ESTECO increases efficiency in software development with Proxmox VE

ESTECO needed a complete development virtualization system for their test and research groups. After implementing Proxmox VE they can now quickly overview and manage their test machines and the deployment process is very fast. When developers request a new VM, the IT staff quickly instantiates them and provides access instantaneously.

“The biggest gain with Proxmox VE was that we could significantly reduce our working hours,” says Livio Tenze, head of IT at ESTECO. “Our company is highly specialized in numerical optimization and simulation data management and we develop optimization software like VOLTA and modeFRONTIER and support our customers. Each day, we have to instantiate numerous virtual machines either to check software functionalities, provide support to our customers, or to enable access to sandboxing VMs.”

WASTING TO MUCH TIME FOR VM MANAGEMENT

Livio Tenze is the head of IT department and an electronic engineer PhD in signal and image processing at ESTECO. Before implementing the Proxmox virtualization platform, the IT staff spent a lot of working hours just to create, configure, deploy, and backup all the virtual machines for the engineers from the development and test department in their company. “Now, the procedures are very fast,” says Livio, “and they enable our developers and engineers to quickly setup a VM to run tests checking the recently implemented software functionalities.”

ESTECO is mainly involved in developing optimization software for desktop and enterprise installations. The company was founded in 1999 and is
headquartered in Trieste, Italy with offices in the USA and India. It has about 130 employees of which 80 are based in Italy and 50 at the other offices. With their products and services specialized in numerical optimization and simulation data management ESTECO helps their customers to design prototypes and future products. Over 300 international organizations have chosen ESTECO to consolidate specialized expertise, streamline teamwork, and boost product development across a wide spectrum of industrial sectors.

**FIVE PROXMOX VE NODES RUNNING OVER 60 VMS AND CONTAINERS EVERY DAY**

“Currently, we have five nodes with Proxmox VE,” says Livio Tenze, head of IT. “We have two AMD and three Intel nodes in a mixed cluster that runs about 60 VMs and containers every day. These nodes are connected to a data storage (ZFS storage: LUNs and filesystem are provided through iSCSI and NFS protocols to all of the nodes) where the VMs are stored, and we virtualize both Linux and Windows. Our backups are stored to specific local and remote infrastructures. Also, we already have another Hitachi SAN in production that we are going to connect with the Proxmox cluster.”

“What makes Proxmox VE outstanding is the online storage migration feature which is very useful and powerful in many applications. Periodic backups, LDAP integration, and other features make Proxmox a reasonable solution for us.”

“What pushed us to search for a virtualization solution was that we were looking for an efficient solution to manage all the machines for testing and development in a supervised environment. The main challenge was the fact that we needed some advanced technologies to simplify and speed up our every day work.”

“Choosing Proxmox VE significantly improved the efficiency of our company and sped up the development of our own software products,” says Livio T. “Moreover, virtual machines provide simple management, easy backup and restore procedure, fast re-installation and re-instantiation of servers.”

**CHOOSING PROXMOX VE AFTER TESTING EUCALYPTUS, OPENNEBULA, AND VMWARE**

“We have found Proxmox after many tests: Eucalyptus, OpenNebula, and VMware. Then we installed and tested the Proxmox VE solution which was introduced to us by our colleagues from SymTech IT. As Proxmox partner, they have a lot of expertise with Proxmox VE themselves and could help us a lot. We finally choose Proxmox VE because it’s so easy to manage and it’s a robust solution for a virtualization environment.”

“Now, virtualization provides high flexibility to all of our developers and engineers during development and testing. We currently instantiate many VMs to run a lot of tests to check new software functionalities, to support our customers, or to give access to a sandbox VM to test a new product. This is the main use we do with virtualization.”

“As we exploit many open-source solutions for development at ESTECO, we had no concerns about the open-source solution at all. Moreover, we found that Proxmox VE contains many features not available in other environments. Under many aspects, Proxmox VE is easier to manage and use than other solutions. For
instance, the web interface provides almost everything you need to manage VMs. We can also minimize the use of the command line, which makes work faster. However, in some operations the command line is still very powerful. For us, the combination is just a perfect choice.”

**IMPLEMENTATION**

“Implementing Proxmox VE was fast and easy. We found some spare nodes for testing the virtualization system and then we installed Proxmox on them. We tested both, hardware virtualization (KVM) and paravirtualization (OpenVZ and LXC). It was easy to setup Proxmox VE and without any problems. We found useful help and user guides provided by the Proxmox wiki and website. For some advanced customization we also got a little help from our colleagues at SymTech IT.”

**RESULT: REDUCING WORK TIME AND IMPROVING PERFORMANCE**

The outcome of implementing Proxmox VE within ESTECO has been successful and the company now has a complete development virtualization system for testing and research groups.

“After implementing Proxmox VE we can now easily overview and manage the test machines, and the deployment process is very fast. When our developers request a new VM, we quickly instantiate them and they can access and use it instantaneously. Furthermore, with VM templates we have a very efficient way when many VMs, especially with the same configuration, need to be instantiated.”

“We also could improve performance after implementing Proxmox VE. Overall, we significantly reduced our work time – creation, configuration, deployment, backup procedures are now really fast for us.”

“The most important benefit we could achieve is that Proxmox VE speeds up our core work and helps us with its ease of management.”

Livio Tenze, Electronic Engineer PhD in signal and image processing, head of IT department.
About ESTECO

ESTECO is an independent software provider, highly specialized in numerical optimization and simulation data management with a sound scientific foundation and a flexible approach to customer needs. Over 300 international organizations have chosen ESTECO to consolidate specialized expertise, streamline teamwork and boost product development across a wide spectrum of industrial sectors. ESTECO was founded in 1999 and is headquartered in Trieste, Italy with offices in the USA and India. It has about 130 employees of which 80 are based in Italy and 50 at the other offices. More: [https://www.esteco.com](https://www.esteco.com)

SymTech IT

SymTech IT is a professional IT systems and solutions provider with a focus on cloud services and business continuity. Since 20 years SymTech has been dealing with IT systems and solutions, with the aim to support and follow its customers along the path of information technology and to provide them with competent and effective solutions and support. The company is specialized in ensuring the security of company data and ensuring the availability of services. SymTech is based in Trieste, Italy and a Proxmox reseller and training partner. More: [https://www.symtech.it](https://www.symtech.it)

About Proxmox Server Solutions GmbH

Proxmox is provider of powerful yet easy-to-use open-source server software. Proxmox is developer of Proxmox Virtual Environment, the leading open-source platform for all-inclusive enterprise virtualization, as well as of the Proxmox Mail Gateway, a comprehensive open-source email security solution. Enterprises regardless of size, sector or industry use the stable, secure, scalable, and open Proxmox solutions to deploy efficient, agile and simplified IT infrastructures, minimize total cost of ownership, and avoid vendor lock-in. Proxmox also offers enterprise support and training to ensure business continuity to its customers. Proxmox Server Solutions GmbH was established in 2005 and is headquartered in Vienna, Austria.

To learn more visit [https://www.proxmox.com](https://www.proxmox.com)

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