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CHAPTER 1

About This Guide

This guide provides an overview of steps required to deploy recommended Virtuozzo Hybrid Server infrastructures. It links to and is meant to be used with other Virtuozzo Hybrid Server manuals that offer more details on each specific step.
CHAPTER 2

Deployment Overview

With Virtuozzo Hybrid Server, you can deploy the following infrastructures:

- Virtuozzo Hybrid Server with Virtuozzo Storage for running virtual machines and containers on resilient, self-healing storage managed via a GUI or CLI.

- Standalone Virtuozzo Hybrid Server nodes for running virtual machines and containers on regular storage.

On top of both setups, you can also deploy Virtuozzo Automator, a GUI-based solution for easy virtual machine and container management.

The following chapters explain how to deploy these infrastructures.
You can deploy Virtuozzo Storage with management either via command line tools (i.e. CLI) or web management panel (i.e. GUI, recommended). This section lists steps to deploy the recommended setup from scratch.

**Note:** If you are sure you need to deploy Virtuozzo Storage with CLI management instead, see Installing with CLI Management.

1. Plan your Virtuozzo Storage infrastructure (hardware, networks, redundancy mode) as described in Planning Infrastructure for Virtuozzo Storage with GUI Management.

2. Set up the first Virtuozzo Storage node.

   On it, a container will be created with the Virtuozzo Storage management panel through which you will manage your Virtuozzo Storage clusters. It will also be configured as a storage node that will automatically be registered in Virtuozzo Storage. Finally, Virtuozzo Automator Management Node will be installed on this server. With it, you will easily select Virtuozzo Storage as location for your virtual environments. The Virtuozzo Automator Management Node will be installed in another container. The node will be registered in Virtuozzo Automator automatically.

**Note:** If you already have Virtuozzo Automator set up, you can use it instead. To easily switch to the Virtuozzo Storage management panel, you can install Virtuozzo Storage management plugin for your Virtuozzo Automator as described in Logging In to Virtuozzo Storage Management Panel.

To set up the first node, follow these steps:
2.1. Boot the node from the Virtuozzo Hybrid Server distribution and choose **Install with GUI management** on the installer’s welcome screen.

2.2. Set up date, time, and keyboard layout, accept EULA, and choose a disk to install Virtuozzo Hybrid Server on. For more details on the latter, see *Choosing the Installation Destination*.

2.3. Open the **VIRTUOZZO STORAGE** screen. On it, choose the role **Management Panel and Storage** and specify the IP address and hostname for your Virtuozzo Storage management panel container. For details, see *Installing Management Panel and Storage on the First Server*.

![VIRTUOZZO STORAGE Screen](image)

2.4. Open the **VIRTUOZZO AUTOMATOR** screen. On it, choose the role **Management Panel and Compute** and specify the IP address and hostname for your Virtuozzo Automator Management Node container. For details, see *Installing Management Panel and Compute on the First Server*. 
2.5. Complete installation by setting license and root password. For details, see Finishing the Installation.

3. Set up the second and other Virtuozzo Storage nodes.

Each of these similar storage nodes will be automatically registered in Virtuozzo Storage. In addition, they will be automatically registered in Virtuozzo Automator.

Follow these steps:

3.1. Boot the node from the Virtuozzo Hybrid Server distribution and choose Install with GUI management on the installer’s welcome screen.

3.2. Set up date, time, and keyboard layout, accept EULA, and choose a disk to install Virtuozzo Hybrid Server on. For more details on the latter, see Choosing the Installation Destination.

3.3. Open the VIRTUOZZO STORAGE screen. On it, choose the role Storage and specify the IP address or hostname of your Virtuozzo Storage management panel container as well as token. For details, see Installing Storage on the Second and Other Servers.
3.4. Open the VIRTUOZZO AUTOMATOR screen. On it, choose the role Compute and specify the IP address or hostname of your Virtuozzo Automator Management Node container as well as password. For details, see Installing Compute on the Second and Other Servers.

3.5. Complete installation by setting license and root password. For details, see Finishing the Installation

4. Log in to the Virtuozzo Storage management panel at the IP address (or hostname) specified during installation and default port 8888 and set up storage networks as described in Configuring Node Network Interfaces.

5. From the Virtuozzo Storage management panel, create a Virtuozzo Storage cluster as described in Creating the |vstorage| Cluster.
6. From the Virtuozzo Storage management panel, create datastores to store your virtual machines, containers and their backups in a Virtuozzo Storage cluster as described in Managing Datastores.

7. In Virtuozzo Automator, click **New... > Virtual Environment** on the toolbar and start creating virtual machines and containers. For more details, see Starting to Create Virtual Environments. If you have chosen not to use Virtuozzo Automator, you can create VMs and containers from CLI (see Creating Virtual Machines and Containers).
CHAPTER 4

Deploying Standalone Nodes

You can deploy standalone nodes with Virtuozzo Automator (recommended) or without it. This section lists steps to deploy the recommended setup from scratch.

Note: If you are sure you need to deploy standalone nodes without Virtuozzo Automator, see Installing with CLI Management.

1. Set up the first node.

   On it, a container will be created with Virtuozzo Automator Management Node for easy virtual machine and container management. The node will be registered in Virtuozzo Automator automatically.

   Note: If you already have Virtuozzo Automator set up, you can use it instead. To easily switch to the Virtuozzo Storage management panel, you can install the Virtuozzo Storage management plugin for your Virtuozzo Automator as described in Logging In to Virtuozzo Storage Management Panel.

2. If required, set up second and other nodes.

   Each of these similar nodes will be automatically registered in Virtuozzo Automator.

3. Log in to Virtuozzo Automator at <VA_MN_IP_addr_or_hostname>:4648. Click New... > Virtual Environment on the toolbar and start creating virtual machines and containers. For more details, see Starting to Create Virtual Environments.