

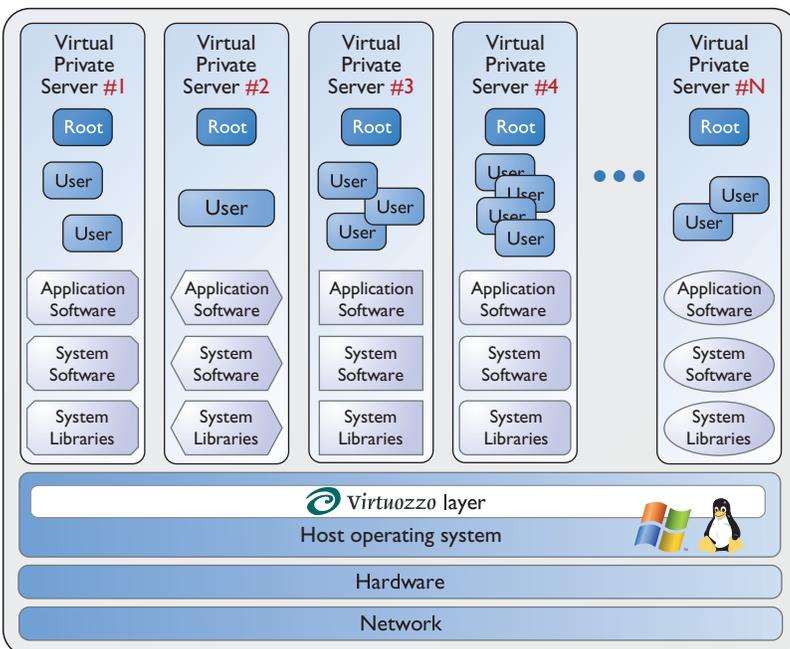
## IT Infrastructure Challenges

Enterprises are struggling to keep up with increasing demands for IT server infrastructure. Multiple platforms, up to 100s or even 1000s of physical servers, and sporadic and unpredictable application growth all contribute to lower server utilization rates and higher infrastructure costs, resulting in a minuscule return on investment. With IT growing complexity and volume, the cost of managing the infrastructure from simple patch management to skill set requirements for IT administrators is increasing exponentially.

## Virtuozzo Solution

Virtuozzo empowers IT organizations to keep up with increasing demands on IT infrastructure and management. Virtuozzo creates multiple isolated Virtual Private Servers (VPSs) on a single physical server to share hardware, licenses and management effort with maximum possible efficiency. Each VPS performs and executes exactly like a stand-alone server. A VPS can be rebooted independently and has its own root access, users, files, processes, memory, IP addresses, applications, system libraries and configuration files.

The Virtuozzo low-overhead architecture maximizes server resources; VPSs reside on a common and shared OS introducing only 1-3% overhead, allowing up to 100s of VPSs to run on a physical server. The enhanced design of the virtualization technology enables any VPS to be easily and transparently moved to another server with near-zero downtime, enabling IT departments to more fully utilize existing servers and minimize or eliminate planned downtime. IT organizations are using Virtuozzo to consolidate servers, manage critical application growth and minimize downtime, administer departmental and remote servers, simplify patch management and control development environments.



## Ideal Virtualization Solution for Production Servers

Most virtualization solutions were designed for use in development and testing environments. The light overhead and efficient design of Virtuozzo makes it the right virtualization choice for production servers with live applications and data.

### Increase Server Utilization

- Reduce the number of physical servers and corresponding support
- Minimize software license and support requirements

### Improve Server Manageability

- Provision servers and migrate VPSs in minutes
- Monitor OS and application software versions
- Maintain corporate SLAs
- Automate routine tasks such as upgrades and updates

## Dynamic Datacenter and Utility Computing

On-demand Computing Resources Provided by Virtuozzo

- **Virtualizing Resources:** VPSs can be configured to any specification of server resources and can be easily moved between servers
- **Real-time Dynamic Partitioning and Resource Allocation:** Resource allocations can be assigned and changed in real-time
- **Resource Monitoring and Allocation:** VZMC monitors resources and notifies the admin of issues or can automatically allocate additional resources
- **Measuring Usage:** 25 parameters are measured to allow specific chargebacks
- **Automating Daily Operations:** Automation of server deployment, application installation, and upgrades, and other routine tasks.

## Server Consolidation

Application and IT managers have become accustomed to dedicating a physical server to each application and with today's powerful servers this approach leads to low utilization rates. Server consolidation dramatically increases the hardware utilization levels by placing multiple Virtuozzo VPSs on a single physical server. The unique Virtuozzo VPS architecture further accelerates the cost savings by reducing software licensing and support costs and through extensive management tools that help automate server management tasks. VPS consolidation is also transparent to users making the consolidation much easier for IT departments.

## Managing Critical Application Growth and Minimizing Downtime

Business applications such as Microsoft Exchange have become critical business enablers. In response, IT departments nearly always over-provision and place these applications on dedicated servers. With Virtuozzo VPSs you can manage growth simply by placing the application on a server with excess capacity and utilizing the unused capacity for other VPSs. VPSs move in minutes so growth can be easily accommodated. VPSs make hardware irrelevant and capacity planning less difficult.

## Departmental Specific Servers

Many businesses have complex departmental, decentralized location or specific configuration requests for IT infrastructure that are difficult and inefficient to manage. VPSs help IT departments provide end users with the desired or required technology support without the complexity becoming cost prohibitive. It is no longer necessary to manually order and provision separate physical servers for each departmental application.

## Development and Testing Environments

Virtuozzo is designed for and typically used with deployed applications. It can also be a very important tool in a development environment, increasing quality and decreasing time-to-market. VPSs act in isolation just like regular servers; therefore, a change can be made on one virtual server without fear of harming any other virtual server. Developers will no longer need personal standalone servers. Also, quality assurance and testing can deploy 100s of VPSs on a single server for stress testing.

## Patch Management

The VZMC management tool enables servers with 100s of VPSs to be managed as easily as a single server, and several physical servers to be managed centrally. New OSs and applications can be deployed and patched across VPSs and servers with a few mouse clicks. In addition, patches can be easily tested and controlled by cloning a VPS, executing the upgrade, testing the resulting application, and then putting the VPS back into production.

## Virtuozzo Capabilities

### Dynamic Partitioning

Partition a physical server into multiple Virtual Private Servers (VPS) with near-zero overhead. A VPS has full dedicated server functionality with its own processes, users, files, and applications.



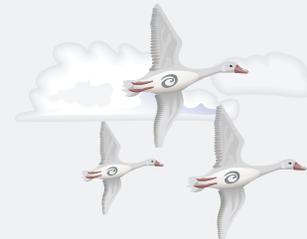
### Resource Management

Allocate resource levels for each VPS. Resources can be controlled with simple minimums, maximums, shares and more sophisticated resource allocation such as barriers that allow for overages.



### Virtualization

Move VPSs and its application(s) between physical servers transparently with near-zero downtime. VPSs are always accessible and recoverable by VPS owners through the browser-based, self-management Virtuozzo Power Panels.



### Mass Management

Easily deploy and update OSs and applications. Hundreds of VPSs on a server can be managed as efficiently as a single server and many physical servers can be managed centrally with VZMC.

