

DEPLOY: DEVICE SOFTWARE

UTILIZING THE POWER OF THE CLOUD FOR COLLABORATION

THE CHALLENGE

The software-defined vehicle is shifting the industry from electromechanical-focused products to electrified connected vehicles (EVs). Given this transformation, a leading automobile manufacturer aims to modernize its secure communication gateway that connects all data-generating components in the car.

Built on the latest vehicle network processor from a leading silicon manufacturer, the new hardware platform addresses the connectivity requirements for autonomous driving, including aggregation and management of data collected from a variety of sensors such as lidar, radar, ultrasonic sensors, and high-definition cameras.

Due to the complexity of the project and the long lifecycle of the communication gateway, the architecture must rely on open standards, using a Linux-based embedded operating system and related technologies. The silicon vendor is willing to provide a reference Linux OS to prove and validate device functionality.

However, the manufacturer must partner with a commercial OS vendor to optimize the Linux stack, ensure successful integration of all components, and count on reliable long-term support and maintenance under an aggressive service-level agreement.

THE SOLUTION

Using Wind River® Studio and benefiting from the existing relationship between Wind River and the silicon provider, multiple teams can collaborate under a single cloud-native environment to develop and deliver early-access releases even while hardware is still in an unstable iteration or available only via a simulator.

Drawing on the integrated Wind River Studio Pipeline Manager and validating on simulators in Wind River Studio Virtual Lab, the OS development team can run multiple iterations while the hardware is being optimized for general availability.

THE RESULTS

Engaging early and leveraging a tight existing relationship, and acting within a common development and integration environment, the manufacturer can meet its hard deadline and launch the product on time and on budget.



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