World Class Standards

6TiSCH/6lo PLUGTESTS REPORT

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15–17 July 2015
Berlin, Germany

Overview of the Event

- Event organized by:
  - ETSI (European Telecommunications Standards Institute)
- Supporting Companies/Projects:
  - OpenMote (hardware, www.openmote.com)
  - OpenWSN (firmware www.openwsn.org)
- Event sponsored and funded by:
  - European Commission
- 15 Participating Companies
  - 3 observer companies
- 8 independent implementations

Plugtests Agenda

Joint 6TiSCH/6lo Agenda (JULY 2016)			
Time	Friday 15	Saturday 16	Sunday 17
08:30		Room Opening	Room Opening
09:00 11:00		TEST SESSION #3	TEST SESSION #7
11:00 13:00	SET-UP	TEST SESSION #4	TEST SESSION #8
13:00 14:00	LUNCH 12:30 to 13:30 WELCOME 13:30 to 14:00	LUNCH	LUNCH
14:00 16:00	TEST SESSION #1	TEST SESSION #5	TEAR-DOWN 14:00 to 15:00
16:00 18:00	TEST SESSION #2	TEST SESSION #6	
18:00 19:00	WRAP UP	WRAP UP	

Summary of Event Planning

- 1 preparation call
  - ETSI/Experts group led and organized
  - Collaborating Web conf (GotoMeeting)
  - Included Vendor Participants
- Test Plan Development
  - 6TiSCH -> Led by Thomas Watteyne, Xavier Vilajosana, Maria Rita Palattella and Tengfei Chang
  - 6lo -> Led by Carsten Bormann and Kerry Lynn


Joint 6TiSCH/6lo Plugtest – 15 to 17 July 2016
ETSI
PLUGTESTS
INTEROP EVENTS
European Commission

Results Reporting

- The results of each interoperability test session have been recorded in a dedicated web application software: the ETSI Test Report Tool (TRT)
  - After each test execution the interoperability result is agreed among all participants and then recorded
  - After each test session the report is submitted to ETSI

Test descriptions

6TiSCH Test descriptions (will be publicly available)

Testing: Minimal, Security, 6P, SF0, 6LoRH and BBR

1 TD_6TiSCH_SYN_01
2 TD_6TiSCH_SEC_01
3 TD_6TiSCH_SEC_02
4 TD_6TiSCH_6P_01
5 TD_6TiSCH_6P_02
6 TD_6TiSCH_6P_03
7 TD_6TiSCH_6P_04
8 TD_6TiSCH_6P_05
9 TD_6TiSCH_SF0_01
10 TD_6TiSCH_SF0_02
11 TD_6TiSCH_SF0_03
12 TD_6TiSCH_BBR-ND_01
13 TD_6TiSCH_BBR-ND_02
14 TD_6TiSCH_BBR-ND_03
15 TD_6TiSCH_BBR-ND_04
16 TD_6TISCH_BBR-ND_05
17 TD_6TiSCH_6LoRH_01
18 TD_6TiSCH_6LoRH_02
19 TD_6TiSCH_6LoRH_03
20 TD_6TiSCH_6LoRH_04

6TiSCH/6lo Tests Outcomes 1/2

- 6TiSCH 6P: More than 85% interoperability
  - Several aspects to be improved:
    - Need for wider functionality on 6P Count
    - Pagination in 6P List command is needed
    - Mechanism to assert consistency in the schedule of two nodes.
- 6lo NFC: More than 80% interoperability
  - It may be better to have a 6lo gateway
  - It requires a packet sniffing mechanism to check detail field values

6TiSCH/6lo Tests Outcomes 2/2

- 6lo BBR: More than 66% interoperability
  - Clarification needed in the draft:
    - Status code in the ARO option
    - Host route in the router
  - Fix implementation problems
    - status code not correct in the ARO Option

Conclusions – 6TiSCH/6lo

- Conclusion
  - Great success! Enabled to detect standard gaps using real implementations, e.g, 6P. Valuable feedback that will be materialized in drafts.
  - Progress through implementation and real testing.

- Recommendations for future:
  - Improve Format of the Plugtests: Add a flexible pre-test session.
  - Advertise it more in advance

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THANK YOU!

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