

Parallels® Virtuozzo Containers

Product Datasheet

An OS level server virtualization solution that enables the highest levels of performance, efficiency and manageability.

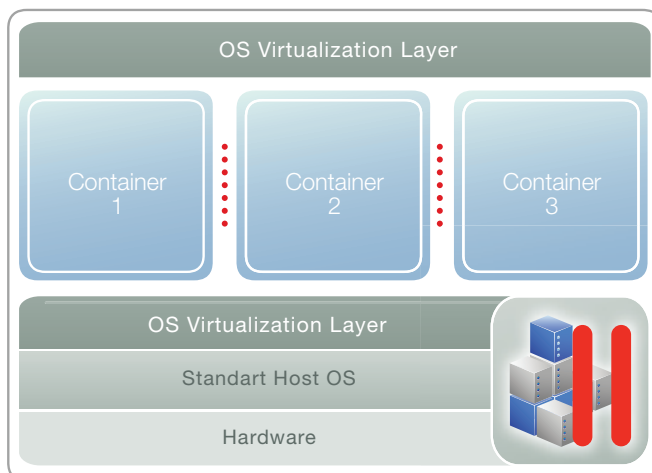
IT Infrastructure Faces Challenges to Support Business Requirements

Server systems are becoming increasingly complex, difficult to manage and somewhat inefficient. Computing resources continue to increase in power, but organizations are unable to fully utilize them in single-application deployments or easily change resource assignments when necessary. While newer servers are becoming more energy-efficient than their earlier brethrens, the deployment of single-application servers that sprawl the IT landscape is taxing corporate resources especially in an inhospitable economic environment.

At the root of the problem is uncontrolled server sprawl, but organizations that turned to hardware virtualization have now created OS sprawl. While hardware costs remain considerable, software and management still consume most of the IT budget. Daily management and operations are daunting, and adding in business continuity requirements, the costs and complexity are overwhelming. To compound the problem, few virtualization management tools provide the management and automation to ease this burden while add-on management tools costs more than the actual virtualization solutions in some cases.

Parallels Virtuozzo Containers: A Powerful and Cost-Effective Approach

Parallels Virtuozzo Containers empowers organizations to meet the increasing demands on their IT infrastructure while providing a cost-effective approach as well. By creating isolated containers on a single physical server and OS instance, organizations can utilize hardware, software, data center and management efforts with high performance and maximum efficiency. With the highest consolidation ratios of any server virtualization technology including virtualization density of up to 3X higher than VMware's hypervisor product, Parallels Virtuozzo Containers maximizes organizations' hardware, software and administration investments.



Highest Performance

Harness the full power of your business IT architecture

- Each container can use up to the full resources of the server, with lowest overhead.
- Ensure that applications operate at their peak performance.
- Full native performance architecture ensures that applications maintain all performance optimizations and run at their highest levels.
- High I/O traffic is manageable without throughput degradation.
- Links and caches enable faster application and response times.
- Granular resource control enables performance tuning for individual containers.

More Efficient: 3X More than VMware

Get maximum efficiency from optimized resource usage

- Parallels Virtuozzo Containers delivers the highest virtualization density with most virtual servers per physical server than the competition, providing the best return on investment.
- Up to 1,000s of containers per each standard physical server.
- Advanced caching to share limited resources effectively.
- High Density Partitioning efficiently divides a server into multiple containers while maximizing the server's resources.

Parallels Virtuozzo Containers' user-friendly management tools and higher efficiency make it the best solution for organizations wanting to contain their IT infrastructure and maximize their resource utilization. Its complete set of management tools and unique architecture make it the perfect solution to easily maintain, monitor and manage virtualized server resources for consolidation and business continuity configurations.

Product Overview

Highest Performance Virtualization Solution

Parallels Virtuozzo Containers empower organizations to fully harness the full power of the IT infrastructure by creating multiple isolated containers on a single physical server and one OS instance. With a minimalistic product architectural design in comparison to competitive hypervisor products, Parallels Virtuozzo Container provides the highest performance for any server virtualization product today. Complete isolation ensures that all containers are secure and have full functional, fault and performance isolation. VeriSign tested and evaluated for security and isolation.

Highest Density and Efficiency

Parallels Virtuozzo Containers provides the highest virtualization density of containers-to-physical server ratio of any virtualization product available today. Coupled with a lean product architectural design that has minimal OS overhead due to the use a single OS kernel, Parallels Virtuozzo Containers is the most cost-effective solution for your server virtualization needs today. Parallels Virtuozzo Containers enable organizations to get maximum efficiency from optimized usage of server system resources.

The Best Manageability

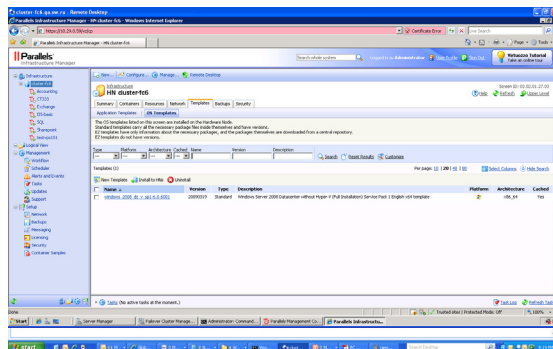
Parallels Virtuozzo Containers enhances the overall productivity of the organizations by enabling IT staff and users to manage a high performance virtualization solution without learning a new OS. IT staff are able to quickly and seamlessly provision a new server and application in seconds with key deployment technologies including cloning and templates.

The dynamic resource management features of Parallels Virtuozzo Containers allows real-time changes of key system resources such as CPU, memory, network, disk and I/O to be made to respond to the changing requirements of a business.

Standard server maintenance and OS sprawl-related problems are easily addressed through global deployment of patches and upgrades to all containers and across servers. The Parallels Transporter migration software allows reliable, easy migration from a physical (P2V) or other VMM server (V2V) migration to a Container.

For high-availability requirements of applications, the clustering support ensures individual containers or the entire Parallels Virtuozzo Containers helps businesses run uninterrupted.

Parallels Virtuozzo Containers utilizes a single OS kernel on top of the server hardware enabling the highest consolidation ratios on the market today.



For virtualized IT infrastructure that is powered by Parallels Virtuozzo Containers, IT organizations can leverage the Parallels Virtual Automation, an optional web browser-based management interface to centrally manage Linux and Windows host servers and containers.

Best Manageability

Increase overall productivity and reduce cost

- Templates and Cloning technologies provide rapid and easy provisioning of multiple containers and applications
- Web-based anytime, anywhere management provides effective mass management of the virtualized infrastructure
- Rapid deployment of OS and application updates/upgrades across multiple servers eliminate OS sprawl-related issues
- Dynamic resource management with over-the-fly changes of server system resources ensure the IT infrastructure is responsive to business requirements

Key Benefits

Parallels Virtuozzo Containers is a trusted virtualization solution that is widely and reliably deployed on more than 10,000 physical servers for the past 6 years. Key benefits of using Parallels Virtuozzo Containers include:

- **Improve performance and flexibility of virtualized IT Infrastructure**
Parallels Virtuozzo Containers provide the abstraction of OS and application from the server hardware and other fixed assets.

The decoupling of the software from hardware enables multiple containers and resident applications to run effectively on a single server hardware.

Parallels Virtuozzo Containers also provides dynamic resource allocation to meet changing application needs so that business get the flexibility that it needs.

High consolidation ratios translate into 100's of containers and near native performance through sharing kernel and system resources such as drivers, memory, schedulers and APIs. Virtually no overhead results in better memory utilization and faster context switching than hypervisors.

Use Case Scenarios and Customer Evidence

Server and OS Consolidation

Consolidate OSES and servers for easy management, increased agility and to reduce IT costs and complexity.

"With over 10,000 [containers], we've become one of the largest virtual deployments in the world."

- Demian Sellfors, CEO (mt) Media Temple

Business Continuity (HA/DR)

Balancing costs and resources with desired levels of high availability (HA) and disaster recovery (DR) produces a wide range of solutions and requirements. Parallels Virtuozzo Containers enables organizations to make data highly available and quickly recoverable.

"If our systems do go down, I have the security of knowing that switching to the back-up server will take no time at all and end-users will experience the minimum disruption possible."

- Steve Dobson, Head of IT, Pharmacy2U

Software as a Service (SaaS)

Templates allow multiple instances of an application to be quickly deployed across high density IT infrastructures in a matter of hours without application changes.

"We took our custom application and delivered it using a SaaS model in under an hour."

- Steve Merkel, Chief Information Officer, Data393

Green Computing

By providing the highest density of containers, OS virtualization enables organizations to unplug more of their physical servers for the greatest reduction in power and cooling.

"Virtuozzo's high-density capabilities, combined with great management tools, reduced power and cooling needs."

- Chris Stucker, Manager of Systems, Networking and Services, AET Films

• Optimize Resource Utilization

Parallels Virtuozzo Containers is a cost-effective virtualization software that optimized the usage of resources such as hardware, power/cooling, datacenter floor space, storage.

Organizations that effectively use existing server systems to run Parallels Virtuozzo Containers due to its minimalistic product architectural design in comparison to competitive hypervisor products.

• Enhance Manageability and Automation

Parallels Virtuozzo Containers provides templates and cloning technologies to help IT staff to simplify and rapidly deploy, provision and manage virtualized servers and applications to departments and users.

When added with optional automation tools on top of the virtualized IT infrastructure, organizations can empower the business units and employees to self-manage their allocated server resources as well as effectively account for resource usage to help business better understand how IT contributes to the bottom line.

In addition, add-on automation capabilities ensure that mundane tasks do not slow down IT staff who can better focus their efforts at helping reduce a business' time to market with products and services.

• Increase Availability at Lower Cost

With integrated backup tools, backup/recovery can be quickly facilitated due to the fluid mobility of containers when compared to conventional server systems. In addition, Parallels Virtuozzo Containers can be easily set up leverage support for clustering technologies such as Microsoft Cluster Server (MSCS) and Red Hat Cluster Server (RHCS) for highly-available Windows and Linux deployments, respectively.

Performance Sensitive Workloads

With its "Native Server Architecture", Parallels Virtuozzo Containers can be used to virtualize databases and email servers while maintaining maximum performance.

"At the end of the week, each developer had the equivalent of a very high-end desktop running Microsoft Office, SQL, Oracle and WebSphere."

- Nick Gatt, IT Manager, Kalido

Internal and Commercial Cloud Computing

With its lean architecture and complete security and isolation, it provides a cost-effective, multi-tenant solution with complete toolsets to provision, manage, monitor and update virtual servers and containers.

"[Parallels] Virtuozzo is very well-designed for ISPs. For our company, for what we want to do, the product is perfect."

- Julien Ardisson, Chief Technology Officer, Strato AG

Virtual Desktop Infrastructure

Centralize desktops to provide end users a secure, controlled environment. Easily create, deploy and manage applications in isolated, customizable containers.

"Parallels has revolutionized the way we do business – not maintaining anything on the PC and a standard deployment that performs."

- Ivor Thomas, Analyst, Far Northern Research Center

The availability of live migration and hot migration without the requirement of a SAN, enable containers to be easily moved, stored and duplicated to ensure minimal to no downtime when Parallels Virtuozzo Containers is used to virtualized the IT infrastructure.

- **Reduce Costs Dramatically**

The ability to gain high-performance and the best manageability while achieving cost-efficiency is a key driver that Parallels Virtuozzo Containers delivers through key areas such as management, hardware, infrastructure, power/cooling and software.

Learn more at
www.parallels.com/virtuozzo



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