DEVICE AUTHORITY

Use Case: PKI Management for Connected Trucks

Situation

A multi-utility company based in Italy, specializing in waste management, recycling logistics, and environmental services, sought a robust PKI-based security framework for its growing fleet of connected waste disposal trucks. These vehicles rely on telematics systems for routing, diagnostics, emissions monitoring, and driver safety – all of which require secure, authenticated communication with cloud-based platforms.

Given the critical nature of the services provided, the customer needed a way to manage vehicle identity, ensure secure ownership transfers (in cases of resale or leasing), and automate certificate provisioning and renewal throughout the vehicle's lifecycle. Manual processes were inefficient and risk-prone, especially at scale, and a future-proof solution was required to integrate with their existing Azure-based infrastructure.

Solution

Device Authority KeyScaler was used to provide:

- PKI Services for IoT with full Automated Identity Lifecycle Management, including certificate issuance, renewal, and revocation.
- Trust anchor technology embedded in each vehicle's Telematics Control Unit (TCU) to establish secure identity at the hardware level.
- Seamless integration with Microsoft Azure IoT and the customer's Connected Vehicle Platform, enabling zero-touch device provisioning via Microsoft DPS (Device Provisioning Service).

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Automotive: PKI Management for Connected Cars



Conclusion

With KeyScaler, the customer established a scalable and secure PKI framework that simplifies identity management across its connected fleet. Automated onboarding and certificate lifecycle operations reduced the operational burden on IT and security teams, while enabling secure transfer of ownership when vehicles were sold or leased. Integration with the customer's existing Azure infrastructure meant faster deployment and a consistent security posture across both vehicles and backend systems. This solution not only enhanced the integrity of vehicle data and communications, but also supported regulatory readiness and improved operational agility across their transportation network.

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