

# Proxmox: Virtualization, Clustering, and Management

Course code: PVCS

Proxmox VE is an open-source virtualization platform that combines KVM (full virtualization) and LXC (containers) in one solution. It enables efficient management of virtual servers, network components, storage, and high availability — all through an intuitive web interface or command line.

## What we teach you

Gain a comprehensive overview of deploying and managing the Proxmox VE virtualization platform, including practical skills in networking, storage, high availability, and migration from VMware.

## Required skills

- Basic understanding of IT infrastructure
- Knowledge of Linux is an advantage but not required
- The course is suitable for administrators, technicians, and IT consultants

## How the training is conducted

- In person in Prague or Brno
- Or online with direct access to a lab environment
- Hands-on experience – each participant works in their own dedicated environment
- The instructor will guide you step by step and answer your questions

## Course outline

### Day 1: Fundamentals, Installation, and Environment Management

- Introduction to virtualization and Proxmox VE architecture
- Hardware, network, and storage requirements
- Installation of a single-node cluster (LAB)
- Post-installation setup, managing repositories
- Working with the Web GUI and CLI
- Users, roles, and authentication
- Network configuration: bridged, NAT, VLAN
- Virtual switches, security, and isolation

### Day 2: Virtualization, Storage, HA, and Migration

- KVM vs. LXC – differences, advantages, use cases
- Creating and managing virtual machines and containers
- Storage backends: local, ZFS, Ceph, NFS, iSCSI
- Snapshots, backup, and recovery
- High availability and clustering
- Migration from VMware: preparation, import, optimization
- Best practices, case studies, discussion

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