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# Boosting performance by moving past boundaries.

How Cellnex Telecom moved network capabilities closer to their customers with a turnkey Lenovo edge computing solution powered by Intel<sup>®</sup> Xeon<sup>®</sup> Platinum processors.

Lenovo Infrastructure Solutions  
for The Data-Centered

Lenovo

1

## Background

Texting, streaming, gaming, video chatting — our lives are consumed by consuming data. And with the popularity of Internet of Things (IoT) devices like smart TVs, fitness trackers, and industrial sensors growing, pressure on telecommunication networks is growing, too.

Many mobile network operators (MNOs) are moving toward edge computing solutions instead of having a few larger data centers, so they can meet growing data demands while keeping bandwidth, latency, and scalability issues at bay.

But building, deploying, and managing such a vast, geographically dispersed edge computing ecosystem is far from simple. That's where Cellnex Telecom comes in.

Cellnex Telecom is Europe's leading wireless telecommunications operator with over 61,000 sites in Spain, Italy, Netherlands, France, Switzerland, Ireland, Portugal, and the United Kingdom. They offer telecommunication infrastructures services, audiovisual broadcasting networks, security and emergency service networks, and solutions for smart urban infrastructure and services management.

People and businesses alike depend on always-on service in all kinds of places, at all times.

2

## Challenge

Because edge computing solutions are deployed over hundreds of thousands of sites, availability and reliability are critical. MNOs typically have a relatively small number of engineers supporting a large, geographically dispersed network, so the fewer outages they need to deal with, the better.

To maximize uptime and ensure their connection remains uninterrupted, Cellnex needed secure infrastructure with powerful performance.



## Building a network

Cellnex needed more than just a vendor. They needed a partner that could provide modular solutions built for today, that could scale for tomorrow as new technologies develop.

That's why they partnered with Lenovo and local company Nearby Computing. Together, we built a converged edge solution that brings together operational and information technology workloads on a single, compact platform.



## Preparing and protecting

We implemented Lenovo ThinkSystem SE350 Servers and prototype Lenovo ThinkSystem SE650 Servers running Intel® Xeon® processors.

The rugged and compact Lenovo ThinkSystem SE350 is tailored specifically for the edge. It can be deployed practically anywhere as it does not require networking points or specialized power supplies, and can handle wide operating temperature ranges, dust, and vibration.

The Lenovo ThinkSystem SE650 — currently a prototype — is a 2U-high modular system designed for applications that need significant processing power such as vRAN, multi-access edge computing (MEC), and NFV infrastructure (NFVI).

Both servers offer the physical and data security to protect against unauthorized data access with a dedicated management port and the ability to detect hardware tampering and unauthorized movement.

And with Lenovo Open Cloud Automation (LOC-A) software, MNOs can rapidly deploy, optimize, and manage cloud infrastructure on the ThinkSystem SE350 Edge Servers with support for Kubernetes, Red Hat OpenShift, OpenStack, and VMware Cloud Foundation.

Cellnex acts as a neutral host for the joint solution, offering the full end-to-end edge solution as a service to their MNO clients.



This edge computing solution is designed to help mobile operators lower their TCO, while supporting exciting new visual use cases for different vertical segments. As a scalable and modular solution, it can cover many different scenarios, from dedicated on-premises deployments, to distributed telco edge services for the consumer market.



**Óscar Pallarols**  
Global Commercial Director  
Cellnex Telecom

3

## Results

Now, Cellnex Telecom has the high availability they need to ensure the 24/7 uptime customers expect. They also have the flexibility to implement 5G, smart city systems, autonomous vehicles, and other emerging technologies.

More importantly, they can offer edge computing as an accessible, affordable managed service for MNOs — helping them improve performance for end-users, shrink operational costs, and even open up exciting new revenue streams.

✓ 1000s of  
remote sites

✓ 99.999%  
uptime

✓ Reduce TCO  
for customers



## Where will edge computing take you?

Go beyond what you once thought was possible by taking your business from data center, to Data-Centered.

[Explore Edge Computing Solutions](#)

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