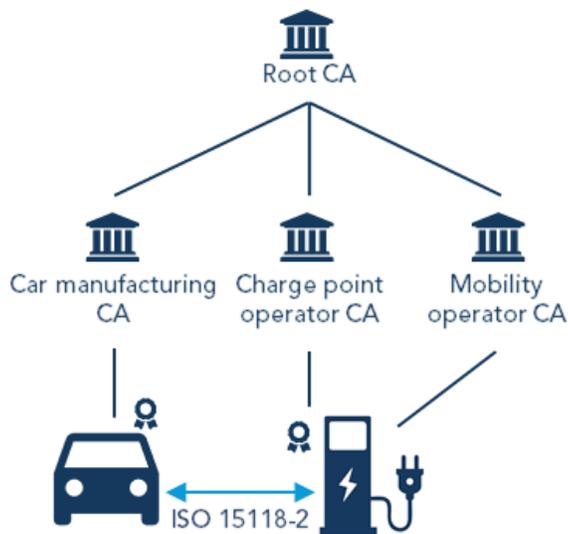


Identities for vehicle-to-grid - V2G PKI



Common Criteria certified PKI platform

Smart ID Certificate Manager (CM) and Nexus OCSP Responder have been certified in compliance with Common Criteria EAL4+.

For more information, see [Common Criteria certification](#).

Do you want to know
more?

[Contact us](#)

Nexus' solution for protecting vehicle-to-grid communication (V2G) with PKI certificates is compliant with common standards and used in plug & charge applications.

Plug & charge use case

The plug & charge functionality has the following goals:

- **E-roaming:** any e-vehicle with a contract from any mobility operator can charge at any charge point
- **Usability:** effortless, cashless and transparent payment without the need for RFID or mobile identification
- **Smart tariffs, bill signing:** the mobility operator signs bills - with dynamic tariffs - on behalf of the consumer
- **Smart charge control:** charging profile can be prepared according to grid status

Roles

The goal of V2G PKI is that the following parties can trust each others' certificates and contracts:

- Vehicle manufacturers (OEMs) provide IDs for e-vehicles (EVCCs) with plug & charge functionality.
- Charge point operators (CPO) provide IDs for charge points (SECCs) with plug & charge functionality.
- Mobility operator (MO) close contracts with consumers and provide signed electronic contracts for the e-vehicle, which are presented to the charge point for charging.

Nexus' solution

Nexus' V2G PKI solution is based on [Smart ID Certificate Manager](#), which has the following features:

High availability and performance

- Guaranteed high performance with a proven capacity to issue 10,000 certificates per second
- Offered as a managed service - with guaranteed SLA and capacity as you grow - or for licensing
- High availability, with >99,7% uptime measured on monthly basis
- Supports monitoring via logs or SNMP, reporting possibilities and regular backups and health checks

Compliance

The solution complies with international standards, such as the following:

- ISO 15118 for plug & charge, where Nexus were early adopters in close technical cooperation and agile approach together with customers
- PKI policy and management according to ETSI 319 411-1 "Normalized Certificate Policy", yearly audit

Proven security

- Quality-assured, high-security CA software with Common Criteria EAL 4+ certification in progress
- Nexus has solid PKI expertise since > 20 years and numerous large-scale references
- Nexus' data center and organization comply with ISO 27001
- Nexus' organization comply with the VDA ISA requirements in TISAX (Trusted Information Security Assessment Exchange), the information security standard for the automotive industry
- Mature, future-safe, highly reliable, continuously tested and maintained software

Scalable platform

- Highly scalable horizontally by adding service nodes.
- Multi-CA and multi-tenancy enabled platform helps you adapt the PKI hierarchy, administration and reporting to your needs.