



Virtual Infrastructure Lowers Costs and Increases Scalability for Petrobras Energía

Petrobras Energía Adopts VMware Virtual Infrastructure for Money Savings, Quick Server Deployment Time, Space Savings and Scalability

RESULTS

- 20:1 server consolidation
- Reduced server deployment times from 30-40 days to 1-2 days
- Minimized downtime with VMotion
- VMware software paid for itself in 12 months
- Saved thousands of dollars in hardware, maintenance costs
- Improved server utilization
- Simplified and centralized server management with VirtualCenter

The Need to Replace Obsolete Servers in Data Center

Petrobras Energía Participaciones S.A. is an energy company engaged in oil and gas exploration and production, refining, petrochemicals, electricity generation, transmission and distribution, and hydrocarbons marketing and transportation. Conducting operations in Argentina, Bolivia, Brazil, Ecuador, Peru and Venezuela, it is engaged in a broad range of oil and gas activities, including crude oil and natural gas exploration and production, refining, transportation, marketing and distribution of oil products, petrochemicals, natural gas and power.

In August 2003, the Argentina office realized they needed more servers to accommodate its business applications. But its data center had 30 older, obsolete servers that would need to be removed. "We had a choice," says Martín Mendez, software and technical architect for Petrobras Energía. "Either we could replace them by buying new servers, or we could consolidate them. We chose to consolidate them."

The company had used VMware GSX Server™ before, with good results. "We knew VMware provided strong solutions, so we went to them," Mendez says. He obtained an evaluation copy of VMware ESX Server™, testing it out by emulating a production environment. "We wanted to see if it would work the same way as with physical machines. It did, so we knew we should move forward with a VMware virtual infrastructure."

Needing to accommodate 60 new servers, Mendez

decided to purchase four VMware ESX Server licenses – one for quality assurance plus three for production – along with Virtual Infrastructure Nodes (VINs) for optimal server management. "If we bought 60 new servers, it would have been very expensive, not to mention the difficulty of finding additional space and resources in our data center to accommodate them," Mendez says. "With the VMware virtual infrastructure in place, we could get everything we needed, plus better performance, all at a lower cost."

The Virtual Infrastructure Advantage

Petrobras Energía has seen a number of benefits from adopting a virtual infrastructure, including:

- **Server Consolidation and Increased Server Utilization.** With VMware virtual infrastructure, Petrobras Energía was able to consolidate its servers by 20:1, and increase server utilization. This allowed Mendez and his team to meet its goals of adding more servers to its data center, without requiring extra resources or space.
- **Faster Server Deployment.** Being able to deploy servers in one or two days with VMware software, instead of taking 30-40 days to deploy physical servers, means the IT team can quickly respond to business needs. "If there is a request for a new server for a new application, we can set it up right away, instead of having to order and set up a new physical server."
- **Minimized Downtime.** Using VMotion, Petrobras Energía can migrate a virtual machine from

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*Martín Mendez
Software and Technical Architect, Petrobras Energía*



VMWARE VIRTUAL INFRASTRUCTURE AT WORK

- ESX Server, VirtualCenter on 8-CPU IBM x445s, 16 GB RAM
- Guest Operating Systems: Windows NT 2003, Linux
- Applications running in virtual machines include: Microsoft Exchange, SQL, DNS Server, IBM Lotus Notes, RADIUS Server and SNA Access Server

one hardware platform to another without any downtime. "We are able to perform hardware upgrades or maintenance without any downtime because we can move applications in virtual machines to other physical servers. This means we have a stronger system, plus minimized downtime."

- **Return on Investment (ROI).** "We found that the VMware software paid for itself in 12 months," says Mendez. "We save money on space, infrastructure costs and switches, plus we recovered our initial investment, so it's an impressive savings."
- **Simplified Server Management.** Using VMware VirtualCenter, Mendez is able to manage servers from a central location. "We are able to easily deploy new servers and manage resources from a centralized point," Mendez says. "This product has reduced the administrative burden of managing a large number of servers, while helping us respond faster to requests."

Optimized IT Infrastructure

Using VMware software, Mendez says he was able to best meet his server consolidation needs, while creating a virtual infrastructure that would scale to meet future business demands. "We were quickly able to recover our investment in the software because it resulted in so many IT infrastructure savings," says Mendez. "For example, we did not need to buy as much hardware, and the software allows us to conserve space and resources. Also, being able to quickly provision new servers and

centrally manage our infrastructure has created an efficient IT infrastructure."

With VMware software, Mendez says he has optimized his IT infrastructure. "We are able to virtualize anything that we would normally put on a stand-alone server," says Mendez. "Application performance, availability, ease of management is improved, plus we save money."

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