



ERICSSON

Providing reliable
connectivity for
live payments
within mass transit

Executive summary

Faced with a new government mandate requiring live real-time payments, seven public transit agencies - representing about 4,000 buses - needed ultra-reliable, low-latency connectivity without expanding costly on-board infrastructure. By deploying a single integrated 5G/Wi-Fi/security/SD-WAN device and leveraging containerized apps and APIs, they met sub 500 ms latency targets for payment transactions, met Payment Card Industry Data Security Standards (PCI DSS), ensured resilient multi-carrier coverage, and simplified operations and management.

Key challenges



- ✓ Comply with a new government mandate to enable live payments across 4,000 transit vehicles.
- ✓ Keep end-to-end latency for payment data below 500 milliseconds to preserve the passenger experience.
- ✓ Support multiple simultaneous on-board services (Computer-Aided Dispatch (CAD), Automatic Vehicle Location Systems (AVL) & DVR/cameras) while dynamically tracking what assets are installed on each bus.

Solution



- ✓ Deployed **Ericsson Cradlepoint R1900 routers** with dual cellular modems across the fleet to provide resilient, multi-carrier cellular and Wi-Fi as WAN connectivity.
- ✓ Implemented **Ericsson NetCloud Secure Connect** to create a zero-trust based WAN, providing security for sensitive payment data, while eliminating the need for complex VPNs and private APN services.
- ✓ Implemented **NetCloud SD-WAN** for centralized management of multiple WAN links and for intelligent traffic steering to optimize cost and application performance
- ✓ Deployed **on-board, SDK applications** to provide automated asset tracking for each bus, eliminating manual tracking by transit operators.

Results

- **Consolidated infrastructure:** the R1900 combined 5G, Wi-Fi, SD-WAN, security and container applications simplifying installations and maintenance.
- **Performance within mandate:** visibility into ensuring payment transactions consistently met the <500 ms latency threshold and complied with PCI DSS.
- **Very low zero-touch deployments enabled** to ensure that as routers are deployed, they automatically update their software, load their configuration and inherit the zero-trust and SD-WAN policies.
- **High availability:** redundant carrier connections with coverage mapping enabled route-level visibility to the quality of each carrier's coverage in the area and enabled carrier selection based. on signal quality
- **Traffic assurance:** application-based traffic steering to prioritize payment and operational communications traffic. Forward error correction (FEC) will mitigate against packet loss. Delivery model (on-premises or cloud) was adapted to each agency's requirements.

