IBM

Rational® software

IBM Rational ClearQuest

Highlights

- *Improve project visibility
  and control with real-time,
  consolidated reporting and
  process enforcement*

- *Speed software delivery with
  integrated, automated end-to-
  end processes*

- *Improve software quality
  through enterprise quality
  management*

- *Enhance team communication
  and coordination with
  automated workflows*

- *Simplify compliance with access
  control, electronic signatures,
  repeatable processes, audit
  trails and lifecycle traceability*

- *Scale from small workgroups
  to geographically distributed
  enterprises*

**Control the software lifecycle and
deliver high-quality software, faster**

The more versions, team members
and sites involved in software delivery,
the greater the risk of software quality
issues and project delays. Lack of
communication, coordination and
prioritization across workgroups can
affect overall effectiveness. Steps may
be missed or completed incorrectly.
Disconnected functional teams can
generate redundant or inconsistent
information. And compliance with inter-
nal and external mandates becomes
even more difficult to manage.

IBM Rational® ClearQuest® change
management software enables you to
manage the software lifecycle more
effectively. You have access to the
information you need to make better
decisions. You can more effectively
manage tasks and schedules and
respond rapidly to customer needs.
Automated workflows control and
enforce development processes—
from requirements definition through
production—and help improve team
communication and coordination.

By making process enforcement trans-
parent, Rational ClearQuest software
enables project teams to stay focused
on their ultimate goal—delivering
high-quality software on time.

Improve visibility and control

When the different groups and func-
tions involved in a project all use
different tools and processes, it's
difficult to clearly understand what's
occurring at any point in time across
the software delivery lifecycle. Dispa-
rate systems and processes can also
create serious coordination problems,
making it tough for teams to collabo-
rate on what should be inherently
connected processes. Rational
ClearQuest software allows you to
customize and enforce consistent
development processes and achieve
an integrated, consolidated view
across the project.

Process automation

Rational ClearQuest software can help
you create repeatable, enforceable,
predictable processes. Workflows are
provided out of the box to jump-start
your implementation. Workflows can
also be easily customized with the
ClearQuest Designer tool to meet your
unique, specialized needs. States and
actions can be defined, fields can
be added and lists can be modified.

Mandatory fields help to ensure the right data is collected. E-mail notifications help improve response time and keep team members informed of changes or updates. By providing control over your processes, Rational ClearQuest software helps make sure nothing falls through the cracks, reducing overall project risk.

Real-time reporting and metrics

Rational ClearQuest software gives you insight into your processes with comprehensive support for querying, charting and reporting. Distribution, trend and aging charts help you visualize complex data. Charts can be easily created and refined to allow you to drill into the area of data that you need.

Individual team members can gain quick access to their prioritized development activities by generating to-do lists. Queries and reports enable you to view the associations of requirements and the status of your test planning, test authoring and test execution activities. Reports can be run out of the box using Business Objects Crystal Reports runtime libraries (included).

Rational ClearQuest software integrates with IBM Rational Portfolio Manager software to align project information with information across the portfolio to help you make more informed business decisions. Integration with IBM

Rational ProjectConsole™ software provides a real-time graphical dashboard to view and analyze overall project trends. Additionally, Rational ClearQuest software can integrate with the Microsoft® Project application to help you better manage schedules and resources.

Defect and change tracking

Rational ClearQuest defect and change tracking capabilities help you manage issues throughout the project lifecycle. By documenting and managing issues to resolution, Rational ClearQuest software provides closed-loop change management that delivers better project control and helps improve software quality.

Lifecycle traceability

Rational ClearQuest software integrates tightly with requirements, development, build, test and deployment tools. By linking requirements, code, build records, test cases, deployment records and other development assets, you're able to extend traceability across the entire software delivery lifecycle.

Compress the software delivery lifecycle

Integrating and automating the software lifecycle doesn't just improve project visibility and control. It also helps you accelerate delivery.

Requirements tracking

Requirements records can be replicated directly from IBM Rational RequisitePro® software into Rational ClearQuest software. They can then be associated with other development assets such as defect submissions, build records and test cases. Rational ClearQuest associations are replicated back into the Rational RequisitePro application, providing analysts with connections to Rational ClearQuest information such as activities, change requests and test data.

Activity-based change management

Rational ClearQuest and IBM Rational ClearCase® software work together to help you define and manage changes to software assets as activities. Through the Unified Change Management capability, file versions in the Rational ClearCase application are grouped into logical activities and associated with change requests in the Rational ClearQuest application. This activity-based approach enables developers to manage their work at the task level, instead of managing individual files. It helps build engineers ascertain that the right files are incorporated into the build. Testers can readily confirm that the right functionality and builds are tested. Quality assurance engineers can quickly see and validate what has changed between builds. And project managers are better able to track project status.

Build tracking and automation

Rational ClearQuest software allows you to track and automate the process for building applications. Build records track when a build starts and when it ends; they also track build logs and other build information. Rational ClearQuest software integrates with IBM Rational Build Forge™ software to automate build and release management. During an automated build cycle, Rational Build Forge software can directly create and update Rational ClearQuest build records. An automated build that is usable by the entire team reduces the time spent chasing down compilation and convergence issues. It also reduces errors that delay downstream testing and deployment activities.

Integrated test management

Rational ClearQuest software manages the full range of testing activities from test planning, to test execution, to the capture and analysis of test results. With Rational ClearQuest software, you can define test plans, create test cases and associate test cases with specific test plans. Integration with a variety of test execution tools enables you to map test execution scripts authored in these test tools with test cases, and to initiate test execution. Rational ClearQuest software automatically captures the test results for reporting and analysis.

Deployment tracking and automation

Rational ClearQuest software integrates and automates development and deployment processes. Deployment records track deployments through test environments and into production. For added control, you can establish approval gates before deploying any of these environments. Deployment records can be associated with one another and with other Rational ClearQuest records, such as build records, test cases and test results, to help you track which builds were tested and deployed.

For deployment automation, Rational ClearQuest software integrates with Rational ClearCase and IBM Tivoli® Provisioning Manager software. You're able to deploy approved build files directly from source code control. In addition, you can launch the Tivoli Provisioning Manager software directly from Rational ClearQuest software to facilitate deploying the approved build.

Improve software quality

By automating interactions among disparate project functions and groups, Rational ClearQuest software helps you eliminate software errors that occur because of manual processes and handoffs, miscommunication and inconsistent information. Built-in defect and change tracking capabilities, together with enterprise quality management functionality, unify development and testing activities and prevent skipped steps or incomplete activities. Streamlined processes can lead to faster and more frequent test cycles, allowing you to detect errors earlier in the software delivery cycle. You can avoid late patches and shoehorned fixes that increase costs and delay project completion.

Enhance team collaboration

Rational ClearQuest software helps you improve team communication and coordination by integrating such typically siloed processes as analysis, development, testing and deployment. Automated workflows and e-mail notification help ensure that appropriate team members are immediately alerted when action is required. They also receive complete information about any change or update that can impact their activities. With everyone on the team working from the same information, issues surface quickly and those affected by the issues are able to collaborate on corrective action in real time. Misunderstandings and missed steps can be prevented.

Simplify compliance

In addition to process automation and lifecycle traceability, security features such as user authentication, user authorization, electronic signatures and audit trails are critical to help ensure compliance with internal and external requirements.

User authentication can be performed through the Rational ClearQuest directory of users or through industry standard directory servers using Lightweight Directory Access Protocol (LDAP). Support for Secure Sockets Layer (SSL) encryption allows communication between the Rational ClearQuest software and LDAP directory to be secure.

User authorization is performed through the Rational ClearQuest user database. You can also extend access control for key security checkpoints through scripting. Together, these capabilities help ensure that changes are made only by authorized individuals.

Rational ClearQuest software logs who changed what, when and why. Changes to activities are tracked in the history of the activity. In addition, electronic signatures verify the identities of individuals performing specific actions. By documenting all transactions across the software lifecycle, you can trace the origin and detail of all activities, and verify authorizations and sign-offs.

Unparalleled scalability

Rational ClearQuest deployments can support thousands of users working across dozens of sites. A wide range of access capabilities helps ensure that all team members, local and remote, have access to the most up-to-date information virtually anytime, anywhere. Whether your team is a small workgroup at a single location or a highly distributed team spanning multiple locations, Rational ClearQuest software provides the flexibility and scalability to support your organizational needs.

For more information

To learn more about how IBM Rational ClearQuest software can help you manage and control your development processes for improved effectiveness and delivery speed, visit:

ibm.com/software/rational/ offerings/scm.html