

# Instructions to compile C++ plugins

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## On Windows

The following instructions assume that:

- You are using Visual Studio 2015.
- A [properly-patched Boost 1.55](#) is installed in `C:\boost_1_55_0`.
- [appleseed's dependency package](#) is installed in `C:\appleseed-deps`.

Make sure to adapt them as required.

Open a Command Prompt inside a plugin's folder, then type:

- With an **end-user** release of appleseed:

```
mkdir build
cd build
cmake ^
-G "Visual Studio 14 2015 Win64" ^
-DAPPLESEED_INCLUDE_DIR=..\..\..\include ^
-DAPPLESEED_LIBRARY=..\..\..\lib\appleseed.lib ^
-DBOOST_ROOT=C:\boost_1_55_0 ^
-DIMATH_INCLUDE_DIR=C:\appleseed-deps\stage\vc14\ilmbase-release\include ^
-DIMATH_MATH_LIBRARY=C:\appleseed-deps\stage\vc14\ilmbase-release\lib\Imath-2_2.lib ^
-DIMATH_IEX_LIBRARY=C:\appleseed-deps\stage\vc14\ilmbase-release\lib\Iex-2_2.lib ^
-DIMATH_HALF_LIBRARY=C:\appleseed-deps\stage\vc14\ilmbase-release\lib\Half.lib ^
-DOPENEXR_INCLUDE_DIR=C:\appleseed-deps\stage\vc14\openexr-release\include ^
-DOPENEXR_IMF_LIBRARY=C:\appleseed-deps\stage\vc14\openexr-release\lib\IlmImf-2_2.lib ^
-DOPENEXR_THREADS_LIBRARY=C:\appleseed-deps\stage\vc14\ilmbase-release\lib\IlmThread-2_2.lib ^
-DAPPLESEED_DEPS_STAGE_DIR=C:\appleseed-deps\stage\vc14 ^
..
```

- With a **working copy** of the appleseed repository:

```
mkdir build
cd build
cmake ^
-G "Visual Studio 14 2015 Win64" ^
-DAPPLESEED_INCLUDE_DIR=..\..\..\..\src\appleseed ^
-DAPPLESEED_LIBRARY=..\..\..\lib\v140\Ship\appleseed.lib ^
-DBOOST_ROOT=C:\boost_1_55_0 ^
-DIMATH_INCLUDE_DIR=C:\appleseed-deps\stage\vc14\ilmbase-release\include ^
-DIMATH_MATH_LIBRARY=C:\appleseed-deps\stage\vc14\ilmbase-release\lib\Imath-2_2.lib ^
-DIMATH_IEX_LIBRARY=C:\appleseed-deps\stage\vc14\ilmbase-release\lib\Iex-2_2.lib ^
-DIMATH_HALF_LIBRARY=C:\appleseed-deps\stage\vc14\ilmbase-release\lib\Half.lib ^
-DOPENEXR_INCLUDE_DIR=C:\appleseed-deps\stage\vc14\openexr-release\include ^
-DOPENEXR_IMF_LIBRARY=C:\appleseed-deps\stage\vc14\openexr-release\lib\IlmImf-2_2.lib ^
-DOPENEXR_THREADS_LIBRARY=C:\appleseed-deps\stage\vc14\ilmbase-release\lib\IlmThread-2_2.lib ^
-DAPPLESEED_DEPS_STAGE_DIR=C:\appleseed-deps\stage\vc14 ^
..
```

Open the Visual Studio solution file (.sln file) that was generated in build and build the plugin in the configuration of your choice (Debug or Release).

## On Linux

The following instructions assume that:

- You are using the prebuild linux dependencies that can be found [here](#)

Make sure to adapt them as required.

In a Bash shell, inside a plugin's directory, type:

```
export APPLESEED_DEPENDENCIES=/directory/with/precompiled/dependencies
export CMAKE_INCLUDE_PATH=$APPLESEED_DEPENDENCIES/include
export CMAKE_LIBRARY_PATH=$APPLESEED_DEPENDENCIES/lib
export LD_LIBRARY_PATH=$APPLESEED_DEPENDENCIES/lib
```

- With an **end-user** release of appleseed:

```
mkdir build
cd build
cmake \
-DUSE_STATIC_BOOST=OFF \
-DBoost_SYSTEM_LIBRARY_RELEASE=$APPLESEED_DEPENDENCIES/lib/libboost_system-gcc48-mt-1_61.so.1.61.0 \
-DAPPLESEED_INCLUDE_DIR=../../../../../src/appleseed \
-DAPPLESEED_LIBRARY=../../../../../lib/libappleseed.so \
..
make
```

- With a **working copy** of the appleseed repository:

```
mkdir build
cd build
cmake \
-DUSE_STATIC_BOOST=OFF \
-DBoost_SYSTEM_LIBRARY_RELEASE=$APPLESEED_DEPENDENCIES/lib/libboost_system-gcc48-mt-1_61.so.1.61.0 \
-DAPPLESEED_INCLUDE_DIR=../../../../../src/appleseed \
-DAPPLESEED_LIBRARY=../../../../../lib/Ship/libappleseed.so \
..
make
```