

From Core to Edge, Build Out Your Distributed Network with Ease and Confidence

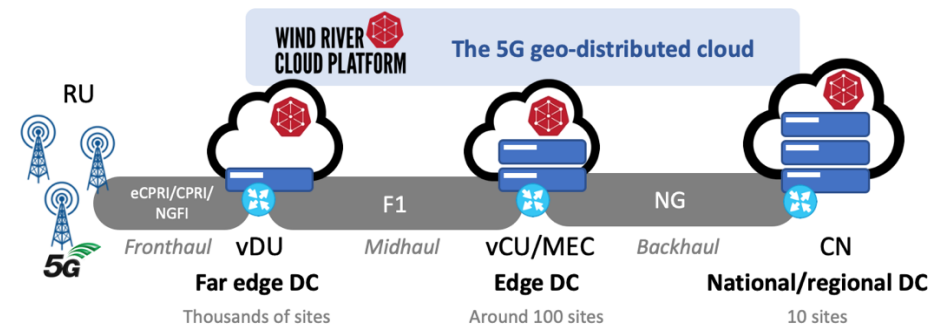
Together, Dell Technologies and Wind River deliver a containerized edge infrastructure for carrier-grade workloads that's ready to go

With the [evolution to 5G](#), many service providers in the telecommunications industry are moving away from integrated, purpose-built solutions to a disaggregated model for their distributed networks. It's a shift that brings new challenges — fear about the unknown, concerns over latency and the daunting task of managing hundreds of thousands of distributed nodes on a day-to-day basis.

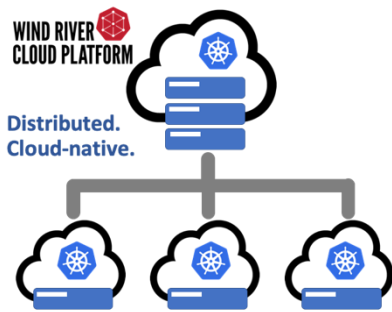
The good news, though, is that you're not in this alone. Proven solutions exist today that can help you deploy and manage a modern, cost-effective, disaggregated infrastructure with confidence and ease — and still get the carrier-grade performance you expect. More specifically, Dell EMC and Wind River have joined forces, combining our respective hardware and software expertise, to support CSPs with a containerized edge infrastructure that delivers the low latency, redundancy and high availability that carrier-grade workloads require today — and lower operational costs.

Performance and ease at the edge

Together, we deliver a validated reference architecture ideal for the distributed provider network. Found within this reference architecture is the combination of two key attributes: unique technology that meets and exceeds the performance and detailed requirements of hosting 5G and edge workloads, and a suite of high-automation tools to reduce Day 1 and Day 2 operational effort.



Source: windriver.com



Source: windriver.com

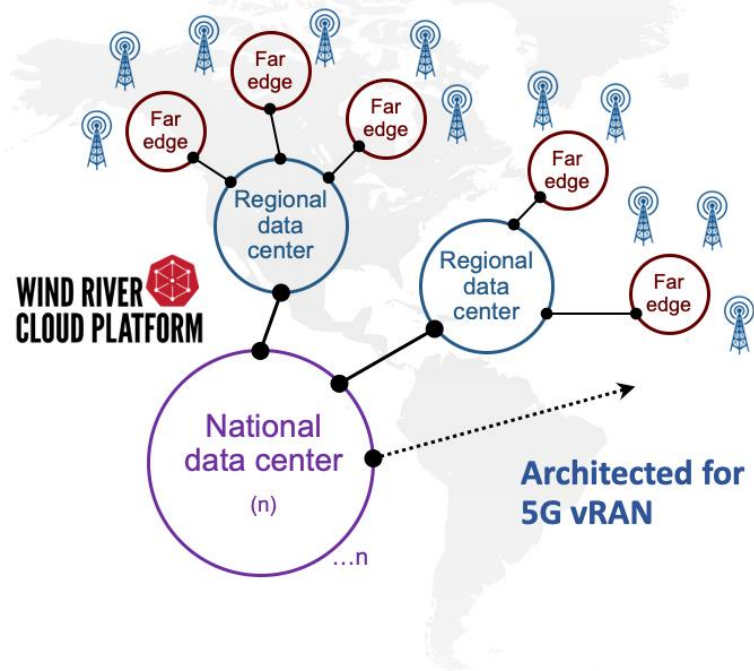
The combination of 5G requirements paired with the automation of operational tools will enable CSPs worldwide to provide next-generation services and enable new revenue streams. These include hosting 5G vRAN infrastructure from the core to the edge, edge compute solutions for Industry 4.0, automated factory and warehousing, as well as autonomous vehicles, vehicle to vehicle (V2V) communications for accident avoidance, and drone management, to name a few. Selection of the right next-generation virtualization infrastructure is a key enabler to hosting these edge compute applications.

The joint solution between Dell Technologies and Wind River includes the market unique ability to perform true zero-touch, fully autonomous turn up of remote edge sub clouds — regardless of the number of nodes. The turn up is done from a bare metal state to a fully operational online system without human intervention. This is just one example the Day 1 capabilities provide to lower operational cost for the provider along with others, such as single-pane-of-glass management and the ability to scale to a full cloud in a single node for low-cost using the latest in cloud-native, container runtime and continuous integration and continuous delivery (CI/CD) capabilities.

This joint effort takes full advantage of essential Dell EMC infrastructure and the Wind River® Cloud Platform, a production carrier-grade Kubernetes® platform to manage your distributed edge cloud infrastructure. These assets are tightly integrated into a ready-to-deploy carrier-grade solution, leveraging the best technologies from both companies to enable next-generation functionality.

Wind River and StarlingX

Active collaborators and contributors to the StarlingX project, Wind River is committed to massive innovation and disruption at the network edge with solutions that are 100% open source.



Source: windriver.com

With extensive experience providing solutions to telecommunications customers, Wind River knows how to address your specific needs and concerns. Wind River Cloud Platform is a complete open-source, telecommunications-first solution that's easy to deploy, run and manage. Upgrades can be orchestrated and automated to keep your system current at all times. The solution is scalable, allowing you to deploy a single compute node at the network edge and up to thousands of nodes in the core. You're always up and running with 99.9999% reliability. Industry-leading ultra-low latency translates into predictable, deterministic performance and added efficiency with resource pooling. You also gain clear visibility into your entire network via a single pane of glass.

Key benefits

- Simplified Day 1 and Day 2 operations through ZTP and single-pane-of-glass host-level management
- Ultra-low latency with deterministic performance optimized per use case
- Support for a single compute node at the far edge
- Scalability from one to many nodes from edge to core
- Distributed control plane with self-healing architecture for distributed cloud deployments
- Orchestration of fully automated upgrade deployments across geo-distributed cloud, with roll back and forward
- Fully integrated security by design
- Automatic workload migration
- High availability with zero downtime for applications

A solid Dell EMC foundation

Running the Wind River Cloud Platform on Dell EMC infrastructure brings added flexibility and scalability, zero-touch ease and carrier-grade reliability to your edge solution.

Telcos can run a cloud-native platform on Dell EMC open networking and compute infrastructure. We offer a lineup of compute options to choose from depending on where you deploy your compute resources. Standard server platforms like the Dell EMC PowerEdge R740 Server, or edge-targeted servers like the PowerEdge XE2420, play a progressively larger role in your network transformation process.

Dell EMC platforms are designed for Network Equipment Building System (NEBS) compliance, which means you can deploy these ruggedized form factors where you need them, including un-manned and remote plant locations.

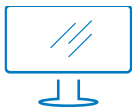
Because this is a validated reference architecture, you can be confident that we've done our due diligence to ensure the Wind River Cloud Platform integrates effectively with Dell EMC essential infrastructure. Dell EMC drivers, like iDRAC and Redfish, interface with the Wind River solution for zero-touch provisioning (ZTP). Now you can easily provision and scale compute resources as needed — and achieve carrier-grade performance and reliability from Day 1.

Why choose Dell Technologies and Wind River?

Dell Technologies and Wind River have a solid partnership and long history of working together to provide solutions across different use cases and verticals — including telecommunications.

Wind River has been an active participant in the telco arena for nearly 40 years. Their Linux® solution already provides the software infrastructure for 5G RAN deployments today. Dell EMC servers, with robust Intel® processing, deliver the high performance expected of demanding telco networks.

Together we're making it easier than ever to deploy and manage your distributed network with a validated architecture. Rely on Wind River and Dell Technologies to deliver a carrier-grade containerized infrastructure at the edge with optional OpenStack® services on top that enable you to leverage your existing investments in OpenStack and virtual machine workloads. Simplify and modernize your infrastructure on your terms and move to the edge with total.



For more information about this solution, please contact your sales representative or visit [Dell Technologies](#).



Contact a Dell Technologies Expert:
Ask_SP_PLM@Dell.com



[View more resources](#)



Join the conversation with
[#5GReadyNow](#)
[#FindYourEdge](#)

© Copyright © 2020 Dell Inc. or its subsidiaries. All Rights Reserved. Dell, EMC, and other trademarks are trademarks of Dell Inc. or its subsidiaries.

Other trademarks may be the property of their respective owners. Published in the USA 5/20 Solution brief DELL-SB-TELCOWNDRVR-USLET-101

Wind River® is a trademark of Wind River Systems, Inc. Kubernetes® is a registered trademark of The Linux Foundation. Linux® is the registered trademark of Linus Torvalds in the U.S. and other countries. Intel® and the Intel logo are trademarks of Intel Corporation or its subsidiaries in the U.S. and/or other countries. The OpenStack® word mark and the Square O Design, together or apart, are trademarks or registered trademarks of OpenStack Foundation in the United States and other countries, and are used with the OpenStack Foundation's permission.

Dell Technologies believes the information in this document is accurate as of its publication date. The information is subject to change without notice.