IETF 107
TEEP Virtual Hackathon Report

Akira Tsukamoto (AIST)

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Schedule

• March 27, Friday (all in Japan Standard Time, UTC+9)

Initially was only meant to be Japan local Hackathon

10:00 - 10:30 planning

10:30 - 12:00 hackathon

12:00 - 13:00 launch break

13:00 - 15:00 hackathon

15:00 - 17:00 break, hackathon (some had meetings)

17:00 - 17:30 wrapup

What we planned

- Try all three messages in TEEP work in sequences
  - QueryRequest <-> QueryResponse
  - TrustedAppInstall <-> Success
  - TrustedAppDelete <-> Success
- Start implementing CBOR format
  - OTrP format was deleted from the draft, only CBOR now
- Try TEEP on SGX
  - Building Dave's TAM and Device on SGX
  - Learn how SGX would handles between TAM and Device

Attendees

Total 10 attendees. (Thank you!)

- Kohei Isobe, Yuichi Takita, Shinichi Miyazawa (Secom)
- Daisuke Itoh (Roboc)
- Takahiko Nagata, Yasuaki Morita (lepidum)
- Dave Thaler (Microsoft) from PST time zone, thanks!
- Tsukasa Oi (TRASIO)
- Kuniyasu Suzaki (TRASIO,AIST)
- Akira Tsukamoto (AIST)

Virtual Hackathon setup

- First time to host Virtual hackathon
- Prepared infrastructure
  - VPN: l2tp/ipsec, provided by Roboc
    - Connecting from Linux/Win/MacOSX
  - Video conference system: provided by Secom
    - V-CUBE meeting
    - Discussion took place in verbal and text chat communication
- Both worked great!

Achievement (1/2)

- Finishing all three sequences in with json format
  - It was not quite finished at Hackathon in Berlin after fixing sign/encryption order. (Isobe-san, Tsukamoto)
  - JSONE format was deprecated in the draft but it was handy for starting CBOR support from working code.
- Started implementing CBOR format
  - Takita-san prepared SUIT manifest in CBOR library, libcsuit.
  - Finished TEEP CBOR message data representation in header file by referencing libcsuit. (Takita-san, Tsukamoto)

Achievement (2/2)

- Successfully able to build Dave's TAM and Device on SGX include OpenEnclave
  - Oi-san built it successfully and transferred the knowledge to Ito-san, Morita-san and Suzaki-san

- Interoperability test inside VPN
  - Dave and Oi-san hosted the TAM servers in the vpn and tried connecting from Device.
  - Dave staying up late 11:00pm in your local time, Thank you!

What we learned (1/2)

- Room for optimizing CBOR representation
    - Found places to remove strings in the message to reduce TEEP message size.
    - Going to move the discussion at github and mailing list.
    - Will add example CBOR message in the draft after implementation works.
- TEEP could handle SGX
    - Further adaptation will be considered

What we learned (2/2)

- Hackathon could be host virtually
  - First time to host virtually and it went well.
- Require having two machines to separate traffic otherwise it will overload VPN connection
  - Development machine connecting to VPN
  - Video chat machine connecting to V-CUBE
- Many text chat helps on virtual hackathon
  - Technical description in text chat is very useful. Used slack. All were in Japanese…

Summary

- Virtual Hackathon works well
- Shared knowledge of CBOR between attendees
- Shared knowledge of SGX between attendees
- CBOR implementation started and all has concrete idea what to do next

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