

Dialing up a competitive edge in a 5G rollout

To meet subscriber demands for 5G services, a major telecommunications provider created a flexible, pod-based architecture using the Dell EMC PowerFlex software-defined platform.



Business needs

In the competitive race to roll out 5G, a leading North American telecommunications provider needed enhanced simplicity and agility to build its next-gen network and deliver innovative new capabilities and services quickly, efficiently and cost-effectively. Dell EMC PowerFlex provides the flexible, scalable, high-performance platform it requires.

Business results

- As little as 1 week to roll out each new service or capability.
- 40% lower cost to deploy new infrastructure pods with PowerFlex.
- No support issues for PowerFlex over the previous 18 months.
- Will scale to accommodate 10x the growth over the next 2 years.
- Rolling upgrades without large CapEx impact or service disruptions.

Customer profile

Leading Telecommunications Provider

Telecommunications | United States



“By moving to PowerFlex, the telecom provider has reduced its per-pod costs by over 40%.”

Leading Telecommunications Provider

Solutions at a glance

- [Dell EMC PowerFlex](#)
- [Dell EMC CloudLink](#)
- [VMware ESXi](#)



Up to **95% faster** service rollouts.



“PowerFlex results in a 95% reduction in the time required to deliver new services or capabilities, from as long as six months to as little as one week.”

Leading Telecommunications Provider

Undertaking a major rollout of its 5G network, a leading North American telecommunications provider faced several challenges. Its traditional three-tier IT infrastructure had suffered a disruptive storage outage that severely impacted subscriber billing.

In addition, new features and functionalities were slow in getting to market. The telecom operator wanted a better way to consolidate its infrastructure onto a single platform for reduced complexity and to automate the build-out of its 5G network.

Flexible pod-based architecture

To develop new capabilities and services, the telecom provider chose the Dell EMC PowerFlex software-defined platform for its 5G network and services as well as its internal cloud. PowerFlex offers exceptional flexibility and massive scalability to keep up with increasing 5G demands, plus enterprise-class performance and rack-level resilience for network reliability.

The provider has already deployed well over 100 PowerFlex nodes in a disaggregated, pod-based architecture with storage, compute and networking resources. These pods can scale storage and compute independently while still being managed as a single platform. PowerFlex pods are distributed throughout North America to handle 5G network and cloud workloads — both in core data centers and at edge locations — so services are delivered in near real-time, closer to where they’re consumed.

By moving to PowerFlex, the telecom company has reduced its per-pod costs by over 40%. The platform’s rack-level resilience ensures that vital 5G services always remain available, even in the unlikely event that an entire rack fails. Since the infrastructure has been deployed, there have been no PowerFlex support issues in over 18 months.

As the telecom provider ramps up its 5G rollout, the PowerFlex infrastructure supporting it is expected to grow tenfold. PowerFlex can accommodate ongoing upgrades and expansions without disrupting services or causing a big hit to CapEx budgets.

Common platform for all applications

The telecom provider’s heterogeneous IT operations include modern and legacy applications deployed across a variety of operating environments, including Red Hat OpenStack, Red Hat OpenShift, and Red Hat Enterprise Linux; Kubernetes clusters with Rancher; and VMware ESXi virtual environments. The PowerFlex platform enables exceptional agility, allowing resources to be provisioned across environments as needed.



Non-disruptive upgrades drive costs down.

Dell Technologies has a strong alliance with Red Hat and together they worked closely to meet the telecom operator's precise needs. The Red Hat platform has been key in supporting some of the company's most critical containerized and bare-metal applications, providing charging, billing, service enablement, mediation and more.

With PowerFlex as its IT platform, the telecom company can quickly and efficiently provision any workload — including modern applications such as MongoDB, Cassandra and Elasticsearch as well as traditional databases like Oracle — to meet subscriber service demands. In addition, Dell EMC CloudLink delivers simple, integrated data encryption for the entire solution to meet its security needs.

Agility for rapid service rollout

With PowerFlex powering its internal cloud, the telecom provider's DevOps teams can self-service their infrastructure needs. PowerFlex results in a 95% reduction in the time required to deliver new services or capabilities, from as long as six months to as little as one week.

PowerFlex REST APIs and the Container Storage Interface plugin have been critical in enabling this automation. Dell Technologies Professional Services developed a custom automation framework incorporating Ansible, Chef and Puppet to automate DevOps workflows.

Foundation for the future

The telecom provider projects that its subscriber base will triple in size as 5G services are rolled out. Dell Technologies and PowerFlex provide the foundation for rapidly delivering these services to subscribers so the company can win in an extremely competitive market.



“The platform's rack-level resilience ensures that vital 5G services always remain available, even in the unlikely event that an entire rack fails.”

Leading Telecommunications Provider