

DEVELOP: DEVICE SOFTWARE

DELIVER ON TESTS WITHOUT HARDWARE

THE CHALLENGE

A steel materials solutions manufacturer uses VxWorks® for its distributed control system (DCS), which manages machines that produce rebar. The current design has been in the field for almost 10 years, and the company is now designing a next-generation DCS that will incorporate new I/O functionality, such as automatic water valve operations.

The company would like to use the millions of lines of process code it already has, incorporating new code for the new features.

Although the hardware platform was launched several months ago, the silicon vendor is impacted by supply chain issues that are severely limiting the number of development boards the team can access. The few available boards are physically located in one office and are being used for platform configuration and application development.

The platform team has completed a preliminary build with VxWorks, which includes the new features, and now they want to validate it. The platform must go through a rigorous round of functional testing. Most of the test engineers are geographically dispersed and don't have access to any physical targets. The lack of boards is directly impacting the team's ability to meet aggressive timelines.

THE SOLUTION

Wind River® Studio includes test automation capabilities integrated with a virtual hardware lab consisting of both physical and virtual targets. Wind River provides a variety of test plans for VxWorks that can be used to validate against virtual models for reference hardware.

The platform team will use the limited physical boards, as well as several virtual instances, to perform validation tests. Using the test automation capabilities in Studio helps the team accelerate its timeline for delivery to the application team. Meanwhile the application team will use virtual targets to start development earlier, while waiting for the final platform.

THE RESULTS

Using Studio's virtual lab and test automation capabilities, both teams are able to collaborate on the integration of their respective test harnesses to improve overall software quality and find issues earlier in the development process.



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