**IBM Rational ClearCase, Version 8.0**

*Improve software and systems delivery with automated software configuration management solutions*

As software delivery organizations expand globally and are confronted with compressed timeframes and cost constraints, software development becomes increasingly complex. The increased complexity can be addressed by employing software configuration management (SCM) tools and processes. SCM helps development teams capture, control and securely manage software changes and assets throughout the software delivery life cycle.

Choosing the right SCM tools is critical for effective configuration and asset management. The SCM system should be capable of:

- Managing and protecting software assets (design models, source code, test cases, documentation)
- Providing a stable development environment
- Managing change throughout the development life cycle
- Managing configurations and versions of a software release
- Maintaining traceability and scalability

IBM® Rational® ClearCase® software offers comprehensive software configuration management and change management capabilities that facilitate sophisticated version control, workspace management, parallel development support and build auditing to help improve productivity. Designed to improve collaboration and automation, it can help businesses enhance IT efficiency by lowering business costs, mitigating risk and reducing time to market for high-quality solutions.

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**Highlights**

- Improve software delivery and software development life cycle traceability with automated and scalable software configuration management
- Enable agile systems and application development with strong integrations to the IBM Jazz platform
- Improve productivity with a secure unified client, parallel development support, automated workspace management, asset reuse and activity-based change management
- Support development flexibility with integrated IDE access, integrations with open source and third-party tools, cross-platform support, remote access and disconnected usage
Providing a single user interface for developers, the Rational ClearTeam Explorer client can help improve developer productivity and unify teams for better coordination and collaboration with powerful filtering and advanced user preferences. It offers support for agile development which can help improve usability and streamline repetitive functions.
Rational ClearCase software provides your teams with real-time, centralized access to project assets and status, helping improve insight and to find ways to improve your existing processes. By automating time-consuming, error-prone, manual development activities, Rational ClearCase software can help developers and administrators focus on tasks that add more value to the business.

Facilitate flexible integrations
Rational ClearCase software features the Rational ClearTeam Explorer, an enriched unified client that facilitates flexible integration with IBM Rational ClearQuest® software to offer enhanced change management and reporting capabilities, including a report designer that gives you the ability to report across multiple record types and data sources. It can also help you create summary charts and detailed parent-child drill-down reports. Additionally, an industry-standard search facility provides search engine-like criteria for quick access to information, helping to improve insight into operations and providing further opportunity for process improvements.

Rational ClearQuest software offers activity-based change and defect tracking. It can manage all types of change requests, including defects, enhancements, issues and documentation changes with a flexible workflow process, which can be tailored to the organization's specific needs and the various phases of the development process. Unified Change Management (UCM), an integration of Rational ClearCase software with Rational ClearQuest software, simplifies development by raising the level of abstraction to manage changes in terms of activities, rather than manually tracking individual files. Through the unified change management capability, file versions in the Rational ClearCase software are grouped into logical activities and associated with change requests in Rational ClearQuest software. This activity-based approach helps you to manage your work at the task level, instead of managing individual files. You have a comprehensive view of how development events, including defects and proposed project changes, affect specific files, versions, baselines or releases.

The Rational ClearTeam explorer client can be integrated with the IBM Jazz™ platform to support agile collaborative development. It offers a lightweight yet feature-rich interface to create workspaces and modify files and can be integrated with agile planning capabilities to help developers collaboratively view their tasks and perform change management functions.

The integration of Rational ClearCase software with the Jazz platform allows you to take advantage of the multiple benefits of the Jazz platform, including agile or traditional planning and tracking, flexible work items and dynamic reporting dashboards. You can use the Rational ClearCase Bridge offered with all licenses of IBM Rational Team Concert™ software to integrate Rational ClearCase software with Jazz. The Rational ClearCase Bridge can be used to integrate Rational ClearCase source control with Rational Team Concert software so that you can take advantage of agile planning and tracking without using Jazz source control.

Connect users across platforms
Rational ClearCase software supports heterogeneous environments and cross-platform development, helping distributed team members collaborate over different platforms. The wide range of supported environments includes IBM System z®, Microsoft, Windows, Linux and UNIX. Rational ClearCase software can be integrated with the Cadence Design Framework II system environment to provide configuration management capabilities for hardware and software designs. On the server side, Rational ClearCase software supports a variety of platforms to store software assets, allowing developers to work in their preferred environments.

Manage distributed and mainframe environments across geographies
Rational ClearCase software allows organizations to manage distributed and mainframe environments using a single solution. It offers scalability and connectivity to address diverse organizational needs, from small workgroups to distributed large-scale enterprise environments.
Rational ClearCase software facilitates transparent real-time access to files and directories from multiple environments and locations. Developers can use desktop, remote and web clients to access security-rich versioned objects from any location. Integrations with leading IDEs, including the IBM Rational Application Developer for WebSphere® software environment, the open source Eclipse framework and Microsoft Visual Studio allow development teams to work in their preferred environment.

**Provide sophisticated and secure version control**

With Rational ClearCase software, you can be confident that you’re working on the right versions of the right artifacts. Rational ClearCase software helps manage and control source code, libraries, documentation, binaries, web artifacts and any other project artifact that can be represented as digital content. It is also used to control versioning for directories, subdirectories and all file system objects. Developers can see the version, branch and file they are working on by viewing the Rational ClearCase version tree. It also allows the developers to delete previous versions, create and delete branches, list version histories, and compare and merge versions.

Rational ClearCase software provides a robust centralized repository where development assets are captured and versioned securely. Access control helps ensure that only authorized individuals make changes. User authentication is performed through operating system authentication mechanisms or through industry-standard Lightweight Directory Access Protocol (LDAP), so that you always know who is accessing the repository. Support for user-based and group-based permissions limits access to files and directories. User-based locks are available on Rational ClearCase software objects (branches, labels, elements and metadata). Rational ClearCase software allows programmatic authorization based on the action being performed.

**Develop in parallel**

By providing extensive support for parallel development, Rational ClearCase software can help developers resolve conflicts, reduce confusion and work on the same code base or release. Parallel development also allows you to fund multiple projects simultaneously, and determine how to release each project depending on when it is complete. Automatic file-branching functionality isolates specific changes or versions, allowing multiple developers on the same and different teams to work independently from the same code base. Development and integration stream models define how and when developers deliver code changes. Using its merging and differencing capabilities, the software accepts uncontested changes and highlights conflicting changes for faster resolution.

**Manage personal workspaces**

With Rational ClearCase software, you have fine-grained control over your personal workspaces and seamless access to the exact file and directory versions you need for different kinds of development activities. A view provides a workspace in which you can work on assignments in isolation from other developers. Rational ClearCase software offers two view concepts:

- A snapshot view is a workspace created on your local computer. The snapshot view delivers a copy-based workspace that allows you to continue working on local copies of files, even when you’re not connected to the company network. On reconnection, the changes can be synchronized easily.
- Dynamic views provide instant access to large workspaces without the cost or hassle of setting up a traditional copy-based workspace giving you transparent access to versions of elements on the network.

Development teams can mix and match their views based on preferences and project needs.
Manage and audit builds and releases

To automate the entire build and release management process, Rational ClearCase software integrates with IBM Rational Build Forge® software. The Rational Build Forge application continuously monitors Rational ClearCase software repositories and executes builds either when a change occurs or on a scheduled basis. This automated build capability can significantly reduce the time spent on addressing compilation and convergence issues. It also reduces errors that can delay downstream testing and deployment activities.

Rational ClearCase software provides effective build auditing that can assist your governance efforts. It helps streamline the edit-build-debug cycle and accurately reproduce software versions. Rational ClearCase software also provides the ability to generate a detailed software bill of materials, which can be used to automatically determine when built objects can be reused or shared by developers using multiple views. By detecting dependencies, reusing derived objects wherever possible and producing detailed build audit trails, Rational ClearCase software helps ensure the reproducibility of software versions.

A robust software configuration management (SCM) system should create a secure and predictable environment for working with software assets. SCM can be integrated with software change management to help improve traceability and control throughout the software development life cycle.

Rational ClearCase software is a customizable and scalable SCM solution that offers flexible deployment options, including a strengthened centralized model and an improved distributed model that makes it easier for global teams to coordinate efforts. As development teams continue to face greater pressure to deliver higher-quality software faster than ever, Rational ClearCase software can help simplify the software delivery process and boost productivity with an enriched unified client, parallel development support, automated workspace management, asset reuse and activity-based change management.

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<th>IBM Rational ClearCase at a glance</th>
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<td><strong>System requirements:</strong></td>
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<td>- Server Requirements: 2-4 CPUs with 4-8 GB RAM, 80 GB hard disk space</td>
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<td>- Client Requirements: Processor-1.5GHz 32-bit (x86) or 64-bit (x64) processor, RAM-1GB (2 GB recommended for Development machines), Drive-40GB hard disk space</td>
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<td>- Network: Wireless 802.11g, Wired connectivity 100MB Full Duplex (recommended)</td>
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<td><strong>Operating systems:</strong></td>
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For more information
To learn more about how IBM Rational ClearCase software can help you improve developer productivity and unify teams, contact your IBM representative or IBM Business Partner, or visit: ibm.com/software/awdtools/clearcase

Additionally, IBM Global Financing can help you acquire the IT solutions that your business needs in the most cost-effective and strategic way possible. We’ll partner with credit qualified clients to customize an IT financing solution to suit your business goals, enable effective cash management, and improve your total cost of ownership. IBM Global Financing is your smartest choice to fund critical IT investments and propel your business forward. For more information, visit: ibm.com/financing