

**Creating a DevOps Test
Embedded project in Eclipse IDE**



Special notice

Before using this information and the product it supports, read the information in [Notices on page xiii](#).

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Chapter 1. Overview

You can use this tutorial to create a DevOps Test Embedded project in DevOps Test Embedded for Eclipse IDE. The tutorial explains three different ways to create a DevOps Test Embedded project. This is a new capability introduced from version 9.0.

DevOps Test Embedded in Eclipse extends the C/C++ Development Tooling (CDT). For more information refer <https://projects.eclipse.org/projects/tools.cdt> documentation. DevOps Test Embedded project is a CDT project with an additional nature that enables additional settings for the Target Deployment Port (TDP) and the tools configuration. From version 9.0, you can use the wizard to create a new DevOps Test Embedded project by selecting the TDP and the source code under test in three different ways:

- Create a project from a folder that contains the source code
- Create a project from a *cmake* compilation database
- Create a project from a *Makefile*

The wizard performs the following actions:

- Create the corresponding CDT project and add the DevOps Test Embedded nature
- Set the chosen TDP in the project,
- Import the C/C++ files under test in the project by creating links to the source files in the project (there is no copy of the source files),
- Depending on the way the project is created, the wizard can also configure the CDT for compilation phase.

Prerequisites

You must have completed the following tasks:

- From the following location download the project on your computer and decompress the zip file if you want to run the tasks of this tutorial with the same source code: <https://github.com/rsky/qrcode>.
- The project creates a library from C code, that can be used to generate QR code see folder *libqr*

Chapter 2. Creating a project from a folder that contains the source files

You can learn about creating a project from a folder that contains the source files.

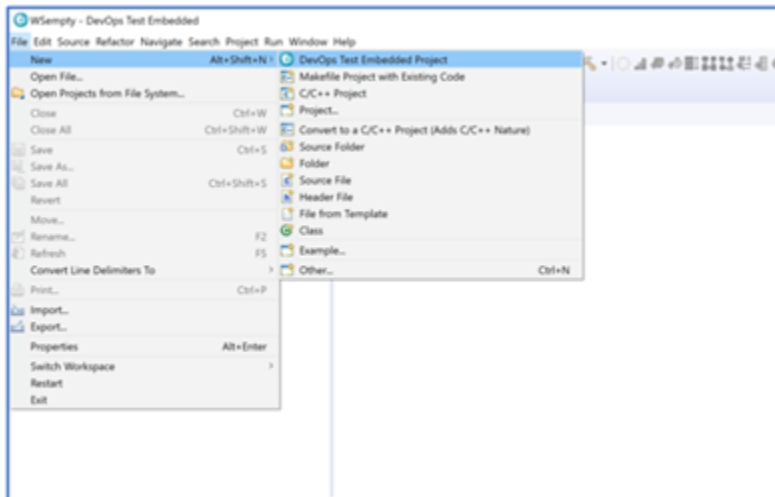
Before you begin

Ensure that you have started DevOps Test Embedded.

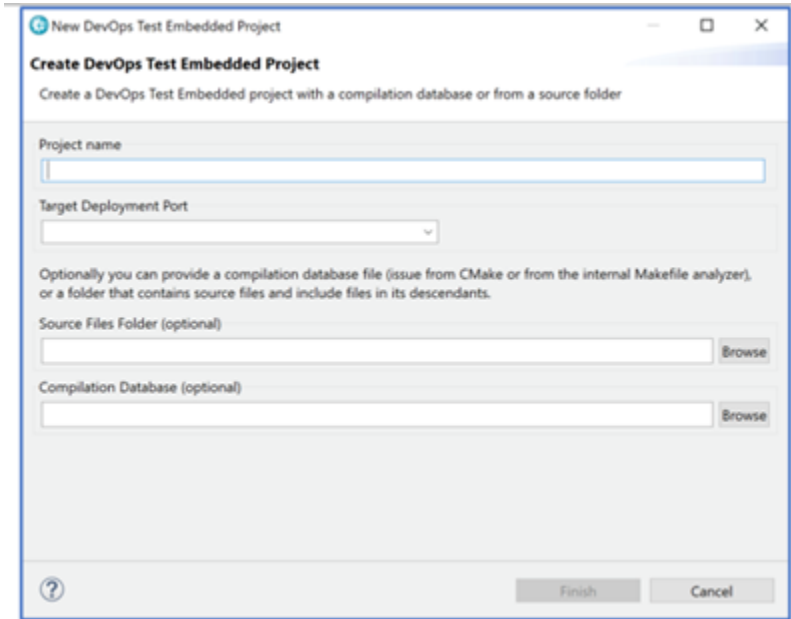
Starting the wizard

Perform the following steps to create a project:

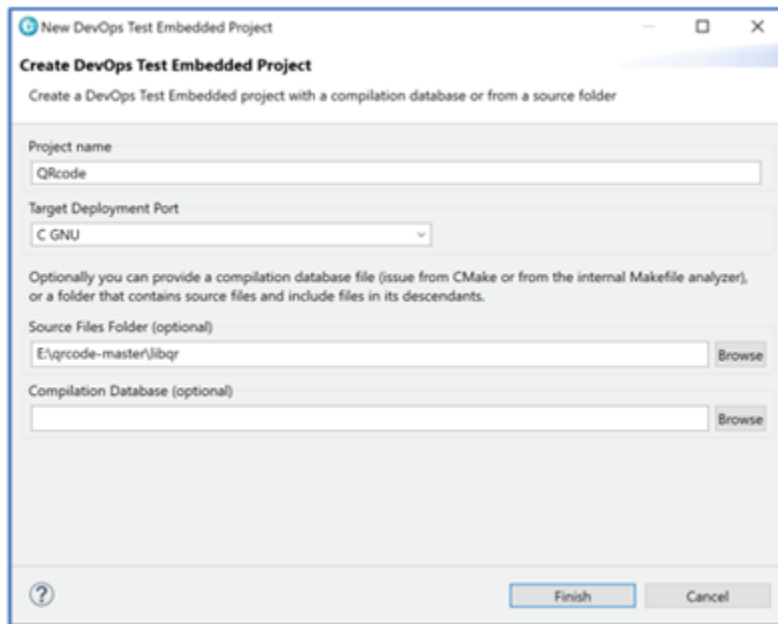
1. Go to **File > New > DevOps Test Embedded Project**.



The Create DevOps Test Embedded page is displayed.



2. Enter a name of the project in the **Project Name** field.
3. Select a Target Deployment Port from the **Target Deployment Port** drop-down list.
4. Click **Browse** and select the folder *libqr* from the C project on your computer in the Source Files Folder field.



5. Click **Finish**.
The project *QRcode* is created.


Viewing the created project

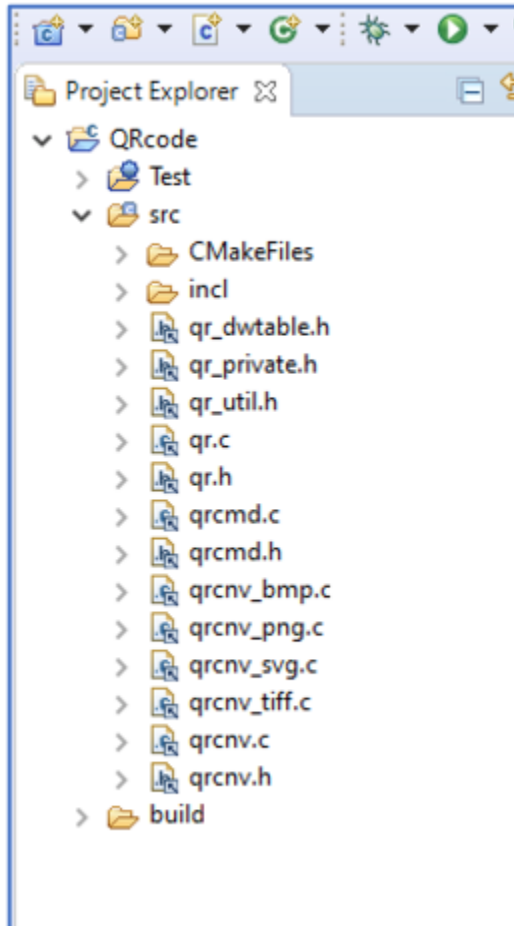
You can view a new project *QRcode* that is created.


Perform the following steps to view the created project:

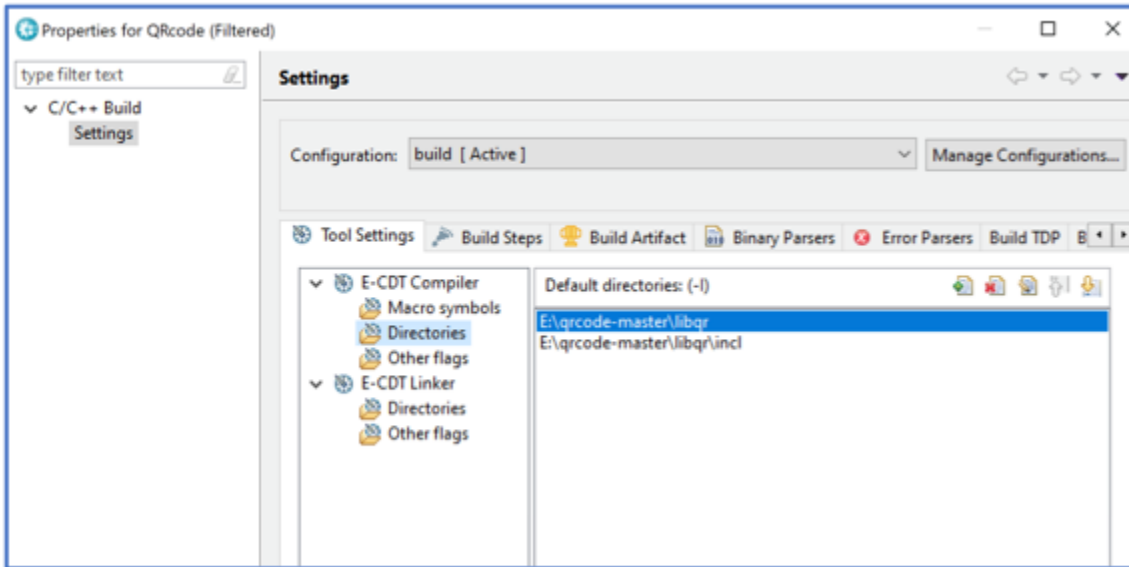
1. Go to the **Project Explorer** and expand the root node.

Under the source folder **src**, all the source files are imported, including the included files

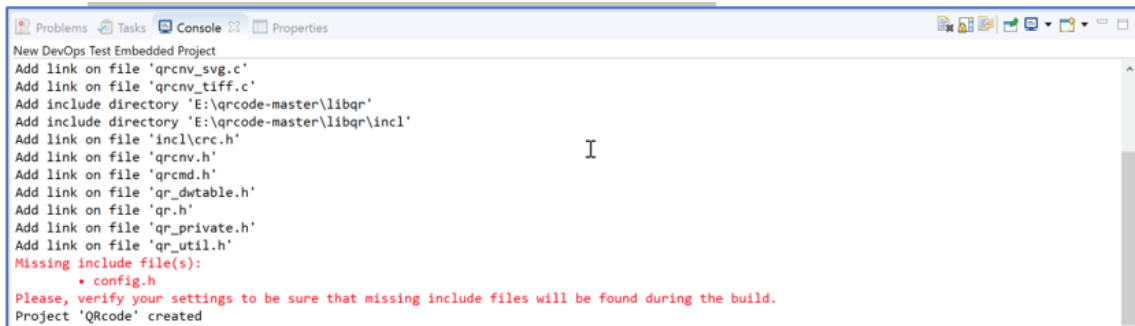
 **Note:** The source files are not copied into the workspace, and you can only view the links of the source files.



2. Click the Settings icon  on the toolbar, and then click the **Tool Settings** tab.
3. In the **Directories** menu of the **Compiler** section, the folders are updated accordingly with the include files found in the imported source files.



4. View the logs that are displayed in the **Console** view, when the files are imported.



If missing include files are found, note that it could be false positive because the tool analyse all the include files without considering the macro definitions.

Chapter 3. Creating a project from a *cmake* compilation database

If your project is built with *cmake* refer <https://cmake.org> documentation. DevOps Test Embedded can create a project from the compilation database generated by this tool.

Generating the compilation database

To generate the compilation database, add the following option to your *cmake* command line:

```
cmake -DCMAKE_EXPORT_COMPILE_COMMANDS=ON ...
```

After generation, a file named *compile_commands.json* is created.

Starting the wizard

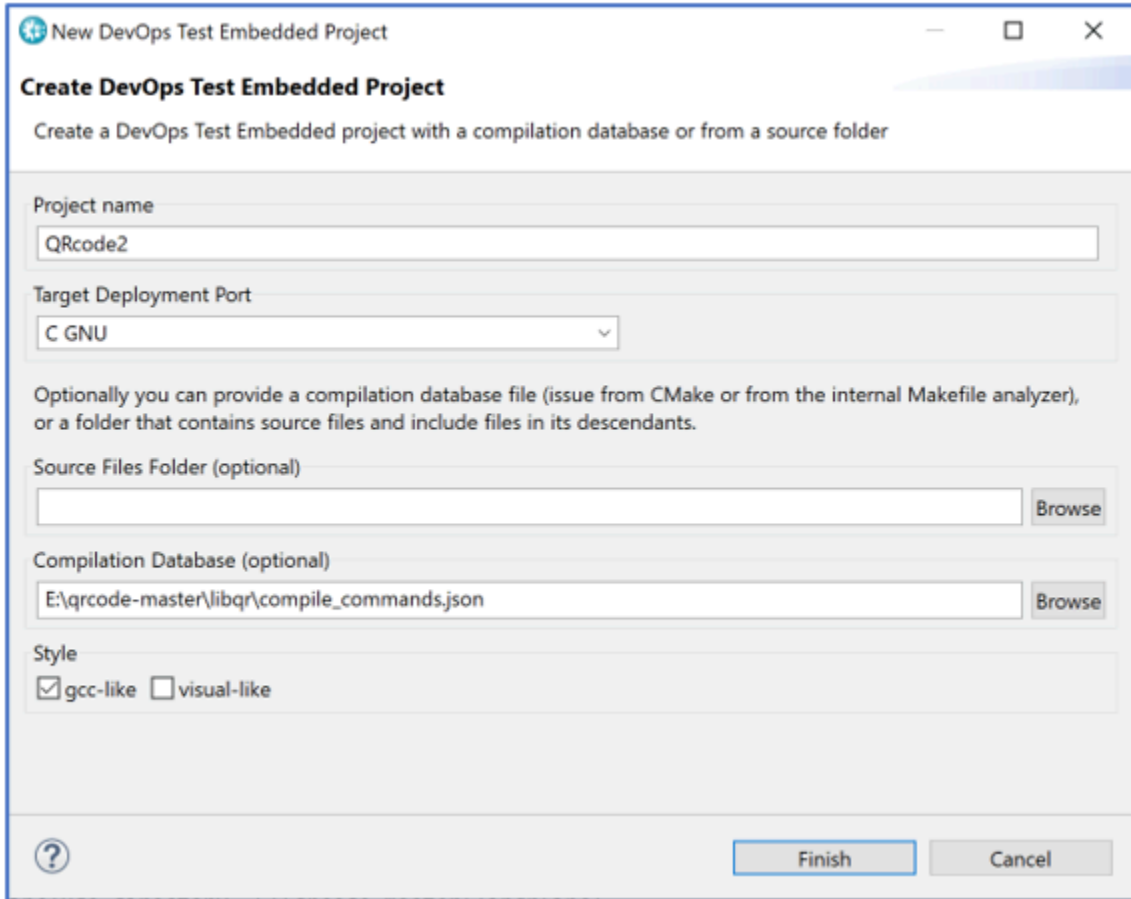
Perform the following steps to start the wizard and create a project:

1. Go to **File > New > DevOps Test Embedded Project**.
2. Enter a project name in **Project Name** field.
3. Select a Target Deployment Port from the **Target Deployment Port** drop-down list.



Note: You do not need to provide a value in the **Source Files Folder** field.

4. Click Browse and import the compilation database file in the **Compilation Database** field.



5. Select the **gcc-like** checkbox if you are using any *gcc* compiler or select the **visual-like** checkbox if you are using Microsoft Visual compiler. You can select the options depending on the compiler used in the *cmake* description file.


Viewing the created project

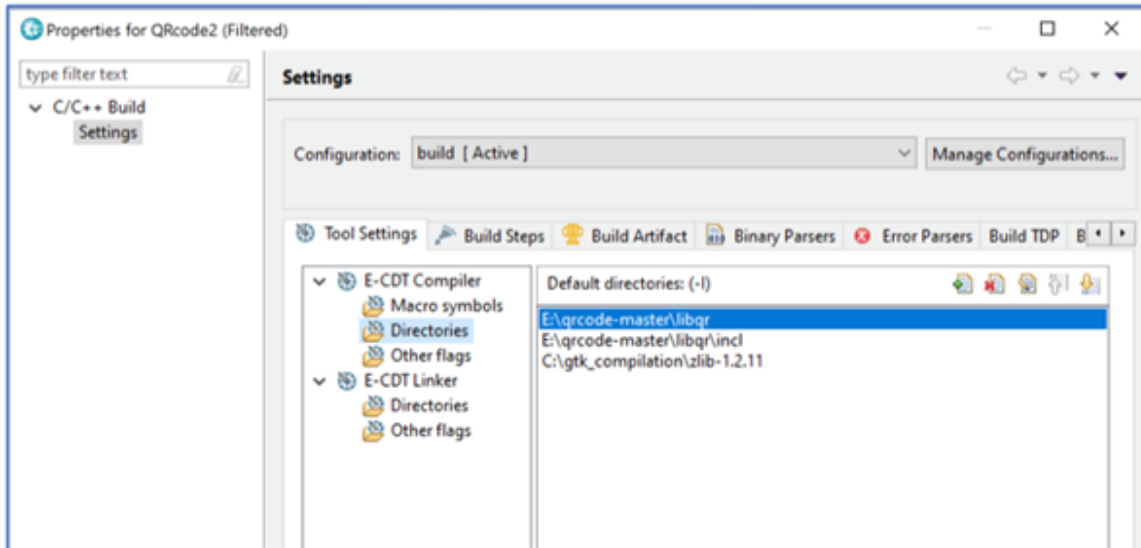
Perform the following steps to view the created project:

1. Go to the **Project Explorer** and expand the root node. Under the source folder **src**, all the source files are imported, including the included files.

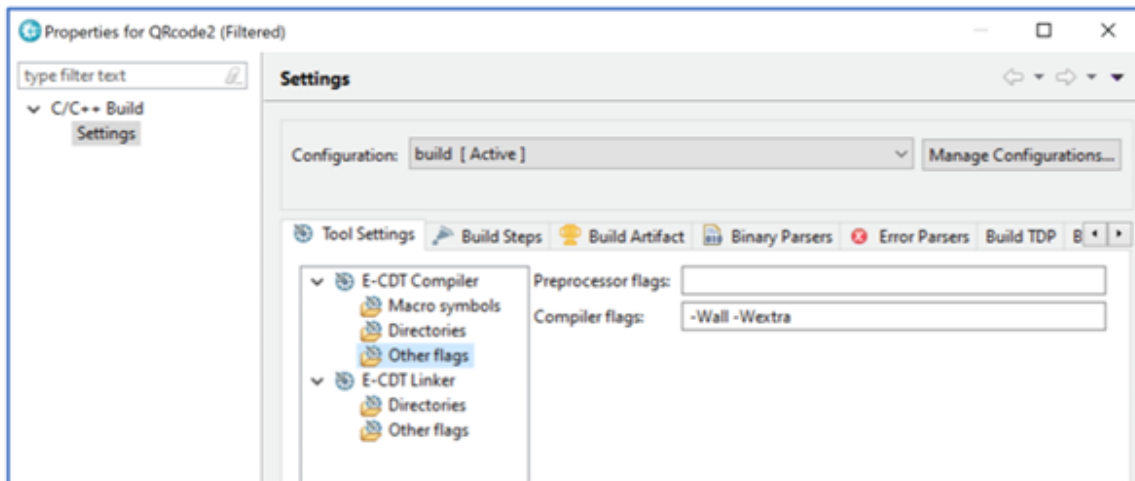


Note: You can see fewer files in the *CMake files* folder because it only contains the source files that are read from the compilation database and imported.

2. Click the settings icon  on the toolbar, and click the **Tool Settings** tab.



You can view, in the **Directories** menu of the **Compiler** section, the folders are updated accordingly with the include files options found in the compilation database. This is the same for the macro symbols (options -D and -U) and the other flags (in this example, the macro symbols are empty). The **Linker** section must be manually completed.



Chapter 4. Creating a project from a Makefile

If your application is built with a *Makefile*, DevOps Test Embedded provides a way to generate its own compilation database. This feature is available from version 9.0 onwards.

A *Makefile* often includes a line that defines the compiler, as displayed in the following example:

```
CC := gcc
```

DevOps Test Embedded includes a tool called *otecli.exe* on Windows and *otecli* on Linux that analyze the compilation command line when the *Makefile* runs.

Perform the following steps to create a project from a Makefile:

1. Modify the *Makefile* as following. The assumption is that the *bin* directory of DevOps Test Embedded is in the path. If not, then you must add the path to the *bin* directory before *otecli*:

```
CC := otecli -- gcc
```

2. Start the *make* command.

At the end of the run, a file named *otecli.json* is created. It is equivalent to a compilation database generated by *cmake*. You can use it exactly as described in [Create a project from a cmake compilation database on page 9](#).

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