RUN IOTIVITY

(For 16.04 LTS Ubuntu Version x64 architecture)

Contents

DOWNLOAD IoTIVITY AND SET UP SYSTEM CONFIGURATIONS

- Install Build essentials

  sudo apt-get install build-essential git scons libtool autoconf valgrind doxygen wget unzip

- Install External Libraries

  sudo apt-get install libboost-dev libboost-program-options-dev libboost-thread-dev uuid-dev libexpat1-dev libglib2.0-dev libsqlite3-dev libcurl4-gnutls-dev

- Download 1.3-rel branch from the following github location

  https://github.com/iotivity/iotivity

MAKE CHANGES TO FILES FOR BUILDING IOTIVITY

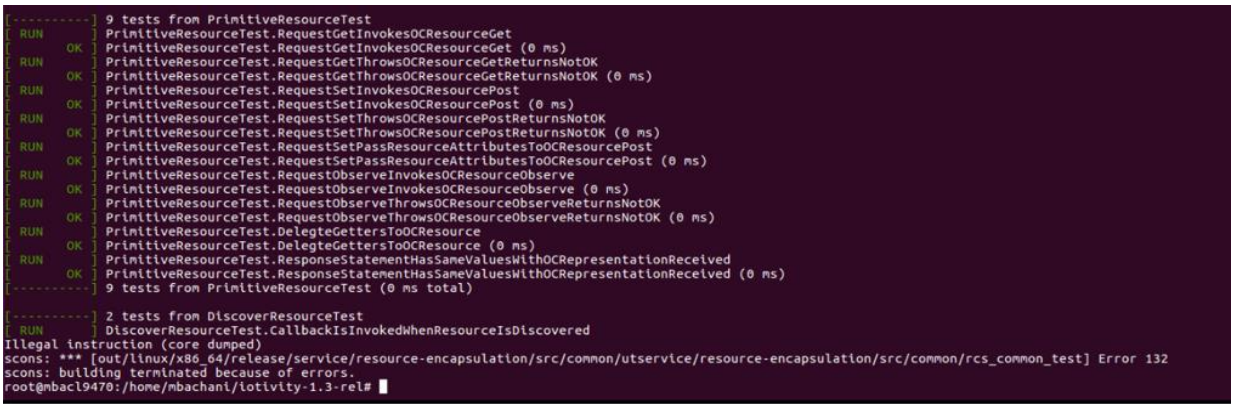
- Only for Ubuntu x64 architecture,
    - Navigate to ~. /iotivity/resource/csdk/stack/test
    - Open stacktest.cpp
    - Change the SHORT_TEST_TIMEOUT from 5 second to 55 second

BUILD AND RUN IOTIVITY

- Navigate to iotivity home directory. Run 'scons' command on the terminal. (It will take around 5-10 mins to finish building).
  NOTE: There are various options with which scons can be used. See following for various options: https://wiki.iotivity.org/build_iotivity_with_ubuntu_build_machine

- To run test cases, run following command
  scons TEST = 1

  NOTE: If you run into any problem such as this one,



Solution to it is following:

- Comment the following lines in the specified file
  - **File location:** ~/iotivity/service/resource-encapsulation/src/common/SConscript
  - **Lines to be commented:** 129-136
- scons -c
- scons
- scons TEST = 1

RUN EXAMPLES

Note: Navigate to 'out/linux/x64_x86/release' directory in iotivity folder. There will be '.a' and '.so' files. These are shared libraries. ('.so' files corresponds to shared object and '.a' files are archived objects).

- export LD_LIBRARY_PATH=<iotivity>/out/linux/x86_64/release
- C++ example are in <iotivity>/out/linux/x86_64/release/resource/examples
  C examples are in
  <iotivity>/out/linux/x86_64/release/resource/csdk/stack/samples/linux/SimpleClientServer.

- Run basic client and server example

```
cd
${project_dir}/out/${TARGET_OS}/${TARGET_ARCH}/${BUILD_MODE}/resource/examples/

killall simpleserver simpleclient # make sure none are running

./simpleserver 2>&1 | tee simpleserver.log.txt &

./simpleclient 2>&1 | tee simpleclient.log.txt

killall simpleserver # since simpleclient is over let's stop server too
```

- Run specific server and client
  - Navigate to <iotivity>/out/resources/examples
  - Following examples will be present

Run any pair of server and client.
./fridgeclient and ./fridge server on separate terminals.

- Run security provisioning example:

Provisioning Client test steps:

1. $ cd <out>/resource/csdk/security/provisioning/sample
2. $ ./sampleserver_justworks (optionally, "$./sampleserver_justworks |& tee ss-jw.log" to capture output for later study)
3. <open a second console in same dir>
4. $ ./provisioningclient (using | tee not suggested as it tends to make menu unusable, but once the process is memorized, you can then use | tee to capture client-side logs)
5. at provisioningclient app menu, choose "10" <enter>
6. after discovery completes, one device should appear in "un-owned" list and the menu is re-displayed
7. at provisioningclient app menu, choose "20" <enter>
8. after doing JustWorks OTM completes and the menu is re-displayed
9. at provisioningclient app menu, choose "10" <enter>
10. after discovery, same deviceuuid as step 6. should appear but now in "owned" device list

Also you can run the security unit tests:

Security Unit Tests:

1. $ cd <out>/resource/csdk/security/unittest
2. $ ./unittest

On successful build, following message will be seen: