Stash
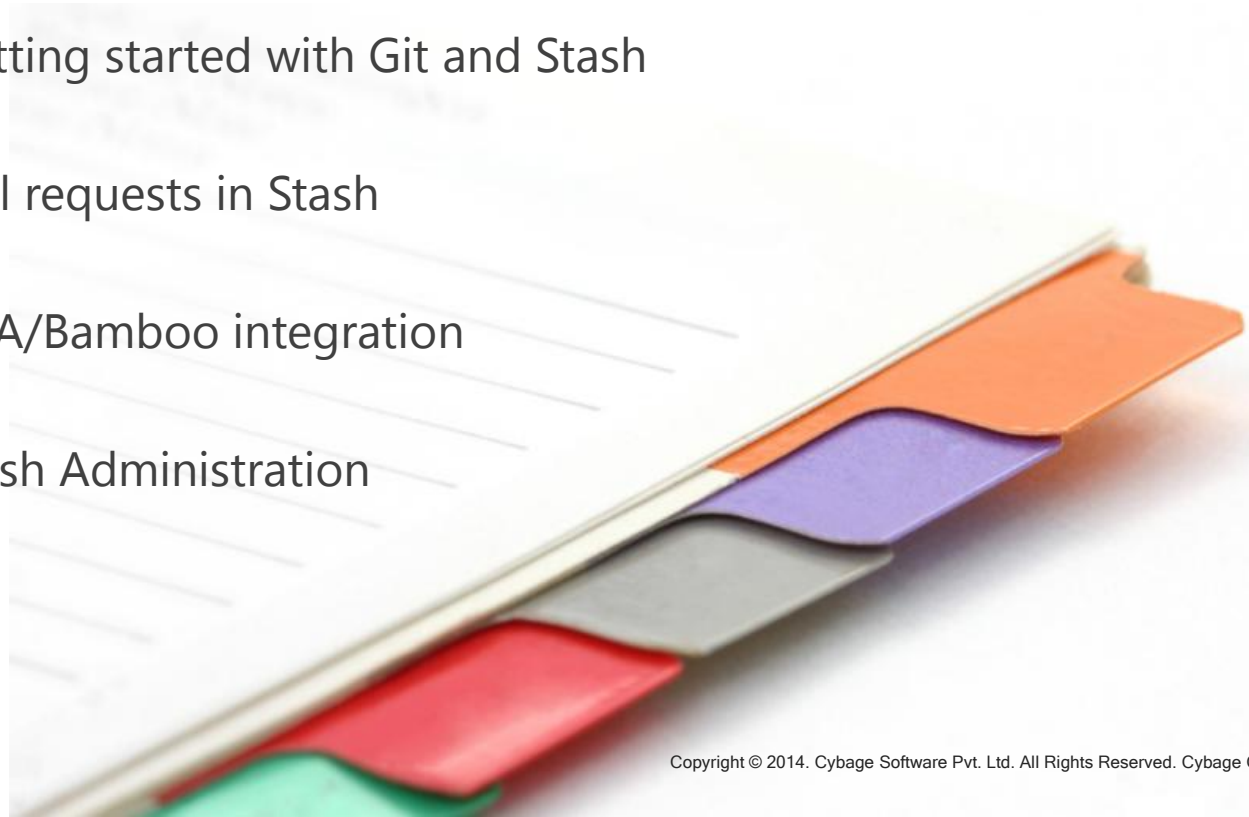
By Vijeta Angeer

Agenda

- Overview

- What is the need?

- Getting started with Git and Stash

- Pull requests in Stash

- JIRA/Bamboo integration

- Stash Administration

Overview

- Belongs to Atlassian Software Systems, founded by Scott Farquhar and Mike Brookes in 2002.
- In 2012, Atlassian released Stash to manage Git repositories

What is Stash?

- Atlassian Stash is the on-premises Git repository management solution for enterprise teams.

- It allows everyone in your organization to easily collaborate on your Git repositories.

- On-premises source code management for Git that's secure, fast, and enterprise grade.

- There are an endless number of Git workflows, and Stash works with them all

What is the need?

- Get fit in small or enterprise environment

- Allows everyone in your organization to easily collaborate on your Git repositories.

- A perfect user management local as well as centralized using JIRA

- Good combination of code review and collaboration

- Traceability over issues and sources

- Support of Add-ons and hooks

Stash Features

User Authentication
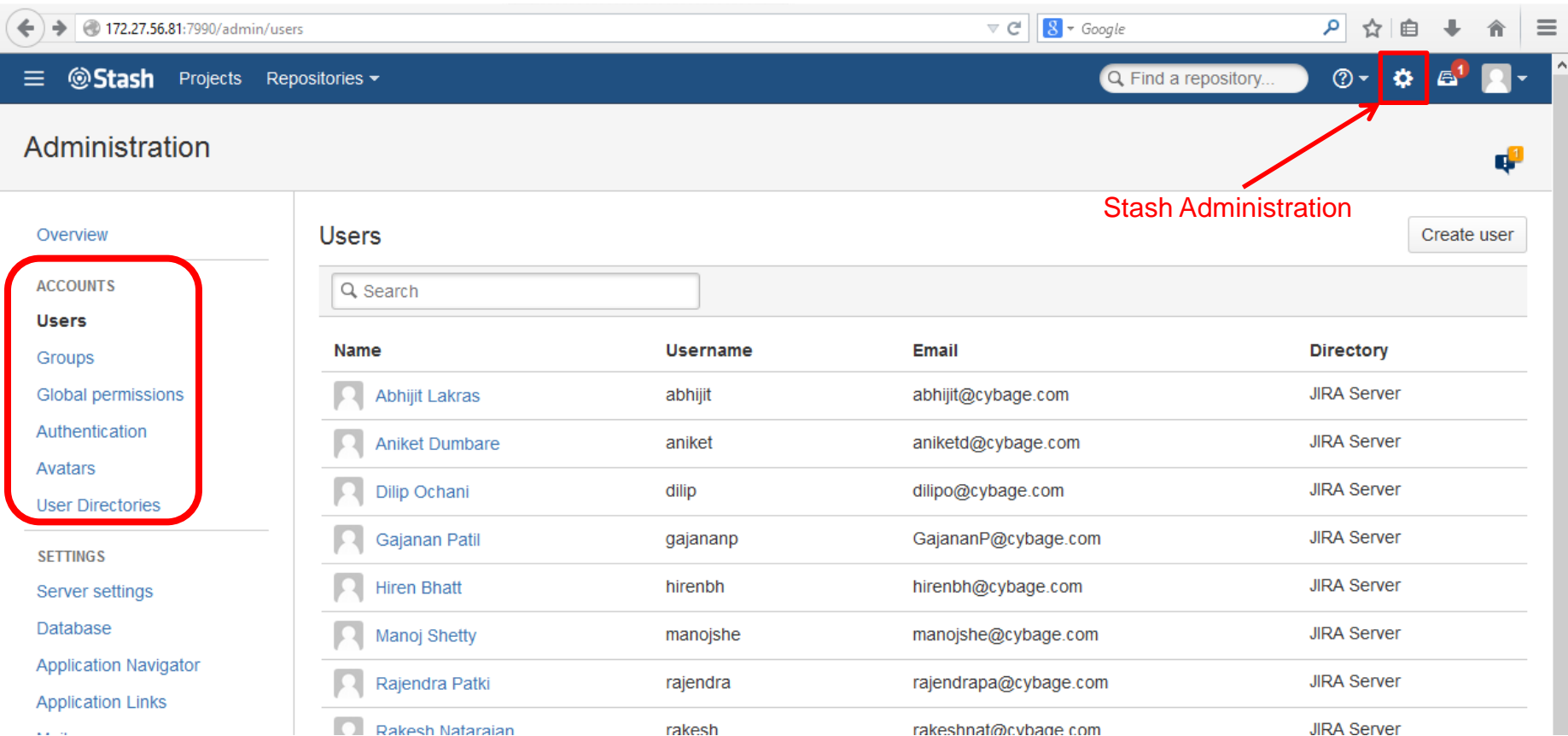
Create a repository and get your code into Stash

Creating personal repositories

Repository hooks

Using branches in Stash

Forks in Stash

User Management

User Management

User Authentication

Project Access
- Admin
- Write
- Read

User Authentication
- System Administrator
- Administrator
- Project Creator
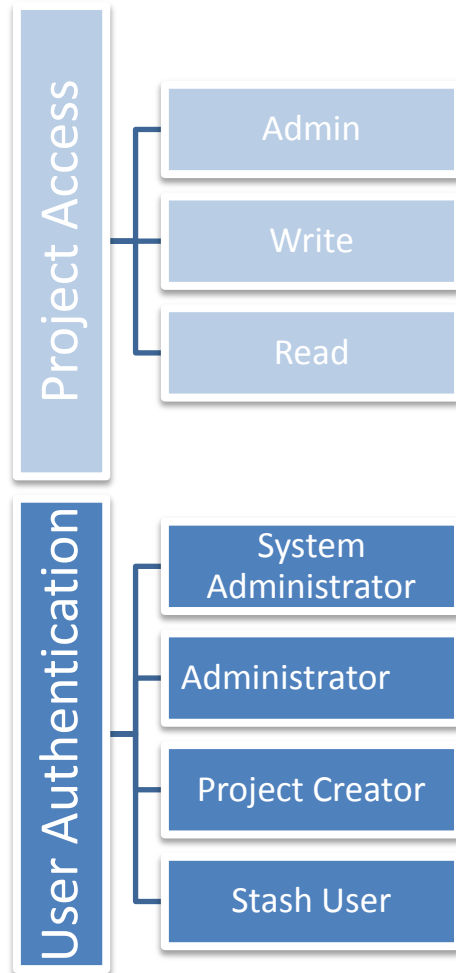- Stash User
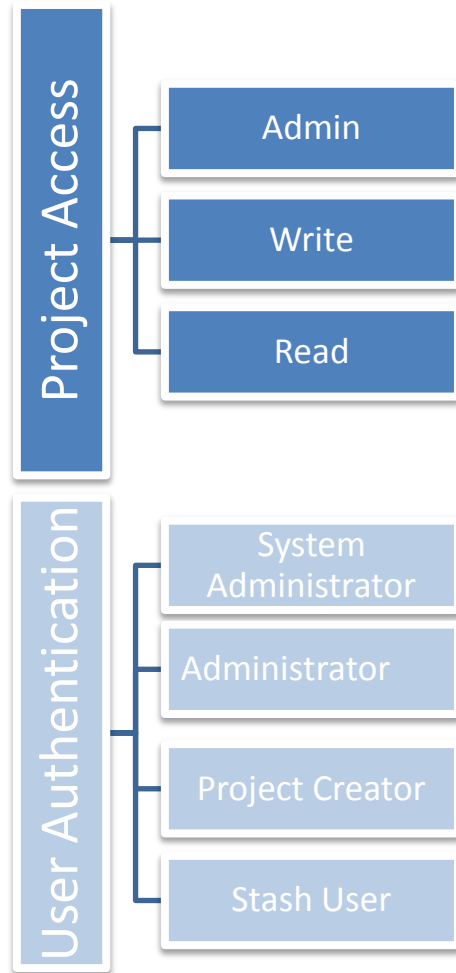
- **Admin**: can create, edit and delete repositories and projects, and configure permissions for projects.

- **Write**: can push to and pull from all the repositories in the project.

- **Read**: can only browse code and comments in, and pull from, the repositories in the project.

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User Authentication

Project Access

- Admin
- Write
- Read

User Authentication

- System Administrator
- Administrator
- Project Creator
- Stash User

- **System Administrator:** can access all the configuration settings of the Stash instance.

- **Administrator:** same as System Admins, but they can't modify file paths or the Stash server settings.

- **Project Creator:** can create, modify and delete projects.

- **Stash User:** active users who can access Stash.

Create a Repository

Import an existing, un-versioned code project to an empty repository

- If you have code on your local machine that is not under source control, you can put it under source control
- Import it into Stash.

Import a Git project to an empty repository

- You can import an existing repository into an empty project in Stash.
- When you do this, Stash maintains your commit history.

Mirror an existing Git repository

- You can mirror an existing repository into a repository hosted in Stash.

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Create a Repository

Personal Repository

- Unrelated to other projects

- You can use for storing private snippets of work

- By default, personal repositories are not visible to other Stash users.

- However, you can:

  - use repository permissions to open up access to other Stash users and groups, for collaboration or review.

  - allow public access (read-only) to your project, for anonymous users.
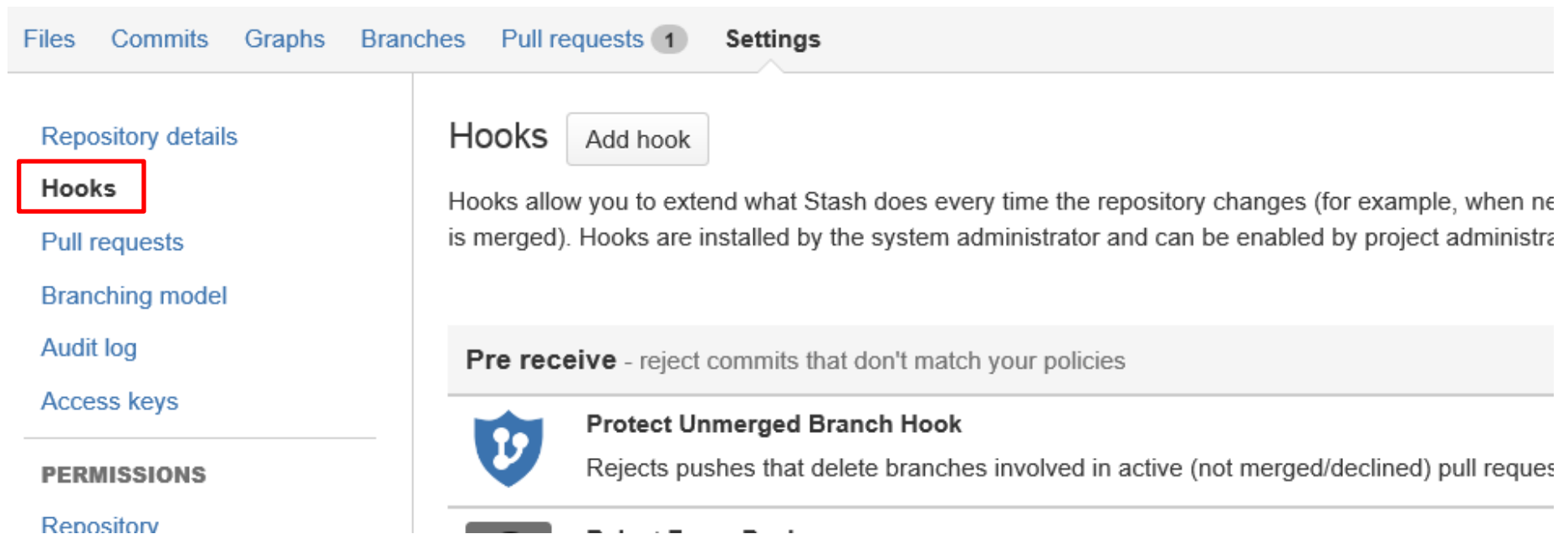
Creating a Personal Repository

You can create personal repositories by:

✓ Directly, from your profile.

✓ By forking another repository.

Repository Hooks

- Provide a way to customize a team's workflow and integrate with other systems.

- Are enabled separately on each repository in a project.

Pre-receive hooks

- The first hook to run when handling a push from a client is the pre-receive hook.

- Can reject pushes to the repository if certain conditions are not fulfilled.

Pre receive - reject commits that don't match your policies

Protect Unmerged Branch Hook
Rejects pushes that delete branches involved in active (not merged/declined) pull requests.

Disabled | Enabled

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

Disabled | Enabled

Post-receive hooks

- The post-receive hook runs after the commits have been processed
- Can be used to update other services or notify users.

Post receive - perform actions after commits are processed

HipChat Push Notification ✎
Sends a notice to the specified HipChat room whenever someone pushes to the repository.

Disabled | Enabled

Post-Receive WebHooks ✎
Allows Stash to POST commit related information to other systems via a simple WebHook URL.

Disabled | Enabled

Stash Webhook to Jenkins ✎
Webhook for notifying a configured endpoint of changes to this repository.

Disabled | Enabled
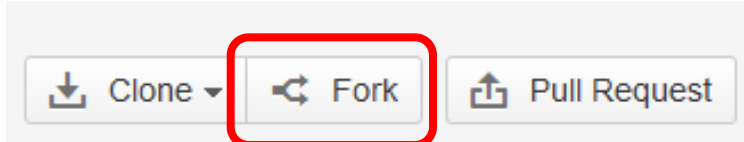
Branches

- Several branch types have default branch naming prefixes.
- Once it's created, Stash takes you to the file listing for the new branch.
- You can now pull to your local repository and switch to the new branch.

Creating Forks

- Provide an alternative workflow to using branches.

- You can also create personal forks and give other developers access to that using repository permissions.

- You can **'Enable fork syncing'** to have Stash automatically keep your fork up-to-date with changes in the upstream repository.

Pull Requests

- Use when you are ready to start a discussion about your code changes

- Provide the team with a quick and easy way to
  - ✓ review changes made on a branch,
  - ✓ discuss those changes, and
  - ✓ make further modifications

before the branch is merged back to master or your main development branch.

Discussing a Pull Requests

Feature/ETD-1 101

Overview | Diff | Commits

Details

Manoj Shetty created a pull request 2:

ETD-1 file added for committing

Activity

What do you want to say?

Manoj Shetty OPENED the pull requ

Overview	Diff	Commits
• Captures all of the team's activity on the pull request in one place, right from the initial creation • You can add/reply a comment on the Overview tab.	• Highlights the changes that will result when the merge occurs • So you can quickly see the files you may need to review. • The diff for a file shows which lines of code have been added, deleted or modified.	• Lists all the commits that will get merged. • Stash auto-updates the Commits tab of the pull request, so you can see exactly which commits will be merged.
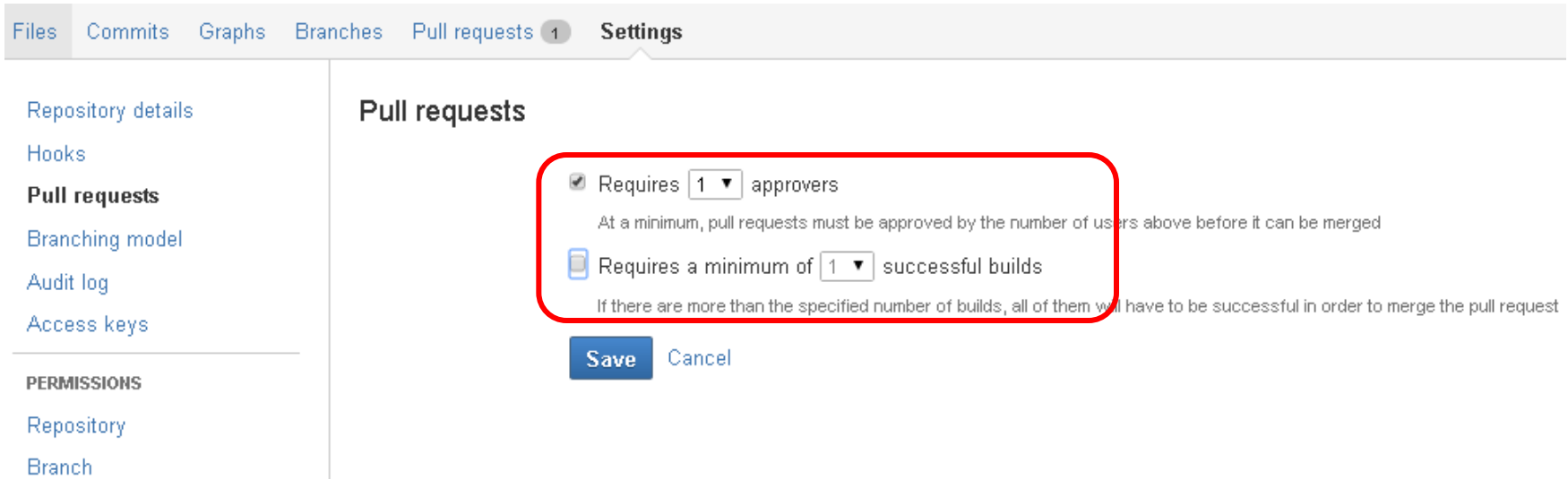
Merging a Pull Request

- You can check Delete branch if you no longer need that branch in the repository.

- The branch being merged will not be deleted if:

  ✓ The branch is the default repository branch.

  ✓ The user does not have permission to delete the branch.

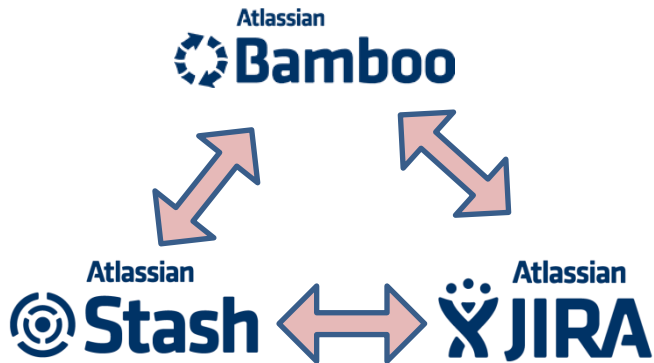 ✓ The branch is subject to an open pull request.

Checks for merging a pull request

- Checks to control when a pull request can be merged.

- Pull requests cannot be merged if the required checks have not been met.

- Set separately on each repository in a Stash project.

Pull Request

JIRA / Bamboo Integration

Atlassian **Bamboo**

Atlassian **Stash**

Atlassian **JIRA**

Quick navigation to JIRA issue and Bamboo builds

Track the work progress of JIRA

Just mention the JIRA issue id while committing the source and it will integrate JIRA/Bamboo and Stash

Source Insight from JIRA

JIRA for user management

JIRA Integration

See the JIRA issues related to commits and pull requests

JIRA Integration…

Use JIRA issue keys in markdown
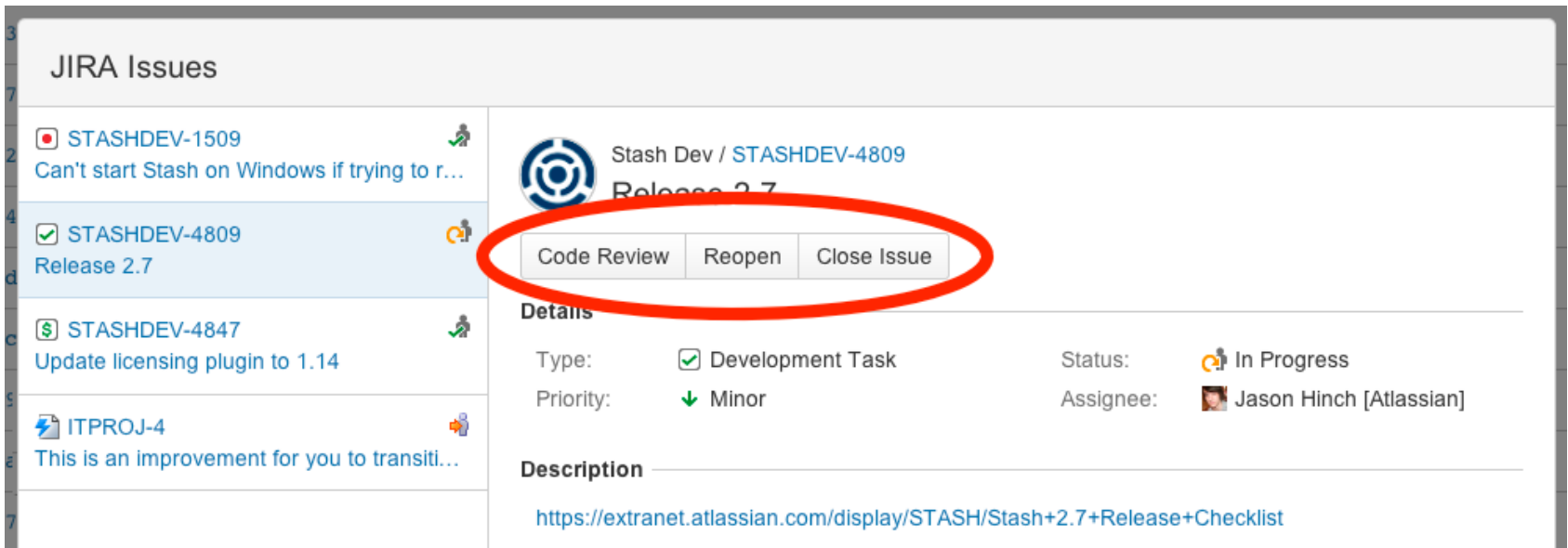
JIRA Integration...

Transition JIRA issues from within Stash

JIRA Integration...

See details of Stash commits in JIRA

JIRA Integration…

- Stash can link to more than one JIRA server at a time

- Different teams can work with their own projects in different JIRA instances

- Or a single team can link to issues across multiple JIRA servers.

Configure Application Links ⓘ

| Application | Enter the URL of the application you want to link | | **Create new link** |

	Name	Application URL	Application	Primary	
✿	Atlassian Bamboo	http://172.27.56.81:8085	Bamboo	✓	Edit ✖
✖	Confluence	http://172.27.56.81:8090	Confluence	✓	Edit ✖
◑	FishEye-Crucible	http://jira.cybage.com:8060/fisheye	FishEye / Crucible	✓	Edit ✖
♟	Cybage JIRA	http://172.27.56.81:8080	JIRA	✓	Edit ✖
♟	Cybage-ALM-JIRA	http://172.27.56.125:8081	JIRA		Edit	Make Primary ✖

Bamboo Integration

- Build results are published to Stash.
- You can see the latest build result for a commit when viewing any commit or pull request.

Administration in Stash

Administration

Overview

ACCOUNTS

Users

Groups

Global permissions

Authentication

Avatars

User Directories

SETTINGS

Server settings

Database

Application Navigator

Application Links

Mail server

Licensing

ADD-ONS

Find new add-ons

Manage add-ons

Purchased add-ons

SUPPORT

Atlassian Support Tools

Logging and profiling

Accounts

👤 **Users**
Edit individual user details, passwords and groups membership.

👥 **Groups**
Create groups and manage the users within each group.

🔒 **Global permissions**
Configure global user permissions.

🛡 **Authentication**
Configure access, privacy and spam prevention settings.

🔧 **Avatars**
Configure user avatar settings.

📇 **User Directories**
Connect Stash to user directory servers - Active Directory, Crowd, LDAP and JIRA

Add-ons

🔧 **Find new add-ons**
Find and install add-ons from the Atlassian Marketplace.

🔧 **Manage add-ons**
Install, update, enable, and disable add-ons.

🔧 **Purchased add-ons**
View purchased add-on licenses or download them from MyAtlassian.

Settings

🔧 **Server settings**
Configure SSH and other server settings.

🗄 **Database**
View and migrate database configurations.

☰ **Application Navigator**
Add links to the Application Navigator

🔧 **Application Links**
Configure links to other applications, including Atlassian products

✉ **Mail server**
Configure the SMTP server used to send notification emails.

🖼 **Licensing**
View and configure license information.

Support

🔧 **Atlassian Support Tools**
Provides tools to detect problems and get in touch with support

🔧 **Logging and profiling**
Configure logging and profiling.

Administration in Stash

Any Questions?

Thank You!