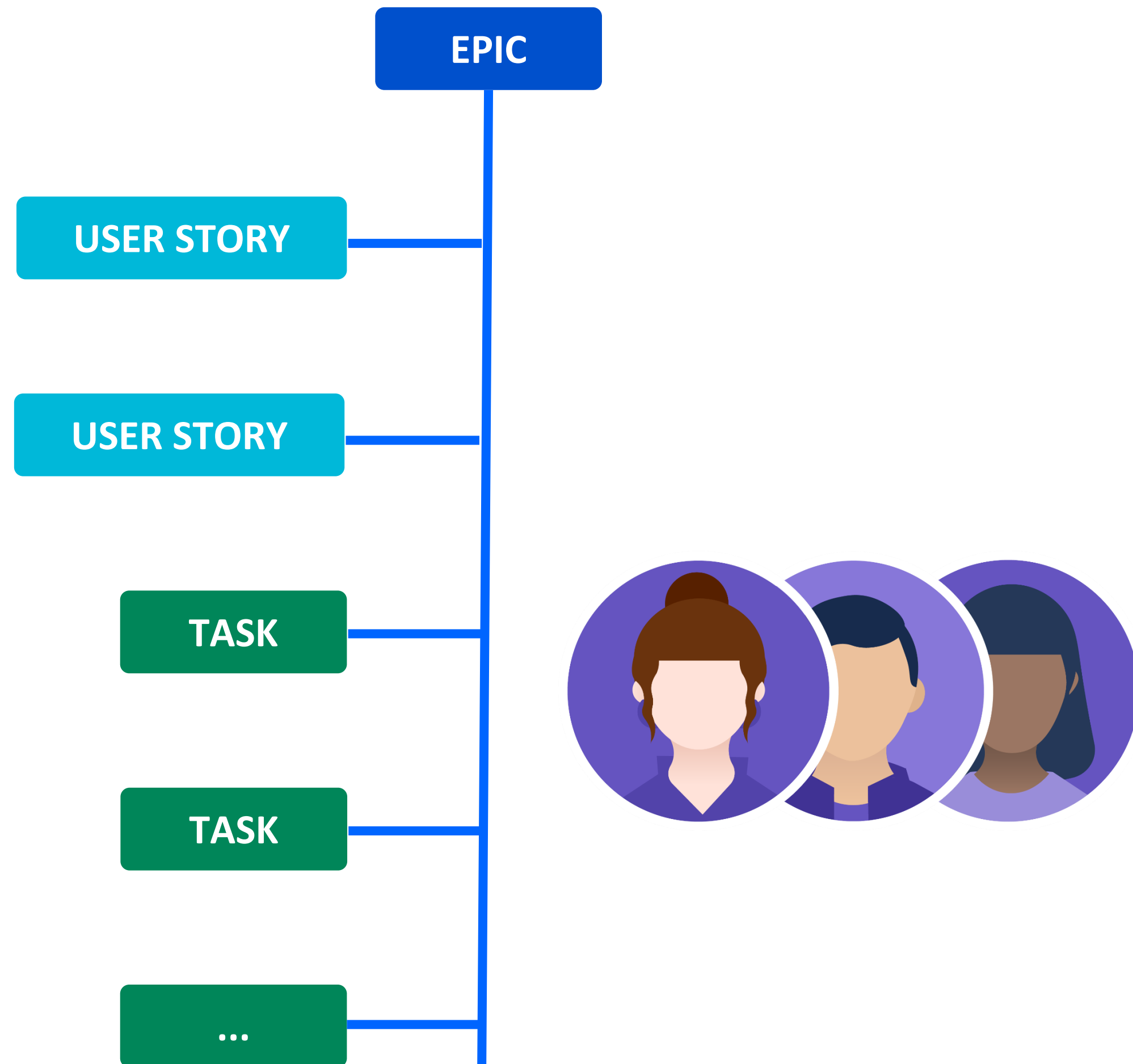
Select Macro

Insert

Cancel

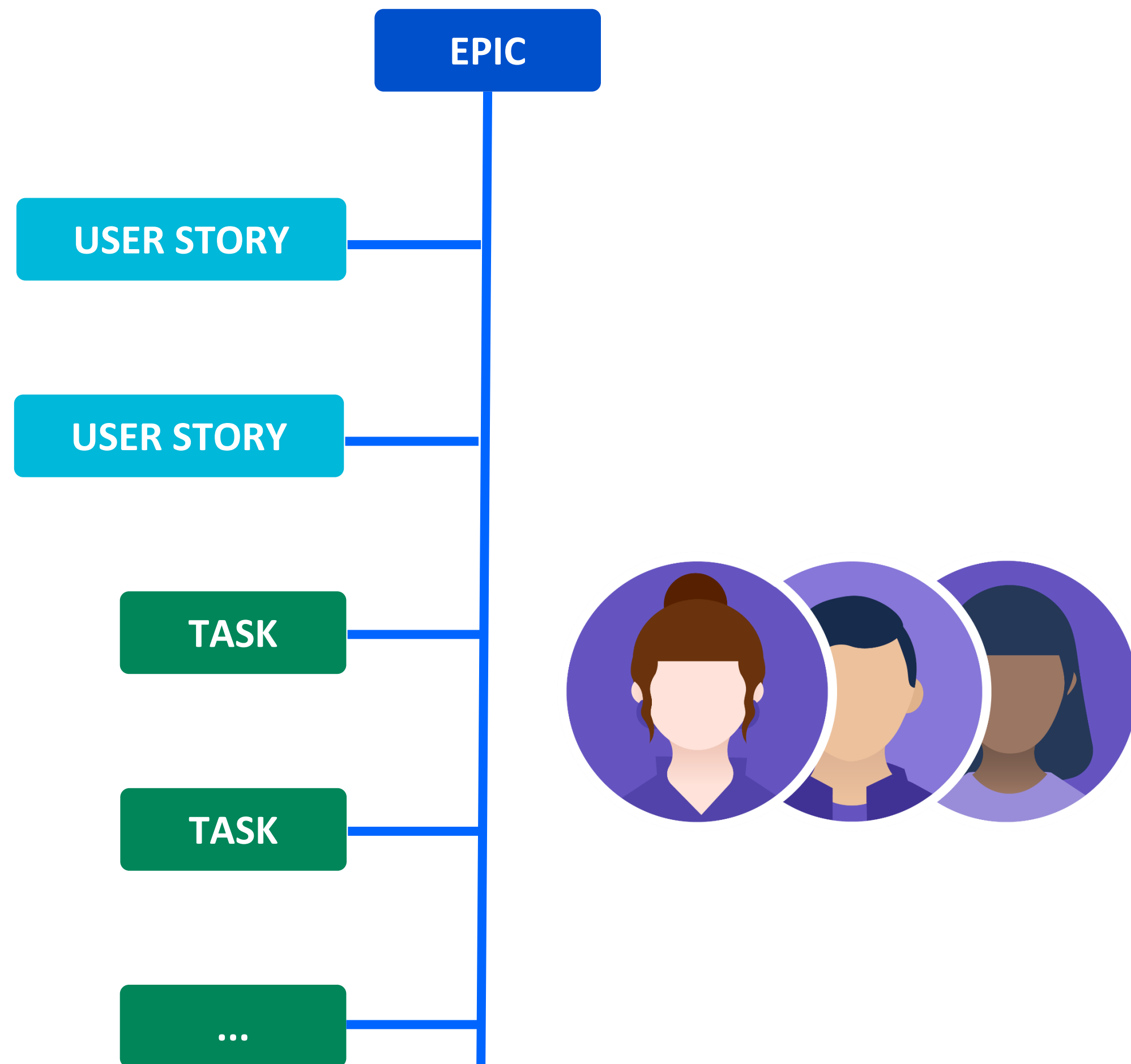
Why we need more ?

JIRA



CONFLUENCE

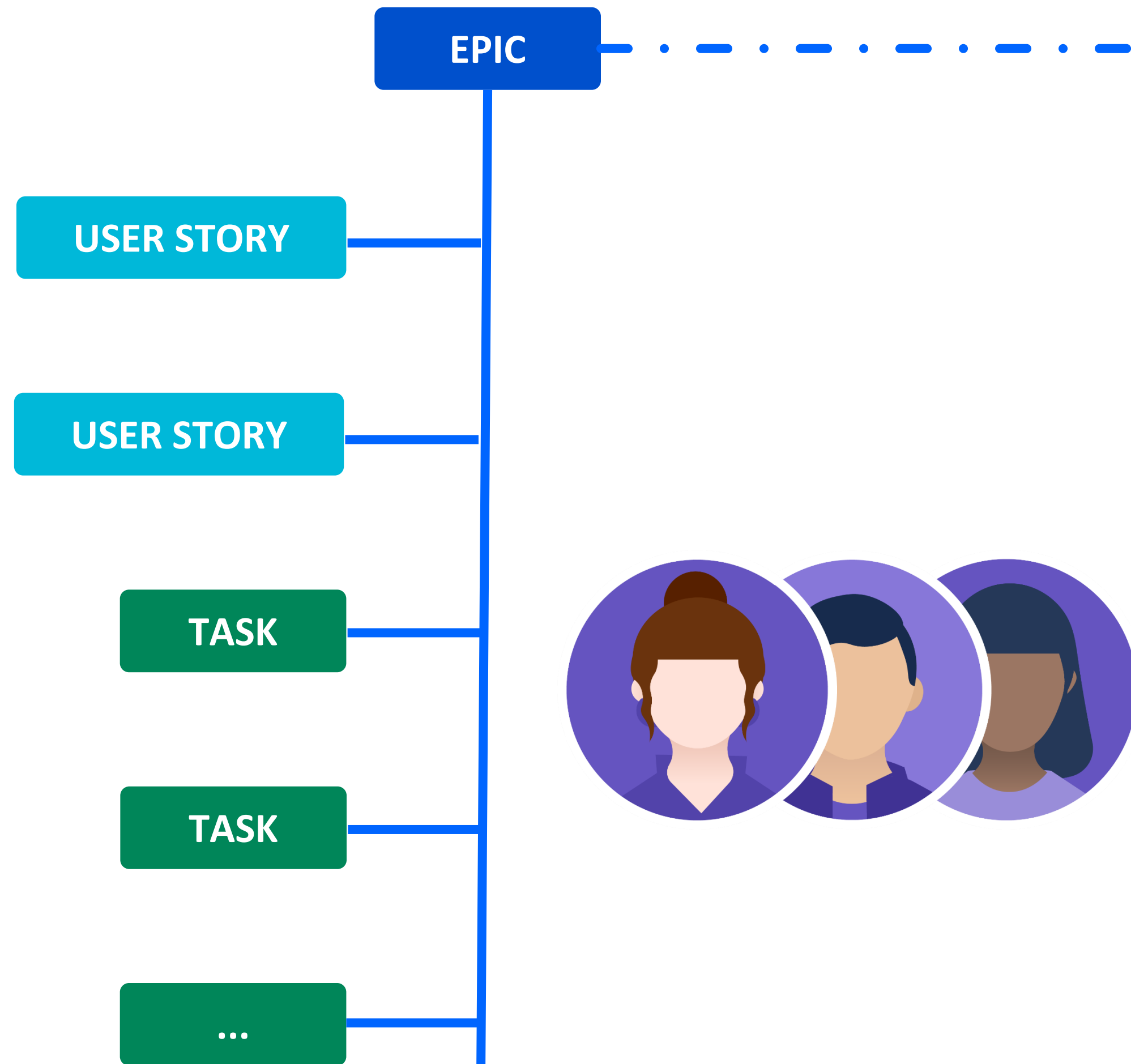
JIRA



CONFLUENCE



JIRA



CONFLUENCE



THE SOLUTION

Notify all
assignees
on documentation
changes

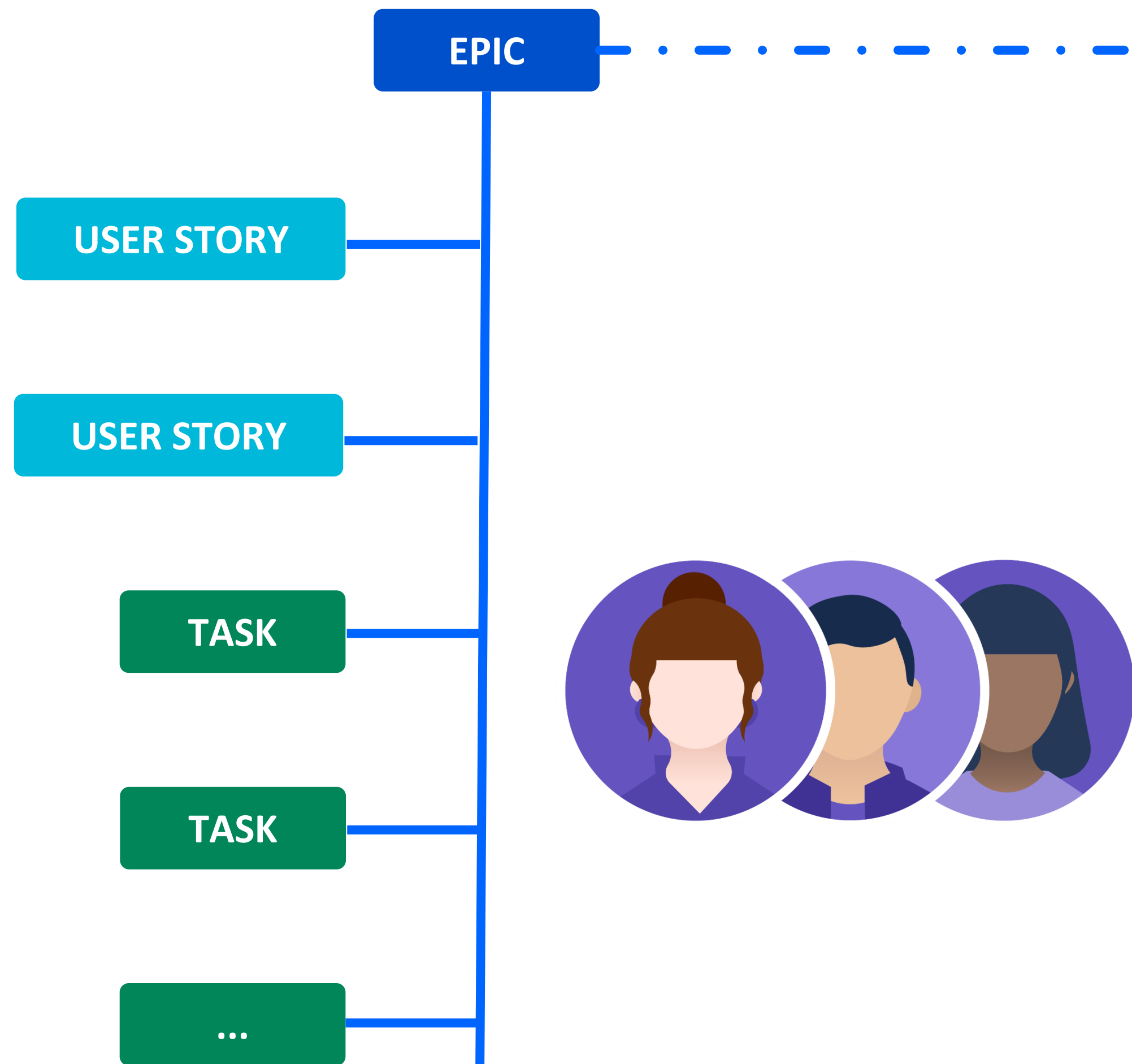


THE SOLUTION

Automate Confluence page watchers mechanism



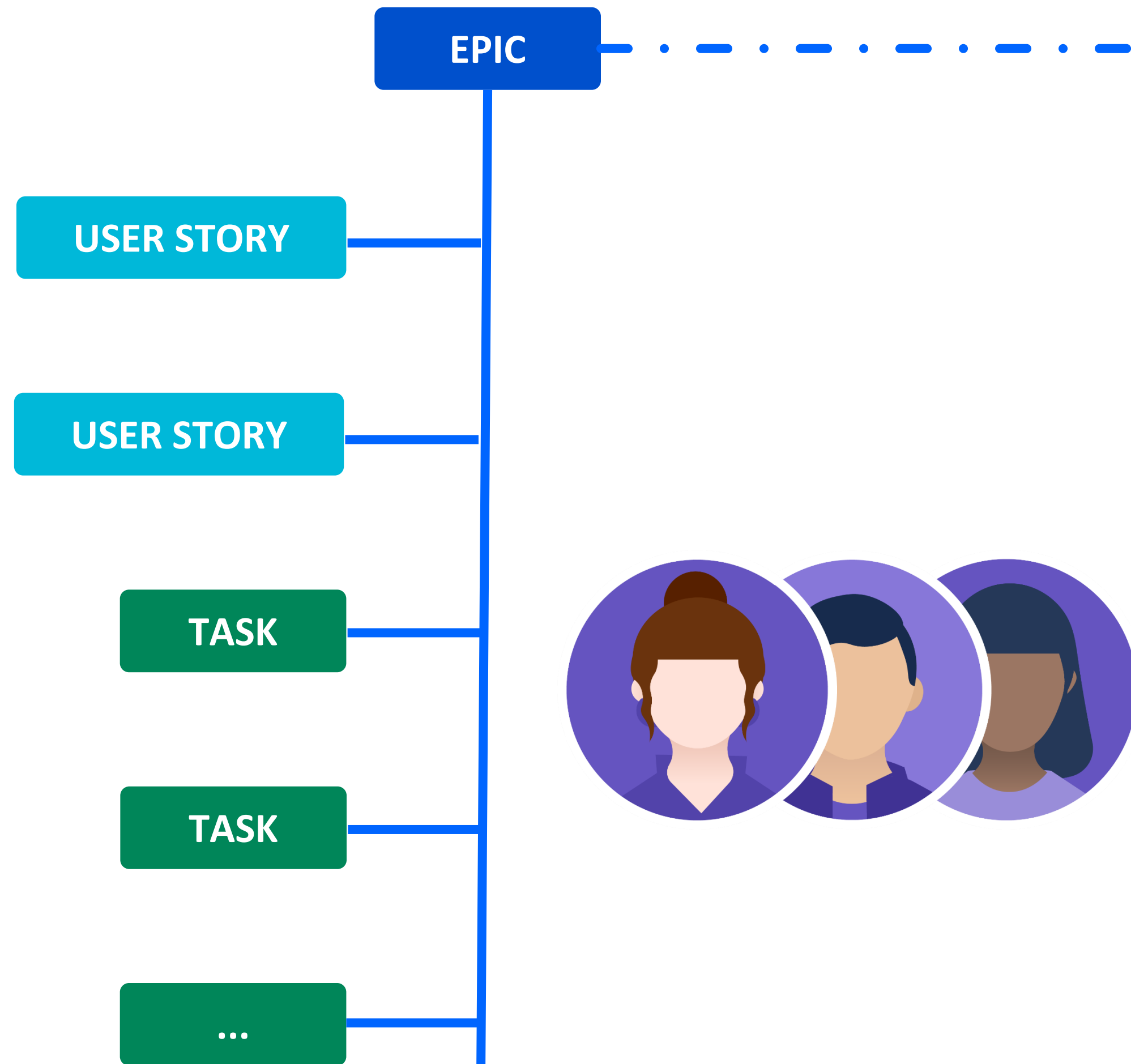
JIRA



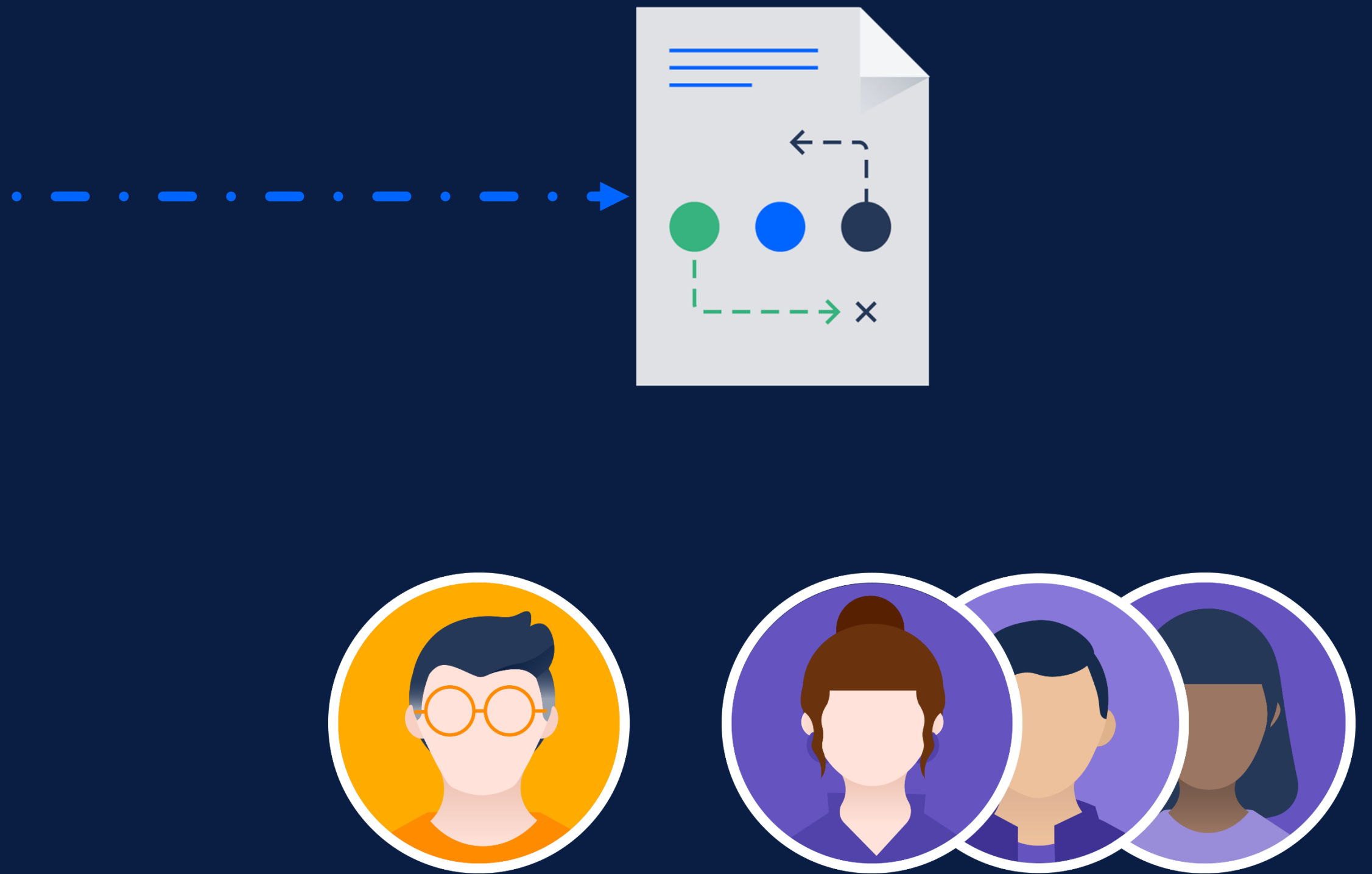
CONFLUENCE



JIRA



CONFLUENCE

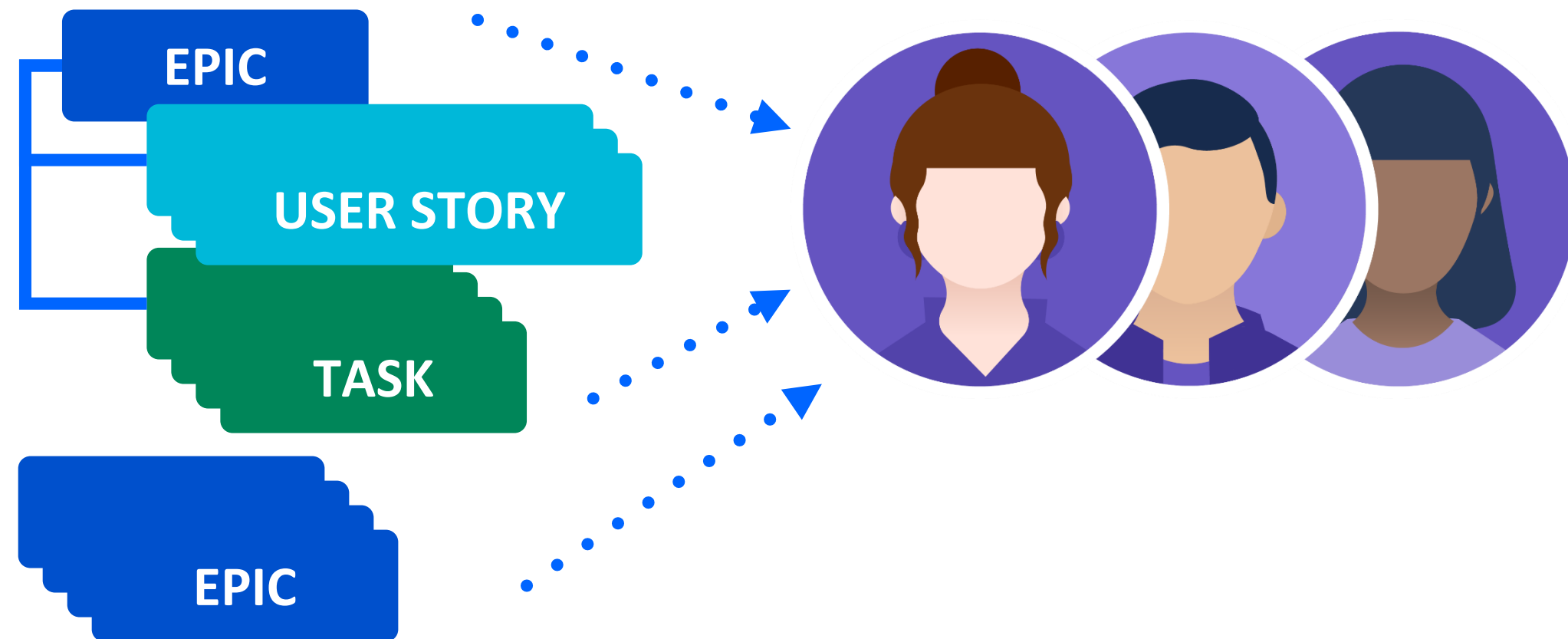


How we built the integration



JOB

REST ENDPOINT

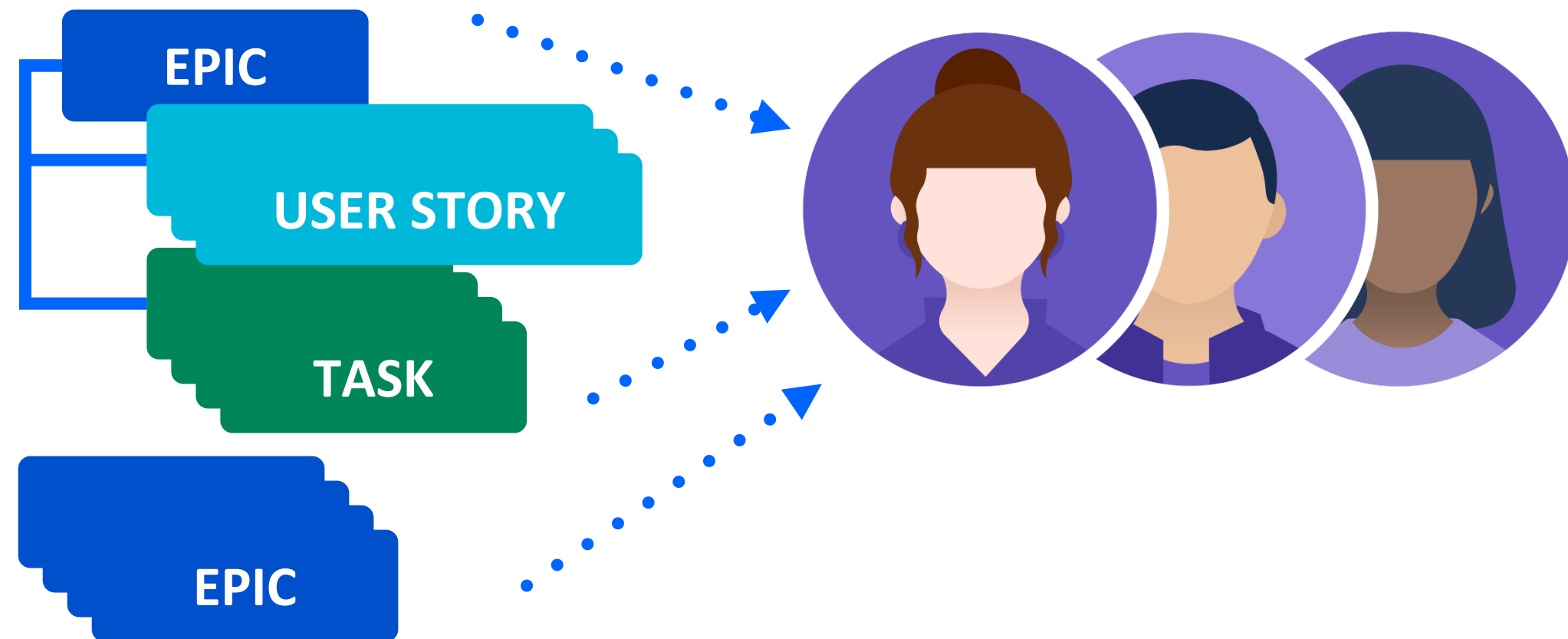




JOB

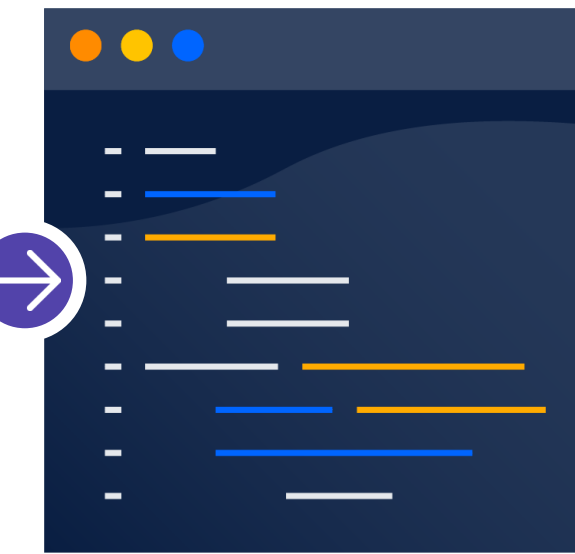


REST ENDPOINT

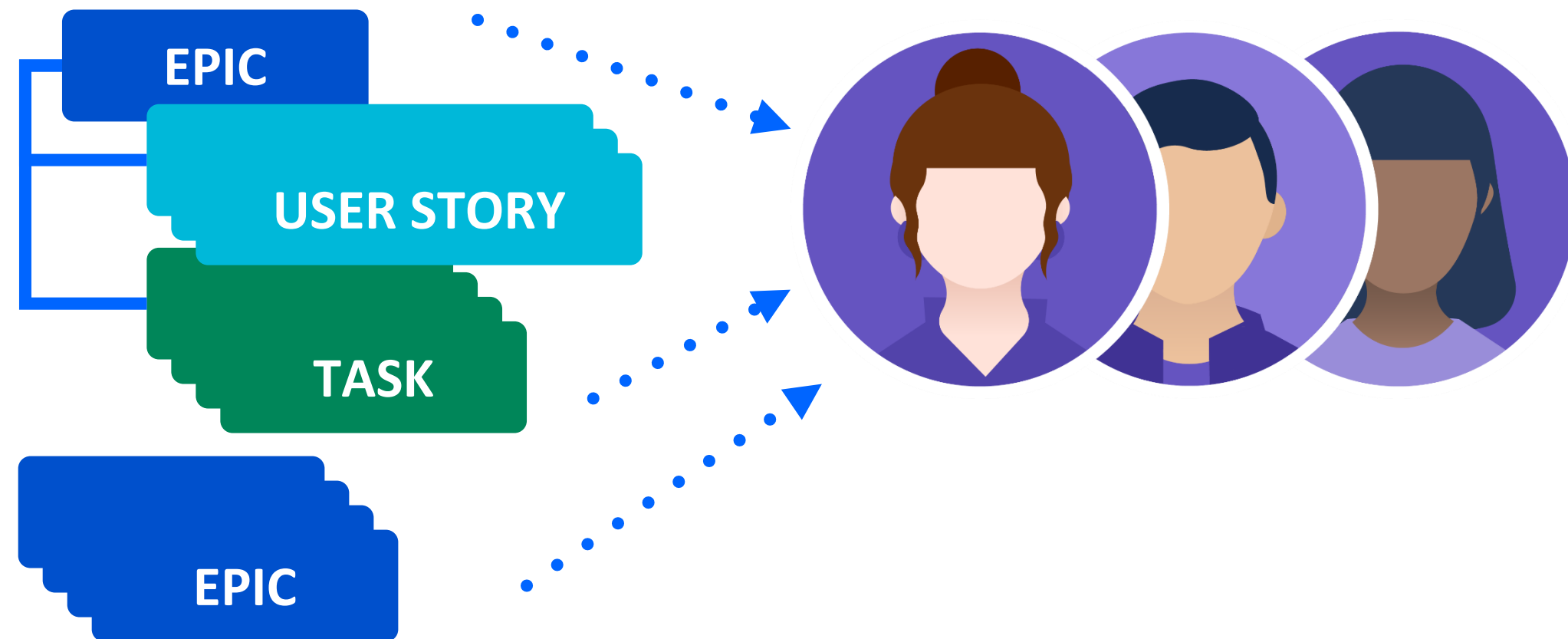




JOB



REST ENDPOINT



WATCHERS

Script Runner Toolset

Job configuration

Code

REST Endpoint

The screenshot shows the configuration page for a job in the Jira Script Runner. The page has a navigation bar with links: Browse, Console, Built in scripts, Listeners, Fields, REST Endpoints, Fragments, **Jobs**, Resources, JQL Functions, and Script Editor. The main heading is 'Escalation service' with a help icon. Below it is a description: 'Can periodically modify issues based on a JQL query, for instance: to change the state of issues if they have been inactive for 2 weeks.'

The configuration fields are:

- Note:** A text input field containing 'Automatic Confluence Watchers by Assignees'. Below it is a sub-label: 'Note, used for your reference (mandatory).'
- User:** A dropdown menu showing 'jiraadmin' with a user icon, an 'x' to clear, and a dropdown arrow. Below it is the instruction: 'Enter the name of the user that the service will run as'.
- Interval/Cron expression:** A text input field containing '0 30 3 ? * *'. To its right is the text 'At 3:30 AM'. Below the field is a link 'Show examples' with a dropdown arrow. Further down is the instruction: 'How often should the service run. Either an integer defining interval in minutes, or a cron expression. See examples'.
- JQL Query:** A text input field containing 'issuetype = Epic and statusCategory != Done' with a green checkmark icon on the left. To its right is the text '837 hit(s)'. Below the field is the instruction: 'JQL query to select issues with. For example "issuetype = Task and updated < -7d"'. There are also two buttons: 'SCRIPT' and 'FILE'.
- Action:** A dropdown menu showing 'None' with a dropdown arrow. Below it is the instruction: 'Optionally set an action...'
- Transition Options:** Three checkboxes: 'Skip Permissions', 'Skip Validators', and 'Skip Conditions'. Below them is the instruction: 'Allow the transition to skip certain checks'.
- Additional issue actions:** A text input field containing 'Automatic Confluence Watchers by Assignees.groovy'.

Script Runner Toolset

Job
configuration

Code

REST Endpoint

```
44 // Add all Epic Users as Watchers
45 linksList?.each {
46     log.debug (String.format("Link to Confluence page is %s", it))
47     def confluenceLink = this.getPrimaryConfluenceLink() as java.lang.Object
48     def baseUrl = String.format("%s/rest/scriptrunner/addWatcherToPage"
49         , confluenceLink.rpcUrl)
50     baseUrl = String.format("%s?users=%s", baseUrl, epicusers)
51     baseUrl = String.format("%s&label=%s", baseUrl, label)
52     if (success) {
53         baseUrl = String.format("%s&pageIds=%s", baseUrl, it)
54         def get = new URL(baseUrl).openConnection();
55         def getRC = get.getResponseCode();
56         // check if action succeeded
57         if(getRC == 200)
58             log.debug(String.format("Success for %s", baseUrl))
59         else {
60             log.error(String.format("Failure for %s", baseUrl))
61             success = false
62         }
63     }
64 }
65
```

Script Runner Toolset

Job
configuration

Code

REST Endpoint

The screenshot shows a web interface for configuring REST endpoints. At the top, there is a navigation bar with links for 'Script Console', 'Built-in Scripts', 'Event Listeners', 'Macros', 'Search Extractors', 'CQL Functions', and 'REST Endpoints'. The 'REST Endpoints' link is underlined. Below the navigation bar, the page title is 'Custom endpoint' with a help icon. A subtitle reads 'Define a REST endpoint in a script'. There are two tabs: 'SCRIPT' (selected) and 'FILE'. The main content area is a dark-themed code editor showing an 'Inline script' with the following code:

```
83
84  def userName
85  // Add each user recieved as a watcher on the page
86  userList?.each { user ->
87      userName = userAccessor.getUser(user)
88      log.debug("userName: " + userName)
89
90      // User must exist in Confluence
91      if (user) {
92          // Set the current user as a watcher in the current page
93          try {
94              notificationManager.addContentNotification(userName, content)
95          }
96          catch (Exception ex) {
97
98              return Response.serverError().entity([error: ex.message]).build()
99              //return the error code
100          }
101      }
102      else
103          log.error(String.format("Given user %s doesn't exist in Confluence", user))
104
```


What did we gain?



Better collaboration

Better collaboration within the team and between different teams



Better collaboration

Better collaboration within the team and between different teams



Time saving

Less time spent on searching for documentation and understanding the changes



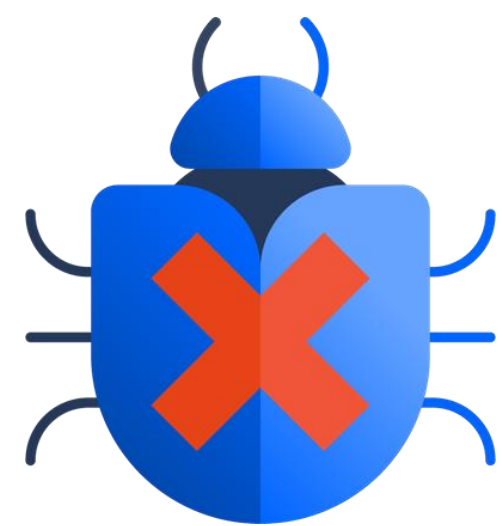
Better collaboration

Better collaboration within the team and between different teams



Time saving

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Less bugs

Developers stayed updated on the latest requirements resulting in fewer bugs discovered during QA

Thank you