Car Communication WG

This working groups focusses on all the communication protocols between EV and Charging Station (EVerest): DIN 70121, ISO 15118 etc.

Meetings for this WG are currently on a bi-weekly basis, Wednesdays, 3pm - 4pm CET. Please check the EVerest calendar for the meeting entry.

2024-06-12 Meeting Notes

EVerest news:

• Recordings from Open EV summit now online:
  https://youtube.com/playlist?list=PLKyFf1J8XkpsZ7pvq-x4XGcdDA3tv5puI&si=X1EyjBEYACIQFlzZ6

Development Update:

CharIn Testival EUROPE @ Ekoenergetyka Poland

• Preparation
• EvseV2G (EIM & PnC) worked well
• ISO15118-20 DC/DC_BPT could not be tested much as all cars supported dynamic instead of scheduled mode
• EvseV2G + libcbv2g tested and worked well -> We can merge the PR soon

libiso15118:

• Preparation for everest-core beta release is going on

everest-core:

• Merged some small changes for EvseV2G
• Prevent integer overflow
• Correct EvseStatusCode

Open GitHub Issues / PRs

everest-core:

• Switch to CBV2G from OpenV2G for DIN, ISO-2, PnC and SAP
• Beta release ISO15118-20 (draft)
• Adding EvManager module
• Adding OpenSSL support in the EvseV2G module

Open Mic:

Fulup presented details about the Simulator/Replay tool (some discussions about TLS sessions)

• Written in Rust
• Apache-2.0
• Master key extraction for TLS 1.3 in EVerest?
• Primarily simulates a car
• Also implements a responder now (sends responses, waiting for expected requests)
• Container works with podman, should work with Docker
• Waiting for hardware to access Qualcomm QCA7000 easily via Ethernet

2024-05-29 Meeting Notes

EVerest news:

• Recordings from Open EV summit now online:
  https://youtube.com/playlist?list=PLKyFf1J8XkpsZ7pvq-x4XGcdDA3tv5puI&si=X1EyjBEYACIQFlzZ6

Development Update:

• libiso15118 - working on ISO15118-2:
  Adding ISO15118-2 messages
• everest-core:
  PR open - EvManager almost finished. fixing bugs related to the simulation finished - Sending TLS secret key over a UDP message
  PR open - Adding OpenSSL support in the EvseV2G module

2024-05-14 Meeting Notes

Development Update
• Roger implemented wireless SDP part
  • Cornelius suggests to write smth similar to slac module for monitoring WiFi may require bigger changes in EvseManager though
• Released libiso15118 v0.1.1:
  • Adding CI (Linting, building and testing for every PR)
  • Adding auto device support
• libiso15118 – working on ISO15118-20 AC
• everest-core:
  • PR open - EvManager almost finished. Smaller fixes, final testing and documentation are missing
  • PR open - Sending TLS secret key over a UDP message
  • PR open - Adding OpenSSL support in the EvseV2G module

2024-05-02 Meeting Notes

Development Update

• JsEvManager: If you are using node-red via docker-compose, please update your node-red flow with the actual node-red flows from everest-core main!
• EvManager rewritten in C++ is almost finished
• libiso15118:
  • Beta Release ISO15118-20
  • Using libcbv2g in libiso15118
  • Continue work on AC
• TLS Handshake fixed with certain cars (Hyundai and VW)

PR for CI in libiso exists

Question regarding OCSP and the usage of wolfssl

Switch to openssl was made recently, no consensus on utilizing wolfssl from the group, of course would be welcomed as contribution.

2024-04-03 Meeting Notes

EVerest news

• EVerest Release 2024.03.0 imminent

Development Update

• EVerest now supports multiple ISO sessions
• SLAC module update - now supporting vendor specific messages/information for Qualcomm & Lummissil

2024-03-20 Meeting Notes

EVerest News:

• Recordings from conference “Open source in emobility” finally available on PIONIX youtube channel.
  https://www.youtube.com/playlist?list=PLpRf2wSz2ru1Ji4uQvrbY0awUlzkdpf7n

• !! NEW EVerest US summit coming up !!
  Open EV charging summit, May 15+16, Dallas Texas
  @
  TEXAS INSTRUMENTS INCORPORATED – HEADQUARTERS
  12500 T I Blvd, Dallas, TX 75243
  https://events.linuxfoundation.org/open-ev-charging-summit/

• EVerest feature freeze announced until next TSC

Development Update:

• JsEvManager PR is almost finished https://github.com/EVerest/everest-core/pull/549
  • JsEvManager will take the part of EV simulator, better abstraction layer with interface to EV commands
• libCHAdeMO C++ Skeleton is finished
  • Repo is still private, until licensing issues are cleared with LFE

Community Area:

• OpenV2G Replacement in EvseV2G PR
  • https://github.com/EVerest/everest-core/pull/563
  • DIN, ISO-2 AC & DC and EIM & PnC is now working in the SIL.
  • In the next few weeks, we will have to test with real cars. After that, PR can be merged

• Handling libeviso15118 from Roger Bedell
  • Before PR , some discussion needed on the general architecture, probably only happening in 2nd week of April
• Help Wanted
  ◦ Adding Unit tests in libcbv2g
  ◦ https://github.com/EVerest/libcbv2g/issues/4
  ◦ https://github.com/EVerest/libcbv2g/issues/5
  ◦ will also forward to General WG

Other topics:

Craig mentioned we should have a discussion about certificate handling and utilization of libevsecurity, can help with certificate trust lists

2024-02-21 Meeting Notes

EVerest News:

• Adding in the next days Issues and PR templates for the relevant repos from this WG (libiso15118, cbexign, ext-switchev-iso15118, libslac, libcbv2g, ...)

Development Update:

• Created the new libcbv2g as a replacement for OpenV2G. It contains the generated code from cbxigen and a CMake Integration
• Created a new Branch in libiso15118 to support ISO15118-2 + Adding code from Roger Dash-2 PR in this Branch

Community Area:

• ISO15118-8/Wifi: Roger has successfully made ISO15118-8 work with the wifi15118 repo. However, there are further discussions about who, how and when ISO15118-8 will be integrated into EVerest.
• Help wanted:
  ◦ EvseV2G - Integration of libcbv2g as OpenV2G replacement https://github.com/EVerest/everest-core/issues/544
  ◦ EvseV2G - complete migration to libevse-security https://github.com/EVerest/everest-core/issues/532

Open Topics:

• How are changes to libcbv2g updated in cbexigen?

2024-02-07 Meeting notes

General EVerest news

• Chargebyte testing -2 -20 in Arnhem went positive, no major hickups
  ◦ Moritz sends mapping table for PnC certs
• CHAdemo skeleton on its way
  ◦ Work on the implementation ongoing during the next weeks
  ◦ Licensing terms still to be cleared - TODO for LFE, waiting for solution
• CB new exi code is safe to be used as underlying exi also for the din spec and iso 2 protocol -20 and PnC as well
• Support for the PyJosev module will be discontinued in the next few weeks
• Discussion of creating a libexi library with the generated cbxige Exi c code; to replace OpenV2G and get the Exi code out of the libiso15118 -
  ◦ Aligned during meeting. Positively approved, will move forward
• Unit Tests for cbxigen
  ◦ Going forward with that! https://github.com/EVerest/cbexigen/issues/67
• Presented plan for General release cycle for EVerest - more info in the General WG meeting
• Iso 15118-8 / wifi - anyone working on this / interested in it?
  ◦ Roger looked into that, seems “doable” but not on his priority currently, good starting point somewhat missing. Looking for other potential contributors to work on that.
• Open topics from last meeting were all marked done.(see notes from last meeting)