Atlassian Bitbucket vs GitLab

GitLab compared to other DevOps tools

On this page

Summary

Atlassian Bitbucket gives teams Git code management, but also one place to plan projects, collaborate on code, test and deploy. It is marketed in the SaaS form (Bitbucket Cloud) and in a self-managed version (Bitbucket Server), however they are not the same product. Bitbucket Server is simply a re-branding of Stash. The two products are completely different code bases, written in two different languages (Cloud in Python, Server in Java) and do not maintain feature parity.

Bitbucket supports Mercurial or Git, but not SVN. GitLab does not support Mercurial or SVN.

GitLab is a single application for the complete DevOps lifecycle with built-in project management, source code managemetn, CI/CD, monitoring and more. Bitbucket only does source code managment. You would need to use Atlassian Jira to get project managment, and Bamboo for CI/CD and Atlassian does not provide a monitoring solution. Addditionally, GitLab Ultimate comes with robust built-in security capabilities such as SAST, DAST, Container Scanning, Dependency Scanning, and more. Bitbucket does not support these capabilities, and Atlassian does not have a product for them.

GitLab also offers a "prem" self-managed and "cloud" SaaS solution. GitLab runs the same exact code on it's SaaS platform that it offers to it's customers. This means customers can migrated from self-hosted to SaaS and back relatively easily and each solution maintains feature parity.

Comments/Anecdotes

- Discussion from HackerNews article about Atlassian not allowing benchmarking

  > Atlassian has always forbidden to talk about the performance of their products in their ToS and in their previous EULA. We all know why, but we donâ€™t talk about it.

- GitLab employee observation from a recent HackerNews article

  > Atlassian put the B-team on BitBucket Server and it isn't getting many updates because it is written in a different programming language. This stresses the value of having codebase parity accross products.

- Disparity between BitBucket Server and BitBucket Cloud for a top customer requested feature took Atlassian over 2 years to acknowledge. Customers found out the feature existed in Server but not Cloud once moving tp Cloud. Still not resolved. - https://bitbucket.org/site/master/issues/12833/branching-models-for-bb-cloud#comment-45982415

Resources

- Atlassian BitBucket Website

Pricing

- Bitbucket Cloud

- Free tier - $0 - Unlimited private repos, Jira Software integration, Projects Pipelines (50 build mins/month), 1GB/month limit on file storage
- Standard tier - $2/user/month (min $10/month) - Same as Free + 500 build mins/month + 5GB file storage/month
- Premium tier - $5/usr/month (min $25/month) - Standard + some advanced features + 1000 build mins/month + 10GB file storage/month

- BitBucket Server / Data Center
  - Server - starting $2k perpetual (25 users, ppu drops roughly every 2x previous tier), includes year maintenance, single server, unlimited priv+pub repos
  - Data Center - $1800/yr (25 users , ppu drops roughly every 2x previous tier) includes annual maintenance, Server + HA, DR, mirroring, SAML 2.0
  - Must buy Data Center if over 2k users.

Comparison

FEATURES		
Free CI/CD with shared or personal Runners GitLab.com has shared Runners that allow you to use GitLab CI/CD completely free up to 2000 build minutes for private projects and unlimited for public projects. Alternatively, you can set up your own Runner for faster build processing, unlimited build minutes, or special requirements. Explore GitLab.com offerings	➖	✔
Built-in CI/CD GitLab has built-in Continuous Integration/Continuous Delivery, for free, no need to install it separately. Use it to build, test, and deploy your website (GitLab Pages) or webapp. The job results are displayed on merge requests for easy access. Learn more about CI/CD	✔	✔
Innersourcing Internal projects in GitLab allow you to promote innersourcing of your internal repositories. Find out more about innersourcing	✘	✔
Commit graph and reporting tools GitLab provides commit graphs and reporting tools about collaborators' work. Learn more about commit graphs	✘	✔

Group Milestones

Create and manage milestones across projects, to work towards a target date from the group level. View all the issues for the milestone youâ€™re currently working on across multiple projects.

Learn more about Group Milestones


Availability

GitLab.com is at 99.5% availability while we want to be above 99.95%. We're hiring to improve this in the last two months of 2017 and in 2018.

GitLab.com status


The most comprehensive import feature set

GitLab can import projects and issues from more sources (GitHub, BitBucket, Google Code, FogBugz, Gitea and from any git URL) than GitHub or any other VCS. We even have you covered for your move from SVN to Git with comprehensive guides and documentation.

Making it easier to get up and running with GitLab


Powerful Issue Tracker

Quickly set the status, assignee or milestone for multiple issues at the same time or easily filter them on any properties. See milestones and issues across projects.

Learn more about the Issue Tracker


Issue Boards

GitLab has Issue Boards, each list of an Issue Board is based on a label that exists in your issue tracker. The Issue Board will therefore match the state of your issue tracker in a user-friendly way.

Learn more about GitLab Issue Boards


Related issues

Explicitly mark issues as related and track their status.

Learn more about Related Issues


Time tracking

Time Tracking in GitLab lets your team add estimates and record time spent on issues and merge requests.

Learn more about Time Tracking


Wiki based project documentation

A separate system for documentation called Wiki, is built right into each GitLab project. Every Wiki is a separate Git repository.

Learn more about GitLab Wikis

 

Move issues between projects

You can move issues between projects in GitLab. All links, history and comments will be copied and the original issue will reference the newly moved issue. This makes working with multiple issue trackers much easier.

Learn more about moving issues between projects

 

Create new branches from issues

In GitLab, you can quickly create a new branch from an issue on the issue tracker. It will include the issue number and title automatically, making it easy to track which branch belongs to which issue.

See how in our documentation

 

Allow edits from upstream maintainers in branch

When a user opens a merge request from a fork, they are given the option to allow upstream maintainers to collaborate with them on the source branch. This allows the maintainers of the upstream project to make small fixes or rebase branches before merging, reducing the back and forth of accepting community contributions.

 

Application performance monitoring

GitLab collects and displays performance metrics for deployed apps, leveraging Prometheus. Developers can determine the impact of a merge and keep an eye on their production systems, without leaving GitLab.

Learn more about monitoring deployed apps

 

Application performance alerts

GitLab allows engineers to seamlessly create service level indicator alerts and be notified of any desired events, all within the same workflow where they write their code.

Learn more about creating SLI alerts

 

GitLab server monitoring

GitLab comes out of the box enabled for Prometheus monitoring with extensive instrumentation, making it easy to ensure your GitLab deployment is responsive and healthy.

Learn more about monitoring the GitLab service

 

Cycle Analytics

GitLab provides a dashboard that lets teams measure the time it takes to go from planning to monitoring. GitLab can provide this data because it has all the tools built-in: from the idea, to the CI, to code review, to deploy to production.

Learn more about Cycle Analytics

 

Quick actions

GitLab provides a convenient way to change metadata of an issue or merge request without leaving the comment field with slash commands.

Documentation about quick actions

 

Built-in Container Registry

GitLab Container Registry is a secure and private registry for Docker images. It allows for easy upload and download of images from GitLab CI. It is fully integrated with Git repository management.

Documentation on Container Registry

 

Preview your changes with Review Apps

With GitLab CI/CD you can create a new environment for each one of your branches, speeding up your development process. Spin up dynamic environments for your merge requests with the ability to preview your branch in a live environment.

Learn more about Review Apps

 

New features every month

GitLab is updated with new features and improvements every month on the 22nd.

 

One integrated tool

Other tools require the integration of multiple 3rd party tools to complete the software development lifecycle. GitLab has a completely integrated solution that covers the entire development lifecycle.

 

Highly Available setups

For mission critical releases, you cannot afford downtime. Split your app servers, database, etc., into multiple instances and work in read-only mode during backups.

More information on High Availability

 

IPv6 ready

Both GitLab.com and GitLab Self-manages support IPv6.

Read the docs on configuring IPv6


AD / LDAP integration

Sync groups, manage SSH-keys, manage permissions, authentication and more. You can manage an entire GitLab instance through the LDAP / AD integration.

More information about AD / LDAP integration


Multiple LDAP / AD server support

Link multiple LDAP servers to GitLab for authentication and authorization

Advanced LDAP configuration


Multiple approvals in code review

In GitLab, to ensure strict code review, you can require a specific number of approvals on a merge request by different users before being able to merge it. You can undo an approval by removing it after the fact.

Approvals Documentation


Confidential Issues

Keep your information secure with Confidential Issues. With GitLab, you can create confidential issues visible only for project members with Reporter access level or above.

Learn more about Confidential Issues


Access to and ability to modify source code

GitLab Enterprise Edition is publicly readable, meaning you can scan or modify the code to meet your security and development needs. The code used by most other providers is proprietary, meaning you cannot edit or view the source code.

Read the GitLab Enterprise Edition license.


A comprehensive API

GitLab provides APIs for most features, allowing developers to create deeper integrations with the product.

Read our API Documentation


Search files with fuzzy file finder

GitLab provides a way to search a file in your repository in one keystroke.

Read about the file finder in our documentation

 

Advanced Global Search

Leverage Elasticsearch for faster, more advanced code search across your entire GitLab instance.

Learn more about Advanced Global Search

 

Advanced Syntax Search

Use advanced queries for more targeted search results.

Learn more about Advanced Syntax Search

 

Fast-forward merge with option to rebase

With this setting at the project level, you can ensure that no merge commits are created and all merges are fast-forwarded. When a fast-forward merge is not possible, the user is given the option to rebase.

Learn more about rebase before merge

 

Remote repository push mirroring

Mirror a repository from your local server to elsewhere.

Learn more about repository push mirroring

 

Remote repository pull mirroring

Mirror a repository from a remote Git server to your local server, making it easy to keep local forks and replicas up to date.

Learn more about repository pull mirroring

 

Merge request approvals

When a project requires multiple sign-offs, GitLab Enterprise Edition enables you to make sure every merge request is approved by one or more people. Merge request approvals allow you to set the number of necessary approvals and predefine a list of approvers that will need to approve every merge request in a project, and in-turn improve your codeâ€™s quality.

Learn more about merge request approvals

 

Disaster Recovery

Fail over in minutes to another data-center.

Learn more about Disaster Recovery

 

Granular user roles and flexible permissions

Manage access and permissions with five different user roles and settings for external users. Set permissions according to people's role, rather than either read or write access to a repository. Don't share the source code with people that only need access to the issue tracker.

Learn more about User Roles

 

Projects

Organize your repository into private, internal, or public projects.

Learn more about Projects

 

Merge Requests

Create merge requests and @mention team members to review and safely merge your changes.

Learn more about merge requests

 

Reject unsigned commits

GitLab Enterprise Edition Premium allows you to enforce GPG signatures by rejecting unsigned commits.

Read more about enforcing push rules

 

Verified Committer

Verify that a push only contains commits by the same user performing the push.

In development for GitLab. Follow this link for more information.

 

Based on Git, a distributed VCS

Git, on which GitLab is built, is fully distributed. Every user has a complete copy of the repository, allowing for much faster access to history, easier branching and an overall better experience.

Get started with Git

 

Protected branches

Granular permissions for branches you want to protect.

Read about protected branches

Snippets

Store and share code snippets to engage in a conversation about that piece of code. You can embed snippets on any blog or website using a single line of code.

Learn more about Snippets

Inline commenting and discussion resolution

Code or text review is faster and more effective with inline comments in merge requests. Leave comments and resolve discussions on specific lines of code. In GitLab, Merge Request inline comments are interpreted as a discussion. You can configure your project to only accept merge requests when all discussions are resolved.

Learn more about resolving discussions

Cherry-picking changes

Cherry-pick any commit in the UI by simply clicking the Cherry-Pick button in a merged merge request or a specific commit.

Learn more about cherry picking merge requests

Activity Stream

View a list of the latest commits, merges, comments, and team members on your project.

Learn more about the Activity Stream

GPG Signed Commits

Sign commits and prove that a commit was performed by a certain user.

Read more about GPG signed commits

Subgroups: groups within groups

Create groups within groups to easily manage large numbers of people and projects.

Learn more about Subgroups

Object storage for LFS

LFS files can be stored on Object Storage (Amazon S3)

Learn how to store artifacts on object storage


Globally distributed cloning with GitLab Geo

When development teams are spread across two or more geographical locations, but their GitLab instance is in a single location, fetching and cloning large repositories can take a long time. Built for distributed teams, GitLab Geo allows for read-only mirrors of your GitLab instance, reducing the time it takes to clone and fetch large repos and improving your collaboration process.

Learn more about GitLab Geo


Support for High Availability

To avoid downtime, GitLab Enterprise Edition Premium offers support for High Availability (HA). A Service Engineer will help you identify your specific HA needs and map out an architecture.

Learn more about GitLab's High availability


Deploy Boards

GitLab Premium ships with Deploy Boards offering a consolidated view of the current health and status of each CI/CD environment running on Kubernetes. The status of each pod of your latest deployment is displayed seamlessly within GitLab without the need to access Kubernetes.

Learn more about Deploy Boards


You decide when you upgrade

GitLab releases a new version each month and lets you choose when to upgrade.

Learn how to upgrade your GitLab instance


Easy upgrade process

Using our official Linux repositories or the official Docker image, upgrading GitLab is a breeze.

Learn how to upgrade your GitLab instance


Automatically close issue(s) when a merge request is merged

With GitLab, you can use specific keywords to close one or more issues as soon as a merge request is merged.

Learn more about automatically closing issues


Work in Progress merge requests (WIP)

Prevent merge requests from accidentally being accepted before they're completely ready by marking them as Work In Progress (WIP). This gives you all the code review power of merge requests, while protecting unfinished work.

Learn more about WIP MRs

 

Custom Git Hooks

Leverage the power of Git Hooks and chain them together to fire off custom scripts when certain actions occur on the repository. If the commit is declined or an error occurs during the Git hook check, the error message of the hook will be present in GitLab's UI. GitLab supports all types of hooks.

Learn how to use Git Hooks with GitLab

 

Responsive-first design

GitLab is built with a responsive-first design approach. Be it on a desktop, tablet or smartphone, GitLab is optimized to be viewed for the best result.

 

Community based, users can help shape the product

GitLab has open issue trackers for almost all of its operations. From GitLab itself to infrastructure and marketing, you can help shape the product.

View all GitLab contributors

 

Git LFS 2.0 support

Manage large files such as audio, video and graphics files with the help of Git LFS. Git LFS 2.0 file locking support helps large teams work with binary assets and is integrated with our native file locking feature.

Learn more about Git LFS support in GitLab

 

Create projects with Git push

Push new projects to the desired location and a new private project will automatically be created.

Learn more about creating Projects

 

SAML SSO for Groups

Connect a group in GitLab to a SAML identity provider to manage authentication.

Learn more about LDAP group synchronization

 

View Kubernetes pod logs

Quickly and easily view the pod logs of an app deployed to Kubernetes.

 

Learn more about viewing Kubernetes pod logs

Mercurial repository hosting

Hosts Mercurial DVCS repositories.

 

See the GitLab issue to implement this

Enforced Two-factor Authentication (2FA)

Two-factor authentication secures your account by requiring a second confirmation, in addition to your password. That second step means your account stays secure even if your password is compromised. The ability to enforce 2FA provides further security by making sure all users are using it.

 

Learn more about Enforced GitLab 2FA

IP Whitelisting

IP Whitelisting defines safe IP network addresses from which clients can access and interact with the repository server. This helps prevent unwanted third parties from accessing your account even if they have acquired a team memberâ€™s email address and password.

 

Learn more about GitLab IP Whitelisting