PERFORCE **HELIX**

Helix Swarm

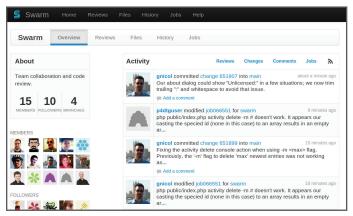
Collaborate on Any Type of File

Helix Swarm is a collaboration engine for all types of intellectual property. It unites teams to formalize content reviews, foster brainstorming and keep projects moving forward. Contributors share files, comment, suggest tasks, vote up or down, and submit final work directly within its elegant, web-based interface. Swarm automates the entire process via notifications and makes it easy to monitor progress.

Code Conversations

Swarm helps development teams achieve faster release cadences without sacrificing quality. Its "code conversations" enable direct and contextual collaboration at each stage of development. You can comment right inside the code—whether you're sharing your ideas, helping a colleague on a code snippet, or a designated reviewer providing feedback on submitted code.

- Comment on reviews
- · Comment in-line with code
- Use @mentions to send notifications
- See comments in the activity stream or in emails
- Filter activity streams by reviews, changes, comments, users or projects.

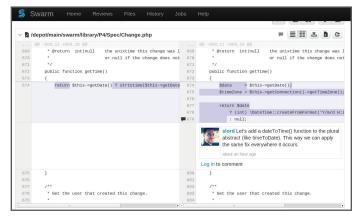


Check your personal activity stream for changes, comments and review requests.

Streamlined Code Reviews

Purpose-built for handling multiple reviews at a time, Swarm's activity streams, project pages, notifications and a rich repository browser enable distributed teams to make better use of Agile methodologies. You can see the entire review history and customize each review to suit your working style:

- See the review lifecycle workflow (pending, approve, reject, etc.) across projects and branches
- Pre- and post-commit review workflow
- Immediate feedback from build/test (pass/fail)
- Inline or side-by-side reviews with context-based, color-highlighted code
- Diff incremental changes between adjacent versions of code reviews using the Review Timeline



To quickly understand changes, view them side-by-side with highlighted code.

Project-Centric

Swarm starts with the definition of a project. Each project has developers and release managers as part of the core team, as well as any followers who want to be part of the information flow. Artists and other team members can preview Office documents (e.g., Word, Excel, Powerpoint, Visio, RTF), standard image formats (e.g., BMP, EPS, PSD, TGA, TIFF), and 3D model files (e.g., STL, OBJ, DAE).

Optimized for Continuous Delivery

Swarm projects provide easy hooks into your continuous delivery workflow. Get immediate feedback from your build and test environment or deploy your code for a quick preview of the change—all from one place. It automatically runs submitted code through the build and test environment linked with the project for immediate feedback. You can integrate your build environment with:

- · Continuous integration hooks (e.g., Jenkins)
- · Deployment tool integrations

Open and Extensible

Swarm is easily customizable to Agile workflows and third-party tools, including JIRA.

Support for Distributed Teams

Swarm leverages Helix's advanced replication technology to support large user bases, remote teams and automated processes. It enables distributed teams to achieve Fast Agile collaboration whether they're sitting side-by-side or on different continents.

Helix and Git

Developers using either P4 or Git can request code reviews before or after they've committed the code to its target Git branch. Pre-commit code reviews use Helix shelves and postcommit code reviews use committed Helix changes. Colleagues can do reviews using either Git or Helix.

Enterprise-Ready

Perforce solutions meet every requirement for scalability, security and compliance. And they're backed by our world-class technical support, voted best in the industry in a 2012 survey by UBM TechWeb.

Free Trials

Swarm is tightly integrated with Helix. Download Swarm today. It's free for up to 20 users. Or sign up for a free trial at perforce.com/swarm

Swarm Features

Requirement	Swarm Solution
Faster Collaboration	Swarm's "code conversations" enable direct and code snippet-level engagement.
Better Code Quality	The built-in code review tool provides side-by-side or vertical code review with color highlighting, making it easier to see potential errors.
Continuous Delivery	Integration with continuous integration and deploy tools enables immediate feedback for fast release cadences and continuous product delivery.
Support for Distributed Teams	Powerful collaboration and review workflow on top of the Perforce replication service to support teams spread across multiple sites.
Support for Git Users	Git repositories imported via Git Fusion integrate Git users into the mainline.
Easy to Manage	Swarm does not require a separate database to manage.

perforce.com/swarm



