WNDRVR Studio

DEPLOY: VIRTUALIZATION

REENGINEERING LEGACY PLATFORMS FOR DIGITAL SCALE

THE CHALLENGE

A leader in smart-manufacturing automation helps industrial companies be more productive and sustainable by delivering products such as distributed control systems, lighting control, programmable controllers, energy monitoring, and input/output modules.

The company needs to consolidate its wide portfolio of proprietary operating systems and standardize on a common architecture to reduce development complexities and maintenance costs, accelerate deployment, and leverage the advantages of a unified platform OS. At the same time, the new platform must integrate an OCI-compliant container engine to deploy the existing portfolio of proprietary and third-party partner applications.

Overall, the new aggregated software architecture will require the use of robust hypervisor technology to run the existing OSes side by side with a new OS and ensure container runtime support for application portability. The existing solution's portfolio is built and validated on Arm® Cortex-A53 architecture, and each system has a certification component.

THE SOLUTION

Leveraging the built-in virtualization technology in Wind River® Studio, based on Wind River Helix™ Virtualization Platform, the team can run its existing OSes in a virtual environment next to the market-leading VxWorks® real-time OS and Wind River Linux guest operating system.

With the built-in test automation framework, it can migrate its existing test assets and automate execution using cloud resources. The built-in access to virtual targets in Wind River Studio Virtual Lab and the safety artifacts repository allows for streamlined certification of software components for regulated markets.

THE RESULTS

This new design approach and consolidated software architecture allow the company to expand on its existing proprietary OS portfolio to achieve a standardized, certifiable, extensible, COTS-based platform. The initial investment into re-architecting the solutions portfolio will pay off over the long term through significant saving on maintenance and certification costs.

RELATED USE CASES

Solve the Challenges with Multiple Operating Systems »

Accelerate Testing in Virtual Labs with Unlimited Targets »

Certifying Industrial Mission-Critical IoT »

Digital Twins for a Complex Industrial Operational Network »