Dell Telecom Multi-Cloud Foundation
A fundamentally smarter way to deploy best-of-breed, telco clouds

Summary
There are some great telco cloud platforms on the market today from Red Hat, VMware, Wind River – each with their own unique strengths. Wouldn't it be great if communications service providers had the freedom to automate the deployment of those platform while choosing whichever platform makes the most sense for their workload? And, wouldn't it be great if those cloud platforms were tested and validated with the hardware to ensure a consistent, telco-grade deployment or upgrade every time? That’s what Dell Technologies delivers with its Telecom Multi-Cloud Foundation. Offered as an integrated solution, Telecom Multi-Cloud Foundation provides an automated, validated, and continuously integrated foundation for best-of-breed, multivendor 5G telco cloud networks.

Solution highlights
How you build your cloud network does make a difference. Dell Telecom Multi-Cloud Foundation ensures that CSPs get a fully validated, continuously integrated cloud foundation that delivers a competitive advantage:
- Accelerate the deployment of 5G, cloud network with a solution that works "out of the box"
- Reduce the risk associated with building a customized, best-of-breed telco cloud network by getting validated hardware, software, and automation tools in a single, integrated solution
- Simplify cloud network management through easy-to-use, built-in automation and orchestration tools

Building a telco cloud requires a different approach
In the coming years, the way that telecommunications networks are built will fundamentally change. Gone will be the proprietary systems and purpose-built appliances of the past. In their place will be cloud-native core networks, edge networks, and Open RAN solutions that mix virtualized software and industry standard servers from a multitude of vendors. These cloud-based networks will scale effortlessly, adapt quickly to new opportunities, and foster innovation while driving costs down.

Unlike enterprise clouds, telco clouds have unique considerations around performance, latency, security, and the services they support. To meet these telco-grade requirements, communications service providers (CSPs) will need to mix and match solutions from different vendors and, in many cases, manage multiple cloud platforms 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 and reduce the risk of multi-cloud telco networks, Dell Technologies has developed an open, integrated, end-to-end solution named Dell Telecom Multi-Cloud Foundation.

Get everything you need for your telco cloud to succeed
Dell Telecom Multi-Cloud Foundation is purpose built to reduce the cost, time, complexity, and risk of deploying and maintaining a distributed, telco-cloud for the delivery of 5G services. It integrates with our cloud software platform partners’ management and orchestration tools to create an integrated, hardware/software cloud stack with automated deployment and lifecycle management. It consists of Dell Bare Metal Orchestrator, Dell Bare Metal Orchestrator Modules, and approved Dell hardware.

Bare Metal Orchestrator identifies bare metal servers and accelerates deployment of software across multi premises, reducing operational costs by orchestrating provisioning and lifecycle management across hundreds of thousands of servers.
Bare Metal Orchestrator Modules are add-on modules to Bare Metal Orchestrator that use the design and configuration guidance obtained through the continuous integration testing that Dell Technologies performs with its cloud software partners. This reduces operator integration testing costs while ensuring a consistent, telco-grade deployment or upgrade of these cloud platforms that meets the stringent performance, availability, and security requirements of the telecommunications industry. By offering a choice of cloud platforms from the industry leading providers, Dell Technologies provides operators with a single integrated solution that delivers the flexibility to choose the best and most cost-effective cloud platform to meet specific workload requirements across their network.

Dell Telecom Multi-Cloud Foundation

With just one integrated solution, CSPs can deploy multiple cloud platforms optimizing their network to meet each workload’s requirements. For example, they can deploy one cloud platform for the 5G core and another for the 5G RAN. The result is flexibility without fear. CSPs can mix and match cloud components from leading vendors to get the best combination of price, performance, and features without worrying about mobilizing the skill sets and resources to integrate and validate the technology themselves.

The benefits of building your network on Telecom Multi-Cloud Foundation

A best-of-breed architecture is the best way to build telco cloud networks. 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 Multi-Cloud 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. Building with Telecom Multi-Cloud Foundation has tangible benefits for CSPs:

**Flexibility** to leverage cloud innovation for competitive differentiation

Dell Telcom Multi-Cloud Foundation supports all of the industry’s leading cloud platforms: Red Hat OpenShift, Red Hat OpenStack, VMware Telco Cloud Platform and Wind River Studio. Combining support for all of the leading cloud platforms with Dell’s broad portfolio of telco-optimized infrastructure gives CSPs the flexibility to deploy the optimal hardware and software combination to meet the range of workloads requirements that exist across the RAN, edge and core of the network. This, in turn, opens the network to more innovation and while increasing competition that drives down costs.

**Automation** to accelerate deployment and simplify lifecycle management

Dell Telecom Multi-Cloud Foundation enables CSPs to automate the deployment and lifecycle management of thousands of bare metal servers across their network. As telco networks expand and diversify in the 5G economy,
the ability to rapidly deploy, centrally manage, and seamlessly scale a widely dispersed and disparate infrastructure will be critical.

**Telco-grade reliability and security to meet unique customer requirements**

Telco clouds have different requirements than enterprise clouds, and thus are built differently. From 5G services to the service level agreements (SLAs) behind them, telcos must have a cloud network that scales efficiently, supports a multitude of SLAs and pricing structures, meets strict security compliance measures, and integrates with existing OSS/BSS systems. Dell Telecom Multi-Cloud Foundation delivers these capabilities “out of the box” with built-in security, open APIs, and continuous integration testing so CSPs can invest in their telco cloud with confidence.

**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 telco-grade solutions. Dell has invested in the Open Telecommunications Ecosystem Lab (OTEL) for 5G solution testing, integration, and validation to support the development of an open ecosystem of suppliers that drive innovation while meeting the unique requirements of the telecommunications industry.

Beyond our technical expertise and growing telecom solutions portfolio, Dell 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 on the planet. At Dell, we recognize that CSPs have a choice in who they partner with in the future. Our goal is to keep it that way.

To learn more about Dell Technologies’ solutions for the telecommunications industry, visit us at [www.delltechnologies.com/telecom](http://www.delltechnologies.com/telecom).