

Parallels Compressor®

User's Guide

ISBN: N/A

Parallels Holdings, Ltd.
c/o Parallels Software, Inc.
13755 Sunrise Valley Drive
Suite 600
Herndon, VA 20171
USA
Tel: +1 (703) 815 5670
Fax: +1 (703) 815 5675

Copyright © 1999-2009 Parallels Holdings, Ltd. and its affiliates. All rights reserved.

Parallels, Coherence, Parallels Transporter, Parallels Compressor, Parallels Desktop, and Parallels Explorer are registered trademarks of Parallels Software International, Inc. Virtuozzo, Plesk, HSPcomplete, and corresponding logos are trademarks of Parallels Holdings, Ltd. The Parallels logo is a trademark of Parallels Holdings, Ltd.

This product is based on a technology that is the subject matter of a number of patent pending applications. Virtuozzo is a patented virtualization technology protected by U.S. patents 7,099,948; 7,076,633; 6,961,868 and having patents pending in the U.S.

Plesk and HSPcomplete are patented hosting technologies protected by U.S. patents 7,099,948; 7,076,633 and having patents pending in the U.S.

Distribution of this work or derivative of this work in any form is prohibited unless prior written permission is obtained from the copyright holder.

Apple, Bonjour, Finder, Mac, Macintosh, and Mac OS are trademarks of Apple Inc.

Microsoft, Windows, Microsoft Windows, MS-DOS, Windows NT, Windows 95, Windows 98, Windows 2000, Windows XP, Windows Server 2003, Windows Vista, Windows Server 2008, Microsoft SQL Server, Microsoft Desktop Engine (MSDE), and Microsoft Management Console are trademarks or registered trademarks of Microsoft Corporation.

Linux is a registered trademark of Linus Torvalds.

Red Hat is a registered trademark of Red Hat Software, Inc.

SUSE is a registered trademark of Novell, Inc.

Solaris is a registered trademark of Sun Microsystems, Inc.

X Window System is a registered trademark of X Consortium, Inc.

UNIX is a registered trademark of The Open Group.

IBM DB2 is a registered trademark of International Business Machines Corp.

SSH and Secure Shell are trademarks of SSH Communications Security, Inc.

MegaRAID is a registered trademark of American Megatrends, Inc.

PowerEdge is a trademark of Dell Computer Corporation.

eComStation is a trademark of Serenity Systems International.

FreeBSD is a registered trademark of the FreeBSD Foundation.

Intel, Pentium, Celeron, and Intel Core are trademarks or registered trademarks of Intel Corporation.

OS/2 Warp is a registered trademark of International Business Machines Corporation.

VMware is a registered trademark of VMware, Inc.

All other marks and names mentioned herein may be trademarks of their respective owners.

Contents

Introduction	4
About Parallels Compressor	4
About This Guide	4
Organization of This Guide	5
Documentation Conventions	5
Getting Help	6
Feedback	7
Installing Parallels Compressor	8
Parallels Compressor Basics	9
Working With Parallels Compressor	11
Preparing for Compression	11
Compressing the Disk In the Express Mode	12
Compressing the Disk In the Advanced Mode	13
Using Parallels Compressor From Command Line	17
Index	18

CHAPTER 1

Introduction

Parallels Compressor[®], supplied with the main product package, enables you to reduce the size of your virtual machine's hard disk by cleaning up the unused disk space and reducing the size of the virtual hard disk file (.hdd) stored on the physical computer.

In This Chapter

About Parallels Compressor.....	4
About This Guide.....	4
Getting Help.....	6
Feedback	7

About Parallels Compressor

Parallels Compressor is a special utility for maintaining the size of your virtual machine's hard disk. This utility enables you to clean up the unused disk space and reduce the size of the virtual hard disk file (.hdd) stored on the physical hard disk of the physical computer.

About This Guide

This guide provides extensive information about using Parallels Compressor.

Notation Conventions

The table below presents the conventions used in this Guide.

Fonts	This font	Used for buttons, options, menus and menu commands, windows, and dialog boxes.
	<i>This font</i>	Used for keys, paths, and folder names.
	This font	Used for console commands in Linux and Windows.
	<i>This font</i>	Used for tips, glossary items and options or modes mentioned in the text.
Type Styles	Note:	Used to emphasize the message.
	Warning:	Used to warn you about possible data loss.
Key Combinations	<key>-click	Used to direct you to press the key and click the mouse button.

	<key>+<key>	Used to direct you to press the keys simultaneously.
--	-------------	--

Abbreviations used in text

In the present guide the following abbreviations are used:

- *OS* is used instead of *operating system* in some long sentences where using it will not change the meaning of the sentence.
- *VM* is used instead of *virtual machine* in some long sentences where using it will not change the meaning of the sentence.

Definitions

Primary operating system (primary OS): In this Guide this term is used to refer to the operating system that controls the I/O devices of the computer and that is loaded when the physical computer is turned on.

Guest operating system (guest OS): The term is used to refer to an operating system that runs under the virtual machine control.

Main product: The term is used to refer to Parallels virtualization products. It can be either Parallels Desktop or Parallels Workstation or Parallels Server.

Organization of This Guide

The present guide comprises the following chapters:

- **Introduction.** This chapter provides basic information about Parallels Compressor and this guide.
- **Installing Parallels Compressor.** This chapter contains information on how to install Parallels Compressor.
- **Working With Parallels Compressor.** This chapter provides the detailed instructions on how to use Parallels Compressor.

Documentation Conventions

Before you start using this guide, it is important to understand the documentation conventions used in it.

The table below presents the existing formatting conventions.

Formatting convention	Type of Information	Example
Special Bold	Items you must select, such as menu options, command buttons, or items in a list.	Go to the Resources tab.
	Titles of chapters, sections, and subsections.	Read the Basic Administration chapter.

<i>Italics</i>	Used to emphasize the importance of a point, to introduce a term or to designate a command line placeholder, which is to be replaced with a real name or value.	These are the so-called <i>EZ templates</i> . To destroy a Container, type <code>vzctl destroy <i>ctid</i></code> .
Monospace	The names of commands, files, and directories.	Use <code>vzctl start</code> to start a Container.
Preformatted	On-screen computer output in your command-line sessions; source code in XML, C++, or other programming languages.	Saved parameters for Container 101
Monospace Bold	What you type, as contrasted with on-screen computer output.	# rpm -V virtuo-<i>release</i>
Key+Key	Key combinations for which the user must press and hold down one key and then press another.	Ctrl+P, Alt+F4

Besides the formatting conventions, you should also know about the document organization convention applied to Parallels documents: chapters in all guides are divided into sections, which, in their turn, are subdivided into subsections. For example, **About This Guide** is a section, and **Documentation Conventions** is a subsection.

Getting Help

Parallels Compressor offers several ways of accessing the necessary information:

- Context-sensitive help. You can open a help page for the active window by pressing the F1 key.
- Parallels Compressor User's Guide. This document contains extensive information about the product, its usage and troubleshooting. The PDF version of this guide can be accessed from the main product **Help** menu > **Online Documentation**.
- Parallels website (<http://www.parallels.com>). Explore the Parallels Support web page that includes product help files and the FAQ section.
- Parallels Knowledge Base (<http://kb.parallels.com/>). This online-resource comprises valuable articles about using Parallels virtualization products.

Feedback

If you spot a typo in this guide, or if you have thought of a way to make this guide better, we would love to hear from you!

The ideal place for your comments and suggestions is the Parallels documentation feedback page (<http://www.parallels.com/en/support/usersdoc/>).

CHAPTER 2

Installing Parallels Compressor

Parallels Compressor is installed only into your Windows virtual machines along with Parallels Tools. Parallels Tools are a set of special utilities designed to help you use your virtual machines in the most comfortable and efficient way.

For the list of Windows guest OSs which support Parallels Tools and Parallels Compressor, see the main product's Help.

Note: Parallels Compressor is not available for virtual machines that use physical partitions as their hard disks (for example, Boot Camp virtual machines on Mac host computers).

CHAPTER 3

Parallels Compressor Basics

Parallels Compressor is a special utility that helps you keep your virtual machine compact and efficient. It cleans up the unused space on the virtual hard disk, thus reducing the size of your virtual hard disk file (.hdd) stored on the physical computer.

Parallels Compressor can run in one of these modes:

- **Express.** This is the default mode. In this mode, Parallels Compressor defragments and compacts the boot volume (the virtual hard disk volume on which the operating system is installed).
- **Advanced.** In this mode, Parallels Compressor enables you to select the volumes to compress and set the compression level.

By default, Parallels Compressor runs in the *Express* mode.

Compression Levels

In the *Advanced* mode, Parallels Compressor supports three levels of compression: *Low*, *Medium*, and *High*. Each level suggests the execution of certain tasks. In the Parallels Compressor wizard, the task levels are indicated by different colors: red 🚫 is used for high-level tasks, yellow 🟡 for medium-level tasks, and green for low-level 🟢 tasks.

Tasks performed when the *Low* level of compression is selected include:

- 🟢 Truncate Page file. This task recreates the system page file of a smaller size.
- 🟢 Clean Up Temporary System Files. This task deletes temporary files used by the system for the acceleration of operations.
- 🟢 Clean Up System Cache. This task deletes temporary data stored by the system on the hard disk to increase performance.
- 🟢 Empty Recycle Bin. This task permanently removes the files from the Recycle Bin.
- 🟢 Clean Up Temporary Internet Files. This task cleans up the Internet Explorer cache, deletes the cookies, history, address bar, and temporary files.
- 🟢 Disable Hibernate file. This task disables the hibernate file that stores the virtual machine memory when the virtual machine is turned off.
- 🟢 Compact virtual disk(s). This task reduces the size of the virtual hard disk file (.hdd) in the primary operating system.

Tasks performed when the *Medium* level of compression is selected include:

- 🟡 Clean Up Temporary Setup Files. This task deletes the installation files used by MS Office and other programs.
- 🟡 Clean Up System Media Files. This task deletes the temporary files used by Windows Media Player.

Tasks performed when the *High* level of compression is selected include:

-  Clean up Drivers Cache. This task empties the cache for the most popular drivers. If you are going to install new hardware, clear the check box related to this task.
-  Clean Up System Restore Information. This task deletes the data related to the last successful system loading.

When you use Parallels Compressor in the *Express* mode, your boot volume is defragmented and compacted only. To customize the list of tasks and perform more intensive cleanup of your virtual disks, use the *Advanced* mode.

CHAPTER 4

Working With Parallels Compressor

This chapter contains detailed instructions on how to use Parallels Compressor to reduce the size of your virtual machine's hard disk.

In This Chapter

Preparing for Compression	11
Compressing the Disk In the Express Mode	12
Compressing the Disk In the Advanced Mode.....	13
Using Parallels Compressor From Command Line.....	17

Preparing for Compression

Before starting Parallels Compressor, perform the following steps:

- 1 Back up your virtual machine by cloning it or by copying its hard disk files to a safe location.

This will allow you to restore your virtual machine in case you do not like the results of the compression.

Warning: The result of virtual machine compression is irreversible.

- 2 Check the hard disk for errors by running the `chkdsk.exe` utility.

Check if the virtual machine whose hard disk you are going to compress meets the following requirements:

- The virtual machine's hard disk is not a physical partition (like a Boot Camp partition on a Mac).
- The virtual machine has no snapshots.
- The virtual machine is not running in Safe Mode.
- The virtual machine's hard disk is in the *expanding* format.

Note: The disk format can be checked in the **Hard Disk** pane of Virtual Machine Configuration. To access the **Hard Disk** pane, choose **Configure** from the **Virtual Machine** menu and select the **Hard Disk** item. If the disk is *plain*, you can convert it to an *expanding* one using Parallels Image Tool.

Other types of virtual hard disks can be successfully compressed with Parallels Compressor.

Compressing the Disk In the Express Mode

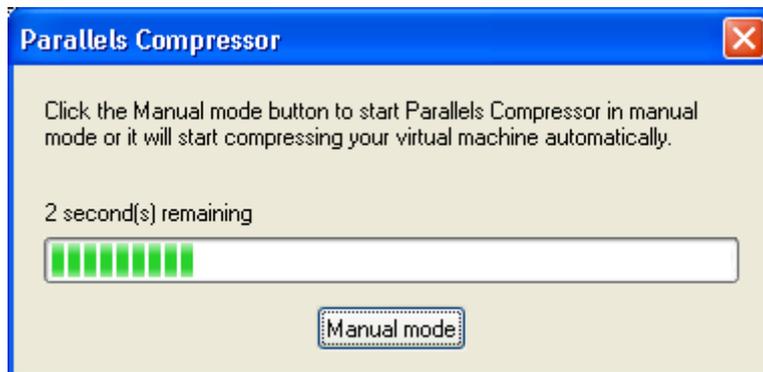
In the *Express* mode, Parallels Compressor reduces the size of the virtual machine's boot volume by defragmenting and compacting it. In this mode the hard disk size is usually reduced less than in the *Advanced* mode.

Compressing in the *Express* mode takes less time and requires minimal effort from the user.

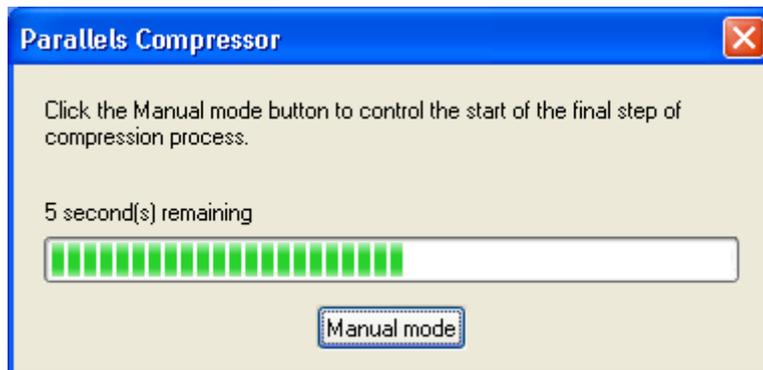
To start Parallels Compressor in the *Express* mode:

- 1 Start the virtual machine.
- 2 Choose Run Parallels Compressor from the Virtual Machine menu. This will launch Parallels Compressor in the virtual machine.
- 3 In the virtual machine, you will see the Parallels Compressor window that displays a time indicator. When the time is out, Parallels Compressor will automatically compress the virtual machine in the *Express* mode.

Note: If you click the Manual mode button, select the *Express* option in the Parallels Compressor wizard, and click Compress.



- 4 You can view the progress in executing the tasks in the Execution in progress window.
- 5 In the Preparing to restart window, click Restart to restart your virtual machine.
- 6 After the restart, the Parallels Compressor window displays a time indicator that shows the time remaining until Compressor will continue to execute the tasks.



Note: If you click the **Manual mode** button before the timeout expires, you can postpone the execution of the remaining tasks.

- 7 You can view the progress in executing the tasks in the **Execution in progress** window.
- 8 When the process of compressing the virtual hard disk is complete, click **Finish** to close the wizard.

Compressing the Disk In the Advanced Mode

In the *Advanced* mode, Parallels Compressor enables you to select the volumes to compress and specify the compression level.

To start Parallels Compressor in the *Advanced* mode:

- 1 Start the virtual machine.
- 2 Choose **Run Parallels Compressor** from the **Virtual Machine** menu. This will launch Parallels Compressor in the virtual machine.
- 3 In the virtual machine, you will see the **Parallels Compressor** window that displays a time indicator. Click the **Manual mode** button to open the Parallels Compressor wizard.

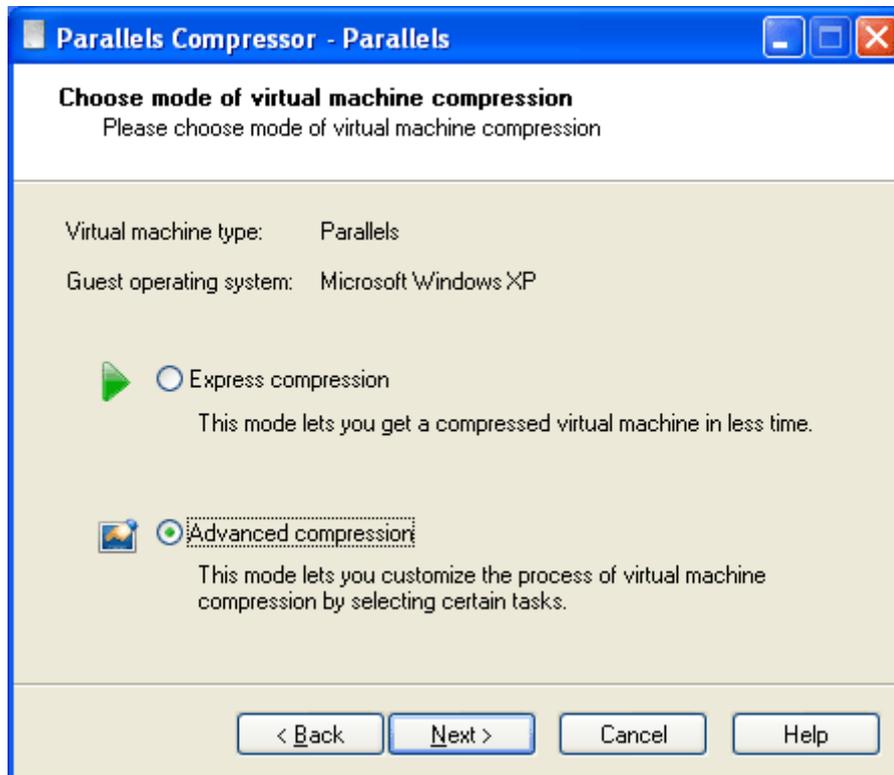
Note: If you do not click the **Manual mode** button, when the time is out, the compression will be performed in the *Express* mode (p. 12).

- 4 In the **Welcome** window, click **Next**.

Note: If you do not want this window to appear next time you start Parallels Compressor, select **Skip introduction next time**.

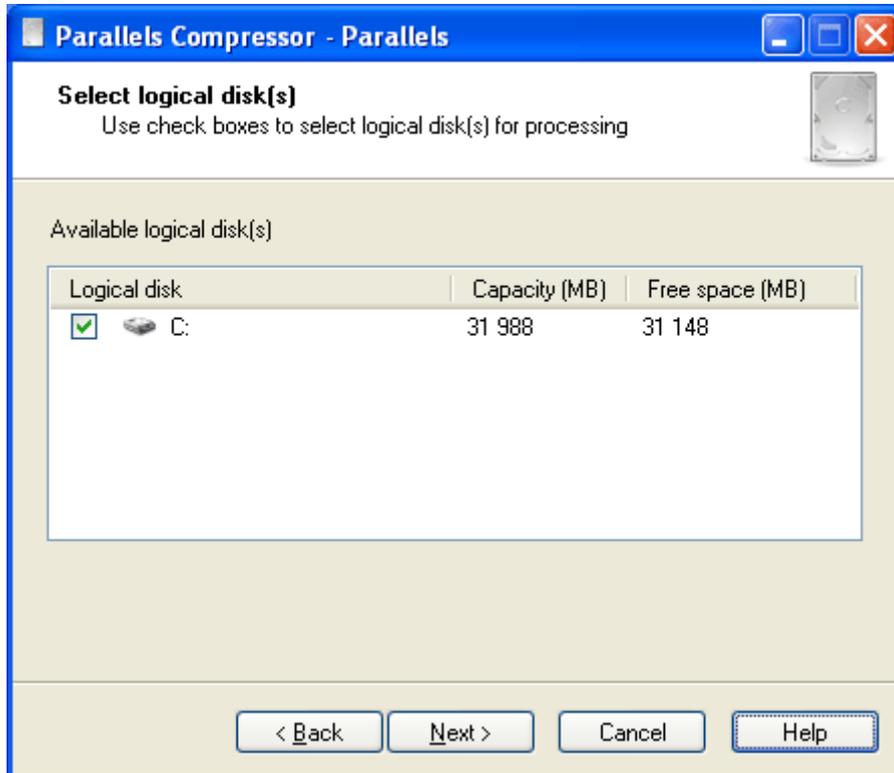
- 5 In the next window, select **Advanced compression** and click **Next**.

Note: If you choose **Express compression**, the compression will be performed in the *Express* mode (p. 12) after you click **Compress**.



- 6 In the Select logical disk(s) window, select the disk volumes you want to compress and click Next.

Note: If you are not sure if the types of disks you selected can be processed with Parallels Compressor, see [Preparing for Compression](#) (p. 11).



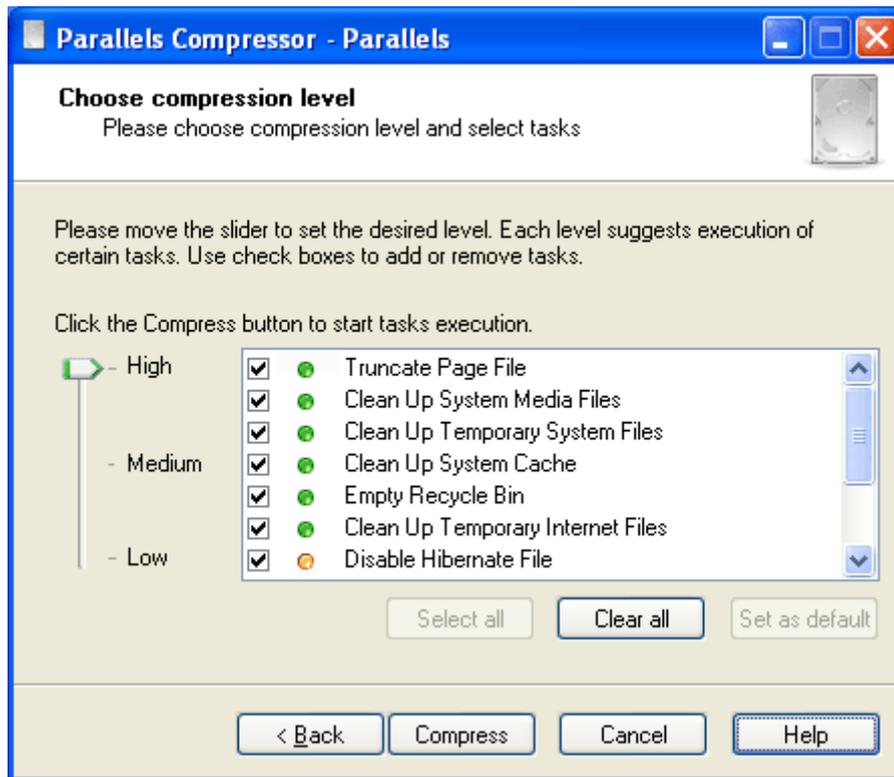
- 7 In the Choose compression level window, specify the level for compressing the disk. Three compression levels are available: **Low**, **Medium**, and **High**. Each level suggests the execution of certain tasks. The tasks on these levels are indicated by different colors: red 🚫 is used for high-level tasks, yellow 🟡 for medium-level tasks, and green for low-level 🟢 tasks. For more information about the levels, refer to [Parallels Compressor Basics](#) (p. 9).

Drag the slider in the left part of the window to choose the appropriate compression level. Each level of compression has a fixed number of tasks.

You can also select or deselect certain tasks in the tasks list.

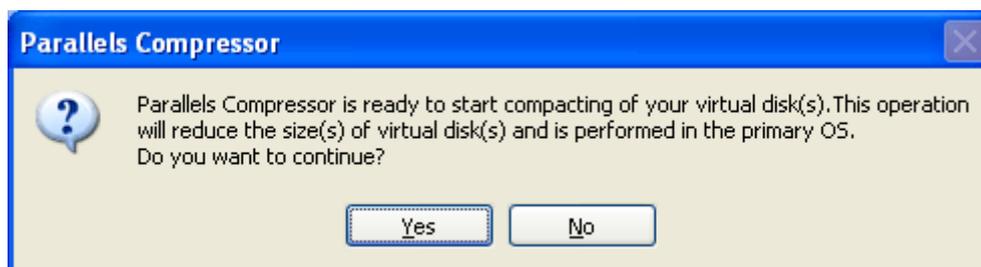
- To select all tasks, click **Select all**.
- To deselect all tasks, click **Clear all**.
- Click **Set as default** to restore the default selection of tasks for the chosen level.

When finished, click the Compress button.



- 8 You can view the progress in executing the tasks in the Execution in progress window.
- 9 In the Preparing to restart window, click Restart to restart your virtual machine.
- 10 After the restart, the wizard is ready to resume the execution of the tasks. Click Next.
- 11 In the next window, you can view the progress in performing the tasks.
- 12 The wizard prompts you to start the disks compacting process, which is the final step of compression. Click Yes to perform the operation.

Note: If you want to skip this step of compressing the disk, click No.



- 13 When the compressing is complete, click Finish to exit Parallels Compressor.

Using Parallels Compressor From Command Line

You can start Parallels Compressor from the command line utility in your virtual machine by issuing the following command in the C:\Program Files\Parallels\Parallels Tools\Applications\Compressor\ directory:

```
ParallelsCompressor
```

This command has the following keys:

- /A -Starts the program automatically in the Express mode.
- /G <cmdline> - Starts a third-party defragmentation tool instead of the tool used by Parallels Compressor. <cmdline> stands for the path and name of this tool.
- /H - Opens the Help panel with the list of available keys.
- /S - Runs Compressor in background (silent mode).

The program name and the key should be separated by space.

If spaces are used in the <cmdline>, enclose the expression in double quotes as follows:

```
ParallelsCompressor /G"C:\Program Files\...\defrag.exe"
```

There is no space between the key and its parameter as in the example above.

Index

A

About Parallels Compressor • 4

B

Backing up virtual machines • 11

Boot Camp partition

booting via virtual machine • 8

C

Cleaning up

drivers cache • 9

system cache • 9

system restore information • 9

temporary internet files • 9

temporary setup files • 9

temporary system files • 9

Compressing virtual hard disks • 12, 13

Compression levels • 9

D

Documentation feedback page • 7

Drivers Cache • 9

F

Files

compressing files • 9

HDD file • 9

H

High compression level • 9

I

Installing

Parallels Compressor • 4, 8

L

Launching

Parallels Compressor • 12, 17

Low compression level • 9

M

Medium compression level • 9

P

Parallels Compressor

advanced mode • 13

compression levels • 9

compression modes • 9, 12, 13

express mode • 12

manual mode • 12

preparing for compression • 11

requirements for virtual machine • 11

using command line • 17

R

Removing

Parallels Compressor • 8

Requirements

system • 8

S

Selecting disks for compression • 11

Starting

compression • 12, 13, 17

Parallels Compressor • 11, 12

Supported guest operating systems • 8

System requirements • 8

U

Unused disk space • 4, 9

V

Virtual hard disk

selecting hard disks for compression • 11