

# Parallels Server

## Reference Guide

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# Contents

<b>Introduction</b>	<b>4</b>
About Parallels Server .....	5
About This Guide .....	6
Organization of This Guide .....	6
Documentation Conventions .....	6
Getting Help .....	7
Feedback .....	8
<b>prlctl Basics</b>	<b>9</b>
<b>prlctl Parameters</b>	<b>10</b>
Matrix of prlctl Commands.....	10
Server Connection Parameters .....	11
prlctl create .....	12
prlctl start, prlctl stop, and prlctl reset .....	15
prlctl delete .....	16
prlctl clone .....	16
prlctl list .....	17
prlctl pause, prlctl suspend, prlctl resume.....	18
prlctl register and prlctl unregister .....	19
prlctl capture .....	19
prlctl server .....	20
prlctl set .....	20
Device Management Parameters .....	22
Hard Disk Drive Management Parameters .....	23
DVD-ROM and CD-ROM Drive Management Parameters .....	25
Floppy Disk Drive Management Parameters.....	26
Network Adapter Management Parameters .....	27
Serial Port Management Parameters.....	28
Parallel Port Management Parameters .....	29
Sound Device Management Parameters .....	30
Removing Devices from Virtual Machine.....	30
<b>Glossary</b>	<b>31</b>
<b>Index</b>	<b>33</b>

---

**CHAPTER 1****Introduction****In This Chapter**

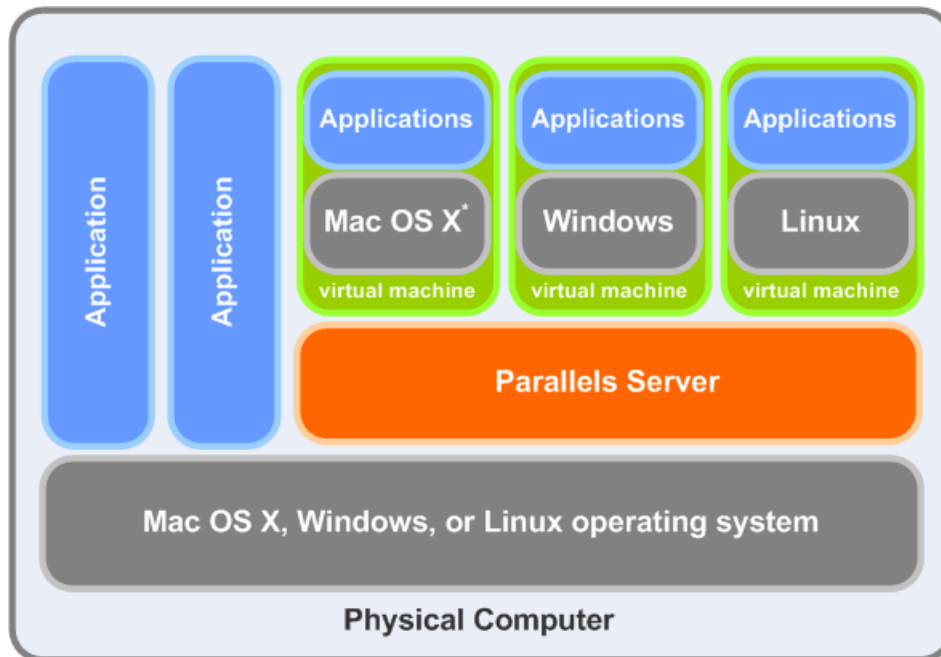
About Parallels Server .....	5
About This Guide .....	6
Getting Help .....	7
Feedback .....	8

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## About Parallels Server

Parallels Server is a cross-platform software that enables you to efficiently use your physical computer's hardware resources by sharing them between multiple virtual machines created on this computer. Parallels Server can be installed on any Intel VT-x and AMD-V based Mac, PC, or bare-metal computer that complies with the system requirements.

With Parallels Server, you can create virtual machines on a computer with a Mac OS X, Windows, or Linux primary OS installed and make them accessible to other computers on the network. Parallels Management Console included in the Parallels Server package enables you to control virtual machines both locally and remotely. You can install Parallels Server on a physical server and then create, run and configure virtual machines using Parallels Management Console, Parallels Command Line Tool, or other client application installed on the same computer or other computer on the network. You can also create your own applications using the Parallels SDK package that is installed together with Parallels Server.



\* You can install Mac OS X Server v10.5 on top of Mac OS X operating systems only.

Parallels Server enables you to

- Create multiple virtual machines with different operating systems on a single physical computer.
- Work in two or more operating systems simultaneously on the same computer desktop.
- Optimize the physical server resources usage.
- Simplify virtual machines provision by creating virtual machine templates that can be deployed to multiple virtual machines.
- Use a variety of tools to manage Parallels Server and its virtual machines.
- Manage several servers at a time using Parallels Management Console.
- Remotely access the virtual machine's graphical console.

## About This Guide

This guide is a complete reference on the Parallels Command Line Tool - `prlctl` - allowing you to manage servers running the Parallels Server software and virtual machines hosted on these servers.

The primary audience for this guide is anyone who is looking for an explanation of a particular `prlctl` option or is seeking for a command to perform a certain task in the Parallels Server context.

## Organization of This Guide

Chapter 2, `prlctl` Basics, familiarizes you with the basics of the `prlctl` utility functioning.

Chapter 3, `prlctl` Parameters, describes all available `prlctl` commands together with the options and switches that can be passed to them.

## Documentation Conventions

The table below presents the conventions used in this guide.

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

---

# Getting Help

Parallels Server offers several options for accessing necessary information:

## Parallels Server Help

In-product Parallels Server Help is available through the **Help** menu of the Parallels Management Console.

To open Parallels Server Help:

- Choose **Parallels Management Console Help** from the **Help** menu.
- Press the **F1** key on the keyboard to display the help page that corresponds to the currently open assistant or window.

## Parallels Server PDF Documentation

Parallels Server is supplied with a number of PDF guides available online or through the resources installed with Parallels Server.

- **Getting Started With Parallels Server.** This guide contains basic information about Parallels Server, including its installation and usage.
- **Parallels Server Administration Guide.** This document contains extensive information about managing Parallels Server and its virtual machines.
- **Parallels Virtual Machine Guide.** This guide contains information about virtual machines used in Parallels Server.
- **Parallels Server Transporter Guide.** This guide contains extensive information on using Parallels Server Transporter.
- **Parallels Server Explorer User Guide.** This guide contains information on using Parallels Server Explorer utility.
- **Parallels Server Image Tool User Guide.** This guide contains information on using Parallels Server Image Tool utility.
- **Parallels Server Reference Guide.** This guide contains information on using Parallels Command Line Tool.
- **Parallels Server Programmer's Guide.** This guide contains information on using Parallels Server SDK package.
- **Parallels Server Installation Guide for Bare Metal Computers.** This guide provides information on installing Parallels Server components on bare-metal computers.
- **Parallels Server Installation Guide for Mac.** This guide provides information on installing Parallels Server components on Mac.
- **Parallels Server Installation Guide for Windows.** This guide provides information on installing Parallels Server components on Windows.
- **Parallels Server Installation Guide for Linux.** This guide provides information on installing Parallels Server components on Linux.

All these PDF documents are available online at Parallels Server Documentation page <http://www.parallels.com/en/support/server/documentation/>.

For PDF documents installed together with Parallels Server, browse the following folder:

- On Mac OS X: /Library/Applications/Parallels/Parallels Management Console/Contents/Resources/English.lproj.
- On 32-bit Windows: C:\Program Files\Parallels\Parallels Server\Documentation\.
- On 64-bit Windows: C:\Program Files (x86)\Parallels\Parallels Server\Documentation\.
- On Linux: /usr/share/parallels-server/docs/.

### Parallels Website

Explore the Parallels Support page (<http://www.parallels.com/en/support/>) that includes product help files, the FAQ section, and the Knowledge Base.

---

## Feedback

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

The Parallels documentation forum is the ideal place for your comments and suggestions. It is regularly monitored by the members of the Parallel technical documentation department, so it is likely that you will receive a reply to your post before long.

Note that new users will be asked to fill in a short registration form before being able to post. Registering will allow you to participate not only in the documentation forum discussions, but in all the other Parallels forums as well.

## CHAPTER 2

# prlctl Basics

The `prlctl` Parallels Command Line Tool is a utility enabling you to manage servers running the Parallels Server software and virtual machines hosted on these servers in the same way you would manage them using Parallels Management Console. Users can make use of the `prlctl` utility in one of the following ways:

- run the utility from the command prompt or
- include special utility calls in their automation scripts.

The `prlctl` utility is an integral part of the Parallels Server distribution set and is provided with each of the supported platforms: Mac, Linux, and Windows. This utility can be used to manage both local and remote servers having the Parallels Server software installed. `prlctl` uses the Parallels API (Application Programming Interface) to communicate with the Parallels Servers software.

## CHAPTER 3

# prctl Parameters

This chapter documents the command-line options and switches that can be used with the `prctl` utility.

## In This Chapter

Matrix of <code>prctl</code> Commands .....	10
Server Connection Parameters .....	11
<code>prctl create</code> .....	12
<code>prctl start</code> , <code>prctl stop</code> , and <code>prctl reset</code> .....	15
<code>prctl delete</code> .....	16
<code>prctl clone</code> .....	16
<code>prctl list</code> .....	17
<code>prctl pause</code> , <code>prctl suspend</code> , <code>prctl resume</code> .....	18
<code>prctl register</code> and <code>prctl unregister</code> .....	19
<code>prctl capture</code> .....	19
<code>prctl server</code> .....	20
<code>prctl set</code> .....	20

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## Matrix of `prctl` Commands

The `prctl` utility allows you to manage servers running the Parallels Server software and virtual machines hosted on these servers. It has the following syntax:

```
prctl command <ID|name> [options]
                    [-l user_name[:passwd]@server]
```

where *command* can be one of the following:

Group Name	Description
<code>create</code>	Used to create a new virtual machine on the Parallels server.
<code>list</code>	Used to list the virtual machines currently existing on the Parallels server and display detailed information on them.
<code>delete</code>	Used to remove an existing virtual machine from the Parallels server.
<code>start</code>	Used to start a virtual machine.
<code>stop</code>	Used to stop a virtual machine.
<code>reset</code>	Used to consecutively stop and start a virtual machine.
<code>suspend</code>	Used to save the current state of a virtual machine.
<code>resume</code>	Used to restore a virtual machine from its suspended state.

<code>set</code>	Used to manage different virtual machine parameters, including VM virtual devices.
<code>clone</code>	Used to create a clone of an existing virtual machine.
<code>pause</code>	Used to pause a virtual machine.
<code>register</code>	Used to register a virtual machine with the Parallels server.
<code>unregister</code>	Used to unregister a registered virtual machine from the Parallels server.
<code>capture</code>	Used to make snapshots of virtual machines running on the Parallels server.
<code>server</code>	Used to display detailed information on the Parallels server and to shut it down.

Detailed information on each command is provided in the following subsections.

---

## Server Connection Parameters

The way the `prlctl` utility connects to the Parallels server depends on the parameters passed to the utility during its execution:

- If no connection parameters are specified, `prlctl` assumes that the command is run on the local server. In this case the utility has the following syntax:

```
prlctl command [<ID|name>] [options]
```

- If you specify a user name but omit the server parameters, `prlctl` will run the command on the local server on behalf of the specified user. In this case it has the following syntax:

```
prlctl command [<ID|name>] [options] -l user
```

- If you specify the appropriate user credentials and server parameters (i.e. the server IP address or hostname and, if necessary, the port number), `prlctl` will establish a connection to the specified remote server, log in to this server using the indicated user credentials, and run the command on the remote server. In this case the utility has the following syntax:

```
prlctl command [<ID|name>] [options] [-l user:passwd@server
```

or

```
prlctl command [<ID|name>] [options] -p path -l user@server
```

The full list of server connection parameters that can be used with `prlctl` is presented in the following table:

Parameter Name	Description
<code>-l, --login</code>	Sets the login parameters for <code>prlctl</code> to connect to a remote Parallels server or defines the user on behalf of which the command is to be run on the local Parallels server.
<code>user</code>	The name of the user: <ul style="list-style-type: none"> <li>▪ to log in to a remote Parallels server (if the server parameters are specified);</li> <li>▪ on behalf of which the command is to be run on the local Parallels server (if the server parameters are omitted).</li> </ul>
<code>passwd</code>	The password for accessing the remote Parallels server.

<code>-p, --read-passwd <i>path</i></code>	The path to the file containing the password for accessing the remote Parallels server.
<code><i>server</i></code>	The IP address or hostname of the remote Parallels server.
<code>-v, --verbose <i>number</i></code>	Sets the verbosity level for the executed command. The greater number you specify, the more verbose output the command will produce.

---

## prlctl create

The `prlctl create` command is used to create new virtual machines on the Parallels server. The command syntax is as follows:

```
prlctl create <name> [-c, --config <path>][--location <path>]
[-v, --verbose <number>]
prlctl create <name> {-o, --ostype <name> | -d, --distribution <name>}
[--location <path>] [-v, --verbose <number>]
prlctl create <name> --ostemplate <name> [--location <path>]
[-v, --verbose <number>]
```

The parameters that can be used with this command are explained in the table below:

Parameter Name	Description
<code><i>name</i></code>	The name to be assigned to the virtual machine. If it consists of two or more words separated by spaces, the VM name should be quoted (e.g. "My Virtual Machine").
<code>--location <i>path</i></code>	The path to the directory on the Parallels server where all configuration files of the newly created virtual machine are to be stored. If the <code>--location</code> parameter is omitted, the VM files are automatically placed to the following directory: <ul style="list-style-type: none"> <li>▪ on servers running the MAC operating system (OS): /Users/Shared/Parallels;</li> <li>▪ on servers running the Windows OS: C:\Documents and Settings\All Users\Documents\Parallels;</li> <li>▪ on servers running the Linux OS: /Users/Shared/Parallels.</li> </ul>
<code>-c, --config <i>path</i></code>	The path to the <code>config.pvs</code> configuration file of an existing virtual machine that you wish to use as the basis for creating a new VM.

`-o, --ostype name`

The operating system family the guest OS you wish to install inside the virtual machine belongs to. It can be one of the following:

- windows;
- linux;
- macos;
- feebbsd;
- os2;
- msdos;
- netware;
- solaris;
- other (specify this option if the operating system family you are using is not listed above).

- d, name*      `--distribution` The version of the operating system to be installed inside the newly created virtual machine. It can be one of the following:
- win-311;
  - win-95;
  - win-98;
  - win-me;
  - win-nt;
  - win-2000;
  - win-xp;
  - win-2003;
  - win-vista;
  - win-2008;
  - win (specify this option if the Windows OS version you are using is not listed above);
  - rhel;
  - suse;
  - debian;
  - fedora-core (specify this option for all Fedora Core distributions except for Fedora Core 5);
  - fc-5;
  - ubuntu;
  - mandriva;
  - macos-10.4;
  - macos-10.5;
  - freebsd-4;
  - freebsd-5;
  - freebsd-6;
  - freebsd-7;
  - freebsd;
  - msdos-6.22;
  - msdos (specify this option for all MS-DOS operating systems except for MS-DOS 6.22);
  - os2-3;
  - os2-4;
  - os-45;
  - ecomstation-1.1;
  - ecomstation-1.2;
  - os2 (specify this option for all OS/2 operating systems except for the ones listed above);
  - netware-4;
  - netware-5;
  - netware-6;
  - netware (specify this option for all NetWare operating systems except for the ones listed above);
  - solaris-9;
  - solaris-10;

	<ul style="list-style-type: none"> <li>▪ <code>solaris</code> (specify this option for all Solaris operating systems except for the ones listed above);</li> <li>▪ <code>qnx</code>;</li> <li>▪ <code>openstep</code>;</li> <li>▪ <code>other</code> (use this option if the operating system version you are using is not listed above).</li> </ul>
<code>--ostemplate name</code>	<p>The name of the folder containing one or more configuration files to be used as the basis for the virtual machine creation. If it consists of two or more words separated by spaces, the folder name should be quoted (e.g. "My Virtual Machine Template").</p> <p>You can use the <code>prlctl list</code> command to get the list of folders that currently exist on the Parallels server and can be used for the VM creation.</p>
<code>-v, --verbose number</code>	Sets the verbosity level for the <code>prlctl create</code> command. The greater number you specify, the more verbose output the command will produce.

---

**Note:** All virtual machines you create using the `prlctl create` command are located on the Parallels server to which you are currently logged on, even if you are running the command on a remote server.

---

## prlctl start, prlctl stop, and prlctl reset

These three commands have the same syntax and take no obligatory arguments:

```
prlctl start <ID|name> [-v, --verbose number]
prlctl stop <ID|name> [--kill] [-v, --verbose number]
prlctl reset <ID|name> [-v, --verbose number]
```

The commands are used to perform the following actions:

- `prlctl start` is used to start a virtual machine;
- `prlctl stop` is used to stop a virtual machine;
- `prlctl reset` is used to consecutively perform the stopping and starting of a virtual machine.

The options available to the commands are explained in the table below:

Parameter Name	Description
<code>name</code>	The name of the virtual machine to be started/stopped/reset. You can start virtual machines that are stopped, paused, or suspended.
<code>ID</code>	<p>The unique ID of the virtual machine to be started/stopped/reset. You can start virtual machines that are stopped, paused, or suspended.</p> <p>You can use the <code>prlctl list</code> command to learn what ID is assigned to the virtual machine.</p>

<code>--kill</code>	If a virtual machine becomes corrupted for some reason or other (e.g. due to an error in an application), you can use this option to forcibly stop the VM by killing all the processes running inside it.
<code>-v, --verbose number</code>	Sets the verbosity level for the executed command. The greater number you specify, the more verbose output the command will produce.

---

## prlctl delete

The `prlctl delete` command is used to permanently remove any of your virtual machines from the Parallels server. The command has the following syntax:

```
prlctl delete <ID|name> [-v, --verbose number]
```

The options available to this command are:

Parameter Name	Description
<i>name</i>	The name of the virtual machine to be deleted.
<i>ID</i>	The unique ID of the virtual machine to be deleted.  You can use the <code>prlctl list</code> command to learn what ID is assigned to the virtual machine.
<code>-v, --verbose number</code>	Sets the verbosity level for the <code>prlctl delete</code> command. The greater number you specify, the more verbose output <code>prlctl delete</code> will produce.

---

## prlctl clone

The `prlctl clone` command is used to clone a virtual machine within the Parallels server, i.e. to create a complete copy of an existing virtual machine with a different unique ID, name, and path to its configuration files. The command syntax is as follows:

```
prlctl clone <ID|name> --name <new_name> [--template]
           [--location <path>] [-v, --verbose number]
```

The command options are the following:

Parameter Name	Description
<i>ID</i>	The ID of the virtual machine to be cloned.  You can use the <code>prlctl list</code> command to learn what ID is assigned to the virtual machine.
<i>name</i>	The name of the virtual machine to be cloned.
<i>new_name</i>	The name to be assigned to the cloned virtual machine.

<code>--template</code>	Tells the <code>prlctl clone</code> command to create a template instead of creating a virtual machine. You can use then this template as the basis for creating new virtual machines.
<code>--location &lt;path&gt;</code>	The path on the Parallels server where all configuration files of the cloned virtual machine are to be stored. If the <code>--location</code> parameter is omitted, the VM files will be placed to the following directories: <ul style="list-style-type: none"> <li>▪ on servers running the MAC operating system (OS): <code>/Users/Shared/Parallels</code>;</li> <li>▪ on servers running the Windows OS: <code>C:\Documents and Settings\All Users\Documents\Parallels</code>;</li> <li>▪ on servers running the Linux OS: <code>/Users/Shared/Parallels</code>.</li> </ul>
<code>-v, --verbose number</code>	Sets the verbosity level for the <code>prlctl clone</code> command. The greater number you specify, the more verbose output <code>prlctl clone</code> will produce.

---

## prlctl list

The `prlctl list` command is used to display a list of virtual machines currently registered on the Parallels server together with additional information about these virtual machines. It has the following syntax:

```
prlctl list [-a, --all] [-t, --template] [--no-header]
           [-o, --output name[,name...]] [-s, --sort name|-name]
           [-v, --verbose number]
prlctl list --info [<ID|name>] [-v, --verbose number]
```

The options that can be used with this command are explained in the table below:

Parameter Name	Description
<code>-a, --all</code>	Lists all virtual machines currently registered on the Parallels server. By default, only running virtual machines are shown.
<code>-t, --template</code>	Lists the templates that currently exist on the Parallels server and that can be used as the basis for the virtual machine creation. In this case a template denotes a folder containing one or more VM configuration files.
<code>--no-header</code>	Do not display column headers.
<code>-i, --info</code>	Displays detailed information on all virtual machines currently registered on the Parallels server. You can specify the virtual machine ID or name to view detailed information about this VM only.
<i>ID</i>	The ID of the virtual machine whose detailed information you wish to view.
<i>name</i>	The name of the virtual machine whose detailed information you wish to view.

<code>-o, --output <i>name</i></code>	This option is used to display only particular information about the virtual machine. Currently, you can use the following parameters after the <code>--output</code> option: <ul style="list-style-type: none"> <li>▪ <code>uuid</code>: the ID assigned to the virtual machine;</li> <li>▪ <code>name</code>: the name assigned to the virtual machine;</li> <li>▪ <code>status</code>: the current status of the virtual machine.</li> </ul> To display a number of parameters in a single output, they should be separated with commas (e.g. <code>uuid,name</code> ).
<code>-s, --sort <i>name</i></code>	Sorts the virtual machines in the list by the specified parameter. If "-" is given before the name of the parameter, the sorting order is reversed.
<code>-v, --verbose <i>number</i></code>	Sets the verbosity level for the <code>prlctl list</code> command. The greater number you specify, the more verbose output <code>prlctl list</code> will produce.

---

## prlctl pause, prlctl suspend, prlctl resume

These commands are used to pause, suspend, and resume a virtual machine, respectively. The commands have the following syntax:

```
prlctl pause <ID|name> [-v, --verbose number]
prlctl suspend <ID|name> [-v, --verbose number]
prlctl resume <ID|name> [-v, --verbose number]
```

The commands are used to perform the following actions:

- `prlctl pause` is used to pause the specified virtual machine;
- `prlctl suspend` is to save the current state of the specified virtual machine by suspending it;
- `prlctl resume` is used to resume the virtual machine that was suspended with the `prlctl suspend` command.

The options available to the commands are explained in the table below:

Parameter Name	Description
<code><i>name</i></code>	The name of the virtual machine to be paused/suspended/resumed.
<code><i>ID</i></code>	The unique ID of the virtual machine you wish to pause/suspend/resume.  You can use the <code>prlctl list</code> command to learn what ID is assigned to the virtual machine.
<code>-v, --verbose <i>number</i></code>	Sets the verbosity level for the executed command. The greater number you specify, the more verbose output the command will produce.

---

## prlctl register and prlctl unregister

The `prlctl register` and `prlctl unregister` commands are used to register and unregister an existing virtual machine on the Parallels server, respectively. The commands syntax is as follows:

```
prlctl register <path> [-v, --verbose number]
prlctl unregister <ID|name> [-v, --verbose number]
```

Options available to this command are:

Parameter Name	Description
<i>path</i>	The full path to the <code>config.pvs</code> configuration file of the virtual machine to be registered.
<i>name</i>	The name of the virtual machine to be unregistered.
<i>ID</i>	The unique ID of the virtual machine to be unregistered.  You can use the <code>prlctl list</code> command to learn what ID is assigned to the virtual machine.
<i>-v, --verbose number</i>	Sets the verbosity level for the executed command. The greater number you specify, the more verbose output the command will produce.

---

## prlctl capture

The `prlctl capture` command is used to make snapshots of running virtual machines. It has the following syntax:

```
prlctl capture <ID|name> --file <name>
```

The options that can be used with this command are explained in the table below:

Parameter Name	Description
<i>ID</i>	The ID of the virtual machine whose detailed information you wish to view.
<i>name</i>	The name of the virtual machine whose detailed information you wish to view.
<i>--file name</i>	The name of the file where the resulting snapshot is to be stored. You can specify the full path to the file or only its name. In the latter case, the file will be saved in your working directory.
<i>-v, --verbose number</i>	Sets the verbosity level for the <code>prlctl list</code> command. The greater number you specify, the more verbose output <code>prlctl capture</code> will produce.

---

## prlctl server

The `prlctl server` command is used to get detailed information on the Parallels server you are currently working with. You can also use this command to shut down the server. The command syntax is as follows:

```
prlctl server <shutdown|info> [-v, --verbose number]
```

The options that can be used with `prlctl server` are explained in the table below:

Parameter Name	Description
<code>info</code>	Displays detailed information on the Parallels server configuration.
<code>shutdown</code>	Shuts down the Parallels server.
<code>-v, --verbose number</code>	Sets the verbosity level for the <code>prlctl server</code> command. The greater number you specify, the more verbose output the command will produce.

---

## prlctl set

The `prlctl set` command is used for setting and configuring virtual machine parameters. The command has the following syntax:

```
prlctl set <ID|name> [--cpus <number>] [--memsize <number>]
  [--videosize <number>] [--description <description>]
  [--autostart <on|off|auto>] [--autostart-delay <number>]
  [--autostop <stop|suspend>] [--applyconfig <conf>]
  [--start-as-user administrator|owner|user:passwd]
  [device_management_options] [-v, --verbose number]
```

The general command options are the following:

Parameter Name	Description
<code>ID</code>	The ID of the virtual machine whose parameters you wish to set/configure.
<code>name</code>	The name of the virtual machine whose parameters you wish to set/configure.
<code>--cpus number</code>	If the Parallels server has more than one CPU installed, this option allows you to set the number of virtual CPUs to be available to the virtual machine.
<code>--memsize number</code>	The amount of memory that can be consumed by the virtual machine, in megabytes.
<code>--videosize number</code>	The amount of memory to be allocated to the virtual machine graphic card.
<code>--description VM_description</code>	Short description of the virtual machine.

---

<code>--autostart on off auto</code>	<p>Defines the virtual machine start-up options:</p> <ul style="list-style-type: none"> <li>▪ <code>on</code>: the virtual machine is started automatically on the Parallels server boot.</li> <li>▪ <code>off</code>: the virtual machine is left in the stopped state on the Parallels server boot. This is the default VM start-up mode.</li> <li>▪ <code>auto</code>: resume the state that the virtual machine had when the Parallels server was turned off.</li> </ul> <p>If you set this option to <code>on</code> or <code>auto</code>, you should additionally specify the <code>--start-as-user</code> option.</p>
<code>--autostart-delay number</code>	Sets the time interval when the virtual machine is to start after the Parallels server boot.
<code>--autostop stop suspend</code>	<p>Defines the action the virtual machine should perform on the Parallels server shutting down. It can be set to one of the following:</p> <ul style="list-style-type: none"> <li>▪ <code>stop</code>: the virtual machine is stopped when you shut down the virtual machine.</li> <li>▪ <code>suspend</code>: the virtual machine is suspended when the Parallels server is shut down.</li> </ul>
<code>--start-as-user administrator owner user:passwd</code>	<p>Specifies under which account the virtual machine is to be run:</p> <ul style="list-style-type: none"> <li>▪ <code>administrator</code>: run the virtual machine as the Parallels server administrator;</li> <li>▪ <code>owner</code>: run the virtual machine as its owner;</li> <li>▪ <code>user</code>: run the virtual machine as the specified user.</li> </ul>
<code>--applyconfig conf</code>	The full path to the <code>config.pvs</code> configuration file of an existing virtual machine you wish to base your virtual machine on.
<code>device_management_options</code>	A group of parameters used to manage VM devices. Detailed description of all available parameters is given in the next subsection.
<code>-v, --verbose number</code>	Sets the verbosity level for the <code>prlctl set</code> command. The greater number you specify, the more verbose output the command will produce.

## Device Management Parameters

The `prlctl set` command can be used to manage your virtual machine devices: hard disk drives, CD-ROM drives, floppy disks, network cards, etc. The command syntax is as follows:

```
prlctl set <ID|name> --device-add <name> <options>
prlctl set <ID|name> --device-set <name> <options>
prlctl set <ID|name> --device-del <name>
```

All device-related parameters can be subdivided into the following categories:

- parameters related to managing VM hard disk drives;
- parameters related to managing VM DVD-ROM and CD-ROM drives;
- parameters related to managing VM network cards;
- parameters related to managing VM floppy disk drives;
- parameters related to managing VM serial ports;
- parameters related to managing VM parallel ports;
- parameters related to managing VM sound cards.

Each group of parameters is explained in the following subsections in detail.

---

**Note:** All operations on virtual machine devices (adding, modifying, or removing a device) can be performed on a stopped virtual machine only. An attempt to perform any of these operations on a running virtual machine will result in error.

---

## Hard Disk Drive Management Parameters

This group of parameters is used to create new virtual hard disk drives for your virtual machines and configure their properties. The parameters syntax is as follows:

```
prlctl set <ID|VM_name> --device-add hdd [--image <name>]
    [--type <expand|plain>][--size <number>][--split]
    [--iface <ide|scsi>][--position <number>]
    [--enable|--disable]
prlctl set <ID|VM_name> --device-add hdd --device <name>
    [--iface <ide|scsi>][--position <number>]
    [--enable|--disable]
prlctl set <ID|VM_name> --device-set hddN [--image <name>]
    [--type <expand|plain>][--size <number>][--split]
    [--iface <ide|scsi>][--position <number>]
    [--enable|--disable]
prlctl set <ID|VM_name> --device-set hddN --device <name>
    [--iface <ide|scsi>][--position <number>]
    [--enable|--disable]
```

All VM disk drive-related parameters are explained in the following table:

Parameter Name	Description
<code>--device-add</code>	Adds a virtual hard disk drive to the virtual machine. By default, the <code>prlctl create</code> command creates a virtual machine with only one disk drive. However, you can use <code>--device-add</code> to add additional virtual disk drives to your virtual machine.
	<b>Note:</b> You can connect up to four IDE devices and up to seven SCSI devices to a virtual machine. Any of these devices can be a virtual hard disk or DVD/CD-ROM drive.
<code>--device-set</code>	Used to configure certain settings of the specified VM hard disk drive.
<code>hdd</code>	Informs the <code>prlctl set</code> command that the device to be added to the virtual machine is a hard disk drive. By default, <code>prlctl set</code> creates a virtual disk drive
<code>hddN</code>	The name of the virtual hard disk drive whose parameters you wish to configure where <i>N</i> denotes the disk drive index number. You can learn this number by running the <code>prlctl list</code> command with the <code>--info</code> option.
<code>--device name</code>	Tells the <code>prlctl set</code> command to connect the specified physical hard disk on the Parallels server to the virtual machine. Using this option allows you to run guest operating systems (e.g. Mac OS X, Linux, or Windows) from existing physical disk partitions on the Parallels server.
	When used with <code>--device-set</code> , this parameter configures the properties of the VM disk drive connected the specified physical partition.
	You can use the <code>prlctl server</code> command to learn what physical hard disk drives currently exist on the Parallels server.

---

<code>--image <i>name</i></code>	<p>The name of the file to be used for emulating the VM virtual disk drive. If this option is omitted and the <code>--device</code> option is not indicated either, a new file is created inside the directory storing all VM-related configuration files and assigned the name of <code>harddiskN.hdd</code> (where <i>N</i> is the index number of the newly added disk drive).</p> <hr/> <p><b>Note:</b> In fact, <code>harddiskN.hdd</code> is a directory keeping a number of disk-related files. However, all these disk-related files are regarded by the <code>prlctl</code> utility as a single entity. So, for the sake of simplicity we designate these directories as files.</p> <hr/>
<code>--type <i>expand plain</i></code>	<p>The type of the virtual disk drive. It can be set to one of the following:</p> <ul style="list-style-type: none"> <li>▪ <i>expanding</i>. Virtual disks of this type are small initially and grow in size as you add data to the disk. By default, all newly created disk drives are of the 'expanding' type.</li> <li>▪ <i>plain</i>. Virtual disks of this type have the fixed size from the moment of their creation. Plain disks provide enhanced performance as compared to expanding disks. Please make sure that you have enough disk space on the Parallels server before creating a plain virtual disk drive.</li> </ul>
<code>--size <i>number</i></code>	<p>The size of the hard disk drive, in megabytes. By default, the size of all newly created disk drives is set to 32 Gb.</p>
<code>--split</code>	<p>Splits the hard disk drive into 2 Gb pieces. For example, you should split your virtual disk if it is stored on a file system that cannot support files larger than 2 Gb (e.g. FAT16).</p>
<code>--iface <i>ide scsi</i></code>	<p>The interface type of the VM disk drive. It can be one of the following:</p> <ul style="list-style-type: none"> <li>▪ IDE (Integrated Drive Electronics) and</li> <li>▪ SCSI (Small Computer Systems Interface).</li> </ul> <p>By default, the interface type of the newly added disk drive is set to 'SCSI'.</p>
<code>--position <i>number</i></code>	<p>The SCSI or IDE device identifier to be used for the disk drive. The allowed ID ranges are the following:</p> <ul style="list-style-type: none"> <li>▪ for IDE devices: 0:0, 0:1, 1:0, 1:1;</li> <li>▪ for SCSI device: 0:0, 1:0, 2:0, 3:0, 4:0, 5:0, 6:0.</li> </ul> <p>You can use one of the following formats for specifying IDs: <i>ID:bus</i>, <i>ID-bus</i>, <i>ID</i>. For example, if you specify 3:0 (or 3-0 or 3) as <i>number</i> for a SCSI drive, the guest OS will see the drive as having ID 3 on SCSI bus 0.</p>
<code>--enable</code>	<p>Enables the specified disk drive. All newly added disk drives are enabled by default (provided the <code>--disable</code> option is omitted).</p>
<code>--disable</code>	<p>Temporarily disables the operations with the specified disk drive. The disk drive itself is not removed from the virtual machine configuration.</p>

## DVD-ROM and CD-ROM Drive Management Parameters

This group of parameters is used to manage virtual machine DVD-ROM and CD-ROM drives. The parameters syntax is as follows:

```
prlctl set <ID|VM_name> --device-add cdrom --image image_name
    [--iface <ide|scsi>] [--position number]
    [--enable|--disable] [--connect|--disconnect]
prlctl set <ID|VM_name> --device-add cdrom --device device_name
    [--iface <ide|scsi>] [--position number]
    [--enable|--disable] [--connect|--disconnect]
prlctl set <ID|VM_name> --device-set cdromN
    {--device <name>|--image <name>} [--iface <ide|scsi>]
    [--position <number>][--enable|--disable]
    [--connect|--disconnect]
```

All VM DVD/CD-ROM drive-related parameters are explained in the following table:

Parameter Name	Description
--device-add	Adds a DVD/CD-ROM drive to the virtual machine.  <b>Note:</b> You can connect up to four IDE devices and up to seven SCSI devices to a virtual machine. Any of these devices can be a virtual hard disk or DVD/CD-ROM drive.
--device-set	Used to configure certain settings of the specified VM DVD/CD-ROM drive.
cdrom	Informs the <code>prlctl set</code> command that the device to be added to the virtual machine is a DVD/CD-ROM drive.
cdromN	The name of the DVD/CD-ROM drive whose parameters you wish to configure where <i>N</i> denotes the drive index number.  You can learn this number by running the <code>prlctl list</code> command with the <code>--info</code> option.
--device name	Tells the <code>prlctl set</code> command to connect a physical DVD/CD-ROM drive (either on the Parallels server or on the client computer where you are running the <code>prlctl</code> utility) with the specified name to the virtual machine.
--image name	Tells the <code>prlctl set</code> command to connect an existing image file (either on the Parallels server or on the client computer where you are running the <code>prlctl</code> utility) with the specified name to the virtual machine. Currently, the following image file formats are supported: <code>.iso</code> , <code>.cue</code> , <code>.ccd</code> , and <code>.dmg</code> . Images must be non-compressed and non-encrypted.
--iface ide scsi	The interface type of the DVD/CD-ROM drive. It can be one of the following: <ul style="list-style-type: none"> <li>▪ IDE (Integrated Drive Electronics) and</li> <li>▪ SCSI (Small Computer Systems Interface).</li> </ul> By default, the interface type of the newly added disk drive is set to <code>scsi</code> .

<code>--position <i>number</i></code>	<p>The SCSI or IDE device identifier to be used for the DVD/CD-ROM drive. The allowed ID ranges are the following:</p> <ul style="list-style-type: none"> <li>▪ for IDE devices: 0:0, 0:1, 1:0, 1:1;</li> <li>▪ for SCSI device: 0:0, 1:0, 2:0, 3:0, 4:0, 5:0, 6:0.</li> </ul> <p>You can use one of the following formats for specifying IDs: <i>ID:bus</i>, <i>ID-bus</i>, <i>ID</i>. For example, if you specify 3:0 (or 3-0 or 3) as <i>number</i> for a SCSI drive, the guest OS will see the drive as having ID 3 on SCSI bus 0.</p>
<code>--enable</code>	Enables the specified DVD/CD-ROM drive. All newly added DVD/CD-ROM drives are enabled by default (provided the <code>--disable</code> option is omitted).
<code>--disable</code>	Temporarily disables the operations with the newly added DVD/CD-ROM drive.
<code>--connect</code>	Use this option to have the specified DVD/CD-ROM drive automatically connected to the virtual machine on its start.
<code>--disconnect</code>	Use this option if you do not wish to have the specified DVD/CD-ROM drive automatically connected to the virtual machine on its start.

## Floppy Disk Drive Management Parameters

This group of parameters is used to manage floppy disk drives of your virtual machines. The parameters syntax is as follows:

```
prlctl set <ID|VM_name> --device-add fdd [--device <name>]
           [--enable|--disable][--connect|--disconnect]
prlctl set <ID|VM_name> --device-set fdd [--device <name>]
           [--enable|--disable][--connect|--disconnect]
```

All VM floppy disk drive-related parameters are explained in the following table:

Parameter Name	Description
<code>fdd</code>	Informs the <code>prlctl set</code> command that the device to be added to the virtual machine is a floppy disk drive.
<code>--device-add</code>	Adds a new floppy disk drive to the virtual machine.
<b>Note:</b> You can connect only one floppy disk drive to a virtual machine.	
<code>--device-set</code>	Used to configure certain settings of the specified floppy disk drive.
<code>--device <i>name</i></code>	The name of the physical floppy disk drive on the Parallels server to be connected to the virtual machine. If you omit this option, a floppy drive image emulating the VM floppy disk drive will be created.
<code>--enable</code>	Enables the specified floppy disk drive. All newly added floppy drives are enabled by default (provided the <code>--disable</code> option was omitted during the drive creation).
<code>--disable</code>	Temporarily disables the operations with the specified floppy disk drive; the drive itself is not removed from the virtual machine configuration.

<code>--connect</code>	Use this option to have the specified floppy disk drive automatically connected to the virtual machine on its start.
<code>--disconnect</code>	Use this option if you do not wish to have the specified floppy disk drive automatically connected to the virtual machine on its start.

## Network Adapter Management Parameters

This group of parameters is used to manage virtual machine network adapters. The parameters syntax is as follows:

```
prlctl set <ID|VM_name> --device-add net --type <shared|host>
    [--mac <addr>][--enable|--disable][--connect|--disconnect]
prlctl set <ID|VM_name> --device-add net --type bridged --iface <name>
    [--mac <addr>][--enable|--disable] [--connect|--disconnect]
prlctl set <ID|VM_name> --device-set netN --type <shared|host>
    [--mac <addr>][--enable|--disable][--connect|--disconnect]
prlctl set <ID|VM_name> --device-set netN --type bridged
    --iface <name> [--mac <addr>|auto][--enable|--disable]
    [--connect|--disconnect]
```

All VM network adapter-related parameters are explained in the following table:

Parameter Name	Description
<code>--device-add</code>	Adds a new virtual network adapter to the virtual machine.
<code>--device-set</code>	Used to configure certain settings of the specified virtual network adapter.
<code>net</code>	Informs the <code>prlctl set</code> command that the device to be added to the virtual machine is a virtual network card.
<code>netN</code>	The name of the virtual network adapter whose parameters you wish to configure. You can learn this name by running the <code>prlctl list</code> command with the <code>--info</code> option.
<code>--type</code> <code>shared host bridged</code>	Sets the operating mode of the virtual network adapter. Any VM network adapter can be set to function in one of the following modes: <ul style="list-style-type: none"> <li>▪ <code>host</code>. Select this option if you wish the virtual machine to communicate with the Parallels server and all virtual machines residing on this server. Access to any computers on external networks is not allowed.</li> <li>▪ <code>bridged</code>. Select this option if you wish the virtual machine to access other computers on your local network and in the Internet by means of one of the physical Ethernet adapters installed on your Parallels server.</li> <li>▪ <code>shared</code>. Select this option if you wish to enable the Network Address Translation (NAT) feature for your virtual machine. In this case the virtual machine will share one and the same IP address with the Parallels server when connecting to external networks.</li> </ul>
<code>--iface name</code>	The name of the physical network adapter on the Parallels server to be used for connecting the VM virtual adapter to your local network and the Internet.

<code>--mac <i>addr</i></code>	The MAC address to be assigned to the virtual network adapter. If you omit this option, the MAC address will be automatically generated by the Parallels Server software.
<code>--mac <i>addr</i> auto</code>	Use this option with <code>--device-set</code> to make the Parallels Server software regenerate the MAC address assigned to the specified virtual network adapter.
<code>--enable</code>	Enables the virtual network card. All newly created network adapters are enabled by default (provided the <code>--disable</code> option is omitted).
<code>--disable</code>	Temporarily disables the operations with the newly added network adapter; the adapter itself is not removed from the virtual machine configuration.
<hr/>	
<b>Note:</b> If you start a virtual machine having one or more network adapters disabled, you will be able to enable these adapters only after the VM stopping.	
<hr/>	
<code>--connect</code>	Use this option to have the specified network adapter automatically connected to the virtual machine on its start.
<code>--disconnect</code>	Use this option if you do not wish to have the specified network adapter automatically connected to the virtual machine on its start.

## Serial Port Management Parameters

This group of parameters is used to manage serial port settings of your virtual machines. The parameters syntax is as follows:

```
prlctl set <ID|name> --device-add serial
    {--device <name>|--output <file>|--socket <name>}
    [--enable|--disable][--connect|--disconnect]
prlctl set <ID|name> --device-set serialN
    {--device <name>|--output <file>|--socket <name>}
    [--enable|--disable][--connect|--disconnect]
```

All VM serial port-related parameters are explained in the following table:

Parameter Name	Description
<code>--device-add</code>	Adds a new serial port to the virtual machine.
<hr/>	
<b>Note.</b> You can connect up to four serial ports to a virtual machine.	
<code>--device-set</code>	Used to configure certain settings of the specified serial port.
<code>serial</code>	Informs the <code>prlctl set</code> command that the device to be added to the virtual machine is a serial port.
<code>--device <i>name</i></code>	The number of the serial port on the Parallels server where the newly created VM serial port is to be connected.
<code>--output <i>file</i></code>	The path to the output file where the newly created VM serial port is to be connected.
<code>--socket <i>name</i></code>	The name of the physical socket on the Parallels server where the newly created VM serial port is to be connected.
<code>--enable</code>	Enables the VM serial port. All newly added serial ports are enabled by default (provided the <code>--disable</code> option is omitted).

<code>--disable</code>	Temporarily disables the operations with the newly added serial port.
<code>--connect</code>	Use this option to have the specified serial port automatically enabled inside the virtual machine on its start.
<code>--disconnect</code>	Use this option if you do not wish to have the specified serial port automatically enabled inside the virtual machine on its start.

## Parallel Port Management Parameters

This group of parameters is used to manage parallel port settings of your virtual machines. The parameters syntax is as follows:

```
prlctl set <ID|name> --device-add parallel
    {--device <name>|--output <file_name>}
    [--enable|--disable][--connect|--disconnect]
prlctl set <ID|name> --device-set parallelN
    {--device <name>|--output <file_name>}
    [--enable|--disable][--connect|--disconnect]
```

All parallel port-related parameters are explained in the following table:

Parameter Name	Description
<code>--device-add</code>	Adds a new parallel port to the virtual machine.  <b>Note.</b> You can connect up to three parallel ports to a virtual machine.
<code>--device-set</code>	Used to configure certain settings of the specified parallel port.
<code>parallel</code>	Informs the <code>prlctl set</code> command that the device to be added to the virtual machine is a parallel port.
<code>parallelN</code>	The name of the parallel port whose parameters you wish to configure. You can learn this number by running the <code>prlctl list</code> command with the <code>--info</code> option.
<code>--device name</code>	Connects the VM virtual parallel port to the specified parallel port on the Parallels server.
<code>--output file_name</code>	Connects the VM virtual parallel port to a file with the name of <code>&lt;file_name&gt;</code> on the Parallels server.
<code>--enable</code>	Enables the specified parallel port. All newly added parallel ports are enabled by default (provided the <code>--disable</code> option was omitted during the port creation).
<code>--disable</code>	Temporarily disables the operations with the specified parallel port; the port itself is not removed from the virtual machine configuration.
<code>--connect</code>	Use this option to have the specified parallel port automatically enabled inside the virtual machine on its start.
<code>--disconnect</code>	Use this option if you do not wish to have the specified parallel port automatically enabled inside the virtual machine on its start.

## Sound Device Management Parameters

This group of parameters is used to manage sound device settings of your virtual machines. The parameters syntax is as follows:

```
prlctl set <ID|name> --device-add sound --output <name>
           [--enable|--disable][--connect|--disconnect]
prlctl set <ID|name> --device-set sound --output <name>
           [--enable|--disable][--connect|--disconnect]
```

All VM sound device-related parameters are explained in the following table:

Parameter Name	Description
sound	Informs the <code>prlctl set</code> command that the device to be added to the virtual machine is a sound card.
--output <i>name</i>	The name of the output device on the Parallels server.
--input <i>name</i>	The name of the input device on the Parallels server.
--enable	Enables the specified sound device. All newly added sound devices are enabled by default (provided the <code>--disable</code> option is omitted).
--disable	Temporarily disables the operations with the specified sound device.
--connect	Use this option to have the sound card automatically enabled inside the virtual machine on its start.
--disconnect	Use this option if you do not wish to have the sound card automatically enabled inside the virtual machine on its start.

## Removing Devices from Virtual Machine

The `--device-del` option is used to remove virtual devices that you do not need any more from your virtual machines. It has the following syntax:

```
prlctl set <ID|name> --device-del <name>
```

`--device-del` requires only the name of the device to successfully remove it from the specified virtual machine. You can use the `prlctl list` command to get the list of devices currently existing inside your virtual machine.

---

# Glossary

This glossary defines terms and spells out abbreviations used in Parallels Server help and Parallels Server User Guide. References to terms defined elsewhere in the glossary appear in *italics*.

**Administrator.** A user with server administration privileges.

**Bridged networking.** Virtual machine network connection mode that enables the virtual machine to appear as any other computer on the network, with its own IP address and network name.

**Client computer.** A computer that has *Parallels Management Console* installed.

**Client operating system (client OS).** An operating system of a remote client computer where *Parallels Management Console* is installed.

**Configuration file.** See *PVS file*. Configuration file specifies virtual machine's devices and resources. It is created automatically when you create a new virtual machine.

**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 hard disk in the *guest OS*.

**Guest operating system (guest OS).** Operating system that runs under the virtual machine control.

**HDD file.** A virtual hard disk file used by the virtual machine.

**Host computer.** A physical server Parallels Server application is installed on. This computer hosts Parallels Server virtual machines files.

**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 machine available from the host computer only.

**Localhost.** Physical computer where both Parallels Server and Parallels Management Console, that you use to manage virtual machines, are installed.

**Parallels Server.** Application that enables the user to create *virtual machines* and run them.

**Parallels Management Console.** Parallels Server client application that provides graphical user interface for managing Parallels Server, its virtual machines, preferences, and settings.

**Plain format.** A virtual hard disk format. A plain virtual hard disk image file resides on your 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).** An physical computer operating system where Parallels Server application is installed.

**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.

**Virtual hard disk.** A file or a group of files that emulates virtual machine's hard disk.

**Virtual Machine.** A virtualized PC environment in which an operating system can be installed and run just like in a physical computer.

**Virtual machine files.** Files stored in the virtual machine folder. Virtual machine has at least two files: *configuration file* and *virtual hard disk* file.

**Virtual machine template.** A virtual machine that can be cloned to multiple virtual machines that will have the same configuration that the virtual machine template had.

**VM.** See *Virtual Machine*.

# Index

## A

About

Parallels Server • 5

About Parallels Server • 5

About This Guide • 6

## D

Device Management Parameters • 22

Documentation Conventions • 6

DVD-ROM and CD-ROM Drive Management  
Parameters • 25

## F

Feedback • 8

Floppy Disk Drive Management Parameters •  
26

## G

Getting Help • 7

Glossary • 31

## H

Hard Disk Drive Management Parameters • 23

Help

getting help • 7

## I

Introduction • 4

## M

Matrix of prlctl Commands • 10

## N

Network

kinds of networking • 31

Network Adapter Management Parameters •  
27

## O

Organization of This Guide • 6

## P

Parallel Port Management Parameters • 29

Parallels

Parallels Server • 5

Parallels Server • 5

Primary operating system • 31

prlctl Basics • 9

prlctl capture • 19

prlctl clone • 16

prlctl create • 12

prlctl delete • 16

prlctl list • 17

prlctl Parameters • 10

prlctl pause, prlctl suspend, prlctl resume • 18

prlctl register and prlctl unregister • 19

prlctl server • 20

prlctl set • 20

prlctl start, prlctl stop, and prlctl reset • 15

## R

Removing Devices from Virtual Machine • 30

## S

Serial Port Management Parameters • 28

Server Connection Parameters • 11

Sound Device Management Parameters • 30

## V

Virtual Machine • 31