

IETF TEEP Hackathon

- IETF 106
- Nov. 16-17, 2019
- Singapore



Great TEEm ☺



What we planned

- Open Trust Protocol:
 - Evaluate OTrPv1 vs TEEP (aka OTrPv2) proposal
 - Test implementations of OTrP-over-HTTP
- Brought prototypes of TAM and TEEP device
 - TAM with node js by Isobe-san
 - TAM with SGX by Dave Thaler
 - TEEP device on OP-TEE by Akira Tsukamoto
 - TEEP device on SGX by Dave Thaler

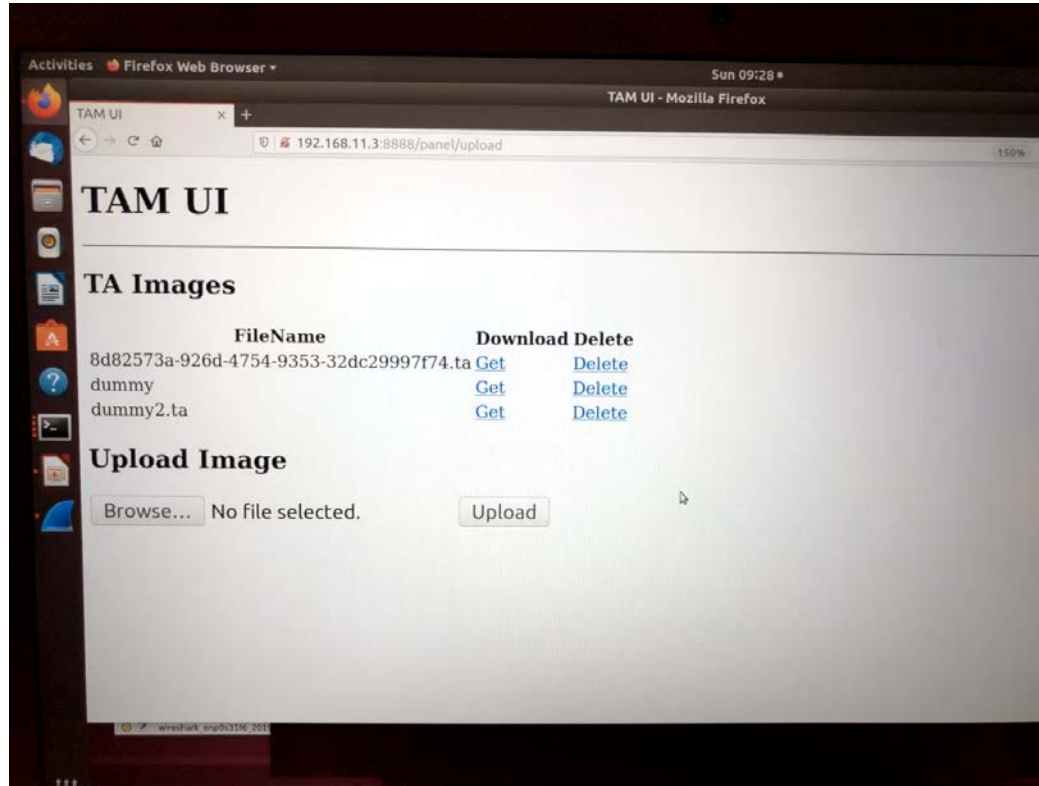
What got done

- First time to interop OTrP/TEEP protocol implementations built from specs.
 - See pictures on following pages.

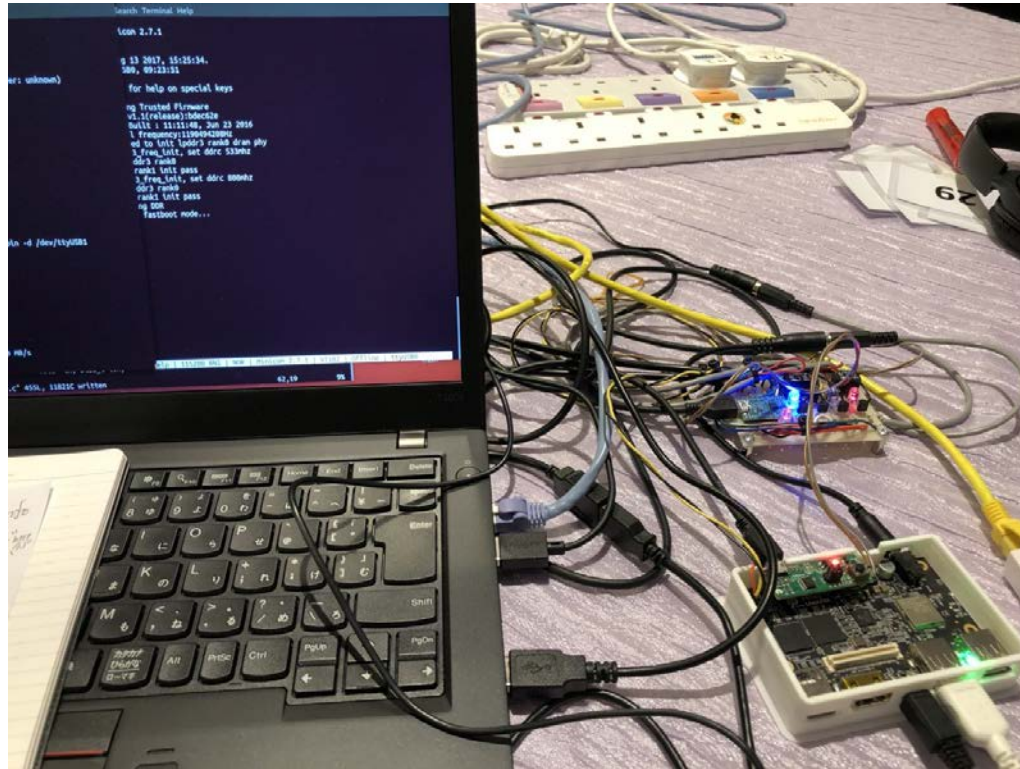
On the Table



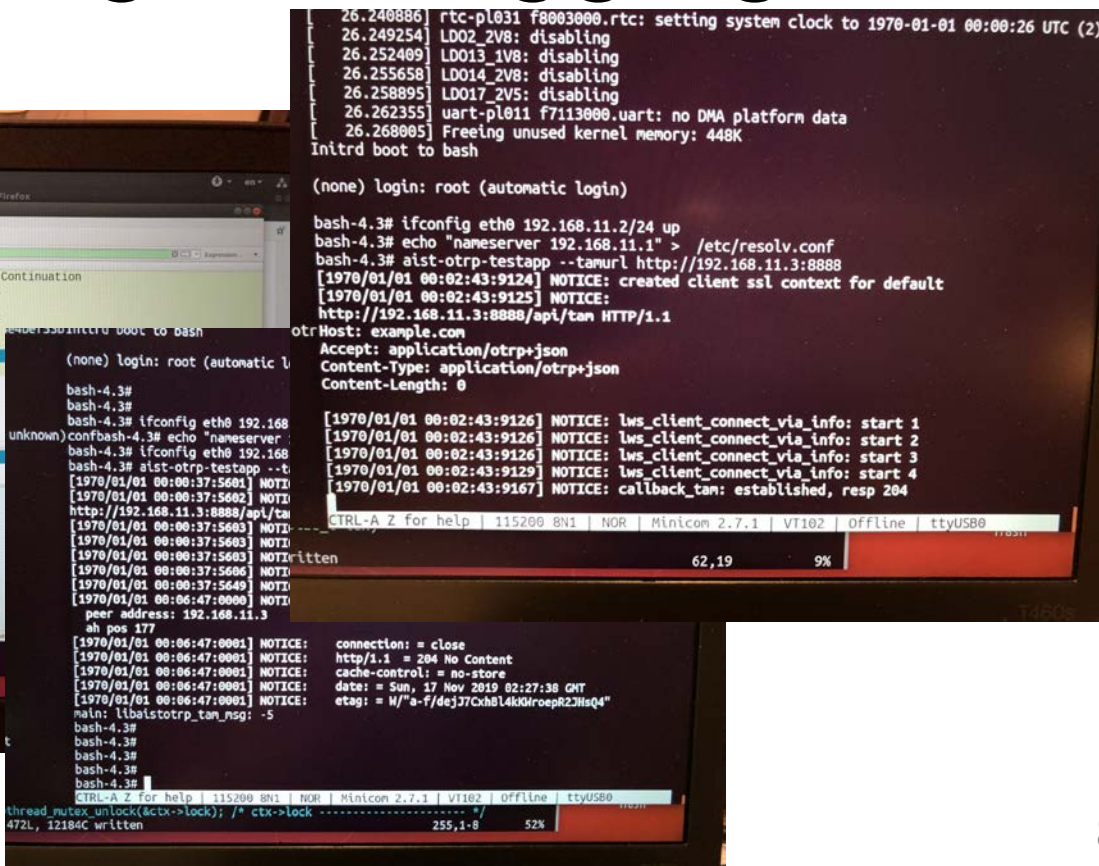
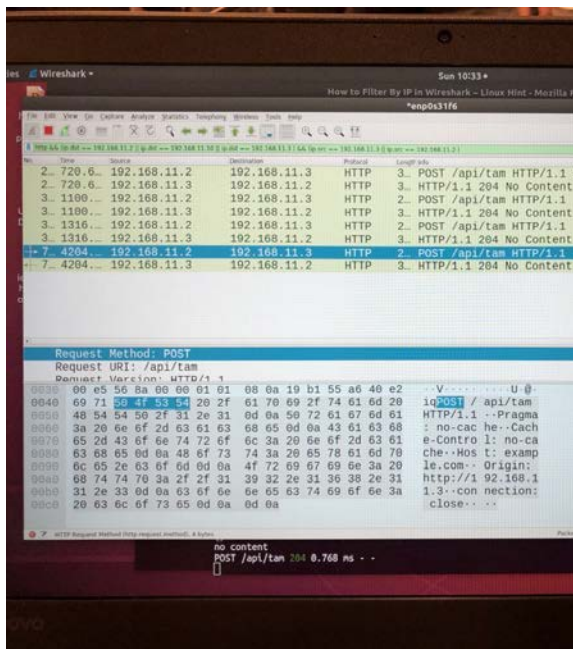
TAM`s UI for uploading TA



TEEP device



Hacking, Debugging!



TEEP Device installing TA

```
I/TC: bootstrap: install_ta()
on I/TC: install_ta: start
: unI/TC: install_ta: 1
I/TC: install_ta: 2
I/TC: install_ta: 3
I/TC: install_ta: tee_fs_rpc_data_mount_req()
E/TC:? 0 install_ta:117 Installing 8d82573a-926d-4754-9353-32dc29997f74
E/TA: lws_l_emit_optee:101 Wrote TA to secure storage

[1970/01/01 00:00:41:9851] NOTICE: main: libaistotrp_pta_msg: OK 0
bash-4.3# aist-otrp-test
aist-otrp-test-ta-client aist-otrp-testapp
bash-4.3# aist-otrp-test-ta-client
AIST ta-aist-test client
I/TA: TA_InvokeCommandEntryPoint: AIST OTRP Test TA: Hello IETF TEEP!

aist_otrp_test_ta_client: done
bash-4.3#
```

CTRL-A Z for help | 115200 8N1 | NOR | Minicom 2.7.1 | VT102 | Offline | t

100,1-8 45%

What we learned

- Filed issues
 - draft-ietf-teep-otrp-over-http-03
 - #5: demuxing TEEP vs OTrP
 - draft-tschofenig-teep-protocol-00.txt
 - Would like to have JSON example
- A lot of implementation action items
 - Prerequisite required for OTrP/TEEP
 - HTTP, JSON, CBOR stack must be completely working
 - Require TEE hardware knowledge of SGX, ARM and etc.
 - Heavy implementation

Wrap Up

Team members:

Akira Tsukamoto

Kuniyasu Suzuki

Kohei Isobe

Dave Thaler

Hannes Tschofenig

Nancy Cam-Winget

<https://trac.tools.ietf.org/wg/teep/>

This presentation of hackathon is based on results obtained from a project commissioned by the New Energy and Industrial Technology Development Organization (NEDO).