

CANTATA

Training Course Outline

Course Title	Cantata
Versions covered	7.x
Duration	2 Days
Location	Customer site
Format	Instructor-led lectures and hands-on lab exercises
Availability	Normally 2 weeks' notice required
Price	Contact your supplier



This document outlines the Cantata training course for users testing C code. It describes the format and agenda of the course, the training materials provided, and requirements at the customer site. Sufficient temporary Cantata licenses are provided for use with the training course.

Course Description

The Cantata Training Course significantly increases the productivity of engineers with the Cantata tool and accelerate your unit and integration level testing.

The course covers the use of the Cantata tool for testing C code with hands on examples guided by easy to Eclipse cheat sheets.

After this course, students will be able to:

- > Streamline overall system verification
- > Use best practice unit and integration testing techniques with Cantata

Course Format

- > Two-day instructor-led course consisting of lectures and lab sessions
- > Students gain hands-on experience with personal guidance from expert QA Systems instructors
- > Specific questions are addressed
- > Lab sessions allow hands-on application of the course concepts with supplied examples running in a VMware image
- > NB – Courses can also be customised to meet specific requirements, please contact QA Systems to discuss these in advance.

Training Course Instructor

All Instructors are expert in the Cantata tool. They are current developers of the tool, consultants or have previously been Cantata Technical Support Engineers.

Who Should Attend

- > C-code Developers
- > Test engineers performing unit and/or integration testing
- > Quality Assurance personnel

Requirements

Training Classroom

- > Data Projector
- > 1 workstation per 2 students (at least 4gb of RAM) – with VmWare Player installed (https://my.vmware.com/web/vmware/free#desktop_end_user_computing/vmware_player/4_0)

Student Skills:

- > Basic understanding of C programming
- > Functional knowledge of UNIX or Windows
- > Notions of software testing

Materials Provided

Training Virtual Machine

- > Cantata installed and licensed on a Linux Virtual Machine
- > GCC compiler and Make utilities installed
- > Lab Exercises
- > Eclipse Cheat Sheets

Training Exercise Book

- > Objectives
- > Detailed instructions

Training Presentation Slides

- > Supplied as PDF

Training Course certificate

- > Recorded qualification for each student
- > Signed by course instructor

Topics Covered

- > Cantata tool suite overview
- > Relevance of different types of testing
- > Applicable techniques for test planning
- > Code coverage & static metrics
- > Unit testing methodologies
 - Black-box
 - White-box
 - Parameterised Tests
 - Robustness testing
 - Automatic Test Generation
- > Integration testing methodologies
- > Testing objectives and specifications
- > Tracing requirements with test scripts/cases
- > Software design for testability techniques
- > Hardware and environmental considerations for testing

Technical Consultancy

Technical Cantata consultancy is available in addition to the structured Cantata Training Course. Such consultancy may include advice on using the tool, integrating it into developer's workflow and mentoring a team. Please contact QA Systems for a price quotation for your specific requirements.

Commercial Terms


For full commercial terms please request a formal price quotation from QA Systems.

AGENDA


Unless tailored to your specific requirements in advance, the Cantata training course will have the following agenda.

Day 1

Introduction



- > Unit testing theory
- > Cantata test harness
-  Test harness Lab

Stubbing with Cantata

- > Simulating calls
-  Stubbing Lab


Lunch Break (1h)

Cantata in Eclipse


- > Using the Cantata IDE
-  Using Test Script Manager Lab 1
-  Using Test Script Manager Lab 2

Afternoon Break (15 min)

Global Data Testing

- > Verification of Global Data
-  Negative Testing Lab

Wrapping with Cantata

- > Intercepting calls
-  Wrapping Lab


End

Day 2


Q&A from Day 1

- > Clarification discussion

Coverage Analysis


- > Cantata Coverage analysis
-  Coverage analysis Lab

Integration Testing


- > Integration techniques
-  Integration testing Lab

Lunch Break (1h)

Robustness Testing


- > Table-driven testing
-  Robustness testing Lab

AutoTest

- > AutoTest use cases & capabilities
-  AutoTest Lab

Afternoon Break (15 min)

Cantata Trace

- > Requirements traceability with tests
-  Cantata Trace Lab

Q&A session

- > Led by trainees anticipated needs

Course Review

- > Feedback questionnaire
- > Course Diploma signed and given

End