

Proxmox VE Bundle

Duration: 4 Days

The Proxmox VE training bundle takes a complete deep dive into the open-source server virtualization management platform Proxmox VE. The course consists of the training courses "Proxmox VE Deployment and Management" together with "Proxmox VE Clustering and Shared Storage".

Target audience:

This training is aimed at IT professionals, system engineers, server administrators, and Proxmox partners who need to build competence and confidence in deploying, managing, and troubleshooting Proxmox VE in single node as well as clustered setups.

Training content

The course provides a mix of theory and practical work, helping participants build competence and confidence in deploying, managing, and troubleshooting Proxmox VE clusters:

Module 1: Deployment and Management

1. Understanding the architecture of Proxmox VE with a focus on a single server deployment.
2. Installing and setting up Proxmox VE: system requirements, installation, updates, and network configuration.
3. Exploring the management interfaces (web GUI, CLI).
4. Configuring and managing networks in Proxmox VE: Bridging and bonding network interfaces, VLANs, software-defined networking.
5. Storage management: Storage options in Proxmox VE with a focus on single server deployments.
6. Virtual guest management: Creating, managing, and understanding the various options and possibilities for VMs and Linux OS containers (LXC).
7. Migration to Proxmox VE from other hypervisors (V2V) and bare-metal machines (P2V) and recommended post-migration steps.
8. Backup and restore strategies: Backing up guests with the out-of-the-box backup functionality, exploring the integration with the Proxmox Backup Server, retention management, and restore possibilities.
9. Authentication and Permissions: Users, groups, authentication realms, and permission schemes.

10. Integrated firewall
11. Troubleshooting common issues

Module 2: Clustering and Shared Storage

1. Architecture and components of a Proxmox VE cluster: Requirements, best practices.
2. Exploring the Proxmox Cluster File System (pmxcfs) and Corosync.
3. Cluster networking and redundancy, software-defined networking (SDN) and VLANs.
4. Storage management with shared storage options.
5. Deploying Ceph: Hyper-converged infrastructure (HCI), Ceph RBD for guest virtual disk storage, CephFS for clustered file storage, maintenance tasks, and best practices.
6. Migration of guests between nodes.
7. ZFS for asynchronous guest disk replication in a cluster.
8. High availability (HA) for VMs and containers.
9. Failure scenarios with exercises for HA and Ceph.
10. Considerations for a minimal 2 node setup with an external tiebreaker (QDevice).
11. Automate tasks using the Proxmox REST API or CLI tools.
12. Troubleshooting common issues