



Getting Started With Parallels® Workstation 6.0

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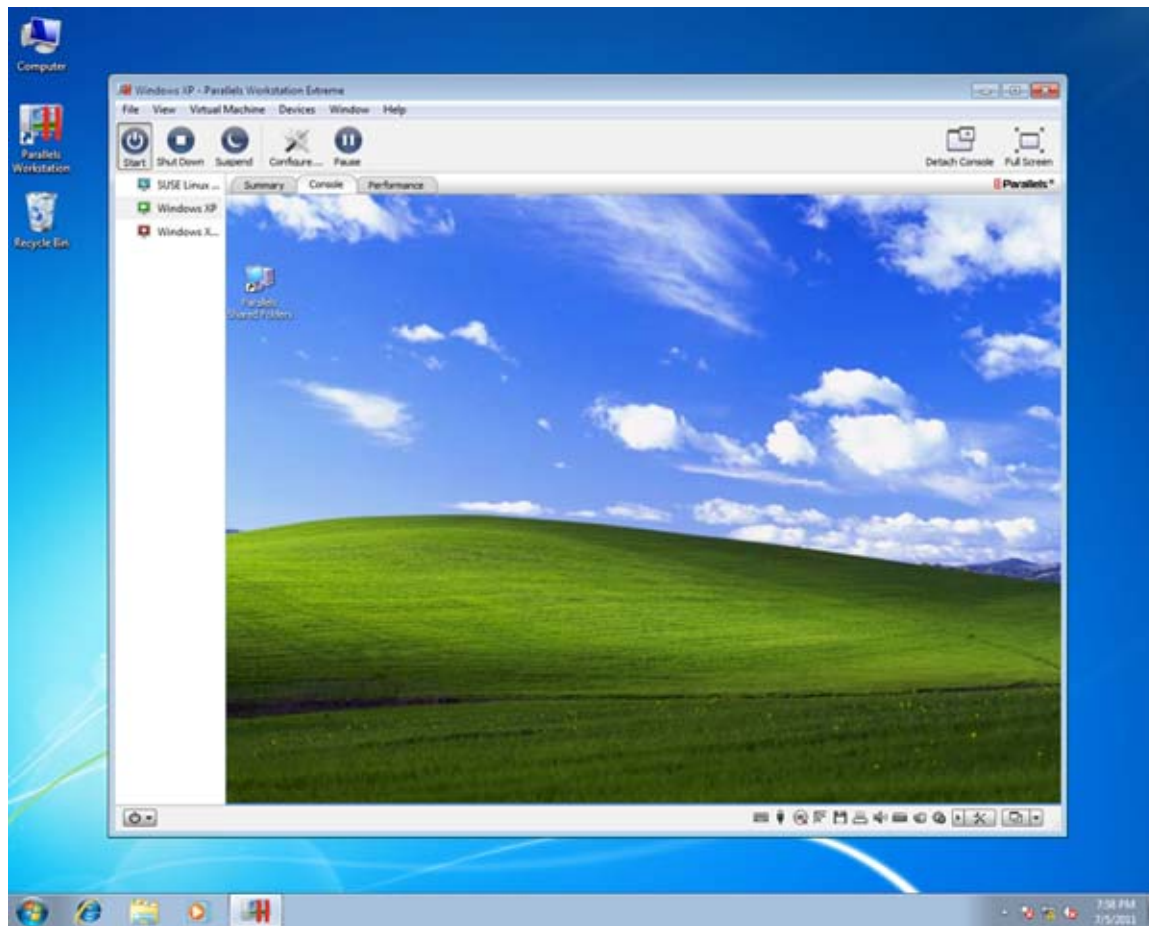
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CHAPTER 1

Welcome to Parallels Workstation

Congratulations on purchasing Parallels Workstation. Now you can install and work with multiple operating systems together at the same time on your computer.

Use this guide to quickly set up and start using Parallels Workstation.



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About Virtual Machines and Guest Operating Systems

To add an additional operating system to your computer, Parallels Workstation creates a "**virtual machine**," or a software implementation of a computer, inside your computer. You can install any supported operating system, or "**guest OS**," in the virtual machine.

Just like with a regular computer, you can turn virtual machines on and off, configure them, and install and use programs.

You can use Parallels Workstation to install several virtual machines, with various operating systems installed in them.

In this guide, your actual computer and its operating system are sometimes referred to as the "host computer" and "host OS."

What You Can Do

With Parallels Workstation, you can:

- Install and use 32-bit and 64-bit guest operating systems on your host computer
- Easily share files, devices, and other resources between operating systems
- Run host OS and guest OS programs seamlessly on one desktop
- Copy and paste text and drag and drop objects between host OS and guest OS programs
- Transfer the operating system and all your data from a remote Windows or Linux computer and use them on your host computer
- If you have Parallels Workstation Extreme and your computer supports Intel VT-d, assign physical PCI Express (PCIe) devices directly to virtual machines
- And much more

CHAPTER 2

Install Parallels Workstation

Follow the instructions in this chapter to install and activate Parallels Workstation.

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What You Need

To install and set up Parallels Workstation 6, you need:

A computer with:

- Minimum 1.66 GHz x86 (32-bit) or x64 (64-bit) CPU.

To run 64-bit guest operating systems, you need a processor that supports the Intel VT-x hardware virtualization technology.

To assign PCI Express (PCIe) devices directly to your virtual machines (Parallels Workstation Extreme only), you need a processor that supports the Intel VT-d technology.

The support for Intel VT-x and VT-d may be disabled by default in some computers that actually support them. To enable these features, in most cases enter BIOS, go to **System Settings > Virtualization Support**, and select the **Enable Intel Virtualization** and **Enable Intel VT for Direct I/O** check boxes.

For detailed information on enabling the Intel VT-x and VT-d features in BIOS, refer to the OEM supplier's documentation.

Important: VT-d features are supported by Parallels Workstation Extreme only.

- 2 GB RAM minimum. 4 GB RAM or more is recommended.

The recommended amount of memory assigned to a virtual machine is 1-2 GB. You can assign up to 8 GB of RAM if Parallels Workstation is installed in the 32-bit host OS and up to 64 GB if in the 64-bit.

- 350 MB of hard disk space for the Parallels Workstation installation.
- About 30 GB of hard disk space for each virtual machine.

To store a virtual machine's temporary files, you need to have twice as much free disk space as the overall amount of this virtual machine's memory: (memory + video memory) +150 MB.

- DVD-ROM drive.
- Ethernet network adapter.

If you want to use a directly connected PCIe video card in your virtual machine, you need:

- Two PCIe video cards. One video card for your host computer and the other – for the virtual machine.

Parallels Workstation officially supports the NVIDIA Quadro® FX 1800, 3800, 4800, 5800, Q4000, Q5000, (Q2000? and Q6000?) video cards for virtual machines. For these video cards, use the latest drivers (starting from 182.65 for Windows and 180.51 for Linux ?) available on the manufacturer's website.





Direct assignment of PCIe video cards requires an NVIDIA Video BIOS version of 62.00.62.00.01 or later. If you have a supported video card which does not have this BIOS level, please contact your OEM supplier.

Software Requirements

Parallels Workstation 6 officially supports the following host operating systems:

Host Operating Systems	32-bit	64-bit
Windows 7		
Windows Vista SP1, SP2		
Windows XP Pro SP3		
Windows XP Home SP3		
Windows XP Pro SP2		
Debian 6.0		
Fedora 14, 15		
RHEL 6, 6.1		
SLED 11 SP1		
Ubuntu 10.10, 11.04, 11.10		

Parallels Workstation 6 Extreme officially supports the following host operating systems:

Host Operating Systems	32-bit	64-bit
Windows 7		
Windows Vista SP2		
Windows XP SP2		
RHEL 5.7, 6, 6.1		

In Linux operating systems, make sure the following software packages are installed:

- kernel development packages

Note: In RedHat-based systems, such packages are called `kernel-<kernel_version>-devel`, in Debian-based systems - `linux-headers-<kernel_version>`.

- gcc of the version with which the host kernel was compiled
- 32-bit version of glibc 2.3.6 or later
- make or gmake
- the 32-bit version of the alsa-plugins-pulseaudio package in the Fedora 10 (64-bit) operating system

For 64-bit systems, it is also desired to have 32-bit alsa-lib installed in RedHat-based systems or lib32asound in Debian-based systems.

If you do not have any of the aforementioned packages installed on your Linux-based physical computer, the Parallels Workstation installer tries to install it automatically.

Install Parallels Workstation

Before installing Parallels Workstation, make sure your computer meets the system requirements.

Install Parallels Workstation in Windows

You can be up and running with Parallels Workstation in a few easy steps.

Note: To install Parallels Workstation in Windows, you must have administrator's rights.

To install Parallels Workstation:

- 1** Locate the Parallels Workstation setup file (`ParallelsWorkstation-parallels-en_US-6.0.xxxxxx.xxxxxx.exe`) and double-click it. You can find this file:
 - On the Parallels Workstation installation disc included with the boxed version of Parallels Workstation
 - On the Parallels website
- 2** If your computer is connected to the Internet, Parallels Workstation checks for available updates. If an update is available, click "**Download and Install New Version**" to get the latest version of Parallels Workstation.
- 3** Follow the onscreen instructions to install Parallels Workstation.

Note: When you're presented with information about the Parallels Customer Experience program, you can choose whether you want to participate. If you choose not to, you can join the program later using the **Feedback** pane of Parallels Workstation Preferences.

Install Parallels Workstation in Linux

Before installing Parallels Workstation on a Linux computer, make sure that the packages and libraries listed in the [system requirements](#) (p. 7) for Linux host operating systems are installed in your system.

Note: You must have the `root` privileges to be able to install Parallels Workstation in a Linux operating system.

To install Parallels Workstation in Linux, you need a RUN installation package. It is available on the Parallels Workstation installation disc included in the boxed version of Parallels Workstation or can be downloaded from the Parallels website.

To install Parallels Workstation in Linux:

- 1 Disable SELinux in the host operating system (you can enable it again after the installation is complete). For the detailed information on how to do this, please refer to your Linux distribution documentation and/or support resources.
- 2 Locate the `.run` installation package in a terminal and make sure it is executable. To do this, use the following command:

```
# chmod +x parallels-workstation-parallels-en_US-6.0.xxxxx.xxxxxx.run
```

where `parallels-workstation-parallels-en_US-6.0.xxxxx.xxxxxx.run` is the name of your `.run` installation package.

- 3 Start the Parallels Workstation installation by executing the following command:

```
# ./parallels-workstation-parallels-en_US-6.0.xxxxx.xxxxxx.run
```

- 4 Parallels Workstation connects to the Parallels update server and checks for available updates. If there is a newer version of Parallels Workstation available, you will be offered to install the most recent version of Parallels Workstation. If you do not want to install the most recent version, you can choose to install the version from the installation media.

Note: If the host computer is accessing the Internet only via a proxy server, configure the proxy server settings to allow Parallels Workstation to check for available updates during the installation process. For more information on how to configure the proxy server settings, refer to the corresponding subsection below.

If there are no updates available or your host computer is not connected to the Internet, Parallels Workstation will be installed from the current installation source.

- 5 Parallels Workstation Installer starts. In the **Welcome** screen, click **Next**.
- 6 In the **License Agreement** screen, read the license agreement scrolling it by pressing Spacebar on your keyboard. To accept the agreement, click the **Accept** button.
- 7 In the **CEP Agreement** screen, you can choose to participate in the program that will help us improve Parallels Workstation according to your experience. Read carefully the information about the program and click the **Agree** button if you want to participate in it. Otherwise click **Disagree**.

8 When the installation is complete, click **Exit**.

9 To exit the terminal, enter:

```
exit
```

Configure Proxy Server Settings

If the host computer is accessing the Internet only via a proxy server, you should configure the proxy server settings to allow Parallels Workstation to check for available updates during the installation process. To this effect, start the Parallels Workstation installation as follows:

1 Execute the following command to start the installation:

```
sudo ./parallels-workstation-parallels-en_US-6.0.xxxxx.xxxxxx.run -- -p  
proxy_server_host_name:port
```

or

```
sudo ./parallels-workstation-parallels-en_US-6.0.xxxxx.xxxxxx.run -- -p ip_address:port
```

where *proxy_server_host_name* stands for the proxy server host name, *ip_address* stands for the proxy server IP address, and *port* stands for the proxy server port.

2 Continue the installation as it was described above.

If the proxy-server requires authentication, you will be prompted to enter your name and password in one of the steps.

Activate and Register Parallels Workstation

Activate Parallels Workstation

Once the installation is finished, you must activate Parallels Workstation to use all of its features.

- 1 Open Parallels Workstation.
- 2 Click **Activate Product**.
- 3 Enter your Product Activation Key.

Note: If you bypass the activation dialog, you can activate Parallels Workstation later by choosing **Help > Activate product** and entering your Product Activation Key.

If You Don't Have A Product Activation Key

If you don't have a key already, you can get one by choosing **Help > Activate Product**. Then, to get a free trial Product Activation Key so you can try out Parallels Workstation for a limited time, click **obtain a free trial activation key**. Or to purchase a key that lets you use Parallels Workstation permanently, click **purchase a permanent activation key**.

Registering Parallels Workstation

During installation, you're presented with the opportunity to register Parallels Workstation. Registering allows you to:

- Download and install the latest Parallels Workstation updates.
- Create a backup copy of the product key on the Parallels web server and restore it at any time.
- Easily contact the Parallels support team, using the support code.
- Stay informed about Parallels news and announcements.

Note: If you choose not to register Parallels Workstation during installation, you can register anytime by choosing **Help > Register product** when the program is open.

CHAPTER 3

Install or Import a Guest Operating System

There are a few ways you can get started using one or more guest operating systems alongside the host operating system:

- Install a new guest operating system in a Parallels Workstation virtual machine from a disc or image
- Import a virtual machine from a previous version of Parallels Workstation or from VMware, Microsoft Virtual PC, or VirtualBox
- Transfer an operating system and all your data from a remote PC to a Parallels Workstation virtual machine on your host computer

Read on to learn how.

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Supported Guest Operating Systems

Parallels Workstation 6 officially supports the following guest operating systems:

Guest Operating Systems	32-bit	64-bit	Express installation
Windows 7	✓	✓	✓
Windows Vista SP1, SP2	✓	✓	✓
Windows XP Pro SP3	✓		✓
Windows XP Home SP3	✓		✓
Windows XP Pro SP2	✓	✓	✓
Debian 6.0	✓	✓	
Fedora 14, 15	✓	✓	
OpenSUSE 11.1	✓	✓	
RHEL 6, 6.1	✓	✓	
SLED 11 SP1	✓	✓	
Ubuntu 10.10, 11.04, 11.10	✓	✓	

Parallels Workstation 6 Extreme officially supports the following guest operating systems:

Guest Operating Systems	32-bit	64-bit	Express installation
Windows 7		✓	✓
Windows Vista SP2		✓	✓
Windows XP SP3	✓		✓
Windows XP SP2	✓	✓	✓
Fedora 14, 15		✓	
RHEL 5.7, 6, 6.1		✓	

Install a Guest OS from a Disc or Image

If this is your first time using Parallels Workstation, or if you simply want to start with a fresh installation, you can install any supported guest operating system into a new Parallels Workstation virtual machine.

You need one of the following:

- An operating system installation disc
- An image file of such an installation disc

You can use any of the following modes to install a guest OS:

- **Express Windows.** Installs Windows 7, Vista, or XP and Parallels Tools (software that makes your work with the guest operating system as seamless as possible) automatically.
- **Typical.** Creates a virtual machine with a typical configuration for the selected guest OS.
- **Custom.** Allows you to customize the virtual machine configuration while creating it.

This guide provides you with the instructions on how to create a virtual machine and install a guest OS in the *Typical* mode. For the instructions on creating virtual machines in the *Custom* or *Express Windows* modes, refer to the *Parallels Workstation User's Guide*.

To create a typical virtual machine:

- 1 Start Parallels Workstation:
 - In Windows: Choose **Start > All programs > Parallels > Parallels Workstation Extreme > Parallels Workstation Extreme**.
 - In Linux: Choose **System Tools > Parallels Workstation** from the **Applications** menu.
- 2 In the **Parallels Workstation** window click **Create a New Virtual Machine** or choose **File > New**.
- 3 Do one of the following:
 - If you're installing from a disc, insert the disc.
 - If you're installing from an image file on another hard disk, connect the disk to the host computer.
- 4 Select the operating system you want to install.
- 5 In the **Virtual Machine Type** window, select **Typical** and click **Next**.
- 6 Click **Choose** and specify where you want to store the virtual machine.

By default, Parallels Workstation stores the virtual machine in your **Documents > My Parallels** folder.

When ready, click **Next**. The wizard creates a virtual machine.

- 7 In the **Install Operating System** window, select the source of the installation files from the **Source** menu.
- 8 Click **Start** to begin installing the guest operating system in the virtual machine or click **Done** if you want to install it later.

Import from an Earlier Parallels Workstation or Other Virtualization Application

If you already have a virtual machine stored on the host computer but it is missing from the list of virtual machines registered in Parallels Workstation, you can easily add it.

To add an existing virtual machine

- 1 Choose **File > Add Existing**.
- 2 Locate the virtual machines you want to add by doing one of the following:
 - To add a specific virtual machine's configuration file (config.pvs), select **Add a specific virtual machine** and type the path in the **File** field, or click the **Choose** button and navigate to the file you want. Then click **Next**.
 - To find all virtual machines in a specific folder, select **Search for virtual machines in this folder**. Then type the path to the folder you want in the **Start from** field, or click the **Choose** button and navigate to the folder. Then click **Search**.



- 3** If you chose **Search for virtual machines in this folder**, in the next window the wizard displays all the virtual machines found in the specified folder that are not registered in Parallels Workstation. Select the virtual machines you want to add.

To select all items at a time, click the Select All button  displayed below the list.

To clear all items at a time, click the Clear All button  displayed below the list.

Review the selection and click **Add**.



Import Your Data from a PC

Parallels Transporter allows you to import all your data from a remote PC to Parallels Workstation on the host computer. Then you can continue to work with all your programs, files, and data, side-by-side with the host OS.

To learn how to work with Parallels Transporter, please refer to *Parallels Transporter User's Guide* available on the Parallels website.

Install and Update Parallels Tools

Parallels Tools are a set of utilities that help you use guest operating systems in the most comfortable and cohesive way. For example, with Parallels Tools you can move the mouse seamlessly between your host and guest operating systems, change the virtual machine's screen resolution by simply resizing its window, view synchronized time and date settings between your host and guest operating systems, and more.

If you installed a Windows guest operating system using Express Installation, Parallels Tools were installed automatically and you don't have to do anything else. Otherwise, it's recommended that you install Parallels Tools to get the most out of Parallels Workstation.

To install or update Parallels Tools:

- 1 Start the virtual machine in which you want to install Parallels Tools and log in to the guest operating system.
- 2 Choose **Virtual Machine > Install Parallels Tools** to install Parallels Tools for the first time, or **Virtual Machine > Update Parallels Tools** to update to the latest version.

Note: If the **Install Parallels Tools** option is unavailable, Parallels Tools may not support your guest operating system. To see the list of guest operating systems supported by Parallels Tools, choose **Help > Parallels Workstation Help** and see the **Parallels Tools Overview** section.

The Parallels Tools installation wizard opens.

- 3 Click **Install**.
- 4 When the installation is complete, click **Reboot** to restart the virtual machine.

For detailed information about Parallels Tools, choose **Help > Parallels Workstation Help**.

CHAPTER 4

Use a Guest Operating System

Read this chapter to learn the basics of using a guest operating system on your host computer.

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Start Up and Shut Down a Guest OS

Start a Guest OS

- 1 In Parallels Workstation, select the virtual machine with the guest OS you want to start.
- 2 Choose **Start** from the **Virtual Machine** menu.

Shutting Down a guest OS

You can shut down the guest operating system the way you would normally shut it down. For example, in Windows choose **Shut Down** from the **Start** menu.

You can also choose an option from the Virtual Machine State menu  at the bottom of the Parallels Workstation window:



- Choose **Suspend** to freeze the guest operating system in its current state. You can safely quit Parallels Workstation, open it again later, and resume everything right from where you left off.
- Choose **Pause** to stop using the guest operating system and allow its resources to be used by the host computer or other virtual machines.
- Choose **Shut Down** to shut down the guest operating system the way it would normally shut down.
- Choose **Stop** to stop the guest operating system without going through the normal shut down procedures. Stopping a virtual machine is like unplugging a computer while it is running. None of your data is saved.

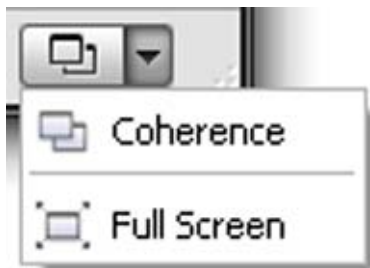
Set the View Mode

While running a guest operating system you can switch between the following view modes:

- **Window mode.** The guest operating system desktop and its programs appear together in a separate window. This is the default view mode.
- **Full Screen mode.** The guest operating system is expanded to occupy the whole of your physical computer's screen. The host operating system is hidden.
- **Coherence mode.** Programs from the guest and host operating systems appear together on the host OS desktop. The desktop of the guest operating system is invisible.

Note: The Coherence view mode is available only for Windows 7/Vista/XP guest operating systems [with Parallels Tools installed](#) (p. 18).

To switch a virtual machine working in the Window view mode to any other view mode, use the View Mode menu in the lower right corner of the virtual machine window.



Note: You can change the virtual machine view mode only when the virtual machine is running.


Install Programs in a Guest Operating System

You can install programs in a guest OS using the following media:


- CD and DVD discs
- Images of CD or DVD discs made with the help of third-party imaging products

Note: Parallels Workstation supports ISO image files.

To install a program using a CD or DVD disc:

- 1** Insert the disc.
- 2** Do one of the following:
 - Click the CD/DVD icon  in the virtual machine status bar and choose **Real CD/DVD** from the shortcut menu.
 - Choose **CD/DVD 1 > Real CD/DVD** from the **Devices** menu.

To use an image of a disc:

- 3** Do one of the following:
 - Click the CD/DVD icon  in the virtual machine status bar and choose **Connect Image** from the shortcut menu.
 - Choose **CD/DVD 1 > Connect Image** from the **Devices** menu.
- 4** Specify the image file.

For further installation steps, refer to the documentation of the program you are installing.

Save a Snapshot of a Virtual Machine

A snapshot is a saved state of a virtual machine. After you save a snapshot, you can continue working with the virtual machine and revert to the snapshot at any time. All of your settings and data revert to the saved state.

You can create a snapshot when the virtual machine is running, paused, or stopped.

To save a snapshot:

- 1** Choose **Virtual Machine > Take Snapshot**.
- 2** Type a name for the snapshot and, if desired, provide a short description.

To access the snapshot, choose **Virtual Machine > Manage Snapshots**.

For more information about snapshots, choose **Help > Parallels Workstation Help** and search for "snapshots."

CHAPTER 5

Learning More, Support, and Feedback

For detailed instructions on how to use all the features of Parallels Workstation, see the *Parallels Workstation User's Guide*, available online.

To download the *Parallels Workstation User's Guide*:

- 1 In Parallels Workstation, choose Help > Online Documentation (you must be connected to the Internet).

A web page opens with access to all of the Parallels Workstation manuals.

- 2 Click the PDF link next to **Parallels Workstation User's Guide**.

In the *Parallels Workstation Users Guide*, you can find information on things like:

- Sharing files
- Connecting devices
- Configuring virtual machine settings
- Configuring network settings
- Protecting your virtual machines
- Optimizing virtual machines
- And much more

There are also many other ways to get help and information on using Parallels Workstation:

- **Parallels Workstation Help:** For detailed instructions on using all of the Parallels Workstation features, open Parallels Workstation and choose **Help > Parallels Workstation Help**. This resource has all of the same information as the *Parallels Workstation User's Guide*.
- **Context-sensitive help:** In Windows, press F1 to get information relating the active window.
- **Parallels Command Line Reference Guide:** This document, available on the Parallels Online documentation page, has information on using the prctl command line utility to manage Parallels Workstation and its virtual machines from a terminal.
- **Parallels API references and the SDK programmer's guide:** These guides for IT-professionals can be found on the Parallels Online documentation page.
- **Parallels support website:** The [Parallels support website](http://www.parallels.com/support/) (<http://www.parallels.com/support/>) includes product help files and a FAQ section.
- **Parallels Knowledge Base:** This [online resource](http://kb.parallels.com/) (<http://kb.parallels.com/>) comprises valuable articles about using Parallels Workstation and other Parallels products.

- **Parallels forums:** The [Parallels forums](http://forum.swsoft.com/forumdisplay.php?s=&forumid=239) (<http://forum.swsoft.com/forumdisplay.php?s=&forumid=239>) are a great place to search for answers, post questions, or answer other users' questions.

Feedback

Parallels welcomes your feedback on how to make our documentation more helpful. You can submit feedback using the Documentation Feedback form on our [website](http://www.parallels.com/en/support/usersdoc/) (<http://www.parallels.com/en/support/usersdoc/>).