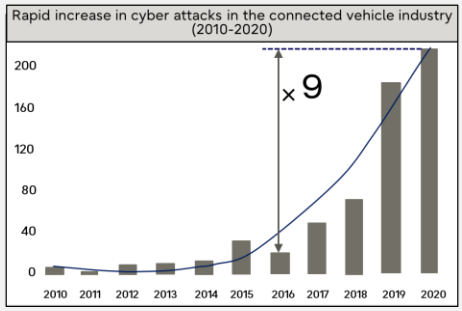
LockingSeed

Key Management Service

A service that provides functions for generating, storing, and distributing "Cryptographic Keys" required for automotive cybersecurity measures.

Rapidly Increasing Cyberattacks on Automobiles



The number of cyberattacks on connected cars has increased significantly since 2016. Most of them are remote attacks over the network; these attacks include external communications used for connected cars and autonomous driving and communications with tools such as (diagnostic, analysis, reprogramming, and other equipment) that connect to vehicles. Encryption technology (procedures for encryption and decryption) is required to protect vehicles from such attacks. Encryption technology requires "Cryptographic Keys," and a Key Management is a system for securely generating, storing, and distributing cryptographic keys.

What is Fujitsu's Key Management Service?

- **Service Overview**

The "Cryptographic Keys" required for automotive cybersecurity measures are used throughout the automobile's life cycle (from the production phase to the repair and scrapping phase). So, the "Key Management System" must securely generate, store and operate the "Cryptographic Keys" during the life cycle. Fujitsu's Key Management System, LockingSeed, helps users generate, store and operate "Cryptographic Keys." It is an integrated Key Management System with high reliability, a wide variety of encryption algorithms, and expandability that prioritizes security such as vehicle availability and vulnerability countermeasures. It can be implemented in a short period without building new facilities.

① **Key Generation/Key Storage**

Generate the "Cryptographic Key" needed for encryption, authentication, and digital signature. Not only the generated "Cryptographic Keys," but also various keys distributed from the multiple suppliers such as automobile manufacturers can be securely managed.

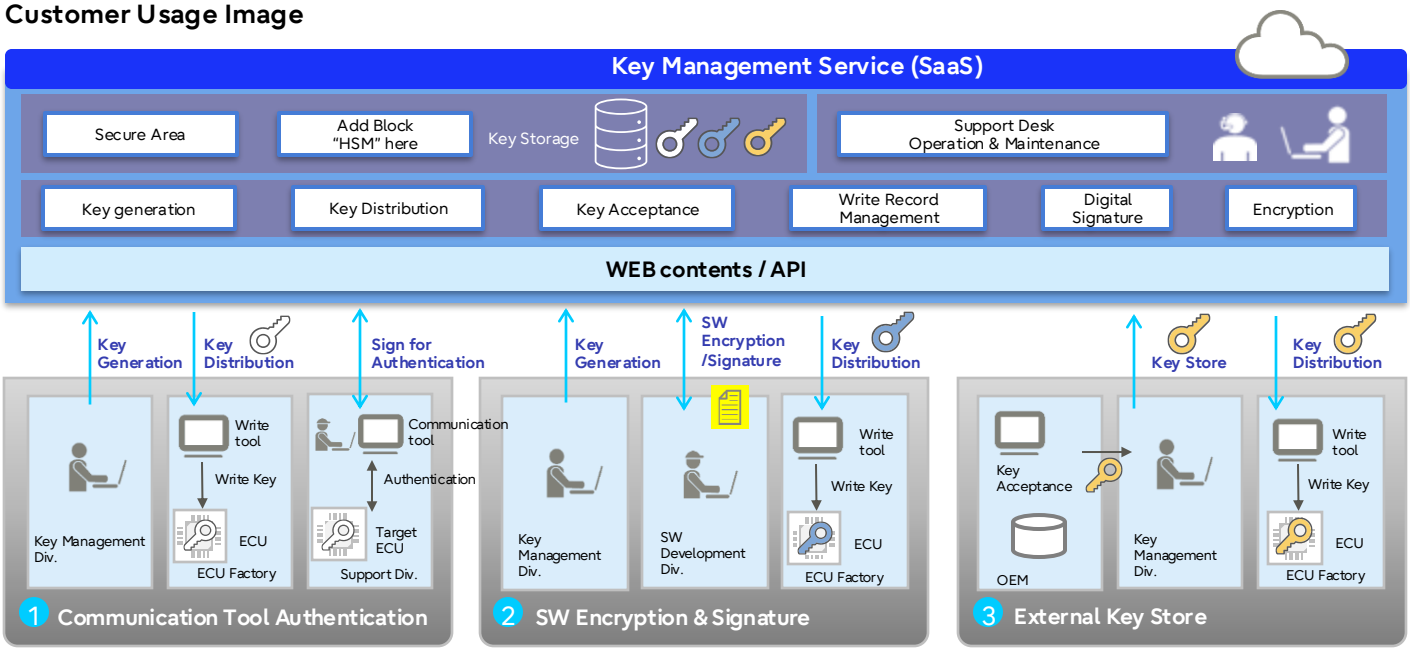
② **Connection Tool Authentication**

Add the digital signature to generate Cryptographic Key and identify whether the diagnostic/analysis equipment (Connection Tool) can be connected to the ECU.

③ **Software encryption and digital signature**

Create digital signatures to ensure the authenticity of the software.

Customer Usage Image



Features and benefits of LockingSeed

Low cost and quick implementation through using existing possession

- SaaS service requires no capital investment and reduces the initial deployment time to 1/3.
- Elimination of the operation support team will significantly reduce the resource maintenance, and the cost of in-house development can be reduced to 1/2.

Operations by experts and reliable service infrastructure

- The service is operated by Fujitsu experts familiar with vehicle security technology.
- Central management of Cryptographic Keys on a reliable infrastructure minimizes security risks and stores customers' keys securely.

Supports international standards and the latest security technologies

- The service meets international NIST security guidelines.
- It supports encryption algorithms with a strength of 128 or higher, which is recommended for use even after 2030 and can be used safely for an extended period following the vehicle life cycle.
- The functions of future new encryption algorithms are updated accordingly.

Supports security measures by multiple business partners

- A variety of standard encryption algorithms enables dealing with multiple business partners' requests.
- Cryptographic Keys corresponding to requests are separated and managed securely in a secure zone for each business partner.

Contact

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