



CANTATA 

Corporate Training Course for C



Driving embedded
software quality



Corporate Cantata Training Course for C

Duration:	2 days, typically from 9:00 am to 5:00 pm each day
Location:	On Site or Online
Speaker:	QA Systems Product Trainer
Language:	EN or DE
Price:	Please contact us for a price quotation by email to sales@qa-systems.com

Testimonials:

"I think the training met all of my expectation. Not only the practical aspect was useful and entertaining but I believe that the content touched throughout the presentation was very well organized, very relevant to our needs and interesting. The only thing I would suggest is to update the training practicals since it results daunting for everyone to follow instructions that are incorrect."

"I did appreciate the introduction to the GUI interface, which I have ever been reluctant to use."

Benefits

The Cantata Training Course significantly increases the productivity of development and test engineers performing unit and integration level testing of C code. The course covers the use of the Cantata product with hands on examples and users own code.

After this course, students will be able to:

- ✓ Streamline overall system verification
- ✓ Use best practice unit and integration testing techniques

Target group

- ✓ C code developers
- ✓ Test engineers
- ✓ 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 GCC 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 GCC 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

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Course Format

- ✓ Two-day instructor-led courses consisting of lectures and lab sessions
- ✓ Students gain hands-on experience with personal guidance from expert QA Systems instructors
- ✓ Students examine details of the Cantata tool, focussing on the intelligent testing techniques for efficient unit and integration testing
- ✓ 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 product. They are current developers of the tool, consultants or have previously been Cantata Technical Support Engineers.

Technical Consultancy

Technical Cantata consultancy is available in addition to the structured Cantata Training Course. All Course Instructors are capable of providing more general consultancy 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, consultancy or testing work requirements.

Commercial Terms

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

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
- ✓ Associations between functional requirements and test cases/scripts
- ✓ Software design for testability techniques
- ✓ Hardware and environmental considerations for testing

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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 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
- 🖥️ Further IDE Exercise Lab

Wrapping with Cantata

- ✓ Intercepting calls
- 🖥️ Wrapping Lab

AutoTest

- ✓ AutoTest use cases & capabilities
- 🖥️ AutoTest Lab

Day 2

Q&A from Day 1

- ✓ Discuss issues from Day 1

Coverage Analysis

- ✓ Coverage Analysis Theory
- ✓ Cantata Coverage analysis
- 🖥️ Coverage Analysis Lab

Integration Testing C

- ✓ Techniques for Integration Testing
- 🖥️ Integration Testing Lab

Lunch Break (1 hour)

Robustness Testing

- ✓ Table-driven testing
- 🖥️ Robustness testing Lab

Global Data Testing

- ✓ Verification of Global Data
- 🖥️ Negative Testing 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