

LabWindows/CVI Compiler/Debugger

1 Abstract

This document describes the setup and handling of **LabWindows/CVI Compiler/Debugger** as target system.

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2 Introduction

TESSY supports the **LabWindows/CVI** Compiler/Debugger for automatic test execution.

3 Setup

Running tests with **LabWindows/CVI** from TESSY requires the installation of National Instruments **LabWindows/CVI** 2013 or later.

3.1 TESSY Environment Editor (TEE) Settings

The environment editor TEE provides some settings that need to be adapted for the controller you are using. You need to add the **LabWindows/CVI** environment to your project configuration as described below.

3.1.1 Step1: Enable the LabWindows/CVI Target Environment

Open the TEE from within your TESSY using the menu **File**→**Edit Environment**.

Select the filter settings **Show All** and enable the **LabWindows/CVI** environment within the **Configuration** section of the TEE using the **Enable Environment** entry from the context menu.

3.1.2 Step 2: Add LabWindows/CVI to the Project Configuration

Now switch the filter back to **Hide Disabled**, so that you just see the enabled target environments. This allows easy drag-and-drop of the **LabWindows/CVI** compiler node onto the **File** node of your project configuration.

3.1.3 Step 3: Adjust Compiler Settings

Now review the settings within the **LabWindows/CVI** compiler node. You need to change the **Compiler Install Path** entry according to the **LabWindows/CVI** install path. Choose the path to the directory ending with **CVI2013**.

3.1.4 Step 4: Adjust Target Settings

Now select the **LabWindows/CVI** target node and review the attribute settings. You need to change the **Target Install Path**. Choose the path to the National Instruments base directory.

3.1.5 Step 5: Adjust Options

Now select the environment node (named “(Default)” by standard) and change the following attributes:

CC Options File

Choose a CC_options.txt file from your own **LabWindows/CVI** development project which can be found in the Debug folder.

Link Options File

Choose a link_options.txt file from your own **LabWindows/CVI** development project which can be found in the Debug folder.

4 Executing Tests Automatically

You can execute tests by selecting the “Execute Test” button within TESSY now. Choose the instrumentation options and run a test.

5 Interactive Debugging

Select **Define Breakpoint at Test Object** from within the **Execution Test** dialog.

TESSY will automatically start **LabWindows/CVI** and close it after the test is finished.

The debugger stops at the function 'Breakpoint()'. Below this line you will find your test object function. In the following example is 'is_value_in_range()' the test object to be tested. In order to reach the test object click the 'Step Into' button twice.

```
/* Debug Code */
if (tessy_debug_state) {
    while (!IsDebuggerPresent()) {
        Sleep(500);
    }
    Breakpoint();
}
TS_TESTOBJECT_RETURN = is_value_in_range(r1, v1);
TS_REPEAT_COUNT--;
```