

# Parallels<sup>®</sup> Server Installation Guide

for Linux

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## CHAPTER 1

# Introduction

Parallels Server is a cross-platform software that enables you to create virtual machines on computers with Intel® VT-x and AMD-V™ hardware virtualization support that have a Mac OS® X, Windows® , Linux® , or no primary operating system installed.

With Parallels Server, you can make these virtual machines accessible to other computers on the network, even to those that have different primary operating systems.

# Parallels Server Components

Parallels Server comprises three major components that are fully cross-platform and can be installed on any computer that has Mac OS, Windows, or Linux operating system.

- **Parallels Server.** Server application that enables you to create and run Parallels virtual machines.
- **Parallels Management Console.** Client application that is used to manage Parallels Server and its virtual machines.
- **Parallels Server SDK.** Software Development Kit that enables you to manage Parallels Server and its virtual machines without using any client applications.

Parallels Server also includes several utilities that can help you work with your virtual machines:

- **Parallels Command Line Tool.** Utility that enables you to manage Parallels Server and its virtual machines right from the command line of your computer.
- **Parallels Transporter.** Application that enables you to migrate physical computers and disks into Parallels Server virtual machines.
- **Parallels Server Image Tool.** Utility that enables you to change the format and properties of hard disks used by Parallels virtual machines.

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**Note:** In this version, the Image Tool utility is available only for computers with Mac OS X. It is installed together with Parallels Server.

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- **Parallels Server Explorer.** Utility that enables you to view and manage the contents of Parallels virtual machines and their hard disks without even starting them.

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**Note:** In this version, the Explorer utility is available only for computers with Mac OS X. It is installed together with Parallels Server.

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- **Parallels Server Mounter.** Utility that enables you to mount Parallels virtual hard disks in Mac OS Finder.

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**Note:** In this version, the Mounter utility is available only for computers with Mac OS X. It is installed together with Parallels Server.

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- **Parallels Compressor.** Utility that enables you to reduce the size of virtual hard disks used by Parallels virtual machines.

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**Note:** The Compressor utility is available for virtual machines with Windows guest operating systems only.

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## CHAPTER 3

# System Requirements

Before installing the product, make sure that your computer meets the hardware and software requirements listed in this section.

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## Parallels Server System Requirements

Parallels Server can be installed on any Linux computer that supports Intel VT-x or AMD-V hardware virtualization and complies with the requirements listed here. The number of virtual machines you can run on a single physical computer depends on the resources they require and the number of processors this physical computer has. The more processors your physical computer has, the higher will be the performance of each of the running virtual machines.

### Hardware Requirements

Linux host computers should meet the following hardware requirements:

- Minimum 1.5 GHz x86 (32-bit) or x64 (64-bit) CPU with Intel VT-x or AMD-V Hardware Virtualization Technology. 64-bit version of Linux OS is required to host 64-bit operating systems in virtual machines.

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**Note:** The number of physical CPUs must be equal to or greater than the number of virtual CPUs used by any of the virtual machines.

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- 2 GB RAM minimum. 4 GB RAM or more is recommended.
- 200 MB of hard disk space for Parallels Server installation.
- Approximately 30 GB of hard disk space for each virtual machine.
- CD-ROM or DVD-ROM drive (optional).
- Ethernet network adapter.

## Software Requirements

Parallels Server can be installed on Linux operating systems with kernel version 2.6 and later that support X Window System.

- Red Hat® Enterprise Linux WS4 (x32, x64)
- Red Hat Enterprise Linux AS4 (x32, x64)
- Red Hat Enterprise Linux ES4 (x32, x64)
- Red Hat Enterprise Linux 5 (x32, x64)
- CentOS 4.x (x32, x64)
- CentOS 5.0 (x32, x64)
- CentOS 5.1 (x32, x64)
- Ubuntu Server 7.10 (x32, x64)
- SUSE® Linux Enterprise Server 10 SP1 (x32, x64)

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**Note:** You can run virtual machines with 64-bit operating systems only on host computers with 64-bit versions of Linux OS installed.

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To successfully install Parallels Server and its components, make sure you have the following software on your Linux computer:

- GNU Compiler 4.0 or later
- GNU Make 3.8 or later
- kernel 2.6.14 source files or development package
- glibc 2.3.6
- glib2 2.10.3
- glib 2.3.6
- zlib 1.2.2.2
- libstdc++ 4.0.2
- libpng 1.2.8

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**Important:** If you have Parallels Workstation installed, you should remove it before installing Parallels Server. Parallels Server cannot be used on computers that have Parallels Workstation installed. This limitation doesn't apply to Parallels Management Console and Parallels SDK, though. These components can be installed and used side-by-side with Parallels Workstation.

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# Parallels Management Console

## System Requirements

Parallels Management Console can be installed on any Linux computer that complies with the following system requirements.

### Hardware Requirements

- 700+ MHz Intel-compatible x86 (32-bit) or x64 (64-bit) processor.
- 1 GB RAM is recommended.
- 100 MB of hard disk space is required for Parallels Management Console.
- CD-ROM or DVD-ROM drive (optional).
- Ethernet network adapter.

### Software Requirements

Parallels Management Console can be installed on Linux operating systems with kernel version 2.6 and later that support X Window System (X11).

- Red Hat® Enterprise Linux WS4 (x32, x64)
- Red Hat Enterprise Linux AS4 (x32, x64)
- Red Hat Enterprise Linux ES4 (x32, x64)
- Red Hat Enterprise Linux 5 (x32, x64)
- CentOS 5.1 (x32, x64)
- CentOS 5.0 (x32, x64)
- Ubuntu Server 7.10 (x32, x64)
- SUSE® Linux Enterprise Server 10 SP1 (x32, x64)

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- glib2 2.10.3
- glib 2.3.6
- zlib 1.2.2.2
- libstdc++ 4.0.2
- libpng 1.2.8

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# Network Requirements

To connect Parallels Management Console to Parallels Server and its virtual machines, you will need to establish a network connection between the host and the remote computers. The connection can be wireless or wired.

## Firewall Settings

Before using Parallels Server installed on Windows and Linux computers, make sure that the following ports are not blocked by the firewall:

- TCP/UDP port 64000

This port should be open to ensure correct performance of Parallels Server.

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**Note:** You may need to configure the firewall settings on your physical computer where Parallels Server was installed.

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## CHAPTER 4

# Installing Parallels Server Components

This chapter includes instructions on installing Parallels Server, Parallels Management Console and Parallels Server SDK on a computer with GNU/Linux primary OS.

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## Installing Parallels Server on Linux

Parallels Server and Parallels Management Console can be installed as a single application on computers with GNU/Linux primary OSes. The computers must comply with the system requirements listed in the Parallels Server System Requirements (see page 6) topics.

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**Note:** To install Parallels Server on a GNU/Linux operating system, you should log in as a user with root privileges.

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Before installing Parallels Server, make sure you have the installation media handy.

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**Important:** If you have Parallels Workstation installed, you should remove it before installing Parallels Server. Parallels Server cannot be used on computers that have Parallels Workstation installed. This limitation doesn't apply to Parallels Management Console and Parallels SDK, though. These components can be installed and used side-by-side with Parallels Workstation.

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### To install Parallels Server components on GNU/Linux

- 1 Locate the Parallels Server installation package and launch the `parallels-server-3.0.XXXX.XXXXX.run` file to run Parallels Server Installer. You can also open this file in terminal.
- 2 In Parallels Server installation screen, press `Enter` to continue.
- 3 Carefully read the Software License Agreement. If you agree with the stated terms and conditions, type `Accept` and press `Enter`. If you do not agree, type `Decline`.

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**Note:** You should accept the Software License Agreement to proceed with the installation.

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- 4 When Parallels Server is installed, read the tips that will help you to get started with Parallels Server. To quit the installer, press `Enter`.

When you have Parallels Server installed, you do not need to launch it: it starts automatically and runs in the background.

To manage your Parallels Server, use Parallels Management Console installed on the same or on a remote computer. To launch Parallels Management Console, start terminal and enter: `pmc`.

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**Note:** During the Parallels Server installation, kernel modules are being installed. The set of these modules is necessary for the virtualization and depends on the Linux system kernel. If you upgrade the Linux kernel, you should reinstall Parallels Server to ensure proper functioning of the product.

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## Installing Parallels Management Console on Linux

Parallels Management Console is installed on client computers with GNU/Linux primary operating systems that have no Parallels Server installed on them.

The computers must comply with the system requirements listed in the Parallels Management Console System Requirements (see page 8) topic.

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**Note:** To install Parallels Server on a GNU/Linux operating system, you should log in as a user with root privileges.

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### To install Parallels Management Console on a GNU/Linux computer

- 1 Locate the Parallels Server installation package and launch the `parallels-management-console-3.0.XXXX.XXXXX.run` file to run Parallels Management Console Installer. You can also open this file in terminal.
- 2 Confirm your wish to install Parallels Management Console by clicking **Run** when prompted.  
Wait until the process of uncompressing Parallels Management Console is complete and the Installer launches.
- 3 In the **Welcome** window, select **Next**.
- 4 In the **License Agreement** window, carefully read the Software License Agreement. If you agree with the stated terms and conditions, choose **Accept**. If you do not agree, choose **Decline**.

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**Note:** You should accept the Software License Agreement to proceed with the installation.

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- 5 In the **Installation Completed** window, click **Exit** to quit the Installer.

By default, Parallels Management Console is installed to `/usr/lib/parallels-management-console`. To launch Parallels Management Console, start terminal and enter: `pmc`

Now you can manage Parallels Server from a remote computer using Parallels Management Console installed.

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## Installing Parallels Server SDK on Linux

Parallels Server SDK can be installed on computers with GNU/Linux primary operating systems.

The computers must comply with the system requirements listed in the Parallels Management Console System Requirements (see page 8) topic.

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**Note:** To install Parallels Server on a GNU/Linux operating system, you should log in as a user with root privileges.

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To install Parallels Server SDK on a GNU/Linux computer

- 1 Locate the Parallels Server installation package and launch the `parallels-server-sdk-3.0.XXXX.XXXXX.run` file to run Parallels Server SDK Installer. You can also open this file in terminal.
- 2 Confirm your wish to install Parallels Server SDK by clicking **Run** when prompted.
- 3 In the **License Agreement** window, carefully read the Software License Agreement. If you agree with the stated terms and conditions, choose **Accept**. If you do not agree, choose **Decline**.

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**Note:** You should accept the Software License Agreement to proceed with the installation.

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- 4 In the **Installation Completed** window, click **Exit** to quit the Installer.

When Parallels Server SDK is installed on your Linux computer, you can use the library package to write applications under Parallels Server.

For more information about how to use Parallels Server SDK, refer to *Parallels Server Programmer's Guide*.

## CHAPTER 5

# Removing Parallels Server Components

This chapter includes instructions on how to remove Parallels Server, Parallels Management Console and Parallels Server SDK from a computer with GNU/Linux primary OS.

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## Removing Parallels Server

Parallels Server can be removed from the host operating system like any other application.

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**Note:** Removing Parallels Server doesn't remove virtual machines and their files from the host computer.

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To remove Parallels Server from a Linux primary OS

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**Note:** To remove Parallels Server from a computer with GNU/Linux primary OS installed, you should log in as a user with root privileges.

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- 1 Locate the Parallels Server installation package and launch the `parallels-server-3.0.XXXX.XXXXX.run` file to run Parallels Server Installer. You can also open this file in terminal.
- 2 Parallels Server installer Welcome screen appears. Press `Enter` to proceed.
- 3 To remove Parallels Server, select the **Remove** option and press `Enter`.
- 4 When prompted to select the action to perform, select the **Remove** option press `Enter`.
- 5 When Parallels Server is successfully uninstalled, press `Enter` to close the window.

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## Removing Parallels Management Console

Parallels Management Console can be removed from the host operating system like any other Linux application.

To remove Parallels Management Console from GNU/Linux primary OSes

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**Note:** To remove Parallels Server components from a computer with GNU/Linux primary OS installed, you should log in as a user with root privileges.

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- 1 Locate the Parallels Server installation package and launch the `parallels-management-console-3.0.XXXX.XXXXX.run` file to run Parallels Management Console Installer. You can also open this file in terminal.
- 2 In the Installer window, press `Enter`, when prompted.
- 3 To remove Parallels Management Console, select **Remove** and press `Enter`.
- 4 When Parallels Management Console is successfully uninstalled, press `Enter` to close the window.

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## Removing Parallels Server SDK

Parallels Server SDK can be removed from the host operating system like any other Linux application.

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**Note:** To remove Parallels Server components from a computer with GNU/Linux primary OS installed, you should log in as a user with root privileges.

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To remove Parallels Server SDK from GNU/Linux primary OS

- 1 Locate the Parallels Server installation package and launch the `parallels-server-sdk-3.0.XXXX.XXXXX.run` file to run Parallels Server SDK Installer. You can also open this file in terminal.
- 2 In the Installer window, press `Enter`, when prompted.
- 3 To remove Parallels Server SDK, select **Remove** and press `Enter`.
- 4 When Parallels Server SDK is successfully uninstalled, press `Enter` to close the window.

## CHAPTER 6

# What's Next

After you have installed all the necessary components, you can administer your Parallels Server application and work with your Parallels virtual machines with the help of Parallels Management Console.

Using Parallels Management Console, you can create, clone, delete and otherwise manage your virtual machines. To learn all the necessary information about how to work with Parallels virtual machines, refer to *Parallels Virtual Machine Guide*.

To learn all the necessary information about how to work with Parallels Server application, refer to *Parallels Server Administration Guide*.

You can find these documents after the installation of Parallels Management Console in the following location: `/usr/share/parallels-server/docs/`.