

Setting Up Meson

Meson is an open source and multi-platform build system generator using Ninja as main backend. Build definitions are located in `meson.build` files while build options are located in `meson_options.txt`.

Meson build support in Qt Creator is not mature yet, you can only use it to build native desktop applications. Many features available with Meson build or usually available from Qt Creator are missing.

Qt Creator automatically detects the Meson and Ninja executables specified in the PATH. You can add paths to other Meson or Ninja executables and use them in different build and run **kits**.

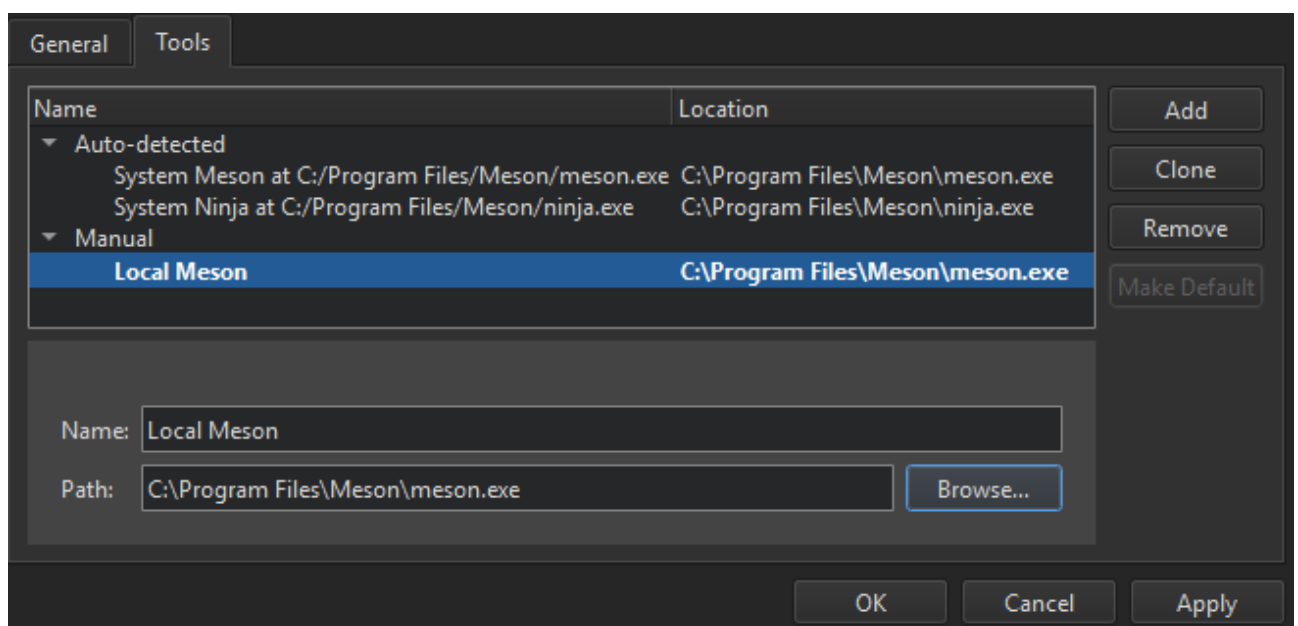
Note: Meson build plugin is disabled by default, see [Enabling and Disabling Plugins](#).

Adding Meson Tools

Qt Creator does not have strong requirements on Meson build's version, any version above 0.49.0 should be compatible.

To specify paths to Meson or Ninja executables:

1. Select **Edit > Preferences > Meson > Tools > Add**.



2. In the **Name** field, specify a name for the tool.

Select the **Edit > Preferences > Kits > Kits** tab to add the Meson and Ninja tools to a build and run kit:

The screenshot shows the 'Kits' tab in the Qt Creator Preferences dialog. The 'Kits' tab is selected, and the configuration for a 'Meson' kit is displayed. The fields and their values are as follows:

- File system name:** (empty)
- Device type:** Desktop
- Device:** Local PC (default for Desktop)
- Build device:** Local PC (default for Desktop)
- Sysroot:** (empty)
- Compiler:** C++: Microsoft Visual C++ Compiler 16.8.30804.86 (amd64)
- Environment:** No changes to apply.
- MCU Dependencies:** (empty)
- Debugger:** Auto-detected CDB at C:\Program Files (x86)\Windows Kits\
- Qt version:** Qt 5.15.4 (msvc2019_64)
- Qt mkspec:** (empty)
- CMake Tool:** System CMake at C:\Program Files\CMake\bin\cmake.exe
- CMake generator:** <none> - Ninja, Platform: <none>, Toolset: <none>
- CMake Configuration:** CMAKE_CXX_COMPILER:STRING= %{Compiler.Executable:Cxx}; ...
- Meson Tool:** System Meson at C:/Program Files/Meson/meson.exe
- Ninja Tool:** System Ninja at C:/Program Files/Meson/ninja.exe

For more information, see [Adding Kits](#).

Editing Meson Build Descriptions

To open a meson.build file for editing, double-click it from project tree. Only plain text editor is available now.

Code Completion and External Libraries

Through external libraries, Qt Creator can support code completion and syntax highlighting as if they were part of the current project or the Qt library.

Qt Creator handles code completion from compilation flags in Meson introspection data. Any external library added with dependency () or found in include path will be known by Qt Creator for code completion.

Current Meson Support Limitations

The following features are not supported yet:

- › Showing header files in project tree.
- › Configuration change detection, for example when building triggers a Meson configuration first.
- › Actions from locator such as searching or triggering builds.
- › Adding files to Meson projects from Qt Creator.

Related Topics

- › [Opening Projects](#)
- › [Meson Build Configuration](#)
- › [Specifying Run Settings](#)

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