

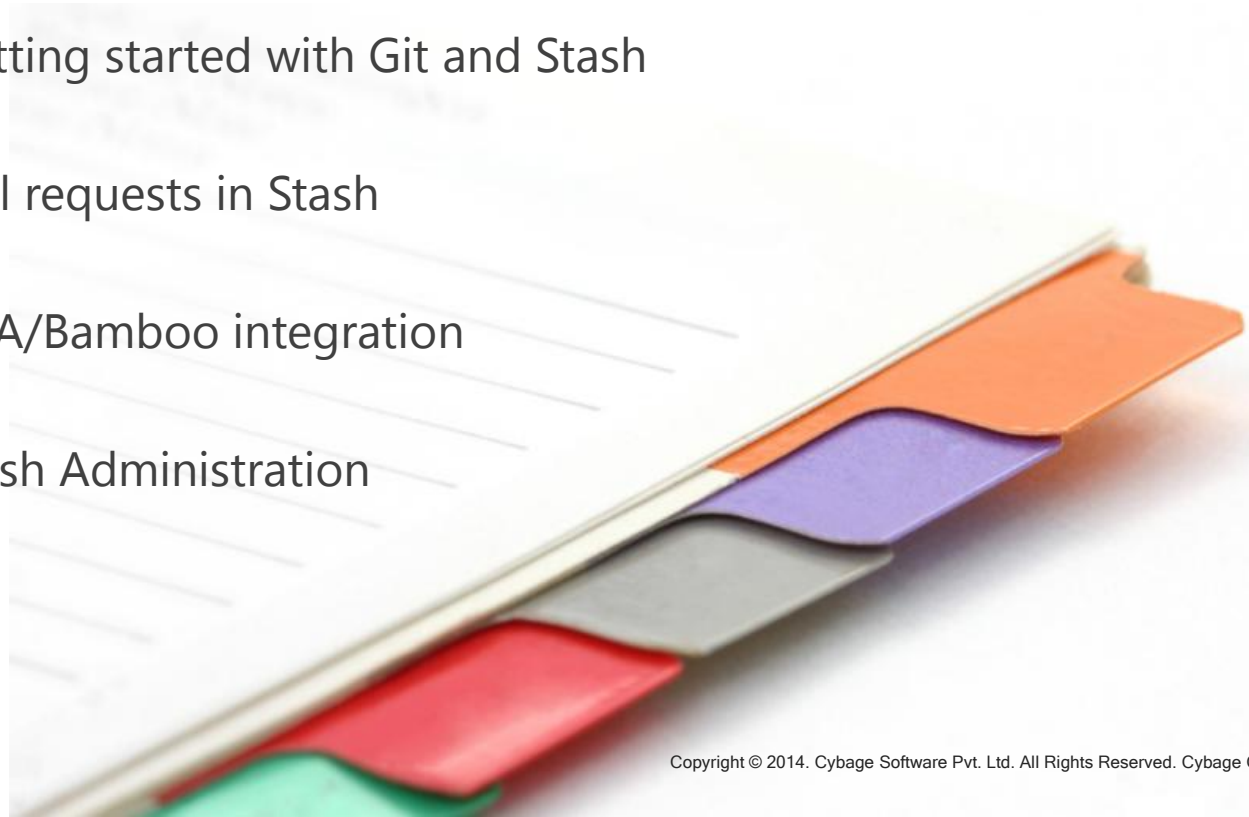


 **Stash**

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

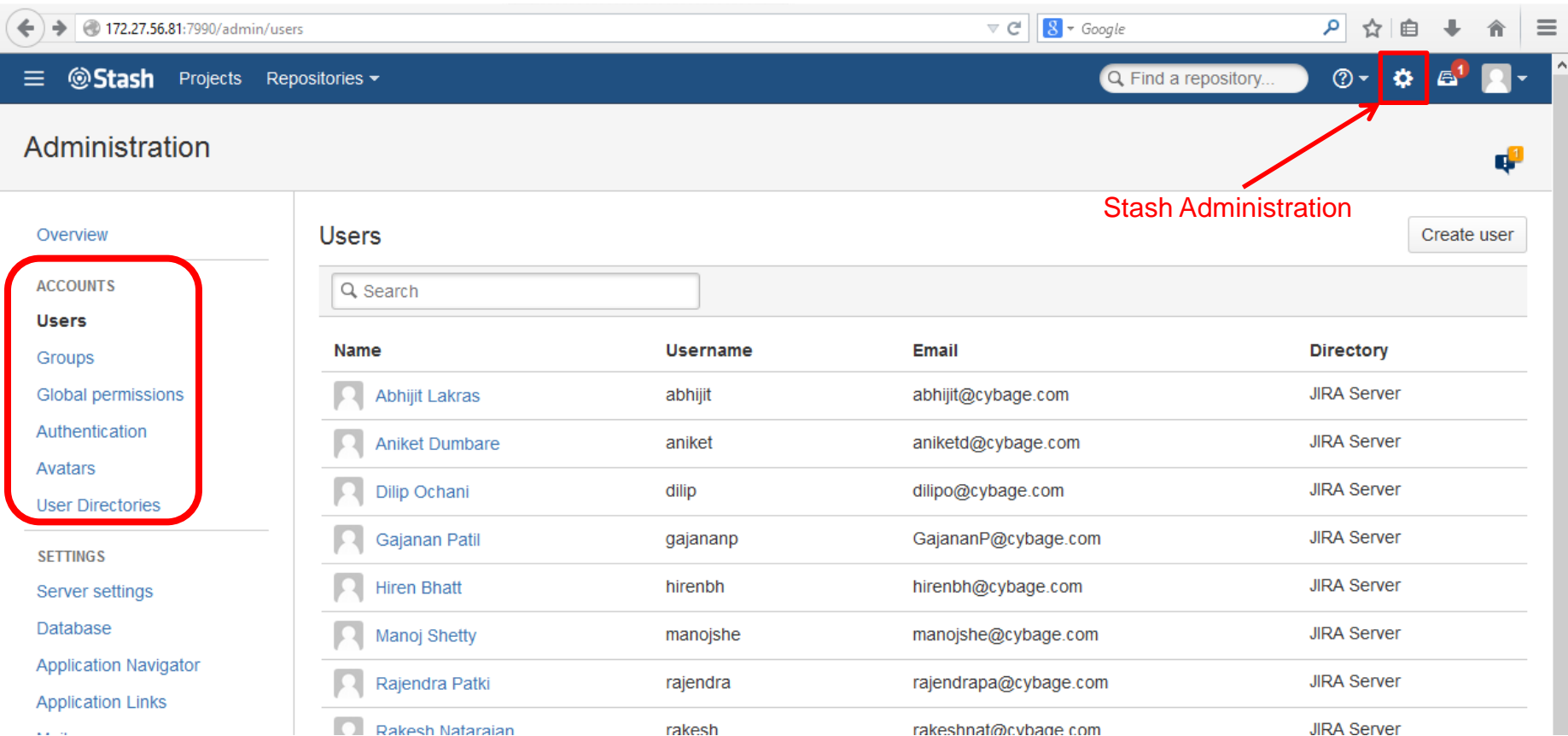
Creating personal
repositories

Repository hooks

Using branches in
Stash

Forks in Stash

User Management



Administration

Overview

ACCOUNTS









- Users**
- Groups
- Global permissions
- Authentication
- Avatars
- User Directories

SETTINGS

- Server settings
- Database
- Application Navigator
- Application Links
- ...

Users

Search

Name	Username	Email	Directory
 Abhijit Lakras	abhijit	abhijit@cybage.com	JIRA Server
 Aniket Dumbare	aniket	aniketd@cybage.com	JIRA Server
 Dilip Ochani	dilip	dilipo@cybage.com	JIRA Server
 Gajanan Patil	gajananp	GajananP@cybage.com	JIRA Server
 Hiren Bhatt	hirenbh	hirenbh@cybage.com	JIRA Server
 Manoj Shetty	manojsh	manojsh@cybage.com	JIRA Server
 Rajendra Patki	rajendra	rajendrappa@cybage.com	JIRA Server
 Rakesh Nataraian	rakesh	rakeshnat@cybage.com	JIRA Server

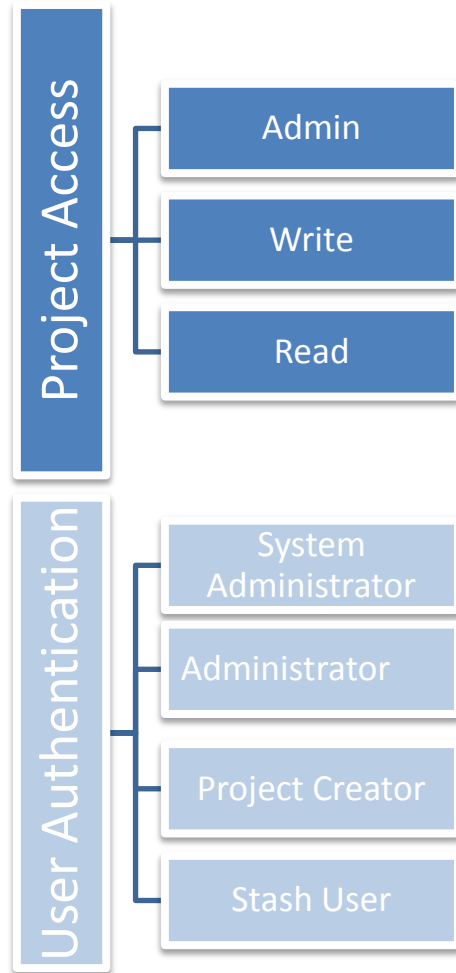
Create user

Stash Administration

User Management

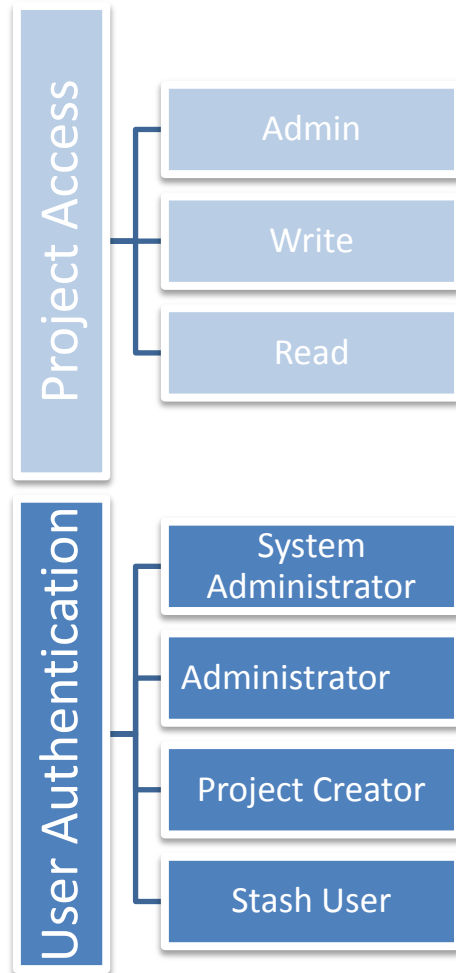


User Authentication



- **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.

User Authentication



- **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.

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

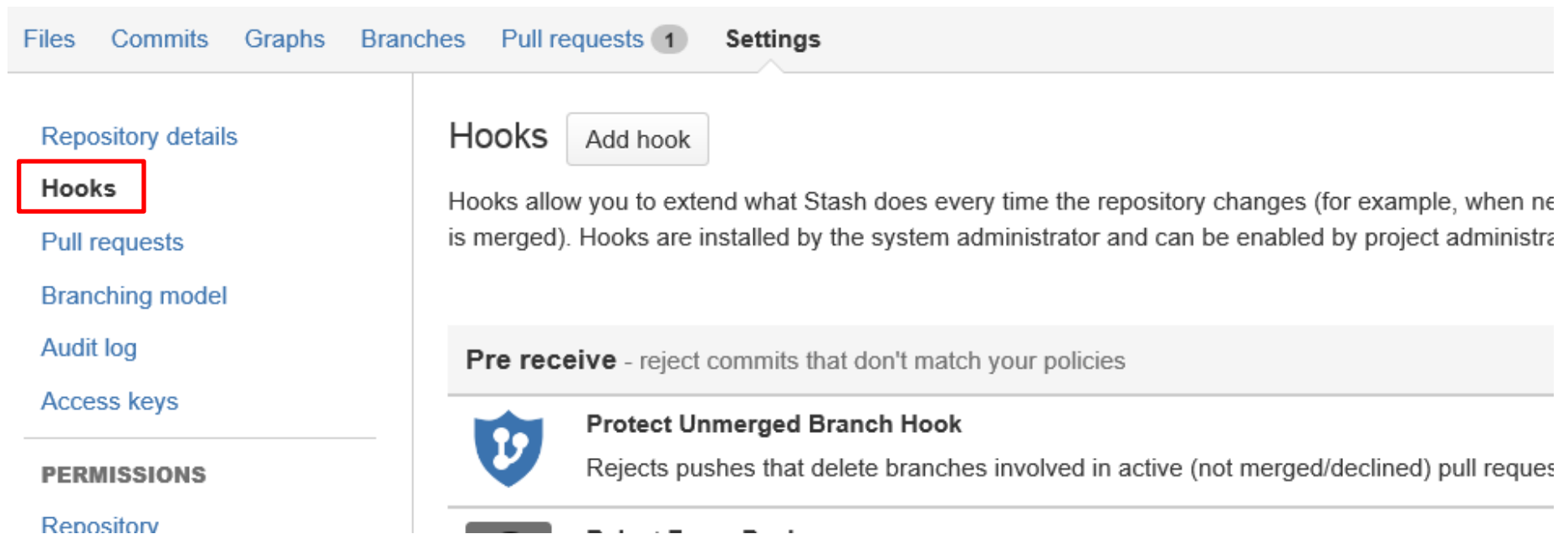
You can create personal repositories by:

- ✓ 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.



The screenshot shows the Stash web interface. At the top, there's a navigation bar with tabs: Files, Commits, Graphs, Branches, Pull requests (with a '1' badge), and Settings (which is the active tab). On the left sidebar, under 'Repository details', the 'Hooks' link is highlighted with a red rectangle. Other links in the sidebar include Pull requests, Branching model, Audit log, Access keys, and a PERMISSIONS section with a Repository link. The main content area is titled 'Hooks' and has an 'Add hook' button. Below this, a text block explains that hooks extend Stash's functionality. A section titled 'Pre receive - reject commits that don't match your policies' is shown, featuring a shield icon with a checkmark and the title 'Protect Unmerged Branch Hook'. The description for this hook states: 'Rejects pushes that delete branches involved in active (not merged/declined) pull requests'.

Files Commits Graphs Branches Pull requests 1 Settings

Repository details

Hooks

Pull requests

Branching model

Audit log

Access keys

PERMISSIONS


Repository

Hooks

Add hook

Hooks allow you to extend what Stash does every time the repository changes (for example, when new code is merged). Hooks are installed by the system administrator and can be enabled by project administrators.

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

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

Create branch

Repository

Employee_... / employee_t... ▼

Branch type

Bugfix ▼


[Learn about branch types](#)

Branch from

master ▼

Branch name

bugfix/



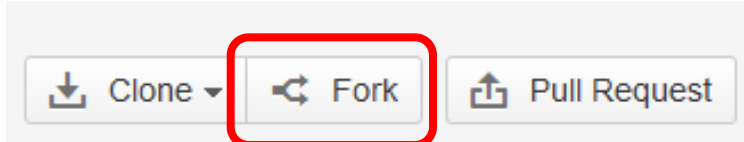
master

Create branch


Cancel

- 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



Fork Employee_Test_Demo / employee_test_demo

Project*  **Employee_Test_Demo** ▼

Where would you like to fork this repository into?

Name*

The repository's name will be used to create its URL
http://172.27.56.81:7990/scm/etd/employee_test_demo.git

☒ **Enable fork syncing**
Keep branches and tags automatically in sync with
[Employee_Test_Demo / employee_test_demo](#).

Fork repository Cancel

- 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 request

Overview

- 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.

Diff

- 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.

Commits

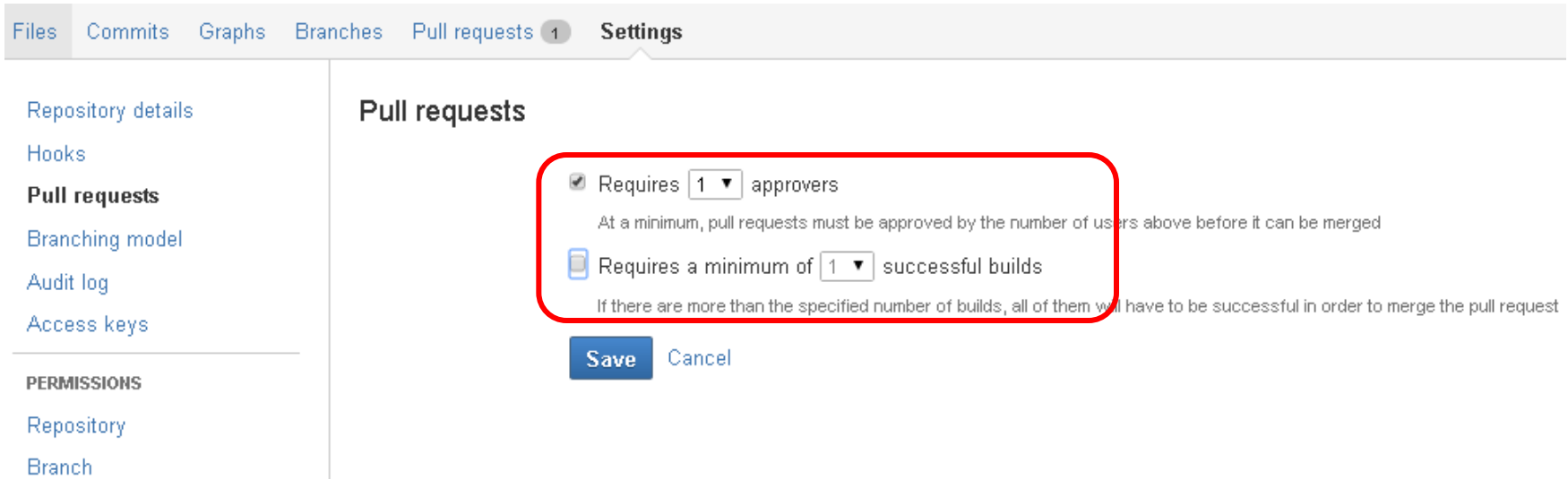
- Lists all the commits that will get merged.
- Stash auto-updates the Commits tab of the pull request, so you can see exactly which commits will be merged.

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



Files Commits Graphs Branches Pull requests 1 Settings

Repository details
Hooks
Pull requests
Branching model
Audit log
Access keys

Pull requests

☒ Requires 1 ▼ approvers
At a minimum, pull requests must be approved by the number of users above before it can be merged

☒ Requires a minimum of 1 ▼ successful builds
If there are more than the specified number of builds, all of them will have to be successful in order to merge the pull request

Save Cancel

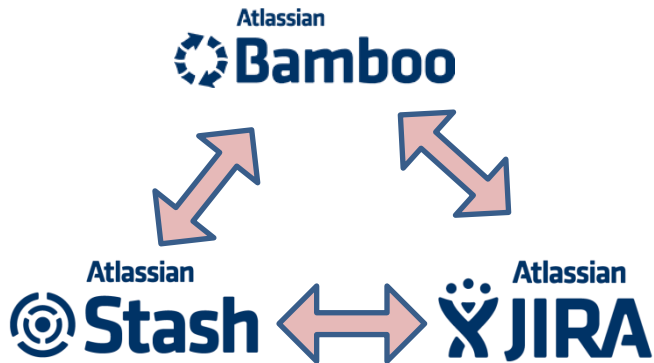
PERMISSIONS
Repository
Branch

- 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



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


Files Commits Graphs Branches Pull requests Settings						
master ...						
Author	Commit	Message	Commit Date	Issues	Builds	
 Manoj Shetty	f437b70 <small>M</small>	Merge pull request #1 in ETS/employee_tracking_system from feature/ETS-3 to master * commit '35ef9348234f96f5...	02 Apr 2014	ETS-3		
 Manoj Shetty	35ef934	ETS-3 Add Employee	02 Apr 2014	ETS-3		
 Manoj Shetty	5664c44	Adding base code	01 Apr 2014			

JIRA Integration...

Use JIRA issue keys in markdown

Employee Tracking System





JIRA Issues

 Employee_Tracking_System / **ETS-3**

Coding and Unit Testing of Add Employee

Start Progress Resolve Issue Close Issue

Details

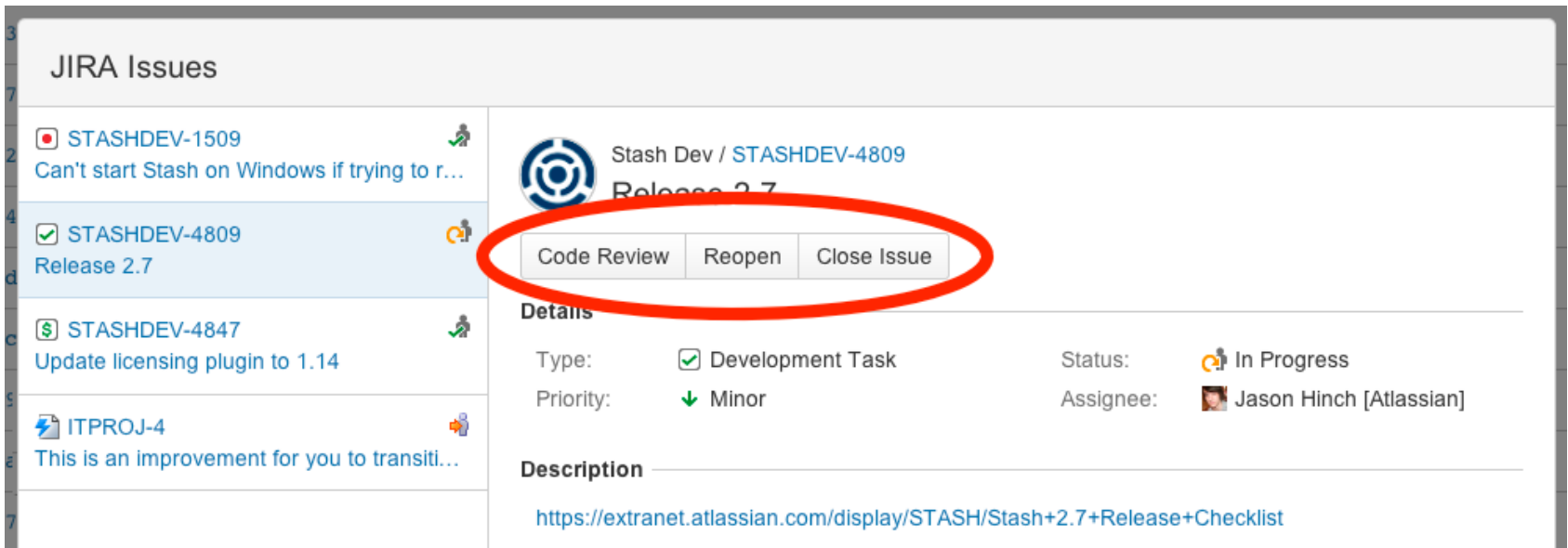
Type:	 Task	Status:	 Open
Priority:	 Major	Assignee:	 Hiren Bhatt

Description

Coding and Unit Testing for Add Employee

JIRA Integration...

Transition JIRA issues from within Stash






JIRA Issues

- ☐ STASHDEV-1509
Can't start Stash on Windows if trying to r...
- ☒ STASHDEV-4809
Release 2.7
- ☐ STASHDEV-4847
Update licensing plugin to 1.14
- ☐ ITPROJ-4
This is an improvement for you to transiti...

Stash Dev / STASHDEV-4809
Release 2.7

Code Review **Reopen** **Close Issue**

Details

Type: ☒ Development Task Status:  In Progress
Priority:  Minor Assignee:  Jason Hinch [Atlassian]

Description



<https://extranet.atlassian.com/display/STASH/Stash+2.7+Release+Checklist>

JIRA Integration...

See details of Stash commits in JIRA

Activity

All Comments Work Log History Activity Commits **Source** Reviews Builds

 Jason Hinch Yesterday 2:28 AM **Click through to Stash** 

Merge remote-tracking branch 'origin/master' into **STASHDEV-1801-authentication-cleanup** [View full commit](#)

Stash / stash **MERGE**

- MODIFIED** [api/src/main/java/com/atlassian/stash/nav/NavBuilder.java](#)
- MODIFIED** [api/src/main/java/com/atlassian/stash/user/UserAdminService.java](#)
- MOVED** [distribution/licenses/src/main/resources/licenses/com.atlassian.utils-processutils--1.5.10.txt](#)
- ADDED** [etc/release/check_help_prefix.sh](#)
- ADDED** [etc/release/check_help_prefix_test.sh](#)









... see more changes in Stash

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 [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.

Author	Commit	Message	Commit Date	Issues	Builds
 Manoj Shetty	f437b70 <small>M</small>	Merge pull request #1 in ETS/employee_tracking_system from feature/ETS-3 to master * commit '35ef9348234f96f5...	02 Apr 2014	ETS-3	
 Manoj Shetty	35ef934	ETS-3 Add Employee	02 Apr 2014	ETS-3	
 Manoj Shetty	5664c44	Adding bas	01 Apr 2014		

Builds

 [Employee_Tracking_System - Employee_Tracking_System_Build_...](#) 3 days ago

#5 successful (with 23 tests) in 24 seconds

Close

Administration in Stash

Administration

Overview

ACCOUNTS

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[Groups](#)
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[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!