

18 March 2022



Change Documentation for

***Testwell CTC++***

Version 9.1.4

## Features and Changes

### Support of macOS

With version 9.1.4, macOS (Big Sur, Monterey) is supported for x86\_64 and arm64 (M1) architectures.

## Bug Fixes

### Access violation of `ctc`

A crash of `ctc` due to an access violation could happen with version 9.1.3.

### Endless loop with cyclic typedefs

During instrumentation, `ctc` could get into an endless loop caused by cyclic type definitions like:

```
typedef unsigned char uint8_t;  
typedef uint8_t uint8;  
typedef uint8 uint8_t;
```

These kind of type definitions have been encountered in library code from Visual Studio, versions 15 and 17, and from clang.

### Recognition of nested template brackets

While processing template parameters, additional nested templates could hinder `ctc` from recognizing the end of the first parameter list.

This could lead to a syntax error of `ctc` for the end of the source file, or to uninstrumented code.

### C++ attributes in name space definitions

In the definition of a namespace, using attributes as in

```
namespace [[deprecated("Reason")]] example { ... }
```

hindered `ctc` from recognizing the namespace correctly. This led to misnamed functions in the reports of Testwell CTC++ but could also cause subsequent faults in processing templated types, for example.

### Line numbers of included files

With version 9.1.3, a new handling of line numbers associated with include directives was introduced. With some compilers (for example, DesignWare ARC MetaWare), this line number was not always derived correctly, and this could lead to rare problems like a crash of `ctcxmlmerge`.