

# Virtuozzo Hypervisor

*“From the beginning, our goal was to make Virtuozzo 100 percent compatible with upstream projects and stick to open standards whenever possible.”*

— Pavel Emelyanov, chief software architect

## Optimized KVM and Upstream Compatibility

KVM—the most popular open source hypervisor—has gained significant traction over the last few years. And Virtuozzo has made it even more powerful. Our hypervisor uses the open source core of KVM, but adds more than 200 enhancements.

## Ready-To-Use Virtualization Solution

Virtuozzo Hypervisor can be used as a standalone product or as part of bigger OpenStack installations. It’s based on CentOS7 KVM and a modern version of QEMU: 2.3.0, which allows our virtual machines to run with no vendor-specific changes that could cause incompatibilities.

## Native Support for Windows Guests

The new Virtuozzo Hypervisor is optimized to support the Microsoft family. Virtuozzo drivers enable a full set of Hyper-V enlightenments, and the Windows guest runs on top of the Virtuozzo hypervisor, just as they would on top of Hyper-V. In addition, Virtuozzo is committed to maintaining complete SWVP certification, a step that ensures Microsoft will consider the Virtuozzo Hypervisor Windows compatible and officially support all applications running on top of it.

## Production Ready

Virtuozzo Hypervisor comes with a ready-to-use backup solution installed—no agent-based backups from 3rd parties required. Kernels can be upgraded without rebooting and with no freeze time thanks to ReadyKernel, which is based on kpatch technology. Updating images is easy—Virtuozzo Hypervisor takes advantage of a catalog of over 100 popular apps and OSes, which are patched by the Virtuozzo team within 48 hours.

## Professional Service and Support

Virtuozzo’s experienced support team is available 24/7, and has more than 15 years of experience. They’re capable of not only solving issues within our code base, but also delivering effective fixes to upstream in the shortest timeframes possible.

## Key Features

### 100% Upstream Compatible

All changes were pushed to the upstream community to ensure they will be supported in subsequent versions.

### Auto-Ballooning Technology

Improved density and performance with advanced memory management that predicts memory usage patterns and reclaims unused memory from guests if required. Based on real statistics from guest operating systems, providing the most accurate and reliable data. Supports both Windows and Linux guests.

### Hyper-V

No additional configurations required for Windows guests—Virtuozzo drivers enable a full set of Hyper-V enlightenments.

### Powerful Guest Tools

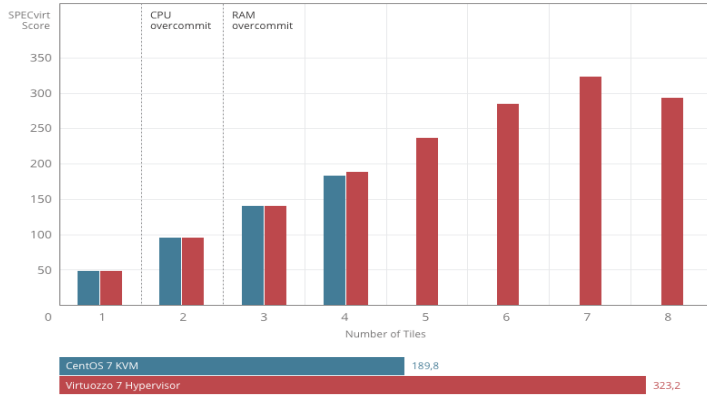
Support the most common operations, including guest exec and guest enter commands.

### Out-of-the-Box Backups

A proven backup solution is included by default.

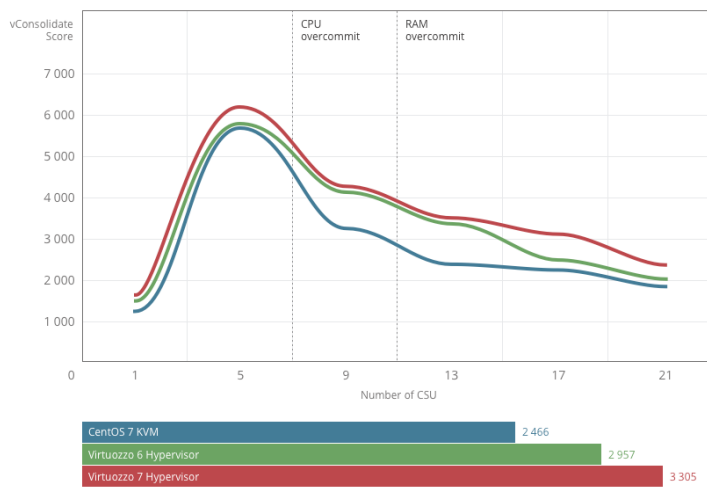
## Benchmarking Data

### Performance Test: CentOS 7KVM vs Virtuozzo Hybrid Server Hypervisor



This graph depicts a SPECvirt performance test of Linux workloads for CentOS 7 KVM versus the Virtuozzo Hybrid Server Hypervisor. Tiles represent a set of workloads. A single tile deploys a number of different workloads, each of them generating output transactions. Here we measure the output total of all transactions.

### Windows Server Performance on Virtuozzo Hybrid Server



This graph depicts a Windows operating system running a Virtuozzo Hypervisor versus CentOS 7 KVM. The vConsolidate Score reflects the performance of all workloads running on the host. Virtuozzo outperforms CentOS 7 KVM.

### By the Numbers

- 100% upstream KVM compatible
- Up to 40% better performance results for latest Linux and Windows OS
- Higher density than standard KVM
- 24x7 highly skilled professional support

FOR MORE INFORMATION

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