

**X** PROXMOX



# Proxmox VE

Proxmox Virtual Environment (Proxmox VE) is your enterprise-grade, open source, hyperconverged virtualization solution that integrates virtualization using KVM/QEMU, LXC containers, and Ceph storage on a single, low-cost-of-ownership platform, with professional support and the ability to obtain official training.



**Soltecsis, SILVER PARTNER of Proxmox and first TRAINING PARTNER approved to provide official Proxmox VE training in Spanish.**

## Why use it?

By virtualizing operating systems, applications and workloads, you will be able to adapt your Data Center efficiently to the requirements of your business as they evolve, scaling both computing and storage resources in a simple way and making it easier to effectively take advantage of your investment in hardware. Additionally, it makes it easier for you to manage the lifecycle of your services and data through the use of backups, snapshots, clones and replicas.



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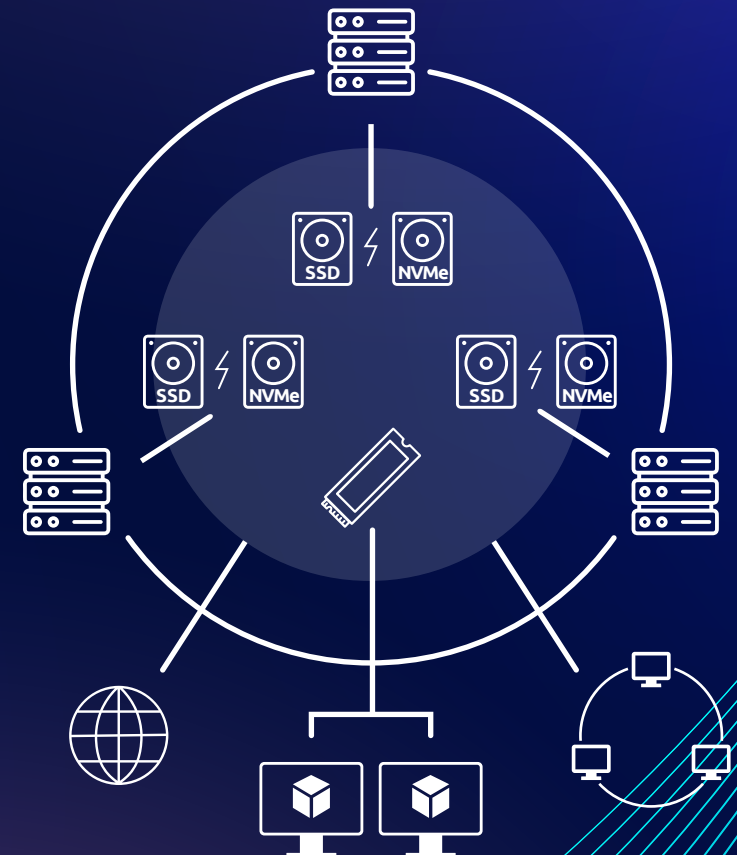
# Proxmox VE Ceph Cluster

A Proxmox VE server cluster combined with a Ceph distributed storage system allows you to create an hyperconverged virtualization infrastructure in high availability, with load balancing and very easy horizontal scalability.

## What is it?

Three or more servers forming part of a Proxmox cluster and using Ceph as a distributed storage system, all managed from the Proxmox web interface, thanks to which we achieve a hyperconverged virtualization infrastructure.

A hyperconverged virtualization infrastructure is an integrated system that combines compute, storage, and networking in one environment only. This simplifies management, improves efficiency, and enables easy scalability, making it easy to create and manage virtual machines in a single cluster.





## Architecture

Although the architecture may vary depending on the needs and requirements of each client, it is always very similar. Roughly speaking, a Proxmox VE Ceph Cluster consists of:

- › Three or more servers.
- › Two mirrored disks using ZFS for the installation of the Proxmox hypervisor.
- › NVMe disks for Ceph where to create the pools to host the Virtual Machines.
- › Ceph network with 50Gbps or 20Gbps trunks.
- › Service network for access to virtual machines.

## Mesh network

For three nodes, a mesh network can be used, thus avoiding the need for a switch stack. From three nodes it is recommended to use a switch stack.

## Advantages

- › Cost reduction
- › High availability and fault tolerance
- › High scalability
- › Hardware updates without affecting production
- › Storage migration
- › Load balancing
- › Live migration
- › Centralized management



## DRP (Disaster Recovery Plan)

A DRP (Disaster Recovery Plan) is crucial to maintain business operations in the event of disasters, guaranteeing the continuity and protection of essential data. It is very important to have a good DRP to ensure the resilience of the data.

### What is it?

The "Disaster Recovery Plan" in computing refers to a set of strategies, policies and procedures that an organization implements to restore its critical systems and data after a catastrophic event or disaster that causes significant disruptions in normal operations. These events may include:

- Natural disasters: Such as earthquakes, floods, fires, storms, etc.
- Man-made disasters: Such as cyber attacks, infrastructure failures, acts of vandalism, etc.

The goal of the Disaster Recovery Plan is to minimize downtime and ensure business continuity, allowing the organization to recover quickly after a disaster.

Below we will list several options, taking into account that our DRP may have some of these or even a combination of all of them, depending on the level of data resilience desired.

## Option 1

### Proxmox VE Ceph Distributed Cluster

Our partner OVHcloud has a service called 3-AZ region thanks to which we can distribute a Proxmox VE Ceph cluster made up of dedicated servers (bare metal) between three different data centers separated by a few tens of kilometers.

## Option 2

### Proxmox Backup Server with frequent replication

Make use of a Proxmox Backup Server (PBS) or our PBS Online service in a data center (even a different country or continent) where you can have a backup copy of all virtual machines, maintaining history of several versions over time depending on the space available for copies.

## Option 3

### Ceph Replication

Create a Proxmox VE Ceph cluster identical to the production one in a data center geographically separated from the main cluster and activate Ceph replication between both clusters.



# VDI (Virtual Desktop Infrastructure)

Virtual desktops and applications accessible from anywhere and at any time, providing flexibility, security and efficiency in the management of work environments.

## What is VDI?

VDI stands for "Virtual Desktop Infrastructure." It is a technology that allows organizations to host and manage virtual desktops in a centralized environment, rather than relying on individual physical computers for each user.

In a VDI environment, user desktops run as virtual machines (VMs) on servers in the organization's data center. Each user accesses their virtual desktop through a client device, such as a desktop, laptop, tablet, or mobile device, using a network connection.







**UDS**  
ENTERPRISE

As a VDI solution we implemented UDS ENTERPRISE which provides a high-performance work experience and maximum security regardless of location and access device.

## Benefits

### **Security**

It meets the highest safety standards without the need for any extra components.

### **Multi Tech**

It is compatible with any technology. Enable all the solutions you need simultaneously.

### **100% Customizable**

Open Source base that allows you to customize the platform to adapt it to your needs.

### **Efficiency and cost savings**

UDS Enterprise allows you to manage all the software used in the organization from a single console. It optimizes existing infrastructures, enables the reuse of obsolete equipment and cost savings in the acquisition of new devices.

### **Scalability**

The great scalability of this VDI solution allows you to easily expand or reduce the infrastructure according to the real needs of each moment, offering a fast and efficient solution to peaks in demand.

### **User Experience**

Users just have to open a web browser and enter their UDS Enterprise access credentials to start using all the tools they need. In the event of any incident, the support team's response times are drastically reduced.

### **Sustainability and Responsibility**

UDS Enterprise helps organizations to be more sustainable and responsible in caring for the environment, promoting compliance with the Sustainable Development Goals (SDGs) to achieve the goals of the 2030 Agenda set by the UN.



# Proxmox Backup Server

## Backup data and virtual machines

Proxmox Backup Server is an enterprise backup solution to backup and restore virtual machines, containers, and physical hosts.

We provide Proxmox Backup Server Online service. You can hire us TB of space on our servers to make a remote copy of your Proxmox VE-based virtualization environment.



# BACKUP

## Characteristics

Proxmox Backup Server in the cloud

### Space optimization

By supporting incremental and fully deduplicated backups, Proxmox Backup Server significantly reduces network load and saves valuable storage space.

### Security

With strong encryption and methods to ensure data integrity, you can feel confident backing up data, even to destinations that are not fully trusted.



**We are distributors, integrators and the first and only company of official Proxmox VE trainers in the Spanish language.**



# Proxmox Course

The training will be online and conducted in Spanish. At the end of it, each student will receive the corresponding **official certificate signed by Proxmox**.

All courses that are part of the Proxmox VE training are eligible for credit through the Tripartite Foundation (Only for Spanish territory).



## Installation and Administration

2 days

Basic training aimed at IT professionals who want to learn how to deploy and manage KVM virtual machines, Linux containers, or Proxmox Firewall in a single-node configuration within their network.



## Advanced

2 days

This hands-on training course is aimed at advanced IT professionals who want to manage a Proxmox VE cluster, understand high availability, use hot migration and different storage solutions (e.g. Ceph and ZFS).



## Bundle

4 days

Get the best value for your money with the complete training course package: you'll learn the fundamentals of server virtualization, as well as advanced topics such as clustering, high availability, and distributed storage, in just a few days.



The training calendar is available on our website.

From 5 students enrolled in the Bundle course, the training dates can be adapted to the needs of the end client.



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