

CANTATA

C++ Training Course Outline

Course Title	Cantata C++ Training Course
Versions covered	8.x and 9.x
Duration	2 Days
Location	On Site or Online (Go To Meeting – Web sessions)
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
- 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 as Online - Web Session

- > Ability to install Go To Meeting plugin workstation
- > 1 workstation per student with web cam, headphones and microphone (at least 4gb of RAM) – with Cantata 8.x or 9.x installed on each machine, as well as the training plug-in and source code (delivered by QA Systems once the training has been ordered)
- > A supported version of g++ compiler (please refer Cantata Release Note) for Linux users

Training as On Site - Classroom

- > Data Projector
- > 1 workstation per 2 students (at least 4gb of RAM) with Cantata 8.x or 9.x installed on each machine, as well as the training plug-in and source code (delivered by QA Systems once the training has been ordered)
- > A supported version of g++ compiler (please refer Cantata Release Note) for Linux users

Student Skills:

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

Materials Provided**Training Course Plug-in**

- > Eclipse Cheat Sheets for use with Cantata 8.x or 9.x
- > Lab Exercises source code provided as plug-ins

Training Presentation Slides

- > Supplied as PDF

Training Course certificate

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

Topics Covered

- > Cantata test harness basics
- > Introduction to the Cantata IDE
- > Code coverage analysis
- > Multi-unit integration testing
- > Cantata call control interface
- > Automatic test case generation
- > Testing templates
- > Abstract classes and inheritance
- > Associations between functional requirements and test cases/scripts

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 (typically from 9 AM to 5:00 PM each day).

Day 1

Introduction


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

Stubbing with Cantata


- > Simulating calls
-  Stubbing External Units Lab

Lunch Break (1 hour)


Cantata in Eclipse

- > Using the Cantata IDE
-  Introduction to the IDE Lab

Wrapping with Cantata

- > Intercepting calls
-  Wrappers Technology Lab

AutoTest

- > AutoTest use cases & capabilities
-  AutoTest Demo


End of Day

Day 2


Q&A from Day 1

- > Discuss issues from Day 1


Code Coverage Analysis

- > Cantata Coverage analysis
-  Code Coverage Analysis Lab

Integration Testing


- > Techniques for testing multiple units
-  Multi-Unit Testing Lab

Testing Templates


- > Technique for testing instantiated templates
-  Testing Templates Lab

Lunch Break (1 hour)

Abstract Classes and Inheritance

- > Managing abstract classes and inheritance
-  Abstract Classes and Inheritance Lab

Requirements Tracing

- > Cantata Trace
-  Cantata Trace Lab

Q&A session

- > Led by trainees anticipated needs

Course Review

- > Feedback questionnaire
- > Course Certificate signed and given

End of Day