

Steps to Build an Analysis Plug-in for OpenSim

1. **Install Visual C++ 2008 Express Edition** freely available from <http://www.microsoft.com/express/download/> if you do not already have Visual C++ 8.0 (2005) or 9.0 (2008) setup on your computer.
2. **Install CMake.** CMake is a cross-platform open-source build system that will setup the build environment for creating an OpenSim plug-in. CMake is freely available from <http://www.cmake.org/files/v2.6/cmake-2.6.1-win32-x86.exe>.
3. **Download OpenSim 1.6** at https://simtk.org/project/xml/downloads.xml?group_id=331 and make note where you have installed OpenSim (referred to as <OpenSimInstallDir>).
4. **Prepare your development folder.** Copy the <OpenSimInstallDir>/sdk/examples/plugin directory into a folder (work space) outside of the OpenSim installation so that future uninstalls and installs of OpenSim do not destroy your work. Any empty folder will do, for example, C:/OpenSimPlugin/ would be easy to recognize.
5. **Run CMake.** Select the plugin folder you just copied for “Where is the source code:” and for “Where to build the binaries:” select a build directory that is convenient, like C:/OpenSimPlugin/build. Click **Configure** which will setup CMake so it creates a build profile compatible with your version of Visual C++, which you must select from the list it presents. Additional settings that CMake requires to proceed will appear in red. Set the <OpenSimInstallDir> for the OPENSIM_INSTALL_DIR field, which identifies where OpenSim and its libraries live. Click **Configure** again and when there are no fields in red, the OK button will be enabled. Click **OK**. This will setup all the necessary build files in your build directory.
6. Open the **OsimPlugin.sln** from your build directory which will **launch Visual C++** with OsimPlugin as a project. Change the Solution Configuration from Debug (default) to **Release**.
7. **Build solution** (from the Build menu) which will compile the template analysis into a .dll (plugin). Follow that with a build **Install** which will install the osimplugin.dll into <OpenSimInstallDir>/plugins.
8. **Launch OpenSim** and load the plug-in from Tools->User Plugins, by clicking on the osimplugin.dll. This will confirm that the plug-in is available to use in OpenSim.