

Parallels Virtual Automation 4.5

What's New

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Introduction

This document outlines new features of Parallels Virtual Automation 4.5.

The current release includes a number of new features and functionalities that make Parallels Virtual Automation be a more effective and flexible administration tool designed for managing physical servers and virtual environments.

With Parallels Virtual Automation, you can easily deploy an effectively functioning virtual infrastructure that enables you to significantly reduce your costs in terms of time and resources. While Parallels virtualization products enable you to create complex formations of virtual environments, you may find it hard to manage these formations using different management tools. However, with Parallels Virtual Automation you can handle this challenging task with ease. Since Parallels Virtual Automation supports the whole set of the Parallels products, you can use it with any of its virtualization solutions, be it Parallels Virtuozzo Containers or Parallels Server Bare Metal.

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Single Host for Containers and Virtual Machines

With Parallels Virtual Automation 4.5, you can register and manage both Parallels Virtuozzo Containers and Parallels Server Bare Metal physical servers. Using Parallels Server Bare Metal physical servers, you can run both Containers and virtual Machines on a single host.

The previous version of Parallels Virtual Automation 4.5 - Parallels Infrastructure Manager 4.0 - served as a management tool for Containers only. The current version allows you to create Virtual Machines that can reside on Parallels Server Bare Metal physical severs. So, now both Containers and virtual machines participate in building the infrastructure scheme.

If you need to have virtual environments with guest OS different from the hosting physical server OS, you can create and use virtual machines. Using Parallels Server virtual machines, you can have a wide range of guest OSs installed in them. At the same time, you can create Parallels Virtuozzo Containers. Their operating system should always coincide with the operating system of the hosting server. But they are less resource consuming than virtual machines.

Centralized Management of Physical Servers and Virtual Environments

Being an administration tool, Parallels Virtual Automation 4.5 can manage two different kinds of physical servers: those running Parallels Virtuozzo Containers software and those running Parallels Server Bare Metal software.

Irrespective of the virtualization technology installed on the physical servers, Parallels Virtual Automation provides single-manner management tools for whatever server or virtual environment, be it a Container or a virtual machine. The physical servers and their virtual environments are managed in a single way, in the same screens and in a single concept.

Parallels Virtual Automation 4.5 provides single manner scenarios for the routine management of physical servers and virtual environments. This ensures better scalability and performance of the product.

Container to Virtual Machine Migration

Parallels Virtual Automation 4.5 allows you to migrate a Container residing on a Virtuozzo physical server to a virtual machine on a Parallels Server Bare Metal physical server. This can be either a Windows- or a Linux-based Container, which will be migrated into a Windows- or Linux-based virtual machine respectively. This is a very convenient functionality in case, when you need to transfer a Windows Container to a Linux physical server), which is impossible because Container's operating system should coincide with the physical server operating system. However, virtual machines do not have such restrictions, and a Windows virtual machine can reside on a Linux physical server (Parallels Server Bare Metal), or vice versa.

Massive Virtual Machine Creation and Operations

Parallels Infrastructure Manager 4.5, being an effective management tool for working with multi-level structures, allows you to perform mass actions with physical servers and their virtual environments and provides all the necessary means for this. If you need to perform a common action on several Containers or virtual machines (i.e. start/stop/suspend, change their configuration, schedule backups, clone to templates, etc), you just need to choose the virtual environments from the joined lists and specify the action to be logged. To be aware of the running operations, you can always open the Tasks Details screen and study the status of the operations.

Access to Virtual Machines via Integrated VNC Console

Parallels Virtual Automation 4.5 allows you to operate the virtual machine via Virtual Network Computing (VNC). It is a graphical desktop sharing system that remotely controls another computer. With an integrated VNC console, you can perform basic actions with a single virtual machine without switching to a stand-alone control application. Via the VNC screen, you can install Parallels Tools inside the virtual machine and freely work in it. In addition to this, for your convenience, you can detach the console screen and run the virtual machine in a separate browser window.

Integrated Virtual Environment Resource Usage Monitoring

In Parallels Virtual Automation 4.5, the virtual environment resource consumption can be controlled via the integrated **Resource usage** Monitor.

If the work of the hosting physical server slows down or the distribution of services between virtual environments is hindered, there is always a need to identify the problem. The **Resource usage** Monitor shows which of the virtual environments on the server consumes the maximum of resources, and what type of resources is being consumed more actively. A Parallels Virtual Automation 4.5 administrator/user can view the chart on the current resource consumption or can switch to a history view and set any interval to learn the statistics. On the basis of the acquired knowledge, the administrator/user can fix the resource overuse quickly and without assistance.

Moreover, you can filter the values and bring out the information on CPU, memory, disk i/o usage only or combine all the parameters together on the same chart.

Virtual Environment Security Management

Parallels Virtual Automation 4.5 has a strong security component. Every user or administrator activity, every physical server or virtual environment operation is regulated according to the security settings. The security component functionality has been developed according to the role-based principles. This means that Parallels Virtual Automation enables its administrator to create users and grant them certain roles. A role, in the Parallels Virtual Automation context, is a set of permissions and restrictions, allowing a user perform only those actions that the administrator added into the role. In addition to this, several users can be made members of a single group with its own permissions and restrictions.

Moreover, all operations executed through Parallels Virtual Automation are logged and grouped into lists. Each record contains information on the user who requested this operation (the username, IP address of desktop from which the request has been sent, etc).

User Session Management and Audit of Operations

Parallels Virtual Automation 4.5 allows to keep track of all active user sessions in Parallels Virtual Automation 4.5 or in Parallels Power Panel. The administrator and any user (if granted with these permissions) can view the history and current list of user sessions. Every session entry contains information on the user remote IP, the logon and expiration time, and the list of operations initiated by this user, as well as the status of the operation. Thus, the administrator can keep track of all operations performed by any virtual machine or Container and, if needed, can terminate any session at any time.

Power Panel Policies

Parallels Power Panel is an independent control panel that provides you with the ability to manage virtual environments with the help of any standard Web browser on any platform.

Setting up Power Panel policies is part of the Parallels Virtual Automation 4.5 security policy. When the Power Panel Policy is created, configured and applied to a physical server or a group of virtual environments, it restricts user access to certain Power Panel functionalities and sets limitations on performing certain operations on the corresponding virtual environment or physical server(s), such as the total amount and size of backups, and applications management.

Resource Library

Resource Library is a new section inside Parallels Virtual Automation 4.5 administration panel where you can manage various building blocks for Containers and virtual machines. The **Resource Library** serves as a data centrum for storing Container OS and Application templates, for creating virtual networks and IP pools, for storing virtual machine templates. This is a single source for various building units that you may need while managing virtual environments.

Resizing Virtual Machine Hard Disk

During the virtual machine creation, you are to provide it with an emulated hard disk, i.e. you should specify its type and size. However, these parameters are not constant. If the size of the virtual machine's hard disk turns to be not enough, or vice versa, is too much, you can turn to the virtual machine configuration and adjust its size.

Using RHCS Failover Support

Parallels Infrastructure Manager 4.5 supports the RHCS (Red Hat Cluster Suite) clustering technology allowing you to provide high availability for your applications and services, including the Parallels Virtuozzo Containers and Parallels Infrastructure Manager software.

With the RHCS clustering service, you can group Virtuozzo Linux slave servers into a cluster and set up the failover support for them. This means, that if any of the physical servers within the cluster crashes, there is no need to wait until the server is fixed. The failover system guarantees routing all requests from a down server to an active available server with an automatic real-time full data replication. During the data replication, the working Containers, applications and other running processes, initiated from Parallels Infrastructure Manager, would be instantly copied to an available on-line physicals server within the cluster.

Enlarged Scope of Supported Windows Operating Systems

Parallels Virtuozzo Containers 4.5 and Parallels Virtual Automation 4.5 have changed the software system requirements and made them even more soft.

Now physical servers with Microsoft Windows 2008 can participate in the PVA infrastructure as well as the Microsoft Windows Server 2003 servers. A Windows 2008-based physical server can be made both a Master server and a Slave server.

Virtual Machine Backups

Via theParallels Infrastructure Manager 4.5 software you do not only operate virtual machines residing on the Parallels Server Bare Metal physical servers, but you are also provided with a high-security tool - Virtual Machine Backup Wizard. By means of this wizard, you can automate the virtual machine backup creation process by setting up a scheduled job, or you can make a backup manually. When you automate the process, you can specify the default backup location and the time interval for the backups to be made. Additionally, you can set the backup type.

Moreover, these backup default settings can be made on various levels: the global, infrastructure, physical server or concrete virtual machine level.

The higher the level, the more influential and compound these settings are. For example, the global backup settings are applied to all physical servers and virtual environments residing on them, while the virtual machine level backup settings deal with the concrete virtual machine backups.

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PIM 4.0 to PVA 4.5 Upgrade

Since the PIM 4.0 version, Parallels Infrastructure Manager 4.5 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 4.5 infrastructure. But if you used to administer Parallels Infrastructure Manager 4.0 and have a complex infrastructure of 4.0 servers, you do not need to drop these servers when switching to Parallels Infrastructure Manager 4.5. Such servers can be upgraded. The upgrading procedure retains all the data stored in the 4.0 system and transfers it to the 4.5 infrastructure. In a few steps, you can embed a 4.0 server into the server group of the 4.5 version.

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