

SCons: A software construction tool

- Configuration files are Python scripts.
- Built-in support for C, C++, D, Java, Fortran, Yacc, Lex, Qt and SWIG, and building TeX and LaTeX documents.
- Configuration file name should be SConstruct
- To run use command scons

Building Simple C / C++ Programs:

```
Program('hello.c')
```

Specifying the Name of the Target:

```
Program('new_hello', 'hello.c')
```

Building Object Files:

```
Object('hello.c')
```

Compiling Multiple Source Files:

```
Program('program', ['prog.c', 'file1.c', 'file2.c'])
```

Building Libraries:

```
Library('foo', ['f1.c', 'f2.c', 'f3.c'])
StaticLibrary('foo', ['f1.c', 'f2.c', 'f3.c'])
SharedLibrary('foo', ['f1.c', 'f2.c', 'f3.c'])
```

Linking with Libraries:

```
Library('foo', ['f1.c', 'f2.c', 'f3.c'])
Program('prog.c', LIBS=['foo', 'bar'], LIBPATH='.')
```

Implicit Dependencies:

```
Program('hello.c', CPPPATH = '.')
```

Creating a Construction Environment:

```
import os
env = Environment()
env = Environment(CC = 'gcc',
                  CCFLAGS = '-O2')
env.Program('foo.c')
```

Example of DM:

```
import os
env = Environment()
env.Append(IOTVITY_DIR = '/home/vankagan/Ganesh/iot/iotivity-1.2.1')

iotvity_dir = env.get('IOTVITY_DIR')

env.AppendUnique(CXXFLAGS = ['-std=c++0x', '-Wall'])

env.SharedLibrary('DM_iotivity', 'DM_iotivity.cpp', CPPPATH = [iotvity_dir
+ '/resource/include/',
    iotvity_dir + '/resource/csdk/stack/include',
    iotvity_dir + '/resource/c_common/ocrandom/include',
    iotvity_dir + '/resource/c_common/',
    iotvity_dir + '/resource/csdk/logger/include',
    iotvity_dir + '/resource/oc_logger/include',
    iotvity_dir + '/resource/examples',
```

```
        './'
    ],
    LIBS = ['coap', 'connectivity_abstraction' , 'oc_logger' ,
'octbstack' , 'oc'],
    LIBPATH= [iotvity_dir + '/out/linux/x86_64/release'])
```