

# Parallels Virtuozzo Containers 4.0 for Linux

## Readme

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This document provides the first-priority information on Parallels Virtuozzo Containers 4.0 for Linux and supplements the included documentation.

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### 1. DISTRIBUTION CONTENTS

The following directories are included in the Parallels Virtuozzo Containers 4.0 for Linux distribution:

- a) The root directory:  
Contains a number of subdirectories and text files. The text files include LICENSE (the Parallels end user license agreement regarding the Virtuozzo Containers software), README (this file), RELEASE-NOTES, unattended (the description of the way to perform an unattended Virtuozzo Containers installation and upgrade), SWSOFT-GPG-KEY, and md5sums (MD5 message digests for all the files included in the distribution). The root directory also contains the install script that should be launched to perform the Virtuozzo Containers installation.
  - *virtuozzo*  
Contains the Parallels Virtuozzo Containers core files and RPMs.
  - *virtuozzo/compat*  
Contains a number of subdirectories with the Virtuozzo Containers software packages enabling compatibility with various Fedora Core, Red Hat, and SUSE Linux distributions.
  - *virtuozzo/installer*  
Contains the files used by the install script during the Virtuozzo Containers installation.
  - *virtuozzo/RPMS*  
Contains the packages for the Virtuozzo Containers installation.
  - *virtuozzo/SVE*  
Contains the OS template for creating the Service Container.

- *client/linux.rhel4*  
Contains the distribution files of Parallels Management Console for Fedora Core 4, 5, and 6, Fedora 7, RHEL 4 and 5, SUSE Linux Enterprise Server 10, Ubuntu 6.
- *client/win32*  
Contains the Windows version of Parallels Management Console.
- *docs*  
Contains the Virtuozzo Containers documentation.

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## 2. LICENSING

You can obtain a license for Parallels Virtuozzo Containers 4.0 for Linux in one of the following ways:

- request a license from the Parallels sales representative;
- visit the <http://www.parallels.com/download/pvc46> website, fill up a special registration form, and get a free evaluation license.

The Virtuozzo Server license is needed to start using the Virtuozzo Containers software and Virtuozzo Tools (Parallels Infrastructure Manager, Parallels Power Panel, and Parallels Management Console).

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## 3. SYSTEM REQUIREMENTS

Parallels Virtuozzo Containers 4.0 for Linux comprises the Parallels Virtuozzo virtualization engine for a Linux server and the graphical user interface for its managing represented by Parallels Management Console. Virtuozzo Containers systems can also be managed via a standard web browser with the help of Parallels Infrastructure Manager and Parallels Power Panel.

The hardware and software requirements for Parallels Virtuozzo Containers 4.0 for Linux are the following:

- **Platform:**  
Any x86 platform that is supported by the host Linux OS (Pentium, AMD, and the like). x86-64 and IA-64 platforms are also supported.
- **Memory:**  
1 GB or more. The required amount depends on the total number of Containers you wish to run on the server (minimum 30 MB per Container).
- **Hard Disk Space:**  
At least 15 GB of free disk space. The required amount depends on the size of the software to be installed in Containers.
- **Network Interfaces:**  
One or more network cards.

The exact server configuration depends on how many Containers you are going to run on the server and what load those Containers are going to create.

- Operating System:  
Depending on its version, the Virtuozzo Containers 4.0 software can be installed on the following systems to run kernel 2.6:

*The 32-bit version of Virtuozzo Containers 4.0:*

- the 32-bit editions of Red Hat Enterprise Linux 4, Red Hat Enterprise Linux 5, CentOS 4, CentOS 5, Fedora 7, Fedora 8, SUSE Linux Enterprise Server 10, SUSE Linux Enterprise Desktop 10.

*The 64-bit version of Virtuozzo Containers 4.0 for installing on x64-86 processors:*

- the 64-bit editions of Red Hat Enterprise Linux 4, Red Hat Enterprise Linux 5, CentOS 4, CentOS 5, Fedora 7, Fedora 8, Suse Linux Enterprise Server 10, SUSE Linux Enterprise Desktop 10.

*The 64-bit version of Virtuozzo Containers for installing on IA-64 processors:*

- the 64-bit editions of Red Hat Enterprise Linux 4, Red Hat Enterprise Linux 5, CentOS 4, CentOS 5, Suse Linux Enterprise Server 10, SUSE Linux Enterprise Desktop 10.

The hardware and software requirements for Parallels Infrastructure Manager, Parallels Power Panel, and Parallels Management Console include the following:

- Platform:  
450 MHz or higher Intel Pentium-compatible CPU.
- Memory:  
256 MB recommended. The required amount depends on the number of Hardware Nodes (servers where the Virtuozzo Containers 4.0 software is installed) to be administered (minimum 5 MB per Hardware Node).
- Hard Disk Space:  
About 500 MB.
- Operating System:  
Microsoft Windows 2000, XP, Server 2003, or Linux Fedora Core 4, Fedora Core 5, Fedora Core 6, Fedora 7, Linux RHEL 4, RHEL 5, SUSE Linux Enterprise Server 10, Ubuntu 6.
- Browsers:
  - Internet Explorer 6.0 and above, or
  - Mozilla 1.7 and above, or
  - Firefox 1.0 and above.

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#### **4. INSTALLING PARALLELS VIRTUOZZO CONTAINERS 4.0**

Complete installation instructions on how to set up Parallels Virtuozzo Containers 4.0 for Linux on a dedicated server is provided in the **Parallels Virtuozzo Containers 4.0 for Linux Installation Guide** included in the current distribution.

When installing the Linux operating system on the server (i.e. before installing the Virtuozzo Containers software):

- Create three partitions on the hard drive:

- root (/) sized out at 10-12 Gb.
  - swap sized out at 2 times the size of the installed RAM. If you decide to have a swap file instead of the partition, its size cannot exceed 2 Gb.
  - /vz to which you should allocate all the remaining free space. We highly recommend that you format it as ext3.
- Disable the firewall on the server.

**Caution:** In case you are going to split /vz among several disk partitions, please note that the Virtuozzo File System implementation requires /vz/*template* reside on a single disk partition; the Virtuozzo File System implementation also requires the private area of a Container (/vz/*private/<CT\_ID>*) reside on a single disk partition.

Before installing the Virtuozzo Containers 4.0 software on the server:

- Make sure that the Virtuozzo Containers distribution is located on a persistent storage (e.g. on a local file system). This is needed to ensure the accessibility of the distribution after the system reboot.

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## 5. UPGRADING TO PARALLELS VIRTUOZZO CONTAINERS 4.0

The process of upgrading Virtuozzo 3.0 and Virtuozzo 3.0 Service Pack 1 to Parallels Virtuozzo Containers 4.0 differs from that of installing Virtuozzo Containers 4.0 on a fresh Linux system only slightly and is described in the **Parallels Virtuozzo Containers 4.0 for Linux Installation Guide** and the *upgrade* file included in the current distribution.

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## 6. FURTHER READING

In addition to this README, there are a number of other resources shipped with Virtuozzo Containers 4.0 which can help you use the product more effectively. These resources include:

### RELEASE-NOTES

This document describes the new features of the Parallels Virtuozzo Containers 4.0 release and important changes since the previous one.

### MANUALS:

#### PARALLELS VIRTUOZZO CONTAINERS 4.0 EVALUATION GUIDE

This guide is destined to introduce you to the main features of Parallels Virtuozzo Containers 4.0 and to its underlying technology, to help you set up an environment for evaluating the Virtuozzo Containers major features, and to suggest the relevant procedures for this evaluation.

#### GETTING STARTED WITH PARALLELS VIRTUOZZO CONTAINERS 4.0 FOR LINUX

This guide provides brief instructions on how to install and run the Virtuozzo Containers 4.0 software on your server. It also explains the basics of working with Containers - how to create a Container, start/stop it, install additional software in it, and the like.

## **PARALLELS VIRTUOZZO CONTAINERS 4.0 FOR LINUX INSTALLATION GUIDE**

This guide provides exhaustive information on the process of installing, configuring, and deploying your Virtuozzo Containers 4.0 system. As distinct from the **Getting Started With Parallels Virtuozzo Containers 4.0 for Linux** guide, it contains a more detailed description of all the operations needed to install and set the Virtuozzo Containers software to work, including planning the structure of your Virtuozzo Containers network, performing the Virtuozzo Containers unattended installation, preparing the Backup and Monitor Nodes, etc. Besides, it does not include the description of any Container-related operations.

## **PARALLELS VIRTUOZZO CONTAINERS 4.0 FOR LINUX USER'S GUIDE**

This guide provides comprehensive information on Parallels Virtuozzo Containers 4.0 covering the necessary theoretical conceptions as well as all practical aspects of working with the Virtuozzo Containers software. However, it does not deal with the process of installing and configuring your Virtuozzo Containers system.

## **PARALLELS VIRTUOZZO CONTAINERS 4.0 FOR LINUX REFERENCE GUIDE**

This guide is a complete reference on all Virtuozzo Containers configuration files and Hardware Node command-line utilities.

## **HELP SYSTEMS:**

### **PARALLELS MANAGEMENT CONSOLE 4.0 HELP**

This help system provides detailed information on Parallels Management Console - a graphical user interface tool for managing Hardware Nodes and their Containers.

### **PARALLELS INFRASTRUCTURE MANAGER 4.0 ONLINE HELP**

This help system shows you how to work with Parallels Infrastructure Manager - a tool providing you with the ability to manage Hardware Nodes and their Containers with the help of a standard Web browser on any platform.

### **PARALLELS POWER PANEL 4.0 ONLINE HELP**

This help system deals with Parallels Power Panel - a means for administering individual Containers thru a common Web browser on any platform.

All the Virtuozzo Containers 4.0 documentation is available at the following locations:

- in the */docs* directory of your Virtuozzo Containers 4.0 distribution;
- at <http://www.parallels.com/products/virtuozzo4/docs>.