

Dell Telecom Infrastructure Automation Suite

Automate to accelerate your move to open networks and AIOps

Solution highlights

Built from the ground up for telecom network infrastructure, the Dell Telecom Infrastructure Automation Suite enables you to:

Unify infrastructure management

By bringing together lifecycle management and orchestration across multivendor infrastructure and cloud platforms and collecting real-time data to enable observability.

Future-proof your operations

Offering you a growing portfolio of plug-ins that enable you to extend automation to your choice of infrastructure controllers, cloud platforms and scripting tools to the management and orchestration framework.

Accelerate service delivery

Providing an open software framework that enables template-based deployment and operation and offers northbound APIs for easy integration into network service orchestrators.



Modern automation for network transformation

Communications service providers (CSPs) around the world face the same challenge: innovating faster while controlling costs as the volume of network data grows relentlessly. The path forward passes through the adoption of open, disaggregated networks built on industry-standard hardware and leveraging a cloud operating model. CSPs know this, but they are hesitant to transform from legacy, vertically integrated infrastructure due to concerns about complexity. While flexible and agile, open infrastructure introduces management and operations challenges that give CSPs pause about embarking on a transformation journey. The solution is clearly automation. But automation has been around for a long time, so hasn't this complexity challenge already been solved? Yes and no. Yes, if you have a vertically integrated stack. Not so much if you're operating a cloud-native infrastructure stack comprising software and hardware from multiple vendors.

Enter Dell Technologies. Our heritage is firmly rooted in open, standards-based infrastructure, and with the Dell Telecom Infrastructure Automation Suite, CSPs can now accelerate network transformation by automating management and orchestration across multivendor compute, storage, networking, and cloud resources. The suite enables CSPs to have the best of both worlds: the day-to-day simplicity of integrated stacks with the flexibility and agility of open, cloud-native network infrastructure. Flexibility stems from an extensible software design that enables infrastructure controllers to be connected to the suite, while agility stems from blueprints that define workflow automation. In addition, by aggregating telemetry data from diverse, distributed infrastructure resources (compute, storage, networking) the suite enables observability and predictive analytics, laying the groundwork for AIOps.

A closer look at the Dell Telecom Infrastructure Automation Suite

The suite is built from the ground up to automate the management and orchestration of open telecom network infrastructure via plug-ins, APIs, and blueprints. It provides a single management and orchestration plane for both the CaaS and physical layers, features an open architecture for easy extensibility, and functions as the central automation controller for multi-cloud environments (from hyperscalers to the core cloud, enterprise cloud, edge, and RAN). The suite includes a controller for automating the deployment and lifecycle management of bare metal and aggregates infrastructure telemetry, laying the groundwork for AIOps.

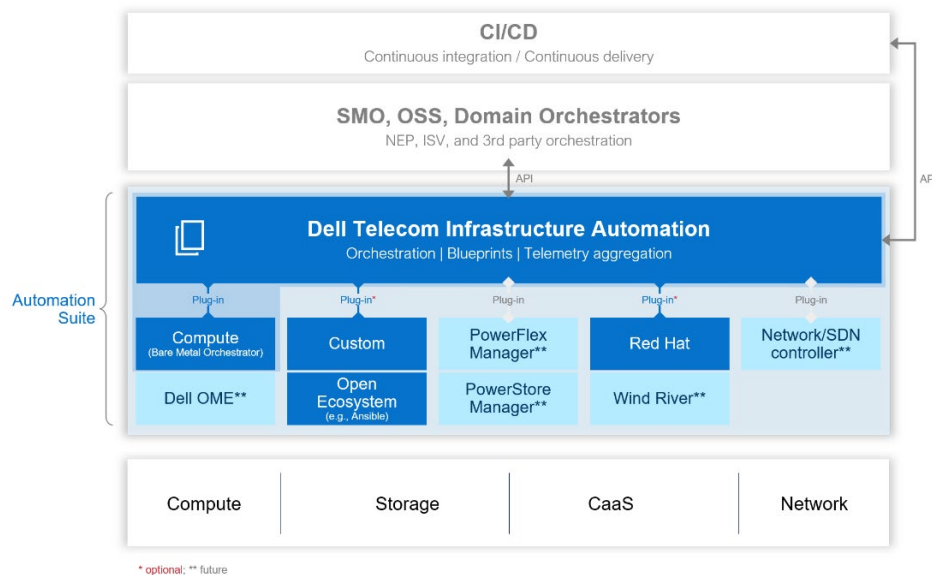


Figure 1: Dell Telecom Infrastructure Automation Suite

TOSCA-based blueprints implement workflows by defining automation intents via declarative automation. Dell will offer basic blueprints, but customers can also create blueprints on their own or work together with Dell or a systems integrator. The use of TOSCA-based templates ensures that blueprints are portable, allowing them to be used across different environments with minimal modification.

Plug-ins connect resource controllers for servers, CaaS, storage, and network equipment. Customers can choose either off-the-shelf plug-ins or work with Dell or a systems integrator to build custom plug-ins.

APIs enable easy integration of the suite with higher-level network orchestrators.

Together, these components of the suite bring four core capabilities to CSPs:

- **Automated implementation of workflow and intent** via declarative blueprints enable consistency and processes free of manual errors and delays.

- **Golden configuration and drift detection** enable the detection of configuration drift and facilitate replacement and rebuild of servers (storage is on the roadmap).
- **Aggregation and exporting of telemetry** enable CSPs to implement service assurance, predictive analytics, and closed-loop automation with AI Ops.
- **Life cycle management and fault remediation** enable CSPs to consume infrastructure through a CI/CD workflow as they move to cloud operating models, especially around Day 2 operational issues.

Ease your transformation and your mind with Dell Services

Integrating automation into complex, mission-critical telecom infrastructure is no easy feat. Dell services can help. From the design phase to deployment to ongoing management and support, the Dell Services team is ready.

Day zero	Day one	Day two
<ul style="list-style-type: none"> • Business outcome workshops • Tailored Designs Development and blueprint creation • Set up cloud platform • Design fine-tuning for peak performance, scalability, and cost-effectiveness 	<ul style="list-style-type: none"> • Remote implementation to simplify deployment • Custom integration to drive specific outcomes • Northbound & southbound integration of solution components • Integration into DevOps tools (Git, ArgoCD, Kafka, etc.) 	<ul style="list-style-type: none"> • Simplified upgrades, updates, rollbacks, and expansion • Comprehensive 24x7x365 proactive, predictive failure detection* • Accelerated issue resolution with restoration SLAs • Dedicated telecom-trained account team with specialized insights and escalation processes

Dell Telecom Infrastructure Automation the suite in action (use case)

How could the suite transform your network infrastructure? Let's imagine you want to do the following:

1. Deploy network cloud infrastructure that is ready for workload.
2. Do it repeatably without errors.
3. Reduce OPEX by automating deployment and lifecycle management.
4. Scale across 10's of thousands of servers.

For the discovery and design phase (day 0), the suite enables northbound integration into the network domain orchestrators via APIs, connection to southbound resources including bare metal servers, storage, networking, and CaaS, the use of blueprints to define custom orchestration for your environment.

As you deploy and integrate (day 1), the suite enables you to set up user/tenant authorization and authentication (RBAC), run a pre-install health check to minimize any failures, leverage blueprints for server deployment and configuration and CaaS deployments, and send server-ready data to northbound systems. the suite handles server lifecycle management (update/upgrade BIOS, OS, firmware, configuration), tunes infrastructure to meet the needs of specific workloads, collects and aggregates infrastructure telemetry data to feed observability and analytics apps, and sends telemetry to high-level orchestrators via APIs.

Dell Technologies is the telecom industry's partner of choice.

The pressure on CSPs to innovate and grow while controlling costs is relentless and the need for CSPs to transform is ever more acute. The time is now. With the Dell Telecom Infrastructure Automation, CSPs can accelerate their move to open networks and AIOps, as they unify management and orchestration to simplify and streamline operations, future-proof their infrastructure for flexibility, and leverage TOSCA-based blueprints and a standardized operating model to accelerate the delivery of new services. Dell Technologies is a uniquely capable partner for network transformation. Our deep experience in cloud spans hundreds of companies across multiple industries and today we are partnering with CSPs to help them transform by building telecom-grade solutions. Since our founding, we have been completely committed to open technologies and every year our commitment grows even deeper. The future is open and we are ready to propel your telecom business forward.



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Automation Suite](#)



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