

Dell Telecom Multicloud Foundation: Dell Telecom Infrastructure Blocks for Red Hat

A fundamentally smarter way to deploy and manage best-of-breed, telco clouds.

Summary

The cloud is the future of telecom networks. Communications service providers (CSPs) can't afford to be locked into a single-vendor vision of the future. They need a trusted, open foundation on which to build the multivendor networks of tomorrow, which is why we've developed the Dell Telecom Multicloud Foundation. Dell Technologies is partnering with Red Hat to co-engineer and integrate complete 5G telecom cloud solutions that combine hardware, software, automation, and services into pre-integrated, pre-validated, and optimized packages.

Solution Highlights

Every CSP's cloud journey is unique. Dell Telecom Multicloud Foundation enables CSPs to choose the journey that's right for them, benefit from a strong head start, and work with an experienced partner along the way. We've done the hard work up front so that CSPs can have an easier time deploying, managing, and maintaining a best-of-breed cloud environment:

- Optimized, pre-integrated Dell Telecom Infrastructure Blocks featuring all the hardware, software, and services you need to deploy specific use cases.
- Reduced deployment time and risk with pre-integrated and validated solutions that are co-developed by Dell Technologies and Red Hat.
- Simplified management of your telco cloud that features easy-to-use, built-in automation and orchestration tools.

Building your cloud future on a trusted foundation

In the coming years, the way that telecommunications networks are built will fundamentally change. Instead of proprietary, single-vendor systems and purpose-built appliances, CSPs are shifting to cloud-native core networks, cloud-based edge services, vRAN and Open RAN solutions that mix virtualized software and industry-standard servers from a variety of vendors. These cloud-based networks will scale effortlessly, automate day-to-day operations, and adapt quickly to new market opportunities while reducing costs.

Although these solutions will share many common characteristics with enterprise clouds, telco clouds will continue to have unique requirements around performance, latency, security, and the services they support. To meet these requirements across a variety of use cases, CSPs will need to mix and match solutions from different vendors across the edge, core, and RAN. This introduces the potential for complexity and risk, particularly as CSPs look to integrate multivendor solutions and manage them effectively over the solution lifecycle. In order to accelerate the deployment, simplify management, and reduce the risk of multivendor telecom networks, Dell Technologies is partnering with Red Hat®, a global leader in cloud platform software for telecom networks, to create Dell Telecom Multicloud Foundation featuring Dell Telecom Infrastructure Blocks.



Everything you need for your cloud to succeed

Dell Technologies is uniquely qualified to help CSP's modernize their network. We have helped hundreds of companies across a broad range of industries with their digital transformation. We are making significant investments to help CSP's transform their networks. We partner with Red Hat to perform continuous integration testing that helps operators plan and deploy a telco cloud that meets the stringent SLAs of the telecommunications industry. Dell Telecom Multicloud Foundation integrates with Red Hat Advanced Cluster Management and Red Hat® OpenShift® with Dell Bare Metal Orchestrator management software to deliver a fully integrated cloud stack with automated deployment and lifecycle management.

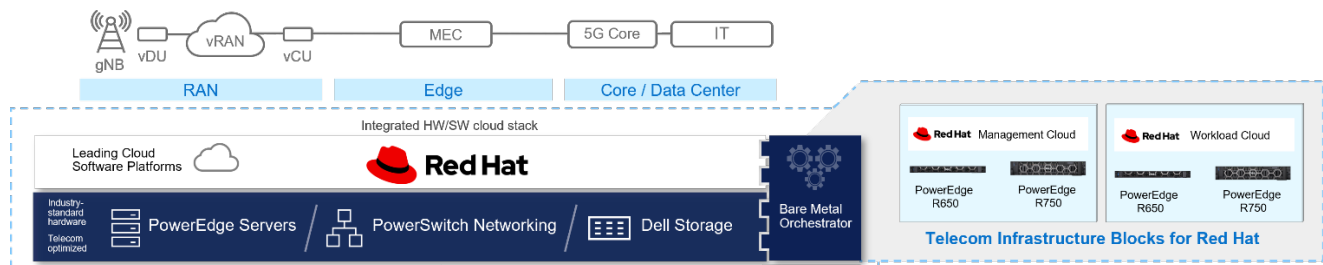


Image represents available server models with the DTIB for Red Hat offer and does not represent the actual size/server counts for the Management & Workload Clouds.

Figure 1: Dell Telecom Multicloud Foundation

Bare Metal Orchestrator gives CSPs the ability to identify bare metal servers and accelerate deployment of software across multi premises, reducing operational costs by orchestrating lifecycle management across hundreds of thousands of devices.

Dell Telecom Infrastructure Blocks – building blocks for your telco cloud

Dell Telecom Infrastructure Blocks are critical components of this solution. An Infrastructure Block is a foundational building block designed for use with Telecom Multicloud Foundation that streamlines the design, configuration, and delivery of cloud infrastructure to efficiently accelerate the deployment of new services. It is integrated in Dell's factory and has been co-engineered with our cloud platform partners to include all the hardware and software required to meet the needs of a specific workload across a range of scale points. It includes Bare Metal Orchestrator Modules that provide all the scripts, APIs and configurations files needed to integrate Bare Metal Orchestrator with the cloud platform partner's software. They also encapsulate all the configuration guidance obtained from the continuous integration testing Dell Technologies performs with its software partners to ensure the cloud stack consistently meets telecom SLAs. And, if anything ever goes wrong, Dell's world class support team provides a unified support experience that meets carrier grade SLAs for the entire cloud stack.

Dell Telecom Infrastructure Blocks for Red Hat

Dell Telecom Infrastructure Blocks for Red Hat integrate Red Hat Advanced Cluster Management with Dell Bare Metal Orchestrator to automate the deployment and lifecycle management of Red Hat OpenShift management and workload clusters on bare metal. These engineered systems are optimized to support 5G Core network functions running in national and regional data centers.

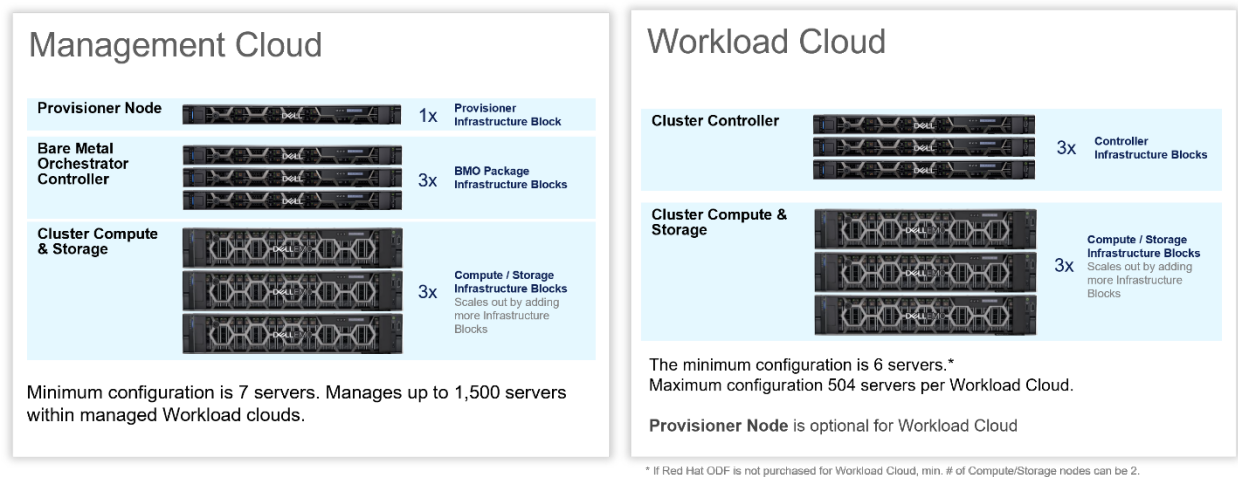


Figure 2: Dell Telecom Infrastructure Blocks for Red Hat

Building your network on Dell Telecom Multicloud Foundation

A best-of-breed architecture is the best way to build a telco cloud. Yet this can be a challenge for CSPs because it requires the ability to bring together and manage an ecosystem of partners to continuously validate a multitude of hardware and software combinations to support a broad set of use cases. Dell Telecom Multicloud Foundation simplifies this process by providing an integrated solution that is ready for production traffic while offering a wide variety of options for cloud customization. Dell Telecom Multicloud Foundation has several important benefits for CSPs derived through validation, automation, and integration.

Validation

Dell validates configurations with Red Hat by performing continuous integration testing that reduces operator integration costs while ensuring a telco-grade deployment or upgrade of the cloud platform's hardware/software stack that meets the stringent performance, availability, and security requirements of the telecommunications industry.

Automation

Dell Telecom Multicloud Foundation integrates with Red Hat Advanced Cluster Management and OpenShift to enable CSPs to automate the deployment and lifecycle management of hundreds of thousands of servers across their network. This lowers operating costs by eliminating manual tasks. It also ensures a consistent, telecom-grade deployment of the full hardware/software stack, which reduces configuration errors so that less time is spent on fault, configuration, and security management.

Integration

Dell Telecom Infrastructure Blocks for Red Hat are factory-integrated systems that are optimized and ready for deployment and will be offered in a variety of use cases. This simplifies design, procurement, deployment, and

lifecycle management and reduces the time spent configuring telecom cloud hardware and software by providing a single integrated and validated solution purpose built for specific telecom use cases. And, it's all backed by a unified support model from Dell Technologies that meets carrier grade SLAs.

Dell Technologies is the telecom industry's partner of choice

As CSPs evolve their network architectures for 5G, proprietary and appliance-based networks will give way to best-of-breed, multivendor cloud networks. Dell Technologies is uniquely suited to lead this network transformation. We combine deep experience in digital transformation and cloud technology with a long history of open partnerships and a commitment to building telecom-grade solutions.

Beyond our technical expertise and growing telecom solutions portfolio, Dell Technologies brings a global reach that few companies can match. Today, we have over 25 manufacturing facilities, 50 distribution and configuration centers, and over 750 parts distribution centers located around the world. We manage a supply chain that is the envy of the industry as well as local services teams that can support customers nearly anywhere in the world. At Dell Technologies, we recognize that CSPs have a choice in who they partner with in the future and our goal is to keep it that way.



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