IBM Rational ClearQuest Administration

Course Summary

Description

This course is a two day advanced course for those who will be responsible for developing ClearQuest applications using the Schema Designer tools. ClearQuest has a unique architecture in which the application itself does not contain any application logic but functions instead almost like an interpreter. The logic is actually encoded in the structures and artifacts that make up the ClearQuest schema. When an even occurs in the ClearQuest application, it looks up the appropriate interfaces, logic, actions and data as a response to the event by reading the schema. In this sense ClearQuest is a meta-application, with the schemas each representing and actual ClearQuest application. The purpose of this course is to provide students with the skills, knowledge and hands on experience to be able to design, build, code and test a ClearQuest schema. While the most common use of ClearQuest is defect tracking, this course will demonstrate how to use schema to generalize defect-tracking ideas to generic tracking of process artifacts such as requirements and test cases.

Objectives

At the end of this course, students will be able to:

- Understand and describe the main concepts of process tracking and how those concepts map to the main features of a ClearQuest schema
- Develop a migration and implementation plan for automating tracking process using ClearQuest.
- Understand the structure of ClearQuest schema and packages.
- Customize ClearQuest schema/processes with ClearQuest Designer.
- Customize ClearQuest functionality with hooks and scripts.
- Customize the forms and reports.
- Develop automation processes using ClearQuest API functions.
- Use ClearQuest from the command line for scripting/

Topics

- Designing a ClearQuest Application
- Introduction to ClearQuest Design
- Laying out a Schema Model
- The State and Data Model
- Forms
- Hooks and Scripts
- Packages
- The ClearQuest API
- Testing
- Final Wrap up

Audience

This course is intended for those who will be developing schemas.

Prerequisites

The ClearQuest Introduction course is a prerequisite.

Duration

Two days

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Course Outline

I. Designing a ClearQuest Application
- A. What ClearQuest automates
- B. Process artifacts and state models.
- C. What we need before we can start
- D. Artifact definitions and state models
- E. Typical work flow in a CRM – following a change request through its life cycle.
- F. CRM and product application life cycles.
- G. When CRM fails us – standard pitfalls to supporting CRM

II. Introduction to ClearQuest Design
- A. ClearQuest architecture
- B. ClearQuest design principles
- C. Schemas and repositories
- D. Schema structure.
- E. Overview of Packages
- F. Schema design work flow.

III. Laying out a Schema Model
- A. Identifying state and non-state artifacts
- B. Developing a state model from a process
- C. Identifying user types and requirements
- D. Building on an existing schema
- E. Developing a schema from scratch
- F. Version control and the schema repository

IV. The State and Data Model
- A. Actions, states and transitions
- B. Testing the state model
- C. Defining fields and data types
- D. State dependent field properties
- E. Multiple state models in a schema.

V. Forms
- A. Identifying the needed forms
- B. Associating forms with records.
- C. Using the form editor
- D. Deploying and testing forms.

VI. Hooks and Scripts
- A. Hooks, actions and triggers
- B. Field hook descriptions and hook code.
- C. Script editors for hook code development
- D. Working with action hooks and field hooks
- E. Execution order for action and field hooks
- F. Record scripts
- G. Global scripts
- H. Debugging tools
- I. Working at the command line.

VII. Packages
- A. Adding functionality with packages
- B. Package structure
- C. Overview of packages available

VIII. The ClearQuest API
- A. ClearQuest API and API functions
- B. Session and Entity objects
- C. Commonly used ClearQuest API methods
- D. Sequence to use ClearQuest API functions
- E. EventType constants
- F. Key objects to access the schema repository
- G. API methods for the AdminSession

IX. Testing
- A. Testing tools available in ClearQuest
- B. Using test data
- C. Setting up and executing a test suite

X. Final Wrap up
- A. Review of concepts.
- B. Best practices summary.
- C. Common errors and pitfalls summary.
- D. Questions.

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