# PARTNERING WITH WIND RIVER PULSAR LINUX

## Unlock a New Systems Integrators Path

Wind River® is proud to offer Wind River Pulsar™ Linux, a certified run-time distribution, for inclusion on commercial off-the-shelf partner hardware platforms.

Pulsar is a small, certified, and secure Linux operating system that is pre-loaded on hardware boards from our trusted partners. The pre-packaged joint solution is tested and validated to work out of the box, capturing new opportunities emerging from a hardware-centric OS model.

*Table 1: Key Benefits*

| Benefits for Systems Integrators | Benefits for End Users |
|---|---|
| • **Leverage a single support infrastructure from a trusted and established vendor:** Avoid complicated certification and development processes with multiple stakeholders.<br>• **Unlock new opportunities:** By adding a certified out-of-the-box OS you open up a new distribution model as a systems integrator, bringing more value to end customers.<br>• **Drive a shared-risk business:** Defer software acquisition costs from the prototyping and design phase to the volume shipping phase. Cover the cost only when you ship and for what you shipped.<br>• **Ship an application-ready platform:** Offer extensibility via cloud-based tools, allowing end users to develop and deploy applications using provided software development kits (SDKs) in Wind River Helix™ Cloud. | • **Achieve faster time-to-market:** End users can build and deploy applications in minutes.<br>• **Use an extensible architecture:** An atomic container-based OS enables application middleware abstraction, bringing end users the ability to run any application from any ecosystem on any device, even applications that need their own middleware.<br>• **Keep devices secured and updated:** Developers can access an update agent preconfigured to connect to a trusted Wind River package repository for regular updates. After the prototyping phase, deployed devices can access high-value security updates from a certified repository.<br>• **Access a new ecosystem:** Bridging hardware to the rich Yocto Project Compatible ecosystem connects the fast-growing world of open source development to established embedded hardware.<br>• **Enable creative application development:** In addition to traditional application development, Pulsar is connected to the Wind River family of cloud-based tools and virtual development environments, so applications can be developed directly in the cloud. |

AGENTS OF CHANGE™

## WIND RIVER AND PARTNERS REDUCE EMBEDDED DEVELOPMENT COMPLEXITY WITH A HIGHLY SCALABLE PRE-PACKAGED SOLUTION

More than 50% of embedded projects use an open source–based OS. Although current usage is trending toward open source, integrating new technology and managing code size are the biggest technology challenges, and they directly impact project schedules and resources. Over the course of every project, developers will spend on average of five months working on hardware integration. Over the past five years, the development team resource ratio has remained constant: 60% of resources are spent on software development, and 40% on hardware enablement. What if system maintenance and hardware integration were no longer necessary?

Pulsar fills this gap. Thanks to certification and integration work, Wind River can ensure all needed updates are delivered directly to the devices that run our connected world. And by partnering with Wind River, hardware vendors can offer a solution that is customized and optimized for their hardware platform, so end users can take advantage of a commercially supported, open source–based distribution, and simply focus on their value-added applications.

## AN EMBEDDED OS IN THE BOX

Wind River and its partners create joint value and share risk by bringing a commercial-grade, certified distribution to fit end-user embedded development needs. In addition to the pre-installed OS, Wind River provides ongoing security patches and other critical Linux updates to ensure customers' devices are always protected and current.

Pulsar is a small, high-performance, secure, and manageable application-ready platform that combines the best of Wind River open source technology and delivers it without the traditional cross-build complexity. This shortcut to traditional embedded development allows end users to start developing applications on a Yocto Project Compatible OS in minutes after powering up their hardware.

Each supported silicon board has its own certified binary image. Right out of the box, supported hardware comes with a complete Linux run-time that includes a desktop environment, if graphics are enabled, and an update agent preconfigured to connect to a trusted Wind River package repository.

## THE PATH TO CERTIFICATION

Purpose-built equipment and powerful software are crucial for embedded development. Wind River does not build its own hardware, but does work together with hardware partners to make the integration between these two paramount components seamless. An end-to-end, holistic approach can be hard to manage, so a shared-risk model is a great way to create new value and leverage new opportunities.

"People who are really serious about software should make their own hardware."

—Alan Kay

### 1. Distribution Definition

Wind River and partner select hardware and kernel type software packages to match end user needs. Performance requirements, security requirements, and manageability usage are defined.

### 2  Distribution Creation

Wind River generates the binary image, with binary packages and cross SDKs, performing benchmarking and Q&A testing.  An IRC/community support channel is also set up for end users.

### 3.  Repository Creation

Wind River allocates disk space and bandwidth to each partner, allowing them to convene on traffic policies on the space that hosts the OS binary image and packages. Authentication setup is required and the whole system is tested for the set use cases.

### 5.  Launch

The certified distribution is pre-packaged with hardware, enabling a new ecosystem. Public assets are updated on the Wind River–hosted repository with build-in authentication for the update agent.

### 4.  Go-to-Market

Wind River creates a Web portal linking co-branded assets. Box logos and in-box instruction sheets for the hardware shipping are also provided. Additionally, shared PR and news are delivered.
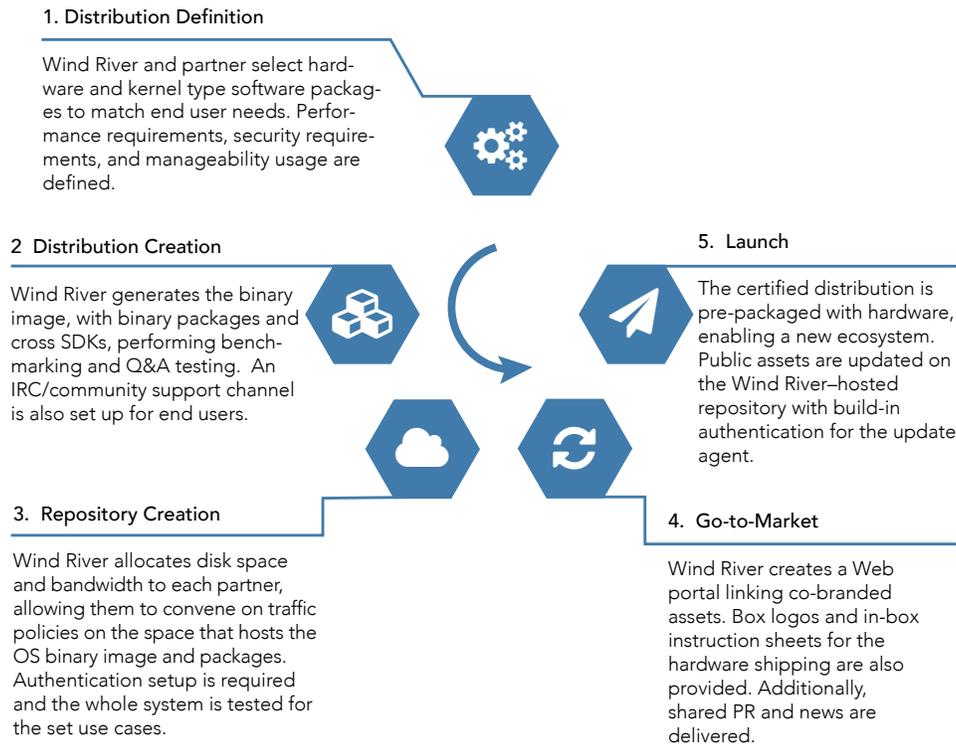
*Figure 1: The certification process*

Wind River and its hardware partners bring a new approach to hardware enabling, leveraging open source technologies and purpose-built hardware capabilities without sacrificing the reliability and performance of hardware-centric solutions. By collaborating with Wind River through the Wind River Pulsar Linux ecosystem, hardware partners share revenue and risk by extending their offering into a ready-to-use platform, delivered together with their hardware, which is always updated and releases end-users of the burden of cross-building and maintenance.

## MORE INFORMATION

Detailed information about Wind River Pulsar Linux can be found at
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Or contact
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