

## DATASHEET

# Proxmox Virtual Environment

### AT A GLANCE

- Complete virtualization solution for production environments
- KVM hypervisor
- Lightweight Linux Containers (LXC)
- Web-based Management Interface
- Comprehensive management feature set
- Multi-node High Availability Clusters
- VM Templates and Clones
- Multiple storage types supported like Ceph, NFS, ZFS, Gluster, iSCSI,...
- Open source license GNU AGPL, v3

### OVERVIEW

Proxmox VE is a complete virtualization management solution for servers. You can virtualize even the most demanding application workloads running on Linux and Windows Servers. It combines the leading Kernel-based Virtual Machine (KVM) hypervisor and container-based virtualization on one management platform.

Thanks to the unique multi-master design there is no need for an additional management server. This saves resources and also allows high availability without single point of failures (no SPOF).

With the included web-based management you can easily control all functionality. Full access to all logs from all nodes in a cluster is included, including task logs like running backup/restore processes, live-migration or high availability (HA) triggered activities.

### ENTERPRISE-READY

Proxmox VE includes all the functionality you need to deploy an enterprise-class virtualization environment in your company's datacenter. Multiple authentication sources combined with role based user- and permission management enable full control of your HA virtualization cluster. The RESTful web API enables easy integration for third party management tools like custom hosting environments.

With the future-proof open source development model, your full access to the source code as well as maximum flexibility and security are guaranteed.

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#### ABOUT PROXMOX SALES AND INQUIRIES

Proxmox Server Solutions GmbH is a privately held corporation based in Vienna, Austria.

<http://www.proxmox.com>

Proxmox Customer Portal  
<https://my.proxmox.com>



## KEY FEATURES

### Industry-leading Enterprise Virtualization Technology

- Linux and Windows Servers, 32 and 64 bit operation systems
- Support for the latest Intel and AMD server chipsets for great VM performance
- Leading performance relative to bare metal for real-world enterprise workloads
- Management layer contains all the capabilities required to create and manage a virtual infrastructure

### Integrated web-based Management GUI

- No need to install a separate management tool or any additional management node
- Fast search-driven interface, capable of handling thousands of VM's
- Secure HTML5 VNC console, supporting SSL
- Wizard based creation of virtual servers and containers
- Seamless integration and management of Proxmox VE 4.x Cluster
- Subscription management via GUI
- Role based permission management for all objects (VM's and CT's, storages, etc.)
- Support for multiple authentication sources (e.g. local, MS ADS, LDAP, ...)
- AJAX technologies for dynamic updates of resources
- Based on Ext JS JavaScript framework.
- Cluster-wide Task and Cluster logs: The GUI shows all running tasks from the whole cluster but also the history and the syslog of each node. This includes running backup or restore jobs, live-migration or HA triggered activities

### Command Line Interface

- For advanced users
- Manage all components of your virtual environment
- CLI with intelligent tab completion and full UNIX man page documentation

### Live Migration

Moving running servers from one physical host to another without any downtime.

### Open Source Software

- Licensed under the free, copyleft GNU Affero General Public License, version 3 (AGPL, V3: <http://www.gnu.org/licenses/agpl-3.0.html>)
- Designed to ensure cooperation with community
- Public code repository (GIT)
- Bugtracker
- Public community forum
- Free Wiki for documentation and HowTo's

### RESTful web API

- Easy integration for third party management tools like custom hosting environments
- REST like API (JSON as primary data format, and the whole API is formally defined using JSON Schema)
- Easy and human readable data format (native web browser format)
- Automatic parameter verification (verification of return values)
- Automatic generation of API documentation
- Easy way to create command line tools (use the same API)
- Resource Oriented Architecture (ROA)
- Declarative API definition using JSON Schema

### High Availability Cluster

- No single point of failure (no SPOF)
- Multi-master cluster (no single master)
- GUI for managing KVM and container HA settings
- pmxcfs—Proxmox VE Cluster File System: database-driven file system for storing configuration files replicated in realtime on all nodes using Corosync
- Based on proven Linux HA technologies, providing stable and reliable HA service
- Resource agents for KVM and Linux Containers (LXC)
- Watchdog based Fencing

### Fencing

- Proxmox VE HA Manager uses self fencing provided by hardware Watchdog or kernel Softdog
- No simultaneous data access and corruption
- Works „out-of-the-box“
- Proxmox VE HA Simulator included for testing

## KEY FEATURES

### Storage Types

- Local storage, ZFS, LVM with ext3/ext4, and XFS
- Shared storage such as FC, iSCSI or NFS
- Distributed storage such as Ceph RBD, Sheepdog, and DRBD9
- Unlimited number of storage definitions (cluster-wide)

### Multiple Authentication Sources

- Proxmox VE supports multiple authentication sources
- Linux PAM standard authentication (e.g. 'root' and other local users)
- Proxmox VE authentication server (built-in)
- Microsoft Active Directory (MS ADS)
- LDAP

### Bridged Networking

- Bridged networking model
- Each host with up to 4094 bridges
- TCP/IP configuration
- IPv4 and IPv6 support
- VLANs
- Open vSwitch

### Role-based Administration

- User- and permission management for all objects (VM's, storages, nodes, etc.)
- A role is simply a list of privileges. Proxmox VE comes with a number of predefined roles which satisfies most needs. The whole set of predefined roles can be seen on the GUI.
- Permissions are the way to control access to objects. In technical terms they are simply a triple containing <path,user,role>. This concept is also known as access control lists. Each permission specifies a subject (user or group) and a role (set of privileges) on a specific path.

### Backup and Restore

- Full backups of containers and VMs
- Live Backups via LVM snapshot
- Multiple schedules and backup storages
- GUI integrations, but also via CLI
- "Backup Now" and restore via GUI
- All jobs from all nodes can be monitored via the GUI tab "Tasks"
- vzedump

### VM Templates and Clones

- Deploying virtual machines from templates is blazing fast, very comfortable and if you use linked clones you can optimize your storage by using base images and thin-provisioning.
- Linked and Full Clones

### Proxmox VE Firewall

- Linux-based netfilter technology. Stateful firewall. Provides high bandwidth.
- Distributed: Main configuration in Proxmox VE cluster file system, iptable rules stored in nodes.
- Supports IPv4 and IPv6
- Cluster-wide settings
- 3 levels of configuration (datacenter, host, VM/CT)
- Completely customizable allowing complex configurations via GUI or CLI
- Quick setup with predefined macros

### Two-Factor Authentication

- For high security
- 2 types: Time-based One Time Passwords and YubiKey

„Exactly what we needed: High availability features, ease of use and proper integration of a shared storage technology (Ceph) without the need to set up separate storage systems.“

*Martin Gollowitzer, Voluntary System Administrator at FSFE*

## PROXMOX VE SUPPORT SUBSCRIPTIONS

Proxmox VE Subscriptions is a service program designed to help IT professionals and businesses to keep their Proxmox VE deployments stable, secure and up-to-date. A Proxmox VE Subscription enables exclusive access to the enterprise repository, to updates and to immediate professional support services for your virtualization server deployments.

Pick the right plan for you and your team and scale as your need grows:

	PREMIUM	STANDARD	BASIC	COMMUNITY
Stable updates via Enterprise repository	Yes	Yes	Yes	Yes
Technical support via Proxmox Customer Portal	Yes	Yes	Yes	No
Technical support via Community Forum	Yes	Yes	Yes	Yes
Support tickets included	Unlimited	10 per year	3 per year	None*
Response time	1 business day	1 business day	1 business day	n/a
Remote login via SSH	Yes	Yes	No	No
Pricing	€ 66,33 per month & CPU-socket	€ 33,17 per month & CPU-socket	€ 18,33 per month & CPU-socket	€ 4,99 per month & CPU-socket

\* Support via public community forum

**Note:** Subscriptions are licensed per physical server and per CPU-socket. Subscription period is one year from purchase date. All prices are net prices. VAT will be added, if applicable.

„We definitely can recommend Proxmox VE for its simplicity, its robustness and reliability, its price and the good support (if we have a problem, immediate action is taken).“

*Frank Ihringer, CEO, Serwise AG*

### LEARN MORE

Wiki: <http://pve.proxmox.com>  
 Community Forums: <http://forum.proxmox.com>  
 Bugtracker: <https://bugzilla.proxmox.com>  
 Code repository: <https://git.proxmox.com>

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