

WNRVVR

Dell Telecom Infrastructure Blocks for Wind River

The simplest, fastest way to deploy a vRAN infrastructure to scale out your network.

Overview

For years, telecommunications service providers have been reading about the journey to cloud-native architectures. Now, Dell Technologies introduces the industry’s fastest path to a cloud-based telecom network: Dell Telecom Infrastructure Blocks for Wind River. Co-engineered with Wind River, Telecom Infrastructure Block are pre-integrated, pre-validated, purpose-built packages of hardware and software designed to support specific use cases to help you scale out your network.

Dell Telecom Infrastructure Blocks for Wind River represent the simplest, fastest, and safest way for communications service providers (CSPs) to build and expand their cloud native network. They deliver foundational building blocks for virtual distributed units (vDUs), virtual centralized units (vCUs) and the site controller management cluster used in Dell Telecom Multi-Cloud Foundation.

Wind River Studio is a cloud-native platform optimized for the development, deployment, operations, and servicing of mission-critical edge systems. It includes commercially supported [StarlingX](#), the open-source project, which is purpose built for cloud native, edge applications. It is optimized for reliability and scalability and easily scales from one-to-many thousands of nodes. Wind River Studio runs on as few as two cores to reduce platform overhead, lower power consumption and reduce hardware requirements. It also offers ultra-low latency to deliver deterministic, tunable performance. It integrates with Dell Bare Metal Orchestrator to simplify day one and day two operations by automating deployment and lifecycle management of the full hardware and software stack to reduce time spent deploying and managing the cloud infrastructure.

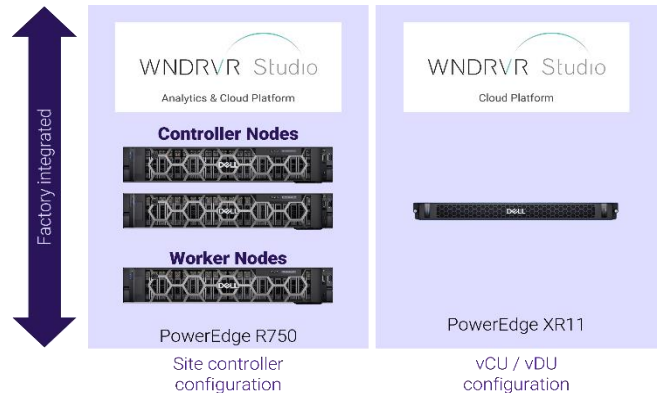


Figure 1: Dell Telecom Infrastructure Blocks for Wind River

What is in a Telecom Infrastructure Block?

vCU/vDU Infrastructure Block

Our vCU/vDU Telecom Infrastructure Block comes with Wind River Studio Cloud Platform factory installed and includes right to use licenses for Wind River Studio, Bare Metal Orchestrator and Bare Metal Orchestrator Modules so you have everything you need to build and scale out your vRAN right out of the box.

Note: For PowerEdge XR11, customers can choose to either have an H755 PERC Card to utilize HW Raid or an ACC100 card. RAID + ACC100 is not supported.

vCU/vDU Infrastructure Block Configuration		
Components	Quantity	Description
Server	1	<ul style="list-style-type: none">PowerEdge XR11¹
CPUs	1	<ul style="list-style-type: none">Intel® Xeon® Gold 6338N 2.2G, 32C/64T, 11.2GT/s, 48M Cache, Turbo, HT (185W) DDR4-2666
Memory	8	<ul style="list-style-type: none">32GB RDIMM, 3200MT/s, Dual Rank, 16Gb BASE x8 (256GB Total)
Storage	4	<ul style="list-style-type: none">960GB SSD SATA, 6Gbps, 51 2.5in Hot-plug Drives (3.84 TB Total)
NICs	2	<ul style="list-style-type: none">Intel E810-XXVDA4TGG1 Quad Port 10/25GbE SFP28 Precision Timing Adapter with GNSS, PCIe Full Height
Embedded System Management	1	<ul style="list-style-type: none">iDRAC9 Datacenter 15G with OpenManage Enterprise Advance Plus
Rack Rails	1	<ul style="list-style-type: none">ReadyRails Sliding Rails for 2/4-post Racks without Cable Management Arm or Strain Relief Bar
With ACC100 Configuration Options (No RAID)		
Chassis Configuration	1	<ul style="list-style-type: none">Front Port Access Chassis with up to 4 SATA drives (Onboard SATA), RAF
PCIe Riser	1	<ul style="list-style-type: none">Front Port Access Riser Config 2, 3 x16 slots (Intel ACC100 LP Only)
GPU/FPGA/ Acceleration Cards		<ul style="list-style-type: none">Intel vRAN Accelerator ACC100 Adapter, PCIe Low Profile

¹ For PowerEdge XR11 specifications, see the [PowerEdge XR11 spec sheet](#)

vCU/vDU Infrastructure Block Configuration

Components	Quantity	Description
RAID Configuration Options (No ACC100)		
Chassis Configuration	1	<ul style="list-style-type: none"> Front Port Access Chassis with up to 4 SAS/SATA drives or PERC Controller, RAF
RAID Card		<ul style="list-style-type: none"> PERC H755 Adapter LP
PCIe Riser	1	<ul style="list-style-type: none"> Front Port Access Riser Config 1, 1 x8, 2 x16 slots
Power	1	<ul style="list-style-type: none"> Single, Hot-plug, Power Supply (1+0), 1400W, Mixed Mode,L,RAF
Installed Software		<ul style="list-style-type: none"> Wind River Studio Cloud Platform
Right to use licenses (3 years)	1	<ul style="list-style-type: none"> Wind River Studio Cloud Platform Dell Bare Metal Orchestrator Dell Bare Metal Orchestrator Modules
Support	1	<ul style="list-style-type: none"> Next Business Day Onsite Service, 36 Months and Mission Critical 4-hour option (8-hour for LATAM and Brazil) Options for carrier grade support
Deployment Services	1	<ul style="list-style-type: none"> ProDeploy for Telecom Networks

Our vCU/vDU Infrastructure Blocks also come with detailed design guidance for configuring these Infrastructure Blocks to support vRAN and Open RAN (O-RAN) systems that span from 8 to 15 radios across a range of frequencies and operating bandwidth. Scaling up a system is simply a process of adding more Infrastructure Blocks.

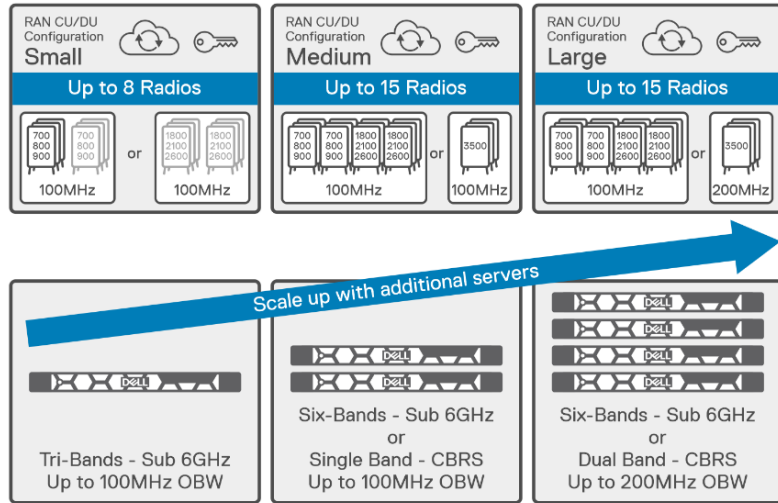


Figure 2: Design guidance for scaling your vRAN

Site Controller Infrastructure Blocks

There are two types of Site Controller Infrastructure Blocks: Worker Nodes and Controller Nodes. Each Site Controller requires one (1) Worker Node and two (2) Controller Nodes. Site Controller Infrastructure Blocks are based on PowerEdge R750 servers. They include right to use licenses for Wind River Studio, Bare Metal Orchestrator and Bare Metal Orchestrator Modules to simplify scaling your system.

Site Controllers can scale up as your network grows simply by adding more storage capacity to the Controller Nodes.

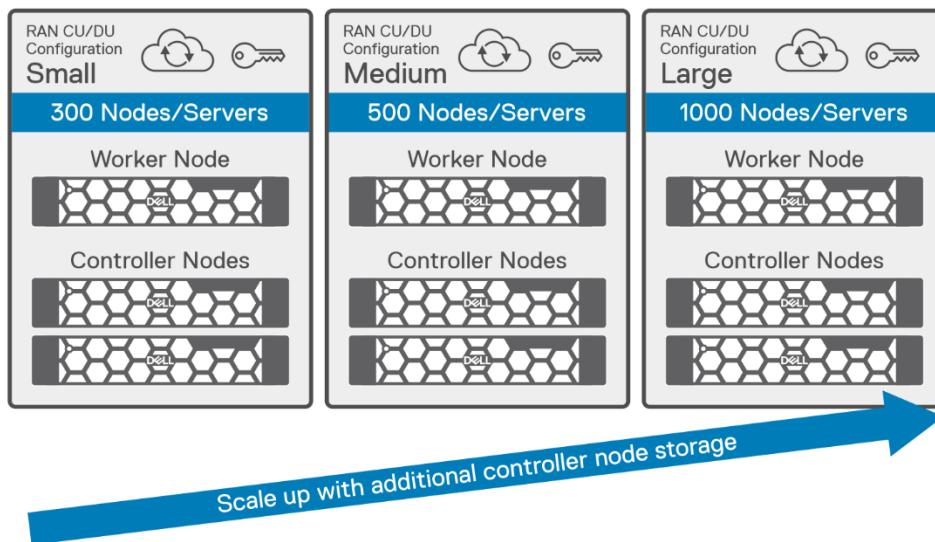


Figure 3: Design guidance for scaling your Dell Telecom Multi-Cloud Foundation

Site Controller Infrastructure Block: Controller Node Configuration		
Components	Quantity	Description
Server	1	<ul style="list-style-type: none"> PowerEdge R750²
CPUs	2	<ul style="list-style-type: none"> Intel® Xeon® Gold 6338N 2.2G, 32C/64T, 11.2GT/s, 48M Cache, Turbo, HT (185W) DDR4-2666
Memory	16	<ul style="list-style-type: none"> 32GB RDIMM, 3200MT/s, Dual Rank, 16Gb BASE x8 (512GB Total)

² For PowerEdge R750 specifications, see the [PowerEdge R750 spec sheet](#)

Site Controller Infrastructure Block: Controller Node Configuration

Components	Quantity	Description
Only SSDs RAID 1+Unconfigured RAID³		
Storage	2	<ul style="list-style-type: none"> 960GB SSD SATA Mix Use 6Gbps 512 2.5in Hot-plug AG Drive, 3 DWPD
	4	<ul style="list-style-type: none"> 2nd RAID Container: 3.84TB SSD SAS Read Intensive 12Gbps 512 2.5in Hot-plug AG Drive, 1 DWPD
Chassis Configurations	1	<ul style="list-style-type: none"> SSDs RAID 1+Unconf: 2.5" Chassis with up to 24 SAS/SATA Drives including 8 Universal Slots (NVMe Direct), 2 CPU
SSDs RAID 1 + NVMe Direct		
Storage	2	<ul style="list-style-type: none"> 960GB SSD SATA Mix Use 6Gbps 512 2.5in Hot-plug AG Drive, 3 DWPD
	4	<ul style="list-style-type: none"> PCIe SSD/Flex Bay: 3.84TB Enterprise NVMe Read Intensive AG Drive U.2 Gen4 with carrier
Chassis Configuration	1	<ul style="list-style-type: none"> 2.5" Chassis with up to 24 SAS/SATA Drives including 8 Universal Slots (NVMe Direct), 2 CPU
NICs	2	<ul style="list-style-type: none"> Intel E810-XXVDA4 Quad Port 10/25GbE SFP28 Adapter, PCIe Full Height
Embedded System Management	1	<ul style="list-style-type: none"> iDRAC9 Datacenter 15G with OpenManage Enterprise Advance Plus
Rack Rails	1	<ul style="list-style-type: none"> ReadyRails™ Sliding Rails Without Cable Management Arm
Power	2	<ul style="list-style-type: none"> Redundant, 1400W power supplies
Right to use licenses (3 years)	1	<ul style="list-style-type: none"> Wind River Studio Cloud Platform Dell Bare Metal Orchestrator Dell Bare Metal Orchestrator Modules
Support	1	<ul style="list-style-type: none"> Next Business Day Onsite Service, 36 Months and Mission Critical 4-hour option (8-hour for LATAM and Brazil) Options for carrier grade support
Deployment Services	1	<ul style="list-style-type: none"> ProDeploy for Telecom Networks

³ The SAS disks will not have the RAID configured.

Site Controller Infrastructure Block: Worker Node Configuration

Components	Quantity	Description
Server	1	<ul style="list-style-type: none"> PowerEdge R750⁴
CPUs	2	<ul style="list-style-type: none"> Intel® Xeon® Gold 6338N 2.2G, 32C/64T, 11.2GT/s, 48M Cache, Turbo, HT (185W) DDR4-2666
Memory	16	<ul style="list-style-type: none"> 32GB RDIMM, 3200MT/s, Dual Rank, 16Gb BASE x8 (512GB Total)
SSDs RAID 1		
Storage	2	<ul style="list-style-type: none"> 960GB SSD SATA Mix Use 6Gbps 512 2.5in Hot-plug AG Drive, 3 DWPD
Chassis Configuration	1	<ul style="list-style-type: none"> 2.5" Chassis with up to 24 SAS/SATA Drives including 8 Universal Slots (NVMe Direct), 2 CPU
NICs	2	<ul style="list-style-type: none"> Intel E810-XXVDA4 Quad Port 10/25GbE SFP28 Adapter, PCIe Full Height
Embedded System Management	1	<ul style="list-style-type: none"> iDRAC9 Datacenter 15G with OpenManage Enterprise Advance Plus
Rack Rails	1	<ul style="list-style-type: none"> ReadyRails™ Sliding Rails Without Cable Management Arm
PCIe Riser	1	<ul style="list-style-type: none"> Riser Config 2, Half Length, 4x16, 2x8 slots, SW GPU Capable
Power	1	<ul style="list-style-type: none"> Dual, Hot-Plug, Fully Redundant Power Supply (1+1), 1400W, Mixed Mode
Right to use licenses (3 years)	1	<ul style="list-style-type: none"> Wind River Studio Cloud Platform Dell Bare Metal Orchestrator Dell Bare Metal Orchestrator Modules
Support	1	<ul style="list-style-type: none"> Next Business Day Onsite Service, 36 Months and Mission Critical 4-hour option (8-hour for LATAM and Brazil) Options for carrier grade support
Deployment Services	1	<ul style="list-style-type: none"> ProDeploy for Telecom Networks

⁴ For PowerEdge R750 specifications, see the [PowerEdge R750 spec sheet](#)

Dell Support and Services

Every Telecom Infrastructure Block is backed by one call support for the entire hardware and software stack. This eliminates the need to determine if it is a hardware or software issue, you just call Dell. And, with Dell's carrier grade support option, operators receive guaranteed response times of under 15 minutes and guaranteed service restoration times under four hours.

While Dell Telecom Infrastructure Blocks provide an engineered system that is ready for deployment out of the box, some operators may require custom configurations to meet specific outcomes. Dell services can deliver custom configurations direct from Dell factories to streamline operator processes to meet unique requirements. Dell services can also provide tailored integration services from onsite racking and stacking of hardware and network integration to remote installation and support, to network design and validation. This allows operators to deploy at any scale anywhere in their network.

We are open to innovation

Dell Technologies is committed to open telecom solutions, from OpenStack and Kubernetes to O-RAN. Dell Infrastructure Blocks with Wind River allow CSPs to quickly deploy, easily manage, and seamlessly scale virtual and O-RAN solutions while driving cost and complexity out of the network.

Dell Technologies supports each of our Infrastructure Blocks across the entire stack to eliminate finger-pointing between vendors. There is one trusted source for procurement, deployment, and lifecycle management—backed by a global supply chain and a world-class team of telecom service professionals. When it comes to building telecom clouds, nothing else stacks up to Dell Telecom Infrastructure Blocks for Wind River.



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