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# Innovation Showcase

*June, 2017*

# Agenda

- Product Vision, Portfolio, and New Release
- Helix Version Control System
  - v17.1 release
  - Product direction
- Helix ALM
  - V17.1 release
  - Product direction
- Q&A

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## Product Vision, Portfolio, and New Release

2017.1 Has Arrived



# 2017.1



Helix**Core**



Helix**4Git**



Helix**Swarm**



Helix**ALM**

GitSwarm

P4V

P4Java | P4VS | P4Jenkins

# Git at Scale

- Manage large-scale Git-based development projects with continuous build, integrate and test processes, built-in mirroring and a single source of truth across multiple Git repos
  - Up to 80% faster builds
  - Organize multi-repo projects
  - Replicates content automatically around the globe
  - Multiple Git Tool Support
  - Integrated for Streamlined Release
  - Standalone or with Helix Core



# Helix Version Control System



## HelixCore

File Level Access  
Large files, more than just code  
1,000's of contributors across the globe



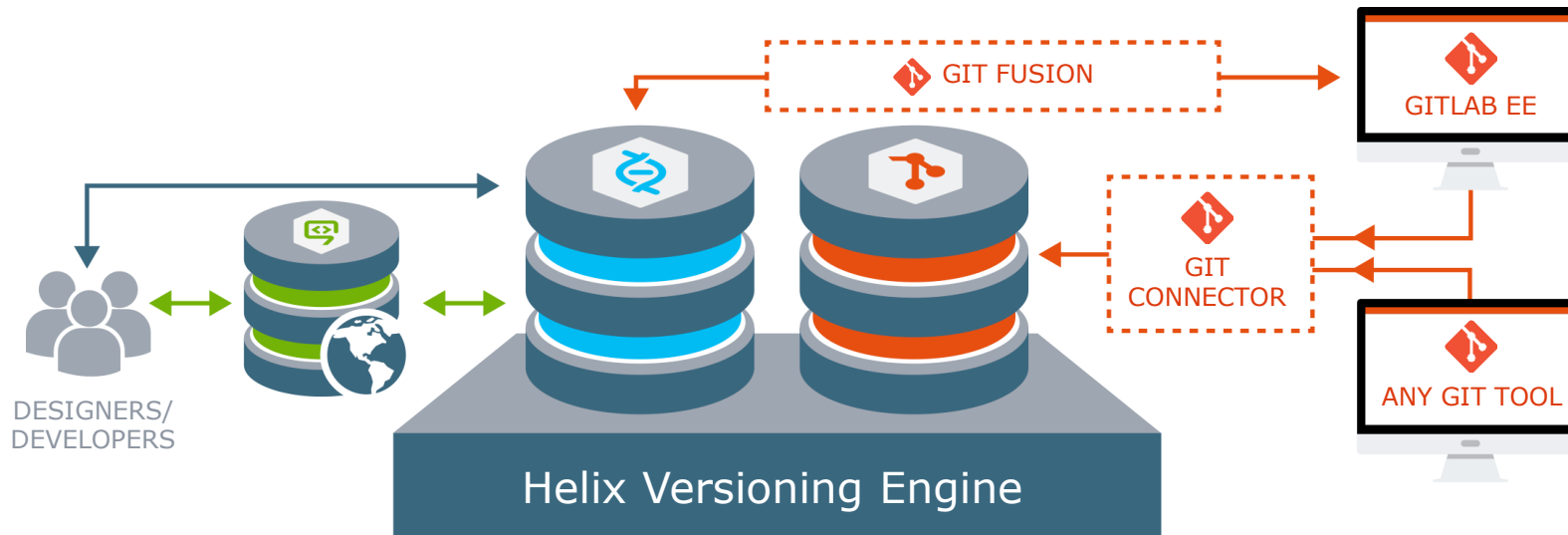
## HelixSwarm

Large scale code review and collaboration  
Integrated with version control events  
Included as part of Helix Core license



## Helix4Git

Multiple Git tools  
Many Git repos; multiple projects  
Lightweight mirroring



# Helix4Git

- GitSwarm now GitLab EE (no rebranding)
  - GitLab EE for GitFusion (replaces GitSwarm)
  - GitLab EE standard for use with Helix4Git
  - GitSwarm CE retired
- Helix4Git available with Helix Core or separately

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## Product Vision and Direction

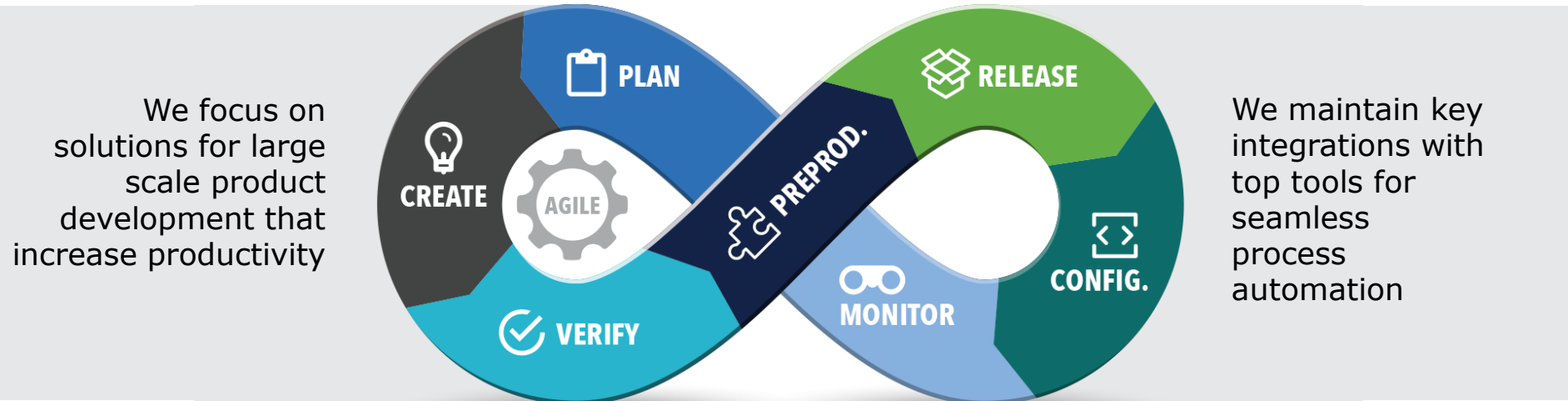


# Product Vision



- Deliver enterprise-class solutions enabling large scale technology development and delivery
- Drive increased productivity through:
  - Simplifying complex development projects
  - Multiple workflows for developers, designers, and other contributors
  - Organizing and managing multiple repo projects

# The Foundation for Modern Product Development

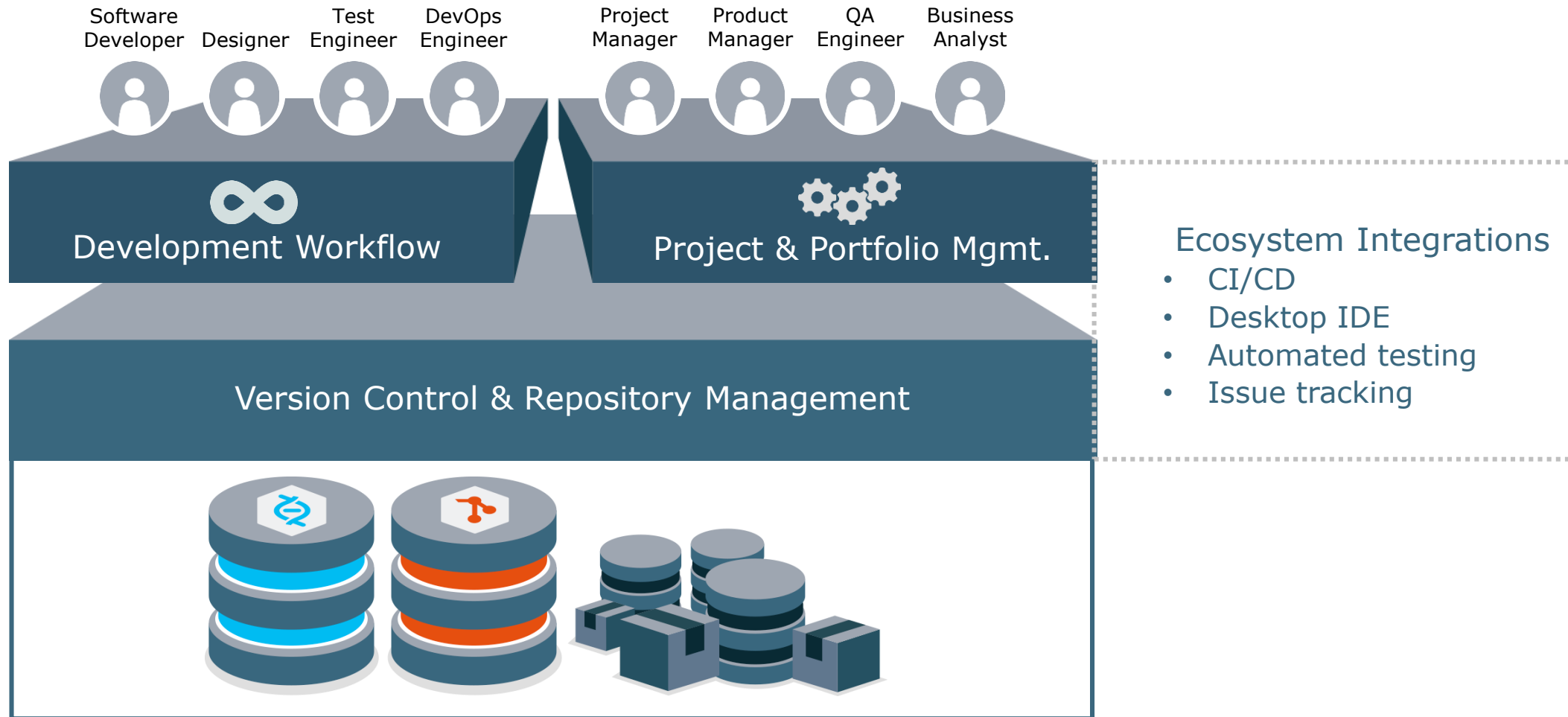


# Ideal for Global, Complex Product Development

- **Integrated ALM**  
Control, visibility and traceability of the entire development process
- **Fast and Scalable, Everywhere**  
Federated architecture supports thousands of global users and millions of daily transactions
- **Single Source of Truth**  
One repository contains contributions from all teams and all artifacts from planning process
- **Security and Compliance**  
Granular permissions; end-to-end visibility; auditability and traceability that is unmatched in the market
- **Open and Extensible**  
APIs and integration hooks for customization



# Helix Platform



# Looking Forward



Focus



Accelerated  
Delivery  
Pace



Quality



Integrated  
Portfolio



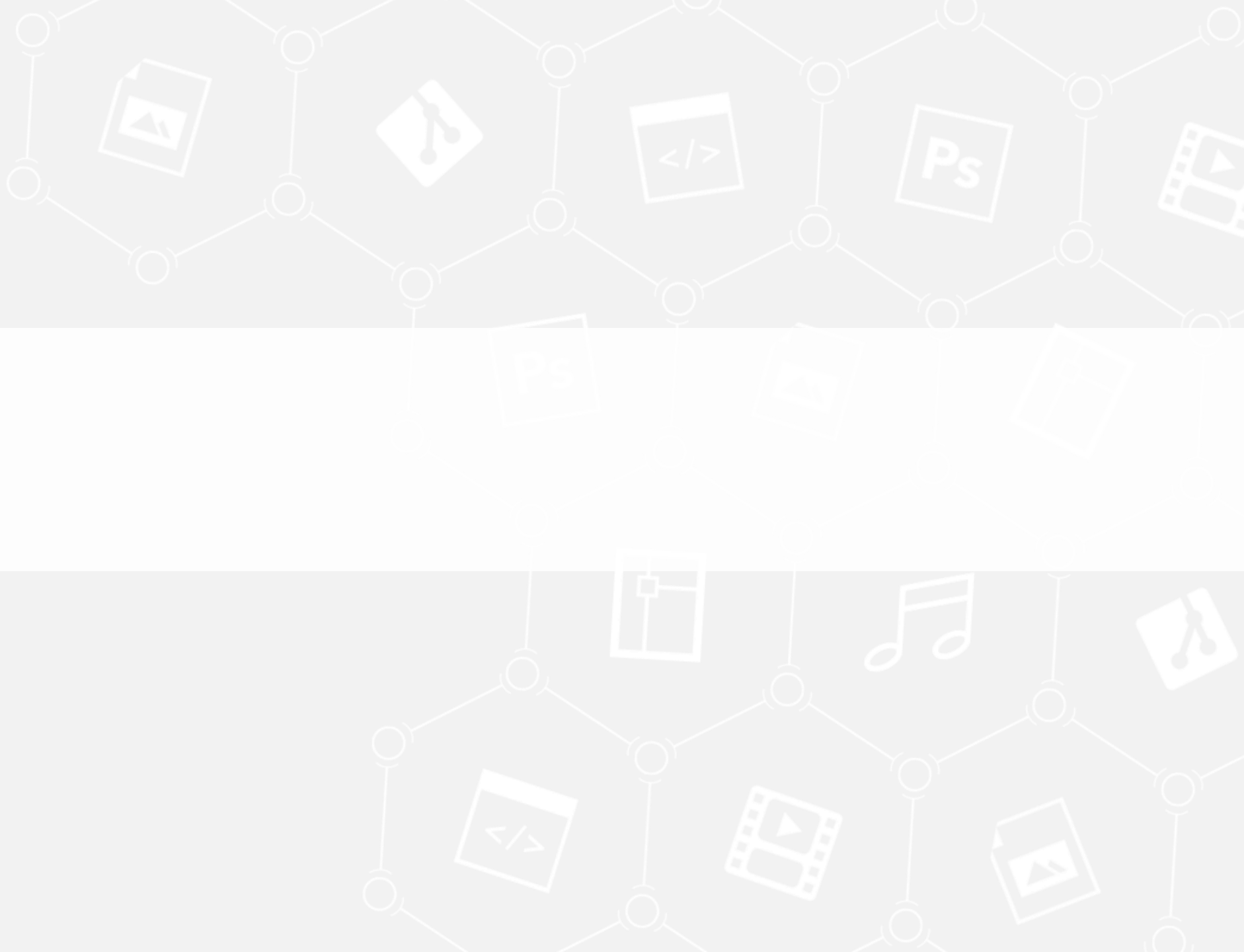
Expanded  
Portfolio

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## Helix Version Control System (VCS)

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v2017.1



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Performance Improvements



# Server File Transfer Performance

Sync over  
2K(16 GB) workspace  
from remote server



Submit over 2K files  
(16 GB) changelist to  
remote server

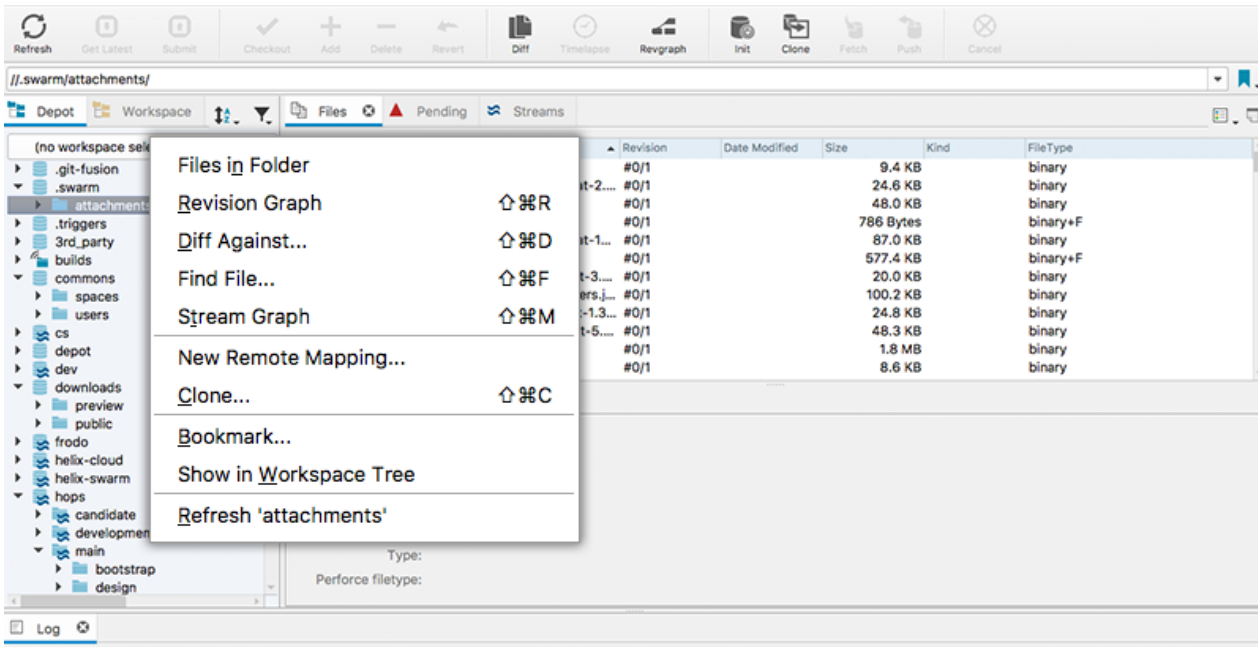


Submit 10 GB file  
to Edge server  
(Client->Edge->Commit server)



*All tests performed with 200 ms roundtrip latency  
on a 1 Gbps link, and with client and server running under Linux*

# Desktop Clients



## DVCS

- Init, clone, branch, fetch, push, remote mapping

## Usability improvements

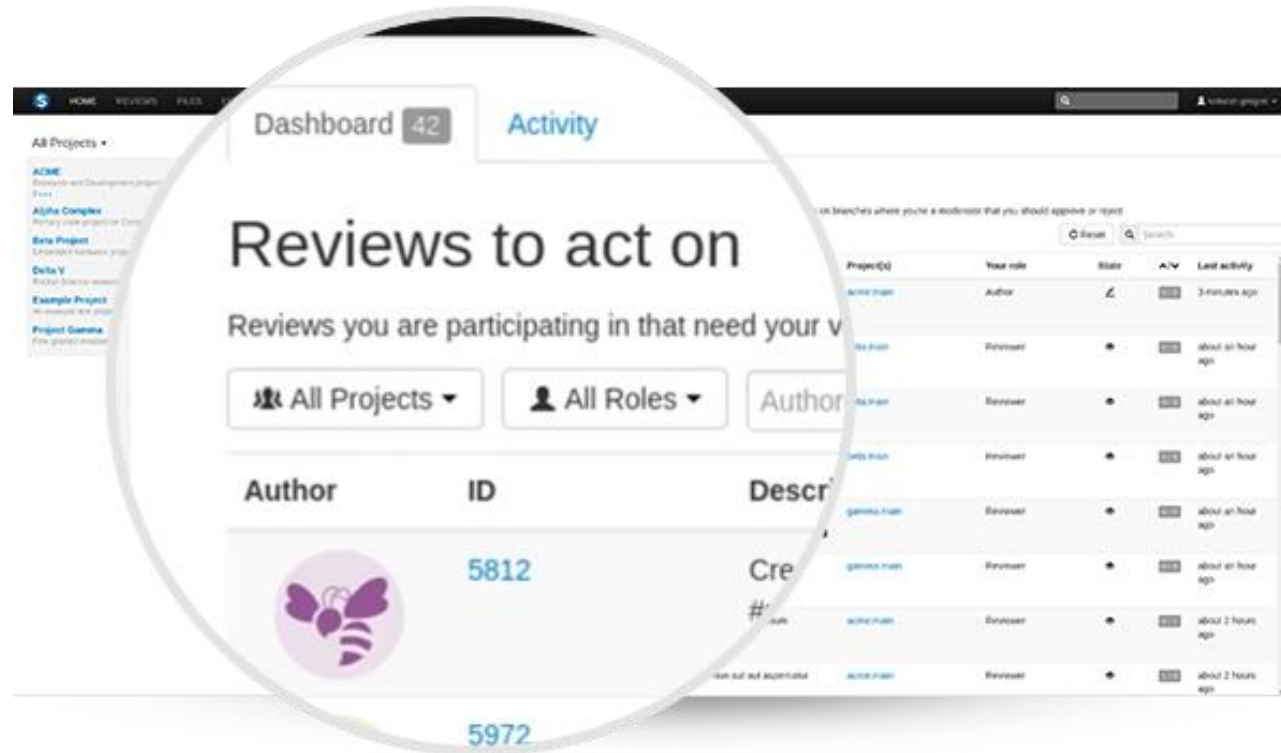
- Custom tools keyboard shortcut in P4V
- Support for streams depth in P4Admin

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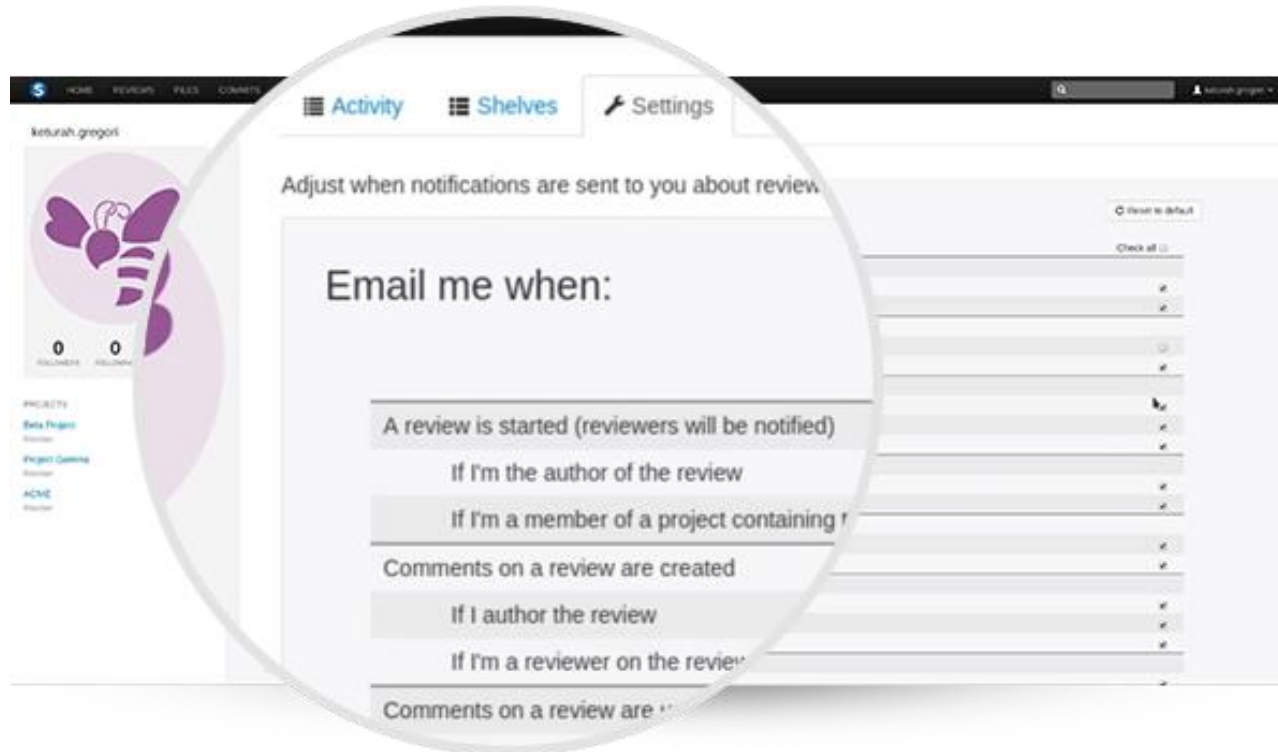
Collaboration @ Scale

# Swarm 2017.1 New Features



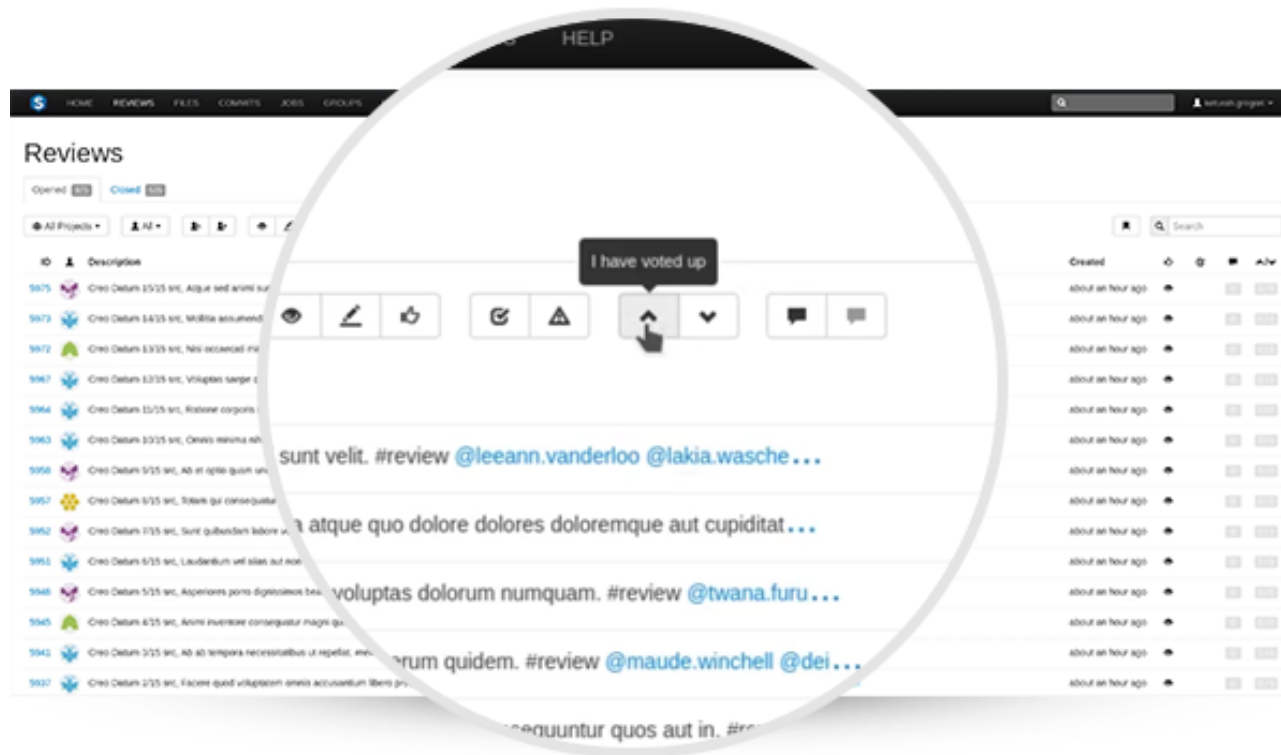
Act on important code review tasks

# Swarm 2017.1 New Features



Receive relevant notifications

# Swarm 2017.1 New Features



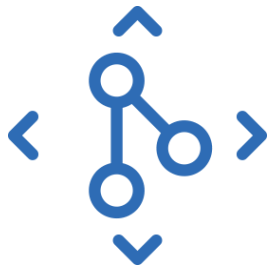
Analyze large code review data sets

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Enterprise Git Solutions

# Key Pain Points with Git in the Enterprise



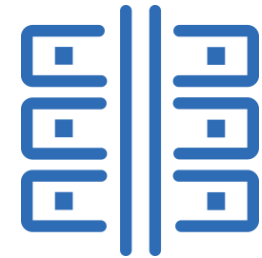
Git scalability  
(i.e. # of files,  
history, repo  
sizes)



Poor CI  
performance  
on large  
projects



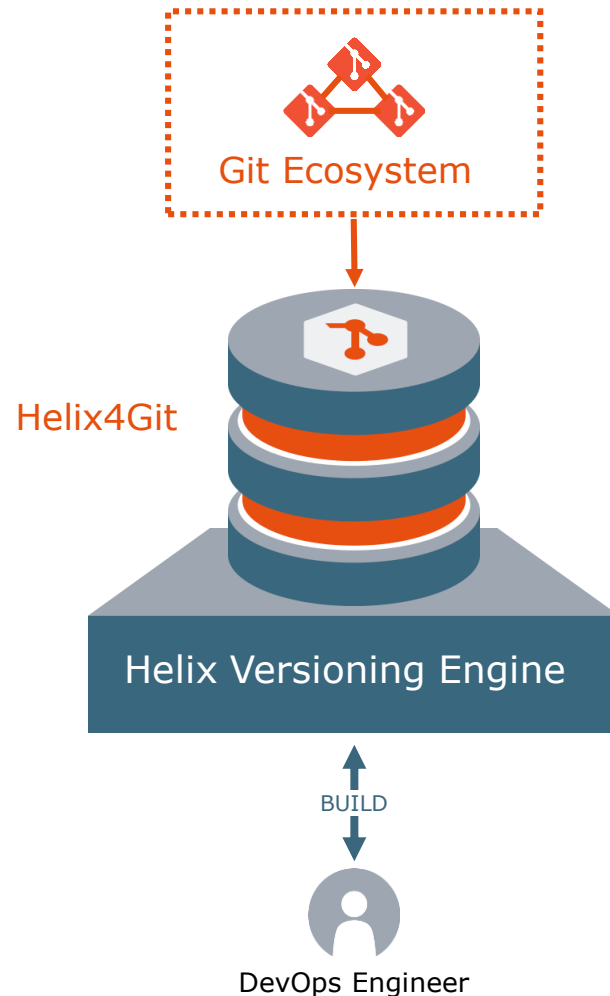
Overhead of  
managing solutions  
from multiple  
vendors



Silos of data inhibit  
collaboration on  
software and  
design



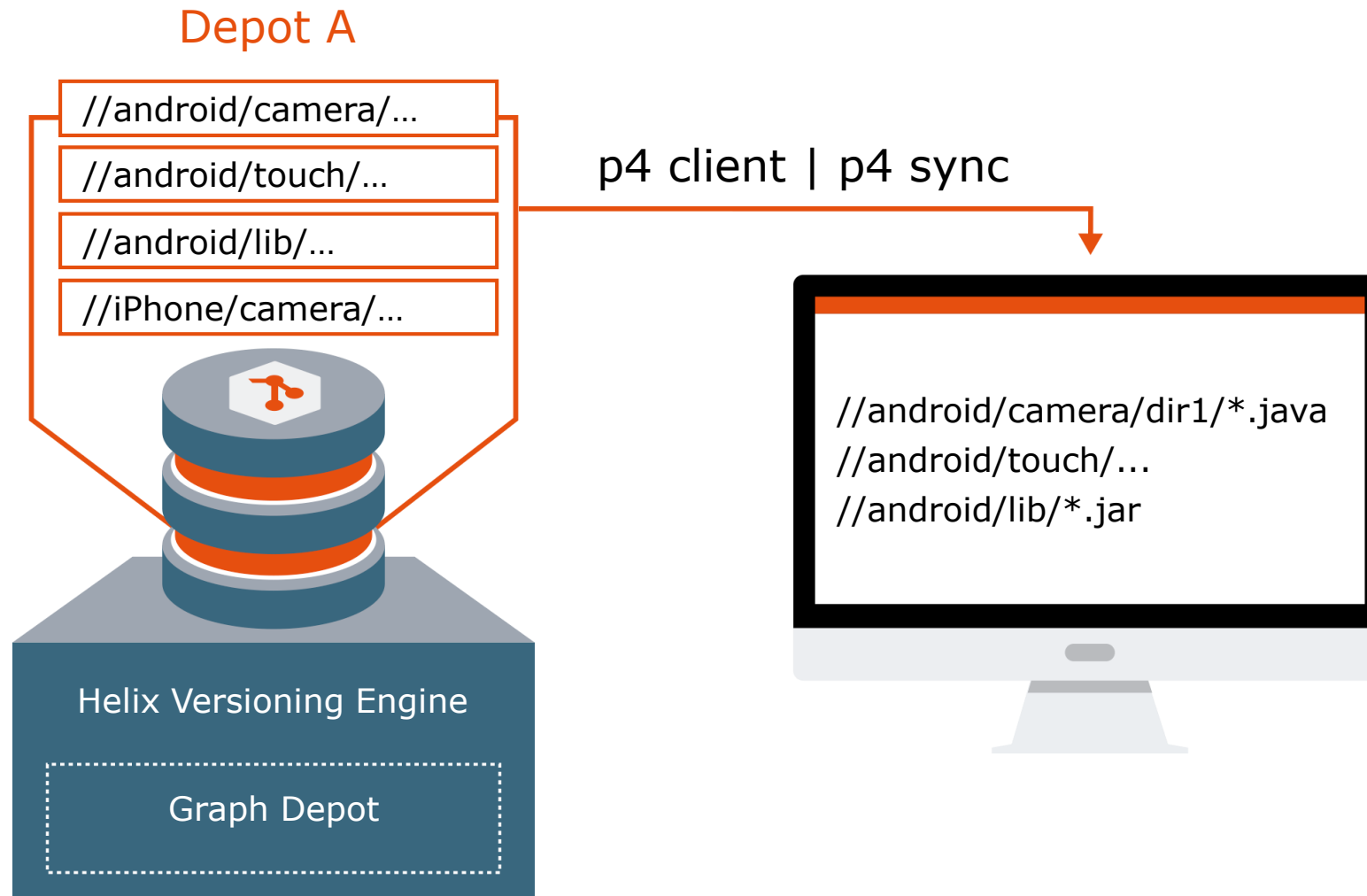
# Scalable, High Performance Git solution for Enterprise



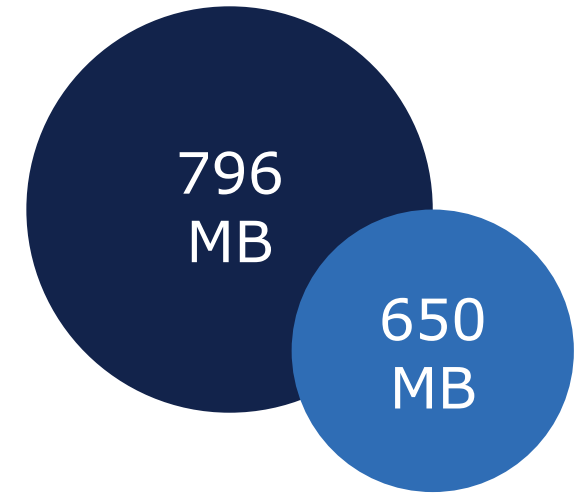
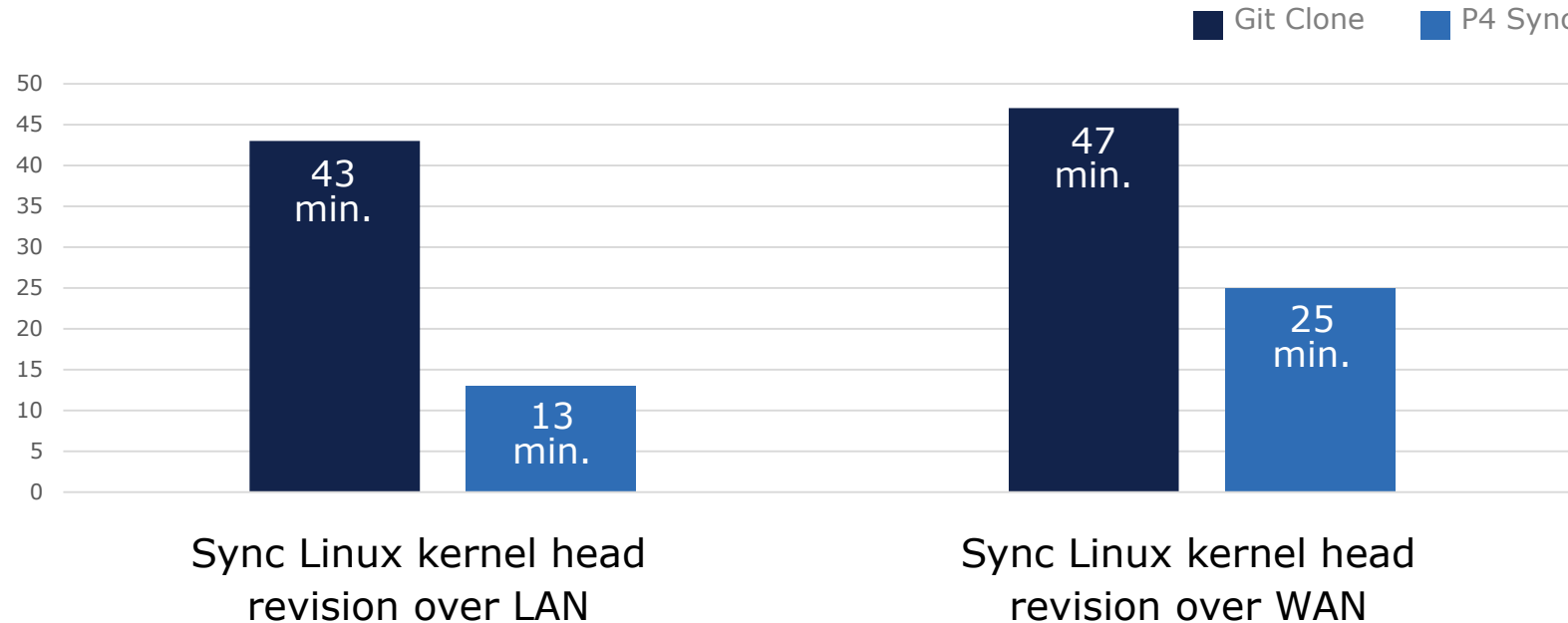
## Benefits:

- Supports major 3rd party Git apps
- CI @ Scale for multi-repo projects
  - 40-80% faster build
  - 15-30% less storage
- Simplified admin of large projects
- Faster clone/pull for remote users
- Helix as a single source of truth

# Helix4Git – Under the hood



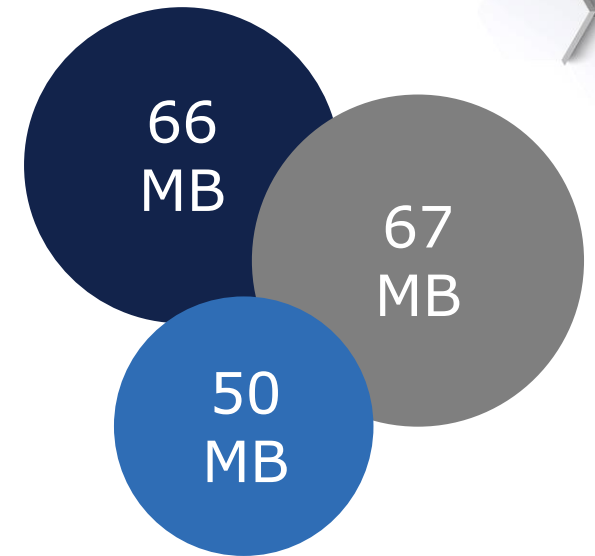
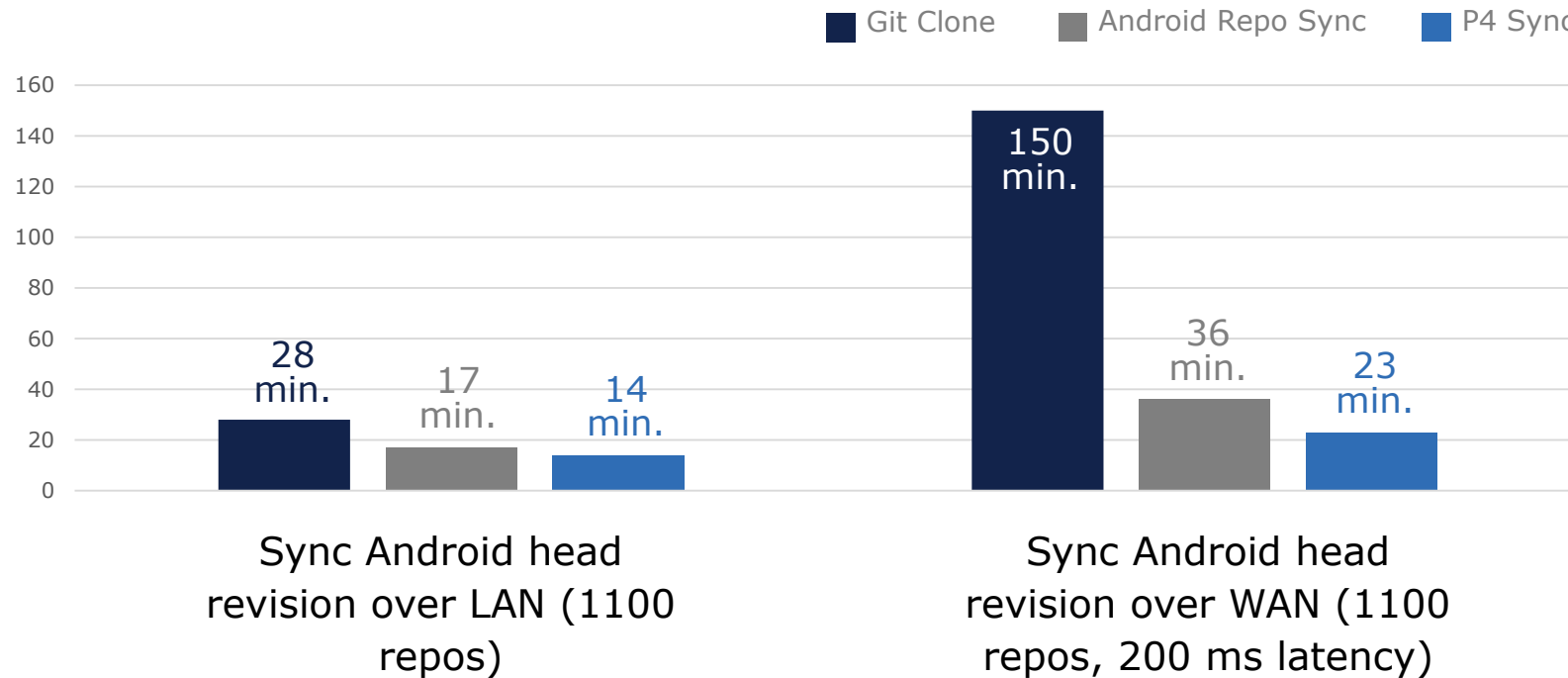
# CI @ Scale: 40-80% faster builds, 18% less storage



Resulting sync sizes

*All tests performed with shallow clone of Linux kernel on a 1 Gbps link, and four parallel threads of p4 sync. For WAN test, a 200 ms round trip latency was added between client and server.*

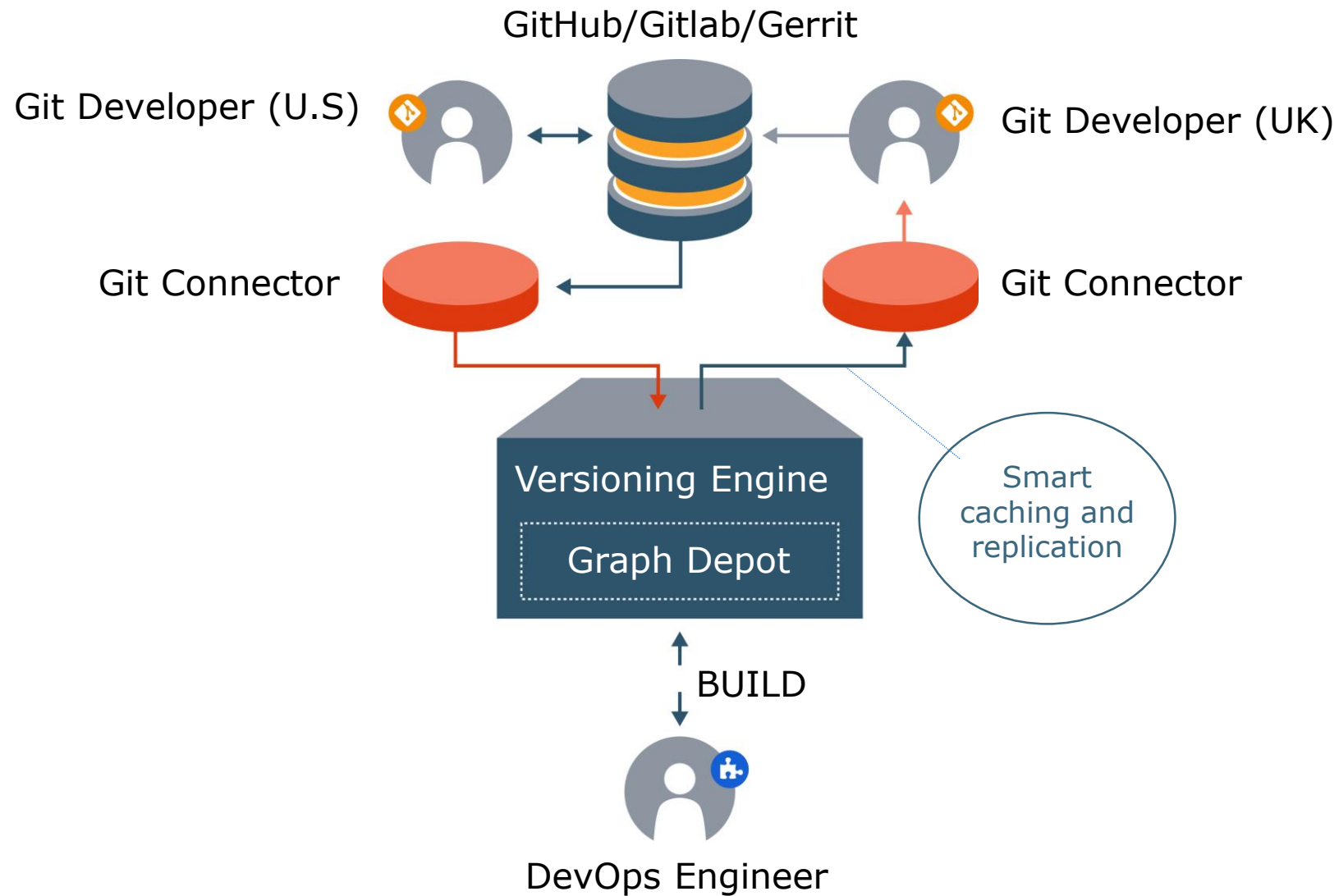
# CI for Android using Helix: Faster Builds, Less Storage



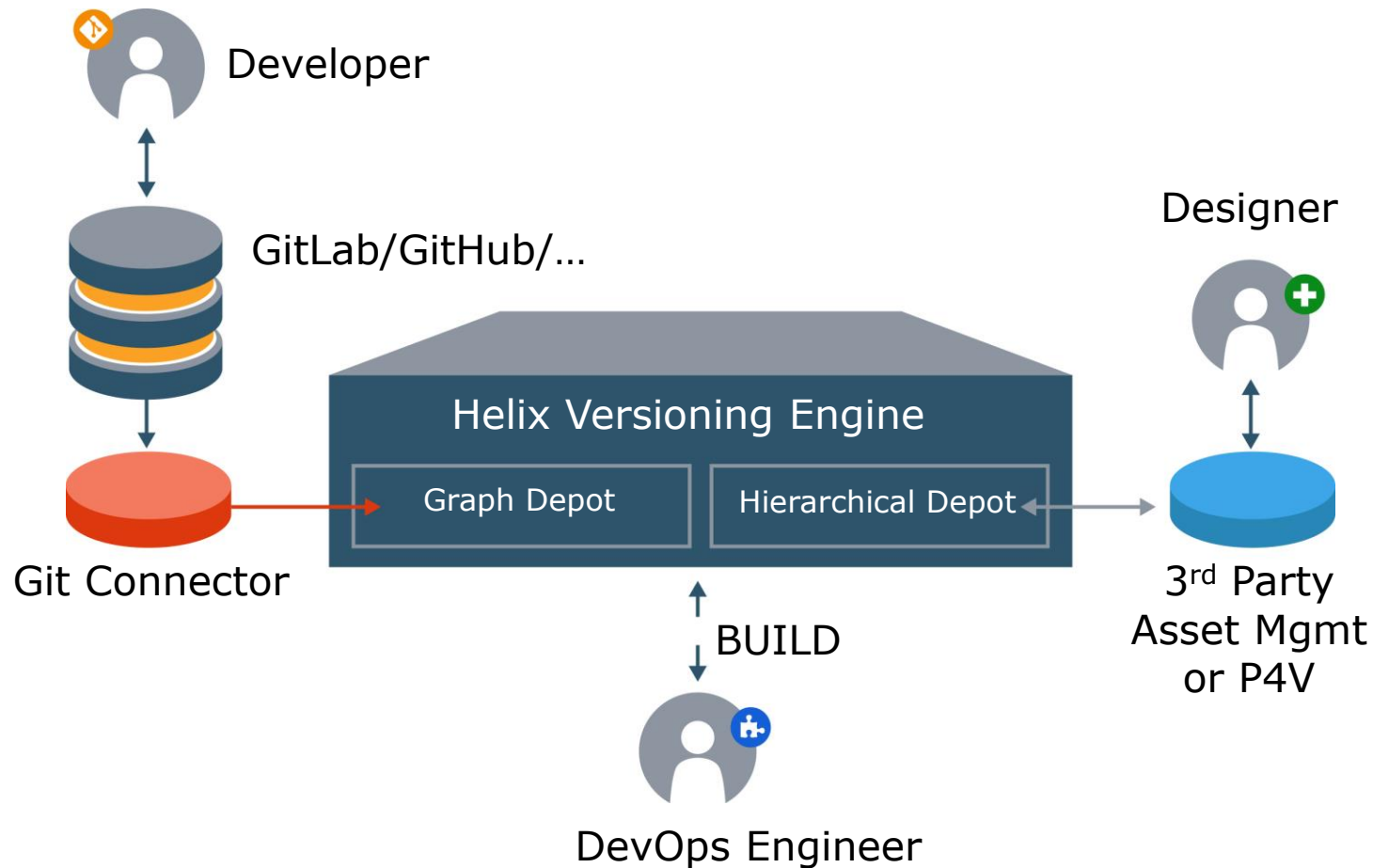
Resulting sync sizes

*All tests performed with shallow clone of full Android build on a 1 Gbps link, and four parallel threads for repo sync and p4 sync. For WAN test, a 200 ms round trip latency was added between client and server*

# Faster performance for distributed Git teams



# Solution for Software + Design Teams



## Benefits:

- One workspace that combines Git and P4 content
- CI @ Scale:
  - CI from multiple git repos
  - CI from multiple assets
- Support projects that span large # of git repos

## Summary – 2017.1

- Significant out-of-the-box performance improvements
- New features and usability improvements in desktop client
- New code review features for large project/teams
- New Git product offering

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## Product Direction – Version Control



# Areas of Focus



Performance



Multiple  
Repositories  
Admin



Flexible  
Code Review  
Workflow



Simplified  
Administration



Security

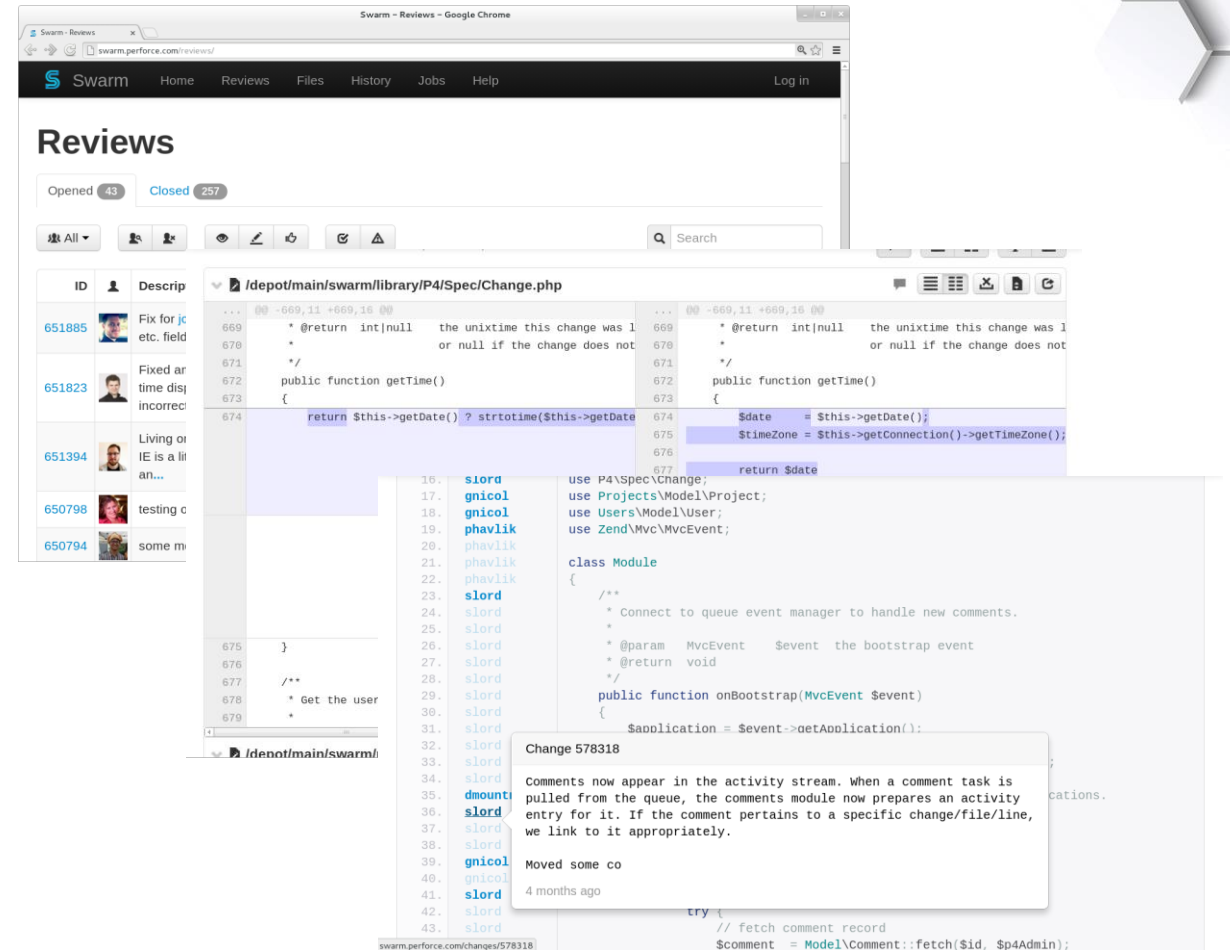
# Helix Next Steps



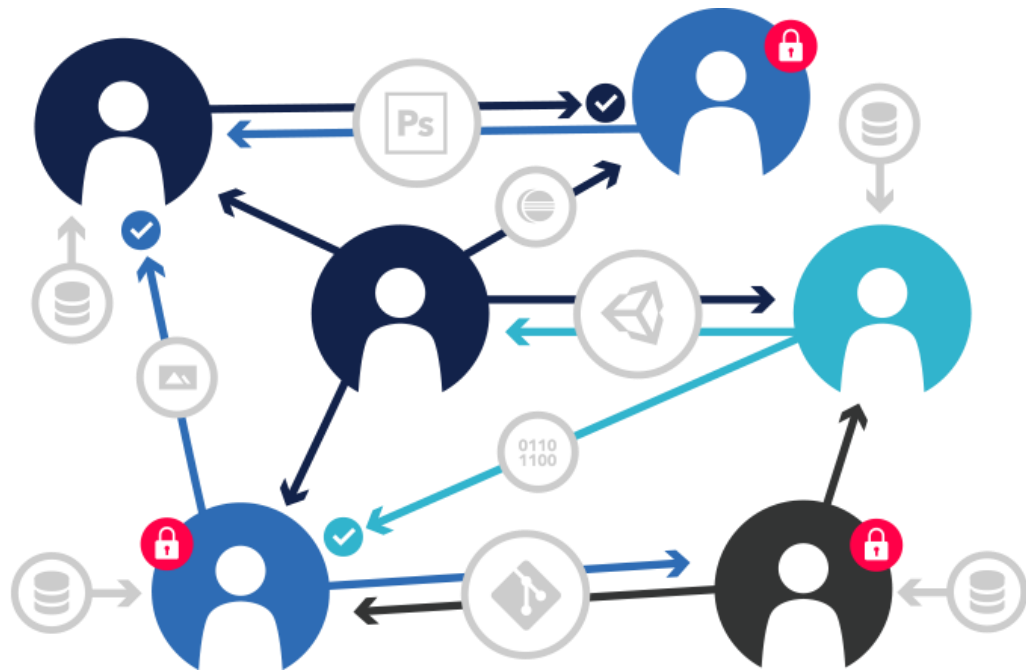
- Expansion of Helix4Git functionality
  - P4 client, sync, submit, merge, ...
  - Support code review
- Continued file-transfer performance improvements
- Security: Multi-factor authentication
- DR enhancements

# Code Review & Collaboration

- Customizable workflow
- Usability improvements
  - Improved large file performance
  - Enhanced commenting
- Enhanced Group support
- Integration with quality control tools
- Flexible workflow



# Project and team administration



- Single or multi-repo projects
- Code and artifacts
- Permission management

# APIs and 3<sup>rd</sup> party Integrations

- Visual studio & Eclipse plugins
  - VS 2017 support
  - Usability improvements
- Jenkins
  - Performance/scalability improvements on Graph Depot
- P4GT
  - Support latest plugins releases
- APIs
  - Support new server features



# Summary

- Performance and scalability improvements
- Flexible workflow
- Code review and collaboration @ scale
- High performance & scalable Continuous Integration
- Fast performance for distributed teams
- Simplified interfaces for versioning, collaboration, and administration

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## Helix Application Lifecycle Management (ALM)

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2017.1



TestTrack is now Helix ALM

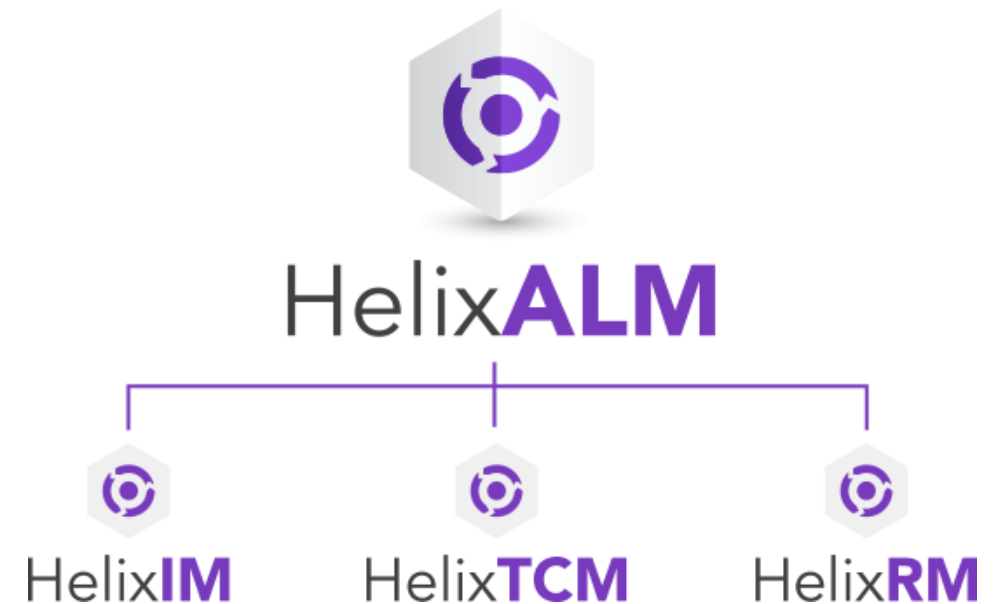


Helix**ALM**

# Quality Centric ALM Platform

*One application to centralize, link, and manage all product development artifacts across your entire application lifecycle.*

- Reduce product development risk
- Increase visibility into project health
- Automate traceability across all work items and data — from requirements capture and risk analysis through testing and defect resolution.



## HelixIM

## Issue Management

- Easily manage defects, feature requests, and other work items
- Track and support your customers
- Rock-solid issue management

## HelixTCM

## Test Case Management

- Create, manage, and organize tests
- Track results and measure progress
- Open and integrated

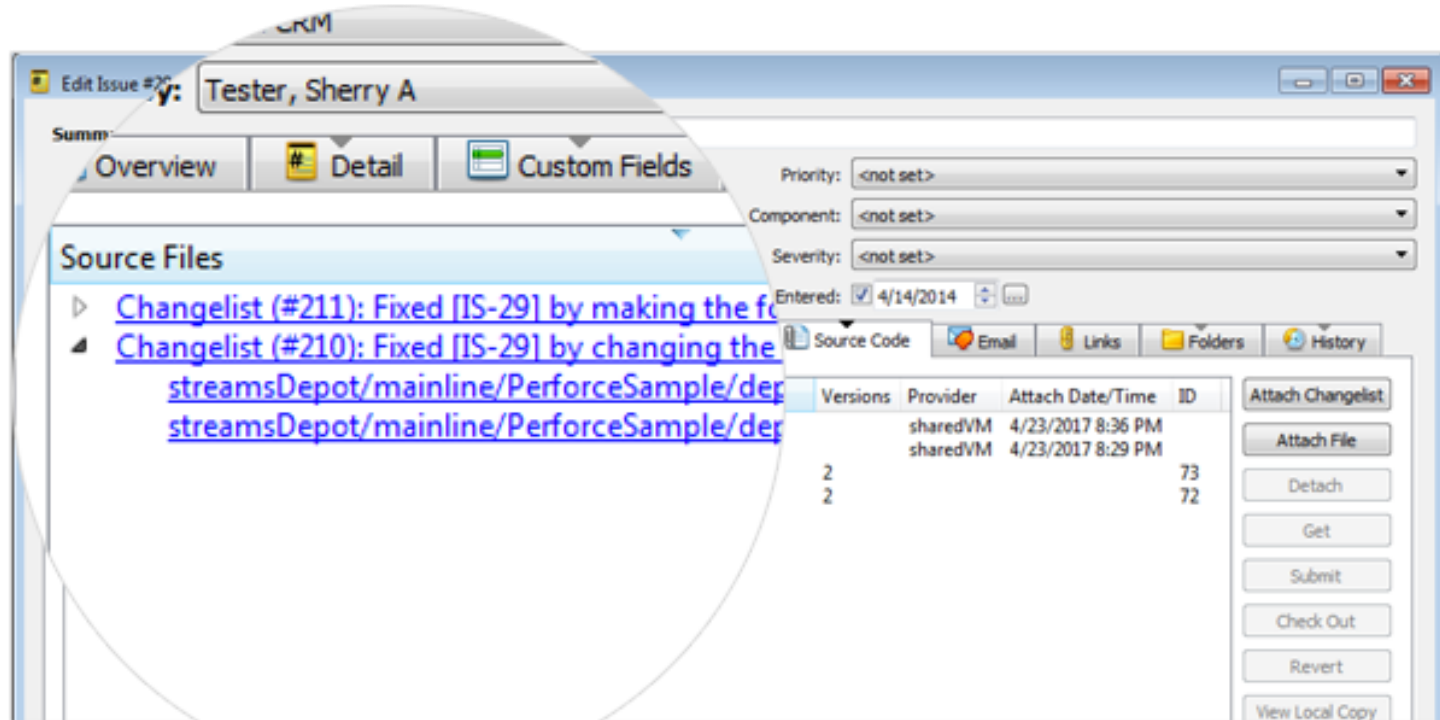
## HelixRM

## Requirements Management

- Centralize and organize requirements, user stories, risks
- Collaborate with multiple stakeholders
- Single source of truth

Control, visibility and traceability of the entire development process

# Improved Integration with Helix Versioning Engine



- Attach changelists
- Support for streams
- Improved performance

# View Changelists in Helix Swarm

The screenshot displays the Helix Swarm interface. On the left, the 'Edit Issue #29' window shows a summary of a 'Poor font choice on calendar' issue, with fields for status, type, product, and date entered. The main area shows a 'Change 210' commit by 'Seapine' with a description: 'Fixed [IS-29] by changing the color to red'. Below this, a diff view for 'Jam.html#2' shows the change from 'jam' to 'p style="color:red;"jam' on line 28. A tip at the bottom suggests using 'n' and 'p' keys to cycle through changes.

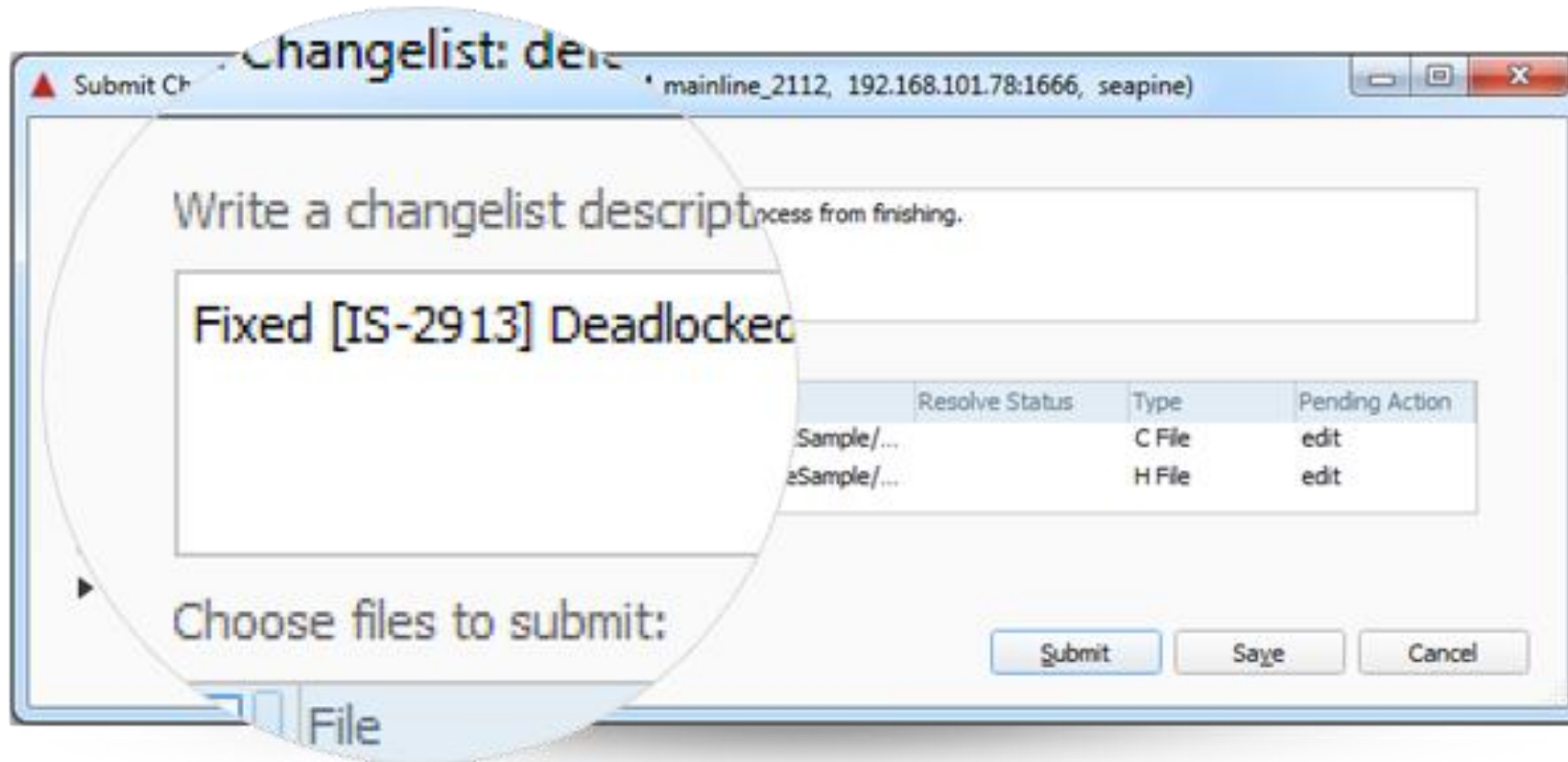
Source Files	Versions	Provider	Attach D
Changelist (#211): Fixed [IS-29] by making the font larger. Set to 40px.		sharedVM	4/23/201
Changelist (#210): Fixed [IS-29] by changing the color to red		sharedVM	4/23/201
streamsDepot/mainline/PerforceSample/depot/Jam/MAIN/src/Jam.html	2		
streamsDepot/mainline/PerforceSample/depot/Jam/MAIN/src/headers.c	2		

```
23 Jam/MR "jam"
24 </TITLE>
25 <BODY>
26 <CENTER>
27 <H1>
28 jam
29 </H1>
30 <P>
31 <A NAME="TOP">
32 The Jam/MR Executable Program
33 <BR>
```

```
23 Jam/MR "jam"
24 </TITLE>
25 <BODY>
26 <CENTER>
27 <H1>
28 <p style="color:red;">jam </p>
29 </H1>
30 <P>
31 <A NAME="TOP">
32 The Jam/MR Executable Program
33 <BR>
```

Helix Swarm

# Attach Using Helix VCS Trigger



P4V Client

# Easier to Configure

Source Control Providers

sharedVM

Details

Name: sharedVM

Type: Helix Versioning Engine

Server address: 192.168.101.78

Server port: 1666

Helix Swarm URL: http://192.168.101.64

Provider key: 39b4-9f57a18cecd7}:-{f8640279-671b-4b...

Active

Add Delete ?

Administrators

Source Control Integration Local Options

Current integration: sharedVM

Type: Helix Versioning Engine

Server: 192.168.101.78 Port: 1666

Source Control Application Login

Use Helix ALM username and password

Use the following:

Username: seapine

Password: ●●●●●●

Validate Connection

Workspace: seapine\_RomeWin7VM\_mainline\_2112

? OK Cancel

Users

# Full Traceability

**Helix ALM | Sprint #1 Forward Trace**  
 Report generated by Administrator, System on 5/5/2017 at 11:13:42 PM

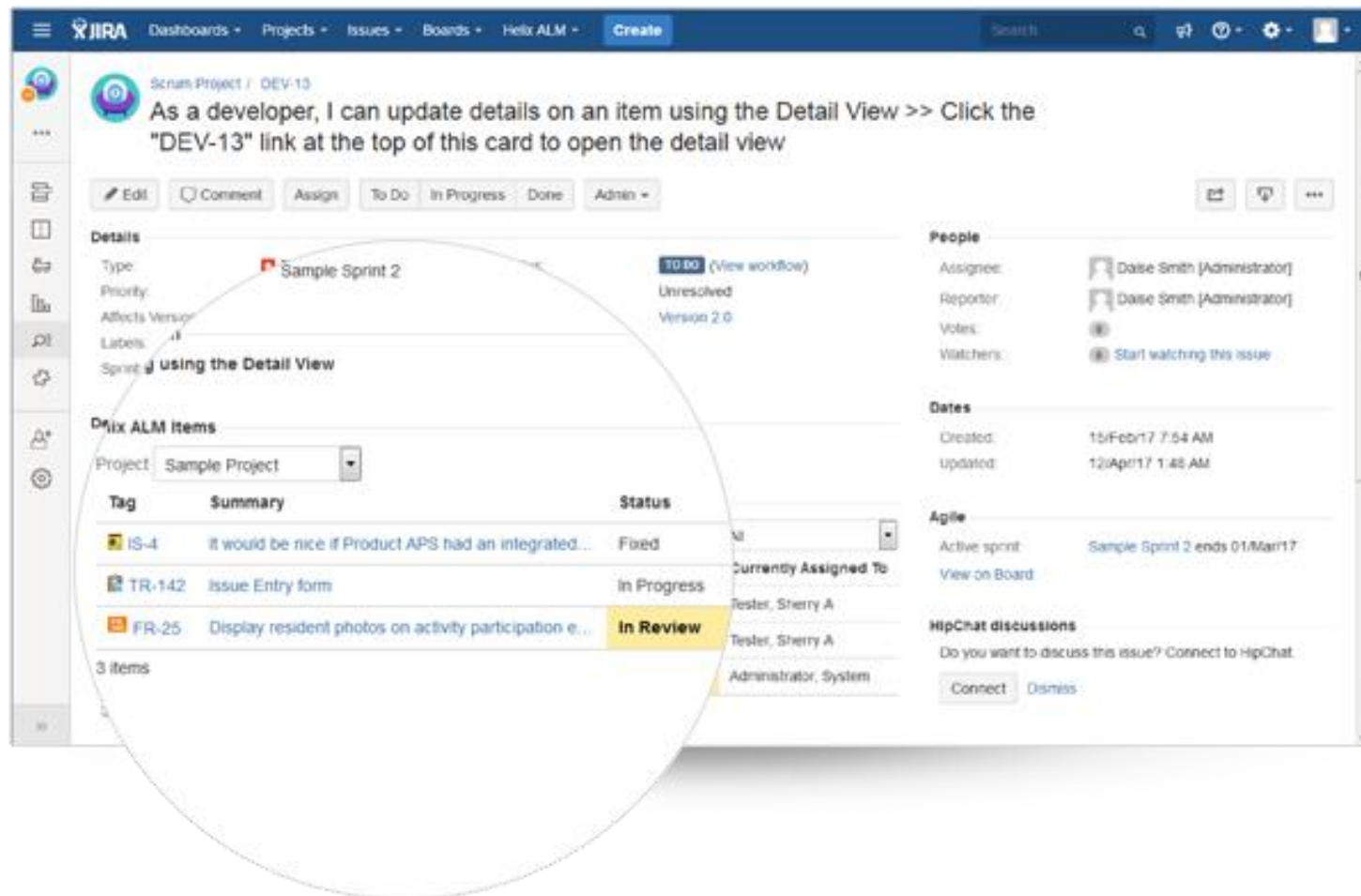
User Stories	Tasks	Test Cases	Test Runs	Defects
<b>US-2</b> - As a Customer Service Specialist, I would like to be able to update customer data so that we have the most up to date information  In Progress, assigned to Developer, Joe C	<b>TSK-11</b> - Add an Edit button to toggle between view and edit mode  Done	<b>TC-18</b> - This test case was auto-generated from Task 11	<b>TR-12</b> Failed	<b>DECT-10</b> - run failed... Added...
	<b>TSK-12</b> - Add Update Button to customer info window and put code so it only shows when in edit mode  Done	<b>TC-19</b> - Generated from Task 12: Verify that the 'Update' button works in edit mode	<b>TR-14</b> Failed	
			<b>TR-13</b> Ready, assigned to Tester, Sherry A	

**Changelist:** [Added additional check on command length.](#) (#209) from the Helix Core provider at 5/5/2017 11:07 PM

**Changelist:** [Removed extra case statements](#) (#206) from the Helix Core provider at 5/5/2017 11:07 PM



# Helix ALM for JIRA Add-on



- View Helix ALM items associated with a JIRA issue
- See current status without switching applications
- Click to view details in Helix ALM web client
- Works with all item types (with Helix ALM license)

## Summary – 2017.1

- Helix ALM now part of the Perforce product family
- Stronger integration with Helix VCS
- Helix ALM for JIRA add-on extends integration with JIRA

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Product Direction – ALM

# Areas of Focus



Simplification



Integration

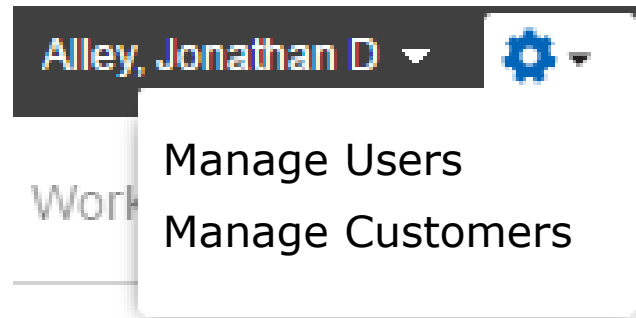


Performance and Scalability



Security and Compliance

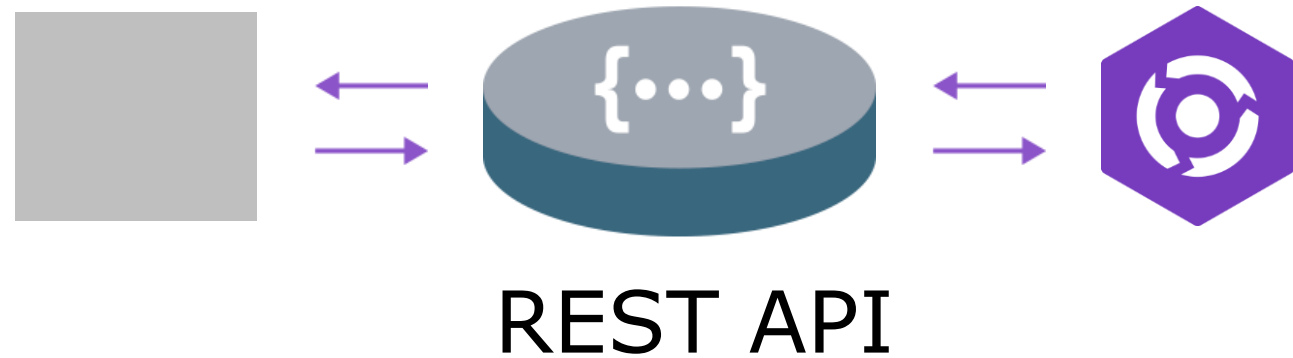
# Helix ALM Clients



- Manage users and customers with web client
  - Major administration component
- Usability improvements for easier navigation
- Shared list window views

# Integrations

- New REST API
- Helix VCS integration
- 3<sup>rd</sup> Party integrations



# Summary

- Simplified interfaces for administration and collaboration
- New REST API and ecosystem integrations
- Streamlined workflows across the product lifecycle
- Ongoing improvements to performance, security, and compliance