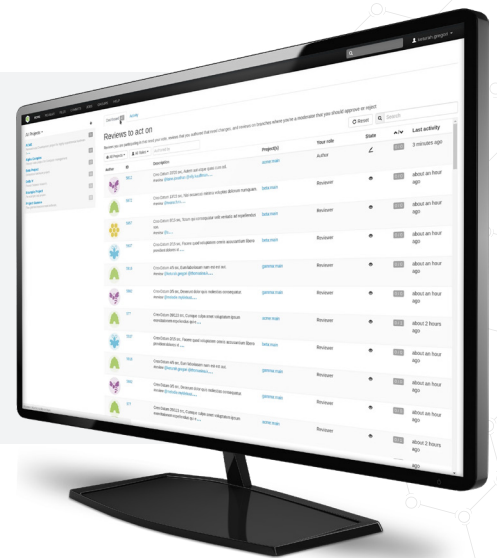


## PRODUCT BRIEF

# Unite Teams for Collaborative Code Review with Helix Swarm

Helix Swarm is a collaboration engine for all types of intellectual property. It unites teams to foster brainstorming, formalize content reviews, 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.



## STREAMLINED CODE REVIEWS

Large, distributed teams use Swarm to support Agile methodologies requiring multiple iterations and incremental delivery. Swarm seamlessly handles 100s or 1000s of reviews at once, regardless of file type or size, and empowers you to:

- See the review lifecycle workflow (pending, approve, reject, etc.) across projects and branches.
- Conduct large-scale, concurrent code reviews.
- Create review groups for projects and teams.
- Review multiple changelists in one code review.
- Add pre- and post-commit review workflows.
- Support faster reviews for large files and large numbers of files.
- Get immediate feedback from build/test (pass/fail).
- See reviews in-line or side by side with context-based, color-highlighted code.

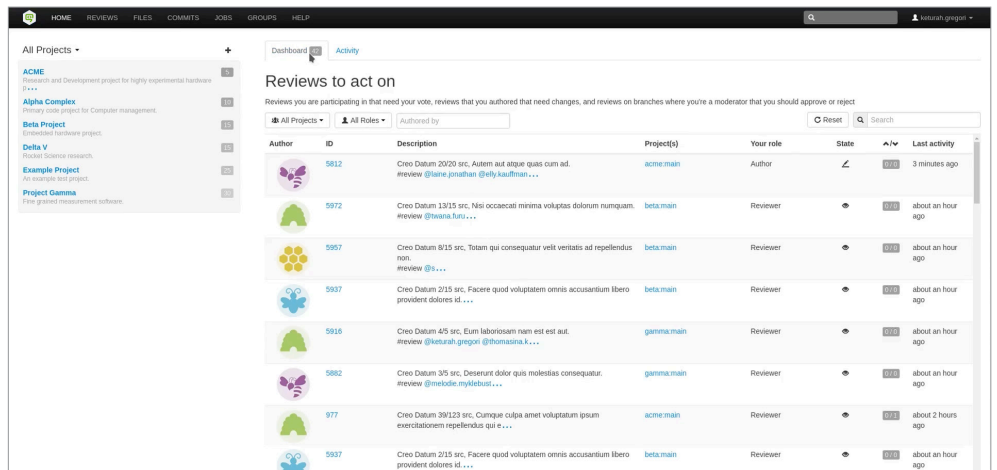
- Diff incremental changes between adjacent versions of code reviews using the review timeline.
- Easily search for users, files, or projects, and see groupings sorted by category.

## CODE CONVERSATIONS

Development teams achieve faster release cadences without sacrificing quality in Swarm by empowering direct, contextual collaboration at each stage of development. Create powerful conversations directly in your code:

- Comment ideas, suggestions, and feedback.
- Threaded comments make it easy to keep track of multiple conversations in a single review.

- Use Markdown to make in-line comments stand out.
- Use @mentions to send notifications.
- See comments in the activity stream or in emails.
- Filter activity streams by reviews, changes, comments, users, or projects.
- Set option to delay notifications and batch comments in a single email.



See which reviews require your attention as soon as you log in with the action item dashboard.

## OPTIMIZED FOR CONTINUOUS DELIVERY

Get immediate feedback from your build and test environment or deploy your code for a quick preview of the change – all from one place. Integrate your build environment with:

- Continuous integration hooks (e.g., Jenkins).
- Deployment tools.

## ACTION ITEM DASHBOARD AND CUSTOM REVIEW LISTS

Use the action item dashboard to find all reviews that require your attention. The “Reviews to act on” list eliminates the need to manually identify your most pressing reviews. Have thousands of reviews that need your attention? Create review lists to filter by votes and/or comments.

## CUSTOM TEAM WORKFLOWS

Helix Swarm provides teams with complete flexibility and control to define their own approval workflows. Users can create their own Swarm project to identify the specific branches they want to review, adding moderators to approve any reviews originating from those branches.

## ALL TYPES OF CONTRIBUTORS

Collaborate on projects and initiate reviews with files of any type:

- Office documents: Word, Excel, PowerPoint, Visio, RTF.

- Standard image formats: BMP, EPS, PSD, TGA, TIFF.
- 3D model files: STL, OBJ, DAE.

## NOTIFICATION PREFERENCES

In Swarm, users and group owners can set email notifications (including batch notifications) to reduce the number of emails in their – or their group members’ – inboxes. Admins can also configure:

- Global notifications.
- Admin preferences.
- Audit and accountability standards.

## SMART EMAIL FILTERS

Swarm’s smart email filters increase productivity by enabling users to receive emails from Swarm with specific headers relevant to their projects, teams, and their work.

## SUPPORT FOR MULTI-FACTOR AUTHENTICATION

Protect your IP by integrating your Helix version control system with Okta or your MFA tool of choice.

## FREE TRIAL

Swarm is tightly integrated with Helix Core. Download Swarm today. It’s free for up to five users. Or sign up for a free trial at [perforce.com/products/helix-swarm](http://perforce.com/products/helix-swarm).