

What's New in Cantata 22.10?

Cantata 22.10 is available from October 2022. This release adds full support for C++ 17 and testing of local types. Code coverage gathering and reporting is changed to be on a generic C++ template rather than its generated specialisations. This change means 22.10 is faster, more able to achieve coverage targets and well positioned for modern C++ language versions.

This document details all the most important changes in Cantata version 22.10.

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Introduction

Cantata 22.10 is available from October 2022. During our product portfolio re-fresh, we have updated our tool version numbers to have a consistent format across the tools, so from this release onwards Cantata versions will be in the format yy.mm.

The Cantata 22.10 release has added full support for C++ 17 and testing of local types, along with an updated install process for allowing completely silent product installation. Code coverage gathering and reporting is changed to be on a generic C++ template rather than its generated specialisations.

Cantata 22.10 also contains several other productivity and flexibility enhancements as well as fixes. The full set of changes are documented in the Release Notes which track all changes in Cantata since version 4.0. The most important changes in this release are highlighted in the sections below.

Generic C++ Template Instrumentation

Cantata 22.10 has changed the way instrumentation is used to improve template processing for modern C++ (i.e. C++14 and later). Instrumentation is the process where Cantata makes intermediate changes to the Source code Under Test (SUT) for measuring Code Coverage, or to make the code easier to test (Testability Instrumentation - i.e. Wrapping, Static/Private access, and Custom Code Insertion). This change means Cantata 22.10 is faster, more able to achieve coverage targets and well positioned for modern C++ language versions. A summary of the impacts on existing Cantata (version 9.5 or earlier) test projects is below:

Software Language	Impact Summary
C	None
C++ (non-template)	Minor changes to testability instrumentation (only wrapping options for <code>main/Winmain</code> and <code>operator new</code>)
C++ (template)	Major changes to code coverage instrumentation options Minor changes to testability instrumentation options

For details of the differences between Cantata 9.5 and earlier versions and Cantata 22.10, how users will see them, and how existing tests projects may need to be updated when upgrading to Cantata 22.10, please refer to the document "[Cantata Technical Changes in v22.10](#)"

Updated Platform Versions Support

As with every version of Cantata, support for platforms has been updated.

Cantata is tightly integrated with leading Integrated Development Environments which are Built-on-Eclipse®, and toolchains available as Eclipse-Ready® plug-ins. Cantata 22.10 is built on the Eclipse 2019-12 release (Eclipse 4.14) and is also available to install as an Eclipse-Ready plug-in set for versions from Luna (4.4) up to Eclipse 2022-06 (4.24). The GCC compiler versions up to 8.2 on Windows and up to 12.1 on Linux, are now also supported in Cantata 22.10.

In addition, Cantata 22.10 now provides full support for all C++17 language features.

