IETF 107
TEEP Virtual Hackathon
Report

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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/

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