

## WHAT'S NEW IN WIND RIVER LINUX 4 UPDATE PACK 3

Innovations to Speed Development, Increase Performance, and Improve Your Bottom Line

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Wind River Linux 4 is the latest version of our commercial embedded Linux run-time and development platform. Each Update Pack adds new functionality, usability improvements, hardware support, and integrations with add-on products to the core platform. We expect that existing Wind River Linux 4 customers will migrate to this latest platform to take advantage of the following new features.

### CORE PLATFORM ENHANCEMENTS

#### IPv6

Our IPv6 stack has achieved official "IPv6 Ready" certification:

- Reduce total cost of ownership (TCO), cost of work, and fragmentation:
  - Achieves compliance (TAHI test suite), and every daily build is now tested
  - Meets customer requests for IPv6 certified stack
  - Provides a coexistence solution—important because migration from IPv4 is expected to take about 10 years
  - Comes with setup tips and tricks

#### Virtual Routing and Forwarding

Wind River Linux now offers a simple, elegant open source solution, easy to implement and inexpensive, for building next-generation routers:

- Reduce operational expense through consolidation:
  - Allows multiple instances of a routing table to coexist on the same device
  - Creates separate VPNs easily as demand increases (this is an evolution of VLAN-tagging)
  - Leverages network containers with dedicated CPU affinities and Linux user space to roll more than 100 devices into one
  - Accelerates packet processing at the network edge
  - Conforms with Cisco's definition of virtual routing and forwarding (VRF)

## CORE TECHNOLOGY UPGRADES

- KVM uprev
  - Simulate an asymmetric multiprocessing (AMP) solution without using a hypervisor.
- QEMU uprev
  - Easily emulate your target system, enabled on Intel and ARM Cortex-A9 architectures.
- Valgrind extended support
  - Use the memory analysis toolset on these additional hardware platforms:
    - ppc\_e500mc nd 603e (fsl\_p4080, qemu\_ppc, and more)
    - arm\_v7at2\_vfp\_neon, arm\_v7at2

## ADD-ON PRODUCT INTEGRATIONS

### Wind River Simics 4.6

With this integration, teams can start developing projects on Wind River Linux even before hardware is available:

- Lower hardware costs and time-to-market and increase efficiency:
  - Is integrated into Wind River Linux workflows
  - Enables teams to develop, debug, and test complex embedded systems on the host machine
  - Accurately creates an exact simulation of the target
  - Enables teams to freeze and save the state of the simulation
  - Includes Wind River Simics virtual targets in Wind River Workbench remote systems view

### Wind River Linux Performance Studio for Intel Architecture

Three powerful Intel development tools help teams create optimized code to get the most from Intel architecture platforms:

- Boost performance and shorten time-to-market:
  - Integrates Intel C/C++ Compiler, Intel Integrated Performance Primitives, and Intel Vtune Amplifier XE with Wind River Linux 4.2 and higher
  - Optimizes compiler performance on dual and multi-core architectures
  - Provides thousands of algorithms to optimize performance of bandwidth-hungry applications: video and audio streaming, signal and data processing, and more
  - Integrates Vtune with Wind River Workbench, making it easy to analyze application performance

### Intel Data Plane Development Kit

High-performance packet processing on multi-core CPUs is now enabled:

- Increase throughput of high bandwidth applications:
  - APIs for efficient memory management and packet handling as well as optimized poll mode drivers and assistance in overcoming I/O bottlenecks
  - Full support on x86 architectures
  - Open source Intel Data Plane Development Kit (DPDK) implementation on other hardware platforms now available through Wind River Professional Services

### Intel Processor Optimizations

For selected Intel processors, Wind River has included optimizations for hardware management:

- Get the most from your advanced Intel architecture platform.
- Uncover, manage, and correct errors to boost performance.
- Leverage the ACPI platform error interface to optimize power management.

**WIND RIVER**