Parallels Desktop Lite

User's Guide

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Welcome to Parallels Desktop Lite

With Parallels Desktop Lite you no longer have to choose between the Mac and the PC. Parallels Desktop Lite lets you use Windows side-by-side with OS X on your Mac.

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

In This Chapter

What You Can Do

With Parallels Desktop Lite, you can:

- Install various operating systems and use them together

- Copy and paste text and drag and drop objects between Mac and Windows

- Run Windows games and other 3D programs

- Easily share OS X files, devices, and other resources with Windows

- And much more

Set Up Your Mac to Use Windows Programs

After just a few steps, you can begin using Windows programs on your Mac. Setting up your Mac to run Windows programs involves the following steps:

Step 1: Install Parallels Desktop Lite (p. 9).

Step 2: Install Windows on your Mac (p. 12).

Step 3: Install your Windows programs (p. 16).

You only need to follow these steps once. Then you can open and use your Windows programs on your Mac anytime you like, just as you do with your Mac applications.

Other Operating Systems

Important: This guide is focused on using Parallels Desktop Lite with Windows.

Using Parallels Desktop Lite you can run several other kinds of operating systems (p. 58) on your Mac, such as several flavors of Linux and Unix, Windows 10, older versions of Windows, and more.

Finding Information On Running Other Operating Systems

You can find much more information and details on using Parallels Desktop Lite to run other operating systems on your Mac by checking the resources listed in **Get Support** (p. 115).

Additionally, though not explicitly stated, many of the instructions presented in this guide also apply to supported operating systems other than Windows. And some important instructions relating to other operating systems are in the **Advanced Topics** (p. 58) section.

Install Parallels Desktop Lite

Follow the instructions in this chapter to install Parallels Desktop Lite.

In This Chapter

What You Need

To use Parallels Desktop Lite, you need:

- A Mac computer with:

  - A late-2011 Mac computer or later

  - OS X El Capitan 10.11.5 or later

  > **Note:** To identify your computer's year, memory, and OS X version, choose **Apple menu** > **About This Mac**.

  - At least 4 GB of RAM (8 GB recommended)

  - At least 850 MB of space available on the boot volume (the volume that has OS X) for Parallels Desktop Lite installation

  - Enough free disk space for each virtual machine and its applications (at least 15 GB for each installation of Windows)

  - An Internet connection

- One of the following:

  - A Windows installation ISO image file, disc, or other installation media for the operating systems you want to use alongside OS X

  - An Internet connection to download and install freely available operating system such as Ubuntu, or Google Chrome.

For a list of operating systems that Parallels Desktop Lite supports for use with your Mac, see **Supported Guest Operating Systems** (p. 58).

Install Parallels Desktop Lite

You can be up and running with Parallels Desktop Lite in a few easy steps:

1   On your Mac, open App Store.

2   Search for `Parallels Desktop Lite`.

3   Click **Get** and follow the onscreen instructions.

Choose How to Use Parallels Desktop Lite

When you launch Parallels Desktop Lite for the first time, you need to choose how you're going to use it. Choose one of the following:

- **Windows & Support**. If you choose this option, you will be able to create and run virtual machines with Windows, Linux and any other supported operating system. You will also be able to contact the support team for assistance.

  Note: This option is free during a trial period. If you want to continue using Windows or other virtual machines after the trial period expires, you need to purchase a subscription.

- **Linux only**. If you choose this option, you will be able to create and run only Linux virtual machines. This option is completely free of charge. However, telephone support is not available.

Important! Please note that Windows and its license are not included.

Sign In to Parallels

If you chose to use Parallels Desktop Lite with Windows, you need to sign in to a Parallels account.

If you're a new user and don't have a Parallels account, enter you email address (which will be associated with your account), click **I am a new customer**, specify a password (any password you like), and click **Sign In**.

If you already have a Parallels account, specify the email address and password, click **I have a password**, and click **Sign In**.

Select a Subscription Plan

When you install Parallels Desktop Lite for the first time, you can use Windows for free for a limited period of time. If you want to continue using Windows after the trial period expires, you need to purchase a subscription to Parallels Desktop Lite.

Important! Please note that Windows and its license are not included.

To purchase a subscription after the trial period expires, do the following:

1   Launch Parallels Desktop Lite.

2   Click **Parallels Desktop Lite** > **Account & Plan** in the OS X menu bar.

3   Select a subscription, click **Buy** and follow the onscreen instructions.

Set the Language

The Parallels Desktop Lite interface supports the following languages:

- English;
- German;
- French;
- Italian;
- Spanish;
- Czech;
- Polish;
- Russian;
- Brazilian Portuguese;
- Japanese;
- Korean;
- Chinese Simplified;
- Chinese Traditional Taiwan.

Parallels Desktop Lite uses the same language which is chosen for OS X. If OS X uses some other language which is not listed above, the Parallels Desktop Lite interface will use English.

Install or Import Windows

There are a couple ways to get Windows up and running on your Mac:

* Install Windows (p. 12)

* Import Windows from Parallels Desktop for Mac or other virtualization software (p. 13)

In This Chapter

Install Windows

If you have a Windows installation source (a DVD disc, an image file, or a USB storage device) and a valid Windows product key, you can install Windows on your Mac and use it with Parallels Desktop Lite.

To install Windows:

1 Open Parallels Desktop Lite (in the Applications folder) and choose **File** > **New**.

2 Prepare your installation media:

* If you're using a Windows installation ISO image file, be sure you have downloaded the file.

* If you have a Windows installation disc, insert it into the DVD drive.

* If you have a USB storage with Windows, connect the storage to the Mac.

3 Click **Install Windows or another OS from a DVD or image file**.

4 Parallels Desktop Lite scans for and lists installable operating systems. If you see the version of Windows you want to install, select it, click **Continue** and go to step 5.

If the Windows installation source doesn't show up automatically, click **Locate manually** to browse for it manually. You can browse from the following sources:

* **Image File:** If you have a Windows image file, click **Image File** and drag the image to the Parallels Wizard window. Once Windows is detected, click **Continue**.

* **DVD:** If you have a Windows DVD, insert it into the DVD drive. Once Windows is detected, click **Continue**. If your Mac doesn't have a DVD drive, you can use an Apple SuperDrive, another Mac's DVD drive via Remote Disc, or make an image from the disc.

- **USB Drive:** If you have a bootable USB installer with Windows, click **USB Drive** and connect the drive to the Mac. You'll be prompted to grant access to the drive. Then, once Windows is detected, click **Continue**.

> **Note:** Parallels Desktop Lite may fail to detect some operating systems (for example, the latest Linux distributions). If this happens but you're sure that the operating system can be installed, click **Continue**, specify the OS type manually (if it's not listed, choose **Other**), and follow the onscreen instructions.

5   Be sure to leave **Express installation** selected.

> **Note:** If you deselect **Express installation**, be sure to stay near your computer to follow onscreen instructions during the installation. Also, you'll need to install Parallels Tools (p. 108) after the installation to allow the most seamless operation between Windows and Mac OS X.

6   Choose what you're going to primarily use Windows for. Parallels Desktop Lite settings will be tuned to best fit your needs.

7   Choose where you want to store Windows from the **Location** menu.

8   If you want to pre-set things like how much memory Windows uses or whether it starts automatically when you open Parallels Desktop Lite, select **Customize settings before installation**. You can also adjust these settings after the operating system is installed.

9   Click **Continue**.

The assistant installs Windows.

Once Windows is installed, you can start it up by clicking the power button in **Control Center**.
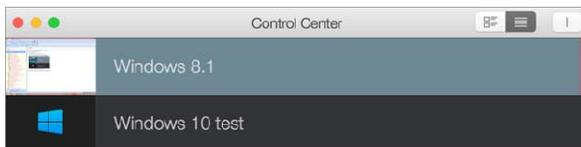
> **Important:** The first time you start Windows, Parallels Tools are installed to allow seamless operation between Windows and Mac OS X. Once Parallels Tools are installed, you're prompted to restart Windows.
>
> If you didn't select **Express installation** in step 5 above, you must install Parallels Tools manually (p. 108).

When you install Windows, Parallels Desktop Lite creates an administrator account with a blank password. Once the installation is complete, it is recommended that you change the password.

Import from Parallels Desktop for Mac or Other Virtualization Application

With Parallels Desktop Lite you can use Windows that you set up using Parallels Desktop for Mac, as well as VMware Fusion, Microsoft Virtual PC, and VirtualBox:

1   Open Parallels Desktop Lite (in the Applications folder) and choose **File** > **Open**.

2   Select the Windows data file you want to import, then click **Open** and follow the onscreen instructions.

   • Parallels Desktop for Mac data files end with `.pvm`.

   • VMware files end with `.vmx`.

   • Virtual PC files end with `.vmc`.

   • VirtualBox files end with `.xml or .vbox`.

   You can also simply drag a Parallels `.pvm` file to **Control Center** to add it to Parallels Desktop Lite.

3   Start Windows (p. 15).

4   Choose **Actions** > **Install Parallels Tools** and follow the onscreen instructions.

Feature Changes When Importing From Parallels Desktop for Mac

1   When you import Windows set up using Parallels Desktop for Mac to Parallels Desktop Lite, not all of the same features are available.

2   In Parallels Desktop Lite:

•   Coherence is unavailable.

•   Windows icons and Windows application icons in the Dock are not available.

•   Bridged networking is unavailable. Instead you'll be prompted to use shared networking.

3   If you go back to using an instance of Windows with Parallels Desktop for Mac, all features will again be fully functional.

C H A P T E R   4

Use Windows on Your Mac

Read this chapter to find out all about using Windows programs on your Mac. Learn how to get started using Windows programs, set how Windows programs work with Mac OS X, share applications, files, and folders between Mac OS X and Windows, connect devices, print, customize your keyboard, and more.

In This Chapter

Get Started

In this section, learn how to start Windows, open a Windows program, install more Windows programs, and shut down or suspend Windows.

Start Windows

To use Windows programs on your Mac, Windows must be running.

You can start Windows by doing the following:

1   Open Parallels Desktop Lite.

2   In **Control Center**, move the mouse pointer to the Windows icon.

3   Once the icon turns to the Power button, click it.

Windows starts and you can begin using Windows programs.

Open a Windows Application

You can open a Windows application in a Windows virtual machine the same way as on a physical computer with Windows installed. Click the Start button and click the application you need.

Open a File in Windows

To open a file in Windows, just drag and drop it to the Parallels Desktop Lite icon in the Dock. The file will be opened in the application configured as default for this type of files.

Install Windows Programs

You install Windows programs on your Mac just as you would on a Windows PC. The two most common ways of installing programs are:

* Downloading an image file or program from the Internet or a network

* Using a CD or DVD installation disc

Install a Program from the Internet or a Network

* Download the image file or program and follow the instructions from the program's source.

In most cases, you can either run the installation file and follow the onscreen instructions, or simply open the downloaded program.

For more information about connecting to the Internet and networks, see Connect to the Internet or a Network (p. 48).

Install a Program from a CD or DVD Installation Disc

1   Start Windows (p. 15).

2   Insert the installation disc.

3   In most cases, an AutoPlay dialog opens. Click the option to run a setup or install file, then follow the onscreen instructions.

For more information about using CD and DVD discs with Parallels Desktop Lite, see **CD/DVD-ROM** (p. 94).

Shut Down or Suspend Windows

When you're finished using Windows programs, you can leave Windows running in the background as you work with your Mac applications. Or you may want to stop Windows from running so more of your computer's resources are available for your Mac applications. There are a few ways to stop Windows. You can:

*   Suspend Windows

*   Pause Windows

*   Shut down Windows

*   Stop Windows

Suspend Windows

Suspending Windows conveniently freezes all running Windows programs and settings in their current state.

Do one of the following:

*   Click the Parallels icon ❚❚ in the menu bar and choose **Actions** > **Suspend**.

*   Click **Actions** in the Parallels Desktop Lite menu bar at the top of the screen and choose **Suspend**.

The next time you start Windows, you resume your progress from exactly where you left off.

When Windows is suspended, you can safely quit Parallels Desktop Lite and resume your progress later.

Pause Windows

You can temporarily pause from using Windows and free your computer's resources, such as RAM and processor cycles, to be used by your Mac applications by doing one of the following:

*   Click the Parallels icon ❚❚ in the menu bar and choose **Actions** > **Pause**.

*   Click **Actions** in the Parallels Desktop Lite menu bar at the top of the screen and choose **Pause**.

To resume using Windows after pausing it, do one of the following:

*   Click the Parallels icon ❚❚ in the menu bar and choose **Actions** > **Resume**.

*   Click **Actions** in the Parallels Desktop Lite menu bar at the top of the screen and choose **Resume**.

Shut Down Windows

Shutting down Windows in Parallels Desktop Lite is just like shutting down Windows on a PC. All Windows programs close, giving you the opportunity to save your progress if necessary, and Windows stops running.

To shut down Windows, do one of the following.

* Click the Parallels icon ‖ in the menu bar and choose **Actions** > **Shut Down**.

* Click **Actions** in the Parallels Desktop Lite menu bar at the top of the screen and choose **Shut Down**.

Stop Windows

To stop Windows and all open Windows programs immediately, do one of the following:

* Click the Parallels icon ‖ in the menu bar and choose **Actions** > **Stop**.

* Click **Actions** in the Parallels Desktop Lite menu bar at the top of the screen and choose **Stop**.

> **Important:** When you stop Windows this way, none of your data or progress is saved.

Startup and Shutdown Settings

Using **Startup and Shutdown** settings, you can:

* Set whether Windows starts automatically when you open Parallels Desktop Lite

* Set which view mode (Window, Full Screen, or Modality) Windows starts up in when you open it from **Control Center**.

* Set what happens when you shut down Windows

* Set what happens when you close the Parallels Desktop Lite window

To access **Startup and Shutdown** settings:

1 Do one of the following:

  * Click the Parallels icon ‖ in the menu bar and choose **Configure.**

  * Click **Actions** in the Parallels Desktop Lite menu bar at the top of the screen and choose **Configure**.

2 Click **Options** and select **Startup and Shutdown**.

Set Whether Windows Starts Automatically

Choose one of the following from the **Start Automatically** menu:

* **Never**: Windows never starts automatically.

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- **When window opens**: Windows starts automatically when you open it from **Control Center**.
- **When Parallels Desktop starts**: Windows starts automatically when you start Parallels Desktop Lite.

Set the Startup View

Choose one of the following from the **Startup View** menu:

- Same as last time
- Window
- Full Screen
- Modality

Set What Happens When You Shut Down Windows

Choose one of the following from the **On VM Shutdown** menu:

- **Keep window open**: If Windows is set to appear in a separate window, the window stays open when you stop or shut down Windows.
- **Close window**: If Windows is set to appear in a separate window, the window closes when you stop or shut down Windows.
- **Quit Parallels Desktop**: Parallels Desktop Lite quits when you stop or shut down Windows.

Set What Happens When You Close the Parallels Desktop Lite Window

Choose one of the following from the **On Window Close** menu:

- Suspend
- Shut Down
- Force to stop
- Ask me what to do

Set How Windows Works with Mac OS X

Read this section to learn more about setting how Windows works together with Mac OS X.

Set Windows to Appear in a Single Window

You can set the Windows and programs to appear together in their own window.

To switch to Window mode from Full Screen mode, do one of the following:

* Press Command-Control-F.

* Move the pointer to the top of the screen until the OS X menu bar appears and click **View** > **Exit Full Screen**.

Monitoring Windows in a Scalable Window

You can set Windows to appear in a window that can be resized to any size so that the content scales in size with the window. This is called **Modality** mode. Modality mode can be useful if you want to monitor programs and other tasks running in Windows as you work in Mac OS X.

To switch to Modality mode:

* From Window mode, choose **View** > **Enter Modality**.

For more information on Modality mode, see the Modality mode settings topic (p. 79).

Set Windows to Take Up the Whole Screen

You can set Windows to occupy your entire screen, so it looks just like it would if you were using a Windows PC. In Full Screen mode, Mac OS X and all of the Parallels Desktop Lite controls are hidden.

To switch to Full Screen mode, do the following:

* From Window mode, choose **View** > **Enter Full Screen** or click the Full Screen icon in the top left corner of the virtual machine window.

To exit Full Screen mode, press Command-Control-F.

Adjust Full Screen Settings

You can customize how Windows appears and behaves when in Full Screen mode.

To access **Full Screen** settings:

1 Do one of the following:

* Click the Parallels icon in the menu bar and choose **Configure** > **Options**.

* Click **Actions** in the Parallels Desktop Lite menu bar at the top of the screen and choose **Configure** > **Options**.

2   Click **Full Screen**.
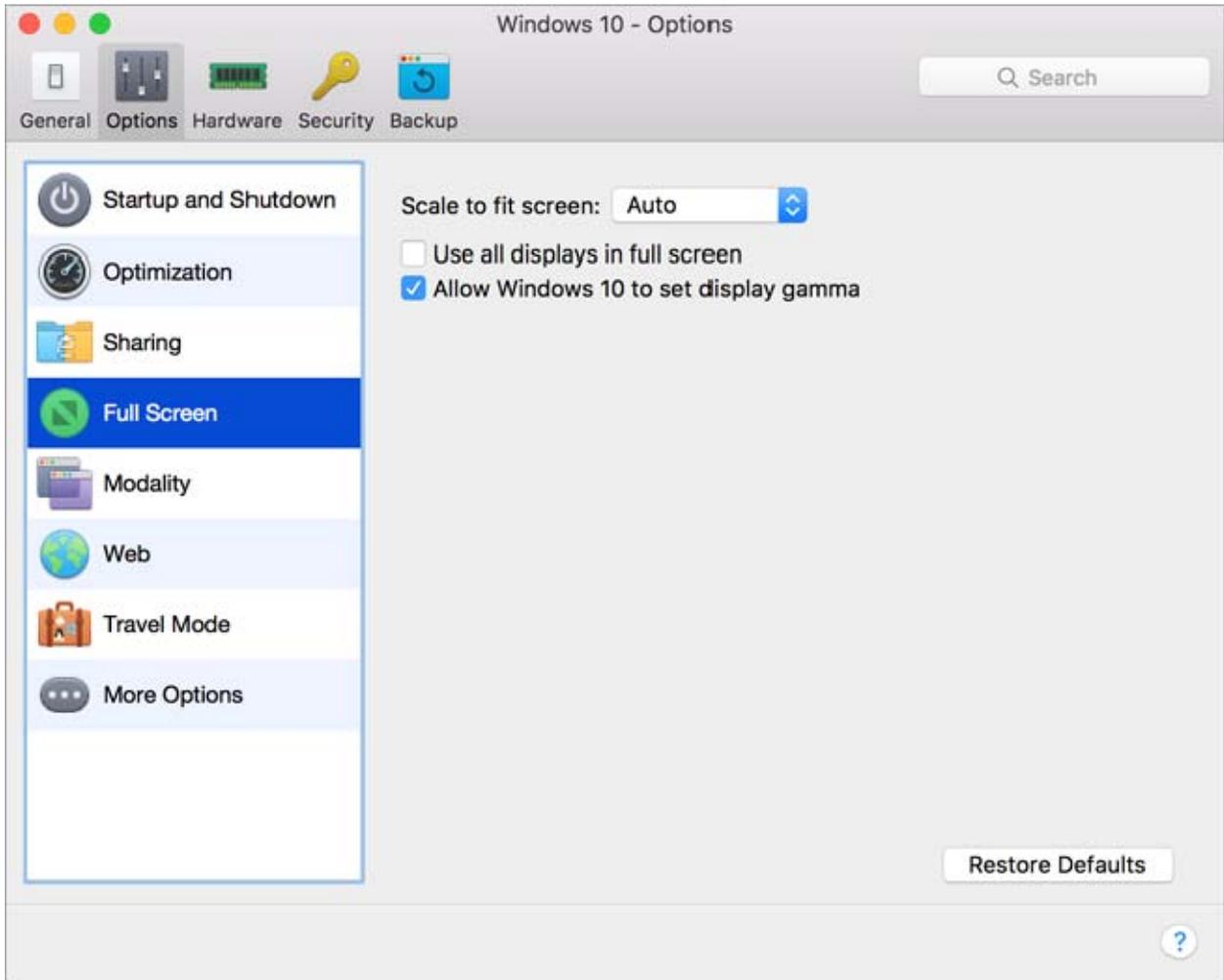
3   In this **Full Screen** pane, you can adjust any of the settings listed below.

Scale to fit screen

Using the **Scale to fit screen** menu, you can configure how Windows is displayed when working in Full Screen:

- **Off.** If Parallels Tools (p. 71) are installed, Windows resolution matches that of the Mac. If Parallels Tools (p. 71) aren't installed, Windows resolution remains unchanged. If it is lower than that of the Mac, Windows is displayed on the black background. If higher, Windows has scroll bars.

- **Auto.** If Parallels Tools (p. 71) are installed, Windows resolution matches that of the Mac. If Parallels Tools (p. 71) aren't installed, Windows resolution remains unchanged. If it is lower than that of the Mac, Windows is displayed on the black background. If higher, Windows is entirely displayed on the screen without any scroll bars.

- **Keep ratio**: No matter whether Parallels Tools (p. 71) are installed or not, Windows resolution remains unchanged. If it is lower than that of the Mac, Windows is displayed on the black background. If higher, Windows is entirely displayed on the screen without any scroll bars.

- **Stretch**: No matter whether Parallels Tools (p. 71) are installed or not, Windows resolution remains unchanged but Windows is stretched to occupy the whole screen.

Set What Shows on Displays Connected to Your Mac

If you have a second display connected to your Mac, by default when you switch to Full Screen mode, Windows is displayed on the primary display and Mac OS X on the secondary.

You can choose which display Windows is shown on by dragging its window to that display and then clicking the Full Screen icon .

To extend Windows across all your displays, select **Use all displays in full screen**.

Allow Windows to set display gamma

If you're using Windows to play video games, Windows may need to temporarily change your Mac's display gamma setting to properly display different visual effects. To allow Windows to change gamma settings, select **Allow Windows to set display gamma**.

Share Items Between Mac OS X and Windows

Please read on to learn what you can share between your Mac and Windows.

Copy and Paste Between Mac OS X and Windows

Parallels Desktop Lite allows you to copy and paste images and formatted text (italic, bold, underlined, and of various colors, fonts, and sizes) between Mac OS X and Windows applications.

To enable copying and pasting between Mac OS X and Windows:

1 Do one of the following:

- Click the Parallels icon ❚❚ in the menu bar and choose **Configure.**

- Click **Actions** in the Parallels Desktop Lite menu bar at the top of the screen and choose **Configure**.

2 Click **Options** > **More Options**.

3 Select **Share Mac clipboard**.

4 To preserve text formatting when copying and pasting text, select **Preserve text formatting**.

> **Note:** To enable copying and pasting between Mac OS X and Windows, Parallels Tools (p. 108) must be installed. In most cases, Parallels Tools are installed by default. Copying and pasting between Mac OS X and Windows is unavailable if you isolate Mac OS X from Windows.

Copy and Paste Files

You can easily copy and paste files between Windows and Mac OS X by doing the following:

1 Select a file (or multiple files) and press Command+C on your keyboard to copy it.

2 Open a folder or click the desktop in the other operating system and press Command-V to paste the file.

> **Notes:**
>
> **1.** To enable copying and pasting files between Mac OS X and Windows, in Sharing settings (p. 24) **All disks** or **Home folder** must be chosen from the **Share Folders** menu.
>
> **2.** If **Home folder only** is selected in the **Share Folders** menu (p. 24), you will be able to copy and paste files from the Mac to Windows only from the Mac home folder.

Share Files and Folders

Parallels Desktop Lite allows you to share folders between the Mac OS X and Windows file systems, so you can easily open Mac OS X files from Windows applications.

> **Note:** These instructions apply to sharing folders between OS X and Linux as well.

Access a Mac OS X Folder or File from a Windows Program

With folder sharing enabled, you can navigate to any shared Mac OS X folder from within a Windows program. When you open a file (for example, by choosing **File** > **Open** in many programs), your shared Mac OS X folders appear as network shared directories labeled "psf."

To enable Mac OS X folders for sharing with Windows programs:

1   Start Windows. (p. 15)

2   Do one of the following:

- Click the Parallels icon ‖ in the menu bar and choose **Configure.**

- Click **Actions** in the Parallels Desktop Lite menu bar at the top of the screen and choose **Configure**.

3   Click **Options** and select **Sharing**.

4   Do one of the following:

- To share just the folders in your Home folder, choose **Home folder** from the **Shared Folders** menu.

- To share all your Mac OS X folders, choose **All disks** from the **Shared Folders** menu.

- To share any folder you want, click **Custom Folders** and click the add (+) button, then choose the folder you want to share. You can add more folders by clicking the add (+) button again.
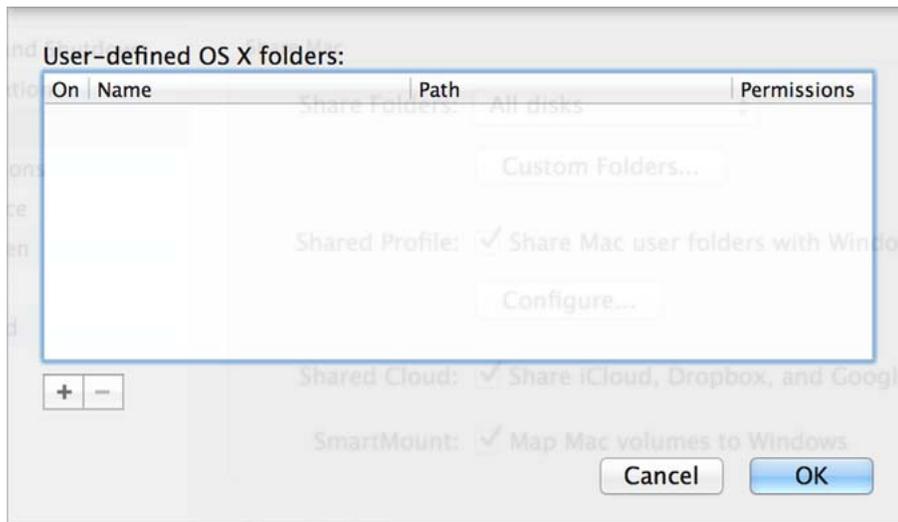
Once you share a Mac OS X folder with Windows you can:

- Disable the folder sharing by deselecting **On**.

- Change the folder name that will be displayed in Windows by double-clicking the folder name in the **Name** column and typing another name.

- Restrict writing to this folder by clicking **Read & Write** in the **Permissions** folder and choosing **Read only**. You will not be able to add items to the folder.

5   Click **OK**.

> **Note:** 1. To enable folder sharing, the **Isolate Windows from Mac** option must be disabled on the **Security** tab of the **Configuration** dialog.
>
> 2. If you're running Linux, shared folders are mounted to the `/media/psf` or `/mnt/psf` directory.

Set Mac OS X and Windows to Use the Same Folders

You can set Mac OS X and Windows to use the same folders for things like music, documents, pictures, your desktop, and deleted files. So for example, if you save a file to the Documents folder, it will be in the Documents folder whether you're using a Mac OS X application or a Windows program.

1   Start Windows. (p. 15)

2   Do one of the following:

- Click the Parallels icon ❚❚ in the menu bar and choose **Configure.**

- Click **Actions** in the Parallels Desktop Lite menu bar at the top of the screen and choose **Configure**.

3   Click **Options** and select **Sharing**.

4   Select **Share Mac user folders with Windows**.

Your Mac OS X `Desktop`, `Documents`, `Pictures`, `Music`, `Movies`, and `Downloads` folders are merged with the corresponding Windows folders, and the Mac OS X Trash is merged with the Windows Recycle Bin.

5   If you only want to map some of the folders, click **Configure** and select the folders you want. To map the Mac OS Trash to the Windows Recycle Bin, select **Merge Recycle Bin with Trash**.

Show an Item from Windows in the Finder

If Windows is set to appear in a separate window or in full screen mode (p. 20), you can show an item from Windows in the Mac OS X Finder.

- In Windows, right-click (or Control-click) a file or folder and choose **Show in Finder** from the shortcut menu.

From the Finder you could, for example, apply a color label to an item, or easily drag it to another location in the Finder.

> **Note:** You can only perform these actions with files stored in shared folders (p. 24).

Set OS X Files to Open in the Windows Application of Your Choice

You can set files of a particular type that you open from the Mac OS X Finder to open in the Windows program of your choice. For example, you could set files ending in `.txt` to always open in Windows Notepad.

Set Mac OS X Files of a Particular Type to Open in a Windows Program

To open a Mac OS X file once with a Windows program:

1 Right-click (or Control-click) the file in the Finder and choose **Open With** from the shortcut menu.

2 Select a Windows program.

   If you don't see the program you want, click **Other** and choose a Windows program from `/username/Applications (Parallels)/Windows Applications.`

To set files of a particular type to always open in a Windows program:

1 Right-click (or Control-click) a file and choose **Get Info** from the shortcut menu.

2 Click the triangle next to "Open with" to expand the section.

3 Choose a Windows program from the pop-up menu.

   If you don't see the program you want, choose **Other** and choose a Windows program from `/username/Applications (Parallels)/Windows Applications.`

4 Click **Change All**.

Open the Current Safari Page in Internet Explorer

Some webpages work best when viewed in Windows Internet Explorer. If you are browsing in Mac OS X using Safari, you can quickly open the current page in Internet Explorer by doing the following:

1 First you need to install the "Open in Internet Explorer" plugin. Do one of the following:

   • Click the Parallels icon ‖ in the menu bar and choose **Configure.**

   • Click **Actions** in the Parallels Desktop Lite menu bar at the top of the screen and choose **Configure**.

2 Click **Options** and select **Web**.

3 Click **Install Plugin**.

4 Once the plugin is installed, click the **Open in IE** button [image: Internet Explorer icon] in the toolbar.

If Windows isn't already open, it starts up and the page opens in Internet Explorer.

Use a Disk Image with the Virtual DVD Drive

While working in Windows, you can select a disk image file to be used with the virtual Windows DVD drive, as if it was a DVD inside a real drive. To do so:

1   In Windows Explorer, open **Computer** or **This PC**, right-click the DVD drive icon, and choose **Select disk image**.

2   Locate the disk image you want to use and click **Open**.

> **Note**: This functionality is available only for Windows with Parallels Tools installed (p. 108).

Apply Mac OS X Parental Controls to Windows

If you have administrator rights in Mac OS X, you can use parental controls to prevent others with accounts on your Mac from using certain Windows programs or accessing certain web sites.

To apply parental control settings:

1   In Mac OS X, choose **Apple menu** > **System Preferences** and click **Parental Controls**.

2   Click the lock if it's not unlocked, and then enter an administrator name and password.

3   Select the account that you want to restrict, click **Enable Parental Controls**, and set up the controls. If you want the user to be able to use some Windows programs, be sure to select Parallels Desktop Lite in the list of allowed applications.

For more information on using parental controls, see Mac Help.

Mouse, Trackpad, and Keyboard

Parallels Desktop Lite lets you configure your mouse or trackpad and your keyboard to work just the way you want them to.

You can also use trackpad gestures to control Windows programs just as you can with Mac OS X applications.

Read on to learn how to customize how your mouse, trackpad, and keyboard work with Windows programs.

Set Your Mouse or Trackpad to Right-Click and Middle-Click

Many tasks in Windows, such as bringing up shortcut menus, are accomplished by right-clicking.

By default, Parallels Desktop Lite is set to mimic a right-click when you press Shift+Control and click the mouse. You can change which key combination triggers a right-click.

You can also set your trackpad to allow right-clicking, and if you have an Apple Mighty Mouse (included with Apple desktop computers from 2005-2009) or Magic Mouse (included with current Apple desktop computers), you can set the mouse to allow right-clicking.

Most other mice are pre-configured for right-clicking.

Set the Trackpad for Right-Clicking.

1 Choose **Apple menu** > **System Preferences** and click **Trackpad** > **Point & Click**.

2 Select **Secondary click** and choose how you want to imitate a right-click.

Set an Apple Mighty Mouse for Right-Clicking

1 Choose **Apple menu** > **System Preferences** and click **Mouse** or **Keyboard & Mouse**.

2 Choose **Secondary Button** from the menu to the right of the mouse.

Now you can press the right side of the mouse to right-click.

Set an Apple Magic Mouse for Right-Clicking

1 Choose **Apple menu** > **System Preferences** and click **Mouse** or **Keyboard & Mouse**.

2 Select **Secondary click**.

Now you can press the right side of the mouse to right-click.

Set Which Key Combination Triggers a Right-Click or a Middle-Click

1 Do one of the following:

- Click the Parallels icon ▐▐ in the menu bar and choose **Preferences**.

- If the Parallels Desktop Lite menu bar is visible at the top of the screen, choose **Parallels Desktop Lite** > **Preferences**.

2 Click **Shortcuts**.

3   Select **Mouse Shortcuts** in the sidebar.
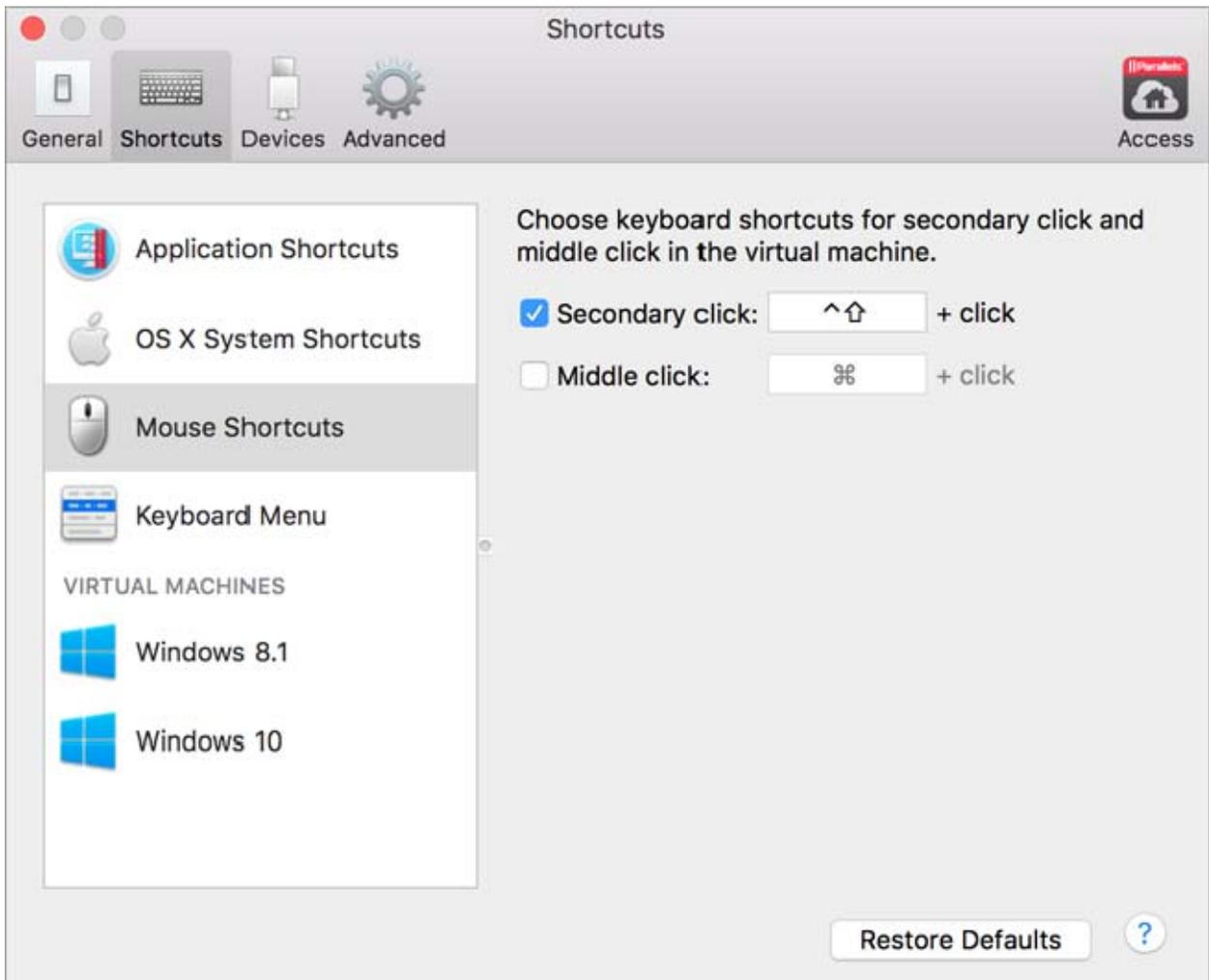
4   Select **Secondary click** (for right-click) or **Middle click**.

5   Click in the corresponding text field and press the key or combination of keys that you want to use with a mouse click to trigger a right-click or middle-click.

You can use any combination of the Control, Option (Alt), Shift, and Command keys.

Control Programs with Trackpad Gestures

If you have an Apple portable computer, such as a Macbook, or if you have an Apple Magic Trackpad, you can use gestures, such as swiping left or right across the trackpad, to control some Windows programs.

Note: You can control some Windows programs using three-finger swipes only if you're using Parallels Desktop Lite with Mac OS X Snow Leopard. In OS X Lion and later, three-finger swipes are used by default to move between full-screen apps and spaces.

The following table provides commands to control some of the more popular Windows programs.

Action	Keyboard and Mouse Combination	Touchpad Gesture
General		
Scroll	Up, down, left, or right arrow	Swipe up, down, left, or right with two fingers
Microsoft Power Point		
Start slide show	F5	n/a
End slide show	Esc	n/a
Perform the next animation or advance to the next slide	N, Enter, Page Down, Right Arrow, Down Arrow, Space (or click the mouse)	Swipe right with three fingers
Perform the previous animation or return to the previous slide	P, Page Up, Left Arrow, Up Arrow, Backspace	Swipe left with three fingers
Zoom in/zoom out	Ctrl+wheel up /Ctrl+wheel down	Pinch open/pinch close
Microsoft Word/Excel		
Zoom in/zoom out	Ctrl+wheel up /Ctrl+wheel down	Pinch open/pinch close
Windows Media Player		
Start/pause playback	Space	n/a
Skip to the next song	Ctrl+F	Swipe right with three fingers
Play the previous song	Ctrl+B	Swipe left with three fingers
Volume up	F8, Up Arrow, wheel up	n/a
Volume down	F9, Down Arrow, wheel down	n/a
Media Player Classic (k-lite)		
Start playback/pause	Space	n/a
Volume up	F8, Up Arrow, wheel up	n/a
Volume down	F9, Down Arrow, wheel down	n/a
Winamp		
Start playback/pause	X to start, C to pause	n/a
Volume up	Up Arrow, wheel up	n/a
Volume down	Down Arrow, wheel down	n/a
Microsoft Internet Explorer		
Page back	Backspace, Option+Left Arrow (Alt+Left Arrow)	Swipe right with three fingers
Page forward	Option+Right Arrow (Alt+Right	Swipe left with three fingers

	Arrow)	
Zoom in/zoom out	Ctrl+wheel up/Ctrl+wheel down	Pinch open/pinch close
Mozilla Firefox		
Page back	Backspace, Option+Left Arrow (Alt+Left Arow)	Swipe right with three fingers
Page forward	Option+Right Arrow (Alt+Right Arrow)	Swipe left with three fingers
Zoom in/zoom out	Ctrl-wheel up/Ctrl-wheel down or Ctrl-"+"/Ctrl-"-"	Pinch open/pinch close
Windows Picture and Fax Viewer		
Next image	Right Arrow	Swipe right with three fingers
Previous image	Left Arrow	Swipe left with three fingers
Zoom in/zoom out	"+"/"-"	Pinch open/pinch close
Rotate clockwise	Ctrl+K	Rotate right with two fingers
Rotate counterclockwise	Ctrl+L	Rotate left with two fingers

Use Keyboard Shortcuts

Both Mac OS X and Windows provide extensive keyboard shortcuts. For example, in Mac OS X you can hold down the Command key and press Q (Command-Q) to quit the current application.

To enter a keyboard shortcut, simply press a key combination on your keyboard.

You can also enter keyboard shortcuts by doing one of the following:

* Click the Parallels icon ▐▐ in the menu bar, then choose **Devices** > **Keyboard** and choose a key combination.

* Choose **Devices** > **Keyboard** and choose a key combination.

These methods are most useful for using keyboard shortcuts that include keys not included on a Mac keyboard, such as Alt + PrintScreen.

Note: To use the F1-F12 keys on a MacBook, press and hold the Fn key and then press an F key.

Customize Keyboard Shortcuts

By default, Parallels Desktop Lite maps common Mac OS X keyboard shortcut key combinations to the equivalent Windows key combinations. That way if you're used to, for example, pressing Command-C to copy text in Mac OS X, you don't have to switch to the Windows equivalent, Control-C.

You can also use and customize keyboard shortcuts for switching between Full Screen and Window view modes, and for showing and hiding Parallels Desktop Lite.

Customize Keyboard Shortcuts

1   Do one of the following:

- Click the Parallels icon ‖ in the menu bar and choose **Preferences**.

- If the Parallels Desktop Lite menu bar is visible at the top of the screen, choose **Parallels Desktop Lite** > **Preferences**.

2   Click **Shortcuts**

3   Select Windows from the Virtual Machines list in the sidebar.

Or if you're using another operating system with Parallels Desktop Lite and you want to customize keyboard shortcuts for it, select it in the sidebar.

When you're using a Windows application, pressing a key combination in the **From** column above triggers the key combination in the **To** column.

4 Do one of the following:

- To edit an existing key combination, double-click the key combination or select it and click the **Edit** button ⚙️. Click modifier keys to select or deselect them. If you wish, change the character in the text field.

- To delete a key combination, select it and click the **Remove** button ⊟.

- To add a new key combination, click the **Add** button ⊞.

If you're using multiple operating systems with Parallels Desktop Lite, you can create keyboard profiles for each OS (p. 68).

> **Note:** 1. Some key combinations can't be edited or deleted.
>
> 2. There are Mac shortcuts that do not have similar shortcuts in Windows For example, you can use the F11 key or Fn+F11 combination to see your Mac OS desktop with Expose, but in Windows there are no keys or key combinations that enable you to perform the same action, because there is no Expose in Windows.

Enable or Disable Mac OS X System Shortcuts

In Mac OS X the function keys on your keyboard (F1, F2, F3 and so on) control functions like activating Dashboard and Mission Control, adjusting screen brightness, and controlling the volume. By default, when a Windows application is active the function keys and other Mac system shortcut key combinations (such as pressing Cmd + Tab to switch between open applications) continue to activate Mac OS X functions.

To set whether function keys and OS X system shortcut key combinations activate functions in OS X or Windows:

5 Click **OS X system shortcuts** in the sidebar.

6 Select one of the following from the **Send OS X system shortcuts** menu:

- **Always**: When Windows or Windows applications are active, function keys and other system shortcuts always trigger functions in Windows.

- **Never**: Function keys and other system shortcuts always trigger functions in OS X.

- **Auto**: If you're working with Windows, system shortcuts that don't function in Windows (for example, Control-Up Arrow button to display Mission Control) trigger functions in OS X. If you're using OS X as a guest OS and a guest OS or its application is active, system shortcuts that are typical only to OS X trigger functions in the guest version of OS X.

Customize Keyboard Menu

In Window mode you can enter key combinations by choosing **Devices** > **Keyboard** and then choosing a key combination. To customize available key combinations, do the following:

7   Do one of the following:

- Click the Parallels icon ▋▊ in the menu bar and choose **Preferences**.

- If the Parallels Desktop Lite menu bar is visible at the top of the screen, choose **Parallels Desktop Lite** > **Preferences**.

8   Click **Shortcuts** > **Keyboard Menu**.

9   Do one of the following:

- To add a new key combination, click the **Add** button + .

- To remove a key combination from the Keyboard menu, select it and click the **Remove** button − .

- To edit an existing key combination, double-click the key combination or select it and click the **Edit** button ⚙▾ . Click modifier keys to select or deselect them. If you wish, change the character in the text field.

Create New Keyboard Shortcuts

You can press certain key combinations, called keyboard shortcuts, to quickly trigger various actions in Parallels Desktop Lite. For example, you can press Command-Control-F to switch Windows to Full Screen mode. You can use existing keyboard shortcuts (you can see them in the **Parallels Desktop Lite** > **Preferences** > **Shortcuts** > **Application Shortcuts** pane), and you can also create your own.

To create a new keyboard shortcut:

1 Make a note of the name for the command you want a shortcut for as it appears in a menu in Parallels Desktop Lite. For example, if you want to create a new shortcut for switching to Full Screen mode, you can see by opening the **View** menu in Parallels Desktop Lite that the name of the menu item is **Enter Full Screen**:

2 In Mac OS X, choose **Apple Menu** > **System Preferences.**

3 In System Preferences, click **Keyboard** and click **Shortcuts**.

4 Select **App Shortcuts** in the sidebar and click the Add button .

5 If you want a new shortcut to work only for Parallels Desktop Lite, choose Parallels Desktop Lite from the **Application** menu. If you leave **All Applications** selected, the shortcut will work for any application that has the same command name and is currently active.

6 Enter the menu item name from Step 1.

> **Important:** You must enter the command name exactly as it appears in the Parallels Desktop Lite menu or your new shortcut won't work.

7 In the **Keyboard Shortcut** field, press the key combination that you want to trigger the action.

> **Note:** You must create separate shortcuts for commands that change in the menu depending on the state of Parallels Desktop Lite, such as **Enter Full Screen** and **Exit Full Screen**.

See and Change Windows Input Language In OS X

While you're working with Windows or any Windows applications, Parallels Desktop Lite shows the input language set in Windows in OS X menu bar.
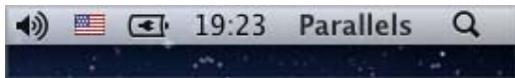
As soon as you switch to Mac, the input language in OS X menu bar changes back to the language that was set before you started working with Windows.

To make this feature work properly, Parallels Tools (p. 73) must be installed and the same input languages must be available in Windows and OS X. To learn how to add input languages, please refer to the help resources for these operating systems.

Change Windows Input Language From OS X Menu Bar

To change the Windows input language from the OS X menu bar:

1   Click Windows or your Windows application to make it active.

2   Choose the language you need from the Input menu available in the OS X menu bar.
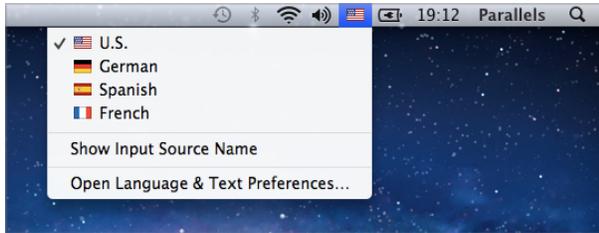
> **Note:** The language you're selecting from the Input menu must be also available in Windows. To learn how to add a language to the list of input sources in Windows, please refer to the Windows help resources.

If the Input menu isn't available in OS X menu bar, you can set it to show by doing the following:

1   In Mac OS X, choose **Apple menu** > **System Preferences** and click **Keyboard**.

2   Click **Input Sources**.

3   Select the language or languages you want to use from the sidebar.

4   Select **Show input menu in menu bar**.

Mouse & Keyboard Settings

Use **Mouse & Keyboard** settings, you can:

* Set whether the mouse pointer behavior is optimized for games.

* Set whether the mouse pointer sticks at the edges of the window in Window mode (p. 20).

* Set whether modifier keys are optimized for games.

To access **Mouse & Keyboard** settings:

1   Do one of the following:

   * Click the Parallels icon ‖ in the menu bar and choose **Configure.**

   * Click **Actions** in the Parallels Desktop Lite menu bar at the top of the screen and choose **Configure**.

2 Click **Hardware** and select **Mouse & Keyboard** in the sidebar.
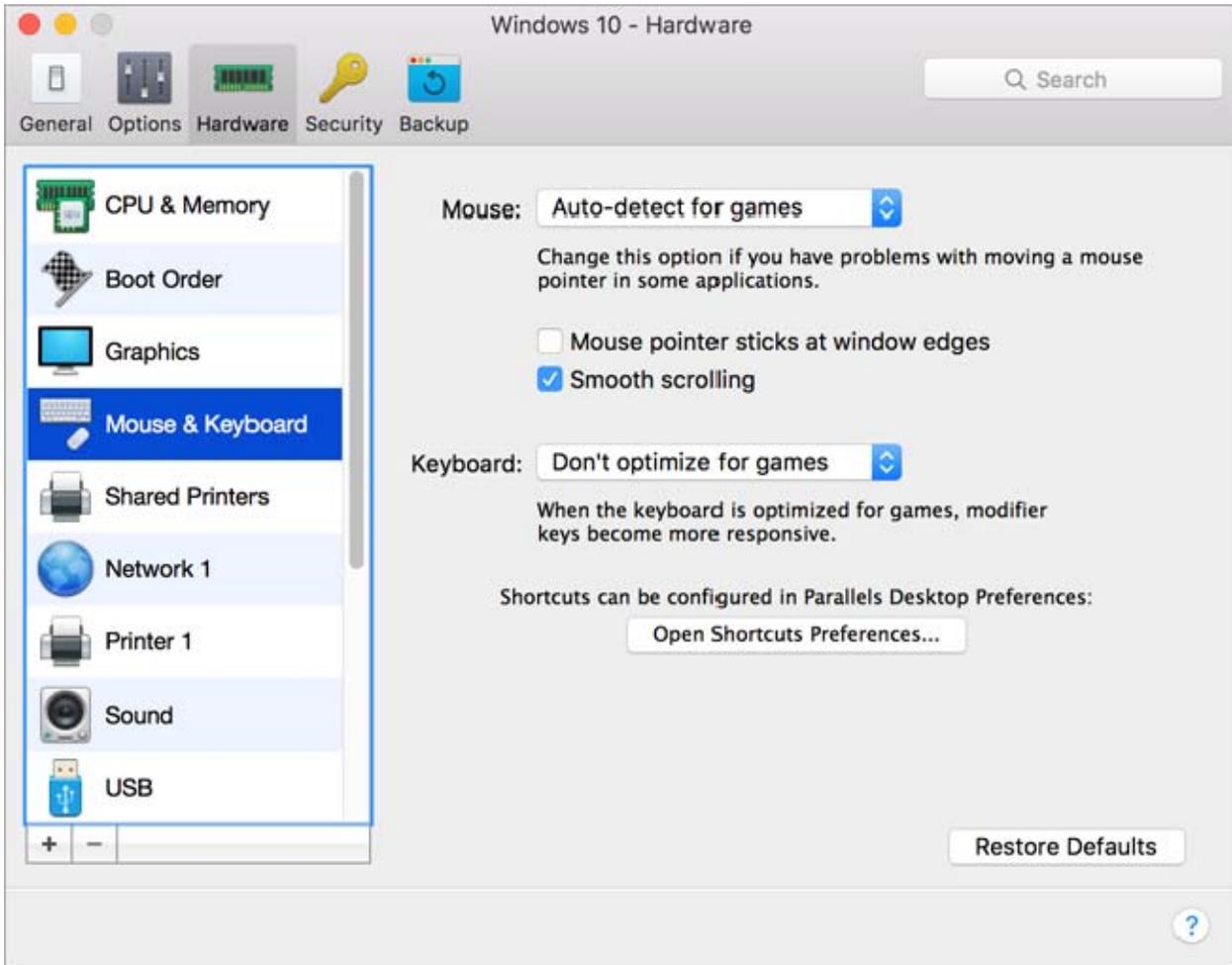
Mouse

If you play games in a virtual machine, the **Mouse** menu allows you to set how to use a mouse:

- **Auto-detect for games**. This is a recommended default setting. If you're working with a guest OS application, the mouse moves freely between the guest operating system and Mac OS X. However, when you start a game, SmartMouse automatically captures the mouse input in the virtual machine so that you couldn't move the mouse to Mac OS X by mistake and automatically releases the mouse when you quit the game.

- **Optimize for games**. If your mouse accidentally moves to Mac OS X when you're playing a game, select this option to make the mouse work in the virtual machine only.

- **Don't optimize for games**. In some rare cases, SmartMouse may detect an application as a game and the mouse starts working incorrectly with the application. If you have this problem, choose **Don't optimize for games**.

Mouse Pointer Sticks at Edges

When working with a virtual machine in Window view mode (p. 20), you may often need to move the mouse pointer to the edges of the virtual machine window to display various guest OS items: for example, to display the Start menu in Windows 8, hidden taskbar in Windows XP, or OS X menu bar when any of the guest OS X applications is running in full screen.

The **Mouse pointer sticks at window edges** option makes the mouse pointer pause for a while at the edges of the virtual machine window and you won't move the mouse outside of the virtual machine window by mistake. To move past the edge, just move the mouse quickly.

Modifier Keys Optimization

Choose **Optimize for games** from the **Keyboard** menu if you actively use the modifier keys Option (Alt), Ctrl, and Shift in action games. If you choose this option, signals from these keys will be processed faster.

> **Note:** You're not recommended to optimize keyboard for games when not playing games.

Connect USB Devices

Parallels Desktop Lite allows you to use USB devices with Windows.

To connect a USB device:

1   Connect the device to your Mac.

2   If Windows is running and the device can't be used with both Windows and Mac OS X at the same time, you're prompted to choose which one you want to use it with. To use the device with Mac OS X applications, click the Mac icon. To use it with Windows programs, click the Windows screen.

New external device detected

Mac

Windows 8.1

USB FLASH DRIVE (disk2)

Hold ALT to remember the choice

Important: To be able to use a USB device with Windows programs, you may need to install Windows drivers for the device. Typically you can download drivers from the manufacturer's website.

You can also set what happens when any new external device is connected and set particular external devices to always be used with either Mac OS X or Windows (p. 41).

Adjust Devices Settings

In the **Devices** pane of Parallels Desktop Lite Preferences, you can:

- Set what happens when you connect any new USB device to your Mac.
- Set a particular device to always be used with either Mac OS X or Windows.
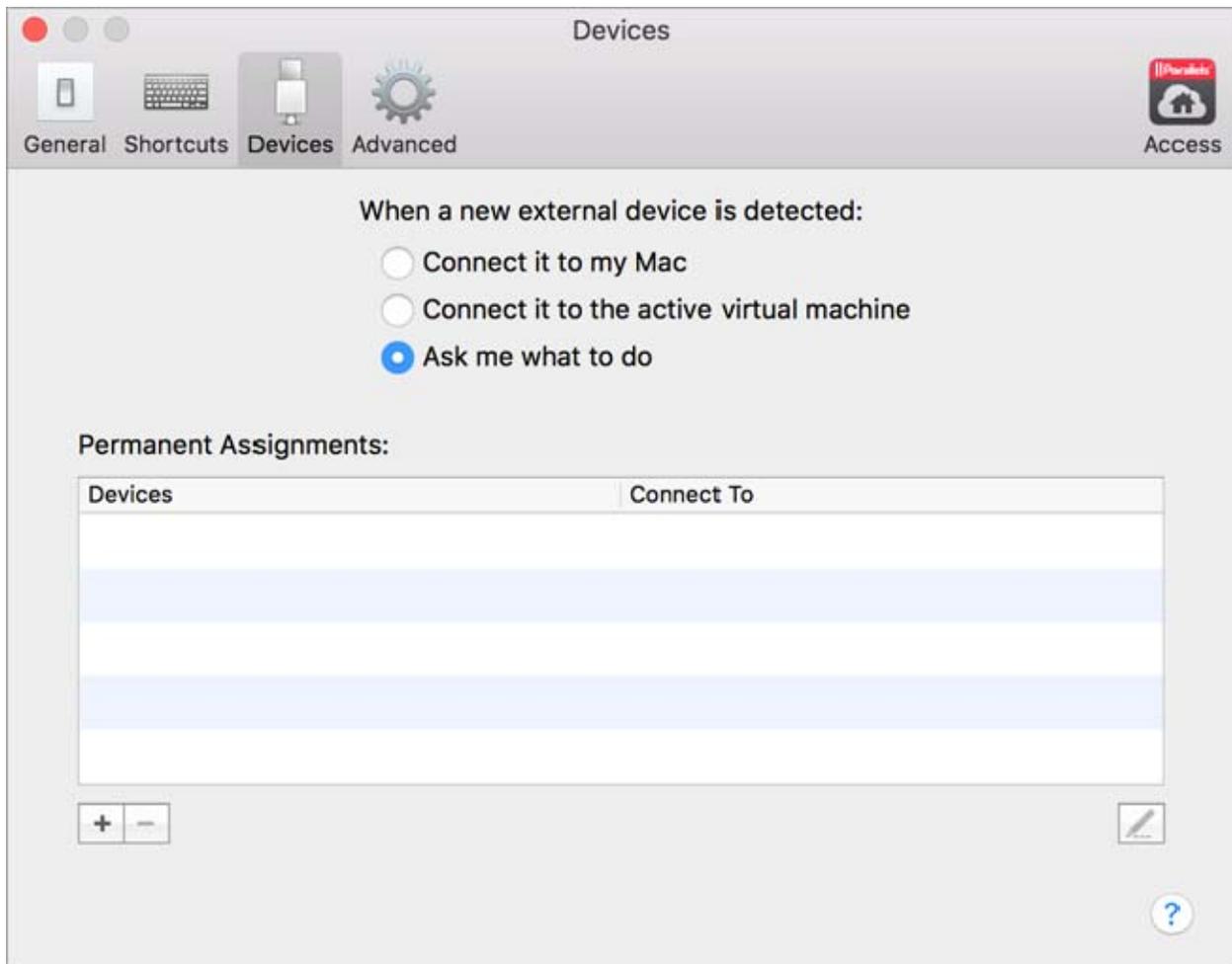
To access Devices Settings:

1   Do one of the following:

- Click the Parallels icon ‖ in the menu bar and choose **Preferences**.

- If the Parallels Desktop Lite menu bar is visible at the top of the screen, choose **Parallels Desktop Lite** > **Preferences**.

2 Click **Devices**.

Set What Happens When You Connect a New External Device to Your Mac

Choose one of the following:

- **Connect it to my Mac**. New external devices are automatically available for use with Mac OS X applications.

- **Connect it to the active virtual machine**. New external devices are automatically available for use with Windows programs. If Windows isn't running, the external device is connected to Mac OS X.

- **Ask me what to do**. Each time you connect an external device, you're prompted to choose whether you want to connect the device to Windows or the Mac.

Set a Particular External Device to Always Be Used With Mac OS X or Windows

If you know you always want a particular external device to be available to either Mac OS X or Windows, you can set it to do so by following the instructions below. The device must already have been connected to your Mac at least once.

1 Click the **Add** (+) button towards the bottom of the window.

2 Select the device from the list.

3 Double-click the word (either **Computer** or some form of **Windows**) in the **Connect To** column. The word becomes a pop-up menu.

4 Do one of the following:

- To set the device to always be available to Mac OS X applications, choose **Computer** from the menu.

- To set the device to always be available to Windows programs, choose **Windows** from the menu.

To remove an existing assignment, so that the device no longer automatically connects to Mac OS X or Windows, select the device in the **External Device** column and click the **Remove** (-) button.

> **Important:** To be able to use an external device with Windows programs, you may need to install Windows drivers for the device. Typically you can download drivers from the manufacturer's website.

Print from Windows

By default, Windows is set to use the same printer that you use with Mac OS X. Simply print from a Windows program the way you normally would.

You can also set Windows to use a different printer. There are a few ways to set up printing in Windows:

- Share any of the printers connected to your Mac.

- Connect to a network printer.

- Connect a USB printer directly to Windows.

Share a Printer Connected to Your Mac

You can use any printer connected to your Mac with Windows programs.

> **Note**: This functionality is also available for Linux with Parallels Tools installed (p. 74).

To print a document from a Windows program:

- Open the document and simply print it the way you normally would (for example, choose **File** > **Print**).

In the print window, you can choose any printer that's connected to your Mac.

Share Printers Connected to Your Mac

5   Do one of the following:

- Click the Parallels icon ▌▌ in the menu bar and choose **Configure.**

- Click **Actions** in the Parallels Desktop Lite menu bar at the top of the screen and choose **Configure**.

6   Click **Hardware** and select **Shared Printers**.

> **Note:** The **Shared Printers** pane is available for Windows 2000 and newer versions of Windows.

7   Select **Share Mac printers with Windows**.

Set a New Default Printer

By default, Windows is set to use the same default printer as your Mac. To use a different default printer for Windows.

1   Do one of the following:

- Click the Parallels icon ▌▌ in the menu bar and choose **Configure.**

- Click **Actions** in the Parallels Desktop Lite menu bar at the top of the screen and choose **Configure**.

2   Click **Hardware** and select **Shared Printers**.

3   Deselect **Synchronize default printer**.

Now you can set a new default printer in Windows the way you normally would.

Set Up a Network Printer

You can install a network printer directly into Windows.

Before installing a network printer in Windows, make sure that:

- Your Mac can access the Internet.

- Windows is configured to work in the Shared networking mode (p. 49) and can access the Internet too.

- The user account in Windows has permission to access the network printer.

- You know the printer IP address.

After that, you can log in to Windows and install a network printer. To learn how to set up a network printer in your virtual machine operating system, please refer to this OS help resources.

Set Up a USB Printer

You can connect a USB printer directly to Windows. In this case, the printer isn't available to Mac OS X. If you want to use the printer to print both from Mac OS X and from Windows, see **Share a Mac Printer** (p. 43).

To connect a USB printer directly to Windows:

1   In Parallels Desktop, start Windows.

2   When Windows starts, install the printer driver. For detailed information on how to do that, refer to the printer manufacturer's documentation. Typically you can find drivers on the manufacturer's website.

3   Do one of the following:

- If the USB printer is already connected to your Mac:

  - Click the Parallels icon ‖ in the menu bar, choose **Devices** > **Printer** > **Printer** and select this printer from the list.

- If the USB printer is not connected to your Mac, connect it. In the **New USB device detected** window, connect the printer to Windows.

4   In the next step, Windows may set up the printer automatically. If it doesn't, please refer to your Windows version help resources to learn how to set up the newly connected printer in Windows.

Create a PDF File

When working with a text document, web page, or other file, you may wish to create a Portable Document Format (PDF) file out of it. A PDF file preserves the format and layout of a document, so others can see it as if it were printed on the page.

To create a PDF file, select **Print to PDF (Mac Desktop)** when choosing a printer. A PDF file is saved on the Mac desktop.

> **Note:** This functionality is available for Windows guest operating systems provided that Parallels Tools are installed (p. 71) and all Mac printers are shared (p. 43) with Windows.

Use the Built-in iSight Camera or Another Webcam

If your Mac or display has a built-in iSight camera, or if you connect a compatible external webcam, by default you can use it with Windows.

To use a built-in iSight or external camera with Windows:

- Simply open a Windows program that uses a camera, you should be able to select the iSight or external camera for use with the program.

Disable Camera Sharing

If you don't want Windows programs to be able to use connected webcams or the built-in iSight camera, you can disable camera sharing by doing the following:

1   Do one of the following:

- Click the Parallels icon ❚❚ in the menu bar and choose **Configure**.
- Click **Actions** in the Parallels Desktop Lite menu bar at the top of the screen and choose **Configure**.

2   Click **Hardware** and click **USB**.

3   Deselect **Share Mac camera with Windows**.

Show a Presentation on an External Monitor or Projector

You can easily connect your Mac to an external monitor or projector and show a presentation from a Windows application, with little configuration needed.

To do so:

1 Start Windows (p. 15) if it isn't already running.

2 Connect your Mac to the external monitor or projector as you normally would. A message appears asking if you're going to show a presentation.
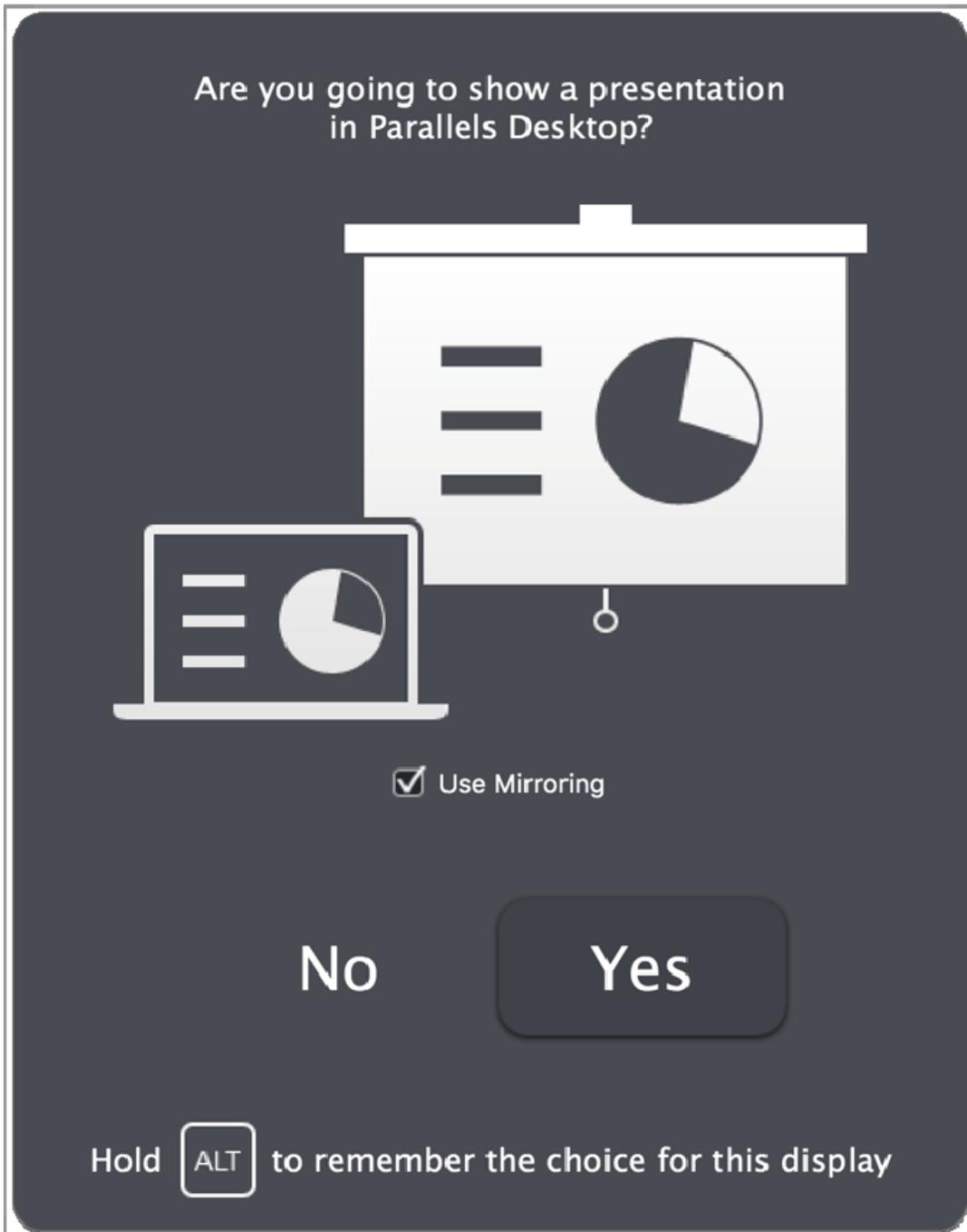
3 If you want to show the exact contents of your computer's display on the external display or projector, select **Use Mirroring**.

If you don't select **Use Mirroring**, certain applications, such as Microsoft Powerpoint, may show a presenter view on your computer while showing only the presentation on the external display or projector.

4   Click **Yes**. Windows switches to Presentation mode, displayed at full screen on both your computer's display and external display or projector. After that, you can start showing your presentation.

> **Note:** To learn how to choose on which display the presentation is shown, please refer to Help of the application you're using for presentations.

> **Important!** While you're working in Presentation mode, changing display settings in Windows may cause the presentation to malfunction.

Protect Your Data

You probably have important documents, photos, and more on your Mac. When running Windows on your Mac, it's especially important to protect your data from viruses and unauthorized use. Read this section to learn how.

In This Section

Isolate Windows from Mac

You can isolate Windows from OS X, so that they no longer share folders, profiles, and applications, connected external devices are no longer automatically accessible by Windows, Windows and Mac no longer synchronize volume, and you can no longer copy or move objects between Windows and OS X. Isolating Windows from OS X may provide a higher level of security by not allowing compromised items from one OS to come into contact with the other.

To isolate Windows from OS X

1   Do one of the following:

- Click the Parallels icon ‖ in the menu bar and choose **Configure.**

- Click **Actions** in the Parallels Desktop Lite menu bar at the top of the screen and choose **Configure**.

2   Click **Security**.

3   Select **Isolate Windows from Mac**.

Encrypt Windows to Protect It from Unauthorized Use

If you store any important data using Windows programs, it is highly recommended that you encrypt Windows to protect your data from any unauthorized use.

Encrypt Windows

To encrypt Windows (it must be shut down):

1   Select Windows and click **Actions** > **Configure** > **Security**.

2   On the **Security** tab, click **Turn On**, specify a password, and click **OK**.

> **Warning:** The specified password is very important. You must record it. Without this password, you can't start Windows.

Change Your Password

To change the password for an encrypted Windows (it must be shut down):

1   Select Windows and click **Actions** > **Configure** > **Security**.

2   On the **Security** tab, click **Change Password**, specify a new password, and click **OK**.

Remove Encryption from Windows

To remove encryption from Windows (it must be shut down):

1   Select Windows and click **Actions** > **Configure** > **Security**.

2   On the **Security** tab, click **Turn Off**.

Connect to the Internet or a Network

Parallels Desktop Lite allows you to use two types of networking with Windows:

- **Shared Networking**: Windows programs share a network connection with Mac OS X. This is the default setting.

- **Host-only networking**: Windows can access only your Mac.

In most cases, you don't need to adjust network settings. If your Mac is set to connect to a network or to the Internet, Windows programs have access to the same network and the Internet.

Read on for detailed information on these types of networking and how to configure them.

Share Network Settings Between Mac OS X and Windows

By default, Windows is set to share network settings with Mac OS X. Windows programs can access other computers on your local network and the Internet by using the IP address of your Mac. Windows does not have its own IP address on the network.

In most cases, you don't need to adjust network settings. If your Mac is set to connect to a network or to the Internet, Windows programs have access to the same network and the Internet.
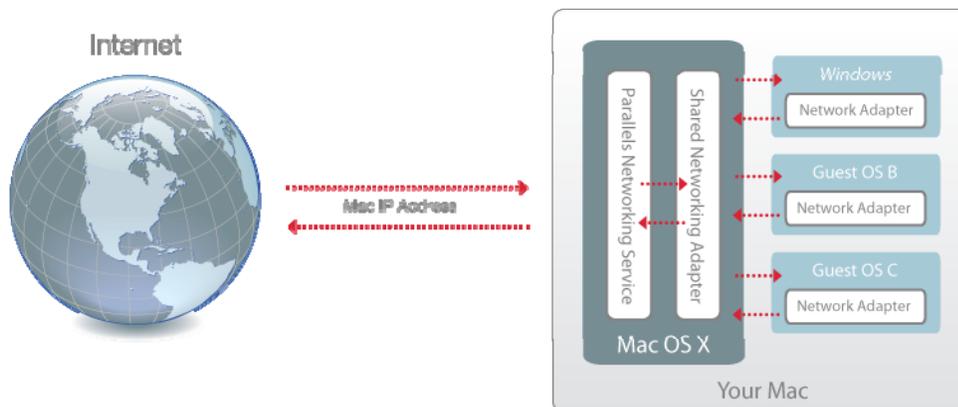
You may wish to use Shared Network mode in the following cases:

- Your Mac accesses the Internet via a modem or another non-Ethernet device.

- You need to access the Internet from inside Windows but are concerned about security.

To configure Windows to use Shared Networking:

1 Do one of the following:

- Click the Parallels icon ▐▐ in the menu bar and choose **Configure.**

- Click **Actions** in the Parallels Desktop Lite menu bar at the top of the screen and choose **Configure**.

2 Click **Hardware** and then click **Network**.

3 In the **Network** pane, make sure the **Shared Network** option is selected.

> **Note:** In the MAC address field, you can change the MAC address currently assigned to Windows. MAC addresses are automatically generated when you first set up Windows on your Mac. However, you can modify the default MAC address by typing another value in the MAC address field or clicking the **Generate** button. When entering a new MAC address, make sure that it is unique within your network.

For the information about troubleshooting networking problems, refer to the Parallels knowledge base available at the Parallels website.

Use Host-Only Network Settings

Parallels Desktop Lite provides a closed network that is accessible only to Mac OS X and Windows. Mac OS X is connected to this network via the Parallels Host-Only Networking adapter automatically created on your Mac during the Parallels Desktop Lite installation. The addresses for Windows are provided by the Parallels DHCP server.
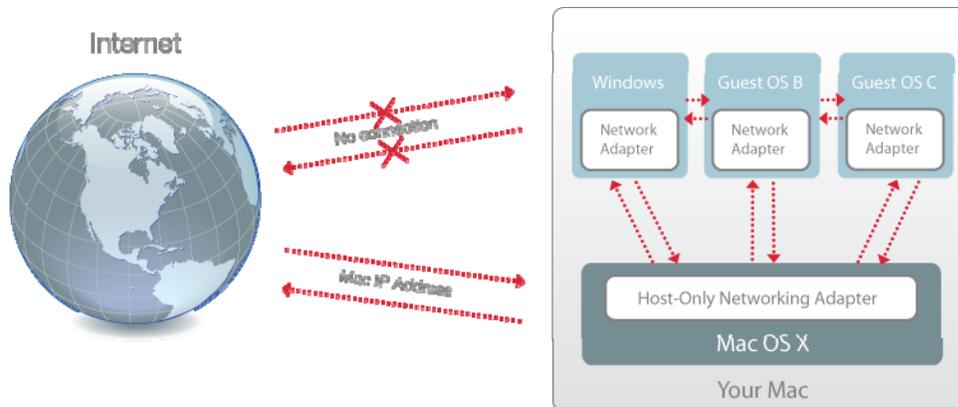
To configure Windows to use Host-Only Networking:

1   Do one of the following:

- Click the Parallels icon ‖ in the menu bar and choose **Configure.**

- Click **Actions** in the Parallels Desktop Lite menu bar at the top of the screen and choose **Configure**.

2   Click **Hardware** and then click **Network**.

3   In the **Network** pane, make sure the **Host-Only Network** option is selected.

> **Note:** In the MAC address field, you can change the MAC address currently assigned to Windows. MAC addresses are automatically generated when you first set up Windows. However, you can modify the default MAC address by typing another value in the MAC address field or clicking the **Generate** button. When entering a new MAC address, make sure that it is unique within your network.

For the information about troubleshooting networking problems, refer to the Parallels knowledge base available at the Parallels website.

Optimize Performance

If Windows isn't working as speedily as you'd like, there are several simple ways you can optimize its performance. This section contains many helpful instructions for doing just that.

Read this section to find out how you can tune Windows for speed.

Set How Much Memory is Allocated to Windows

Parallels Desktop Lite is set to allocate a certain amount of your Mac's available RAM memory to Windows and the rest to Mac OS X. If too much memory is allocated to Windows, Mac OS X may slow down, which in turn can cause Windows programs to slow down because they're running on top of Mac OS X. If, on the other hand, too much memory is allocated to Mac OS X, then Mac OS X applications may run well but Windows programs might slow down.

To optimize the performance of both Windows and Mac OS X, set the memory allocated to Windows to be somewhere within the recommended range.

To set how much memory is allocated to Windows:

1   Shut down Windows (p. 17).

2   Choose **Actions** > **Configure** > **Hardware** > **CPU & Memory**.

3   Move the memory slider to somewhere within the recommended range, indicated by the graphic under the slider.

If you use Windows programs that require lots of memory, like 3D or video production programs, it's best to set the memory allocation towards the high end of the range (move the slider to the right). If not, it's usually best to set it closer to the middle.

> **Note:** No matter how much memory (RAM) your Mac has, the maximum amount of memory that can be assigned to Windows is 8 GB.

If you change this setting and then you don't like how Windows is performing, then try a different setting.

Optimization Settings

Using **Optimization** settings, you can:

- Optimize performance for either Mac OS X applications or Windows programs
- Tune Windows for speedier performance or more graphical features
- If you're using a MacBook or other portable computer, optimize your computer for better battery life or higher performance

To access **Optimization** settings:

1   Do one of the following:

- Click the Parallels icon ❚❚ in the menu bar and choose **Configure.**
- Click **Actions** in the Parallels Desktop Lite menu bar at the top of the screen and choose **Configure**.

2   Click **Options** and select **Optimization**.
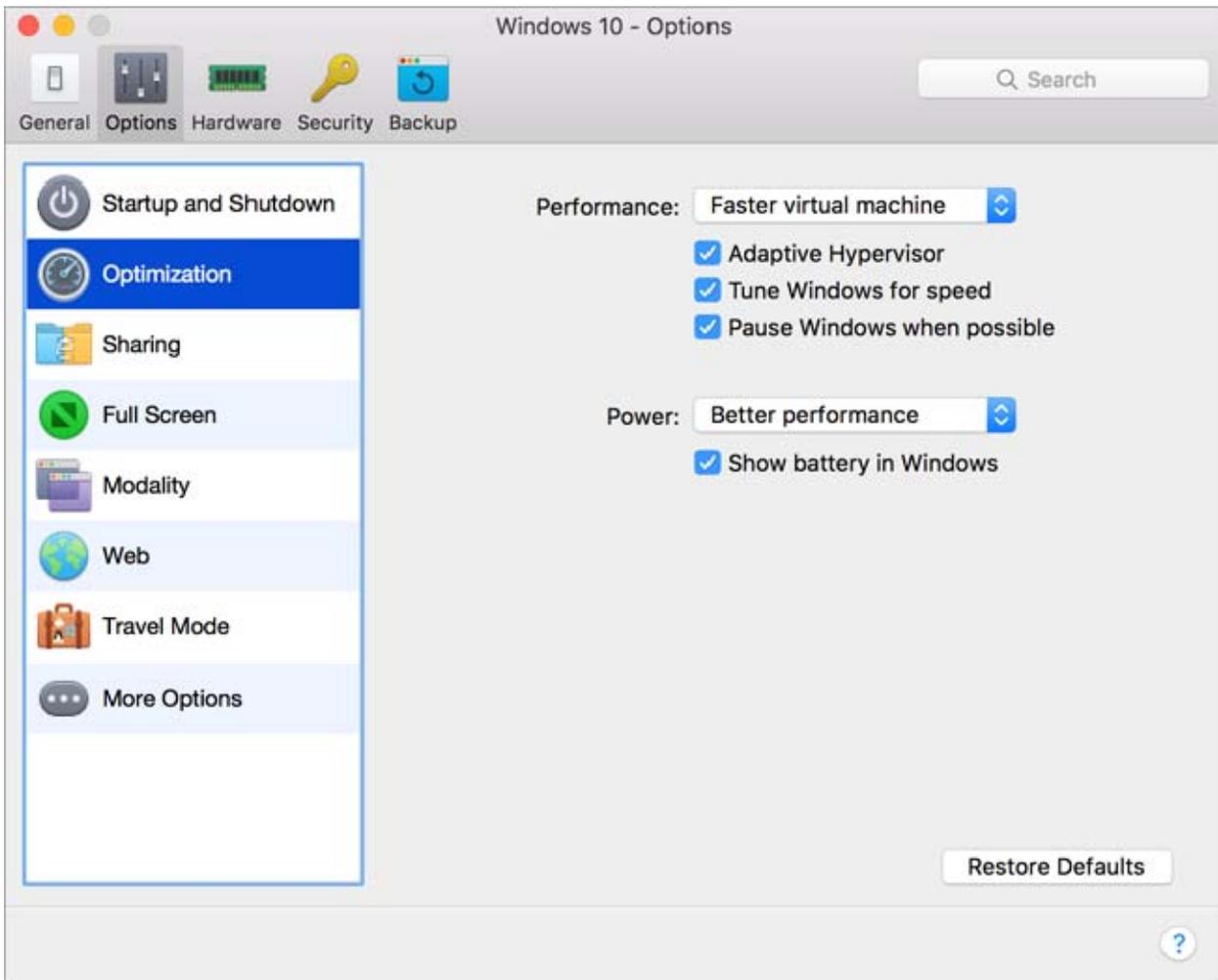
Optimize Performance for Mac OS X Applications or Windows Programs

Choose one of the following from the **Performance** menu:

* **Faster virtual machine**: More of your computer's resources are given to Windows. The performance of Windows programs may be increased significantly, but Mac OS X applications may slow down.

* **Faster Mac**: More of your computer's resources are given to Mac OS X. The performance of Mac OS X applications may be increased significantly, but Windows programs may slow down.

To set Parallels Desktop Lite to automatically optimize performance for Mac OS X or Windows depending on which application or program you're working with at the moment:

* Select **Adaptive Hypervisor**. When you're using a Windows program, more resources are given to Windows, and when you're using a Mac OS X application, more resources are given to Mac OS X.

Tune Windows for Speedier Performance

*   Select **Tune Windows for speed**.

Some Windows features that tend to slow down performance, such as animations during startup, are disabled.

Optimize your MacBook for Longer Battery Life or Higher Performance

The **Power** menu contains the power and performance related options:

*   **Longer battery life**: If you have a portable Mac that you often use unplugged, you can choose this option to lower power consumption for longer battery life. This may slightly reduce Windows performance.

*   **Better performance**: This option (selected by default) maximizes Windows performance, but uses more power.

> **Note:** If you change options in the **Power** menu when Windows is running, you must shut down Windows and start it again for the changes to take effect.

To show battery status in Windows:

*   Select **Show battery in Windows**.

When your MacBook or other portable computer is running on battery power, the battery status is displayed in the menu bar.

Speed Up Games and Graphics Programs

With Parallels Desktop Lite, you can run games and programs that require video cards with DirectX or OpenGL support. To do so, you must enable 3D acceleration.

For information on whether a program requires DirectX or OpenGL support, see the materials that came with the game or program.

To enable 3D acceleration:

1   Shut down the virtual machine. (p. 17)

2   Choose **Actions** > **Configure** > **Hardware**.

3   In the **Graphics** pane, select **On** or select a version of DirectX from the **3D acceleration** menu.

> **Note:** Parallels Tools must be installed (p. 108) before you can enable 3D acceleration. Parallels Tools are installed by default when you set up Windows.

Optimize Virtual Machine for Productivity or Games

When creating a virtual machine, you can optimize it according to your needs. You can choose to configure the virtual machine for:

- **Productivity**. Choose this profile if you're using the virtual machine for your everyday work with text editors, email, web browsers, etc.

- **Games only**. Choose this profile if you're using the virtual machine to play PC games on your Mac.

You can change this setting after the virtual machine is created:

1 Start Parallels Desktop Lite.

2 In **Control Center**, right-click the virtual machine (it must be shut down) and choose **Configure**.

3 On the **General** tab, click **Change**.

4 Select the profile that best fits your need.

Work with Windows in Travel Mode

If you often travel with your MacBook, you must have come across the situations when you had no power adapter at hand to charge the Mac's batteries or experienced some problems when connecting to public networks.

Travel Mode makes Windows use less energy to extend the Mac's battery life and adjusts settings to connect to public networks.

Enter Travel Mode

To switch Windows to Travel Mode, do the following:

1 Start your virtual machine (p. 15).

2 When Windows boots up, do one of the following:

- Click the Parallels icon ❚❚ in the menu bar and choose **Actions** > **Enter Travel Mode**.

- Click **Actions** in the Parallels Desktop Lite menu bar at the top of the screen and choose **Enter Travel Mode**.

Quit Travel Mode

To quit Travel Mode, do one of the following:

- Click the Parallels icon ❚❚ in the menu bar and choose **Actions** > **Quit Travel Mode**.

- Click **Actions** in the Parallels Desktop Lite menu bar at the top of the screen and choose **Quit Travel Mode**.

Enter and Quit Travel Mode Automatically

You can also configure your virtual machine to enter and quit Travel Mode automatically:

3   Do one of the following:

- Click the Parallels icon ‖ in the menu bar and choose **Configure.**

- Click **Actions** in the Parallels Desktop Lite menu bar at the top of the screen and choose **Configure**.

4   Click **Options** and select **Travel Mode**.

5   To enter Travel Mode automatically, choose one of the following:

- **Always when on battery power**: The virtual machine enters Travel Mode when the Mac starts working on battery power.

- **When battery power is**: Choose from the menu when you want your virtual machine to enter Travel Mode.

- **Never**: The virtual machine never enters Travel Mode automatically.

6   To quit Travel Mode automatically, choose one of the following:

- **When connected to power**: The virtual machine quits Travel Mode when you connect your Mac to power.

- **Never**: The virtual machine never quits Travel Mode automatically.

Use Windows on Your iPad, iPhone or Android Device

Parallels Access is a product created by Parallels that allows you to work with your Mac or Windows PC and their applications remotely from your iPad, iPhone or Android device. It also allows you to work with a remote computer via a web browser.

If you have Parallels Desktop Lite installed on your Mac, you can use the Parallels Access app to access and control Windows.

Parallels Access lets you:

- Use any of your Windows programs on your mobile device

- Remotely start, stop, and reset Windows

- Connect over Wi-Fi or 3G

- Access Windows from anywhere over the Internet

Get Started

Before you can use Parallels Access, you must do the following:

7 On your iPad, iPhone or Android device, download and install Parallels Access from the App Store or Google play.

8 Be sure you have installed Windows on your Mac (p. 12).

9 In Parallels Desktop Lite, do one of the following:

- Click the Parallels icon ‖ in the menu bar and choose **Preferences.**

- If Windows is running in Window mode (p. 20), choose **Parallels Desktop Lite** > **Preferences**.

10 Click **Access**.

11 Read the onscreen instructions to install the Parallels Access agent on your Mac.

You only have to do these steps once.

Access Windows from your iPad, iPhone or Android device

1 Turn on your Mac.

Your Mac must be on for Parallels Access to access and use Windows.

2 Open Parallels Access on your iPad, iPhone or Android device and log in to your account using the same email and password you used to register Parallels Desktop Lite.

3 Tap your Mac in the list of available Macs.

When you access Windows for the first time, you see tips about gestures you can use to control Windows. Tap **Close** to go to the Windows desktop.

For more information about using Parallels Access, see *Parallels Access User's Guide*, available online.

Allow Windows Updates While Your Mac is Sleeping

Parallels Desktop Lite supports OS X Power nap, which lets you keep aspects of Windows up-to-date even while your Mac is sleeping. When Power Nap is enabled, services that usually update information after Windows wakes from sleep (for example, new emails in email applications and new event updates in Calendar) will update while your Mac is in sleep.

To use Power Nap, your computer must be compatible. See Apple.com for more information.

To enable Power Nap:

1   On your Mac, choose **Apple menu** > **System Preferences** and click **Energy Saver**.

2   Depending on whether your Mac is working on batteries or is plugged, make sure **Enable Power Nap while on battery power** or **Enable Power Nap while plugged into a power adapter** is selected.

> **Note:** To learn more about Power Nap, please refer to the OS X help resources.

Translate Words in Windows

If you're working with Windows and come across a word you don't know, you can easily look it up in Mac OS X Dictionary. Just hover the mouse cursor over the word and either press Control-Command-D or tap (don't click) the touchpad with three fingers.

> **Notes:**
>
> 1. Parallels Tools (p. 73) must be installed in Windows.
>
> 2. When you hover the mouse over a word, the mouse cursor should change from arrow ⇖ to text selection I. You cannot look for words depicted on pictures.

C H A P T E R 5

Advanced Topics

This chapter is intended to give you additional information on how to work with Parallels Desktop Lite and virtual machines.

In This Chapter

Work with Virtual Machines

Read this section for basic information about working with virtual machines.

Supported Guest Operating Systems

Any of the following guest operating systems can be installed in Parallels Desktop Lite virtual machines.

	32-bit	64-bit	Express Installation
Windows			
Windows 10	✅	✅	✅
Windows 8.1	✅	✅	✅
Windows 8	✅	✅	✅
Windows Server 2012 SP0, R2	✅	✅	✅

Windows 7 SP0, SP1	✔	✔	✔
Windows Server® 2008 SP0, SP1, SP2, R2	✔	✔	✔
Windows Vista® Home, Business, Ultimate, Enterprise SP0, SP1, SP2	✔	✔	✔
Windows Server® 2003 SP0, SP1, SP2, R2	✔	✔	✔
Windows XP Home SP0, SP1, SP2, SP3	✔		✔
Windows XP Professional SP0, SP1, SP2, SP3	✔		✔
Windows XP Professional SP2		✔	✔
Windows 2000 Professional SP4	✔		
Windows 2000 Server SP4	✔		
Windows NT 4.0 Server SP6, Workstation SP6	✔		
Windows ME	✔		
Windows 98 SE	✔		
Windows 95	✔		
Windows 3.11	✔		
MS-DOS 6.22	✔		
Linux			
Ubuntu® Linux 10.04 LTS, 12.04 LTS, 12.04, 13.04, 13.10, 14.04, 14.10, 15.10	✔	✔	✔
Red Hat® Enterprise Linux 5.x, 6.x, 7.x	✔	✔	✔
CentOS Linux 5.x, 6.x, 7.0	✔	✔	
Fedora™ Linux 19, 20, 21, 22	✔	✔	✔
SUSE® Linux Enterprise Server 11 SP2, SP3	✔	✔	
OpenSUSE Linux 12.3, 13.1, 13.2	✔	✔	
Linux Mint 13, 16, 17, 17.2	✔	✔	
Mageia 3, 4.1, 5	✔	✔	
Debian® Linux 7.x, 8.x	✔	✔	
OS X			
OS X Yosemite 10.10.x		✔	
OS X Mavericks 10.9.x		✔	
OS X Mountain Lion 10.8.x		✔	
OS X Lion 10.7.x		✔	

OS X Lion Server 10.7.x		✔	
Mac OS X Snow Leopard Server 10.6.x	✔	✔	
Mac OS X Leopard Server 10.5.x	✔	✔	
Chrome			
Chrome OS*	✔		
Solaris			
Solaris® 10, 11	✔		
BSD			
FreeBSD® 8.x, 9.x, 10, 10.1	✔	✔	
OS/2			
OS/2® Warp 4.5, 4	✔		
eComStation™ 1.2, 2.x	✔		
Android			
Android OS*	✔		

*Chrome and Android OSs - we currently support these operating systems as guest operating systems only if you downloaded them as virtual appliances (p. 66) using New Virtual Machine Wizard.

Please note that Parallels Desktop Lite does not include operating system installation discs or their images. You should purchase them separately.

About Virtual Machines

To add Windows or another operating system to your Mac, Parallels Desktop Lite creates a "**virtual machine**," or a virtual copy of a computer, inside your Mac. You can then install Windows in the virtual machine, just as you would install an operating system on a regular computer.

Many use Parallels Desktop Lite to create one virtual machine and install Windows in it. But you can install as many virtual machines as you like, and install a different operating system in each of them. That way you can use multiple operating systems together at the same time on your Mac. And just like with a regular computer, you can turn virtual machines on and off, configure them, and install and use programs.

Set Where New Virtual Machines Are Stored

By default, Parallels Desktop Lite stores virtual machines in ~/Documents/Parallels.

To change the default location for new virtual machine installations:

1   Do one of the following:

- Click the Parallels icon ‖ in the menu bar and choose **Preferences**. Then click **General**.

- If the Parallels Desktop Lite menu bar is visible at the top of the screen, choose **Parallels Desktop Lite** > **Preferences**, and then click **General**.

2   Choose a location from the **Virtual Machines Folder** menu.

All newly created virtual machines are stored in the new location. Any existing virtual machines remain in their original locations.

Arrange Virtual Machines

If you have many virtual machines, the **Control Center** window may get overloaded and inconvenient to work with.

You can configure **Control Center** to show the minimum information - only virtual machine names and icons. To do so, click the Parallels Desktop Lite icon in the Dock and choose **View** > **Compact View** in the OS X menu bar.

Change the Virtual Machine Name

The name of a virtual machine is displayed in **Control Center** and at the top of the guest OS window when you are running in Window mode.

To change the virtual machine name:

1   Do one of the following:

- Click the Parallels icon ‖ in the menu bar and choose **Configure.**

- Click **Actions** in the Parallels Desktop Lite menu bar at the top of the screen and choose **Configure**.

2   Click **General** and type a new name in the **Name** field.

The length of the name is limited to 50 characters.

Clone a Virtual Machine

Clone a Virtual Machine

If you need an exact copy of a virtual machine, you can clone it. A clone is a separate virtual machine fully identical to the original one. To make a clone:

1   Start Parallels Desktop Lite.

2   In **Control Center**, select the virtual machine you want to clone (it must be shut down) and choose **File** > **Clone**.

3   Choose where you want to store the clone.

By default, Parallels Desktop Lite stores clones in your Documents > Parallels folder.

4   Click **Save** to start cloning the virtual machine.

Back Up a Virtual Machine

Most people don't seriously consider regular backups as a necessity until they have experienced a significant data loss. You should create your own backup strategy to protect yourself from data loss. Virtual machines are as vulnerable to crashes as physical computers.

You can back up your virtual machine using one or several of the following methods:

- Configure the regular backup settings on the **Backup** tab of the **Virtual Machine Configuration** dialog.

- Clone the virtual machine with the help of Clone Virtual Machine Assistant. Give a descriptive name to the clone and save it in a location specially designated for backups.

- Copy the virtual machine files manually.

Configure Regular Backups

On the **Backup** tab of the **Virtual Machine Configuration** dialog, you can choose how to back up your virtual machine regularly. You can configure how the virtual machine snapshots will be created.

Clone the Virtual Machine

You can create a complete clone of the virtual machine using Clone Virtual Machine Assistant. For details, see **Clone a Virtual Machine** (p. 61).

Copying the Virtual Machine Files

You can locate your virtual machine in Finder and create a backup copy of the virtual machine file (PVM).

1   In **Control Center** (or in the virtual machine window if it is shut down), right-click the virtual machine name and select **Show in Finder** from the context menu. In Finder, go to the folder where your virtual machine is stored.

2   Locate the required virtual machine PVM file.

> **Note:** PVM file is a bundle that contains the virtual machine configuration file (PVS), virtual hard disk file (HDD), and other files. For more information about the virtual machine files, see **About Virtual Machines** (p. 60).

3   Copy the virtual machine's PVM file to a safe location.

Save Snapshots of a Virtual Machine

A snapshot is a saved state of the guest OS. It's useful to create snapshots, for example, before:

* you're going to run some programs that may damage the guest OS; or
* if you're going to configure some guest OS software that requires a lot of settings; or
* if you want to mark milestones in the development process.

> **Notes:** 1. If your virtual machine has one or more snapshots, you can neither compress nor resize the virtual hard disk.
>
> 2. Creating a snapshot increases the size of the virtual machine .pvm bundle.

If something goes wrong, you can revert the changes back to any of your snapshots and continue working with the guest OS.

Create a Snapshot

1 Start Parallels Desktop Lite.

2 In **Control Center**, select the virtual machine for which you want to create a snapshot.

3 Click **Actions** > **Manage Snapshots**.

4 Click **New**, specify the snapshot name and click **OK**.

Automate the Creation of Snapshots

The SmartGuard functionality allows you to automate snapshots creation.

To access settings for automating snapshots:

1 Start Parallels Desktop Lite.

2 In **Control Center**, right-click the virtual machine for which you want to create a snapshot and choose **Configure**.

3   Click **Backup**.

To automate snapshots, enable SmartGuard, click **Details**, and do one of the following:

- Manually set the snapshots frequency and maximum number of snapshots to keep. If you want to know when it is time to make the next snapshot and to be able to reject the snapshot creation, select **Notify me before snapshot creation**.

To set how often snapshots are made:

- Use the **Take a Snapshot Every** field. You can set from one to 48 hours.

If the time interval is less than 24 hours, SmartGuard will allow you to restore the latest hourly, daily and weekly snapshot. If the time interval is more than 24 hours, you will be able to restore the latest daily, weekly and monthly snapshot.

To limit how many snapshots are stored:

- Use the **Snapshots to Keep** field to set the maximum number of snapshots that can be stored on your Mac.

The maximum available value is 100 snapshots. As soon as Snapshots Manager reaches the limit for snapshots and needs to make a new one over limit, it deletes the oldest snapshot.

Revert to a Snapshot

To revert to a snapshot:

1   Start Parallels Desktop Lite.

2   In **Control Center**, select the virtual machine that you want to revert.

3   Click **Actions > Manage Snapshots**.

4   Select the snapshot to which you want to revert and click **Go To**.

Delete a Snapshot

To delete a snapshot:

1   Start Parallels Desktop Lite.

2   In **Control Center**, select the virtual machine which snapshot you want to delete.

3   Click **Actions** > **Manage Snapshots**.

4   Select the snapshot you want to delete and click **Delete**.

When you delete an intermediate snapshot, the information it contains is merged into the next snapshot.

Use Mouse Wheel Horizontal Scrolling

You can use the mouse wheel horizontal scrolling when working with windows of virtual machine applications. This feature is available only if Parallels Tools (p. 108) are installed in the virtual machine.

Remove a Virtual Machine

Remove a Virtual Machine from your Mac

If you don't need a virtual machine any more, you can permanently remove it from your Mac:

> **Warning:** Before removing, check that none of the virtual machine files (e.g. virtual hard disk) are used by other virtual machines.

1   Shut down the virtual machine if it is running, right-click in the virtual machine window and choose **Remove**. You can also click **File** > **Remove** or right-click this virtual machine in **Control Center** and choose **Remove**.

2   Click **Move to Trash**.

Remove a Virtual Machine from Control Center

To temporarily remove a virtual machine from **Control Center**:

1   Shut down the virtual machine if it is running, right-click in the virtual machine window and choose **Remove**. You can also click **File** > **Remove** or right-click this virtual machine in **Control Center** and choose **Remove**.

2   Click **Keep Files**.

When you need this virtual machine again, you can easily import it in Parallels Desktop Lite (p. 13).

Download Pre-configured Virtual Appliances

If you don't have enough time to create a new virtual machine with the required configuration, you can download a ready-to-use virtual machine with a predefined configuration.

Downloading Parallels Virtual Appliances

Parallels Virtual Appliances are pre-built virtual machines.

To download such an appliance and use it with Parallels Desktop Lite:

1   Right-click the Parallels Desktop Lite icon in the Dock and choose **New**.

2   Select any of the following free systems and click **Continue**:

- Chrome OS;

- Ubuntu;

- Fedora Linux;

- CentOS Linux;

- Debian GNU/Linux.

3   In the next step, click **Download**. Once the download starts, you can pause it anytime by clicking **Pause**. To resume the download, click **Resume**.

Once the download is complete, you can start working with the virtual appliance in Parallels Desktop Lite.

Set the Guest OS Type and Version

You can change which guest OS a virtual machine is configured to work with. You need to change it in the following cases:

- If you upgrade the guest operating system (for example, from Windows 8 to Windows 10), you need to change the guest OS type and version correspondingly or Parallels Tools (p. 71) may start working incorrectly.

- If you create a virtual machine without installing an operating system, and then decide to use it with a different operating system than the one you initially specified.

To set the guest OS type and version:

1   Shut down the virtual machine. (p. 17)

2   Open the **Actions** menu and choose **Configure**.

3   Click **General** and select an OS from the menu just above the **Name** field.

Set How Many Processors are Allocated to a Virtual Machine

You can change the number of virtual CPUs that will be used to handle the processes running in a virtual machine. Parallels Desktop Lite automatically calculates the maximum allowable number of virtual CPU. The calculation is based on the number of physical CPUs available to your Mac OS X computer.

> **Note:** It is reasonable to use more than one CPU in your guest OS if you are going to use applications that perform better under multi-core processors.

To set how many processors are allocated to a virtual machine:

1   Shut down the virtual machine. (p. 17)

2   Open the **Actions** menu and choose **Configure**.

3   Click **Hardware > CPU & Memory** and select a number from the **Processors** menu.

Check Your Virtual Machine CPU and Memory Usage

While working with a virtual machine, you may need to check how much memory and CPU time of your Mac it is currently using. If the virtual machine is consuming too much and your running Mac applications become slow, you can easily reduce the number of CPUs (p. 67) and amount of memory (p. 51) assigned to the virtual machine.

To check the current CPU and memory usage, choose **Window** > **Show Resource Usage**.

Enable Spoken Commands

You can work with Windows or other guest OSs using the following spoken commands:

Commands	Description
Start	Starts a virtual machine.
Suspend	Suspends a virtual machine.
Shut Down	Shuts down a virtual machine.
Pause	Pauses a virtual machine.
Stop	Stops a virtual machine.
Reset	Resets a virtual machine.
Snapshot	Opens the **Snapshot Manager** window.
Make Screenshot	Makes a screenshot of the Guest OS window and stores it on the Mac OS X Desktop.
Switch to Full Screen	Switches to the Full Screen view mode.

Switch to Window	Switches to the Window view mode.
Edit Configuration	Opens the **Virtual Machine Configuration** dialog.
New	Creates a new virtual machine.
Open	Opens a virtual machine.
Download	Allows you to download a virtual machine appliance available at http://www.parallels.com/en/ptn/dir.
About Parallels Desktop Lite	Opens the About Parallels Desktop Lite menu.
Install Parallels Tools	Launches the installation of Parallels Tools in the running virtual machine.
Send technical data	Opens the window in which you can describe what you were doing when the problem occurred and which allows you to send technical data to Parallels.
Open	Opens an existing virtual machine and registers it in Parallels Desktop Lite.
Open Directory	Opens the **Parallels Virtual Machines** window.

To enable the spoken commands, choose **Parallels Desktop Lite** > **Preferences** > **Advanced** and select **Enable spoken commands**. If necessary, tune the speech settings on the corresponding tab of Mac OS X System Preferences.

Quickly Free Up Disk Space

Using **Free Disk Space Wizard**, you can compress the virtual machine hard disk(s) and remove various unnecessary files to free up disk space.

To quickly compress the disk(s), remove unnecessary files, and free up disk space:

1 Shut down the virtual machine.

2 Choose **File** > **Free Up Disk Space**.

   Free Disk Space Wizard shows whether you can reclaim any disk space by removing the virtual machine snapshots, cache files and various unnecessary files such as statistical, memory dump, and crash dump files, which are generated during the virtual machine life cycle.

You can also conserve disk space by compressing virtual disks manually (p. 96).

Use Other Operating Systems on Your Mac

Read this section for the information that's specific to certain operating systems other than Windows XP or later.

Customize the Keyboard for the Guest OS

By default, Parallels Desktop Lite contains four profiles that represent sets of key combinations typical for the following OSs:

- Windows

- Linux

- Mac OS X

- Generic (for other guest OSs)

When you create or register a virtual machine, one of these profiles, depending on the guest operating system, is assigned to the machine by default. You can create your own profile and assign it to your virtual machines.

To create a custom keyboard profile or edit the existing profiles:

1 Do one of the following:

- Click the Parallels icon ▌▌ in the menu bar and choose **Preferences**.

- If the Parallels Desktop Lite menu bar is visible at the top of the screen, choose **Parallels Desktop Lite** > **Preferences**.

2 Click **Shortcuts**.

3 Select a virtual machine from the sidebar, click the **Profile** menu, and select **Edit profiles list**.
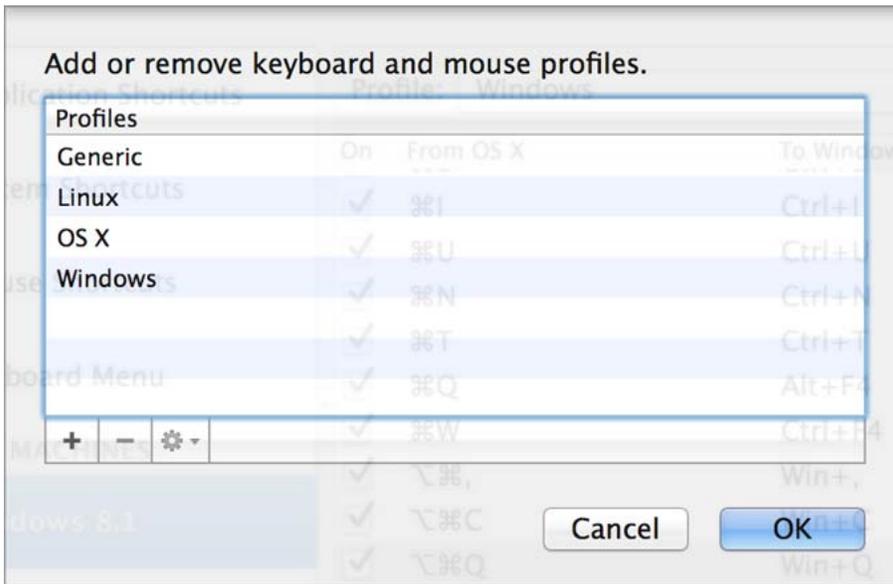
4 Do one of the following:

- To add a new profile, click the **Add** button [+]. Specify the new profile name and select the base profile from the list. After the profile is created, you can submit the changes by clicking **OK**. Then select this new profile in the **Profile** list and configure its shortcuts.

- To remove one of the existing custom profiles, select it and click the **Remove** button [−].

- To duplicate or rename one of the existing profiles, select this profile, click the button [⚙▾], and select the corresponding action from the menu.

    Note: You can rename or remove your custom profiles only.

In the **Shortcuts** pane of Parallels Desktop Lite Preferences, you can also assign profiles to your virtual machines.

To change a profile assigned to a virtual machine:

- Select a virtual machine and choose a profile from the **Profile** menu.

Emulate a Mouse Right-Click or Middle-Click

To emulate a mouse right-click or middle-click:

1 Select **Mouse Shortcuts** in the sidebar.

2 Select **Secondary click** (for right-click) or **Middle click**.

3 Click in the corresponding text field and press the key or combination of keys that you want to use with a mouse click to trigger a right-click or middle-click.

You can use any combination of the Control, Option (Alt), Shift, and Command keys to specify the key combination that will be used to emulate a mouse right-click or middle-click in the virtual machine.

Install or Update Parallels Tools

Parallels Tools are a suite of behind-the-scenes tools that allow seamless operating between Mac OS X and Windows or another guest operating system.

This section gives an overview of Parallels Tools, and has information about how to install them for various guest operating systems.

Parallels Tools Overview

Parallels Tools are a suite of special utilities that help you use your virtual machines in the most comfortable and efficient way. With Parallels Tools, you can move the mouse seamlessly between the virtual machine and your Mac, change the virtual machine's screen resolution by simply resizing its window, synchronize your virtual machine's time and date settings with the time settings of the host computer, share your Mac's disks and folders with its virtual machines, copy text and drag and drop objects from Mac OS to a virtual machine and vice versa.

Parallels Tools are available for the most popular Windows, Linux, and Mac OS X operating systems, and include the utilities listed below. All utilities supported by your guest OS are installed in your virtual machine as a single package when you install Parallels Tools.

Utility	Available for	Description
Mouse Synchronization Tool	Windows Linux Mac OS X	Mouse Synchronization Tool captures the mouse input in the virtual machine each time the pointer moves over its window and automatically releases the input when the pointer moves outside the window.
Time Synchronization Tool	Windows Linux Mac OS X	Time Synchronization Tool enables you to customize your virtual machine time settings. You can: • Automatically synchronize the time settings of your virtual machine with your Mac time settings. • Set up and maintain the time difference between your Mac and your virtual machine.
Drag-and-Drop Tool	Windows	Drag-and-Drop Tool allows dragging and dropping files between your virtual machines and Mac OS.

Clipboard Synchronization Tool	Windows Linux	Clipboard Synchronization Tool enables you to easily exchange texts between: • the virtual machine and your Mac. • different virtual machines irrespective of the guest operating systems installed in them. To copy and paste text, you should use the standard procedure for the current operating system. For example, to copy some text in the Windows guest OS, select the text, and press Ctrl+C. To paste this text in Mac OS X, press Cmd+V, or select **Paste** from the shortcut menu.
Dynamic Resolution Tool	Windows Linux Mac OS X	Dynamic Resolution Tool enables you to work with dynamic resolution. When you resize the guest OS window by dragging its lower right corner, the guest OS window resolution changes automatically.
Shared Folders Tool	Windows Linux Mac OS X	Shared Folders Tool enables you to share Mac folders with the virtual machine.
Shared Profile Tool	Windows	Shared Profile Tool enables you to share your Mac desktop, pictures, documents, downloads, music and videos with your virtual machine, which allows you to access them right from Windows.
SmartMount	Windows Linux Mac OS X	SmartMount automatically detects volumes connected to your Mac and makes them available to the virtual machine as well.
Printing Tool	Windows	Printing Tool allows you to synchronize the host and guest OS printers.
Tray Integration Tool	Windows	Tray Integration Tool allows you to use Windows tray icons in the Mac menu bar.

Parallels Tools are located on disc images that are installed together with Parallels Desktop Lite. There is a separate Parallels Tools disc image for each type of the supported guest operating systems.

- `prl-tools-win.iso` - disc image with Parallels Tools for Windows guest operating systems.

- `prl-tools-lin.iso` - disc image with Parallels Tools for Linux guest operating systems.

- `prl-tools-mac.iso` - disc image with Parallels Tools for Mac OS X guest operating systems.

These disc images can be found in the following location on your Mac:
`<username>/Applications/Parallels Desktop Lite/Contents/Resources/Tools.`

Parallels Tools for Windows

Important: To take advantage of much of the functionality Parallels Desktop Lite offers, Parallels Tools must be installed.

Parallels Tools can be installed in the following Windows guest operating systems:

- Windows 8
- Windows 7
- Windows Server 2008
- Windows Vista
- Windows XP
- Windows Server 2003
- Windows 2000

Installing Parallels Tools

If you chose **Express Installation** when you first installed Windows, Parallels Tools were installed automatically after the installation.

If you didn't choose **Express Installation**, do the following to install Parallels Tools:

1 Start Windows (p. 15).

2 When Windows boots up, choose **Install Parallels Tools** from the **Virtual Machine** menu.

Note: After you choose **Install Parallels Tools** in Windows 7 and Windows Vista, User Access Control (UAC) may ask you whether to allow or deny the Parallels Tools installation. In this case, you need to allow the installation.

3 Click **Continue** to connect the ISO image with Parallels Tools for Windows to the virtual machine's CD/DVD-ROM drive.

4 Click **Install Parallels Tools** to start the installation.

Note: After you click **Install Parallels Tools** in Windows 7 and Windows Vista, User Access Control (UAC) may ask you whether to allow or deny the Parallels Tools installation. In this case, you need to allow the installation.

5 When the installation is complete, click **Restart** to restart the virtual machine or wait for about 2 minutes and it will be restarted automatically.

If the Parallels Tools ISO image doesn't autoplay after you click **Continue**, the CD/DVD autorun must be disabled in your virtual machine. In this case, do the following to install Parallels Tools:

1 Open **My Computer**, right-click the Parallels Tools disc and choose **Open**.

2 Double-click the `PTAgent` file to start the installation.

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3 When the installation is complete, click **Restart** to restart the virtual machine or wait for about 2 minutes and it will be restarted automatically.

To edit the settings of Parallels Tools installed in your virtual machine, use the **Options** tab in the **Virtual Machine Configuration** dialog.

Reinstall or Update Parallels Tools

To reinstall Parallels Tools:

1 Start Windows (p. 15).

2 When Windows boots up, choose **Reinstall Parallels Tools** from the **Actions** menu.

This option is available only if Parallels Tools are up-to-date. If Parallels Tools are outdated, you will see the **Update Parallels Tools** option instead.

Check Whether Parallels Tools Have Been Installed

You can easily confirm whether Parallels Tools were installed. Start your virtual machine and look at the status bar of its window. If the tip "Press Ctrl + Alt to release the mouse and keyboard" appears in the status bar of the virtual machine's window, this means that Parallels Tools were not installed. When Parallels Tools are installed, you do not need to press any key to release the mouse and keyboard - they are released automatically.

Parallels Tools for Linux

Parallels Tools can be installed in Linux guest operating systems that comply with the following requirements:

- glibc 2.3.4 and later
- libstdc++ 3.4.6 and later (libstdc++.so.6)
- gcc 3.4.6 and later (including C++ support)
- make 3.80
- X Window System X11R6.7, X11R6.8, X11R6.8.99, X11R7.0, X11R7.1, X11R7.2 (1.3), X11R7.3 (1.4)
- kernel sources or development package

Note: Some of Parallels Tools, like Shared Folders Tool and Time Synchronization Tool, may also work in the Linux operating systems that do not comply with the requirements listed above.

Preparing for installation

Before installing Parallels Tools in a Linux virtual machine, perform the following actions:

- Close all applications running on the virtual machine.

- If you use a 3D accelerated window manager, disable it.

- Make sure that you have the gcc package and kernel sources installed. If these packages are not installed, the Parallels Tools installer will inform you about this. The kernel sources package name depends on the type of Linux operating system you use: it can be `kernel-devel`, or `kernel-headers`, or something else. For more information about the kernel sources, refer to **Installing the GCC package and Kernel Sources in Linux**.

> **Note:** To install Parallels Tools in your virtual machine, you must have the `root` privileges.

Installing Parallels Tools in the most recent versions of Linux systems

If you have one of the most recent versions of Linux OSs (Ubuntu, Fedora) in your virtual machine, the `prl-tools-lin.iso` image file will be mounted automatically after you connect it to the CD/DVD drive. To install Parallels Tools, do the following:

1 Start the virtual machine.

2 When the operating system boots up, click **Actions** and choose **Install Parallels Tools**.

> **Note:** If the **Install Parallels Tools** option is grayed out, make sure that your operating system complies with the requirements listed above.

The `prl-tools-lin.iso` image file will be mounted to the virtual machine's CD/DVD drive.

You can connect and mount the Parallels Tools ISO image file manually. In the Mac menu bar, click **Devices** > **CD/DVD** > **Connect Image**. In the Finder window, go to the hard disk folder (normally named "Macintosh HD"), select the `/Library/Parallels/Tools/` folder, select the `prl-tools-lin.iso` file, and click **Open** to connect it to the virtual machine.

3 Start a terminal in your Linux guest OS. Type the following command to gain the `root` privileges:

```
su
```

4 Change the directory to the CD/DVD drive directory using

```
cd /media/cdrom/
```

> **Note:** In some of the Linux operating systems, the mount point for the virtual CD/DVD drive may appear as `/media/Parallels\ Tools/`.

5 In the CD/DVD drive directory, enter the following command to launch Parallels Tools installation:

```
./install
```

6 Follow the Parallels Tools Installer instructions to complete the installation.

7 When the installation of Parallels Tools is complete, restart your virtual machine.

Installing Parallels Tools in other versions of Linux guest OSs

To install Parallels Tools in the older versions of Linux OSs, you have to mount the `prl-tools-lin.iso` image file manually. Do the following:

1 Start the virtual machine.

2 When the guest OS boots up, choose **Install Parallels Tools** from the **Actions** menu.

> **Note:** If the **Install Parallels Tools** option is grayed out, make sure that your operating system complies with the requirements for Parallels Tools installation.

The `prl-tools-lin.iso` image file will be connected to the virtual machine's CD/DVD drive.

3 Start a terminal in your Linux guest OS. Type the following command to gain the `root` privileges:

```
su
```

4 Check if the Parallels Tools CD image is mounted by entering

```
mount | grep iso9660
```

If this command does not return anything, proceed to the next step.

If this command returns anything like

```
/dev/cdrom on /media/cdrom type iso9660 (ro,exec,nosuid,nodev,uid=0),
```

skip the next step and proceed to the following one.

If this command returns anything like

```
/dev/cdrom on /media/cdrom type iso9660 (ro,noexec,nosuid,nodev,uid=0)
```

with the `noexec` option present in parentheses, you need to unmount the disc using the following command and then proceed to the next step:

```
umount /dev/cdrom
```

5 To mount the Parallels Tools installation disc image, enter the following:

```
mount -o exec /dev/cdrom /media/cdrom
```

> **Note:** `/dev/cdrom` is the virtual machine's CD/DVD drive and `/media/cdrom` is the mount point for this device. In some of the Linux operating systems the virtual CD/DVD drive may appear as `/dev/hdb` and the mount point `/mnt/cdrom`. Some Linux OSs do not have the CD/DVD drive mount point. In this case, you should create the mount point directory manually.

6 When the installation disc image is mounted, change the directory to the CD/DVD drive directory using

```
cd /media/cdrom/
```

7 In the CD/DVD drive directory, enter the following to launch Parallels Tools installation:

```
./install
```

> **Note:** You must have the `root` privileges to run this command.

8 Follow the Parallels Tools Installer instructions to complete the installation.

9 When the installation of Parallels Tools is complete, restart your virtual machine.

> **Note:** If X Server fails to start in your virtual machine, you can install Parallels Tools manually in text mode.

To edit the settings of Parallels Tools installed in your virtual machine, use the **Options** tab in the **Virtual Machine Configuration** dialog.

How to check if Parallels Tools have been installed

You can easily confirm whether Parallels Tools were installed. Start your virtual machine and look at the status bar of its window. If the tip "`Press Ctrl + Alt to release the mouse and keyboard`" appears in the status bar of the virtual machine's window, this means that Parallels Tools were not installed. When Parallels Tools are installed, you do not need to press any key to release the mouse and keyboard - they are released automatically.

Troubleshooting

Parallels Tools installer can be blocked by SELinux. To solve this problem:

1 Start a terminal and determine your version of kernel by entering

```
uname -r
2.6.18-8.el5
```

2.6.18-8.el5 is the version of your kernel.

2 Open the `/boot/grub/grub.conf` file or `/boot/grub/menu.lst` (depends on the version of your Linux operating system) and find the entry that corresponds to your version of kernel.

```
title Red Hat Enterprise Linux Server (2.6.18-8.el5)
      root (hd0,0)
      kernel /vmlinuz-2.6.18-8.el5 ro root=/dev/VolGroup00/LogVol00 rhgb quiet
      initrd /initrd-2.6.18-8.el5.img
```

3 Type the following text at the end of the entry:

```
selinux=0
```

and the whole entry will be:

```
kernel /vmlinuz-2.6.18-8.el5 ro root=/dev/VolGroup00/LogVol00 rhgb quiet selinux=0
```

4 Save the file and restart the virtual machine.

After the restart, mount the Parallels Tools disc image and try to install Parallels Tools.

Update Parallels Tools

If a newer version of Parallels Tools for Linux is available, the **Parallels Tools Installation Agent** window appears. You're prompted to choose the command to gain root privileges and enter the password (if su - root password, if `sudo` - your user's password). After that, Parallels Tools update automatically.

Reinstall Parallels Tools

To reinstall Parallels Tools in Linux, first remove Parallels Tools and then install them once again.

Installing and Upgrading Parallels Tools in Text Mode in Linux

After upgrading to Parallels Desktop Lite, the X Server may fail to start in Linux virtual machines. To fix the problem, you need to install Parallels Tools in text mode.

1 Start the virtual machine.

2 When you see a message that X Server failed to start, switch to another virtual console using Ctrl+Option+F1 (Ctrl+Alt+F1) and enter your login details.

3 Choose **Install Parallels Tools** from the **Actions** menu to connect the Parallels Tools ISO image to your virtual machine.

> **Note:** If the **Install Parallels Tools** option is grayed out, make sure that Parallels Tools can be installed in your guest operating system. To see the list of guest OSs supported by Parallels Tools, refer to the **Parallels Tools Overview** section in Parallels Desktop Lite *User's Guide*.

The `prl-tools-lin.iso` image file will be connected to the virtual machine's CD/DVD drive.

4 In the virtual machine console, type the following command to gain the `root` privileges:

```
su
```

5 Check if the Parallels Tools CD image is mounted by entering

```
mount | grep iso9660
```

If this command does not return anything, proceed to the next step.

If this command returns anything like

```
/dev/cdrom on /media/cdrom type iso9660 (ro,exec,nosuid,nodev,uid=0),
```

skip the next step and proceed to the following one.

If this command returns anything like

```
/dev/cdrom on /media/cdrom type iso9660 (ro,noexec,nosuid,nodev,uid=0)
```

with the `noexec` option present in parentheses, you need to unmount the disc using the following command and then proceed to the next step:

```
umount /dev/cdrom
```

6 To mount the Parallels Tools installation disc image, enter the following:

```
mount -o exec /dev/cdrom /media/cdrom
```

> **Note:** `/dev/cdrom` is the virtual machine's CD/DVD drive and `/media/cdrom` is the mount point for this device. In some of the Linux operating systems the virtual CD/DVD drive may appear as `/dev/hdb` and the mount point `/mnt/cdrom`. Some Linux OSs do not have the CD/DVD drive mount point. In this case, you should create the mount point directory manually.

7 When the installation disc image is mounted, change the directory to the CD/DVD drive directory using

```
cd /media/cdrom/
```

8 In the CD/DVD drive directory, enter the following to launch Parallels Tools installation:

```
./install
```

> **Note:** You must have the `root` privileges to run this command.

9 Follow the Parallels Tools Installer instructions to complete the installation.

10 When the installation of Parallels Tools is complete, restart your virtual machine.

For general information on installing Parallels Tools in Linux, refer to **Installing Parallels Tools in a Linux Guest OS**.

Parallels Tools for Mac

Install Parallels Tools

To install Parallels Tools in an OS X virtual machine:

1 Start the OS X virtual machine.

2 When OS X boots up, choose **Actions** > **Install Parallels Tools** and follow the onscreen instructions.

Reinstall Parallels Tools

To reinstall Parallels Tools:

1 Start your OS X virtual machine (p. 15).

2 When Windows boots up, choose **Reinstall Parallels Tools** from the **Virtual Machine** menu.

Update Parallels Tools

If a newer version of Parallels Tools for Mac is available, Parallels Tools update automatically.

Check Whether Parallels Tools Have Been Installed

You can easily confirm whether Parallels Tools were installed. Start your virtual machine and look at the status bar of its window. If the tip "Press Ctrl + Alt to release the mouse and keyboard" appears in the status bar of the virtual machine's window, this means that Parallels Tools were not installed. When Parallels Tools are installed, you do not need to press any key to release the mouse and keyboard. They are released automatically.

Modality Mode

When you switch to Modality, you can resize the virtual machine windows and place them side by side with your Mac's applications.

In the Modality mode, you can:

* Resize the Windows window while keeping its shape by dragging its lower-right corner.
* Resize the Windows window by pressing and holding the Option (Alt) key and dragging the lower-right corner of the window.

- Resize the Windows window and dynamically adjust the screen resolution by pressing and holding the Shift and dragging the lower-right corner of the window.

Using the Modality settings, you can configure the virtual machine appearance and behavior when it is running in the Modality mode. In the Modality mode, you can resize the virtual machine windows and place them side by side with your Mac applications. A Modality window can be scaled to any size, and its content will still be active. This allows you to monitor the tasks running inside the virtual machine while you are working on the Mac side.

To edit these settings, do the following:

1   Click the Parallels icon ‖ in the menu bar and choose **Configure**. Or click **Actions** in the Parallels Desktop Lite menu bar at the top of the screen and choose **Configure**.

2   In the **Virtual Machine Configuration** window, click **Options** and select the settings name in the sidebar.

You can configure the settings in this pane even when the virtual machine is running.
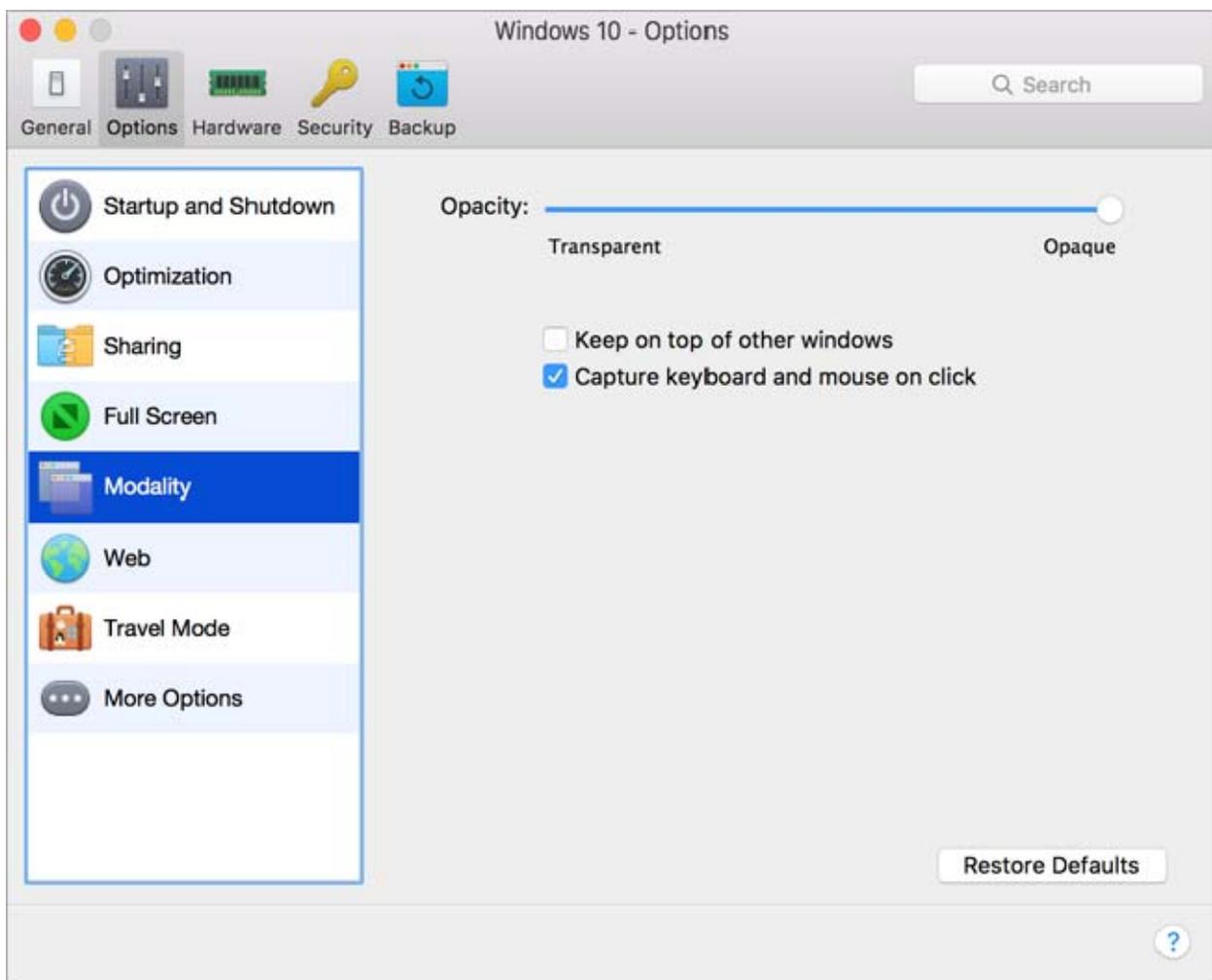
In the Modality mode, the virtual machine window becomes transparent by default. You can specify the level of visibility in the **Opacity** field by dragging the slider between **Transparent** and **Opaque**. You can change the level of transparency for your virtual machine that is running when it is in the Modality mode.

To manage the behavior of the virtual machine window in the Modality mode, use the following options selected by default:

* **Keep on top of other windows**. Clear this option if you do not want the virtual machine window to appear on top of all other open windows when the virtual machine is in Modality.

* **Capture keyboard and mouse on click**. Clear this option if you do not want the virtual machine to capture the keyboard and mouse input when in Modality.

Hide and Show Parallels Desktop Lite

When Parallels Desktop Lite is running, you can hide and show it and all its windows by holding down the Function (Fn) key and pressing the F6 key.

If Parallels Desktop Lite is visible but running in the background, pressing Fn-F6 brings Parallels Desktop Lite and all its windows to focus.

> **Note:** Most function keys (F1, F2, and so on) on Mac keyboards serve as specific control keys, such as volume and brightness controls, and you must hold down the Fn key as you press the function key to trigger an alternate, application-specific function. If you want to set function keys to be used for alternate functions without having to press the Fn key, choose **Apple menu** > **System Preferences** and click **Keyboard**. Then click the **Keyboard** tab and choose **Use all F1, F2, etc. keys as standard function keys**.

Disable Automatically Suspending Windows

By default, when you quit Parallels Desktop Lite, Windows is suspended, and the next time you open Parallels Desktop Lite Windows resumes exactly from where you left off.

If more than one person uses Windows on your Mac, then a user can access the account in Windows suspended by the previous user. To avoid this, you can disable automatically suspending Parallels Desktop Lite.

To disable automatically suspending Parallels Desktop Lite:

1 Do one of the following:

* Click the Parallels icon ‖ in the menu bar and choose **Preferences**, and then click **General**.

* If the Parallels Desktop Lite menu bar is visible at the top of the screen, choose **Parallels Desktop Lite** > **Preferences**, and then click **General**.

2 Select **OS X Resume: Disable for Parallels Desktop Lite**.

Once automatically suspending Windows is disabled, each time you quit Parallels Desktop Lite you can specify how you want Windows to shut down (p. 17). And if you close the Parallels Desktop Lite window, Windows shuts down according to how it's set in shutdown settings (p. 18). To ensure that another user can't access your Windows account, set windows to shut down or stop (rather than suspend).

Remove Parallels Desktop Lite

To remove Parallels Desktop Lite, open your Applications folder and drag the Parallels Desktop Lite application to the Trash.

Advanced Preferences

In the **Advanced** pane of Parallels Desktop Lite Preferences, you can configure some additional settings.
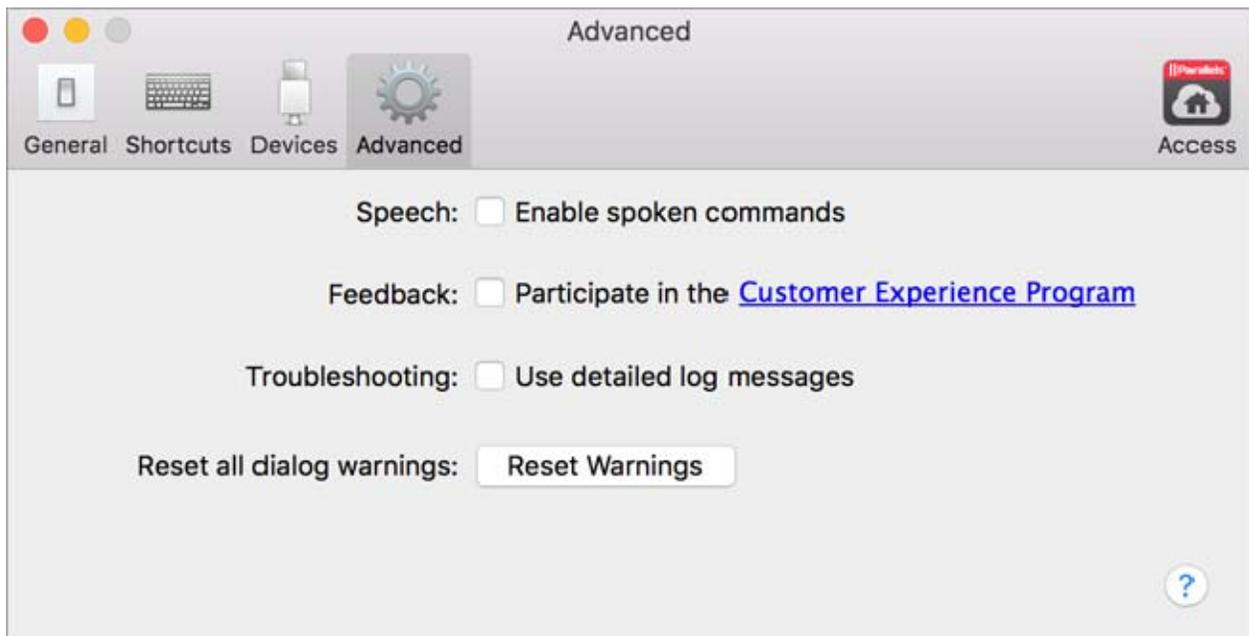
Speech

Parallels Desktop Lite allows you to operate your virtual machine by using the speech commands. If you want to do that, select **Enable spoken commands** and make sure that:

- the virtual machine window is active, and

- the speech settings are properly tuned on the corresponding tab of Mac OS X System Preferences

If the speech settings are not tuned, you will see the `'To enable this option, you should turn on speakable items in System Preferences'` warning message. To tune the speech settings, click **System Preferences**.

To view the list of all spoken commands available to manage your virtual machines, please refer to **Enable Spoken Commands**.

Feedback

To participate in the Customer Experience Program, select the corresponding option. If you join this program, Parallels will collect information about your Mac and virtual machines configuration. The collected information will help us to make the product better fit your needs.

If you join, only the following types of data will be collected:

- hardware configuration of your Mac

- software configuration of your Mac and virtual machines (the names and versions of the operating systems and software installed in them)

- configuration files of virtual machines

Any types of private information like your name, e-mail, address, phone number, and keyboard input will not be collected.

For more details, visit the Customer Experience Program page at the Parallels website (follow the link in the pane).

Troubleshooting

While functioning, Parallels Desktop Lite automatically creates a log file that can be used by the Parallels support team for solving problems and improving the product. If you select the **Use detailed log messages** option, Parallels Desktop Lite will start creating a more detailed log file. It can be helpful for the Parallels support team, but uses more hard disk space and may slightly lower the system performance.

Resetting Hidden Messages

Some Parallels Desktop Lite dialogs and windows are provided with the **Do not show this message again** option. If you select this option, the corresponding dialog will not appear next time you perform the same operation. Using the **Reset Warnings** button, you can reset all dialogs and windows with this option selected so that they would be displayed again each time you initiate the corresponding operation.

More Options

In the **More Options** pane, you can configure the Parallels Desktop Lite additional settings.

To edit these settings, do the following:

1 Open the **Actions** menu or click the Parallels icon ‖ in the Mac menu bar and click **Configure**.

2 In the **Virtual Machine Configuration** window, click **Options** and select the settings name in the sidebar.
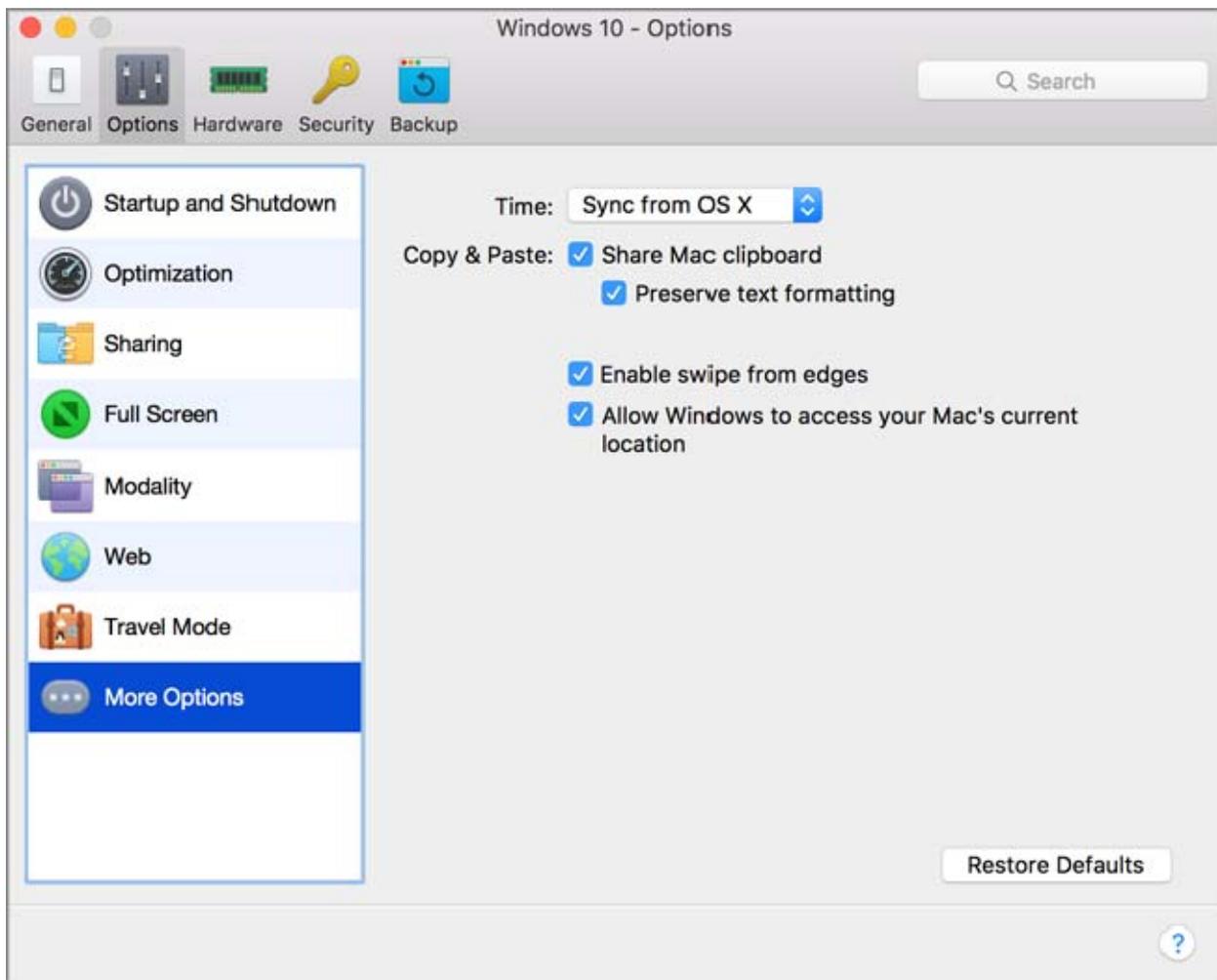
Time Synchronization

Select **Sync from OS X** to synchronize Windows time settings with those of your Mac.

If the time zone set in your virtual machine differs from that of your Mac, you can maintain this time difference by selecting **Do not sync**.

Copy & Paste

If you want to copy and paste data between the host and guest operating systems, select **Share Mac clipboard**. If the data you copy and paste between Mac OS X and your virtual machine is text and you want to preserve text formatting, select **Preserve text formatting**.

> **Note:** This functionality is available only for virtual machines with Parallels Tools installed (p. 108).

Windows Touchpad Gestures

Select **Enable swipe from edges** to enable edge swipe gestures, for example, swiping from the right edge of the touchpad to show the Charm Bar, when working with Windows.

If you often accidentally swipe from the edges of the touchpad and activate features, you may want to disable edge swipe gestures by deselecting this option.

Current Location

Some of Windows applications may ask your permission to use your current location. To allow this, select **Allow Windows to access your Mac's current location**.

Adding and Removing Devices

Adding new devices to a virtual machine is easier than connecting new devices to a real computer. Removing or disconnecting devices is also easy. The following virtual devices can be added to the configuration or removed from it:

- virtual hard disk drive
- CD/DVD drive
- floppy disk drive
- network adapter
- printer port
- sound device
- USB controller
- serial port

Any of the aforementioned devices can be added to the corresponding virtual machine only when it is stopped.

> **Note**: To be able to connect any virtual device to a real one, you should have system privileges to access the real device. Otherwise, the real device will not appear in the list of available devices even though it is installed on your computer.

Adding a New Device to a Virtual Machine

1   Choose **Configure** from the **Actions** menu to open Virtual Machine Configuration.

2   Click the **Hardware** button at the top of the **Virtual Machine Configuration** dialog to open the pane for editing hardware devices.

3   Click the **Add** button ⊞ in the bottom part of the **Virtual Machine Configuration** dialog and select the device to be added to your virtual machine.

> **Note:** The **Add** button is disabled when the virtual machine is running. You need to stop the virtual machine before you can use this button.
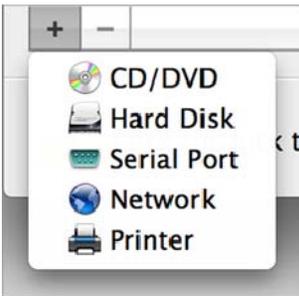
4   If you selected any device except for a hard disk, the corresponding device with a typical configuration is added at once and ready for use.

If you selected a hard disk, you should specify some parameters:

- The hard disk type: a new image file or an existing one.

- The hard disk location. Provide the path on your Mac to the existing image file or the path and name for the new image file. By default, Parallels Desktop Lite offers to save the new image file in the virtual machine PVM bundle.

- The hard disk size for the new hard disk image file.

- For the new hard disk image file, you can choose one of the following formats: *Expanding* or *Plain*. By default, the hard disk will have the *Expanding* format. To create a *Plain* hard disk, clear the **Expanding disk** option. If you want the virtual hard disk to be split, select the **Split the disk image to 2 GB files** option. For more information on hard disk formats, refer to **Support for Virtual and Real Disks** (p. 87).
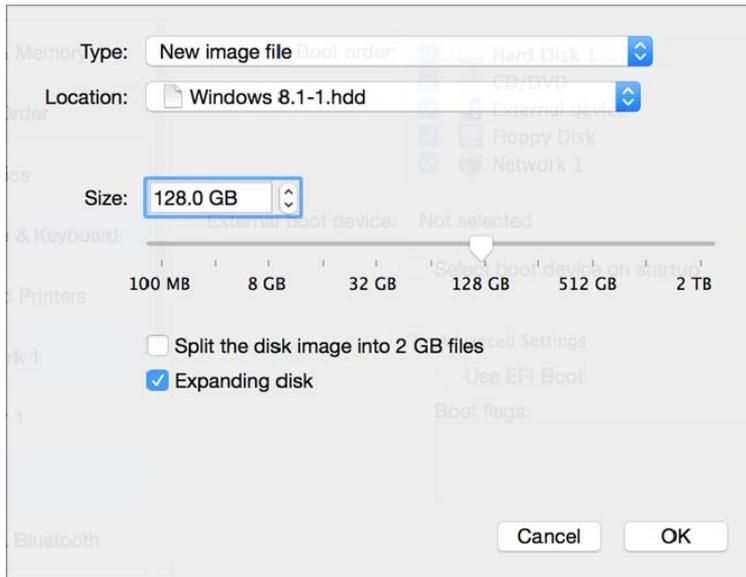
Click **OK**, to add the hard disk. After you added a new virtual hard disk to the virtual machine configuration, it will be invisible to the operating system installed inside the virtual machine until the moment you initialize it. For detailed information on how to initialize the newly added hard disk, see **Initializing the Newly Added Disk** (p. 89).

After the new device is added, you can manage its properties as usual and start using it.

Removing Devices From the Virtual Machine Configuration

1   Choose **Configure** from the **Actions** menu to open Virtual Machine Configuration.

2   Click the **Hardware** button at the top of the **Virtual Machine Configuration** dialog to open the pane for editing hardware devices.

3   Select the device you want to remove and click the **Remove** button [-] in the bottom part of the **Virtual Machine Configuration** dialog.

Support for Virtual and Real Disks

This section lists the types of disks that can be used by Parallels virtual machines and provides the information about basic operations you can perform on these disks.

Supported Types of Hard Disks

Parallels virtual machines use virtual hard disks as their hard disks.

Virtual Hard Disks

The capacity of a virtual hard disk can be set from 100 MB to 2 TB.

Virtual hard disks can be of either *plain* or *expanding* format.

plain	A plain virtual hard disk image file has a fixed size. The size is determined when the disk is created.
expanding	An expanding virtual hard disk image file is small initially. Its size grows as you add applications and data to the virtual hard disk in the guest OS.

When you create a virtual machine, the disk is created in the *expanding* format. You can change the disk format in the **Hard Disk** pane of the **Virtual Machine Configuration** dialog. To add a *plain* hard disk to your virtual machine, clear the **Expanding disk** option when adding a hard disk to the virtual machine.

Split disks

A virtual disk of either format can be a single-piece disk or a split disk. A split disk is cut into 2 GB pieces and is stored as a single `.hdd` file.

CD/DVD Discs and Their Images

Parallels Desktop Lite can access real CD/DVD discs and images of CD/DVD discs.

Parallels Desktop Lite has no limitations on using multi-session CD/DVD discs. A virtual machine can play back audio CDs without any limitations on copy-protected discs.

If your host computer has a recordable optical drive, you can use it to burn CD or DVD discs in a virtual machine.

Parallels Desktop Lite supports CD/DVD disc images in the ISO format.

> **Note:** DMG disk images made with Mac OS X Disk Utility are also supported by Parallels Desktop Lite. When creating such an image, make sure you create a *read-only* and *uncompressed* image without any encryption.

Floppy Disks and Floppy Disk Images

Parallels Desktop Lite can use two types of floppy disks:

- Real diskettes inserted into a real floppy disk drive that is connected to the virtual machine.

- Floppy disk image files having the `.fdd` extension and connected to the virtual machine.

Parallels Desktop Lite treats floppy disk images like real diskettes. Parallels Desktop Lite supports floppy disk image files that have the `.fdd` extension and 1.44 MB size.

Initialize a Newly Added Disk

After you added a new blank virtual hard disk to the virtual machine configuration, it will be invisible to the operating system installed inside the virtual machine until the moment you initialize it. To learn how to initialize the newly added hard disk, please refer to the help resources of the operating system installed in the virtual machine.

Hardware Settings

Using the **Virtual Machine Configuration** dialog, you can configure the virtual hardware available in your virtual machine:

- Configure the devices currently available inside the virtual machine.

- Add or remove devices.

- Configure the boot order of your virtual machine.

CPU and Memory

Using **CPU & Memory** settings, you can:

- Set how many processors are allocated to Windows (p. 67)

- Set how much memory is allocated to Windows (p. 51)

Boot Order

Using the **Boot Order** settings, you can configure the virtual machine boot sequence, that is, the order in which the virtual machine will try to load the operating system from different boot devices.

> **Note:** These settings cannot be changed when the virtual machine is running.

To edit the **Boot Order** settings, do the following:

1   Click the Parallels icon ‖ in the menu bar and choose **Configure**. Or click **Actions** in the Parallels Desktop Lite menu bar at the top of the screen and choose **Configure**.

2 In the **Virtual Machine Configuration** dialog, click **Hardware** and select **Boot Order** in the sidebar.
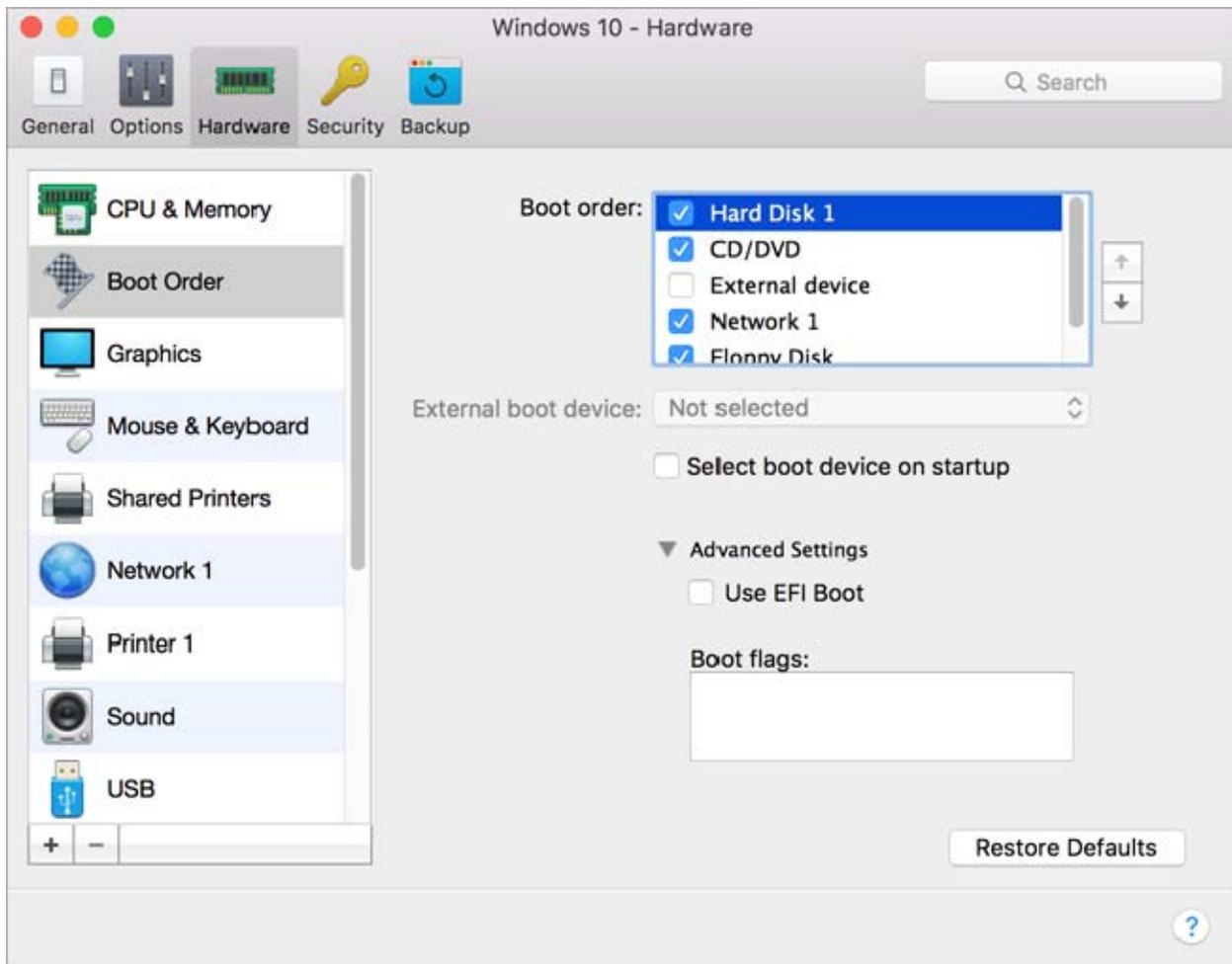
The currently supported boot devices are listed below:

- **Hard Disk**. Select this device if you want the virtual machine to boot up from its virtual hard disk drive.

- **CD/DVD**. Select this device if you want the virtual machine to boot up from the media connected to its virtual CD/DVD drive.

  > **Note:** The virtual machine will use the CD/DVD-ROM drive specified as **CD/DVD-ROM 1** in its configuration.

- **External device**. Select this device if you want the virtual machine to boot up from a bootable external device (USB, FireWire, Thunderbolt, etc.) connected to your Mac. Once selected, choose the device from the **External boot device** menu located below.

- **Network Adapter**. Select this device if you want your virtual machine to boot from a network adapter using PXE (Pre-Execution Environment).

> **Note:** The virtual machine will use the network adapter specified as **Network Adapter 1** in its configuration.

Every time you start the virtual machine, it tries to boot from the device specified as the first one in the **Boot Order** list. If the virtual machine cannot boot from the first device (for example, no media is connected to it), the virtual machine proceeds to the second device in the list and tries to boot from this device, and so on.

In this pane, you can perform the following operations:

- Change the currently set boot sequence by selecting the name of the corresponding boot device in the **Boot Order** list and moving it up or down using the arrows to the right of the list.

- Remove a boot device from the sequence by clearing the check box next to its name.

If you choose the **Select boot device on startup** option, you will see the following message at the virtual machine startup: "`Press ESC to select boot device`". If you press ESC pending 5 seconds, you will be able to select a boot device. If you do not press ESC, the virtual machine will try to boot from the devices specified in the **Boot Order** list.

> **Note:** Make sure that the device you wish to use for your virtual machine booting (hard disk drive, CD-ROM drive, floppy disk drive, or network adapter) is available to the virtual machine and configured properly. If you do not have any boot devices configured in your virtual machine, you will see the following error message after you start the virtual machine: "`No boot device is available`". In this case, you should stop the virtual machine and configure at least one boot device for it.

The **Boot flags** field is intended for specifying the flags that can change the virtual machine system behavior. The system flags can be used by the Parallels customer support team in cases when something goes wrong in your virtual machine. It is not recommended to type anything into this field without being instructed to do so by the customer support staff.

Graphics

To view and configure the amount of video memory available to the virtual machine video card, use the **Graphics** settings.

To edit these settings, do the following:

1 Click the Parallels icon ‖ in the menu bar and choose **Configure**. Or click **Actions** in the Parallels Desktop Lite menu bar at the top of the screen and choose **Configure**.

2 In the **Virtual Machine Configuration** dialog, click **Hardware** and select **Graphics** in the sidebar.

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Note: These settings cannot be changed when the virtual machine is running.
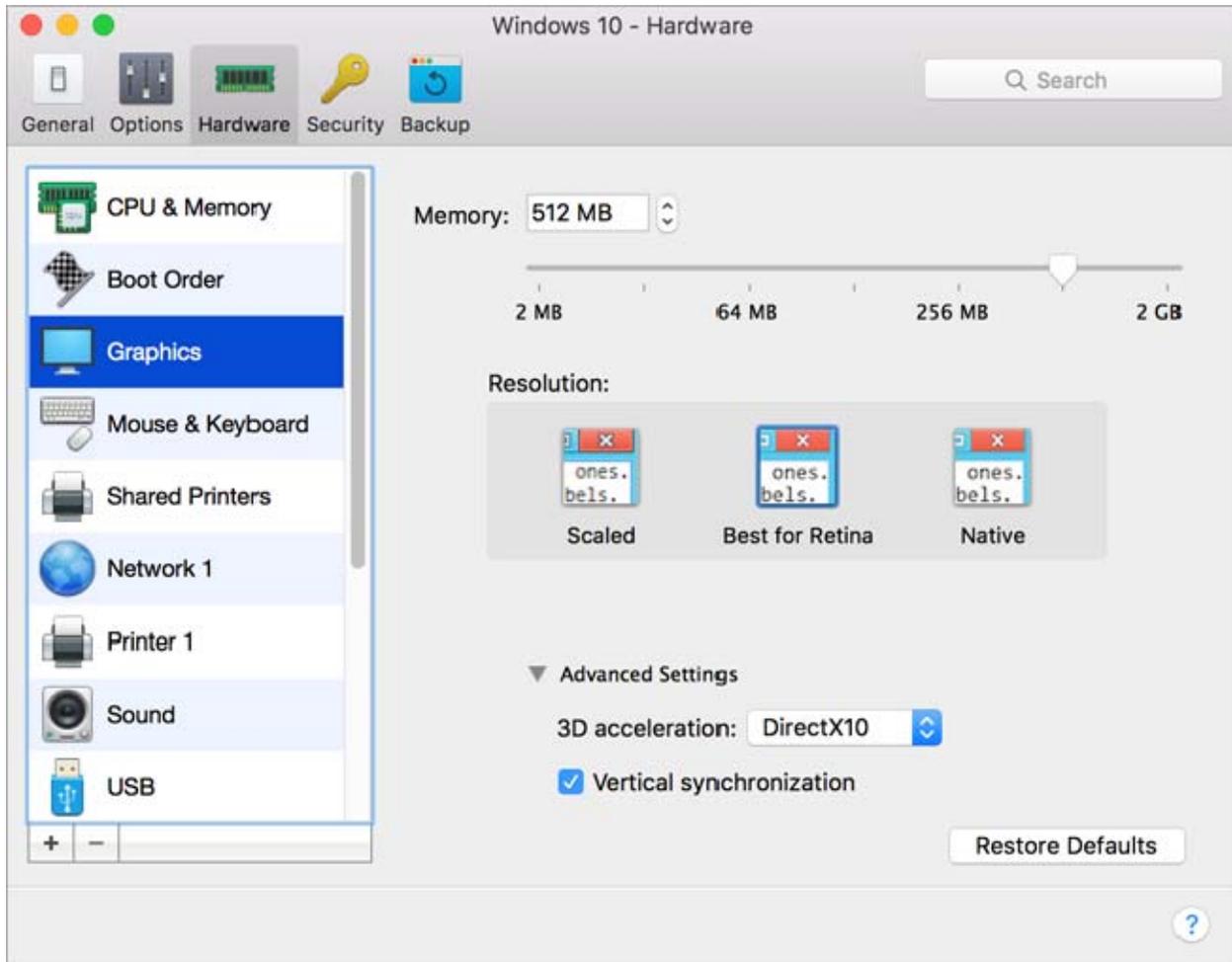
In the **Memory** field, you can set the amount of video memory that will be available to the virtual machine.

To configure the video memory limit, do one of the following:

- Drag the slider
- Use the spin box arrows
- Type the value directly into the **Memory** field

Working with Windows on Retina Display

For Windows 7 or later:

If you're working with Windows 7 or later on a Mac with a Retina display, you can choose how Windows is displayed on the screen:

- **Best for Retina**. Windows resolution matches that of the Retina display and the DPI setting increases. Windows interface elements and text are clear, sharp, and at full size. This option is supported by Windows 7 or later.

- **Scaled**. Windows resolution and DPI setting don't change. Instead, Windows is scaled to full size. As a result, Windows interface elements and text are not sharp. This option is useful for Windows applications that don't support high-DPI settings and appear small onscreen.

- **Native**. Use this option if you're working with Windows on multiple displays one of which is non-Retina. The option is supported by Windows 8 and Windows 10.

For Windows XP:

If you're working with Windows XP on a Mac with a Retina display, Windows becomes scaled but its resolution doesn't change. As a result, Windows interface elements and text are not sharp.

However, you can enable full (2880x1800) Retina resolution for Windows by selecting **Enable Retina resolution**. At such a high resolution, Windows interface elements and text become sharp but small.

Enabling 3D Acceleration

If you want to use Windows Aero in your Windows virtual machines or use games and applications that require video cards that support DirectX or OpenGL, select **On** or the version of DirectX you need from the **3D acceleration** menu.

Enabling Vertical Synchronization

Sometimes in games and 3D applications, a newly rendered frame may overlap a previously rendered one and then screen tearing happens. This occurs when the video card or the software using it begins updating the actively-displayed memory in a manner that is out of sync with the monitor's refresh rate. To prevent screen tearing, select the **Vertical synchronization** option.

Floppy Disk

To view and configure the virtual machine floppy disk drive settings, use the **Floppy Disk** settings.

To edit the device settings, do the following:

1   Click the Parallels icon ❙❙ in the menu bar and choose **Configure**. Or click **Actions** in the Parallels Desktop Lite menu bar at the top of the screen and choose **Configure**.

2   In the **Virtual Machine Configuration** dialog, click **Hardware** and select this device name in the sidebar.

Note: If this device is absent, you can add it to Virtual Machine Configuration. For detailed information on how to add a device, refer to **Adding and Removing Devices**.
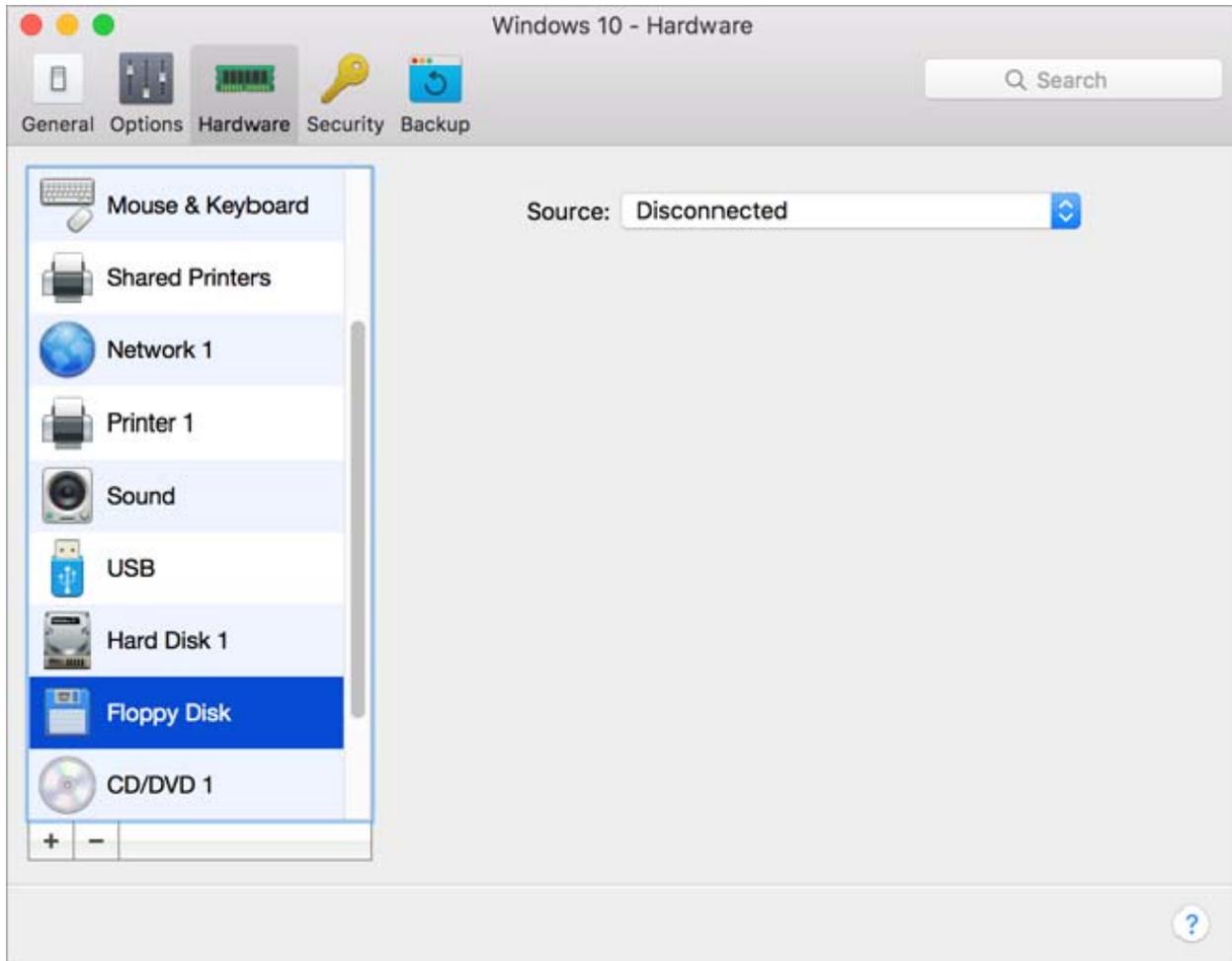
In the **Source** field, specify the source device or image file that will emulate the virtual machine floppy disk drive:

- If you want to use a real floppy disk drive, click the **Source** field and select the real device name from the list.

- If you want to use a floppy disk image, click the **Source** field, click **Choose an image file,** and specify the path to the desired floppy disk image file.

CD/DVD-ROM

To configure the virtual machine CD/DVD drive settings, use the **CD/DVD** settings. Virtual CD/DVD drives can be connected to CD/DVD images.

Note: You can connect up to 4 IDE devices (hard disks or CD/DVD drives), 6 SATA, and 15 SCSI devices to a virtual machine. Each device is listed separately in the **Virtual Machine Configuration** dialog and has its own number.

To edit the device settings, do the following:

1   Click the Parallels icon ‖ in the menu bar and choose **Configure**. Or click **Actions** in the Parallels Desktop Lite menu bar at the top of the screen and choose **Configure**.

2   In the **Virtual Machine Configuration** dialog, click **Hardware** and select this device name in the sidebar.

Note: If this device is absent, you can add it to Virtual Machine Configuration. For detailed information on how to add a device, refer to **Adding and Removing Devices**.

To emulate the virtual CD/DVD drive, you can connect one of the real CD/DVD drives on your physical computer or a CD/DVD image file to the virtual machine.

> **Note:** Parallels virtual machines support ISO and DMG image files and may support CUE and CCD image files.

In the **Source** field, the image file that emulates the virtual machine CD/DVD drive is specified. You can change the source device:

- To use an image file as the virtual machine CD/DVD drive, click the **Source** field and choose the image file from the list, or click **Choose an image file** and specify the path to the desired image file on your Mac.

In the **Location** field, you can specify the type of interface for connecting the device:

- **IDE**. Using this interface type, you can connect up to 4 virtual devices (hard disks or CD/DVD drives).
- **SATA**. Using this interface type, you can connect up to 6 virtual devices (hard disks or CD/DVD drives).

Hard Disk

To view and configure the virtual hard disk settings, use the **Hard Disk** pane of Virtual Machine Configuration. Parallels Desktop Lite allows virtual machines to use hard disk images in the `.hdd` format.

> **Note:** You can connect up to 4 IDE devices (hard disks or CD/DVD drives), 6 SATA, and 15 SCSI devices to a virtual machine. Each device is listed separately in the **Virtual Machine Configuration** dialog and has its own number.

To edit the device settings, do the following:

1 Shut down the virtual machine. (p. 17)

2 Open the **Actions** menu and choose **Configure**.

3 In the **Virtual Machine Configuration** dialog, click **Hardware** and select this device name in the sidebar.

> **Note:** If this device is absent, you can add it to Virtual Machine Configuration. For detailed information on how to add a device, refer to **Adding and Removing Devices**.
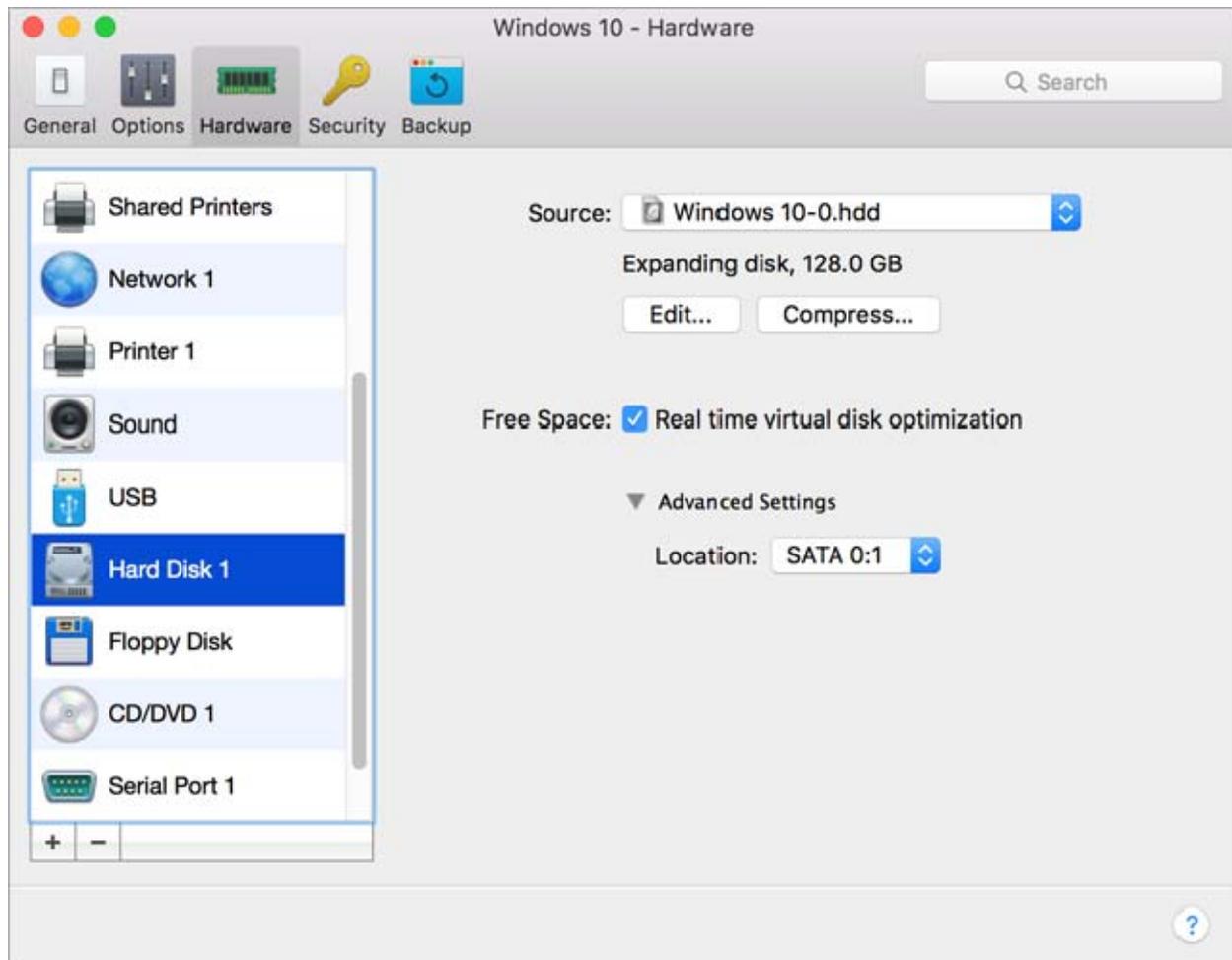
In the **Source** field, the virtual hard disk file (.hdd) that emulates the virtual machine hard disk is specified. You can change the hard disk source:

* To use a virtual hard disk file as the virtual machine hard disk, click the **Source** field and choose the virtual hard disk file from the list, or click **Choose an image file** and specify the path to the desired image file (.hdd) on your Mac.

In the **Location** field, you can specify the type of interface for connecting the device:

* **IDE**. Using this interface type, you can connect up to 4 virtual devices (hard disks or CD/DVD drives).

* **SATA**. Using this interface type, you can connect up to 6 virtual devices (hard disks or CD/DVD drives).

* **SCSI**. Using this interface type, you can connect up to 15 virtual devices (hard disks or CD/DVD drives).

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> **Note 1:** The Mac OS X guest OS does not support the SCSI controller. In the latest Linux distributions (e.g. RHEL 5.3), the SCSI driver may be not installed. In this case, you should install this driver in your Linux guest OS to be able to use the SCSI controller.
>
> **Note 2:** The SCSI 7:0 location is not available for selecting, since it is occupied by the SCSI controller itself.

Compressing the Disk

If you use an expanding (p. 87) virtual hard disk in your virtual machine, its image file size on the physical hard disk increases as you add new data to the virtual hard disk. When you delete some data from this virtual hard disk, free unused space appears on the disk, but the amount of space your virtual machine occupies on the hard disk of your Mac does not reduce. To free the unused space back to Mac, click the **Compress** button. The virtual hard disk will be compressed and the hard disk image file size will be decreased. As a result, there will be more free space on your Mac hard disk.

> **Note:** Compressing can be performed for virtual machines without snapshots.

Editing the Disk

If you find that the capacity of your virtual machine hard disk no longer fits your needs, you can change its size.

> **Important:**
>
> 1. Resizing a hard disk can be potentially dangerous to your data. Before you start, it is highly recommended that you properly shut down the virtual machine (using the shutdown procedure of its guest operating system) and back up the data. To learn how to make a backup, please see **Back Up a Virtual Machine** (p. 62).
>
> 2. Resizing may take some time. It is not recommended that you interrupt the process.
>
> 3. If your MacBook is running on battery, connect it to a power source or make sure the battery is fully charged. A power outage while writing changes to the disk may cause data loss.

To change the disk size:

1 Click **Edit**.
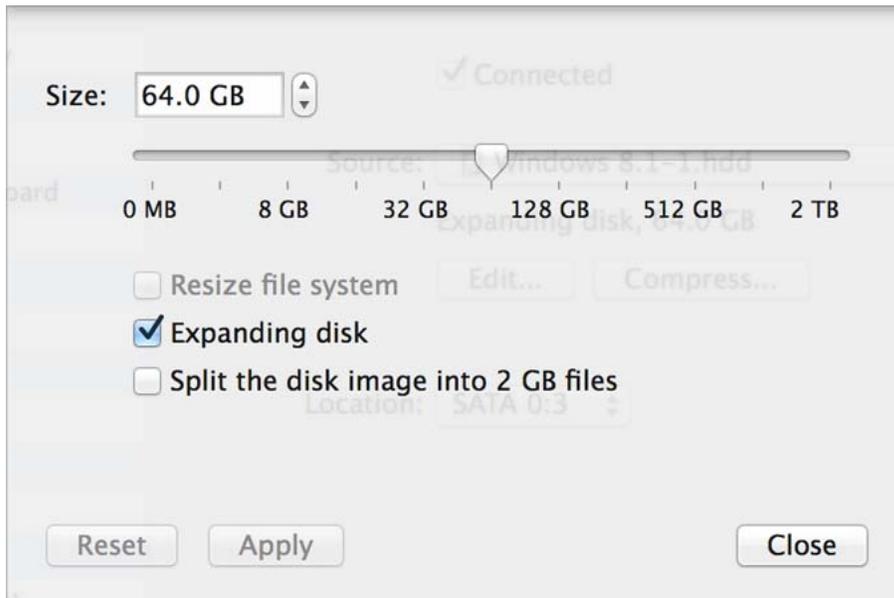
Note: If your virtual machine is running or has snapshots, its virtual hard disks cannot be resized.

2 Drag the slider or enter a new size in the **Size** field.

3 Select **Resize file system** if you want to change the file system size:

- If you select **Resize file system** when increasing the disk size, the additional disk space will be added to the last volume. If you deselect **Resize file system**, the added space will appear as unallocated space and will be invisible to the guest operating system. To allocate this space, you will have to either create a new partition or expand an existing partition. For instructions on allocating the added space, please refer to the guest OS documentation.

- If you select **Resize file system** when decreasing the disk size, the disk will be decreased by removing the unallocated space and decreasing the size of the disk partitions. If you deselect **Resize file system** when decreasing the disk size, you will be able to remove the unallocated space of the disk only and the disk partitions will remain untouched.

If the format of the virtual hard disk is *expanding*, you can convert it to *plain* by deselecting **Expanding disk**.

If you want the virtual hard disk to be split, select **Split the disk image into 2 GB files option**.

Note: For more information about virtual hard disk types, please refer to **Support for Virtual and Real Disks** (p. 87).

Automatically Conserve Disk Space

In most cases, the space that Windows takes up on your hard disk expands as you add files and other data, but isn't reduced when you delete data. To set Parallels Desktop to automatically reduce disk space:

- Select **Real time virtual disk optimization**.

You can also quickly remove unnecessary files that have built up in the system (p. 68) to free up disk space.

Network

Using the **Network** settings, you can change the network type used in your virtual machine.

To edit the device settings, do the following:

1   Click the Parallels icon ▐▐ in the menu bar and choose **Configure**. Or click **Actions** in the Parallels Desktop Lite menu bar at the top of the screen and choose **Configure**.

2   In the **Virtual Machine Configuration** dialog, click **Hardware** and select this device name in the sidebar.

Note: If this device is absent, you can add it to Virtual Machine Configuration. For detailed information on how to add a device, refer to **Adding and Removing Devices**.
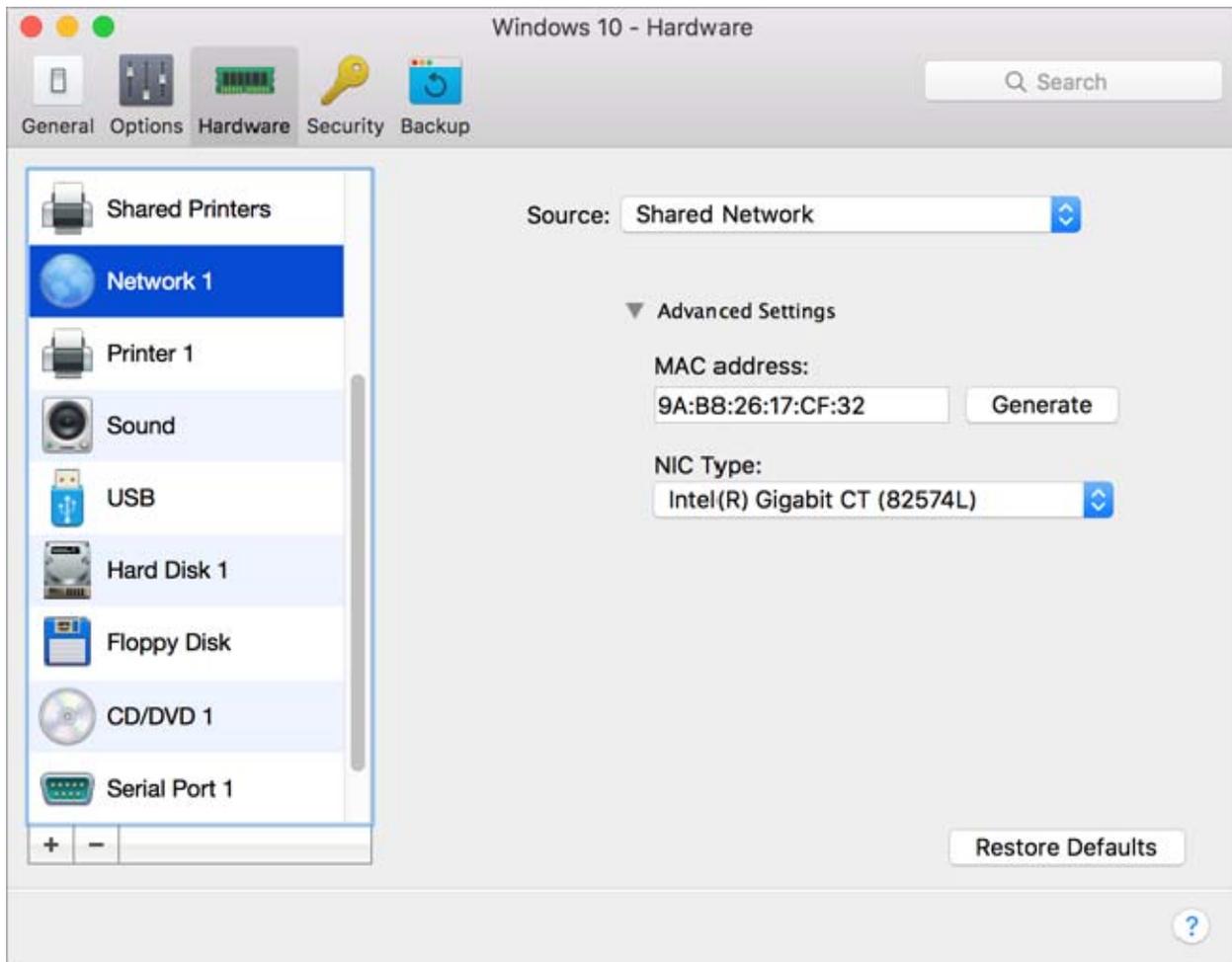
You can choose one of the following network types for the virtual machine network adapter:

- **Shared Network**. Select this option to enable the Network Address Translation (NAT) feature for the virtual machine. In this case, your virtual machine will share whatever network connection is currently used by the host computer.

    See **Shared Network** to learn how to configure this network type.

- **Host-Only Network**. Select this option to allow the virtual machine to connect to the host computer and the virtual machines residing on it and to make it invisible outside the host computer.

    See **Host-Only Network** (p. 50) to learn how to configure this network type.

MAC Address

In the **MAC address** field, you can change the MAC address currently assigned to the virtual machine. MAC addresses are automatically generated during the virtual machine creation. However, you can modify the default MAC address by typing another value in the **MAC address** field or clicking the **Generate** button. When entering a new MAC address, make sure that it is unique within your network.

Printer

Using the **Printer** settings, you can configure the virtual machine printer port settings. A virtual machine can have up to three printer ports.

To edit the device settings, do the following:

1   Click the Parallels icon ‖ in the menu bar and choose **Configure**. Or click **Actions** in the Parallels Desktop Lite menu bar at the top of the screen and choose **Configure**.

2   In the **Virtual Machine Configuration** dialog, click **Hardware** and select this device name in the sidebar.

> **Note:** If this device is absent, you can add it to Virtual Machine Configuration. For detailed information on how to add a device, refer to **Adding and Removing Devices**.
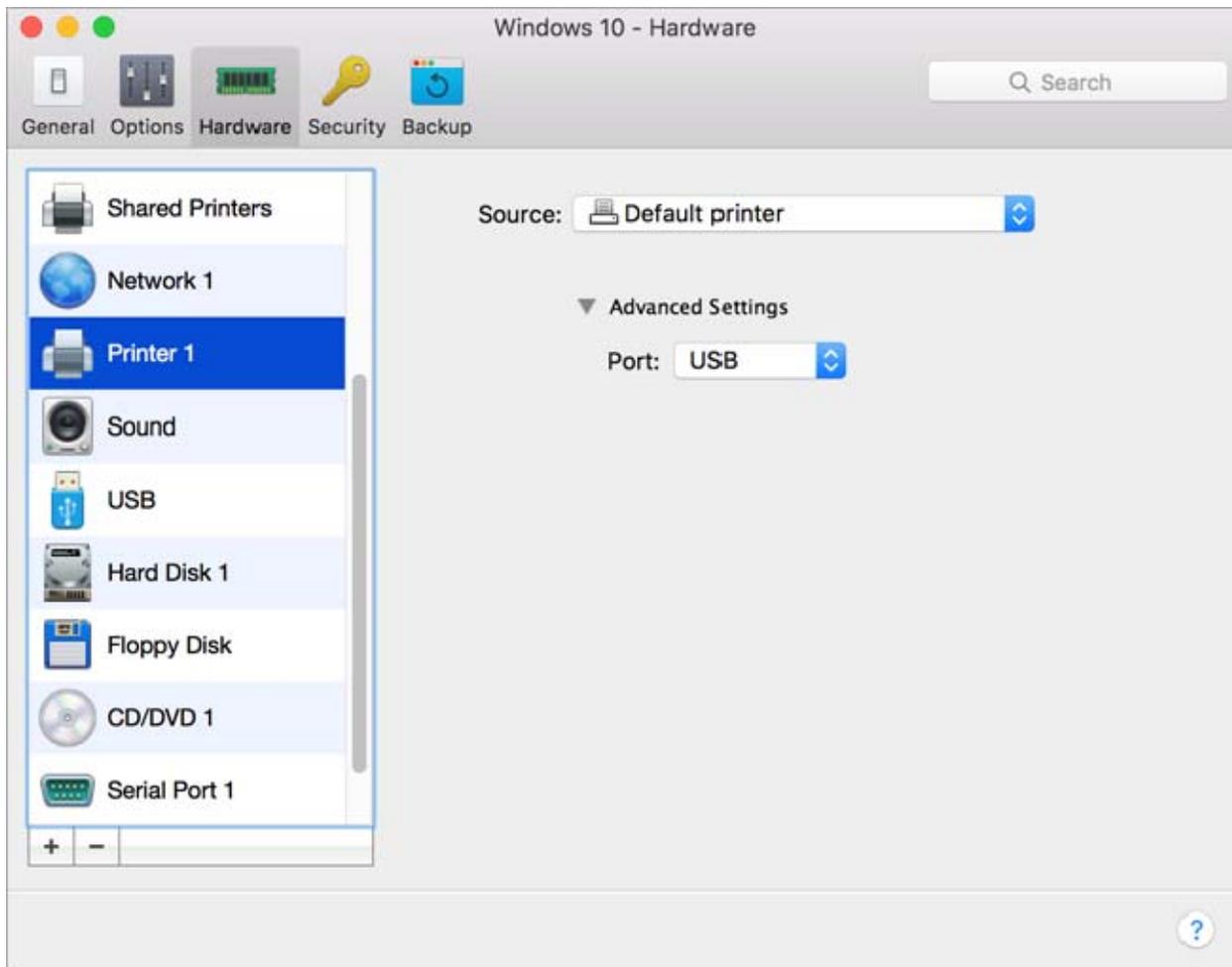
In the **Port** field, choose the port type. If available, you're recommended to use the **USB** port type. Connecting a printer to a virtual machine via USB ensures faster data transfer rate than connecting it via LPT.

In the **Source** field, the source device that emulates this printer port is specified. A printer port can be emulated by one of the following devices:

*   **Printers**. You can use any of the printers connected to your Mac in your virtual machine. Click the **Source** field and select the appropriate printer from the list.

    For the detailed information on how to set up a printer in your virtual machine, please refer to **Print from Windows** (p. 42).

*   **Output File**. You can emulate the virtual machine printer port by using an output file. Click the **Source** field and choose an output file from the list, or click **Choose an output file** and specify the path to the desired output file on your Mac.

Serial Port

In the **Serial Port** pane, you can configure the virtual machine serial port settings.

To edit the device settings, do the following:

1   Click the Parallels icon ▐▐ in the menu bar and choose **Configure**. Or click **Actions** in the
Parallels Desktop Lite menu bar at the top of the screen and choose **Configure**.

2   In the **Virtual Machine Configuration** dialog, click **Hardware** and select this device name in
the sidebar.

> **Note:** If this device is absent, you can add it to Virtual Machine Configuration. For detailed information on
> how to add a device, refer to **Adding and Removing Devices**.

Using serial ports, you can establish a connection between:

*   The virtual machine and the host computer devices (using a real port); or

*   Between two virtual machines located on the same host computer (using a socket).

If you want to connect your virtual machine to the host computer device, you should create a serial
port emulated by a real port. The **Source** list comprises the devices on the host computer that are
available for connection. The connected device, being used in any virtual machine, cannot be used
by the host computer. To be able to use it in the host computer, you should first disconnect it from
the virtual machine. To do that, use the **Devices** menu in the Mac menu bar.

If you want to connect two virtual machines with each other, you need to create a serial port
emulated by a socket in each virtual machine. The names of the serial ports should be identical.
The connection between the virtual machines via serial ports is bidirectional. It means that the
working modes of the sockets set during the port creation can be changed later in the **Serial Port**
pane.

If you need to log the performance activity of your virtual machine or to record the data from it and
use this information later on, you can connect your virtual machine serial port to an output file on
the physical computer. You will be able to view and analyze the activity history of the virtual
machine any time you need by exploring this file.

You can add a new serial port to your virtual machine using Add Hardware Assistant. For the
instruction on how to add serial ports, refer to **Adding and Removing Devices**.

> **Note**: You can connect up to four serial ports to a virtual machine.
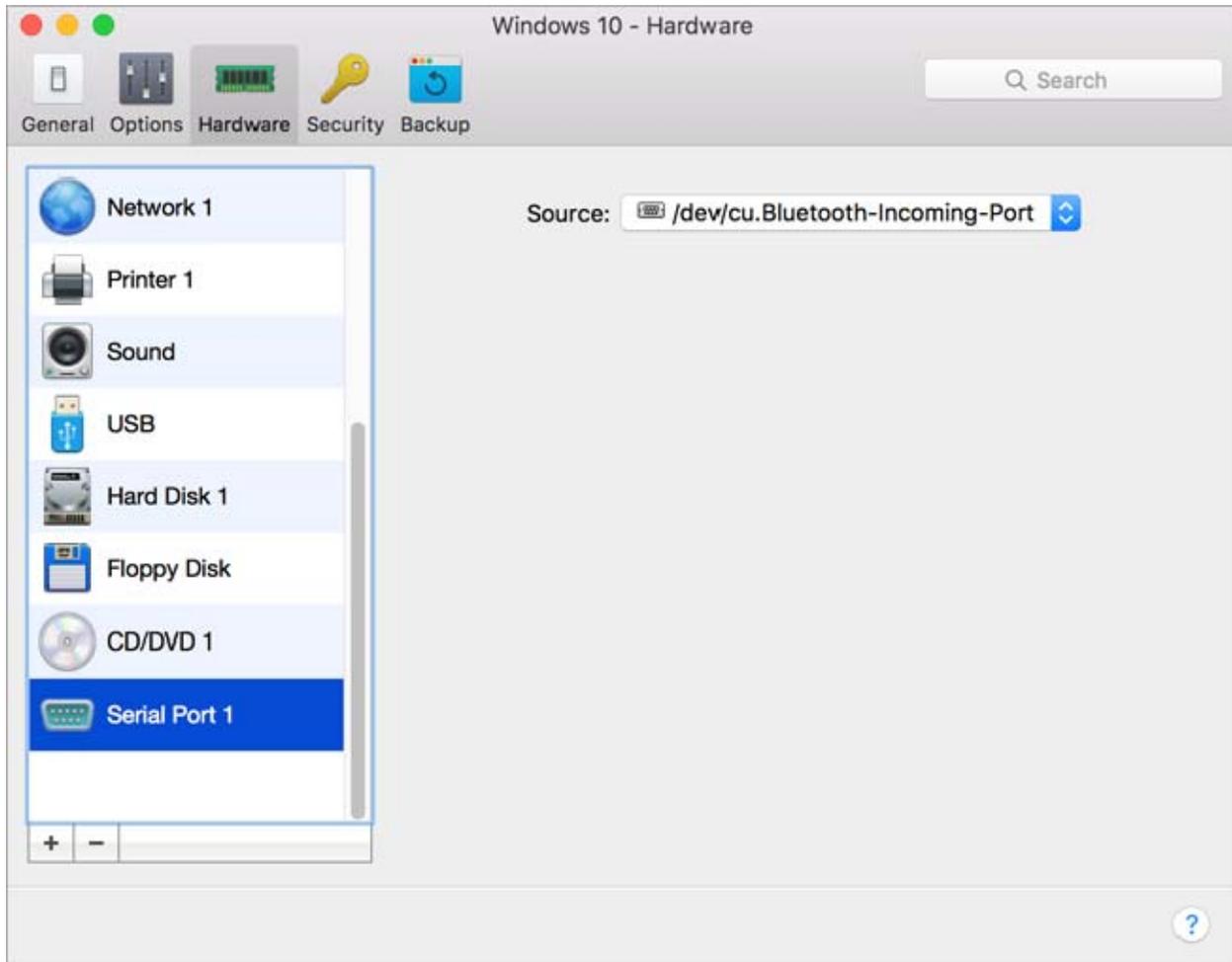
In the **Source** field, the source device that emulates this serial port is specified. Serial ports can be emulated by the following devices:

- **Physical Serial Port**. To connect the virtual machine serial port to one of the existing serial ports on the host computer, choose the appropriate port on the host computer in the **Source** list.

- **Socket**. To connect two virtual machines through the sockets, click the **Source** list and choose the appropriate socket. If there are no sockets available, click **New socket** and specify its name in the **Enter a socket name** field.

  You should also configure the role the virtual machine will play in the connection by selecting the necessary role in the **Mode** list. Selecting **Server** enables you to use this virtual machine to direct the other one. Selecting **Client** enables you to direct this virtual machine from the other one.

  > **Note:** If you change the socket mode of the first virtual machine, make sure the socket mode of the second virtual machine is also modified.

- **Output File**. To connect the virtual machine serial port to an output file, click the **Source** list and choose the appropriate output file. You can also click **Choose an output file** to locate the necessary file.

Sound

The **Sound** pane of Virtual Machine Configuration allows you to configure the virtual machine sound device parameters.

To edit the device settings, do the following:

1   Click the Parallels icon ▌▌ in the menu bar and choose **Configure**. Or click **Actions** in the Parallels Desktop Lite menu bar at the top of the screen and choose **Configure**.

2   In the **Virtual Machine Configuration** dialog, click **Hardware** and select this device name in the sidebar.

Note: If this device is absent, you can add it to Virtual Machine Configuration. For detailed information on how to add a device, refer to **Adding and Removing Devices**.
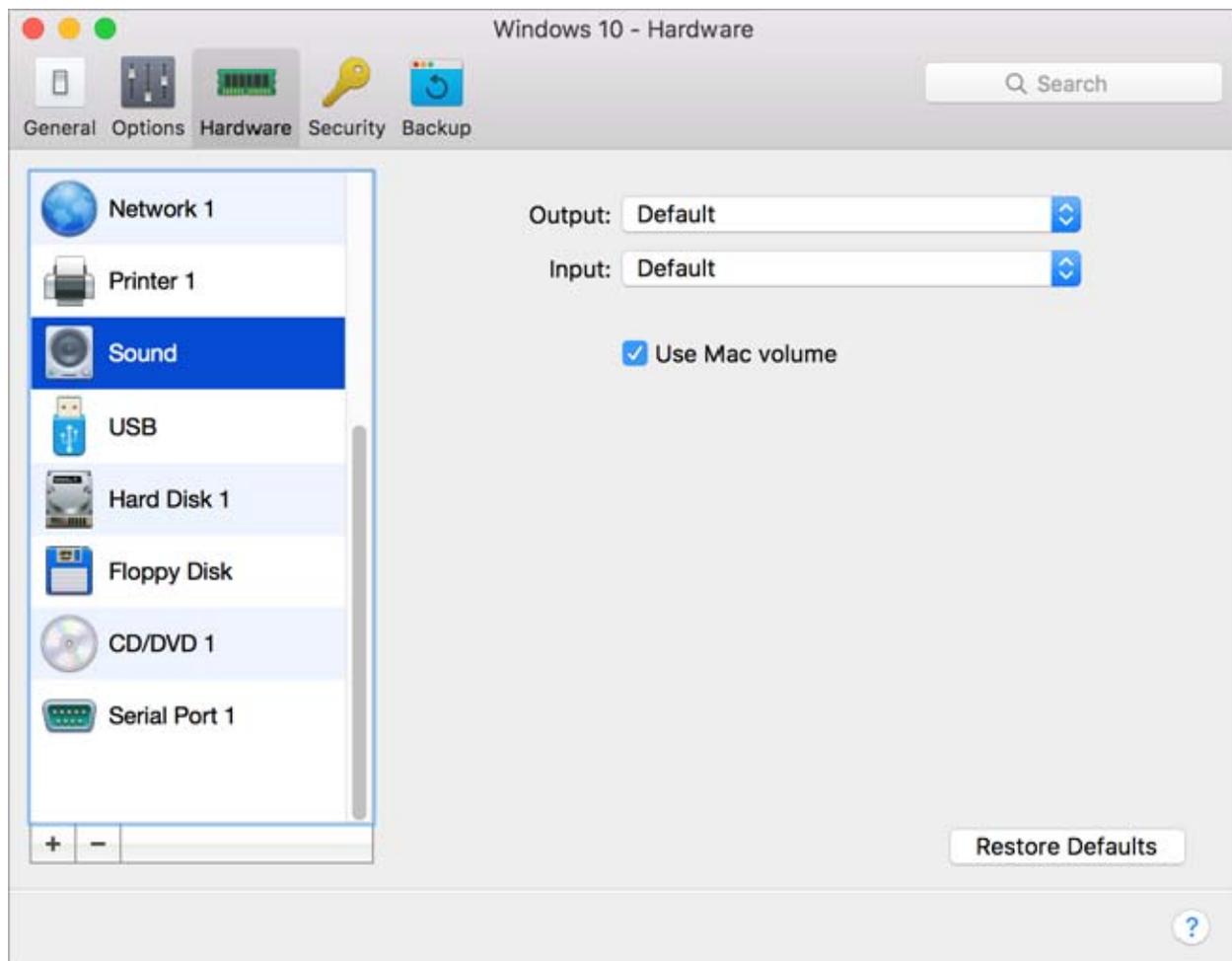
Use the **Output** list to choose the necessary device. You can choose one of the following devices:

* **Default**. Select this option if you want to use the output device set as default in Mac OS.

* **Built-in Output**. Select this option if you want to use one of the output devices from your Mac.

* **Mute**. Select this option if you want to mute the output device.

> **Note:** If you have a 5.1 or 7.1 surround-capable sound card connected to your Mac, you can use it in Windows (p. 112).

Use the **Input** list to choose the necessary device. You can choose one of the following devices:

* **Default**. Select this option if you want to use the input device set as default in Mac OS.

* **Built-in Microphone**. Select this option if you want to use the built-in microphone.

* **Mute**. Select this option if you want to mute the input device.

Sync volume level

For Windows XP and later with Parallels Tools (p. 71) installed, you can set Windows and OS X volume levels to always be the same. With the **Sync volume with Mac** option selected, if you manually change the volume level in Windows, it is changed accordingly in OS X and vice versa.

If your virtual machine doesn't have Parallels Tools installed, the guest operating system syncs the volume level from OS X. If you want to set another volume level in the virtual machine, disable **Use Mac volume**.

USB

The virtual machine USB controller allows you to connect USB storage devices to the virtual machine.

To edit the device settings, do the following:

1 Open the **Actions** menu or click the Parallels icon ▐▐ in the Mac menu bar and choose **Configure**.

2 In the **Virtual Machine Configuration** dialog, click **Hardware** and select this device name in the sidebar.

Note: If this device is absent, you can add it to Virtual Machine Configuration. For detailed information on how to add a device, refer to **Adding and Removing Devices**.
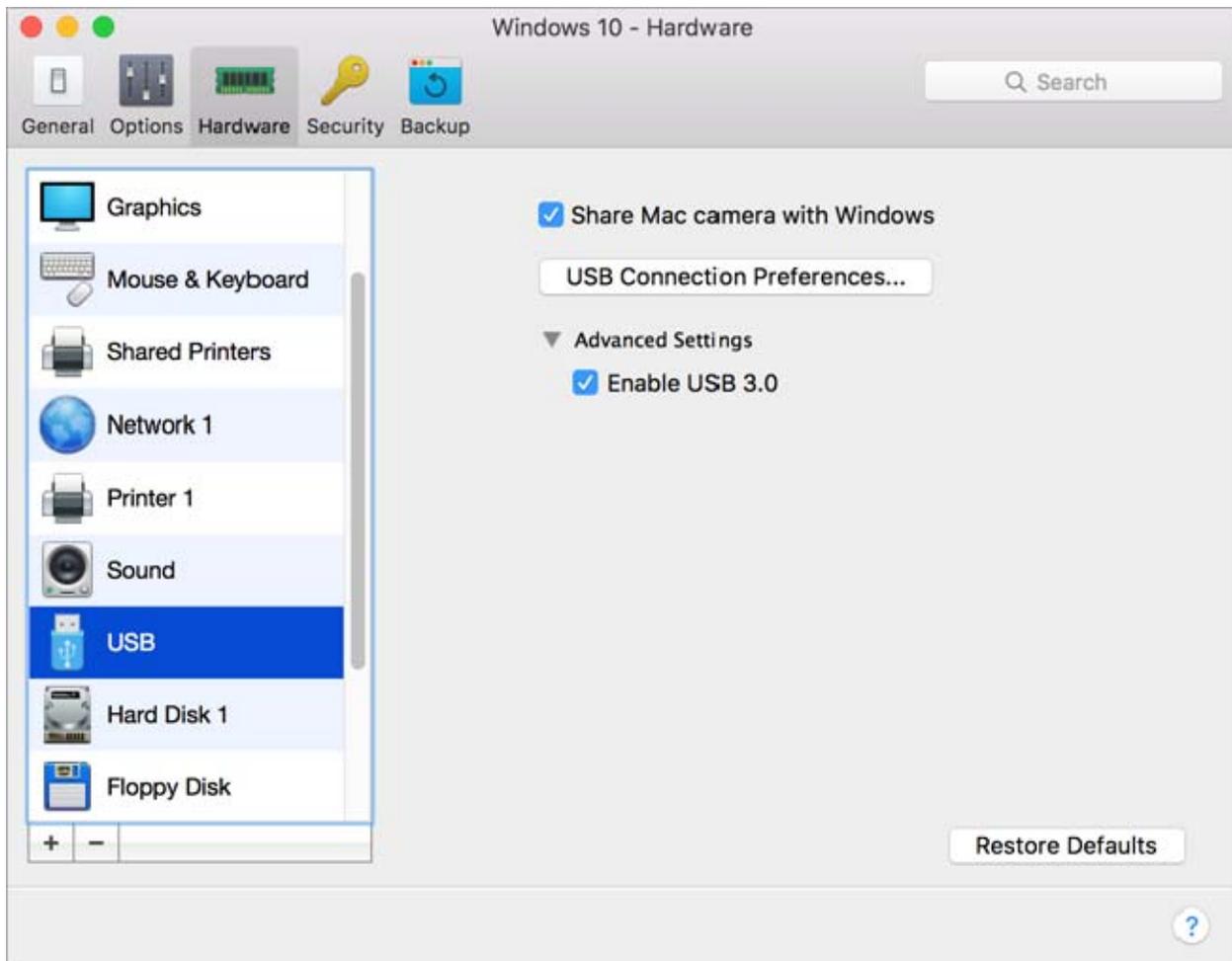
In the **USB** pane, you can:

* Disable camera sharing.
* Enable USB 3.0 support.

    Once USB 3.0 support is enabled, you can immediately start using USB 3.0 devices with Windows 8 and Windows Server 2012. To be able to use USB 3.0 devices with Windows 7/Vista/XP, you must also install the USB 3.0 driver in Windows. The driver can be found here.

    Note: You can also use USB 3.0 devices in the guest versions of OS X 10.7.4 with the latest updates installed, OS X 10.8, and Linux guest operating systems that support USB 3.0.

Tips and Troubleshooting

If you're having trouble using Parallels Desktop Lite, check this section for possible solutions.

In This Chapter

Install Parallels Tools for Seamless Operation Between Windows and Mac OS X

Many issues with using Parallels Desktop Lite can be solved by installing Parallels Tools.

Parallels Tools help you work with Windows in the most comfortable and efficient way. With Parallels Tools, you can:

- Move the mouse seamlessly between Windows and Mac OS X

- Synchronize the Windows time and date settings with those of Mac OS X

- Share your Mac OS X disks and folders with Windows

- Copy text and drag and drop objects from Mac OS X to Windows

Important: Once you install Parallels Tools and restart Windows, you don't have to do anything else. Parallels Tools automatically just work, without any action or configuration on your part.

To install Parallels Tools:

1   Start Windows (p. 15).

2   Choose **Actions** > **Install Parallels Tools** and follow the onscreen instructions.

For more information on installing and updating Parallels Tools, see Parallels Tools for Windows (p. 73).

Find Settings

If you want to change a setting in Parallels Desktop Lite but you aren't sure where to find the setting, you can search for it by doing the following:

1   Do one of the following:

- Click the Parallels icon ‖ in the menu bar and choose **Configure.**

- Click **Actions** in the Parallels Desktop Lite menu bar at the top of the screen and choose **Configure**.

2   Type a word or phrase in the search field. Any settings related to your search are highlighted.

Restore Virtual Machine Default Settings

When working with a virtual machine, you can change different virtual machine settings, such as an amount of memory, video memory, number of CPUs, sharing settings, etc. To restore default settings:

1   Do one of the following (the virtual machine must be shut down):

- In **Control Center**, right-click the virtual machine you want to configure and click **Configure**.

- If the virtual machine window is open, click **Actions** > **Configure**.

2   In the virtual machine configuration dialog, find the pane with the settings that you want to restore and click **Restore Defaults**.

Memory Usage Problems

The amount of Mac's physical memory required for each virtual machine operation can be represented as follows:

Virtual Machine Memory = *Guest OS Memory + Video Memory + Virtual Machine Monitor Memory*

- *Guest OS Memory* is the amount of RAM available to your guest operating system. You can configure the guest OS memory amount in the **CPU & Memory** pane of the virtual machine configuration dialog.

- *Video Memory* is the amount of physical memory available to the virtual machine's video card. You can adjust the video memory amount in the **Graphics** pane of the virtual machine configuration dialog.

- *Virtual Machine Monitor* is the module responsible for the guest operating system virtualization. It consumes memory to perform operations of guest virtual devices and performs virtual paging emulation. The amount of memory required for the Virtual Machine Monitor operation depends on the guest OS and varies from 50 MB to 200 MB.

Memory Overcommitment

If you have several virtual machines running simultaneously and you are trying to start one more virtual machine, you may come across the memory over commit. If so, Parallels Desktop Lite informs you with the corresponding message. If you start one more virtual machine, this may significantly slow down all your virtual machines. To solve this problem, you can:

- Stop one or several of your running virtual machines; or

- Edit your virtual machines' configurations so they consume less memory.

Windows Seems Slow

If Windows performance seems slow, try the following:

- **Quit applications and programs you aren't using:** If you run a number of memory-consuming applications and programs simultaneously, Windows performance may become slow. Quit any applications that you aren't using. You can also use Activity Monitor (located in the Mac OS X Finder in Applications > Utilities) to see how much of your Mac's memory each application is using. That way, you'll have a better idea of which applications cause performance to degrade the most.

- **Change how much memory is allocated to Windows:** Parallels Desktop Lite is set to allocate a certain amount of your Mac's available RAM memory to Windows and the rest to Mac OS X. If too much memory is allocated to Windows, Mac OS X may slow down, which in turn can cause Windows programs to slow down because they're running on top of Mac OS X. If, on the other hand, too much memory is allocated to Mac OS X, then Mac OS X applications may run well but Windows programs might slow down.

  To optimize the performance of both Windows and Mac OS X, set the memory allocated to Windows (p. 51) to be somewhere within the recommended range, indicated by the graphic under the memory slider in the **CPU & Memory** configuration panel.

- **Antivirus software may slow down your virtual machine:** Windows may become slower after you install antivirus software. To be protected, you have to sacrifice performance.

  > **Note:** Do not install more than one Windows antivirus program.

- **Run fewer virtual machines at once:** If you are running multiple operating systems at once using Parallels Desktop Lite, stop one or more of them to improve performance of the others.

- **Run Windows locally:** If you start Windows stored on an external storage device connected to your Mac (for example, an external USB disk drive), its performance will be lower than if it were stored on your Mac.

- **Tune Windows for speed:** To speed up Windows, select **Tune Windows for speed** in the **Optimization** pane (p. 51).

- **Disable log messages:** If you select **Use detailed log messages** in the Advanced pane of Parallels Desktop Lite Preferences, Parallels Desktop Lite will start creating a more detailed log file. It can be helpful for the Parallels support team, but uses more hard disk space and may slightly lower the system performance.

Pressing Ctrl+Alt+Del

As a Windows user, you might know that you can press the Ctrl+Alt+Del key combination to make available troubleshooting options, such as starting the Task Manager or changing a password.

To mimic pressing Ctrl+Alt+Del in Parallels Desktop Lite:

- Press fn+Ctrl+Option+Del.

My Password Isn't Working

If Parallels Desktop Lite doesn't accept your password, try the following:

- Be sure that Caps Lock is not on. If Caps Lock is on, an indicator appears in the password field. To turn Caps Lock off, press the Caps Lock key.
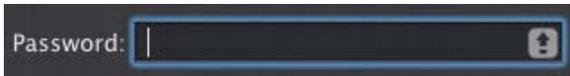
- Be sure that the keyboard is set to the correct language. If the keyboard is set to a language that doesn't belong to the group of Romance languages, an icon in the password field indicates the keyboard language setting.

My Virtual Machine Doesn't Boot

If your virtual machine doesn't boot correctly, most probably it's because there isn't any operating system installed. To install an operating system, do the following:

1 Prepare the OS installation media:

- If you have an OS installation disk, insert it into the DVD drive of your Mac.

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- If you have a USB drive with the OS installation files, connect it to your Mac.
- If you have a disk image, copy it to your Mac.

2 Restart the virtual machine by doing one of the following:

- Click **Actions** > **Restart**.
- Click the Parallels icon ‖ in the menu bar and choose **Actions** > **Restart**.

3 And follow the onscreen instructions.

I'm Having Problems Connecting to the Internet

When you install Windows, it is automatically configured to share your Mac's Internet connection. For details on configuring Windows' network and Internet connection, see the section on connecting to the Internet or a network (p. 48).

Configure 5.1 or 7.1 Surround Sound in a Virtual Machine

If you have a 5.1 or 7.1 surround-capable sound card connected to your Mac (via USB or FireWire), you can use it in your virtual machine. Follow these steps:

Step 1. Configure the sound card in Mac OS X.

Step 2. Select the sound card as the sound output device in the virtual machine configuration.

Step 3. Configure the sound card in the guest operating system.

Configure the sound card in Mac OS X

To configure a sound card in Mac OS X:

1 Start the Audio MIDI Setup application (you can find it in `/Applications/Utilities`).

2 Select your 5.1 or 7.1 surround-capable sound card and choose the necessary sample rate and bit depth from the **Format** pop-up menus.

> **Note:** Make sure these settings match the appropriate settings for the sound card.

3 Click **Configure Speakers**, select **Multichannel** and choose the necessary type of output from the pop-up menu.

4 Set this sound card as the default output device in Mac OS X: select it in **System Preferences** > **Sound** > **Output**.

Select the sound card as the sound output device in the virtual machine configuration

After you have configured the sound card in Mac OS X, select it as the sound output device in the virtual machine configuration:

1 Do one of the following:

- Click the Parallels icon ‖ in the menu bar and choose **Configure.**

- Click **Actions** in the Parallels Desktop Lite menu bar at the top of the screen and choose **Configure**.

2 Click **Hardware** and select **Sound**.

3 Choose **Default** from the **Output** menu.

Configure the sound card in the guest operating system

Configure the sound card in the guest operating system.

In Windows 7/Vista:

1 Click **Start** > **Control Panel** > **Hardware and Sound** >**Sound**.

2 On the **Playback** tab, select **Parallels Audio Controller** and click **Configure**.

3 Select **5.1 Surround** or **7.1 Surround** (depends on your sound card), click **Next** several times, and then click **Finish**.

4 On the **Playback** tab, select **Parallels Audio Controller** again and click **Properties**.

5 Click the **Advanced** tab and choose the sample rate and bit depth.

> **Note:** The specified settings shouldn't be higher than the same settings specified in the Audio MIDI Setup application in Mac OS X (described above).

6 When ready, click **OK** twice.

In Windows XP:

1 Click **Start** > **Control Panel** and double-click **Sound and Audio Devices**.

2 On the **Volume** tab, click **Advanced** in the **Speaker settings** section.

3 On the **Speakers** tab, select the necessary speaker setup.

In Linux:

You can try to follow these general guidelines to use the 5.1 or 7.1 surround-capable sound card in Linux:

1   Click **System** > **Preferences** > **Sound**.

2   On the **Hardware** tab, choose the necessary speaker setup from the **Profile** menu.

I'm Having Problems with Antivirus Software

Because of the close integration between Parallels Desktop Lite and Mac OS X, some Parallels Desktop Lite processes may be detected as malicious by antivirus software installed on your Mac.

To prevent the antivirus software from blocking Parallels Desktop Lite processes, perform a full system scan using the antivirus software, and then if no viruses are detected, add the Parallels Desktop Lite processes to the list of trusted processes. For information on how to do this, refer to your antivirus software Help.

> **Important:** The names of Parallels Desktop Lite processes usually start with `prl` or `parallels`.

The F8 Key Isn't Working Correctly

In Mac OS X, the F8 key and Ctrl+arrow key combination are reserved for triggering Spaces (a feature that lets you organize your windows on multiple desktops). Because of this, the F8 key and Ctrl+arrow key may not function correctly with Windows programs.

If you are experiencing this problem, change the **Spaces** hotkeys settings. See Mac Help for more information. From the Finder, choose **Help** > **Mac Help** or **Help** > **Help Center** and search for "Spaces."

Checking the Build Number

To check the version and build number of the Parallels Desktop Lite software you are using, do one of the following:

- Click the Parallels icon ‖ in the menu bar and choose **About Parallels Desktop Lite.**

- If the Parallels Desktop Lite menu bar is visible at the top of the screen, choose **Parallels Desktop Lite** > **About Parallels Desktop Lite**.

A window appears showing the build number.

Send Technical Data to Parallels

To help improve the quality of Parallels Desktop Lite, you can send technical data to Parallels.

If Windows is forced to shut down because of an error, Parallels Desktop Lite automatically opens a **Send Technical Data** form. If you notice unusual behavior in Parallels Desktop Lite, you can also send technical data manually.

To send technical data:

1 Do one of the following:

- Click the Parallels icon ❚❚ in the menu bar and choose **Help** > **Send Technical Data**.
- Click **Help** in the Parallels Desktop Lite menu bar at the top of the screen and choose **Send Technical Data**.

2 Describe what you were doing when the problem occurred, and fill out the form.

> **Note:** You can review the problem report components that will be sent to the Parallels support team and deselect some of them in the **Technical Data Report Details** window, if desired. To open this window, click **See Details**.

If Parallels Desktop Lite auto-generates a technical data report, the report window contains the **Send a solution to me when available** option. After the report is sent, Parallels engineers start investigating the problem. When they find any workaround or get any news about the reported issue, you will be notified by email.

3 Click **Send Report**.

Parallels team uses error reports to improve the product quality but doesn't respond to them.

Get Support

If you have any question or problem with Parallels Desktop Lite, you can find an answer or solution in the following places:

- Parallels Desktop Lite knowledgebase articles;
- Parallels forums;
- Parallels Desktop Lite documentation;
- Parallels Facebook and Twitter;
- contact the Parallels support team (phone, email, chat).

To get more info about the items mentioned above, visit the Parallels support center:

1 Do one of the following:

- Click the Parallels icon ‖ in the menu bar and choose **Help** > **Support Center**.

- Click **Help** in the Parallels Desktop Lite menu bar at the top of the screen and choose **Support Center**.

CHAPTER 7

Glossary

This glossary defines terms and spells out abbreviations used in Parallels Desktop Lite documentation. References to terms defined elsewhere in the glossary appear in *italics*.

Administrator. A user with administrative privileges.

Active volume: The volume of the physical source computer that is used as a *boot volume* for the active operating system.

Bootable hard disk. A disk used by the operating system to boot from, usually a disk that has an operating system installed.

Boot Volume. A hard disk partition from which the operating system boots.

Configuration file. A file specifies the virtual machine's hardware configuration, the devices it uses, and other settings. It is created automatically when you create a new virtual machine. See also *PVS file*.

CPU. Stands for central processing unit. It is an internal part of the computer. See also *Processor*.

Disks in the new format. Disks of virtual machines that were created or used in Parallels hardware virtualization products starting from version 3.0.

Expanding format. A virtual hard disk format. An expanding virtual hard disk image file resides on your host computer and is small initially. Its size grows as you add applications and data to the *virtual machine*.

FireWire connection. A wired connection that enables a high-speed data transmission between computers.

Guest operating system (guest OS*).* An operating system installed inside your virtual machine.

Host computer: The computer that is used to run virtual machines. In case of Parallels Desktop Lite for Mac, it is your Mac.

Hot key. A user-defined key or combination of keys that provides quick access to applications and commands. See also *Shortcut*.

HDD file. During the creation, the *virtual machine* acquires a virtual hard disk file with the `.hdd` extension. See also *virtual hard disk file*.

Host-only networking. Virtual machine network connection mode that creates a private network between the host computer and its virtual machines, which makes the virtual machines available from the host computer only.

ISO image. A special file that contains the entire contents of a CD or DVD disc commonly used to install an operating system.

Image file. A single file containing the complete contents and structure of a data storage medium or device, such as a hard disk drive, CD, or DVD.

IP address. A unique address that is assigned to a physical computer or a virtual machine that participates in computer networking.

Linux computer. A physical computer that has a Linux operating system installed.

Merged disk. A *split* disk whose parts were merged into a single disk.

Modality. One of the view modes you can use to work with Windows. In Modality mode, the Windows desktop appears in a window and scales in size as you resize the window. Also, you can set this window to always stay on top of other windows, and you can adjust its transparency level so you can see through it when you're working with other applications.

OS. Operating system.

Parallels Desktop Lite for Mac. An application that enables you to create, manage, and use *virtual machines* on your Mac.

Parallels Tools. A set of Parallels utilities that ensures a high level of integration between the *primary* and the *guest* operating systems.

Plain format. A virtual hard disk format. A plain virtual hard disk image file resides on the *host computer* and has a fixed size that cannot be changed.

Preboot Execution Environment (PXE). An environment to boot computers using a network interface independently of available data storage devices (like hard disks) or installed operating systems.

Primary operating system (primary OS). Operating system that controls the I/O devices of the computer and that is loaded when the physical computer is turned on. It is the operating system of the physical computer where the Parallels Desktop Lite application is installed.

Processor. The central processing unit, or *CPU*. It is an internal part of the computer.

PVS file. A virtual machine *configuration file* that contains information about the virtual machine resources, devices and other settings.

Shared networking. Virtual machine network connection mode that allows the *virtual machine* to use the *host computer* network connections. In this mode, the virtual machine is invisible to other computers on the network the host computer belongs to.

Shortcut. A user-defined key or combination of keys that provides quick access to applications and commands. See also *Hot key*.

Snapshot. A copy of the virtual machine state at a particular point of time. The files related to snapshots are stored in a special subfolder in the virtual machine's folder.

Split disk. A split disk is cut into 2 GB pieces, but is stored as a single *HDD file*. Split disks allow you to transfer the data stored on a split disk piece by piece using a USB drive or other media that have limited space and cannot store a large virtual hard disk image file.

Terminal. In Mac OS and GNU/Linux operating systems, a utility that enables you to access the command line.

Third-party virtual machine. A virtual machine created in a third-party virtualization product.

Virtual hard disk (virtual disk). A file that emulates the virtual machine's hard disk.

Virtual Machine. The computer emulated using Parallels Desktop Lite. A virtual machine has its own virtual hardware and requires an operating system to control its hardware. The installed operating system and its applications are isolated inside the virtual machine and share physical hardware resources of the *host computer*.

Virtual Machine Configuration. Like any physical computer, a *virtual machine* has its own configuration which is set during the creation and can be later modified. The virtual machine configuration settings are stored in a *PVS file*.

Virtual machine files. Files stored in a *virtual machine* folder. A virtual machine has at least two files: *configuration file* and *virtual hard disk file*.

Virtual hard disk file. During the creation, the *virtual machine* acquires a virtual hard disk file with the `.hdd` extension. This file performs the functions of a real hard disk. See also *HDD file*.

Virtual machine template. A virtual machine that can be cloned to multiple virtual machines that will have the same configuration and data that the virtual machine template had.

VM. See *Virtual Machine*.

Windows computer. A physical computer that has a Windows operating system installed.

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