



Streamlining Scrum - Tools for Engineering Teams

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ABSTRACT

Scrum Engineering, when combined with JIRA and Confluence, makes wonders in the way agile teams manage and deliver their projects. We will discuss about synergy between Scrum methodologies and these powerful tools which are widely used in the handling of projects-from sprint planning to tracking tasks and collaboration among teams. JIRA would provide a single window for backlog management, tracking, and ensuring visibility, while Confluence is used to enhance documentation, knowledge sharing, and communication. Both together provide a comprehensive solution for supporting agile principles and continuous improvement in project success, and leveraging JIRA and Confluence together teams generate high efficiency, maintain alignment with business goals, and deliver quality outcomes on a consistent basis

Keywords: Scrum, Scrum Engineering, JIRA, Confluence, Scrum Tools.

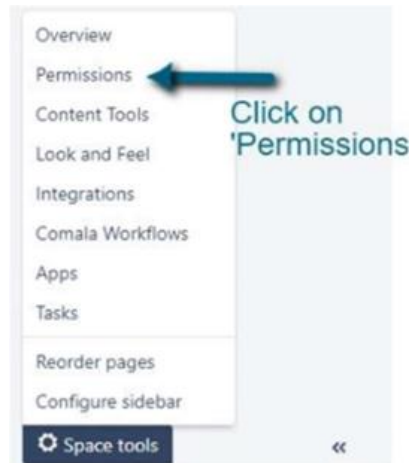
INTRODUCTION

What is Confluence?

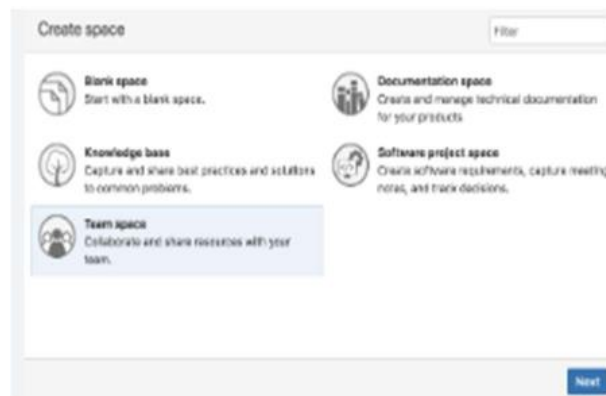
Confluence is a powerful knowledge management tool, which was developed and offered by the well-known company Atlassian. Such a powerful platform gives a place where different teams can collaborate by easily creating, organizing, and sharing all types of content in a single location. Quite a large number of teams in different industries use it for documentation, project management, and internal communications that help in enhancing their collaboration and making it considerably effective to attain desired goals. [1]

Key Features:

- **Pages & Spaces:** It allows teams to create detailed pages for everything from just documenting important information, taking comprehensive meeting notes, and outlining thorough project plans. These pages can be organized into designated spaces, which serve to be areas intended to serve only that particular team or project to enhance collaboration and organization.
- **Collaboration:** Team members can comment on pages, tag their colleagues for better communication, and work together in real-time. This means that several members of the team can work on the same page at the same time. In this way, all can contribute at the same time and still save their own changes independently, without having to depend on anyone.
- **Integration:** Confluence can be integrated with JIRA; hence, users can create elaborative reports with minute graphs that can be reached easily by any stakeholder working at any level of the organization.
- **Templates:** Other than the complete blank page, Confluence also offers a set of readymade templates that come with this system out of the box. A few of these templates include but are not limited to: Wire Frames, Retro formats, Calendars, Tab Containers, Tab Pages, and several others used as starting points by the users.
- **Versioning:** Provide an orderly record of the evolution of changes by maintaining page history and version control. It also helps in managing edits and updates more efficiently with time.
- **User Management:** Space Administrator can provide permissions based on customized user profiles. To do this, he needs to click on the Space Tools section and then click on Permissions that would appear in front of them. Ex: Admin can provide a feasibility to add/delete page or attachments or comments.

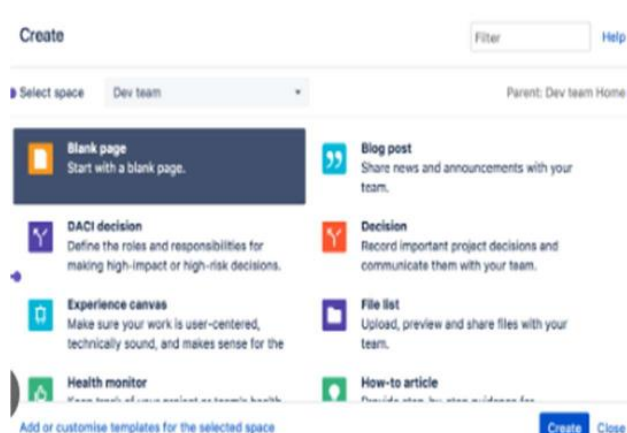


Creating Space



Confluence has defined creation of space as the very first step in achieving confluence. A space, in this regard, is a name given to a unified and integrated region where all knowledge related to a project or a team can be structured and accessed in an organized way. In order to make the content of such a space more organized, it is arranged and further structured through the process of creating pages in that space.

Creating Pages

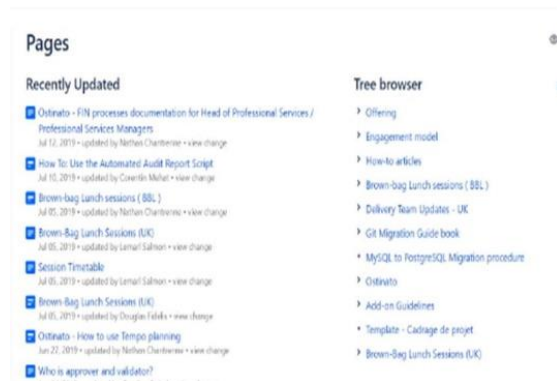


It also allows the development of a single space by adding several pages, which could then be set into the required categories systematically for better clarity and usability. For example, a team is currently developing retro pages. Here, the main space can be named as the project name, while every individual page can be the specific name of each team working within the project. Also, it is the responsibility of the Product Owner or Scrum Master to create child pages corresponding to the year of implementation, such as the year 2020. Further to that, one can also create

further child pages or Tab Containers to systematically categorize and list the names of different sprints occurring in that specific year.

There are a few choices in setting up a page. Once the template is chosen, name the page and click Publish.

Page Tree



Clicking on Pages link will navigate to Page Tree as seen in the illustration and pages can be re- ordered as needed.

JIRA

JIRA, purely developed for defect management to identify and fix the bugs in a software product, gained huge momentum among its end users and teams. Due to this increasing demand and popularity, Atlassian remodeled and shaped it into a powerful and dynamic tool that was capable of handling not only defect reports but also user stories, various types of tasks, tracking issues, and many other important functions which are indeed essential in the Agile Project Management domain. This powerful tool acts as the single source of truth and provides transparency and clarity to every team member involved in the project. Furthermore, through its agile boards, it effectively serves a wide range of projects from different methodologies, including the most famous ones: Kanban and Scrum. [2]

Key Features:

- **Issue Tracking:** JIRA is a powerful tool, highly utilized in tracking bugs, tasks, and other various issues arising within different projects. Each and every issue can be assigned to definite team members, having priorities related to their urgency or importance, while being tracked precisely all along its whole life cycle-from its appearance to resolution
- **Agile Project Management:** It is designed to support various agile methodologies, including known frameworks like Scrum and Kanban. It offers a complete suite of boards, backlogs, and sprints; various reporting capabilities are also available. In fact, these resources are targeted at assisting teams in better handling their workflow for maximum productivity.
- **Custom Workflows:** Teams can define and create their own custom workflows that also include custom statuses, transitions, and fields to match their processes and operational requirements.
- **Integration:** JIRA can integrate perfectly with a variety of tools, especially within the great Atlassian suite, which also includes well-known applications such as Confluence and Bitbucket. Besides that, it also provides integrations with a lot of third-party tools, making it more adaptable to the diverse needs and different requirements for different teams working within different working environments.
- **Reporting:** JIRA provides with a comprehensive report and real-time dashboards. Burndown charts, Velocity reports are just a few of the reports in JIRA that will help teams measure their progress and find the impediments/bottlenecks.
- **Automation:** All JIRA versions have some form of automation for routine tasks such as assigning issues, transitioning statuses, or sending notifications based on predefined conditions.

Famous Issue Types in JIRA:

- **Epic:** An agile epic is a large work item, including a big set of related tasks that are usually represented by multiple user stories. Normally, epics are used to show and describe a new product feature or functionality under development. Such enormous efforts usually span over many sprints, taking contributions and involvement from the whole team on achieving results.
- **Story:** One could define it as the smallest unit of work that exists in an agile framework, which is actually a fundamental building block within which development is done. It represents one of the ultimate objectives or end goals, not just another feature of the software. In other words, it is a general, informal explanation that defines a software feature from the perspective of the end user or customer who will be using that software at the very end. It describes the specific tasks and work to be done by agile teams throughout the entire project life cycle. Normally, user stories are placed in the product backlog, which is a dynamic list being continually refined and groomed. Once

such stories have been adequately elaborated and clarified, they get shifted onto the sprint backlog, where they thus help in the development of one product increment item deliverable to users.

- **Task:** A task is a specific piece of work that needs to be completed as part of a project. The tasks are detailed units of work that contribute to achieving the objectives outlined in larger items, such as stories or epics. They often involve technical or operational activities that may be needed to at the individual component levels that make up a major task or project.

complete the project but are not directly related to user requirements.

Examples may include the upgrade of a server, the coding of a function, or even administrative activities such as organizing a team meeting. Large tasks can be further divided into simpler subtasks for better handling and follow-through on the status.

- **Spike** is a type of activity that the member concentrates on during the span of a sprint. The major aim of this spike is to analyze, research, and gather more information in depth on a subject matter at hand. This information is valuable, as it will help the team to steer through an obstacle or, on the other hand, provide more substantial details needed for a user story to engage the development process with the best means.

- **Sub-task:** A sub-task can be considered a smaller unit of work derived from a larger parent task or overriding issue. Sub-tasks implement that very important objective of decomposing an intricate task into specified, actual steps that can be done individually. Basically, this simplifies the management of those tasks and makes it much easier to monitor progress and deal effectively with the project overall as it advances. These usually help in –

- **Breaking down big tasks is one successful strategy:** It takes large tasks and makes them more palatable by breaking them down in steps into smaller, more feasible ones.

- **Visibility enhancement:** These tools give a very neat and clear overview of what exactly is going on in terms of progress

- **Progress monitoring:** These tools detail tracking in an all-inclusive method, which manages each specified work item individually.

- **Bug:** A bug can be defined as a particular kind of problem that indicates an imperfection or fault existing in the software or system under observation. In simple words, bugs appear as errors in coding, mistakes at the development stage, or other flaws resulting in the software functioning in an unwanted manner or not according to the plans of the people who made it. Such problematic bugs can be spotted during the testing process, when the software is in production, or even after the release of the software for practical use by the end-users. A bug would be raised in JIRA and will have to go through the same defect life cycle-reviewing the defects, fixing, retesting, and closure. The whole process can be visibly tracked.

Illustration for creating Issue Types:

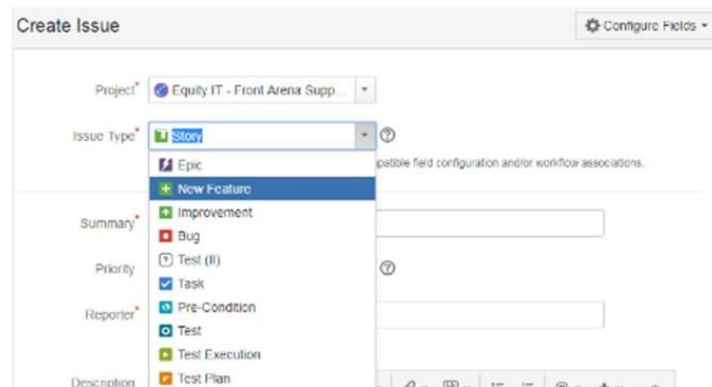


Illustration of Product Backlog:



Illustration for Sprint Backlog

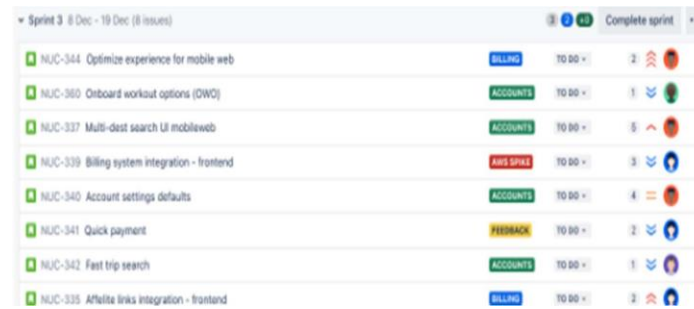
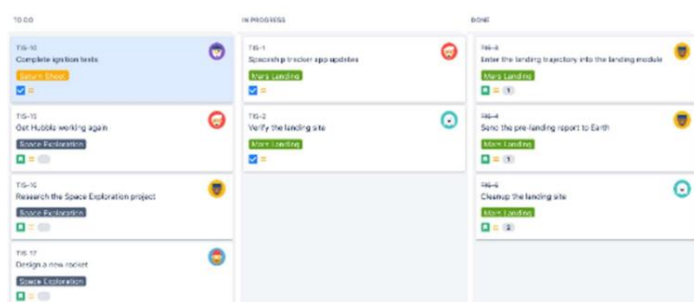


Illustration for JIRA during active sprint.



CONCLUSION

In this changing paradigm of Agile project management, tools like JIRA and Confluence have become quite instrumental in achieving much better collaboration, productivity, and transparency in organizational processes. Equipped with solid issue-tracking features and adapting to different project management styles-even Scrum and Kanban-JIRA extends flexibility to teams by handling backlogs, sprints, and releases efficiently. Confluence is a knowledge management tool and, as such, complements JIRA by offering smooth documentation, hence enhancing communication and making sure the important information on the project is available to every team member.

Put together, these tools create a powerful ecosystem in managing both the technical and collaborative aspects of Agile methodologies, therefore fostering alignment across teams and stakeholders. By integrating workflows, enhancing traceability, and offering deep insights through reporting and analytics, JIRA and Confluence support continuous improvement and decision-making processes at every level of a firm.

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