

SPECT-DM API Integration Guide for Xubuntu

Version v1.0



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Purpose

This document has been created to provide the user with some useful information with regards to integrating the SPECT-DM API into their own application.

The document explains how to build and run the code associated with the SPECT-DM demo application in QtCreator and how to link the SPECT-DM shared library to a Qt application.



Pre-requisites

- You must have followed the *Installation Instructions for Xubuntu* prior to using this guide.
- You must have QtCreator installed prior to using this guide. If you don't have QtCreator installed then follow the steps below to install it:
 - 1) Launch the Synaptic Package Manager
 - 2) Search for and mark the following for installation:

qtcreator

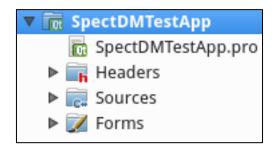


Building and running the test application

- 1) Launch QtCreator
- 2) Select File followed by Open File or Project...
- 3) Locate the *SpectDMTestApp.pro* file in the TestCode directory of the SPECT-DM software download and select *Open*

If the *Configure Project* screen appears at this point, accept the defaults and click *Configure Project*

4) The project should have loaded and you should see the following:



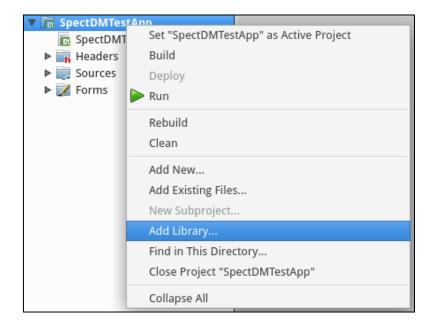
- 5) Select Build on the toolbar and hit Rebuild All
- 6) Once the project has built you can run it by selecting *Build* on the toolbar and then *Run*



Linking against the API

This section will explain how to link the SPECT-DM API to an application using QtCreator, the process will be slightly different for other IDEs and will require consulting the documentation to find out how to do it for the one you plan to use.

1) Right-click on your project in QtCreator and select Add library...



- 2) Select External library as the Type and click Next >
- 3) Click the Browse... button next to the Library file label
- 4) Navigate to the TestCode directory of the SPECT-DM software download.
- 5) The Choose File dialog should only display one file at this point:

```
libSpectDMSharedLib.so
```

Select this file and click Open

- 6) Untick Mac and Windows in the Platform group, leaving Linux ticked and click Next >
- 7) A summary screen should be displayed showing the following:

```
unix:!macx: LIBS += -L$$PWD/ -lSpectDMSharedLib
INCLUDEPATH += $$PWD/
DEPENDPATH +=$$PWD/
```

Click Finish

8) Finally, include the header containing all of the API functions:

```
#include "spectdmdll.h"
```