

Blockchain concept for Porsche



Remme.io and Infopulse joined forces to develop a concept for Porsche that enables management of user access to a vehicle using Blockchain.

Solution

A Blockchain-based solution allows a car owner to securely share access to a vehicle with any family member, another driver, a technician, etc. for a certain period of time in particular area or distance. The access is safeguarded by a certificate in the hardware key, obtained by the owner. The hardware key can create the mesh connection to a car to control it remotely with the help of SSL/TLS connection. Upon creating such connection, the car can check the revoked state of the certificate key with the Blockchain internal light node.

Features

- ▶ Rootstock system (open-source) as a basis for the Porsche Blockchain distributed system.
- ▶ Every block is signed by a pre-defined minimal number of federative nodes; Porsche controls the system and shows transparency of transactions.
- ▶ Creating timestamps and checkpoints without any possibility to reverse or change a transaction. Using multi signature of >75% federative nodes to create a checkpoint.
- ▶ Number of side chains can be used to distribute different types of information in the system with its counterparts.

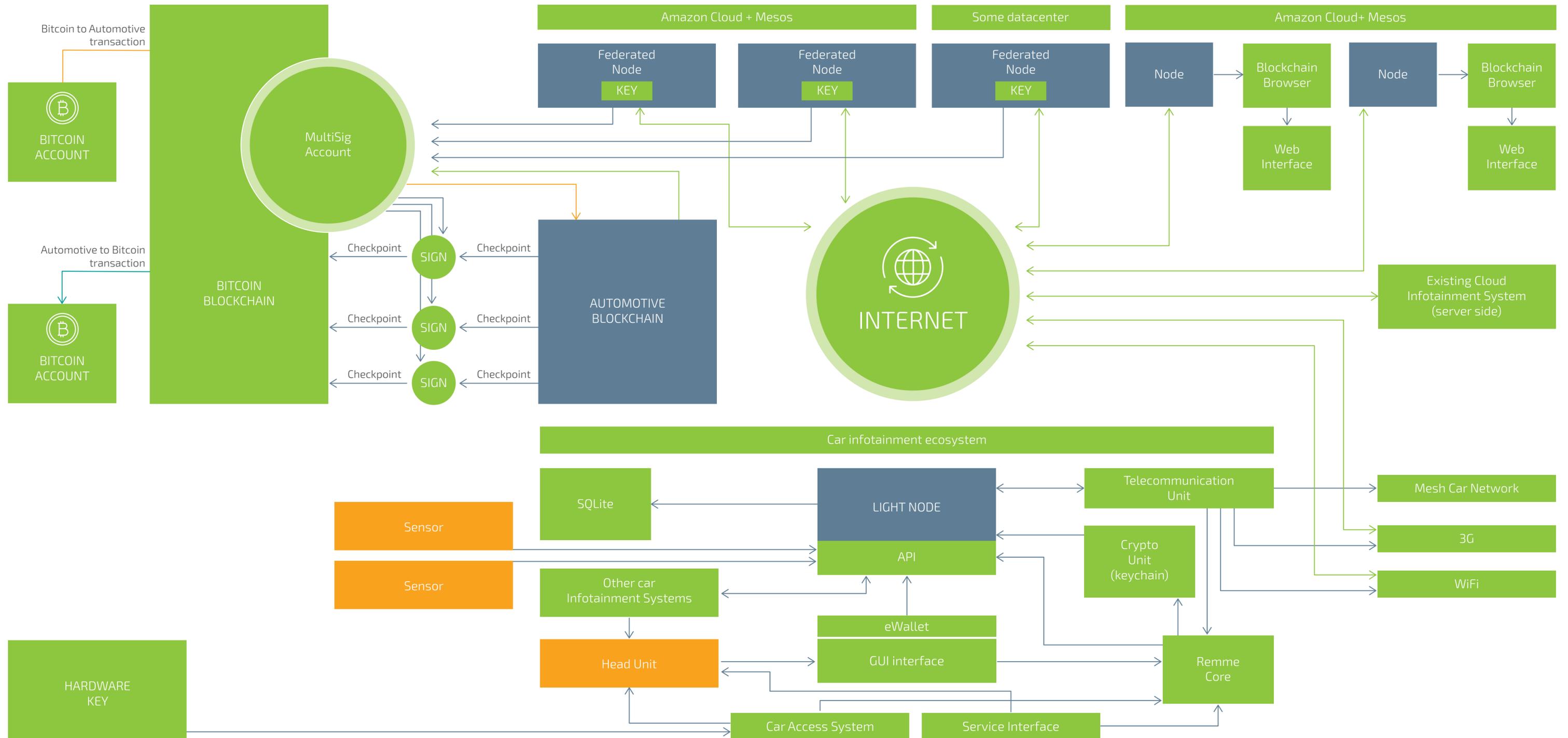
Technology

The automotive Blockchain software stack runs on a self-contained system, Federated Node, via Docker. The car system should be complemented with a separate hardware crypto-module for encryption and key storage that can be installed on a CAN bus.

* The solution can be also implemented with Hyperledger (Linux Foundation) and any cloud provider to set up and run the nodes.

[View System Architecture](#)

System Architecture





About Infopulse

Infopulse, part of Nordic IT group EVERY A/S, is an international vendor of services in the areas of Software R&D, Application Management, Cloud & IT Operations, and Cybersecurity to SMEs and Fortune 100 companies across the globe. Founded in 1991, the company has a team of over 1,800 professionals and is represented in eight countries across Western and Eastern Europe.

Infopulse provides in-depth expertise in automotive software development that includes navigation, computer vision, augmented reality, connected car, cybersecurity, embedded systems, and other solutions. With our help, customers strengthen their technological capabilities, achieve faster time-to-market, reach a wider talent pool, and gain new competitive edge by embracing innovations.

Contact us:



Aleksey Denysyuk

Head of Automotive Service Line

+380 (44) 585-25-00

a.denysyuk@infopulse.com

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