Git Adoption in the Enterprise

As the popularity of Git among developers grows, enterprises look for ways to embrace the increase in Git adoption. The performance, flexibility, and developer-friendly features of Git have made it a prevalent version control tool among distributed teams and for developers working on open source projects. Often large and complex enterprise software development environments require even greater levels of security, process management, and traceability.

Product Overview

Micro Focus® GitCentric (formerly Kando) provides developers with the freedom to use Git without compromising the benefits of an enterprise class Software Change and Configuration Management (SCCM) platform. GitCentric enables the power and flexibility of Git to be augmented with security, auditability, and development process visualization.

The administrator of the Git repositories controls who can change the data, either by pushing or pulling data from the store. With GitCentric, that administrator maps Git branches to AccuRev streams. This enables development teams to manage and visualize relationships between Git repositories and branches with integrated issue tracking and security.

Key Features

Process Visualization

Unlike typical Git repository visualization tools, GitCentric provides a unique visual representation as well as dynamic graphical control of all work in progress for your entire global development organization. This eliminates the hand-scripted and error-prone process of maintaining the hierarchy outside of the system, as is commonly done with separate tools such as Visio or on a whiteboard. Additionally, all of this functionality is available from the command line interface for maximum power and flexibility.
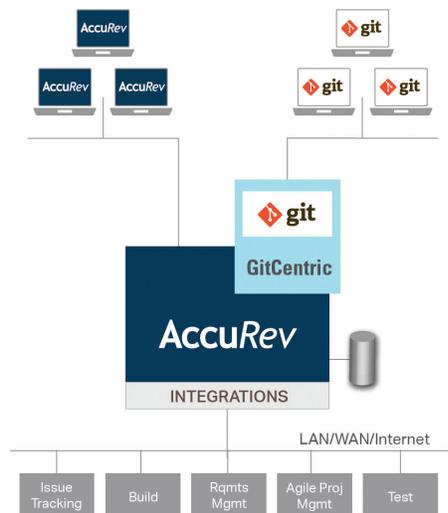

Figure 1. Hybrid SCM solutions with AccuRev and GitCentric

Figure 2. Source tree revisualization

Key Benefits

- Differences in branches in a repository, which enables you to take appropriate action on 'dead' or 'stale' branches
- Provides control and scalability for Git in the enterprise
- Streamlines code review process for Git users using Gerrit
- Ensures that your enterprise software code is secure and your development is compliant
- Managers, testers, release engineers, and developers always stay on the same page
- Features and fixes are released exactly when you need them
- Git developers continue to use Git natively in a secure environment, without disruptions

Features

- Fully explore your Git repositories Commit history, SourceTree and branches
- Built-in Gerrit Code Review
- Enterprise security and administration tools
- Visualization and drag-and-drop control of development process
- Fully integrated issue tracking system
- Change packages and dependency analysis for issue-based development
- All Git repositories may be mapped to powerful AccuRev Smart Streams
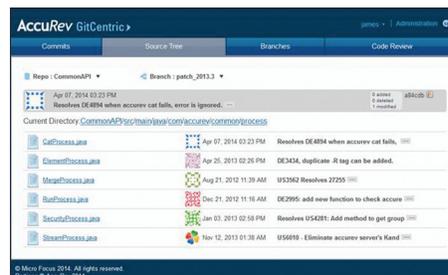- Authentication and support for LDAP and Microsoft Active Directory

Security with Access Controls for Users and Groups

With GitCentric, administrators can now create access control lists (ACLs) for specific Git users and groups providing the ability to restrict access to certain parts of the repository. GitCentric's graphical interface for ACLs makes it easy to manage access for large groups of users without having to edit text documents. Through the GitCentric server, Git users can now be authenticated with the enterprise's LDAP or Microsoft Active Directory.

Requirements Traceability

GitCentric's change packages make it easy for developers to work at the change level. Integrated issue tracking enables issues and features to be grouped together, and differencing between releases can be done at the feature/bug/patch level instead of just the file level. Change packages are integrated with issue tracking, and changes can be checked in or reverted by issue, supporting an ideal granular management of software change for a software development process.

Audit Compliance (Sarbanes-Oxley)

Using the import tool within GitCentric, Git history may be imported into AccuRev. Because all changes made to a Git repository pass through GitCentric, all processes and operations are TimeSafe, guaranteeing reproducibility of the source base and enabling a strong and traceable audit trail. In addition, all changes to elements in a project are atomic transactions, applied in their entirety or not at all, avoiding the possibility of broken builds or indeterminate states due to the Software Configuration Management (SCM) tool. In support of Sarbanes-Oxley, the ability to rebuild any release at any time is crucial. As all operations are TimeSafe, changes may be appended, but history cannot be modified, ensuring absolute reproducibility of any build at any time.

Integrated Development Best Practices

With GitCentric, Git environments benefit from integrated software development best practices, which enable easy mapping to the optimal process model for the organization. GitCentric includes Gerrit Code Review, offering users the benefits of an on-board review process. Additional best practices include built-in advanced parallel development capabilities that scale with your team's changing business requirements.

Conclusion

Micro Focus can help you to provide your developers with the freedom to use Git without compromising the benefits of an enterprise class Software Change and Configuration Management (SCCM) platform. Implementing GitCentric within your organisation enables the power and flexibility of Git to be augmented with security, auditability, and development process visualization.

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