

Data Expert Group: Architecture and Infrastructure

This is the landing page for the Architecture and Infrastructure pillar of the Data Expert Group.

- [Introduction](#)
 - [Building on earlier work](#)
 - [Communication](#)
- [Sub-pages](#)

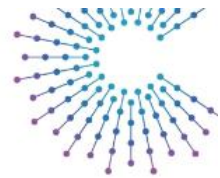
Introduction

The scope of the group is any technologies (software) involved in the transfer and use of the Covesa standard data and services description models with the goal of making their adoption quicker and easier. That can be achieved through collaboration on specifications, design patterns, non-differentiating technology and PoCs to prove they work.

For more details see the [The 2022 Autumn AMM Data Expert Group Introduction](#):

Data Architecture and Infrastructure

- Evolve CVII Tech Stack scope (which still feels relevant):
 - Technology Stack definition: "Any technologies (software) involved in the transfer and use of the standard data model and standard services description model"
 - Defined by: Implementation (Community development projects), Specifications
- For Data Expert Group in-scope touch points make it quicker and easier to adopt the standard data and services model through:
- Design patterns,
 - E.g., cooperation between in-vehicle data stores and servers, or edge data processing
 - Pool domain expertise from within and outside automotive
- Non-differentiating technology accelerators,
 - E.g., adapters, connectors, code generators, comms protocols, data storage/analysis/sync
 - For common architecture components such as Kafka, Spark etc.
 - and Automotive specifics such as Android VHAL, Vehicle API etc.
- and PoCs
 - To prove the above.



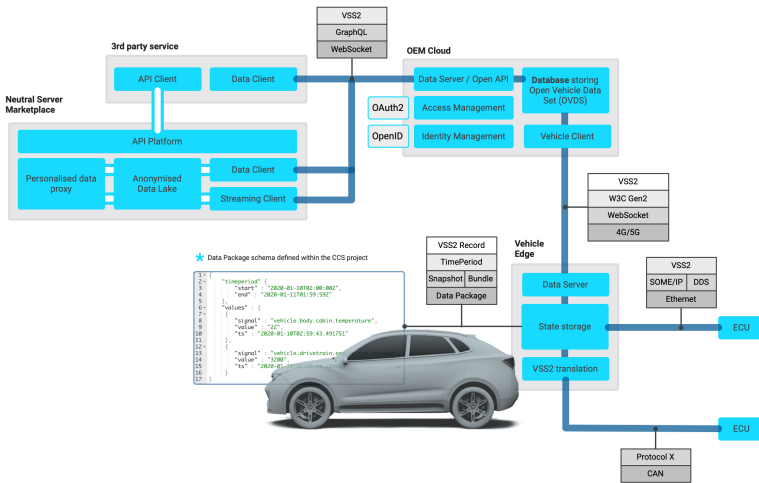
Data
Architecture
/
Infrastructure

- Data Base Layer.
Storage,
serialization,
synchronization.
- Technical
implementations
and proofs of
concept.

AMM Thursday 9am-
12: Working Session
to develop the project
plan

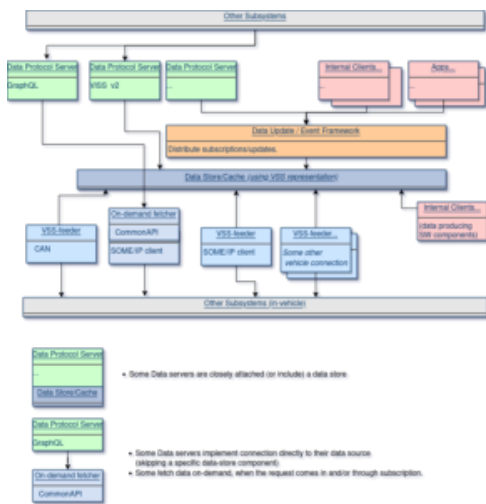
Building on earlier work

The Genivi [Cloud & Connected Services \(CCS\)](#) project investigated the requirements of open data capture in-vehicle and its connection to back-end systems in the cloud. One of the deliverables was this well known cloud reference architecture diagram:



Source: [CCS Reference Architecture - Work Breakdown Structure](#)

CCS was followed by the [Common Vehicle Interface Initiative \(CVII\) Tech Stack](#) project which investigated the software required to transfer and process the standard VSS data model. For that a mutual understanding of terms and common components were required. The latter resulted in this in-vehicle architecture diagram, which is intended to show the likely in-vehicle components and how they interact, rather than specify a specific monolithic architecture:



These two diagrams, the CCS Cloud reference architecture and the CVII Tech Stack in-vehicle architecture will be foundational building blocks for discussion of evolved versions in the Data Architecture and Infrastructure team.

Communication

To avoid multiple sources of information please refer to the [Data Expert Group](#) main page for details of the community calendar and communication channels.

Currently the group meets weekly on Wednesday afternoons at 5pm CET:

Stephen Lawrence is inviting you to a scheduled Zoom meeting.

Topic: Data Expert Group: Architecture and Infrastructure
Time: Nov 2, 2022 05:00 PM Amsterdam, Berlin, Rome, Stockholm, Vienna
Every week on Wed, until Oct 11, 2023, 50 occurrence(s)
Nov 2, 2022 05:00 PM

Please download and import the following iCalendar (.ics) files to your calendar system.

Weekly: <https://us06web.zoom.us/join/tZwodempjotGdWrdaqM4LJ0ECSXsmxy4sz-/ics?icsToken=98tyKuGgqzkqG9yUtxqGRpw-GYjoc-vxiH5ajadqjvhvKEg0HTimME8FxCqFyCMGE>

Join Zoom Meeting <https://us06web.zoom.us/j/88520181731?pwd=dnplcTdvT0dVdHNXYzdiQ1RjbFdYUT09>

Meeting ID: 885 2018 1731
Passcode: @DATA1

In Slack we use the data expert group channel. Hope to see you there.

Sub-pages

- [Architecture and Infrastructure Meeting Minutes](#)
- [Data Architecture / Infrastructure Pillar projects](#)
 - [Central Data Service Playground](#)
 - [Early planning](#)
 - [Artifact JSON-RDF Converter](#)
 - [Playground design artifact outline](#)
 - [Playground Development Notes](#)
 - [Embedded Databases \(IoTDB, Realm etc\)](#)
 - [VISSR \(WII\) VISS Data Server](#)
- [Data Architecture Pillar Proposals](#)
 - [Central Data Service playground proposal](#)
 - [Central Data Service Playground outline](#)
 - [Design Pattern / Data Architecture documentation proposal](#)
 - [Proposal for the elaboration of a Data Architecture framework including a Knowledge Layer.](#)
- [Data Architecture Terminology \(incl. logical components\)](#)
- [Planning Pages](#)
 - [2023 Autumn AMM \(Data Architecture and Infrastructure\)](#)
 - [2023 Spring AMM \(Data Architecture and Infrastructure\) Workshop](#)
 - [2024 Spring AMM Planning \(Data Architecture and Infrastructure\)](#)