


IBM Software Group | Rational software

IBM® Rational® ClearCase® and ClearQuest® evaluation guide

Module 3: Developer role



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This presentation will cover the Developer role.

Role: Developer

- Use ClearQuest directly from within the Eclipse environment to review the tasks you need to do:
 - Identifying and managing the work you are expected to do
 - Informing others of the work you have done
 - The development team can stay in synch and react quickly to new information
 - Create reports with easy-to-use wizards.
- In this section you will learn how to:
 - Create a To Do list from a query
 - Join a Unified Change Management Project
 - Deliver an activity to an integration stream

Now you can use ClearQuest directly from within the Eclipse environment to review the tasks you need to do. As a developer, identifying and managing the work you are expected to do and informing others of the work you have done can be one of the biggest challenges in team-based development. With strong organization and communication channels, the development team can stay in synch and react quickly to new information. ClearQuest makes creating reports simple with easy to use wizards. You can also easily make personal or public queries on any record type in the database.

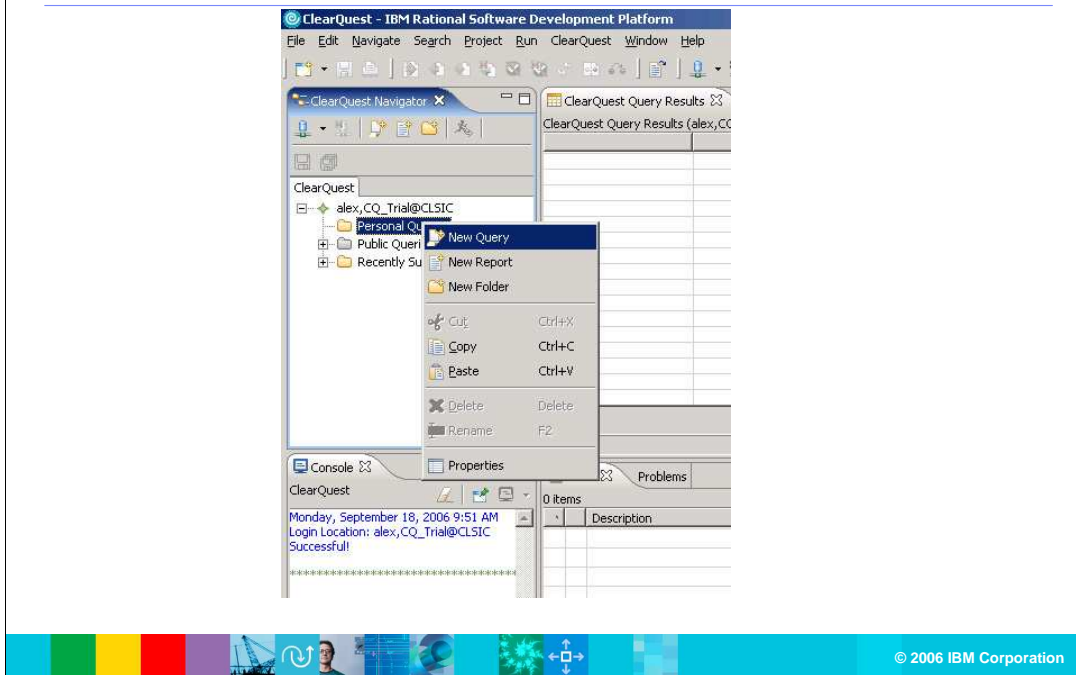
In this section you will learn how to:

Create a To Do list from a query;

Join a Unified Change Management Project;

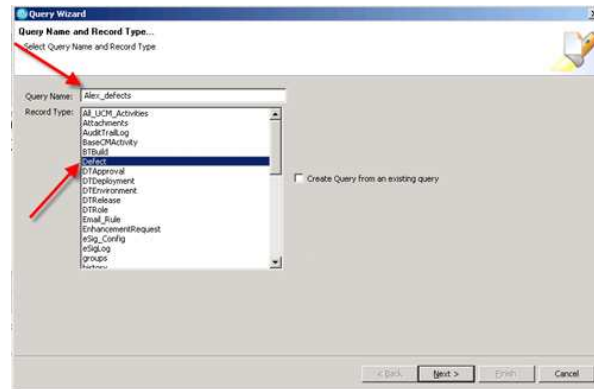
Deliver an activity to an integration stream

Starting a new personal query



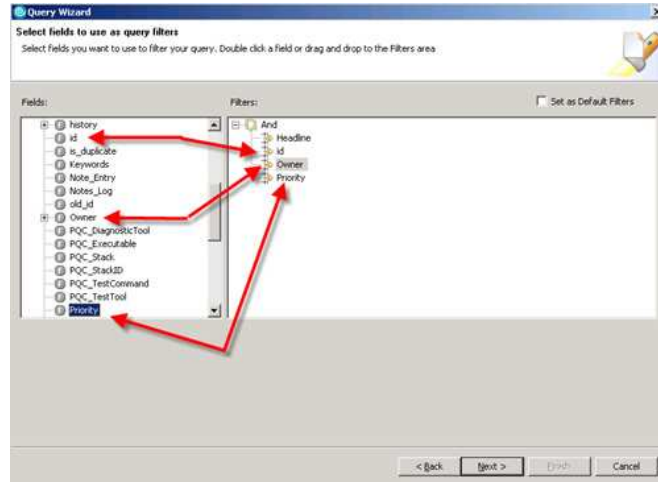
The next few slides will examine the querying functions available in Rational ClearQuest. Start by creating a new query for the developer *A/lex* that will run each time he logs into ClearQuest. This query will show him his 'To Do' list.

Selecting the defect record type



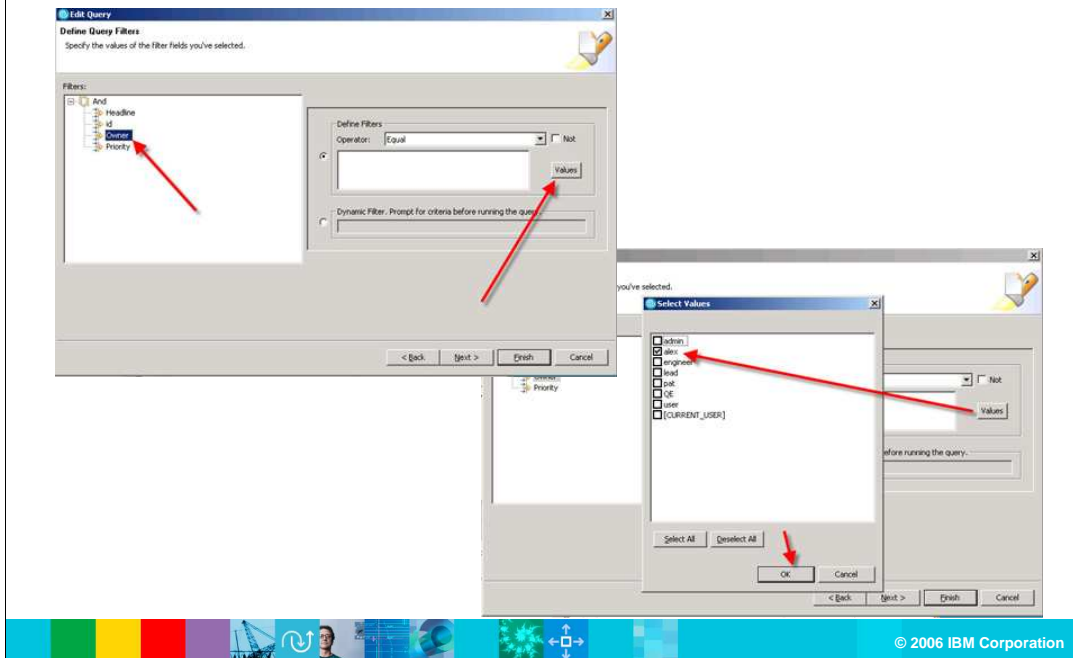
From the Query Wizard, select the record type **Defect** and give the query a name like *Alex_defects*, and click **Next**.

Selecting the fields for query filters



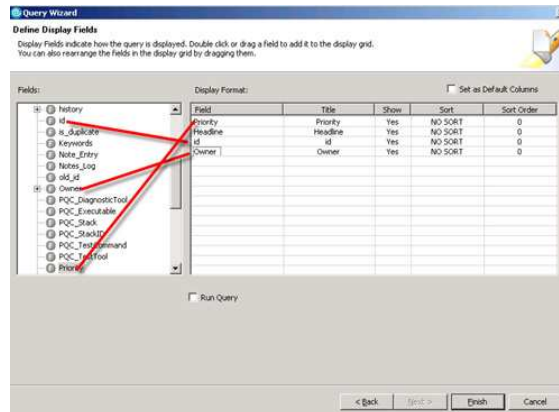
Next, select the fields you want to filter your query. From the left pane, double click **Headline**, **ID**, **Owner** and **Priority**. Notice the fields are populated into the filters pane on the right. Click **Next**.

Selecting the query values



Click the Values button in the query filter window. In the **Select Values** pop-up window, select a value for the **Owner** field: Put a check mark next to **Alex**, then click **OK**.

Defining the display fields



In the **Define Query Filters** step of the Query Wizard, you can define which fields and the order in which to display them. In the **Define Display Fields** step of the wizard, in the following order, select:

- Priority**
- Headline**
- ID**
- Owner**

Then Select the **Run Query** check box, and then click **Finish**.

Once your query is defined, you can have it run immediately after finishing the Wizard. Based on the query you just defined, the developer *Alex* can now quickly discover any new work that he may have.

Join a UCM project

- IBM Rational ClearCase and Rational ClearQuest change management products work together to allow you to:
 - Define and manage changes to software assets as activities
 - Perform operations directly on the activities rather than on the collections of files associated with them



IBM Rational ClearCase and Rational ClearQuest change management products work together to allow you to define and manage changes to software assets as activities. Through the Unified Change Management (UCM) capability, file versions in Rational ClearCase software are associated with activities in Rational ClearQuest. Developers can then perform operations directly on the activities rather than on the collections of files associated with them.

Activity-based approach

- Using activity-based approach to change and configuration management:
 - Helps developers to work on the right versions of the right files
 - Enables developers to manage their work at the task level, instead of managing individual files
 - To ascertain that the right files are incorporated into the build
 - To confirm that the right functionality and builds are tested
 - To quickly see and validate what has changed between builds
 - To more easily track and assess project status

This activity-based approach to change and configuration management helps developers to work on the right versions of the right files. It allows them to create collections of file versions, or "change sets," for each individual change. This 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 easily confirm that the right functionality and builds are tested. Quality assurance (QA) engineers can quickly see and validate what has changed between builds. Project managers can more easily track and assess project status.

Delivering the activity to the integration stream

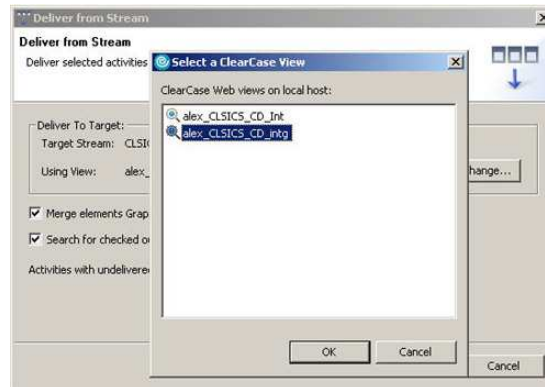
- Once you have successfully joined a UCM project, you still need to propagate the changes to the project
- The *Deliver* operation
- Delivering changes to the project only when appropriate

While you have made the necessary changes in your own work area, the changes have not yet been propagated to the project. Moving changes made for an activity (or activities) from a development work area to a project integration work area is called a *Deliver* operation.

Delivering changes to the project only when appropriate enables developers to work independently in parallel with each other while maintaining project stability.

Deliver operation

- Determine which activities have been worked on and are ready to be delivered
- Select files need to be merged to your project's Integration stream



Rational ClearCase uses the information associated with your development stream to determine which activities have been worked on and are ready to be delivered. Based on that information, it knows which files need to be merged to your project's Integration stream.

As long as there are no conflicts between your changes and changes made by other developers on your project, the delivery will be completed without any further intervention. In this example, there is a conflict.

Resolving conflicts: Merge tool

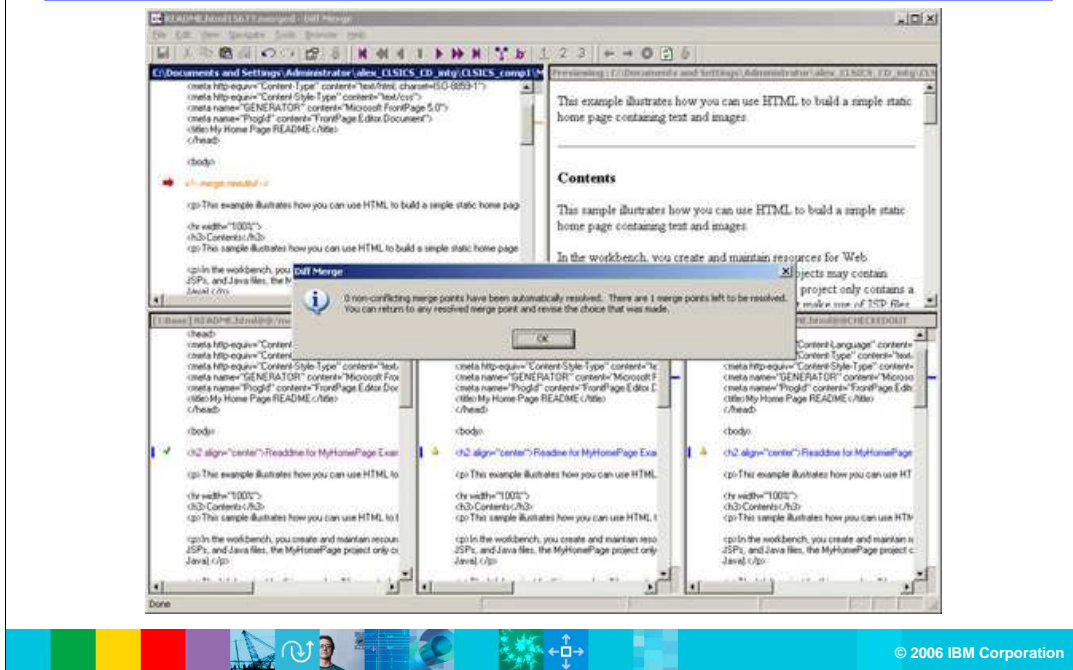
- Select the option to use the graphical merge tool to resolve the conflicts
- You show both changes to see what the differences are
- You see that there is a conflict between the changes that you made and the version that was in your project's integration stream



In cases where there are conflicts that require you to intervene, Rational ClearCase will walk you through the process of resolving the conflicts.

First, you select the option to use the graphical merge tool to resolve the conflicts. The merge tool shows both changes so that you can see what the differences are.

Resolving conflicts: Merge tool



Notice that there is a conflict between the changes that you made and the version that was in your project's integration stream. If you examine the difference however, you can see that the changes that you made in your private development workspace are in fact the correct changes, so you will want to accept those changes. To complete the merge, save the file and exit the merge tool.

Completing deliver operations

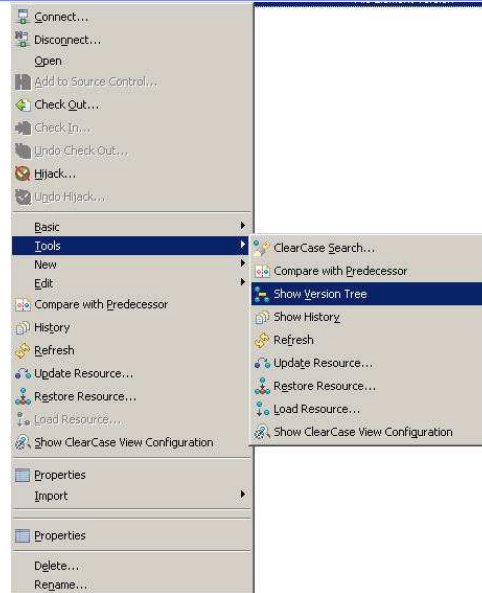
- Before completing any deliver operations, teams should ensure that the changes that were delivered are good, and do not impact other work in the integration area
- At this point, most teams would want to run a build or test to ensure that everything will still work after the deliver
- Teams want to take this step before completing the deliver operation because they have the opportunity to cancel rather than complete
- Because the UCM project here is integrated with Rational ClearQuest, you are automatically transitioning the RCQ defect to the next stage of the workflow.
- Teams can choose to automatically transition ClearQuest defects to 'complete' states on a per UCM project basis.

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However, your changes look good, so you can complete this deliver operation. Because your UCM project is integrated with Rational ClearQuest, you are automatically transitioning the RCQ defect to the next stage of the workflow. Teams can choose to automatically transition ClearQuest defects to 'complete' states on a per UCM project basis.

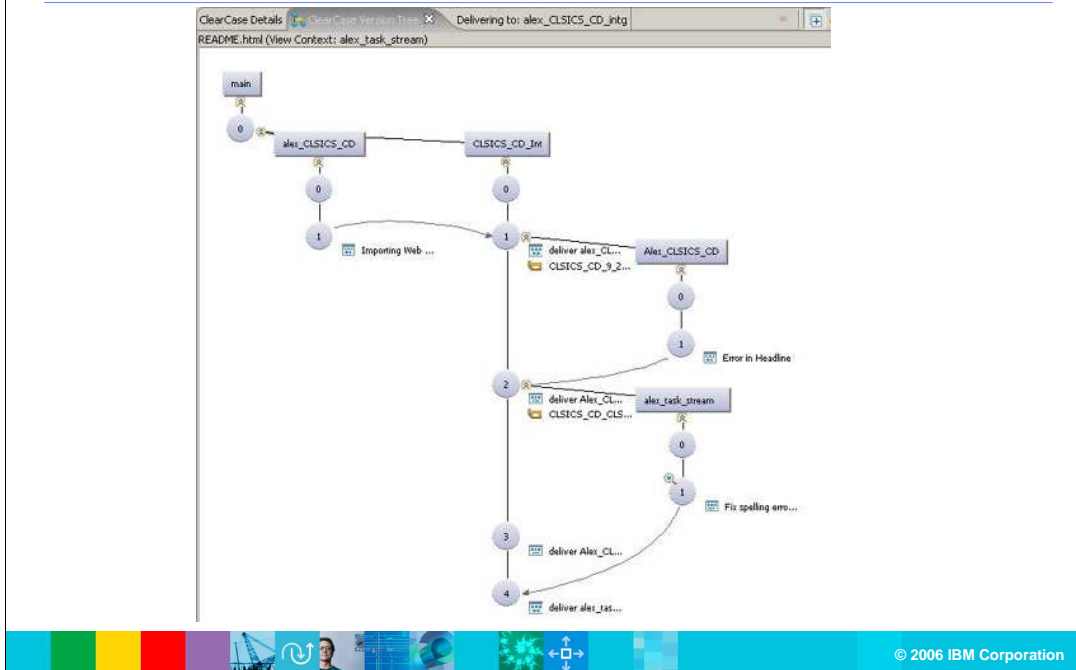
Showing a version tree

- Version tree of the file shows a graphical picture of what happens during the deliver process



You can show a version tree of the delivered file to see a graphical representation of the deliver process.

Version tree for readme.txt example



By taking a look at the version tree of the file, you can get a graphical picture of what happens during the deliver process.

Deliver automatically takes private changes from a developer's workspace and merges them to another stream. Deliver can be done between developers, to task streams, to a common integration point, or even to teams working on different projects. The image above is the completed version tree for the readme.txt example.

Summary for developer role

- In summary, the Developer can:
 - Create a To Do list from a query
 - Join a Unified Change Management Project
 - Deliver an activity to an integration stream
 - Determine which activities have been worked on and are ready to be delivered
 - View graphical version trees

In summary, the Developer can:

Create a To Do list from a query

Join a Unified Change Management Project

Deliver an activity to an integration stream

Determine which activities have been worked on and are ready to be delivered

View graphical version trees

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