

## Prerequisite

1. Java 1.8 or higher(To install jdk 1.8 on linux, run the following:)

```
$ sudo add-apt-repository ppa:webupd8team/java
$ sudo apt-get update
$ sudo apt-get install oracle-java8-installer
```

2. Gradle 2.3 or higher(To install Gradle on linux, run the following:)

```
$ sudo add-apt-repository ppa:cwchien/gradle
$ sudo apt-get update
$ sudo apt-get install gradle
```

3. Jython 2.7 or higher(To install Jython on linux, follow these steps:)

- Go to the following Link and Download Jython 2.7.0 installer
- <http://www.jython.org/downloads.html>
- After download is complete, run the jar file using java-8
- Follow the installation procedure.

4. Robot Framework

- Go to the following link and download zip
- <https://github.com/robotframework/robotframework>
- Extract the zip file
- Go to the root folder of robot framework, open terminal and run:

```
$ python setup.py install
```

## Build Instructions

1. Go to the root folder
2. From the terminal, run:

```
$ ./build.sh
```

## How to run Conformance TC

1. Go to the root folder of Conformance Test Tool

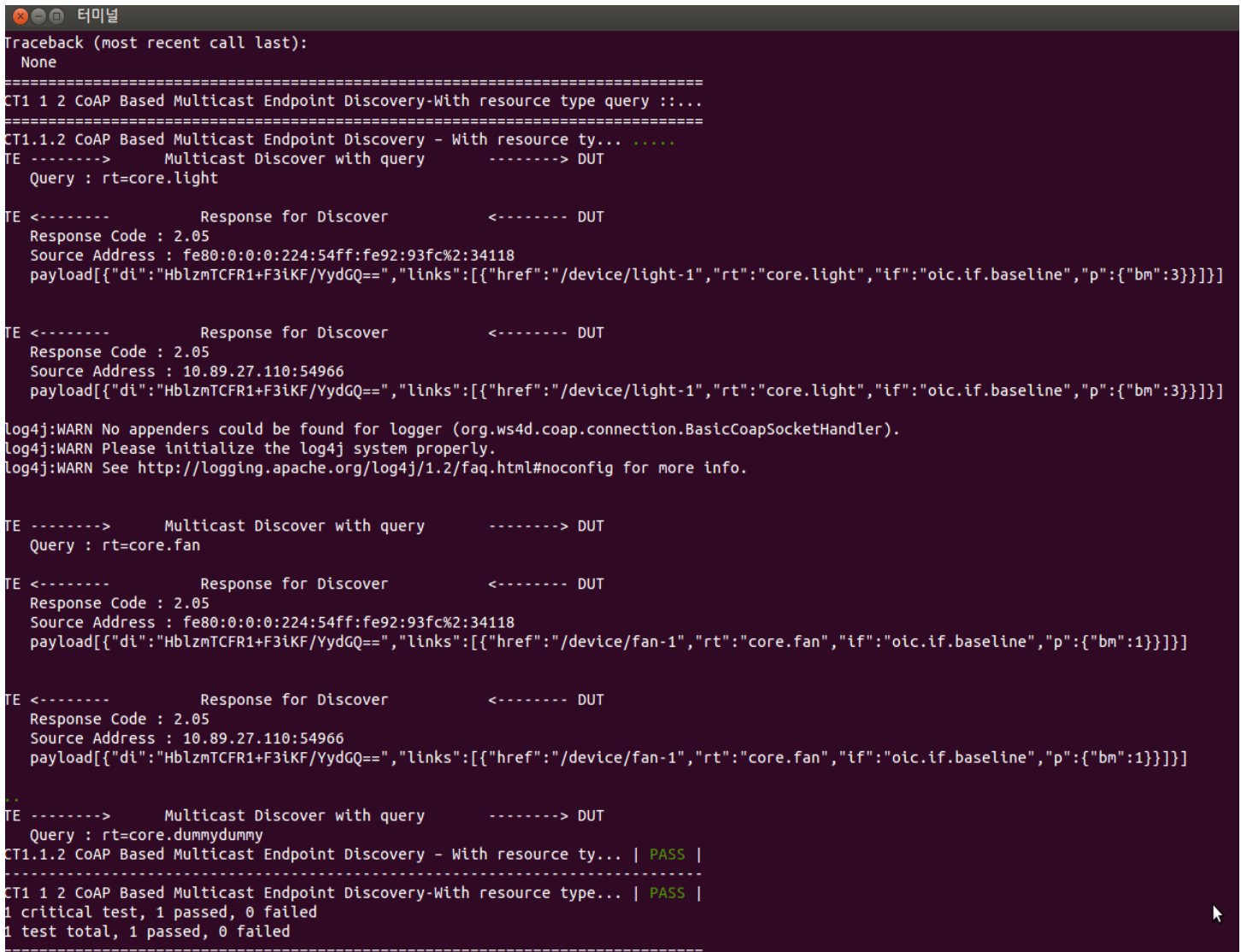
## 2. Then Run:

```
$ cd bin/linux/ConformanceTestTool/testsuite
$ chmod +x run_tc.sh
```

## 3. To run a TC file, execute ./tc\_run.sh <TC\_File\_Name>, e.g.

```
$ ./run_tc.sh CT1_1_1_CoAP_Based_Multicast_Endpoint_Discovery-
No_Query.txt
```

## 4. The result report will be saved at < path\_to\_conformance\_tool>/bin/linux/ConformanceTestTool/testreport/<timestamp>/



```
터미널
Traceback (most recent call last):
  None
=====
CT1 1 2 CoAP Based Multicast Endpoint Discovery-With resource type query :...
=====
CT1.1.2 CoAP Based Multicast Endpoint Discovery - With resource ty... .....
TE ----->      Multicast Discover with query      -----> DUT
  Query : rt=core.light

TE <-----      Response for Discover      <----- DUT
  Response Code : 2.05
  Source Address : fe80:0:0:0:224:54ff:fe92:93fc%2:34118
  payload[{"di":"HblzmTCFR1+F3iKF/YydGQ==","links":[{"href":"/device/light-1","rt":"core.light","if":"oic.if.baseline","p":{"bm":3}}]]

TE <-----      Response for Discover      <----- DUT
  Response Code : 2.05
  Source Address : 10.89.27.110:54966
  payload[{"di":"HblzmTCFR1+F3iKF/YydGQ==","links":[{"href":"/device/light-1","rt":"core.light","if":"oic.if.baseline","p":{"bm":3}}]]

log4j:WARN No appenders could be found for logger (org.ws4d.coap.connection.BasicCoapSocketHandler).
log4j:WARN Please initialize the log4j system properly.
log4j:WARN See http://logging.apache.org/log4j/1.2/faq.html#noconfig for more info.

TE ----->      Multicast Discover with query      -----> DUT
  Query : rt=core.fan

TE <-----      Response for Discover      <----- DUT
  Response Code : 2.05
  Source Address : fe80:0:0:0:224:54ff:fe92:93fc%2:34118
  payload[{"di":"HblzmTCFR1+F3iKF/YydGQ==","links":[{"href":"/device/fan-1","rt":"core.fan","if":"oic.if.baseline","p":{"bm":1}}]]

TE <-----      Response for Discover      <----- DUT
  Response Code : 2.05
  Source Address : 10.89.27.110:54966
  payload[{"di":"HblzmTCFR1+F3iKF/YydGQ==","links":[{"href":"/device/fan-1","rt":"core.fan","if":"oic.if.baseline","p":{"bm":1}}]]

..
TE ----->      Multicast Discover with query      -----> DUT
  Query : rt=core.dummydummy
CT1.1.2 CoAP Based Multicast Endpoint Discovery - With resource ty... | PASS |
=====
CT1 1 2 CoAP Based Multicast Endpoint Discovery-With resource type... | PASS |
1 critical test, 1 passed, 0 failed
1 test total, 1 passed, 0 failed
=====
```

< Illustration 1: TC Execution Using Conformance Test Tool >

CT1 1 2 CoAP Based Multicast Endpoint Discovery-With resource type query Test Report - Mozilla Firefox
CT1 1 2 CoAP Based ...
file:///home/antu/git/oictest\_repo/lotivityTes
Search
LOG
Generated 20151028 00:53:08 GMT +09:00 8 seconds ago

# CT1 1 2 CoAP Based Multicast Endpoint Discovery-With resource type query Test Report

## Summary Information

Status:

All tests passed

Documentation:

CT1.1.2 CoAP Based Multicast Endpoint Discovery – With resource type query

Start Time:

20151028 00:52:35.569

End Time:

20151028 00:53:08.136

Elapsed Time:

00:00:32.567

Log File:

log.html

## Test Statistics

Total Statistics	Total	Pass	Fail	Elapsed	Pass / Fail
Critical Tests	1	1	0	00:00:31	
All Tests	1	1	0	00:00:31	

Statistics by Tag	Total	Pass	Fail	Elapsed	Pass / Fail
Discovery	1	1	0	00:00:31	
Mandatory	1	1	0	00:00:31	
Server	1	1	0	00:00:31	

Statistics by Suite	Total	Pass	Fail	Elapsed	Pass / Fail
CT1 1 2 CoAP Based Multicast Endpoint Discovery-With resource type query	1	1	0	00:00:33	

## Test Details

Totals Tags Suites Search

Name:

CT1 1 2 CoAP Based Multicast Endpoint Discovery-With resource type query

Status:

1 critical test, 1 passed, 0 failed  
1 test total, 1 passed, 0 failed

Documentation:

CT1.1.2 CoAP Based Multicast Endpoint Discovery – With resource type query

Start / End Time:

20151028 00:52:35.569 / 20151028 00:53:08.136

< Illustration 2: View of Conformance Test Tool TC Execution Result >

## Pre-requisite for ConformanceSimulator:

5. scons is required to build ConformanceSimulator
6. ConformanceSimulator is based upon Iotivity. So Iotivity project must be built for linux
  - a. Go to the top(root) directory of 'Iotivity' project.
  - b. Follow the pre-requisite steps described for Iotivity project.
  - c. Run the below command (for non-secured resource):

```
$ scons TARGET_OS=linux
```

(Note: C sdk requires tinycbor. Please follow the instruction in the build message to install tinycbor).

- d. To build Iotivity using Secured resource option, run the below command:

```
$ scons TARGET_OS=linux SECURED=1
```

## How to build ConformanceSimulator :

3. Go to the top(root) directory of 'ConformanceSimulator' project.
4. Run the below command to build Conformance simulator

```
$ scons
```

5. Help:

```
$ scons -h
```

6. Clear:

```
$ scons -c
```

## How to run ConformanceSimulator:

5. From the top(root) directory of ConformanceSimulator, go to linux binary folder:

```
$ cd bin/linux/
```

6. Append the library location of Iotivity to system library path:

```
$ export LD_LIBRARY_PATH=$LD_LIBRARY_PATH:<path-to-Iotivity-root>/out/linux/x86/release/
```

7. Alternatively, for 64 bit operating system:

```
$ export LD_LIBRARY_PATH=$LD_LIBRARY_PATH:<path-to-iotivity-  
root>/out/linux/x86_64/release/
```

8. To run ConformanceSimulator in default settings (NON-confirmable, IPv6, non-secure server):

```
$ ./ConformanceSimulator
```

9. General command to run ConformanceSimulator:

```
$ ./ConformanceSimulator [QoS<0/1>] [IP_Version<4/6>]  
[Security<0/1/2>]
```

QoS: 0 = NON, 1 = CON

IP\_Version: 4 = IPv4, 6 = IPv6

Security: 0 = unsecure, 1 = Secure\_client, 2 = Secure\_server

10. e.g., to Run IPv4 non-secure NON-type server:

```
$ ./ConformancSiulator 0 4 0
```

11. Alternatively,

```
$ ./ConformancSiulator 0 4
```

12. To run IPv6 secure CON-type client:\

```
$ ./ConformancSiulator 1 6 1
```

13. To run IPv6 secure CON server:

```
$ ./ConformancSiulator 1 6 2
```

```
터미널
20. Send POST Request - Partial Update
21. Send POST Request - Create Sub-Ordinate Resource
22. Send Delete Request
23. Observe Resource - Retrive Request with Observe
24. Cancel Observing Resource
25. Cancel Observing Resource Passively
26. Discover Device - Unicast
27. Discover Device - Multicast
28. Discover Platform - Unicast
29. Find Group
30. Join Found Resource To Found Group
31. Quit Conformance Simulator App

1
createResource called!!
Current resource info:
Server Started
Inside onResourceServerStarted...
Resource created successfully
Current resource info:
Server Started
Inside onResourceServerStarted...
Resource created successfully
Please Select an option from the menu and press Enter
Server Operations:
1. Create Normal Resource
2. Create Invisible Resource
3. Create Resource With Complete URL
4. Create Secured Resource
5. Create 100 Light Resources
6. Create Group Resource
7. Delete All Resources
8. Delete Created Group
Client Operations:
10. Find core.light Type Resource
11. Find Specific Type Of Resource
12. Find All Resources
13. Find core.light Type Resource - Unicast
14. Find Specific Type Of Resource - Unicast
15. Find All Resources - Unicast
16. Join Found Resource To The Group
17. Send GET Request
18. Send PUT Request - Create Resource
19. Send PUT Request - Complete Update
20. Send POST Request - Partial Update
21. Send POST Request - Create Sub-Ordinate Resource
22. Send Delete Request
23. Observe Resource - Retrive Request with Observe
24. Cancel Observing Resource
25. Cancel Observing Resource Passively
26. Discover Device - Unicast
27. Discover Device - Multicast
28. Discover Platform - Unicast
29. Find Group
30. Join Found Resource To Found Group
31. Quit Conformance Simulator App

< Illustration 3: Conformance Simulator Execution >
```