

**Objective**

Use the cloud to remedy traditional IT challenges, accommodate near-term industry changes, and provide a long-term business advantage

**Approach**

Build a private cloud in tandem with a new network operations center (NOC) to integrate IT and OT and innovate moving forward

**IT Matters**

- Reduced human error by 20 percent
- Increased resource utilization from 40–50 percent to 70–80 percent
- Accelerated resource deployment significantly

**Business Matters**

- Improved the quality and timing of services delivered to internal business units
- Transitioned IT staff from maintenance to innovation
- Positioned organization to accommodate near- and long-term industry changes

# Private cloud positions CENACE for success

Energy organization is readied for today and primed for the future



**Gonzalo Uquillas**  
CIO  
Cenace

**IT and the pace of change**

Corporación CENACE (CENTRO NACIONAL DE CONTROL DE ENERGIA) is under tremendous pressure. Not only does it operate Ecuador's entire electrical grid, but it also coordinates the many organizations—generation, transmission, and distribution companies—that participate in the country's electrical sector. In its quest

to deliver high-quality, real-time services, CENACE relies heavily on both IT and operations technology (OT). Feeling restricted by its IT systems, CENACE knew a fundamental shift was necessary. It wanted an entirely new IT foundation that would address its immediate challenges and position the organization well for future growth.

“We wanted a new foundation, an entirely new approach to managing IT and operations. Hewlett Packard Enterprise understood that, and they worked with us to create an HPE Helion Cloud foundation on HPE ConvergedSystem 700x that will help truly drive our organization.

— Gonzalo Uquillas, IT Director, Corporación CENACE

### **The limitations of traditional IT IT friends OT—in the cloud**

On the IT side, CENACE was struggling with limitations surrounding the traditional IT model—including slow time to deployment; running at just 40–50 percent of capacity; siloed IT systems management; a disconnect between IT and OT; and an inability to accommodate business requests in a timely manner. “Most of our staffing resources were dedicated solely to maintaining the infrastructure, and that also needed to change,” says Gonzalo Uquillas, IT Director, Corporación CENACE.

The organization wanted to free up its IT staff to focus less on maintenance and management and more on innovation, especially as it was anticipating significant industry changes on the horizon. In the near term, plans exist to double Ecuador’s total capacity of generation, expand the transmission system, and construct a number of new power stations. The evolution of the smart grid is something CENACE continues to keep an eye on. And, further out, it’s expected that Ecuador’s electrical grid will further integrate with the grids of neighboring countries, like Peru and Colombia. These changes and trends pose important challenges for CENACE, especially “in the real-time operation of the country’s power system,” says Uquillas. “In order to meet our immediate IT challenges and these broader industry changes,” adds Uquillas, “it was absolutely necessary to change from the traditional IT model to a more efficient, more integrated approach, which is cloud computing.”

With the goal of improving the reliability and quality of the services it delivers, CENACE decided to build a private cloud solution in parallel with the construction of a new network operations center (NOC). “We needed a platform that was reliable and could deliver the level of performance a public utility demands,” says Uquillas. He was also looking to integrate IT and OT to simplify management and enhance performance. “We are the IT business, so for us it was important that the IT infrastructure be part of the OT solutions.”

The organization’s system is built on an infrastructure that is 95 percent HPE. On top of its HPE ConvergedSystem 700x platform, the organization is running HPE Helion CloudSystem Enterprise. CENACE is rolling out its cloud solution in multiple phases. The first, and recently completed, phase enables the company to deliver Infrastructure as a Service (IaaS) to CENACE’s internal business units—including the planning, operations, and commercial departments. CENACE will eventually evolve its cloud to offer PaaS and SaaS to internal business units, and then expand its entire service offering to other companies that participate in Ecuador’s electrical sector.

HPE services played a large role in helping CENACE develop and deploy this solution. The organization participated in a Cloud Advisory Workshop, and then worked closely with HPE consultants to strategize and architect the right solution—one that takes into account CENACE’s unique position within the energy industry.

## Customer at a glance

### HPE Helion Cloud solution

Private cloud

#### Hardware

- HPE ConvergedSystem 700x
- HPE BladeSystem
- HPE ProLiant BL460c Server Blades
- HPE 3PAR StoreServ 7400 Storage.

#### Software

- HPE Helion CloudSystem Enterprise (with HPE Platform, Applications, and Analytics [PAA] add-on)
- HPE OneView
- HPE Data Protector backup agent

#### HPE services

- HPE Helion Advisory Services (HPE Cloud Workshop)
- HPE CloudSystem Consulting Service, HPE CloudSystem Implementation Services
- HPE Proactive Care Service (3 year, 24x7)

## Gains today—and tomorrow

The first phase of CENACE's private cloud has only been in production for several months, but already, the organization is incredibly pleased with the results. A key benefit of the solution is that the organization has been able to shift key IT staff away from operations so that they can focus on innovation—to explore new ways of addressing some of the industry's upcoming challenges.

CENACE has been able to significantly decrease time to operation via rapid infrastructure deployment. Moving away from siloed systems to a converged infrastructure and more integrated IT and OT systems has radically improved overall system management—simplifying and speeding processes while decreasing human error by 20 percent.

Another benefit is the optimization of resources. Servers that once ran at 40–50 percent of capacity are now running at 70–80 percent of capacity. Given this, the speed of deployment, and the ease of management, CENACE is also experiencing significant time and cost savings.

Harder to measure is the underlying confidence Uquillas and his team are now experiencing, especially as they look to the future. With its HPE Helion CloudSystem built on an HPE ConvergedSystem 700x solution, CENACE will be able to accommodate the anticipated increases in production that will soon occur. And, should Ecuador's National Interconnected System—its grid—eventually become integrated with those of neighboring countries, and should a regional provider be needed to operate the entire system, CENACE will be primed and ready for that potential role.

## Partnership

With HPE's help, Uquillas and his team were able to convince CENACE's board of directors on the advantages of a new IT model via HPE Helion CloudSystem Enterprise. According to Uquillas, "This was a strategic decision that was approved by both the IT department and the board of directors of CENACE. They were fully aware that this was going to be a strategic project that would change the way we work and the way we manage our IT assets."

The fact that HPE guaranteed a speedy deployment of the solution also worked in HPE's favor. "We've been working with HPE for a long time," says Uquillas. "We really felt strongly that, in terms of quality and lifecycle management, HPE is the best. For me, HPE has always been number one. And third parties have validated that opinion." He adds, "We wanted a new foundation, an entirely new approach to managing IT and operations. HPE understood that, and they worked with us to create an HPE Helion Cloud foundation on HPE ConvergedSystem 700x that will help truly drive our organization."

### Resources

"Industry Edge: Energy: Utilities Edition," HPE Services, summer 2012  
<http://www.epageflip.net/t/25196-utilities-industry-edge-vol-7>

Learn more at  
[hpe.com/helion](http://hpe.com/helion)



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