



Parallels Desktop® 7

Mass Deployment and Management

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CHAPTER 1

Introduction

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About Mass Deployment

Installing Parallels Desktop on a single Mac is a simple and easy to follow procedure that takes very little time. Installing Parallels Desktop on tens or even hundreds of Macs can be a challenging task for administrators. The software will have to be installed and activated on every Mac computer; virtual machines will have to be created from scratch or copied from other locations and registered in Parallels Desktop on every Mac; the MAC addresses of virtual network adapters in all copied virtual machines will have to be changed. All of this can easily become a tedious and time consuming effort.

As a solution to this challenge, Parallels provides a special software package that can be used to mass deploy Parallels Desktop to many Macs at once. The package is available as a free download on the Parallels website at the following location:

<http://download.parallels.com/desktop/tools/pd-autodeploy.zip>

In this document, we will discuss in detail how to use the package to deploy Parallels Desktop and virtual machines simultaneously to multiple Mac computers. You will learn how to prepare the package, add the necessary components to it, make configuration changes if necessary, and then run it remotely on every Mac. These instructions will help you easily deploy Parallels Desktop and virtual machines to as many Macs as you require and save a considerable amount of time and effort.

CHAPTER 2

Creating a Deployment Package

This chapter describes how to prepare the package that can later be used for mass deployment of Parallels Desktop to multiple Mac computers.

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Required Components

Before creating a deployment package, please verify that you have all of the necessary components available. If any of the components are missing, please obtain them first. The components are:

- 1** A copy of Parallels Desktop. You will need the installation disk image file (.dmg), which is the same disk image that is used to install Parallels Desktop on an individual computer.
- 2** A valid Parallels Desktop license number. The license must allow to install Parallels Desktop on the planned number of Macs.
- 3** The `Parallels Desktop Autodeploy.pkg` package. This is a special software package provided by Parallels. The package contains instructions to perform the operations necessary to deploy Parallels Desktop on a remote Mac. The package can be downloaded from <http://download.parallels.com/desktop/tools/pd-autodeploy.zip>.
- 4** If you are planning on deploying virtual machines together with the Parallels Desktop software, you should have them created and configured according to your needs (more on the virtual machine configuration later in this guide).

Once you have all of the components in place, you can proceed to the next section that gives a brief overview of the mass deployment process.

How Does it Work

Mass deployment of Parallels Desktop is performed from the administrator Mac connected to your network. Other Mac computers must be connected to the same network and be accessible from the administrator Mac. To deploy Parallels Desktop, we will use a special software package containing deployment instructions and one of the standard remote computer management tools to send these instructions, together with the necessary software and data, to a number of remote Macs on your network. Parallels provides the `Parallels Desktop Autodeploy.pkg` package, which contains all the necessary deployment instructions. All you have to do is add the Parallels Desktop installation disk image and one or more virtual machines to the package and customize some of the settings if necessary. The resulting deployment package is then executed using one of the remote computer management tools, such as Apple Remote Desktop, on every target Mac and will perform the following operations on each one of them:

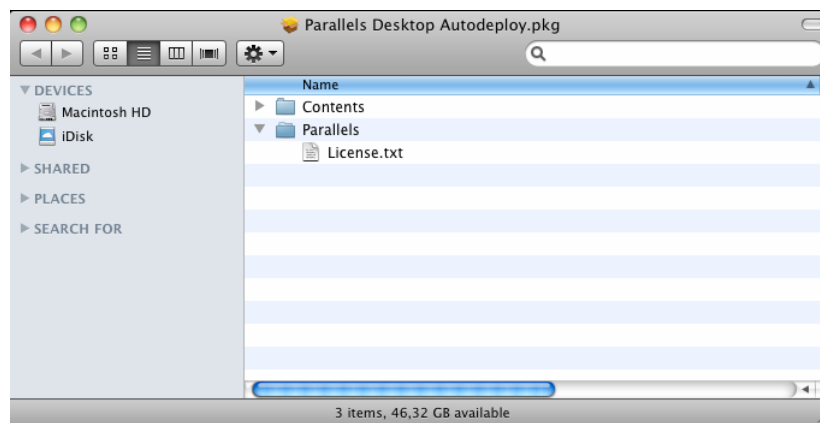
- 1 Install Parallels Desktop and activate it using the supplied license number.
- 2 Copy the virtual machines included in the package and register them in Parallels Desktop.
- 3 Regenerate MAC addresses of the virtual network adapters and the unique identifiers (UUID) of the copied virtual machines to avoid possible conflicts.

Note: The `Parallels Desktop Autodeploy.pkg` package will not automatically register Parallels Desktops deployed to remote Macs. Assuming that your license allows to run Parallels Desktop simultaneously on several Macs, all you have to do is register it once on any of the Macs. In any other case (e.g. you have individual licenses), you will have to manually activate Parallels Desktop and register it on every Mac to which it was deployed. You can read more about Parallels Desktop registration and the benefits it provides in the **Parallels Desktop User's Guide**.

Adding Parallels Desktop to Deployment Package

The software package provided by Parallels contains only the instructions to perform Parallels Desktop deployment. It doesn't contain the Parallels Desktop software, so you have to add it to the package. In order to do it:

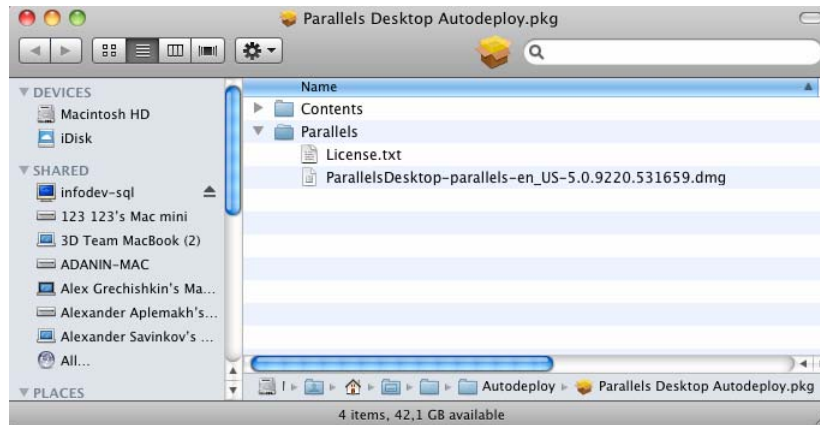
- 1 Locate the `Parallels Desktop Autodeploy.pkg` file that you've downloaded earlier, right-click it and select **Show Package Contents**. The package contents will be displayed.
- 2 Find the `Parallels` folder in the package and double-click it to see its contents. The folder should contain the `License.txt` file only.



Creating a Deployment Package

- 3 Open the `License.txt` file for editing and type in the serial number provided with your copy of Parallels Desktop. You can type the serial number on any line in the file. The number must be specified using the following format: `XXXXXX-XXXXXX-XXXXXX-XXXXXX-XXXXXX`
- 4 Locate the Parallels Desktop installation disk image file (`.dmg`) and copy it to the same `Parallels` folder in the deployment package where the `License.txt` file is located.

After adding the disk image file, the contents of the `Parallels` folder in your deployment package should look like in the following picture:



The package is now ready for deployment. Please note that after performing the steps above, the package will contain the Parallels Desktop software but no virtual machines. If you wish to deploy Parallels Desktop together with one or more virtual machines, you have to perform a number of additional operations described in the next section. If you are not planning on deploying any virtual machines, you may proceed to the [Deploying the Package to Macs chapter](#) (p. 11).

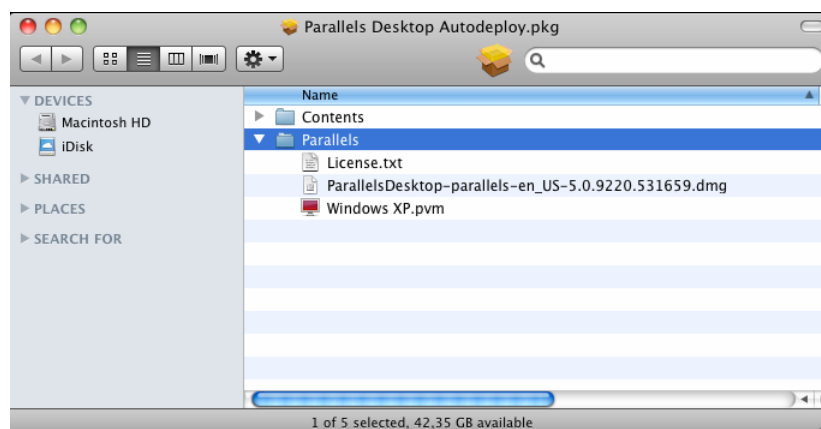
Adding Virtual Machines to Deployment Package

If you would like to deploy one or more virtual machines alongside the Parallels Desktop software, you must add them to the deployment package. You can add existing virtual machines or you can create new ones specifically for this purpose. There are a number of the virtual machine configuration options that you may want to consider changing before deploying it. These options include, but not limited to, changing the default location of the virtual machine files, installing Parallels Tools in a virtual machine, configuring shared folders, and others. In addition, the Windows operating system inside a virtual machine may be configured to obtain a new security ID (SID) and a new name identifying the machine on the network. You can read how to modify some of the most common virtual machine configuration settings in the [Virtual Machine Configuration chapter](#).

Once your virtual machine is ready for deployment, you can add it to the deployment package as follows:

- 1 Locate the `Parallels Desktop Autodeploy.pkg` file, right-click it, and choose **Show Package Contents**.
- 2 Double-click the `Parallels` folder to view its contents. The folder should contain two files: `License.txt` and the Parallels Desktop installation disk image file (we've added this file earlier).
- 3 Locate the virtual machine bundle (the file with the `.pvm` extension). The default folder for storing virtual machine bundles on the host Mac is `/Users/<User_Name>/Documents/Parallels`, where `<User_Name>` is the name of the user's home folder. Copy the bundle to the `Parallels` folder in the deployment package.

After copying the virtual machine bundle, the contents of the `Parallels` folder in your deployment package should look like in the following picture:



Creating a Deployment Package

At this point, the deployment package contains all the necessary software and data, including the Parallels Desktop installation disk image and virtual machine files. The next chapter describes how to deploy the package to remote Mac computers.

Deploying the Package to Macs

Once the deployment package contains all the necessary software and data, you can start deploying it to your Macs. There are a number of standard remote management tools that can be used for this purpose. Some of these tools are:

- Apple Remote Desktop (ARD)
- Package Manager
- Casper Suite
- LANrev
- LANDesk Management Suite

In this guide, we will use Apple Remote Desktop (ARD) to deploy our package. ARD is a remote computer management software developed by Apple. It is an easy to use tool that allows to manage Mac computers on the network.

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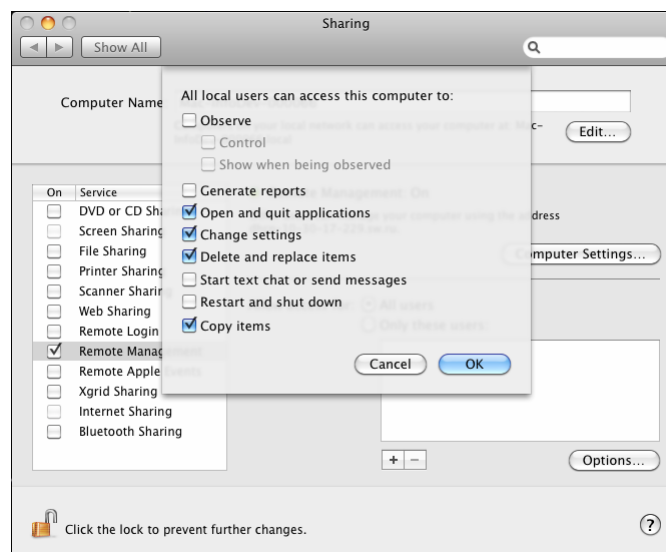
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Using ARD to Deploy the Package

Apple Remote Desktop doesn't come standard with Mac OS X. You will have to obtain the software from Apple and install it on the Mac from which you will be deploying Parallels Desktop. Mac computers to which you will be deploying the software should have a matching version of the Apple Remote Desktop client software installed.

Installing Apple Remote Desktop

- 1 Install the Apple Remote Desktop Admin software on the Mac from which you will be deploying Parallels Desktop.
- 2 You don't normally have to install the client side of the software on the destination Macs because it is installed during the Mac OS X installation. You will have to make sure, however, that the versions of the Admin and the clients match. If they don't, you will have to either upgrade the Admin software on your administrator Mac or the client software on the target Mac computers. While preparing this documentation, we've successfully used the ARD version 3.3 with the client version 3.3.1.
- 3 Configure Remote Management services on each destination Mac computer:
 1. Open **System Preferences**.
 2. Click **Sharing**.
 3. In the Service list, select **Remote Management**.
 4. Click **Options**.
 5. Select the following options: **Open and quit applications**, **Change settings**, **Delete and replace items**, **Copy items** (see picture below).



6. Click **OK**.

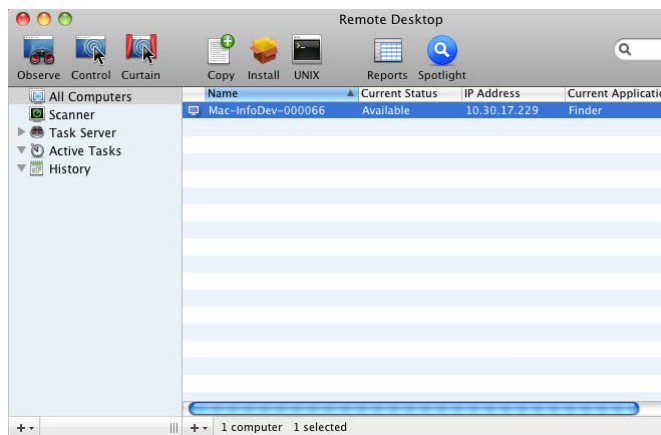
7. Close **System Preferences**.

Deploy the Package

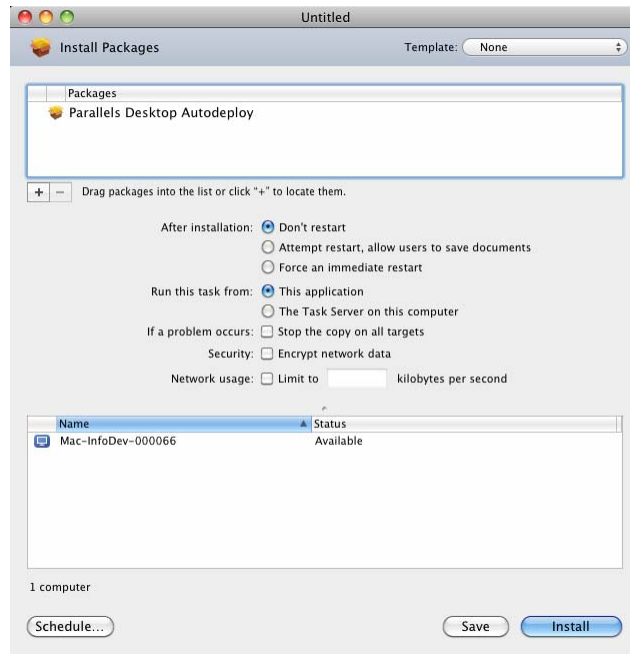
- 1 On the source Mac, open the Finder and click **Applications > Remote Desktop** to display the main window of Apple Remote Desktop.

Note: If you have set up a Task Server, you can deploy the package from that server.

- 2 Make sure that all Macs to which Parallels Desktop is to be deployed are present in the Apple Remote Desktop computer list. To this effect, click **All Computers** in the left section of the ARD main window. The computers are displayed in the main section of the window. For example:



- 3 Select the desired destination computers and click **Install** in the ARD toolbar (or select **Manage > Install Packages** menu). The **Install Packages** window opens.
- 4 Add your deployment package to the **Packages** list either by dragging it there with the mouse or by locating the package using the '+' button



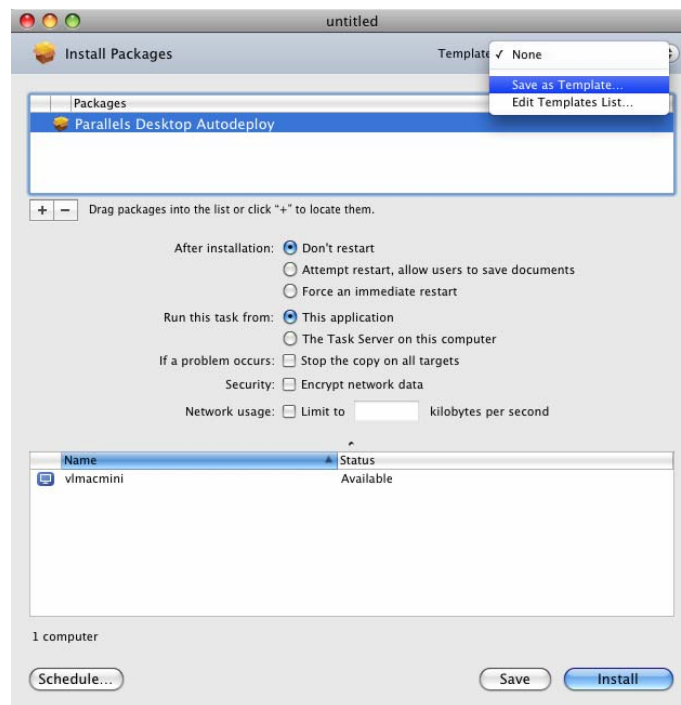
- 5 Click **Install** to start the deployment. The installation progress is displayed in the main window. After a deployment to an individual Mac computer is successfully completed, the text in the **Status** column in the corresponding row of the computer list will change to **Succeeded**.

Using ARD Templates

You may wish to deploy Parallels Desktop to different Mac computers with different sets of virtual machines. For example, you may have virtual machines specifically configured for your developers and virtual machines configured for your graphics designers or quality assurance personnel. Instead of manually populating the deployment package with virtual machines every single time, you can create a separate package for every type of deployment and then use the Apple Remote Desktop templates to make selecting of the packages easier.

To create an ARD template:

- 1 On the administrative computer, open Apple Remote Desktop.
- 2 Click the **All Computers** item in the left pane of the ARD main window.
- 3 Select the computers where the deployment package is to be installed and click **Install** in the ARD toolbar.
- 4 In the **Install Packages** window, add the desired Parallels Desktop deployment package either by dragging it to the top area of the displayed window or locating it by using the '+' button.
- 5 Save current installation setup as a template by selecting **Save as Template** from the **Template** pop-up menu located in the upper right-hand corner of the **Install Packages** window.



- 6 In the displayed window, specify the name that you would like to use for the template and click **OK**.

Next time, when you are ready to deploy Parallels Desktop to your Mac computers, simply select the desired template from the same pop-up menu in the **Install Packages** window and click **Install**.

CHAPTER 4

Configuring Virtual Machine for Deployment

Before adding a virtual machine to the Parallels Desktop deployment package, you may wish to consider changing some of its settings. This chapter describes some of the most common settings and demonstrate how to modify them.

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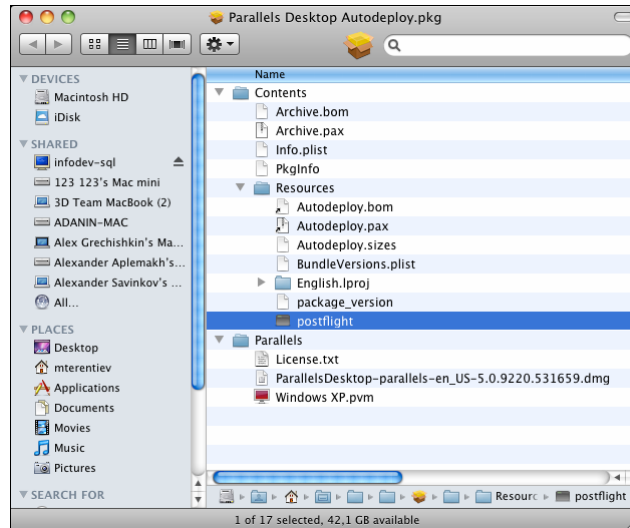
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Configuring the Default Virtual Machine Location

By default, all deployed virtual machines are placed into the local user space (`/Users/<User_Name>/Documents/Parallels` where `<User_Name>` is the name of the user's home folder). The default virtual machine folder is determined by the deployment script and *does not* depend on the original virtual machine location. In some situations, however, you may wish to copy the virtual machine files to the shared user space (`/Users/Shared/Parallels`) to allow other users of the destination Mac to be able to access the virtual machine. In order to make this modification, you will have to edit a portion of the deployment script. You don't have to be a computer programmer to make this modification as it only involves a simple editing of a text file inside the Parallels Desktop deployment package.

To configure the default virtual machine folder, do the following:

- 1 Locate the `Parallels Desktop Autodeploy.pkg` file in the Finder, right-click it, and choose **Show Package Contents**.
- 2 Double-click the `Contents` folder, and then double-click the `Resources` folder.
- 3 Locate the `postflight` file and open it for editing using TextEdit or a text editor of your choice. The following picture shows the entire deployment package directory tree with the `postflight` file highlighted.



4 Find the following section in the `postflight` file (closer to the end of the file):

```
# Getting active username and preparing paths.
username=$( users | grep -m 1 '' )
home_path="/Users/${username}"
parallels_path="${home_path}/Documents"
[ -a "${parallels_path}" ] || mkdir "${parallels_path}"
parallels_path="${parallels_path}/Parallels"
[ -a "${parallels_path}" ] || mkdir "${parallels_path}"
```

The section obtains the name of the current user on the destination Mac and attempts to create a directory where virtual machines will be stored. In the original version, the virtual machines are placed into the local user space. To modify this behavior and make the script place the virtual machines into the shared user space, modify the script as follows.

```
# Getting active username and preparing paths.
username=$( users | grep -m 1 '' )
home_path="/Users/Shared"
parallels_path="${home_path}/Parallels"
[ -a "${parallels_path}" ] || mkdir "${parallels_path}"
```

The following table compares the original and the new portion of the script line by line:

Line	Original	New	Status
1	<code>username=\$(users grep -m 1 '')</code>	<code>username=\$(users grep -m 1 '')</code>	Unchanged
2	<code>home_path="/Users/\${username}"</code>	<code>home_path="/Users/Shared"</code>	Modified
3	<code>parallels_path="\${home_path}/Documents"</code>	<code>parallels_path="\${home_path}/Parallels"</code>	Modified
4	<code>[-a "\${parallels_path}"] mkdir "\${parallels_path}"</code>	<code>[-a "\${parallels_path}"] mkdir "\${parallels_path}"</code>	Unchanged
5	<code>parallels_path="\${parallels_path}/Parallels"</code>		Deleted
6	<code>[-a "\${parallels_path}"] mkdir "\${parallels_path}"</code>	<code>[-a "\${parallels_path}"] mkdir "\${parallels_path}"</code>	Unchanged

When done making the modifications, save the `postflight` file.

Note: Make the modifications carefully and always test them by running a test deployment before performing a real one. If you make an error in the script, the deployment may not fail with an obvious error but the Parallels Desktop installation on the target Mac may become corrupted.

Installing Parallels Tools

Parallels Tools is a collection of utilities and drivers that vastly improve the virtual machine performance. The package is included with every copy of Parallels Desktop and is highly recommended to be installed on every virtual machine right after the machine is created and an operating system is installed in it. Simply install Parallels Tools in your source virtual machine and all of the deployed virtual machines will have it too.

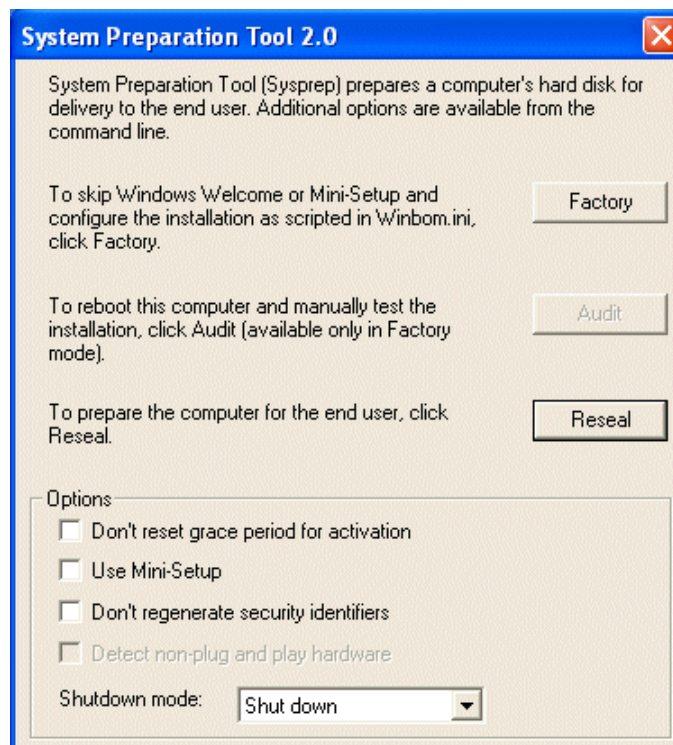
Generating Windows SID Using Sysprep

If your source virtual machine is running the Windows operating system and the new virtual machines on the destination hosts will be participating in the network, you will need to assign them a new Windows SID (security ID) and a new Windows computer name. Instead of modifying these manually in every new copy of a virtual machine, you can set up the source virtual machine in such a way that these values will be automatically generated by the guest Windows operating system on initial startup. This can be accomplished by using Microsoft's System Preparation Tool, or Sysprep for short. The following describes some aspects of using the tool to set up the guest Windows operating system in a source virtual machine.

Download the latest version of Sysprep for your version of Windows from the Microsoft Web site and install it according to Microsoft instructions. For the purpose of this example, we will show which options should be used on the Sysprep set up screen. For the complete Sysprep documentation, please refer to the Microsoft Web site.

Configuring the SID

- 1 In the main Sysprep window, make sure that the **Don't regenerate security identifiers** check box is cleared.



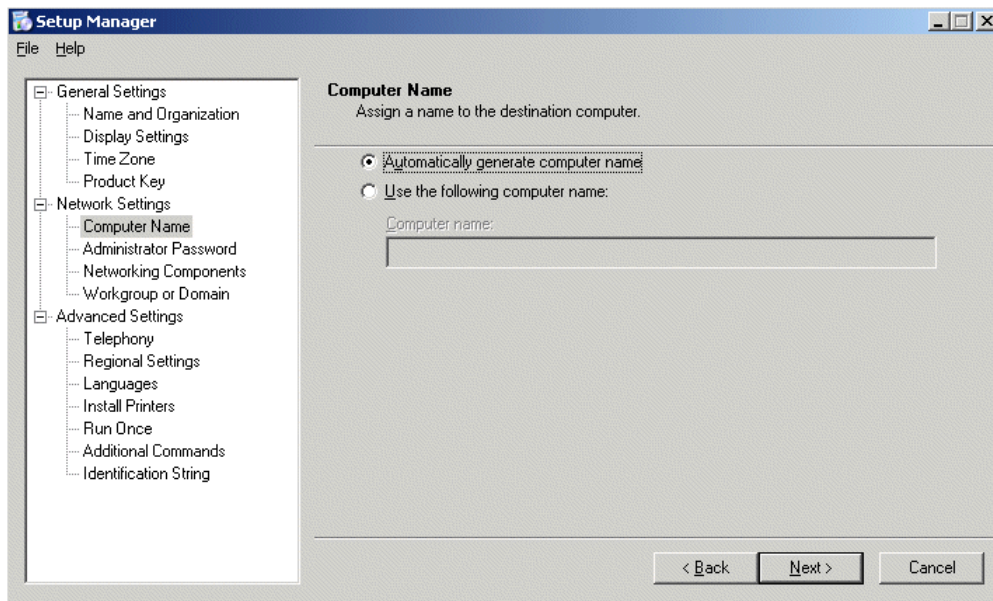
- 2 Click the **Reseal** button.
- 3 In the displayed window, confirm your decision by clicking **OK**.

Note: Once these modifications are done and Sysprep is configured, stop your virtual machine and DO NOT start it again prior to deployment.

Configuring the Computer Name

You can make Windows automatically assign a new Computer name to your virtual machine using one of the following methods.

- 1 SetupMgr.exe (Windows XP) or System Image Manager (Windows Vista) are the tools that can generate answer files for Sysprep, which it will process on new computer deployments. If using the SetupMgr.exe tool to create an answer file for `sysprep`, select the **Automatically generate computer name** radio button in the left pane of the **Setup Manager** window.



- 2 You can also edit the `sysprep.inf` file using the plain text editor of your choice. When editing this file, add the following entry:

```
[UserData]
  ComputerName=*
```

For more information on generating SIDs and Computer names during Windows operating system deployment, please visit the Microsoft Web site.

Performing Further Customization

You may wish to further customize your source virtual machine by configuring its additional settings. These can be anything you can think of. Here are a few examples.

Shared Folders and Profiles

Parallels Desktop offers great flexibility in bridging the capabilities of the Mac OS X and your guest operating system by configuring shared folders and profiles. Think over which files and folders you wish to share between the two operating systems and set up them in advance.

Configuring USB Settings

Hardware devices that connect through USB ports including printers and removable drives can only be used by one operating system at a time. By default, Parallels Desktop will ask the user which OS to connect the device to when a new device is detected. This default can be changed by making all USB devices connect only to the Mac OS X or to the guest operating system.

Removing Floppy Disk Drive

A virtual floppy drive is provided by default when you create a virtual machine. Unless you intend to use it, you may wish to remove it from the virtual machine.

Configuring Automatic Update Settings

Parallels will frequently provide software updates for Parallels Desktop. By default, these updates are downloaded automatically. If you wish, you can disable the automatic update of Parallels Desktop and manually check for available updates when necessary.

Installing Applications

You can install all the necessary applications in the virtual machine before deployment so that you don't have to install them separately in every resulting virtual machine.

For the complete information about configuring a virtual machine, please refer to the **Parallels Desktop User's Guide**.

Volume Licensing

Parallels provides volume licensing options for Corporate and Academic Institutions. Volume licensing comes with the following benefits, among others:

- **No registration required.** You are never prompted to register your copies of Parallels Desktop. Automatic updates and technical support are available to you without the registration.
- **No 3rd party products.** During Parallels Desktop installation, the administrator is never asked whether he/she wants to install complimentary 3rd party software. If needed, IT administrators can install and configure 3rd party products in a corporate virtual machine image using a regular activation key on their master Parallels Desktop installation. The image can then be deployed to individual Macs as described in the **Adding Virtual Machines to Deployment Package section** (p. 9).
- **Local update server and configurable updates.** By default, Parallels Desktop updates are obtained from the Parallels update server via the Internet. When using a volume license, IT administrators have the following options (described in details in the **Setting Up Local Update Server section** (p. 25)):
 1. Get updates from the Parallels update server.
 2. Get updates from a local update server.
 3. Disable updates completely.
- **Customizable "Request Support" functionality.** Parallels Desktop graphical user interface has a menu option named **Help > Request Support**. By default, this option opens the Parallels technical support Web page. With a volume license, the menu can be configured to either show a predefined text message "Please contact your system administrator for support." or open a custom URL pointing to the company's Help Desk, wiki page, etc. See **Customizing Request Support Option** (p. 31) for details.

The volume licensing related functionality is enabled when you activate your copy of Parallels Desktop with a volume license key. When performing mass deployment of Parallels Desktop, specify the volume license at the deployment package preparation step as described in the **Adding Parallels Desktop to Deployment Package section** (p. 7).

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Setting Up Local Update Server

A volume license allows you to set up your own update server. Updates are released periodically to improve the performance and reliability of Parallels Desktop and are available via download from the Parallels update server. To reduce Internet traffic when downloading updates, you can set up a local update server, download the available updates to it, and then set up individual Macs on your network to take the updates from it instead of the Internet. Setting up a Parallels Desktop update server consists of the following steps:

- 1** Adding a computer to your local network (or using an existing one) with a Web server installed on it. This will become your local Parallels Desktop update server.
- 2** Adding the necessary contents to the Web server where it can be accessed via HTTP by individual Macs on your network.
- 3** Configuring Parallels Desktop update preferences on individual Mac computers.

The rest of this chapter describes in detail how to perform the steps above.

Adding Web Server Contents

Install a Web server on a computer connected to your local network. Create a file named `parallels_updates.xml` on the Web server where it can be accessed via HTTP. The file is an XML document containing the Parallels Desktop update specifications. Use the following sample XML document and the element description that follows it as a guidance on how to create your own document.

Sample `parallels_updates.xml` file

```
<?xml version="1.0" encoding="UTF-8"?>
<ParallelsUpdates schemaVersion="1.0">
  <Product>
    <ProductName>Parallels Desktop</ProductName>
    <UpdateEnabled>1</UpdateEnabled>
    <Version>
      <Major>6</Major>
      <Minor>0</Minor>
      <SubMinor>11994</SubMinor>
      <SubSubMinor>637236</SubSubMinor>
      <StringRepresentation>Sumer</StringRepresentation>
      <Update uuid="desktop.6.0.11994.637236.en_US.parallels.mac">
        <UpdateType>0</UpdateType>
        <UpdateName>Build 11994 is available!</UpdateName>
        <UpdateDescription>Update description goes here</UpdateDescription>
        <FilePath>URL to the update file goes here</FilePath>
        <FileSize>219515</FileSize>
        <Status>0</Status>
        <DateTime>2011-02-17 01:23:00</DateTime>
        <Chargeable>0</Chargeable>
        <LocaleName>en_US</LocaleName>
        <DistributorName>parallels</DistributorName>
        <OsType>mac</OsType>
        <Ancestry>
          <Ancestor>desktop.6.0.11992.625164.en_US.parallels.mac</Ancestor>
          <Ancestor>desktop.6.0.11990.621014.en_US.parallels.mac</Ancestor>
          <Ancestor>desktop.6.0.11828.615184.en_US.parallels.mac</Ancestor>
        </Ancestry>
      </Update>
    </Version>
  </Product>
</ParallelsUpdates>
```

Elements

ProductName

The name of the Parallels virtualization product. Use "Parallels Desktop".

UpdateEnabled

Specifies whether the updates are enabled. To enable updates, specify 1.

Version

The Parallels product version information, specified using the following child elements.

Major

Major version number. This is a required parameter. For Parallels Desktop 6, the value is 6.

Minor

Minor version number. This is a required parameter.

SubMinor

Build number. This parameter can be empty.

SubSubMinor

Revision number. This parameter can be empty.

StringRepresentation

Product codename. This parameter can be empty.

Update

This element contains the update information. The element has the `uuid` attribute, which is very important and must contain the correct information for the update to work. The attribute value must consist of the following substrings separated by periods:

`desktop` -- use "desktop".

`major` -- the product major version number.

`minor` -- the product minor version number.

`build` -- build number.

`revision` -- revision number.

`locale` -- locale (e.g. "en_US", "de_DE", etc.)

`vendor` -- vendor ("parallels").

`platform` -- platform ("mac").

UpdateType

Type of the update to perform. Set it to 0 (zero).

UpdateName

The update name.

UpdateDescription

The update description.

FilePath

A URL to the update file. The update files can be obtained from Parallels.

FileSize

The update file size.

Status

Set it to 0 (zero).

DateTime

The date when the update was published.

Chargeable

Set it to 0 (zero).

LocaleName

Update locale.

DistributorName

The name of the distributor of the update file.

OsType

The operating system type for which the update is intended.

Ancestry

The list of Parallels Desktop builds that qualify for this update. Individual builds are specified using a child <Ancestor> element. Each build is specified using the following substrings separated by periods:

`desktop` -- use "desktop".

`major` -- the product major version number

`minor` -- the product minor version number.

`build` -- build number.

`revision` -- revision number.

`locale` -- locale (e.g. "en_US", "de_DE", etc.)

`vendor` -- vendor ("parallels").

`platform` -- platform ("mac").

Configuring Individual Macs

The next step is configuring individual Macs to take their updates from the local update server. This is done by modifying the Parallels Desktop property list file on a Mac computer running Parallels Desktop. The following steps describe how to accomplish this task.

- 1 Find the `com.parallels.Parallels Desktop.plist` file located in the `Library/Preferences` sub-folder in the user's home folder. This is the Parallels Desktop property list file that contains the user-specific information.
- 2 Open the file using the Property List Editor application, which is included with Mac OS X.
- 3 Set the update policy by modifying the `Application Preferences.VolumeLicenseUpdatePolicy` property. If the property doesn't exist, add it to the file specifying its data type as String. Set the property value using one of the following options (see also **Notes** below):
 - "Parallels" -- updates are downloaded from the Parallels update server via the Internet. The value is case-sensitive.
 - Complete URL of the `parallels_updates.xml` file residing on your local update server. For example, "`http://10.0.0.1/pdfm/v6/en_us/parallels/parallels_updates.xml`". Updates will be obtained from the local update server.
 - "None" -- updates are disabled. The value is case-sensitive.
- 4 Set how often Parallels Desktop should check for updates. This is done by modifying the `Application Preferences.Check for updates` property. If the property doesn't exist, add it to the file specifying its data type as Number. Set the property value using one of the following options:
 - 0 -- Never.
 - 1 -- Once a day.
 - 2 -- Once a week.
 - 3 -- Once a month.
- 5 Set the automatic download option. Find the `Application preferences.Download updates automatically` property. If it doesn't exist, add it to the file specifying its data type as Boolean. Set the property value using one of the following options:
 - `true` -- download updates automatically. Specify this value when using a local update server.
 - `false` -- notify the user about the updates but don't download them automatically. This option is useful only when updates are downloaded from the Parallels update server and the user has full control over the update functionality.
- 6 Save the file and close the Property List Editor application.

If Parallels Desktop is running while you are modifying the `plist` file, it will have to be restarted for the changes to take effect.

To automate this procedure for mass deployment, you can use the **defaults** command line utility that comes standard with Mac OS X.

Notes

On initial Parallels Desktop activation using a volume license key, the update related properties will be absent from the `com.parallels.Parallels Desktop.plist` file. The user will be able to configure updates using the Parallels Desktop graphical user interface.

When you add the update related properties to the `com.parallels.Parallels Desktop.plist` file, the updates will be performed according to the values that you specify. The value of the `Application Preferences.VolumeLicenseUpdatePolicy` property will also affect the product update related controls in the graphical user interface as follows:

- If the property contains a URL of the local update server or "None", the product update related controls will be disabled (grayed out) in the Parallels Desktop graphical user interface. The control values and states (selected or unselected) will have no effect on the product update functionality. The user will not be able to configure automatic updates or check for updates manually.
- If the property doesn't exist, has no value, or contains "Parallels" as a value, the product update controls will be enabled in the user interface and the user will be able to configure automatic updates and check for updates manually.

When a copy of Parallels Desktop is activated using a consumer activation key, the `Application Preferences.VolumeLicenseUpdatePolicy` property value has no effect on the Parallels Desktop update functionality and the Parallels Desktop graphical user interface.

Customizing Request Support Option

Parallels Desktop graphical user interface has a menu option named **Help > Request Support**. By default, this option opens the Parallels technical support page in an Internet browser. When your Parallels Desktop is activated using a volume license key, you can customize the action performed by this menu option. The following choices are available:

- The menu option can display a default text message: "Please contact your system administrator for assistance." The message cannot be modified by the system administrator.
- The menu option can open a custom URL, such as a corporate Help Desk page or a wiki page. The system administrator can specify the URL to open.

To make these changes, locate the `com.parallels.Parallels Desktop.plist` file located in the `Library/Preferences` sub-folder in the user's home folder on your Mac. Open the file using the Property List Editor application, which is included with Mac OS X. Find the `SupportRequestUrl` property in the file. If the property doesn't exist, add it to the file specifying its data type as String. To display the text message, clear the property value. To open a URL, specify the full URL to the desired Web page or a resource.

To automate this procedure for mass deployment, you can use the **defaults** command line utility that comes standard with Mac OS X.

Please note that the `SupportRequestUrl` property value has no effect when Parallels Desktop is activated using a consumer license key.

Customer Experience Program

The Parallels Customer Experience Program is a feedback solution that allows Parallels Desktop to automatically collect usage statistics and system information that will help Parallels to develop new features and updates for future releases. When you install Parallels Desktop on a Mac it is automatically set up to participate in the Customer Experience Program. If you want to turn the participation off, you can use the `prlsrvctl` command line utility and execute the following command on every Mac after installing Parallels Desktop:

```
prlsrvctl set --cep off
```

To turn the participation in the Customer Experience Program back on, execute the following command:

```
prlsrvctl set --cep on
```