



CANTATA 

Public Training Course for C++



Driving embedded
software quality



Public Cantata Training Course for C++

Date:	As published on QA Systems website
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Duration:	2 days, each 9:00 am – 5:00 pm
Location:	Online
Speaker:	QA Systems Product Trainer
Language:	EN
Price:	€ 675 / \$ 750 (plus the legally applicable tax of the recipient of the service)

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

Learn the theory and objectives for unit and integration testing and how to increase your productivity with Cantata. You will get to know best practises for testing techniques with Cantata to accelerate your unit and integration level testing. This 2day online training course covers the use of the Cantata tool for testing C++ code with hands-on lab session examples guided by easy-to-use Eclipse cheat sheets.

Target group

- ✓ C++ code developers
- ✓ Test engineers performing C++ unit and/or integration testing
- ✓ Quality Assurance personnel
- ✓ No prior experience of Cantata is required

Requirements

Workstation

- ✓ PC with at least 4GB of RAM available
- ✓ Peripherals: web cam, headphones and microphone
- ✓ Ability to install the "Go To Meeting" app on workstation*
- ✓ Ability to install Cantata and Cantata Training Plug-ins and example code on workstation*
- ✓ Ability to install / use a g++ compiler*

Student Skills:

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

* Supplied after registration.

Materials Provided

Cantata Installation

- ✓ Cantata 9.x installation for Windows or Linux workstation
- ✓ Bundled GNU 8.2 C++ compiler
- ✓ Temporary Cantata license for use with the training course

Training Course Plug-ins (as appropriate)

- ✓ Cantata 9.x Training Course Eclipse Cheat Sheets for C++
- ✓ Lab Exercises source code provided as plug-ins

Training Presentation Slides

- ✓ Supplied as PDF

Training Course certificate

- ✓ Recorded qualification issued for each student

Topics Covered

- ✓ Theory of unit testing
- ✓ Understanding the Cantata IDE
- ✓ What to check for and how in Cantata
- ✓ Code coverage analysis (theory & Cantata practice)
- ✓ Isolation unit testing
- ✓ Multi-unit integration testing
- ✓ How to control function calls for simulation and interception
- ✓ Positive (requirements-based) & Negative (robustness) testing
- ✓ Testing Global Data
- ✓ Automatic test case generation from source code
- ✓ Testing templates
- ✓ Testing Abstract classes and inheritance
- ✓ Associations between functional requirements and test cases/scripts

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Agenda

Day 1

Unit Testing Theory

- ✓ What is a unit?
- ✓ What is unit testing?
- ✓ Different approaches to unit testing
- ✓ What does a unit test look like?
- ✓ Identifying test cases
- ✓ Types of unit test cases

Cantata Eclipse UI

- ✓ Using the Cantata IDE
- 🖥 Introduction to the IDE Lab
- 🖥 Further IDE Lab

Cantata Test Harness

- ✓ Cantata test structure
- 🖥 Test Harness Basics Lab

Lunch Break (1 hour)

Code Coverage Analysis

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

Stubbing Calls

- ✓ Simulating calls
- 🖥 Stubbing Lab

Wrapping Calls

- ✓ Intercepting calls
- 🖥 Wrapping Lab

Day 2

Class Testing

- ✓ Test Classes
- 🖥 Class Testing Lab

AutoTest C++

- ✓ Automatic Test Case Generation
- 🖥 AutoTest Demo

Integration Testing C++

- ✓ Integration Testing Approaches
- 🖥 Integration Testing Lab

Lunch Break (1 hour)

Dependency Resolver

- ✓ Link dependencies
- 🖥 Dependency Resolver demo

Testing Templates

- ✓ Instantiated templates
- 🖥 Testing Templates Lab

ABCs and Inheritance

- ✓ Managing abstract classes and inheritance
- 🖥 Abstract Classes and Inheritance Lab

Requirements Tracing

- ✓ Cantata Trace
- 🖥 Cantata Trace Lab

Q&A session

The course topics give a good grounding in how to use Cantata. The instructor can additionally address any specific questions on testing challenges and how to meet these in Cantata.

Follow on dedicated consultancy engagements and corporate training courses are also available. Contact sales@qa-systems.com for more information.

About Training Course Instructor

All Instructors are experts in testing C and C++ with the Cantata tool. They are current Cantata Technical Support Engineers.



QA Academy Terms and Conditions for Public Online Events

QA Academy Public Online Events

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Cancellation by participant

- 6 or more weeks before the event, none of the fee will be charged
- 6 to 2 weeks before the event, 20% of the fee will be charged
- From 2 weeks before the event, 100% of the fee will be charged

Replacement of event participant is possible at any time free of charge

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