



Wind River Conductor

An integrated, zero-touch edge orchestration and automation solution for multi-cloud architectures

Managing distributed cloud environments is a complex endeavor, exacerbated by the need to scale across edge sites, data centers, and hybrid infrastructures. Traditional manual processes for orchestrating, deploying, and managing workloads are cumbersome, error prone, and resource intensive. Enterprises and telecommunications operators need a centralized way to simplify operations, improve service delivery, and ensure consistency across diverse environments.

As a centralized automation and orchestration tool, Wind River® Conductor streamlines the deployment, scaling, and life-cycle management of distributed cloud infrastructure and applications across edge, core, and enterprise IT environments. Conductor unifies the management of virtualized and containerized workloads under a single control plane, offering zero-touch provisioning, policy-driven orchestration, and automated fault recovery. Conductor empowers enterprise and telecom teams to control end-to-end service deployments while minimizing manual intervention — even across thousands of geographically distributed nodes.

Conductor abstracts the complexity of infrastructure operations. Its capabilities span site initialization, workload placement, continuous compliance enforcement, and rolling updates, ensuring consistent behavior and high availability. This makes it especially powerful in dynamic, resource-constrained edge environments where operational simplicity, scalability, and resilience are critical.

KEY BENEFITS

Wind River Conductor streamlines workload onboarding and automates configuration audits, [reducing audit time by up to 80%](#) and cutting human intervention by 90%. As deployments scale across more servers, automation helps to make the system more efficient. Conductor streamlines operations with features that include:

- **Faster time-to-revenue:** Automate new revenue-generating services in minutes rather than weeks or months.
- **Lower operational cost:** Create services across multiple sites and automatically deploy thousands of clouds and sub-clouds, public and private.
- **Better compliance and security:** Select preconfigured services from an application catalog and deploy them with drag-and-drop operation, reducing human error and simplifying IT policy enforcement.
- **Simplified topology management:** Deploy and manage workloads across clouds with software-driven delivery that reduces costs and enables rapid provisioning.

KEY CAPABILITIES

Consider the capabilities that make Wind River Conductor compelling:

- **Multi-cloud orchestration:** Enforces consistent policies across distributed cloud environments with centralized control and automation
- **Unmatched scalability:** Enables cloud deployments from a single node to thousands, with unified management across distributed environments
- **A user-friendly drag-and-drop graphic editor:** Simplifies service creation, reduces human error, and expedites deployment workflows
- **Customizable portal and catalog services:** Provides UI flexibility, offers preconfigured services, and streamlines access to resources for faster service delivery
- **TOSCA-based blueprint modeling:** Ensures portability and standardizes service designs with reusable, policy-driven templates
- **Kubernetes management:** Orchestrates containerized workloads, implements consistent operations across clusters, and improves deployment in distributed cloud environments
- **Workload orchestration:** Manages the deployment and lifecycle management of complex applications, optimizes resource utilization, and ensures consistent performance across distributed environments
- **Role-based access control:** Enhances security and manages users' access

CENTRALIZED ORCHESTRATION

Wind River Conductor is an automation tool for orchestrating and managing the complete lifecycle of workloads, services, and infrastructure across distributed cloud environments. Centralized control enables organizations to deploy, monitor, and maintain workloads with ease. Conductor:

- Supports orchestration of both containerized and virtualized workloads
- Orchestrates distributed clouds and subclouds
- Automates the full lifecycle management of infrastructure and workloads, from deployment to updates and decommissioning
- Uses policy-based automation to enforce operational consistency across clouds
- Enables plugins for orchestration, zero-touch provisioning, monitoring, fault management, and lifecycle operations, resulting in faster integration and streamlined cloud management

ZERO-TOUCH AUTOMATION

Automate complex, repetitive tasks across distributed environments for faster service delivery and fewer human errors. Automation features manage provisioning, scaling, upgrades, and maintenance. They include:

- **TOSCA-based blueprints:** Leverage predefined, reusable templates for automated service creation and lifecycle management.
- **Policy-driven orchestration:** Automatically enforce operational policies for security, scaling, failover, and resource allocation.
- **Upgrades and patches:** Perform system updates and vulnerability patches without downtime.
- **Workflow automation:** Orchestrate end-to-end service workflows to eliminate repetitive, error-prone tasks.

MULTICLOUD AND MULTISITE MANAGEMENT

Wind River Conductor offers centralized control for distributed deployments across private and public clouds, whether they are in large, centralized data centers or geographically dispersed edge environments. It features:

- A simple visual interface for unified visibility and control of workloads and infrastructure across multiple clouds and sites, including resource-constrained edge environments.
- Support for subclouds and edge sites to manage thousands of distributed subclouds with consistent operations and centralized governance.
- Multi-cloud automation that enables consistent automation across private, public, and edge cloud environments.

HIGH AVAILABILITY FOR MISSION-CRITICAL DEPLOYMENTS

Wind River Conductor is tightly integrated with Wind River Analytics. Together, they ensure reliable operations for mission-critical workloads, with built-in resiliency and high availability across distributed cloud environments. Using Conductor with Analytics minimizes downtime and supports failover mechanisms for seamless operations even in resource-constrained or geographically dispersed edge sites.

- **Automated healing and recovery:** When a failure is detected, Conductor automatically redeploys workloads or services to healthy nodes.
- **Policy-driven fault management:** Policies ensure consistent handling of errors and recovery actions.
- **Zero-touch updates:** Seamless system updates and patches happen without disruptions.
- **Comprehensive monitoring:** Real-time system health visibility helps you mitigate issues proactively.

SCALABILITY FOR DISTRIBUTED CLOUD ENVIRONMENTS

Wind River Conductor scales seamlessly from centralized data centers to thousands of geographically dispersed edge sites. Its architecture supports growing workloads, diverse environments, and expanding infrastructure. It includes these elements:

- **Hierarchical orchestration model:** Scale management across clouds, subclouds, and edge environments with centralized governance.
- **Consolidated management:** Achieve unified visibility and control as infrastructure scales, through a single pane of glass.
- **Support for edge-to-core:** Orchestrate distributed deployments, up to 500,000 nodes with 1,000 concurrent workflows, to support large enterprise and telecom environments and resource-constrained edge sites.

A SUPPORT TEAM READY TO HELP

Wind River's private cloud solution is backed by an award-winning global support organization that offers live help in multiple time zones, with 24/7 emergency recovery and service restoration and standard Tier 1 and Tier 2 break/fix support. The online Wind River Support Network, with multifaceted self-help options and optional premium services, provides customers fast time-to-resolution.

For more information, visit www.windriver.com/support.

HOW TO PURCHASE

Improve the way you deploy and manage workloads across clouds, data centers, and edge sites. Contact your Wind River account manager or visit www.windriver.com/contact.

WHY WIND RIVER AND BLACK BOX

Wind River and Black Box help organizations modernize VMware environments with a practical path to private cloud. Wind River Cloud Platform supports phased migration and coexistence of virtualized and containerized workloads, while Black Box brings design, integration, deployment, and lifecycle expertise to help customers plan and execute modernization across distributed environments with less disruption and risk.



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