Parallels Virtual Automation

4.0 to 4.6 Upgrade Guide

Publication date: 12/12/2011

ISBN: N/A
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Contents

CHAPTER 1

Introduction

Parallels Virtual Automation is a flexible and easy-to-use administration tool designed for managing groups of physical servers, registered in the system, and the virtual environments they host, using a standard web browser running on any platform.

Since the PIM 4.0 version, Parallels Virtual Automation 4.6 has been extensively developed. As a result, it has a number of major differences that prevent the 4.0 physical servers from participating in the 4.6 infrastructure. Such servers should be upgraded. The upgrading procedure retains all the data stored in the 4.0 system and transfers it to the 4.6 infrastructure.

Note: Parallels Virtual Automation 4.5 owners can update the product to the 4.6 version from the **Control panel > Support menu**. For more information, refer to the *Parallels Virtual Automation Administrator's Guide*.

One of the main benefits of Parallels Virtual Automation 4.6 is the support of the whole set of the Parallels products. You can use it with any of the Parallels virtualization solutions - Parallels Virtuozzo Containers or Parallels Server Bare Metal.

In This Chapter

About This Guide

This guide is aimed at a wide range of PIM 4.0 users who want to upgrade the product version and to use Parallels Virtual Automation 4.6.

The present document gives a step-to-step description of the upgrading procedure. However, you will also need to have the *Parallels Virtual Automation 4.6 Installation guides* at hand and refer to it, when prescribed by the present guide.

Organization of This Guide

The structure of the present guide is quite transparent and consists of the following elements:

- The **Introduction** chapter (p. 4). It provides basic information about the product and this guide.
- The **System Requirements** chapter (p. 8). It provides information about the system requirements your physical servers should meet to ensure successful upgrading.
- The **Upgrading instructions** chapter (p. 9). It lists the upgrade stages and gives detailed instructions.

Documentation Conventions

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

The table below presents the existing formatting conventions:

Formatting Conventions	Type of information	Example
Special Bold	Items you must select, such as menu options, command buttons or items in a list.	Go to the **Resources** tab.
	Titles of chapters, sections and subsections.	Read the **Basic Administration** chapter.
Italics	Used to emphasize the importance of a point, to introduce a term or to designate a command line placeholder, which is to be replaced with a real name or value.	These are the so-called *EZ templates*. To destroy a Container, type `vzctl destroy` *ctid*.
`Monospace`	The names of commands, files and directories.	Use `vzctl start` to start a Container.
`Preformatted`	On-screen computer output in your command line sessions; source code in XML, C++, or other programming languages.	`Saves parameters for Container 101`
`Monospace Bold`	What you type as contrasted with on-screen computer output.	**`# rpm -V virtuozzo-release`**
Key+Key	Key combinations for which the user should press and hold down one key and then press another.	Ctrl+P, Alt+F4

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

Getting Help

Parallels Virtual Automation offers several options for accessing necessary information:

Parallels Virtual Automation documentation

- **Parallels Virtual Automation Administrator's Guide**. This document contains extensive information about the product, its usage and troubleshooting. To access the PDF version of the document, go to the **Support** link in the left pane and then click the **Downloads** pane. You can download any document of the Parallels Virtual Automation documentation bundle from the Parallels website.
- **Parallels Virtual Automation Installation Guides for Linux/Bare Metal and Windows**. These documents contain extensive information on system requirements for physical computers and instructions how to install Parallels Virtual Automation components on them.
- **Getting Started With Parallels Virtual Automation**. This document contains the basic information how to install, launch and manage Parallels Virtual Automation.
- **Parallels Power Panel User's Guide**. This document contains extensive information about the Power Panel application.
- **Parallels Virtual Automation 4.6 Agent XML API Reference**. This document is a complete reference on all Parallels Virtual Automation configuration files and physical server command-line utilities.
- **Parallels Virtual Automation Agent Programmer's Guide**. This is a task-oriented guide that provides information on all Parallels Virtual Automation configuration files and physical server command-line utilities.

The documentation is available for download from the Parallels official website http://www.parallels.com/products/pva46/resources/.

Context-sensitive help

You can open a help page for the current screen by clicking the **Help** link in the right upper corner.

Parallels Website

Parallels website http://www.parallels.com/products/pva/resources/. Explore the Support web page that includes product help files and the FAQ section.

Parallels Knowledge Base

Parallels Knowledge Base http://kb.parallels.com. This online resource comprises valuable articles about using the Parallels Virtual Automation, Parallels Virtuozzo Containers and Parallels Server Bare Metal products.

Feedback

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

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

CHAPTER 2

System Requirements

The upgrading procedure itself does not demand any special resources from the physical servers. However, during the upgrading procedure, you will be required to install the Parallels Virtual Automation 4.6 components. In order to successfully perform the installation, you should make sure that the physical servers meet the system requirements of the Parallels Virtual Automation 4.6 product. To learn about the requirements, refer to the *Parallels Virtual Automation 4.6 Installation Guide*.

To be successfully upgraded, the 4.0 Slave servers should have a valid Parallels Virtuozzo license and the following PIM hotfixes installed:

- PIM 4.0 hotfix 12, or later, for Linux physical servers;
- PIM 4.0 hotfix 13, or later, for Windows physical servers;

PIM hotfixes can be downloaded from the Parallels download page http://www.parallels.com/download/pva/.

CHAPTER 3

Upgrading Instructions

The upgrading procedure varies depending on the upgrade case. There are 2 major use cases:

- **Upgrading a group of servers**. In such a group, one server acts as a Master server, while other servers are subordinate to it, they are Slave server. The upgrade procedure allows transmitting all the Slave servers to the Parallels Virtual Automation 4.6 infrastructure. Start the upgrading procedure from the Stage 1 (p. 12).
- **Upgrading a stand alone Parallels Virtuozzo Containers server**. On such a server, the Administrator has a full-scale installation of PIM 4.0 with the Master server and the Agent components stored on one and the same server. Such a server can act both as a Management server and as a Slave server. Start the upgrading procedure from the Stage 1 (p. 12).

The second case occurs rarely. We shall base the upgrade instructions on the first case. The instructions are alike, but in case they differ, the instructions for the stand alone server will be given.

The **Before the Upgrade** section (p. 10) provides you with prescriptions of what should be done before the upgrade.

In This Chapter

Before the Upgrade

The procedure of upgrade PIM 4.0 to Parallels Virtual Automation 4.6 version is safe and designed to preserve all data and settings. You may want to return to current PIM 4.0 installation. For this purpose, the backup and restore procedure is implemented.

Back Up Data

It is recommended to make a backup of your PIM 4.0 installation. The backing up procedure is supported in terminal mode only with a help of `pimBackupData` script. The script backs up the whole Parallels Virtuozzo Service Container and all configuration files of PIM 4.0 installation.

To back up PIM 4.0 installation, perform the following actions:

1. Log in to the PIM 4.0 node with the `Administrator/root` privileges.
2. Start the command line utility:

```
/opt/vzagent/bin/pimBackupData <absolute_path_to_backup_directory>
cscript.exe <vz_install_dir>\VZAgent\bin\pimBackupData.vbs
<absolute_path_to_backup_directory>
```

Note: Make sure that the backup directory resides out of the `vzagent` directory as it is to be removed during upgrade.

After the backup process is finished, you may proceed to upgrading your PIM 4.0 to Parallels Virtual Automation 4.6 version.

Restore Data

The restoration procedure should be performed only after you have uninstalled PVA 4.6 and installed PIM 4.0 components. For the information on PVA 4.6 uninstallation and PIM 4.0 installation, refer to the *PVA 4.6 Installation Guides* and *PIM 4.0 Installation Guide* respectively. The data recovery procedure is supported in terminal mode only with a help of `pimRestoreData` script.

To restore PIM 4.0 configuration, perform the following actions:

1. Log in to the 4.0 Master server with the `Administrator/root` privileges.
2. Start the command line utility:

```
/opt/vzagent/bin/pimRestoreData <absolute_path_to_backup_directory>
cscript.exe <vz_install_dir>\VZAgent\bin\pimRestoreData.vbs
<absolute_path_to_backup_directory>
```

Manual Mode

In this mode, you are to perform the procedures of all stages on your own. The manual upgrading procedure comprises four main stages:

- Setting up PVA 4.6 Master server (p. 12);
- Registering 4.0 Slave servers by 4.6 Master server (p. 13);
- Registering 4.0 Master server by 4.6 infrastructure (p. 15);
- Upgrading 4.0 servers to the 4.6 version (p. 17).

Stage 1: Installing PVA 4.6 Management Server

Parallels Virtual Automation is a complex product consisting of several components, one of them being the **Management server**. This component ensures the communication between the slave physical servers and their virtual environments. It also has a sub-component - **PVA Control Center**. It is always installed together with the Management Server. Thus, you are able to interact with the remote physical servers and have means to observe your virtual infrastructure. It is the PVA front-end that you see in the browser window after logging in to Parallels Virtual Automation. When talking about the Parallels Virtual Automation interface, we are actually talking about the Control Center interface.

Installing Parallels Virtual Automation 4.6 Management Server is a principal action for the upgrading procedure.

This component can be installed on:

- a stand alone physical server without any virtualization technology installed.
- any remote cloud server/place without any virtualization technology installed.
- the same server where PIM 4.0 is installed (Management server). As this server already has a virtualization technology, Parallels Virtual Automation 4.6 cannot be installed directly on the same server. You should first create a Container and use it for the Parallels Virtual Automation 4.6 installation. Note, that the created Container should have the network settings configured.

For the detailed description of all Parallels Virtual Automation components and instructions on their installation, refer to the *Parallels Virtual Automation 4.6 Installation Guides*.

After the component's installation, you have a Master server where all other slave nodes, including the PIM 4.0 nodes, will be registered.

Upgrading a Stand Alone Parallels Virtuozzo Containers Server

If you upgrade a single stand alone server, you should hold the upgrade procedure within this server. Thus, you are to create a Container and to install the Parallels Virtual Automation 4.6 component inside.

The stand alone Parallels Virtuozzo server can act both as a Master server and as a Slave server. This is possible due to the complete package of components installed within it. It has both the Management component and the Agent component installed, all being of the 4.0 version.

Having created the Container with the 4.6 Management component inside it, you replace the 4.0 management component by the corresponding 4.6 version component. By the end of this stage, you have a 4.6 Management component and a 4.0 Agent component within a single stand alone physical server.

Stage 2: Registering 4.0 Slaves in 4.6 Infrastructure

After you have installed PVA 4.6 Management component, your next step is to register all PIM 4.0 Slave servers by the 4.6 Master server.

At the end of this stage, every 4.0 Slave server should be manageable from the 4.6 Master server, where it is registered.

In case with several 4.0 Slave servers, the process of registering each 4.0 Slave server should be performed successively. The following instructions should be applied to every Slave server that you want to register in Parallels Virtual Automation 4.6. Upon registering all the 4.0 Slave servers in Parallels Virtual Automation 4.6, move to the next upgrade stage.

Note: During the registration, Parallels Virtual Automation 4.6 does not import any logs, settings or security information from the 4.0 servers. You can do it, if needed, during the stage 3.

After the re-registration in the 4.6 infrastructure, all 4.0 Slave servers are still shown as registered in the 4.0 system, but in the *Offline* state. You do not need to unregister them.

Registering a Slave Server in GUI Mode

To register a PIM 4.0 Slave server by Parallels Virtual Automation 4.6 Master server, perform the following actions:

1. Login to the 4.6 Master server with the `Administrator/root` privileges. The Parallels Virtual Automation screen appears in the browser window.
2. Click **New --> Hardware Node** from the upper toolbar menu. The adding new hardware node screen is displayed.
3. Connect a PIM 4.0 Slave server to the 4.6 Management server. Fill in the following information:
   - Type in the Slave server IP address.
   - Type in the `Administrator/root` credentials on the Slave server.
   - Tick the **Force registration even if Node is already registered in another Server Group** option.

   Note: The Slave servers you register are members of the PIM 4.0 Server Group. Ticking this option ensures that the Slave server is re-registered in Parallels Virtual Automation 4.6.
4. Click the **Register** button.

The registration task is logged. As soon as it is fulfilled, the PIM 4.0 Slave server appears in the left menu tree, i.e. it becomes registered in the Parallels Virtual Automation 4.6 system. At this stage, the Slave server is still of the PIM 4.0 version.

Perform the same actions for every Slave server. When all 4.0 slaves are registered in the Parallels Virtual Automation 4.6 system, you can pass on to the next stage.

Registering a Slave in terminal mode

To register a PIM 4.0 Slave server by Parallels Virtual Automation 4.6 Master server, perform the following actions:

1. Log in to the 4.6 Master server with the `Administrator/root` privileges.
2. Start the command line utility

```
vzagroup --switchSlave <login>:<passwd>@address_of_4_0_slave
```

The slave server becomes registered in the Parallels Virtual Automation 4.6 system. At this stage, the Slave server is still of the PIM 4.0 version.

Perform the actions for every slave server. When all 4.0 slaves are registered in the Parallels Virtual Automation 4.6 system, you can pass on to the operations on 4.0 Master server, stage 3.

Upgrading a Stand Alone Parallels Virtuozzo Containers Server

Stand alone Parallels Virtuozzo Containers server does not have any slave servers that need to be re-registered. Omit this stage and pass on to the stage 3.

Stage 3: Registering 4.0 Master Server in 4.6 Infrastructure

Now you have all 4.0 Slave servers registered by 4.6 Master server. The 4.6 Master server has no information on the 4.0 Slave server settings because it is still stored on the 4.0 Master server. During this stage, you are to register the 4.0 Master server as a slave server in the 4.6 infrastructure and to migrate the information to the 4.6 Master server. The following information can be transferred: security database, infrastructure folders, alerts, events, tasks and operation logs, scheduled tasks, IP pools settings, samples, network and global backup settings. During the registration, you can choose the settings to be transferred.

Registering the 4.0 Master server and transferring the information take place simultaneously.

Note: Registering 4.0 Master server by the 4.6 infrastructure automatically converts it into a 4.0 Slave server. Later you will be able to upgrade it to the 4.6 version.

If the 4.0 Master server still has subordinate slaves registered, the scenario fails. Re-register the slave nodes in the 4.6 system and repeat the 4.0 master server registration in the same system.

Registering a 4.0 Master Server and Transmitting Information in Terminal Mode

To register a PIM 4.0 Slave server by Parallels Virtual Automation 4.6 Master server, perform the following actions:

1. Log in to the 4.6 Master server with the `Administrator/root` privileges.
2. Start the command line utility

```
vzagroup --importSettings <login>:<passwd>@address_of_4_0_master
```

3. Specify what settings are to be omitted during the data transfer to the 4.6 system by typing in the corresponding command:

Command	Description
--import-security	import security settings from 4.0 server (roles, role assignments, users, groups).
--import-infrastructure	import infrastructure folders, logical view from 4.0 server.
--import-alerts	import alerts and events from 4.0 server.
--import-operations	import task log from 4.0 server.
--import-tasks	import scheduled tasks from 4.0 server.
--import-messaging	import physical server messaging settings from 4.0 server.
--import-backup-settings	import default backup settings from 4.0 server.
--import-ipranges	import ip ranges from 4.0 server.
--import-networks	import virtual networks from 4.0 server.
--import-samples	import Container templates from 4.0 server.

--switch-master	assign 4.0 master server a Slave server role while registering by 4.6 Master server.
--clear	delete data from 4.6 master server before importing information from 4.0 server.

The stage 3 is successfully completed. By now, you have:

- 4.0 Slave servers being registered as 4.0 Slave servers in the 4.6 infrastructure;
- a 4.0 Master server being registered as a 4.0 Slave server in the 4.6 infrastructure;
- 4.0 settings being available in the 4.6 infrastructure;

Registering a Stand Alone Parallels Virtuozzo Containers Server

The same registration restrictions and instructions are applicable to the stand alone Parallels Virtuozzo Containers physical server.

After the stage 1, you have a stand alone physical server with two components: the 4.6 Management component (installed within the Container) and the 4.0 Management component, installed directly on the physical server. During this stage, you are to register the 4.0 Management component in the 4.6 Master server part as a Slave. To do it, use the registration procedure described above.

Stage 4: Upgrading 4.0 Servers to 4.6 Servers

This is the final stage of the migration procedure. By now, you should have all 4.0 servers, including both Slave servers and Master server, registered in the 4.6 infrastructure as Slave servers. The necessary settings from the 4.0 infrastructure have also been migrated, and the servers are ready to be upgraded to the 4.6 version.

Perform the upgrading procedure by installing the Parallels Virtual Automation 4.6 Agent for Virtuozzo component on every 4.0 Slave server. PVA Agent for Virtuozzo is installed on a dedicated physical server that has Parallels Virtuozzo Containers software installed.

For the information on the PVA Agents and to learn how to install PVA Agent components on Slave servers, refer to the *Parallels Virtual Automation 4.6 Installation Guide for Windows or Linux/Bare Metal.*

When the installation of the Agent component is complete, the upgrading procedure is finished. Note, that it may take the Slave servers a while to acquire the online status and to be fully manageable in the 4.6 infrastructure.

Upgrading a Stand Alone Parallels Virtuozzo Containers Server

At this stage, you are to upgrade the 4.0 Slave part to the 4.6 version. This is done by installing the Parallels Virtual Automation 4.6 Agent for Virtuozzo component. By this action, you make both components be of the final version of Parallels Virtual Automation.

For the information on the PVA Agents and to learn how to install the PVA Agent component on slave servers, refer to the *Parallels Virtual Automation 4.6 Installation Guide*.

When the installation of the agent components is complete, the upgrading procedure is finished. It may take the Slave servers a while to acquire the online status and to be fully manageable in the 4.6 infrastructure.

Automatic Mode

In this mode, the Upgrade Automatic tool performs automated procedures on registering and upgrading 4.0 Slave servers. Some of the actions are to be taken on your own. The automated upgrading procedure comprises three main stages:

- Setting up PVA 4.6 Master server (p. 18);
- Running Upgrading Automated tool (p. 19);
- Registering 4.0 Master server by 4.6 infrastructure (p. 22).

Stage 1: Installing PVA 4.6 Management Server

Parallels Virtual Automation is a complex product consisting of several components, one of them being the **Management server**. The automatic upgrading procedure starts with choosing a physical server that will acquire the role of a 4.6 Master server. All 4.0 servers (Slave servers and 4.0 Master server) will be registered in this 4.6 Master server.

Installing Parallels Virtual Automation 4.6 Management Server is a principal action for the upgrading procedure.

To ensure a successful automatic upgrading procedure, the component should be installed on:

- a stand alone physical server without any virtualization technology installed;
- any remote cloud server/place without any virtualization technology installed.

Note: The automatic upgrading procedure cannot be performed within one and the same physical server where PIM 4.0 is already installed. In such a case, a manual upgrading procedure is held. For details, refer to the Manual Upgrading Mode (p. 12).

For the detailed description of all Parallels Virtual Automation components and the installation instructions, refer to the *Parallels Virtual Automation 4.6 Windows Installation Guide*.

Stage 2: Running Upgrade Automation Tool

The Upgrade Automation tool allows performing mass upgrading operations with a group of 4.0 Slave servers. The utility is installed together with PVA 4.6 Management Server component. The default download path for the utility is:

```
C:\Program Files\Parallels\Parallels Virtual Automation\Management
Server\bin\mass_upgrade.exe
   C:\Program Files (x86)\Parallels\Parallels Virtual Automation\Management
Server\bin\mass_upgrade.exe
/opt/pva/mn/bin/mass_upgrade
```

To start the upgrading procedure, the utility should receive information about two physical servers: the source and the target physical servers.

The *source* physical server is a Master server whose subordinate 4.0 Slave servers are to be upgraded. This can be a 4.0 Master Server with subordinate 4.0 Slaves or a 4.6 Master Server if you have preliminary registered 4.0 Slaves in the 4.6 infrastructure. The utility will detect the Slave servers by their IP addresses and start the registration procedure in the 4.6 Master server (if needed). After the registration, the utility performs upgrading of all Slave servers.

Note: To be successfully upgraded, a 4.0 Slave server should have an online status. Otherwise, the Upgrade Automation tool registers it in the 4.6 infrastructure, but fails to upgrade to the 4.6 version.

The *target* physical server is the 4.6 Master server where 4.0 Slave servers will be re-registered and upgraded to the 4.6 version.

Distribution Files for Upgrade

Before running the upgrading procedure, you should download upgrade distribution file archives from the Parallels download page http://www.parallels.com/download/pva/ and unpack them into a folder upon your choice with a certain structure. The set of archives should correspond to the variety of operating systems on Slave servers that will be upgraded. That is, for Slave servers with Linux OS i386/x84_64 and Windows OS i386, you should download the following archives: `pva_agent-linux-i386.tar.gz`, `pva_agent-linux-x86_64.tar.gz`, `pva_agent-windows-i386.zip`.

The path to the Linux OS unpacked files for should be of the following structure:

```
<Folder_upon_your_choice>\linux\<OS_architecture>\<extracted_files>
```

For example,

```
.../My Folder/linux/i386/<extracted_files>
.../My Folder/linux/x86_64/<extracted_files>
```

The path to the Windows OS unpacked files for should be of the following structure:

```
<Folder_upon_your_choice>\windows\<extracted_files>
```

For example,

```
.../My Folder/windows/<extracted_files>
```

Note: For the successful operation, make sure all participating physical servers are connected to one and the same local network.

During this stage, the Upgrade Automation tool does not upgrade the 4.0 Master server. Use the tool to upgrade this server later, after registering it as a Slave server in the 4.6 infrastructure and transmitting all the necessary information. See the next Stage for the instructions on registering and transmitting information.

To start a mass-upgrading procedure, perform the following actions:

1 Log in with the `Administrator/root` privileges to the physical server where Upgrade Automation Tool is installed.

2 Start the command line utility and run the following command:

mass_upgrade.exe -s [USER[:PASSWORD]@]PIM40_MASTER_ADDRESS -t [USER[:PASSWORD]@]PVA45_MASTER_ADDRESS <40_host_ip_1, 40_host_ip_2, ...> -d [path]

Specify the proper options and the data in the command:

Option	Description
-s [--source]	Specify the source Master server: its hostname/IP address and credentials. The information to be presented in the following format: USER[:PASSWORD]@]ADDRESS. The default option value is `localhost`. You can leave the default value if 4.0 Slave servers are already registered in the target 4.6 Master Server where Upgrade Automation tool is running .
-t [--target]	Specify the 4.6 Master server: its hostname/IP address and credentials. The information to be presented in the following format: USER[:PASSWORD]@]ADDRESS. The default option value is `localhost`. You can leave the default value if the tool is running on a target 4.6 Master server.
-d [--directory]	Specify the path to the folder with the upgrade distribution files. Specifying this option is obligatory.
-host-ip	Specify the IP addresses of 4.0 Slave servers to be upgraded and re-registered in the 4.6 Master server. If you omit this option, the Upgrade Automation tool will detect and upgrade all 4.0 Slave servers registered in the source server.
-h [--help]	View help message.

Note: During the registration, Parallels Virtual Automation 4.6 does not import any logs, settings or security information from the 4.0 servers. You can do it, if needed, during the stage 3.

For the detailed information, you can always view the tool logs. Due to the large amount of logged data, we recommend you to write the data in a specially created file.

After the re-registration in the 4.6 infrastructure, all 4.0 Slave servers are still shown as registered in the 4.0 system, but in the *Offline* state. You do not need to unregister them.

Stage 3: Registering 4.0 Master Server and Transmitting Information

Now you have all Slave servers registered by 4.6 Master server. The 4.6 Master server has no information on these Slave server settings because it is still stored on the 4.0 Master server. During this stage, you are to register the 4.0 Master server as a slave server in the 4.6 infrastructure and to migrate the information to the 4.6 Master server. The following information can be transferred: security database, infrastructure folders, alerts, events, tasks and operation logs, scheduled tasks, IP pools settings, samples, network and global backup settings. During the registration, you can choose the settings to be transferred.

Registering the 4.0 Master server and transferring the information take place simultaneously.

Note: Registering 4.0 Master server in 4.6 infrastructure automatically converts it into a 4.0 Slave server. Later you will be able to upgrade it to the 4.6 version.

If the 4.0 Master server still has subordinate slaves registered, the scenario fails. Re-register the slave nodes in the 4.6 system and repeat the 4.0 Master server registration in the same system.

Registering a 4.0 Master Server and Transmitting Information in Terminal Mode

To register a PIM 4.0 Slave server by Parallels Virtual Automation 4.6 Master server, perform the following actions:

1. Log in to the 4.6 Master server with the `Administrator/root` privileges.
2. Start the command line utility

   vzagroup --importSettings <login>:<passwd>@address_of_4_0_master

   Specify what settings are to be omitted during the data transfer to the 4.6 infrastructure by typing in the corresponding commands:

Command	Description
--import-security	import security settings from 4.0 server (roles, role assignments, users, groups).
--import-infrastructure	import infrastructure folders, logical view from 4.0 server.
--import-alerts	import alerts and events from 4.0 server.
--import-operations	import task log from 4.0 server.
--import-tasks	import scheduled tasks from 4.0 server.
--import-messaging	import physical server messaging settings from 4.0 server.
--import-backup-settings	import default backup settings from 4.0 server.
--import-ipranges	import ip ranges from 4.0 server.
--import-networks	import virtual networks from 4.0 server.

--import-samples	import Container templates from 4.0 server.
--switch-master	assign 4.0 Master server a Slave server role while registering by 4.6 Master server. **Note:** You can also register the server from PVA 4.6.
--clear	delete data from 4.6 master server before importing information from 4.0 server.

The stage 3 is successfully completed. By now, you have:

- 4.0 Slave servers being registered as 4.6 Slave servers in the 4.6 infrastructure;
- 4.0 settings being available in the 4.6 infrastructure;
- 4.0 Master server being registered as a 4.0 Slave server in the 4.6 infrastructure;

Now, the 4.0 Slave server (the former 4.0 Master server) should be upgraded to the 4.6 version. Return to the Stage 2 to run the Upgrade Automation Tool for this server.

Index