



# Virtuozzo Containers for Windows 6.0

Readme

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# CHAPTER 1

## In This Chapter

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## About This Document

This document provides the first-priority information about Virtuozzo Containers for Windows 6.0 and supplements the included documentation.

## About Virtuozzo Containers for Windows 6.0

Virtuozzo Containers for Windows 6.0 is a patented operating system virtualization solution that creates isolated partitions, or Containers, on a single physical server and OS instance to utilize hardware, software, datacenter and management effort with maximum efficiency.

## What's New in Virtuozzo Containers for Windows 6.0

Virtuozzo Containers for Windows 6.0 is a major release which introduces the following new features:

- Support for the Microsoft Windows Server 2012 operating system.  
Now you can create and manage Containers based on this OS and use the following Windows Server 2012 functionality:
  - On-demand installation of features in Containers.

During installation, Virtuozzo Containers for Windows creates a special template containing sources of SxS components found in your Windows distribution. This template will later be used as a repair source to automatically install or restore missing Windows features in Containers. One example is the .NET Framework required by numerous applications. If not installed by default, it now can be supplied to Containers on demand from the aforementioned Virtuozzo Containers for Windows template, even if the original Windows distribution is no longer available.

**Note:** To successfully migrate Containers between Hardware Nodes, each Hardware Node must have such a special template with SxS component sources.

- Enhanced RemoteFX support in Containers, including RemoteFX for WAN, RemoteFX Adaptive Graphics, RemoteFX USB redirection, RemoteFX Media Remoting, and RemoteFX Multi-Touch.

The Container where RemoteFX is to be installed must be a part of a domain and have at least 2GB of free disk space. To install RemoteFX in a Container, in the Server Manager, use the Remote Desktop Services installation type, choose Quick Start, then Session-based Desktop deployment, select the Container, and agree to restart it as needed. After the restart, log in to the Container with the same user which initiated the RemoteFX installation.

- The latest Acronis Backup & Recovery 11 libraries are now used for operations like Container resizing, cloning, backup, and migration.
- The improved printing support in Containers greatly reduces printer configuration hassle. Newly created Containers come with the required services and a universal printer driver. Some printers may still require that certain drivers be installed.
- Support for nested installations in virtual machines working in Server Bare Metal 5.0, VMware ESXi 4.1 and ESX 5.0 U1, Microsoft Hyper-V Server 2012. The ability to install Virtuozzo Containers for Windows and create Containers in virtual machines allows you to provide virtual desktop infrastructure (VDI) offerings to users.
- Support for configurations with up to 64 CPUs and 256GB of RAM.
- Support for 10GbE network adapters and jumbo frames (with more than 1500 bytes of payload). To set the jumbo frame size, in bytes:
  - for a bridged adapter, enter the required value in adapter settings;
  - for all host-routed adapters in Containers on the Hardware Node, run the following command on the Hardware Node: `vzctl set 0 --jumboframe <jumbo_frame_size>`. For more information, see the *Virtuozzo Containers for Windows 6.0 Reference Guide*.
- The Virtuozzo Automator installer is not included with the Virtuozzo Containers for Windows distribution now. Instead, the latest version is downloaded from the official repository during Virtuozzo Containers for Windows installation.
- Support for Cisco VPN client and OpenVPN client and server in Containers. Cisco VPN Client version 5.0.07 and all major releases of OpenVPN from version 2.3.0 are supported. For information on how to enable the feature, see the *Virtuozzo Containers for Windows 6.0 Reference Guide*.

# System Requirements

The hardware requirements for Virtuozzo Containers for Windows 6.0 are as follows:

- 1.4 GHz or faster 64-bit processor
- At least 1 GB of RAM
- At least 32 GB of disk space (more for 16 GB of RAM or more)

The following operating systems are supported:

- Windows Server 2012 Datacenter Edition, US English, German, Spanish, French, Italian, Japanese, Korean, Polish, Russian, Simplified Chinese, Brazilian
- Windows Server 2008 R2 Service Pack 1, Enterprise or Datacenter Edition, US English, German, Japanese, Russian
- Windows Server 2008 R2 Service Pack 1, Standard Edition, US English, German, Russian

**Note:** No Microsoft updates must be installed on the Windows Server operating system prior to installation of Virtuozzo Containers for Windows 6.0. For more information, see **Installing Virtuozzo Containers for Windows 6.0** (p. 6).

To be able to manage Virtuozzo Containers for Windows 6.0 with Virtuozzo Automator, make sure that your client computer can run one of the following Web browsers:

- Internet Explorer 8.x, 9.x, or 10.x
- Firefox 16.x
- Safari 5.x or newer
- Chrome 22.x or newer

Other browsers may work as well, however only those listed above have been tested for compatibility with Virtuozzo Automator.

## Installing Virtuozzo Containers for Windows 6.0

Before installing Virtuozzo Containers for Windows 6.0, make sure that:

- No Microsoft updates have been installed after the installation of the Windows Server operating system on the Hardware Node.
- The Windows Server operating system installed on the Hardware Node has been activated.
- The Secondary Logon service is enabled on the Hardware Node if it is a part of a domain.
- The Virtuozzo data folder (C : \vz, by default) is not a mount point. No external disk partitions or network drives must be mounted to this folder.

To start installing Virtuozzo Containers for Windows 6.0, run the installer and follow the wizard's instructions. For more details, please see the *Virtuozzo Containers for Windows 6.0 Installation Guide* included in this distribution set.

Having installed Virtuozzo Containers for Windows 6.0, make sure to install all available Microsoft updates.

**Note:** Make sure to install VA Agent if you plan to manage your Virtuozzo Containers for Windows installation using Virtuozzo Automator.

## Upgrading to Virtuozzo Containers for Windows 6.0

You can upgrade to Virtuozzo Containers for Windows 6.0 from Virtuozzo Containers for Windows 4.6 installed on Windows Server 2008 R2 SP1. For more information, see the *Virtuozzo Containers for Windows 6.0 Upgrade Guide*.

## Starting to Work with Virtuozzo Containers for Windows 6.0

You can start working with Virtuozzo Containers for Windows 6.0 as follows:

- Using Virtuozzo Automator  
Register the server with your Virtuozzo Containers for Windows installation with a VA Management Node. After that you will be able to manage Virtuozzo Containers for Windows using Virtuozzo Automator. For more details, see *Virtuozzo Automator Administrator's Guide*.
- Using Windows PowerShell or Command Prompt  
For information on working with Virtuozzo Containers for Windows in Windows PowerShell, see *Virtuozzo Containers for Windows 6.0 Reference Guide*.

## Known Issues and Restrictions

The current version of Virtuozzo Containers for Windows 6.0 has the following known issues and restrictions:

- In the Task Manager, sorting of tasks by Container ID switches to random on any change to the task list.
- Registry key permissions may be ordered incorrectly, causing Microsoft Security dialogs to appear.
- Automatic File Classification may report zero total size on disk and no classification.

- RemoteFX cannot be deployed in Containers using Windows PowerShell. The workaround is to deploy RemoteFX using the GUI.
- Migration of physical servers to Containers, Containers to virtual machines, and virtual machines to Containers does not work.
- No third-party backup solutions are supported on the Hardware Node or in Containers. NTBACKUP works both on Hardware Nodes and in Containers.
- Migrating Containers between Hardware Nodes with different sets of Microsoft hotfixes may fail.
- Of antivirus software, only AVG AntiVirus Business Edition 2013 and Symantec Endpoint Protection 12.1.4 are supported.
- UTF characters are shown as question marks in vzautoinstall logs.
- The Microsoft Storage Spaces feature does not work in Containers.
- CPU hotplugging may cause Virtuozzo Containers for Windows to crash.
- During Virtuozzo Containers for Windows installation without Internet access, the inactive update folder selection window may appear underneath other open windows.
- The input language switch button may not work in Containers based on the Japanese edition of Windows Server 2012.
- Stopping Containers to which iSCSI devices are attached may cause the Virtuozzo Containers for Windows Hardware Node to crash.
- Microsoft Cluster is only supported on Windows Server 2008 R2 SP1.
- In some cases, role management in Windows Server 2012 may result in the Activate Windows watermark appearing on desktop. The watermark does not imply any functionality limitations and will disappear after some time or after more actions on roles.
- On non-English Windows Server 2012, vzkpg error messages may be unreadable.
- Installing the update KB2928120 (<http://support.microsoft.com/kb/2928120>) on the Hardware Node applies it only to the Node but not to Containers. As a workaround, install the update in Containers manually.
- After the installation of Internet Explorer 9 on the Hardware Node with Internet Explorer 8 and KB2953522 (<http://support.microsoft.com/kb/2953522>) already installed, IE9 does not start in Containers created prior to its installation.
- Under certain circumstances, Containers may start with the warning "LoadUpdateUninstallInfo(105, KB2930275) failed, error = 0x57". Container functionality remains unaffected.
- Installing Remote Desktop Services on a Hardware Node running Virtuozzo Containers for Windows 6.0 causes core Virtuozzo Containers for Windows services to be forcibly stopped by Windows Server Manager. As a result, some Containers may remain partially functional until Node restart. To avoid this, stop all running Containers prior to RDS role services installation.



# Contact Information

Product website: <https://www.virtuozzo.com/>.