



SWsoft, Inc.

Virtuozzo Power Panel

VPS Administrator's Guide



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CHAPTER 1

Introduction

The Virtuozzo Power Panel (VZPP) functionality provides you as VPS administrator with the ability to manage your VPS(s) with the help of any standard Web browser on any platform. VZPP allows you to manage Virtual Private Servers residing on Hardware Nodes running both the Windows 2003 Server and Linux operating systems. Main principles of the VZPP operation for both operating systems are very similar. However, there are some features peculiar to only Windows 2003 Server or Linux. When there are differences between the two versions, steps written specifically for the Windows version are marked with the  icon and steps for the Linux version - with the  icon.

Currently, you are able to manage your VPS in the following ways:

- Start, stop, or reboot the VPS;
- Change the VPS root/Administrator password;
- Start, stop, or restart certain services inside the VPS;
- View the list of VPS processes and send them signals;
- View the current resources consumption and resources overusage alerts;
- View the Virtuozzo logs;
- Customize the VZPP interface;
-  Connect to the VPS by means of RDP;
-  Mount and unmount the VPS in the repair mode;
-  Reinstall the VPS;
-  Back up and restore the VPS;
-  Connect to the VPS by SSH.

Note: Hereinafter, the root/Administrator denotation is used to identify the main user in the Linux and Windows operating systems, respectively.

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Logging In

To log in to your VPS, use the IP address (or hostname) and TCP port of your VPS proper. Your provider should inform you of the IP address (or hostname) and TCP port to enter in the address line of your browser and of the credentials (user name and password) to use to log in to the corresponding VPS.

There are two possible ways to log in to your VPS:

- 1 Enter `root/Administrator` as the user name and the password your provider has given you.
- 2 Enter `admin` as the user name and the password of the Plesk `admin` user. This is possible only if Plesk Control Panel is installed inside your VPS and your provider has entitled you to do so.

If you have logged in to your VPS by using the VPS IP address and the TCP port of the Plesk service (by default, it is 8443), and Plesk Control Panel is not installed in your VPS, you will be asked to install it after you have logged in to the VPS. To this effect, follow any of the links (except for the **Virtuozzo** link) on the Plesk main menu in the left part of the displayed window. You will be warned with the corresponding message saying that Plesk is not installed in your VPS and offering you to do so. Just follow the instructions on the screen. After you have successfully installed Plesk Control Panel in your VPS, you can proceed with the normal course of work.

In either case, once you have connected to the VPS, you are recommended to:

- 1 Change your `root/Administrator` password at once by following the **Change password** link in the left pane of the **VZPP** page.
- 2 Provide a valid email address on the **VZPP** configuration page in order to be able to log in to **VZPP** in case you forget your password. The **Forgot your password?** link on the login page allows you to enter your user name and the email address provided on the **VZPP** configuration page in order to receive a URL at this address informing you how to change your password.

VZPP Interface Overview

The Virtuozzo Power Panel interface has been designed to let the VPS administrator quickly perform all possible tasks thru an intuitive navigation system.

All VZPP pages have a *menu* on the left and a *status bar* on top. The menu looks like this:

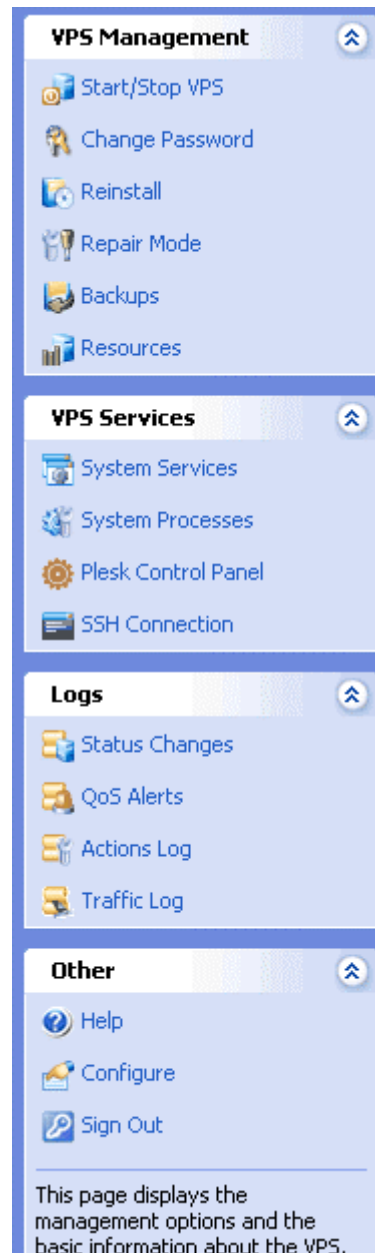








Figure 1: VZPP Menu

It provides links to VZPP pages where you can perform various tasks. The link to the page which is currently open is highlighted. To know more about the page to which any link points, hover the mouse cursor over the link. The description of the corresponding page is displayed at the bottom of the menu. All links are gathered into four groups: **VPS Management**, **VPS Services**, **Logs**, and **Other**, the names of these groups being links themselves. When performing a particular task, you may first click the name of the group to open the corresponding dashboard and then choose a task, or you may select the task at once on the menu under the corresponding group.

Note: If you are managing a VPS that resides on the Hardware Node running the Windows 2003 Server operating system, the **Reinstall**, **Repair Mode**, **Backup** and **SSH Connection** links on the VZPP menu are unavailable. At the same time, you can make use of the **Remote Desktop** link.

The links on the menu do the following:

Link	Description
VPS Management	Opens the VPS Management dashboard where you can learn more about various VPS management tasks and perform any of them.
Start/Stop VPS	Opens the page where you can start, stop, or reboot the current VPS.
Change Password	Opens the page for changing the VPS root/administrator password.
Reinstall	 Opens the Reinstall VPS page where you can recover the original template files of your VPS in case something went wrong.
Repair Mode	 Opens the page where you can start your VPS in the so-called repair mode in order to perform command line checks and fixes.
Backup	 Opens the page where you can manage your VPS backups.
Resources	Opens the page where you can learn about the current consumption of hardware resources by your VPS.
VPS Services	Opens the Service Management dashboard where you can learn more about various service management tasks and perform any of them.
System Services	Opens the list of principal services inside your VPS with the opportunity to start, stop, restart any of them and to control their behavior on the VPS startup.
System Processes	Opens the list of processes running inside your VPS with the opportunity to send various signals to any of them.
Plesk Control Panel	This link is displayed only if the Plesk application template is installed in the VPS being managed. It opens the Plesk Control Panel login window.
Confixx Control Panel	 This link is displayed only if the Confixx application template is installed in the VPS being managed. It opens the Confixx Control Panel login window.
Remote Desktop	 Opens a Remote Desktop session for connecting to your VPS via RDP.
Connect to VPS via SSH	 Opens an <code>ssh</code> terminal window for connecting to your VPS via SSH.
Logs	Opens the Logs dashboard where you can learn more about various logs available for your VPS and view any of them.
Status Changes	Opens the list of status changes your VPS has recently undergone.

QoS Alerts	Opens the list of alerts of your VPS overusing any hardware resources or coming close to the usage limits imposed on it.
Actions Log	Opens the list of actions you have recently performed in VZPP with the current VPS.
Traffic Log	Opens the page where you can view your traffic statistics for a specified period in the past.
Help	Opens this help system.
Configure	Opens the page where you can customize the VZPP interface.
Sign out	Following this link logs you out of VZPP.

The status bar on top is presented on the following figure:

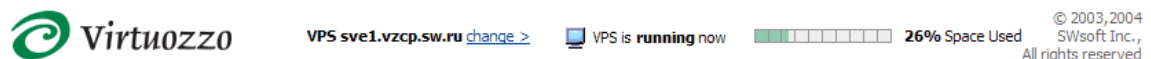


Figure 2: VZPP Status Bar

It consists of the following elements (from left to right):

- 1 The Virtuozzo logotype providing a link to the VZPP main page.
- 2 The ID or the host name of the current VPS.
- 3 The **change** link pointing to the Select VPS page, where you can select another VPS to manage (only in case of a Service VPS user!).
- 4 The current state of the VPS.
- 5 The percent of the available disk space used by the VPS.
- 6 The SWsoft copyright information.

The area in the lower right corner of any VZPP page not covered by the menu and by the status bar provides the contents proper of the page. It has a *title bar* on top (just below the status bar), an example of which is shown below:



Figure 3: VZPP Title Bar

It consists of the following elements (from left to right and from top to bottom):

- 1 The icon corresponding to the current VZPP page.
- 2 The hierarchy of levels superior to the level of the current VZPP page presenting links for moving up to any of these levels.
- 3 The name of the current VZPP page.
- 4 The screen ID of the current VZPP page. If you are having troubles with VZPP, mentioning the ID of the problem screen in your support call is likely to facilitate resolving your issue.
- 5 A link to the **Active Tasks** page. This will open the page with the list of those tasks related to managing your VPS that you have scheduled by means of VZPP, but that have not yet been completed.

- 6 A link to refresh the current screen.
- 7 A link to open the context-sensitive help. The help window opens at the topic related to the current VZPP page, but you will also be able to browse the entire help from this window.

The contents proper of any VZPP page varies depending on the screen ID. The topmost-level page, which is displayed right after logging on to VZPP, provides succinct information on the current VPS in the **VPS Summary** table and links to the three VZPP dashboards (see above).

In case your VPS is short of any resource, the corresponding warning is displayed with the link to the **Resources** page for you to check the state of resources consumption by your VPS.

The **VPS Summary** table has the following fields:




Field Name	Description
ID	The ID of the current VPS.
Hostname	The hostname of the current VPS.
Current status	Indicates whether the VPS is running, down, being repaired, or in any other state. The description of all possible VPS statuses is provided in the VPS Statuses section.
IP Address(es)	Specifies the IP address(es) of VPS network interfaces. These address(es) are assigned by your provider.
Operating System	Indicates what operating system is running inside your VPS.
Applications Installed	Enumerates additional applications installed in the VPS by your provider.

CHAPTER 2

Virtual Private Server Operations

The common VPS operations are accessible in VZPP thru the **VPS Management** dashboard. This dashboard is displayed after you click the **VPS Management** link on the menu.

The following VPS operations are available either by following the links under the **VPS Management** group on the menu or by following the links on the **VPS Management** dashboard itself:

- Starting, stopping, or rebooting the VPS (the **Start/Stop VPS** link);
- Change the VPS root/administrator password (the **Change Password** link);
- View the current resources consumption (the **Resources** link).:
-  Reinstall the original template files into the VPS (the **Reinstall** link);
-  Mount and unmount the VPS in the repair mode (the **Repair Mode** link);
-  Back up and restore the VPS (the **Backup** link).

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Starting and Stopping VPS

A Virtual Private Server may be started up, rebooted, and shut down like an ordinary computer. The VZPP page that provides access to these functions is available on clicking the **Start/Stop VPS** link on the VZPP menu.


The **VPS Info** field on top of the page informs you of the VPS ID, hostname, its current state, and the amount of space consumed by the VPS. Depending on its state, only those operations are accessible that conform to the VPS state. For example, a running VPS cannot be started for obvious reasons, and so on. The following VPS states can be characterized as stable:

Status	Description
Running	The VPS is running; therefore, it may only be rebooted or stopped.
Down	The VPS is stopped; therefore, it may only be started.

Repairing  The VPS is being repaired. You cannot perform any action on the VPS until you press the **Finish Repair** button on the **Repair Mode** page.

Besides these states, during VPS operations any VPS may be in one of the transitional states: mounting, starting, stopping, etc. When in a transitional state, you cannot perform any action on the VPS until the operation is finished. The description of all possible VPS statuses is provided in the **VPS Statuses** section.

Press the **Start VPS**, **Stop VPS**, or **Reboot VPS** button to perform the corresponding action. On pressing one of these buttons, this action is logged.


 If you are managing a VPS residing on the Hardware Node with the Linux operating system installed and wish to stop your VPS, bear in mind that there is a two-minute timeout for the VPS shutdown scripts to be executed. If the VPS is not stopped in two minutes, the system forcibly kills all the processes in the Virtual Private Server. The Virtual Private Server will be stopped in any case, even if it is seriously damaged. To avoid waiting for two minutes in case of a Virtual Private Server that is known to be corrupt, you may use the **Fast Stop VPS** button.

Changing VPS Root/Administrator Password

The **Change root/Administrator password** page is displayed on clicking the **Change Password** link on the **VZPP** menu. Only the root/Administrator password for the current VPS can be changed. If you are connected as a Service VPS user, you cannot change the password of this user in the current VZPP implementation. You should enter the new root/Administrator password for the current VPS into the fields provided and press the **Change** button.

Note that VZPP does not check the entered password as to its length and non-conformity to dictionary entries, so choosing a simple password rests entirely at your own risk. It is recommended to use a chaotic set of lowercase and uppercase letters, digits, and punctuation marks as root/administrator password.

Reinstalling VPS

 VPS reinstallation means recovering the original state of a Virtual Private Server in case you have inadvertently modified, replaced, or deleted any file that is part of an application or OS template, which has brought about the VPS malfunction. The VPS reinstallation process restores these files as they were at the time when the VPS was created and/or when other applications were added to the VPS afterwards.

Reinstallation is likely to bring about some irrevocable changes to your VPS so, to be on the safe side, it is recommended to back up your VPS before reinstallation.

The **Reinstall VPS** introductory page is displayed after clicking on the **Reinstall VPS** link on the VZPP menu. Click **Next** on this page to review the available options and to decide whether you really need to reinstall your VPS and in what way.

Note: If the VPS is running, clicking **Next** on the introductory page will first take you to the page where you can stop the VPS, and only then to the page with reinstallation options. The description of all possible VPS statuses is provided in the **VPS Statuses** section.

Stopping VPS Prior to Reinstallation

The given page of the **Reinstall VPS** wizard is displayed only if you have selected the **Reinstall VPS** option for a running VPS. Inasmuch as there is no possibility to reinstall running VPSs, on this page you can stop the VPS before proceeding to the reinstallation proper.

Press **Next** to stop the VPS you are going to reinstall. This will take you to the page where you can view the reinstallation options and select the appropriate ones.

Selecting Reinstallation Type

The page where you should choose the mode of reinstallation is displayed after you press **Next** on the **Reinstall VPS** introductory page. You shall select one of the two reinstallation types and specify whether to recreate your VPS password database in the corresponding boxes.

When selecting a reinstallation type, bear in mind that there is one thing all types have in common: the original files of the OS and applications templates are restored in the VPS. The potential problem with reinstallation can be that you as administrator might have already done some meaningful changes to these files. In case you have not seriously modified any system configuration files, reinstalling the original files is likely to solve many problems.

However, you are likely to have already filled a freshly installed VPS with personal files of yours. If you are sure these files cannot cause problems or you are bound to keep them in your VPS, select the first option - **Reinstall VPS from scratch and preserve existing VPS files**. In this case, your VPS is created anew with all existing files moved to the `/old` directory inside the VPS. You shall be sure of enough disk space required to perform this operation, otherwise, it will fail. Be prepared to move the necessary files from the `/old` directory to the new existing installation manually. In case of a large number of such files, this may prove a tedious task.


Eventually, if you have nothing to lose at all, select the second option: **Reinstall VPS from scratch, without saving any data**. Your VPS will be erased and recreated from the original template(s). Naturally, all your personal files will be lost. That is why, you should select this option only if you have nothing valuable in your VPS or if you have a backup of your personal files elsewhere.

Pay attention to the **Recreate password database** checkbox. By default, the information on the VPS users and groups is retained whatever the reinstallation type. Selecting this checkbox will purge this information altogether and create only the root account with the password specified in the **Set root password** and **Retype password** fields under the checkbox. This option may prove useful if your VPS has got a corrupted password database.


When you are done, press the **Next** button to proceed to the **Reinstall VPS** confirmation page.

Confirming Reinstallation

On the third page of the **Reinstall VPS** wizard you shall confirm the reinstallation or give up on it. The reinstallation option that you have chosen at the previous step is displayed for you to have a last chance to revise what you are about to do. Press the **Do Reinstall** button to begin the reinstallation process.

Do not forget to start the VPS when the operation is complete. To see the current status of the operation, click the **Active Tasks** link  on the title bar.

Repairing VPS


 Repairing a VPS is another way to solve problems with VPS functioning. In Virtuozzo terminology, the VPS is mounted in the repair mode. This means that a new VPS is temporarily created from scratch with the same network and other parameters as the broken VPS, and the root directory of the broken VPS is mounted as `/repair` into the newly-created VPS. Thereafter, the administrator is supposed to connect to the new VPS via `ssh` using the network and login parameters of the broken VPS, go to the `/repair` directory, and perform one of the following actions:

- 1 Find the personal data that need to be saved and copy it to a safe location elsewhere. Do not copy your personal data directly into your new VPS, as it will be destroyed once you exit the repair mode. After quitting the repair mode, the broken VPS can be reinstalled and the personal data can further be loaded into it from the place where you have saved them.
- 2 Identify the source of the problem and manually correct it. This method can be recommended to advanced VPS administrators, as it presupposes some technical expertise. And it is still recommended to save first your personal data in a safe location, just in case something should go wrong.

The **Repair Mode** page is accessible thru the **Repair Mode** link on the VZPP menu. Pressing the **Run Repair** button on this page will mount the VPS in the repair mode. It is not necessary to stop the VPS beforehand; if the VPS is running at the moment of pressing the **Run Repair** button, it will be first automatically stopped. The description of all possible VPS statuses is provided in the **VPS Statuses** section.

When the page is refreshed after pressing the **Run Repair** button, click the **Details** link at the end of the blue line to see if the repair mode has been successfully entered. After this happens, connect to the VPS via `ssh` and do what you deem reasonable inside the VPS. After closing your `ssh` session, press the **Repair Mode** link on the VZPP menu once again and press the **Finish Repair** button to exit the repair mode. After the repair mode is exited, the VPS is returned to the stopped state, and you should start the VPS to check the repairing effect.

Backing Up and Restoring VPS

 Any Virtual Private Server is defined by its operating system files, applications installed, configuration files, and personal information. VZPP allows you to back up all these components. A regular backing up of the existing Virtual Private Servers is essential for any VPS reliability.

The **Back Up/Restore VPS** page opens after clicking on the **Backup** link on the VZPP menu. If you already have backups of the given VPS, it displays a table summarizing these backups.

Column Name	Description
Backed Up	The date and time when the backing up was performed.
Size	The size of the backup.

You can manage your backups on this page in the following ways:

- The **New Backup** button begins the process of backing up the current state of your VPS, be it running or not. The description of all possible VPS statuses is provided in the **VPS Statuses** section. This button is available only if you have not reached the maximal number of allowed backups for your VPS. If you have, remove one of the backups first (see below for details). VZPP allows you to place the backup of your VPS only onto the Node where your VPS is hosted.
- The **Restore VPS** button restores the VPS backup currently selected in the table. Only one backup should be selected for this operation. The changes in the VPS made after the date of this backup will be lost after the VPS has been restored.
- The **Remove Backups** button removes the VPS backup currently selected in the table. Usually this is done to provide extra space for making new VPS backups. Use the checkbox at the upper left corner to select/deselect all the backups at once.
- In VZPP, if you have reached the limit on the number of VPS backups you are allowed to create, you can make use of the **Renew Backup** button to renew a VPS backup without having to delete any of your existing VPS backups. By default, the latest backup is renewed. You can also renew another VPS backup by selecting the checkbox opposite the corresponding backup and clicking on the **Renew Backup** button.
- Clicking on a backup date in the table opens the **Backup Details** page where you can also restore or remove the corresponding VPS backup.

Backup Details

The **Backup details** page available by clicking any backup link on the **VPS Backups** page provides general information on the corresponding backup and lets you either restore or remove this backup by pressing the corresponding buttons. The information on backups is presented in the following table:

Column Name	Description
Creation Date	The date and time when the backing up was performed.
Backup Size	The size of the backup.
Storing Node	The Hardware Node where the given backup is stored.
Hostname	The hostname the VPS had at the backup time. If the VPS is restored from this backup, this hostname is also restored and replaces the current one.
IP Address(es)	The IP address(es) the VPS had at the backup time. If the VPS is restored from this backup, these addresses are also restored and replace the current one(s).
Applications Installed	All applications that had been installed in the VPS at the backup time. If the VPS is restored from this backup, these applications are also restored and replace the current one(s).

- The **Restore VPS** button restores the VPS from the current backup. The changes in the VPS made after the date of this backup will be lost after the VPS has been restored.
- The **Remove Backup** button removes the current VPS backup. Usually this is done to provide extra space for making new VPS backups.

Restore Confirmation

The Restore Confirmation page is used after you press the Restore VPS button either on the VPS Backups or Backup details page to ensure that your decision to restore the VPS from the selected backup has not been accidental.

If you make up your mind to restore your VPS from the current backup, you should be aware of the fact that all the changes your VPS has undergone since the backup creation date and time will be gone. If you want to restore the VPS to recover some important information you seem to have lost, it is worth considering to back up first the current state of your VPS to be able to return to it at a later time.

Note: If you are using an IP address of your VPS to connect to it, you may have to reconnect to the VPS with the IP address that was retrieved from the backup after the VPS is restored.

Press the Restore button to begin the restoration.



Monitoring VPS Resources

The Resources feature of VZPP allows you to view the current consumption of hardware resources by your Virtual Private Server. On the Resources page you can view the consumption of principal resources - CPU units, system resources, bandwidth, disk space, and disk inodes. This page is displayed on clicking the Resources link on the VZPP menu.




You can learn about the current consumption of the corresponding resource, and about the quota imposed on this resource for the given VPS. The percent bars graphically shows the current consumption of resources by the VPS. To the left of the percent bars there are links to the explanations of the current state of the corresponding resource.

In the Resources based on VPS template table at the top of the Resources page, you can view the name and description of the VPS template the given Virtual Private Server is based on.

The resources displayed on the Resources page are explained in the following table:

CPU	This is a positive integer number that determines the minimal guaranteed share of the CPU time your Virtual Private Server will receive. For stopped VPSs, this parameter is not available.
System	This is a cumulative figure presenting the averaged consumption of a number of critical memory-related parameters by your VPS.
Bandwidth	 There may be limitations imposed on the bandwidth for outgoing traffic available for your VPS. This indicator shows what portion of available bandwidth is currently used.
Disk Space	Total size of disk space consumed by the Virtual Private Server.
Disk Inodes	 Total number of disk inodes (files, directories, and symbolic links) allocated by the Virtual Private Server. When the number of inodes used by the Virtual Private Server hits the soft limit, the VPS can create additional file entries up to the hard limit during the grace period.

In the lower part of the **Resources** page, you can view details on the resources consumption. Information is presented in the table having the following columns:

Column Name	Description
ID	The name of the parameter in the VPS configuration file responsible for the given resource.
Current Use	The value of the aforementioned parameter.
Barrier	The quota on the consumption of the given resource by the current VPS. In some situations, the system may allow the VPS to exceed this quota up to the limit.
Limit	 The quota on the consumption of the given resource by the current VPS that cannot be exceeded in any circumstances.
Soft Limit (for disk-related resources)	 The limit on the consumption of the given resource by the current VPS that can be exceeded up to the hard limit but only during the grace period (see the <code>quotatime</code> parameter in the table).
Hard Limit (for disk-related resources)	 The limit on the consumption of the given resource by the current VPS that cannot be exceeded in any circumstances.
Units	The units in which the value of the Current Use , Limit , Soft Limit , and Hard Limit columns is measured.
Description	The concise description of the given resource.

Note: If any resource has "n/a" in the **Current Use** field, this means that either this field makes no sense for the given resource (for example, the `quotatime` resource is not used if you are not on the grace period) or your VPS is down, so some information on resources consumption cannot be fetched.

The resources are grouped by their relations to various computer subsystems for you to easier find the information on the resource that interests you. The last three groups of VPS resources - **Primary UBC Parameters**, **Secondary UBC Parameters**, and **Auxiliary UBC Parameters** - are the ones that constitute the averaged value of the **System** parameter on top of the **Resources** page.

Note: The **Secondary UBC Parameters** and **Auxiliary UBC Parameters** groups are available only for HNs with the Linux operating system installed.

To learn more on the particular resources comprising all the presented groups, see the **Viewing Detailed Resource Consumption Statistics** section.

To view resource overusage alerts, follow the **QoS Alerts** link on the **VZPP** menu.

CPU Resource

The **CPU** percent bar on the **Resources** page reflects the current consumption of the Hardware Node CPU time by your Virtual Private Server. The percent value is calculated not in proportion to the power of the Hardware Node, but in proportion to the limit on using the Node CPU power by your VPS. Judging by the color of the percent bar, the current CPU consumption of your VPS may relate to either of the three zones: green, yellow, and red.

The CPU percent bar is marked in green if your VPS consumes less than 90% of the CPU time allowed to it. This means that you can run more applications inside the VPS without violating the performance of the current ones. If your VPS consumes more than 90% of the allowed CPU time, but for an insignificant time, the color remains green as this situation is not perilous.

The CPU percent bar is marked in yellow if your VPS consumes between 90% and 100% of the CPU power allowed to it for a relatively long while. Usually this means that the running processes consume too much CPU power. It is up to you to decide whether this situation suits you, but you should bear in mind that additional applications launched inside the VPS might experience shortage of available CPU power. Maybe you should consider the possibility of cutting down the number of processes.

The CPU percent bar is marked in red if your VPS consumes 100% of the CPU power allowed to it, i.e. all the available CPU power, for a long time. Usually this means that currently there is some CPU-intensive process inside the VPS caused by a temporary task. For example, this may happen if you are compiling a package in your VPS or in similar cases. In this case you should simply wait for this task to complete.

However, if you do not know the reason for the CPU overconsumption, turn to the [VZPP System processes](#) page to determine which process(es) are causing the problem and take the corresponding measures. For example, you might want to terminate or kill the offending process. Otherwise, the system performance may continue low for a long while.

System Resource

The System percent bar on the [Resources](#) page reflects the current consumption of the Hardware Node memory-related resources by your Virtual Private Server. These resources can be displayed by clicking the [Primary UBC parameters](#) block on the [Resources](#) page. The current memory consumption of your VPS may relate to either of the four zones: green, yellow, red, or black.

The System percent bar is marked in green if your VPS on the average consumes less than 90% of memory-related resources allowed to it. To view the current consumption of any particular memory-related resource, press the [Show Details](#) button on the [Resources](#) page.

The System percent bar is marked in yellow if your VPS consumes between 90% and 100% of the memory-related resources allowed to it. This is an averaged value, so you should get to know what particular resource is causing the problem. To view the current consumption of any particular memory-related resource, press the [Show Details](#) button on the [Resources](#) page.

It is up to you to decide whether this situation suits you, but you should bear in mind that additional applications launched inside the VPS might experience shortage of some memory-related resources. Judging by the offending resource, you might determine the reason for its shortage and take the corresponding measures.


The **System** percent bar is marked in red if your VPS is currently consuming 100% or more of the memory-related resources allowed to it. This is a very serious situation, so you should get to know what particular resources are causing the problem as the shown value is the average across all the memory-related resources. To view the current consumption of any particular memory-related resource, press the **Show Details** button on the **Resources** page. Judging by the offending resources, determine the reason for the problem or call for your provider's support.

Your VPS is allowed to consume more than 100% of its quota only in extreme situations. If you do not solve the problem in a reasonable time, applications running inside your VPS may be denied some of the resources, so application crashes and other problems are most probable.

The **System** percent bar is marked in black if your VPS has been denied some memory-related resources due to their overusage. This might have resulted in application crashes or other problems inside the VPS. This is a very serious situation, so you should get to know what particular resources are causing the problem as the shown value is the average across all the memory-related resources. To view the current consumption of any particular memory-related resource, press the **Show Details** button on the **Resources** page. Judging by the offending resources, determine the reason for the problem or call for your provider's support.

Note: After the situation has been corrected, please wait 4 minutes for the zone color to be reset.

Bandwidth Resource

 The **Bandwidth** percent bar on the **Resources** page informs you of the bandwidth for outgoing traffic your VPS is currently using related to the bandwidth limit imposed on your VPS. There can be no limitations on the bandwidth for in-going traffic, so there's no indicator for it. The value of the bandwidth parameter is not calculated in real time, but averaged for the latest hour.

As far as you cannot exceed the bandwidth limit and there is no danger in approaching this limit, the bandwidth consumption is always in the green zone, unlike other resources consumption. If bandwidth limits are not set, the bandwidth parameter is not available.

Disk Space Resource

The **Disk Space** percent bar on the **Resources** page and on the status bar of any VZPP window reflects the current consumption of the Hardware Node disk space by your Virtual Private Server. The percent value is calculated not in proportion to the total disk space of the Hardware Node, but in proportion to the soft limit (quota) on using the Node disk space by your VPS. Judging by the color of the percent bar, the current disk space consumption of your VPS may relate to either of the four zones: green, yellow, red, or black.

The **Disk Space** percent bar is marked in green if your VPS consumes less than 90% of disk space allowed to it. This means that your VPS has currently no problem with disk space.


The **Disk Space** percent bar is marked in yellow if your VPS consumes between 90% and 100% of the disk space available to it on the Hardware Node. You should consider the possibility of erasing unnecessary data from the VPS, or it may be a problem to upload new data to it.

The **Disk Space** percent bar is marked in red if your VPS is currently consuming 100% or more of disk space allowed to it on the Hardware Node. This is a very serious situation, so you should erase unnecessary data from the VPS immediately. On a Linux Node, your VPS is allowed to consume more than 100% of its quota only during the grace period (see the `quotatime` parameter in the resources consumption details). If you do not solve the problem during this time, your VPS will be denied some of the disk space and you might lose valuable data.

The **Disk Space** percent bar is marked in black if your VPS has been denied some disk space due to its overusage. This might have resulted in a loss of some valuable data or other problems inside the VPS. To discontinue this very serious situation, you should erase unnecessary data from the VPS immediately.

Note: After the situation has been corrected, please wait 4 minutes for the zone color to be reset.

Disk Inodes Resource

 The **Disk Inodes** percent bar on the **Resources** page reflects the current consumption of the Hardware Node disk inodes (files, directories, and symbolic links) by your Virtual Private Server. The percent value is calculated not in proportion to the total disk inodes available on the Hardware Node, but in proportion to the soft limit (quota) on using the disk inodes by your VPS. Judging by the color of the percent bar, the current disk inodes consumption of your VPS may relate to either of the four zones: green, yellow, red, or black.

The **Disk Inodes** percent bar is marked in green if your VPS uses less than 90% of disk inodes allowed to it. This means that new files, directories, or symbolic links can so far be fearlessly created inside the VPS.

The **Disk Inodes** percent bar is marked in yellow if your VPS uses between 90% and 100% of the disk inodes available to it on the Hardware Node. You should consider the possibility of erasing unnecessary files/directories/symbolic links from the VPS, or it may be a problem to upload new data to it.


The **Disk Inodes** percent bar is marked in red if your VPS is currently using 100% or more of disk inodes allowed to it on the Hardware Node. This is a very serious situation, so you should erase unnecessary files/directories/symbolic links from the VPS immediately. Your VPS is allowed to consume more than 100% of its quota only during the grace period (see the `quotatime` parameter in the resources consumption details). If you do not solve the problem during this time, your VPS will be denied some of the disk inodes and you might lose valuable data.

The **Disk Inodes** percent bar is marked in black if your VPS has been denied some disk inodes due to their overusage. This might have resulted in a loss of some valuable data or other problems inside the VPS. To discontinue this very serious situation, you should erase unnecessary files/directories/symbolic links from the VPS immediately.

Note: After the situation has been corrected, please wait 4 minutes for the zone color to be reset.

Viewing Detailed Resource Consumption Statistics

The **Extended** page (accessible thru clicking the **Extended** button on the **Resources** page) provides descriptions of the individual resource parameters the current VPS is consuming. The **CPU Parameters** group is reciprocally related to the **CPU** bar on top of the page, and the **Disk Quota** group - to the **Disk Space** bar.

 The following resource parameters are available for monitoring on a Windows Node:

CPU Parameters


Parameter	Description
cpuunits	This is a positive integer number that determines the minimal guaranteed share of the CPU time your Virtual Private Server will receive.

Disk Quota

Parameter	Description
diskspace	Total size of disk space consumed by the Virtual Private Server. When the space used by the Virtual Private Server hits the soft limit, the VPS can allocate additional disk space up to the hard limit during the grace period.

Primary UBC parameters

Parameter	Description
numproc	The maximal number of processes the VPS may create.
numsessions	The number of simultaneous terminal sessions that can be opened to the VPS.
vprvmem	The size of private (or potentially private) memory allocated by the VPS. The memory that is always shared among different applications is not included in this resource parameter.

 For Hardware Nodes with the Linux operating system installed, you can monitor the following parameters:

CPU Parameters

Parameter	Description
cpuunits	This is a positive integer number that determines the minimal guaranteed share of the CPU time your Virtual Private Server will receive.
cpulimit	This is a positive number indicating the CPU time in per cent the corresponding VPS is not allowed to exceed.

Disk Quota

Parameter	Description
<code>diskinodes</code>	Total number of disk inodes (files, directories, and symbolic links) allocated by the Virtual Private Server. When the number of inodes used by the Virtual Private Server hits the soft limit, the VPS can create additional file entries up to the hard limit during the grace period.
<code>quotatime</code>	The grace period for the disk quota overusage defined in seconds. The Virtual Private Server is allowed to temporarily exceed its quota soft limits for no more than the <code>QUOTATIME</code> period.
<code>diskspace</code>	Total size of disk space consumed by the Virtual Private Server. When the space used by the Virtual Private Server hits the soft limit, the VPS can allocate additional disk space up to the hard limit during the grace period.
<code>quotauidlimit</code>	Number of user/group IDs allowed for VPS internal disk quota. If set to 0, UID/GID quota will not be enabled.

The resources a Virtual Private Server may allocate are defined by the system resource control parameters, also called user beancounters (UBC). These parameters can be subdivided into the following categories: primary, secondary and auxiliary parameters. The primary parameters are the starting point for defining the relative power of a Virtual Private Server. The secondary parameters are dependent on the primary ones and are calculated from them according to a set of constraints. The auxiliary parameters help improve fault isolation among applications in one and the same Virtual Private Server and the way applications handle errors and consume resources.

Listed below are all the system resource control parameters. The parameters starting with "num" are measured in integers. The parameters ending in "buf" or "size" are measured in bytes. The parameters containing "pages" in their names are measured in 4096-byte pages.

Primary parameters

Parameter	Description
<code>numothersock</code>	The number of sockets other than TCP ones. Local (UNIX-domain) sockets are used for communications inside the system. UDP sockets are used, for example, for Domain Name Service (DNS) queries. UDP and other sockets may also be used in some very specialized applications (SNMP agents and others).
<code>numtcpsock</code>	The number of TCP sockets (PF_INET family, SOCK_STREAM type). This parameter limits the number of TCP connections and, thus, the number of clients the server application can handle in parallel.
<code>vmguarpages</code>	The memory allocation guarantee, in pages (one page is 4 Kb). VPS applications are guaranteed to be able to allocate additional memory so long as the amount of memory accounted as <code>privvmpages</code> (see the auxiliary parameters) does not exceed the configured barrier of the <code>vmguarpages</code> parameter. Above the barrier, additional memory allocation is not guaranteed and may fail in case of overall memory shortage.
<code>numproc</code>	The maximal number of processes and threads the VPS may create.
<code>avnumproc</code>	The average number of processes and threads.




Secondary parameters

Parameter	Description
<code>dgramrcvbuf</code>	The total size of receive buffers of UDP and other datagram protocols.
<code>kmemsize</code>	The size of unswappable kernel memory allocated for the internal kernel structures for the processes of a particular VPS.
<code>othersockbuf</code>	The total size of UNIX-domain socket buffers, UDP, and other datagram protocol send buffers.
<code>oomguarpages</code>	The out-of-memory guarantee, in pages. Any VPS process will not be killed even in case of heavy memory shortage if the current memory consumption (including both physical memory and swap) does not reach the <code>oomguarpages</code> barrier.
<code>tcprcvbuf</code>	The total size of receive buffers for TCP sockets, i.e. the amount of kernel memory allocated for the data received from the remote side, but not read by the local application yet.
<code>tcpsndbuf</code>	The total size of send buffers for TCP sockets, i.e. the amount of kernel memory allocated for the data sent from an application to a TCP socket, but not acknowledged by the remote side yet.

Auxiliary parameters

Parameter	Description
<code>numflock</code>	The number of file locks created by all VPS processes.
<code>lockedpages</code>	The memory not allowed to be swapped out (locked with the <code>mlock()</code> system call), in pages.
<code>privvmpages</code>	The size of private (or potentially private) memory allocated by an application. The memory that is always shared among different applications is not included in this resource parameter.
<code>numsiginfo</code>	The number of <code>siginfo</code> structures (essentially, this parameter limits the size of the signal delivery queue).
<code>numpty</code>	The number of pseudo-terminals, such as an <code>ssh</code> session, the <code>screen</code> or <code>xterm</code> applications, etc.
<code>numiptent</code>	The number of IP packet filtering entries.
<code>shmpages</code>	The total size of shared memory (including IPC, shared anonymous mappings and <code>tmpfs</code> objects) allocated by the processes of a particular VPS, in pages.
<code>numfile</code>	The number of files opened by all VPS processes.
<code>dcachesize</code>	The total size of <code>dentry</code> and <code>inode</code> structures locked in the memory.

Viewing Active Tasks

You can check if there are any VPS operations currently under way on all VZPP pages, except for those containing an error report. The **Active Tasks** window can be accessed by pressing the ,  or  icon or clicking the **Active Tasks** link at the right end of the title bar of a VZPP page. Note that the icons vary according to the interface skin selected. If you are planning to perform any operation on your VPS, it is a good idea to check the **Active Tasks** window and wait for the tasks to complete, if there are any. The window is refreshed every few seconds.

The information on the active tasks is presented as a table with the following columns:

Column	Description
Time	The date and time when the operation was started.
Operation	The name of the operation.
Status	The iridescent line signifies that the operation is under way.

The **Details** link beside a task leads to the **Task Details** page, where you can view the details of the operation.

VPS Statuses

At any point of time, any VPS is characterized by a status (or state). There are four stable statuses and a number of transitional statuses that a VPS may have. If the VPS is in one of the stable states, it means that it is likely to continue in this state until its administrator performs a task that would change its status. If the VPS is in one of the transitional states, it means that it is currently passing from one stable state to another. During a transition stage, no operation can be performed on the VPS until the transition is finished.

The stable statuses are:

Status	Description	Possible Actions
down	The VPS is stopped and its private area is unmounted.	Starting/repairing/reinstalling
mounted	The VPS private area is initialized and ready to work, but the VPS is not running.	Starting
running	The VPS private area is mounted and the VPS is running.	Stopping/rebooting/repairing
repairing	The VPS is mounted in the repair mode.	Exiting the repair mode.

The transition statuses are:




Status	Description
creating	The VPS is being created.
mounting	The VPS is being mounted.
starting	The VPS is being started.

stopping	The VPS is being stopped.
unmounting	The VPS is being unmounted.
destroying	The VPS is being destroyed.
starting-repair	The VPS is entering the repair mode.
stopping-repair	The VPS is quitting the repair mode.
setting	The VPS parameters are being set.
migrating	The VPS is being migrated.
moving	The VPS is being moved.
cloning	The VPS is being cloned.
updating	The VPS is being updated.
backing-up	The VPS is being backed up.
restoring	The VPS is being restored.

CHAPTER 3

Managing VPS Services and Processes

VZPP allows you to manage services and processes inside your VPSs in a number of ways by following the corresponding links on the VPS Services dashboard. You can:

- Click on the **System Services** link to open the list of principal services inside your VPS with the opportunity to start, stop, restart any of them and to control their autostart option.
- Click on the **System Processes** link to open the list of processes running inside your VPS with the opportunity to send various signals to any of them.
- Click on the **Plesk Control Panel** link to be able to log in to the Plesk Control Panel in case the corresponding template is installed in your VPS. If the template is not installed, the Plesk Control Panel link is not displayed.
-  Click on the **Confixx Control Panel** link to be able to log in to the Confixx Control Panel in case the corresponding template is installed in your VPS. If the template is not installed, the Confixx Control Panel link is not displayed.
-  Click on the **Connect to VPS via SSH** link to open an `ssh` terminal window for connecting to your VPS via SSH. This link is available if you are managing a Hardware Node with the Linux operating system installed.
-  Click on the **Terminal Services Connection** link to open a Remote Desktop terminal window for connecting to your VPS via RDP (Remote Desktop Protocol). This link is available if you are managing a Hardware Node running Windows 2003 Server.

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Managing VPS Services


The **System Services** page is displayed when clicking on the **System Services** link on the VZPP menu. It presents the table reflecting those services inside your VPS that you can manage. The table provides the following information:

Column Name	Description
ID	The system ID of the service executable file.
Name	A short description of the service.

Status	Indicates whether the service is running or not. A yellow tooth-wheel means that the service is running; a grey one - that it is stopped.
Autostart	If there is a tick in this column, this service is started automatically on the VPS startup; if a cross - it is not.
Actions	Contains links to perform certain actions with the given service. See below for details.

You can perform the following actions on any service in the table:

- Stop the service by clicking the red square in the **Actions** column. Only running services are subject to this action; otherwise, the square is gray and inactive.
- Restart the service by clicking the green triangle in the **Actions** column. Only running services are subject to this action.
- Start the service by clicking the green triangle in the **Actions** column. Only stopped services are subject to this action.
- Open the **Services Details** page to enable/disable the autostart feature by clicking on the name of the service in the **ID** column.

 If you are managing a Linux Node, you are able to perform the following actions on `xinetd`-dependent services:

- Disable the service by clicking the red square in the **Actions** column. To perform this action, the given service must be enabled, and the `xinetd` service must be running; otherwise, the square is gray and inactive.
- Enable the service by clicking the green triangle in the **Actions** column. To perform this action, the given service must be disabled, and the `xinetd` service must be running; otherwise, the square is gray and inactive.
- Open the **Service Details** page to enable/disable the service on its own page. You cannot manage the autostart feature of `xinetd`-dependent services, as its value is inherited from the `xinetd` service.

To quickly determine what services in the **Services** table are dependent on `xinetd`, look at the marks in the **Autostart** column. Those of `xinetd`-dependent services are gray, be it a tick or a cross, as this value is inherited from the `xinetd` service.

Note: If you have just started your VPS and opened the **Services** page, not all services may have had time to be started. Wait a little and refresh the page to update the state of the services.

Viewing Service Details


The **Service Details** page provides the principal information on the service that you have selected on the **System Services** page and lets you manage this service.

The following information is provided if the service is not dependent on `xinetd`:

- Whether the service is running or stopped;
- Whether the service is started automatically on the VPS startup or not.


You may perform the following actions on the given service:



- Stop the service by clicking the **Stop Service** button. Only running services are subject to this action.
- Restart the service by clicking the **Restart Service** button. Only running services are subject to this action.
- Start the service by clicking the **Start Service** button. Only stopped services are subject to this action.
- Enable/disable the autostart feature by clicking the **Enable Autostart/ Disable Autostart** button, correspondingly.

 If the service is dependent on `xinetd`, this information is mentioned on the screen, and you can perform only one action on such a service - either enable or disable it depending on its current state - by clicking the **Enable/Disable Service** button on the **Service Details** page. Moreover, the `xinetd` service must be running to perform any such action; otherwise, the latter will result in an error.

Managing VPS Processes

The **System Processes** page is displayed when clicking on the **System Processes** link on the **VZPP** menu. It presents the table reflecting all the running processes inside your VPS. The table provides the following information:

Column Name	Description
PID	The process ID.
Pri	The absolute priority of the process assigned to it by the process scheduler. On a Linux Node, the range is from 0 (the highest priority) to 39 (the lowest priority). The usual process priority is 30. On a Windows Node, the range can be from 0 (the highest priority) to 31 (the lowest priority). The usual process priority is 8.
Time	The total amount of the CPU time the process has used so far.
%MEM	 The percent of the RAM size the process is currently using.
%CPU	The percent of the CPU time the process is currently using.
RSS	(Resident Segment Size) The size of physical memory the process really uses (in Kilobytes).

Nice	 The relative priority of the process assigned to it by the user. The negative values mean that the user has manually increased the priority, the positive values - that they have decreased it.
Stat	 The state of the process. The possible states are: R - runnable, on the run queue; S - sleeping; T - traced or stopped; D - uninterruptable sleep; Z - defunct, "zombie". If two letters are shown, the second letter means the following: W - has no resident pages; < - high-priority process; N - low-priority task; L - has pages locked in memory.
Command	The command that is used to launch the process.
User	The user the process belongs to.

You may select any number of processes by selecting the checkbox(es) beside the corresponding process(es) (select the uppermost checkbox to select all the processes at once) and send them a standard signal. Select the needed signal in the drop-down menu and press the Send Signal button. The following signals can be sent:

- TERM - sends the termination signal to the process. The process might be able to catch this signal and stay alive;
- KILL - unconditionally kills the process;
- STOP - stops (suspends) the process. The process will still be on the task list.
- CONT - continue the process causing it to resume.
- HUP - a hang-up signal. It is often used to ask a daemon process to re-read its configuration.

Logging In to Plesk Control Panel

In case a Plesk Control Panel application template is installed inside your VPS, the Plesk Control Panel link becomes visible on the VZPP menu. You can click on this icon to go to the Plesk Control Panel login window.

In this window, you should press the Login to Plesk button. A new browser window with Plesk Control Panel is launched and you are able to get straight down to work there.

The logging in to Plesk is performed with the credentials of the `admin` user. The corresponding VZPP page allows you to change the current password of the `admin` user, which you should do from time to time to maintain maximum security of your VPS.


Note: If your Plesk version is lower than 7.0.2, the option of changing the admin password is not provided on the Plesk Control Panel VZPP page.

Installing Plesk

The **Install Plesk** page allows you to install Plesk Control Panel in any VPS residing on your Hardware Node. This page can be accessed by clicking the **Install Plesk** link on the VZPP main menu.

To install Plesk in a Virtual Private Server, you should press the **Install** button on the **Install Plesk** page. Just follow the instructions on the screen to complete the installation. After you have successfully installed Plesk Control Panel in the VPS, the **Plesk Panel** link becomes visible on the VZPP main menu. Follow this link to start working in Plesk.

Logging In to Confixx Control Panel


 In case a Confixx Control Panel application template is installed inside your VPS, the **Confixx Control Panel** icon becomes visible on the VZPP menu. You can click on this icon to go to the **Confixx Control Panel** login window.

In this window, you should enter your credentials (login and password) into the corresponding fields and press the **Login to Confixx** button. You may learn the credentials from your provider. In case the credentials entered are correct, a new browser window with Confixx Control Panel is launched and you are able to get straight down to work there.

If you select the **Save Login data** checkbox, you won't have to type your login and password again when you later visit this page - the credentials will be filled in automatically. In this case, the credentials information is stored not on the server, but on the client side (i.e. on the computer where your browser window is launched).

Note: Confixx Control Panel with version below 3.0 is not supported.

Using SSH to Connect to VPS

 If you are managing a Hardware Node with the Linux operating system installed, you can use Secure Shell (`ssh`) to remotely connect to your VPS and work inside its directory tree using the standard Linux command line tools. To connect to your VPS by `ssh`, you should make sure that:

- 1 You are launching VZPP in Internet Explorer 5.0 or above. This feature is not yet supported by other browsers. If you are using another browser, you may still establish an SSH connection with your VPS by means of many third-part `ssh` clients bypassing VZPP.
- 2 Your VPS is running. If it is not, start it on the **Start/Stop VPS** page.

Note: If your VPSs reside on the Hardware Node running Windows 2003 Server, please turn to the [Using Terminal Services Connection to Connect to VPS](#) section to learn to manage your VPSs by means of the Remote Desktop Protocol.

The SSH Client window is opened upon clicking on the **SSH Connection** icon on the VZPP menu. You are presented with the **Login** and **Password** fields where you should enter the relevant information to be passed to the `ssh` server inside your VPS.

After you have filled in these two fields, press the **Login** button. If you are doing this for the first time, your browser may display a window like this asking you to install additional components:

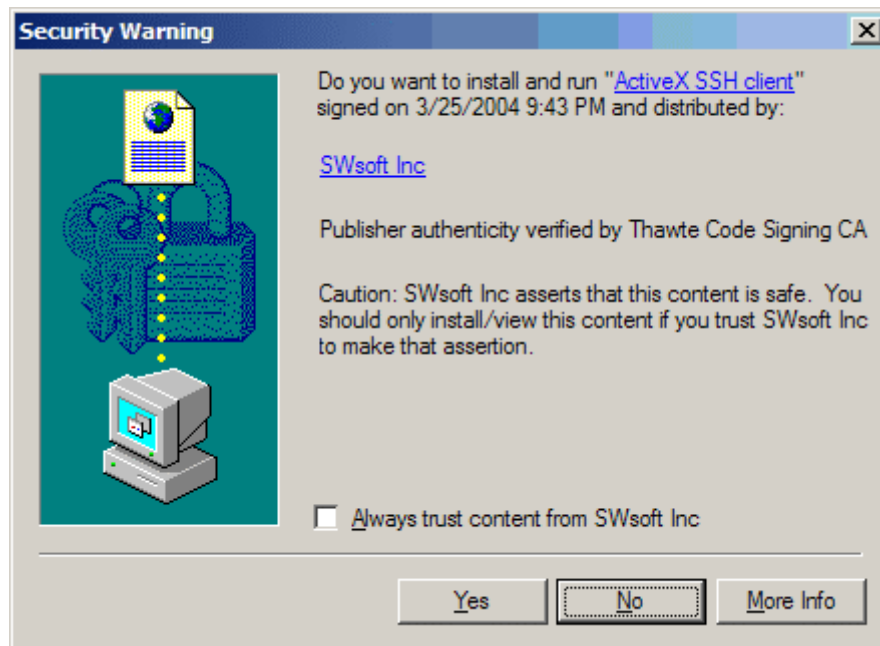



Figure 4: Installing ActiveX SSH Client

Click **Yes** in this window and wait for the `ssh` terminal window to appear, whereupon you get connected to the VPS and may start sending commands to it via `ssh`.

Using Remote Desktop Connection to Access VPS

 If your VPSs reside on the Hardware Node running Windows 2003 Server, you can use Remote Desktop Connection - a standard Windows application - to connect to any Virtuozzo-based VPS by means of the Remote Desktop Protocol (RDP). To connect to your VPS by RDP, you should make sure that your VPS is running. If it is not, start it.

Note: If you are managing Hardware Nodes running the Linux operating system, please turn to the [Using SSH to Connect to VPS](#) section to learn to manage your VPSs by means of Secure Shell.

The Remote Desktop window is opened upon clicking on the Terminal Services Connection icon on the VZPP menu. You are presented with the **Login** button that you should press to open the Remote Desktop session. If you are doing this for the first time, your browser may display a window like this asking you to install additional components:



Figure 5: Installing Remote Desktop ActiveX Control

Click **Yes** in this window and wait for the Remote Desktop terminal window to appear, whereupon you will be presented with the **Login** and **Password** fields. After entering the necessary information in the fields provided, press **Enter** to get connected to the VPS and start sending commands to it via Remote Desktop.

CHAPTER 4

Viewing Logs

VZPP is able to display four kinds of logs maintained for Virtual Private Servers residing on the Hardware Node:

- *History of VPS Status Changes.* This log reflects such changes as starting, stopping, rebooting VPSs, or mounting them in the repair mode. These changes may have been invoked either thru VZPP or by other means.
- *Quality of Service Alerts.* This log reflects those states of VPSs when they hit limits on some hardware resource. To know more about resources, read the **Monitoring VPS Resources** section.
- *Actions.* This log reflects only those actions related to VPS management that were performed by means of VZPP.
- *Traffic Log.* This log allows you to display your network traffic statistics for a specified period of time.


You may view all these logs by following the corresponding links from the **Logs** dashboard accessible by clicking the **Event Manager** link on the VZPP main menu.

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Viewing History of VPS Status Changes

The **Status Changes** page (accessible by clicking the **Status Changes** link on the VZPP menu) keeps track of all the changes in the status of all VPSs existing on the Hardware Node. These changes may happen due to the VPS routine management via VZPP, VZMC, command line operations, or due to the operation of some programs. The three-column table presents the time when the VPS status changed, the VPS ID whose status has changed, and the status obtained from the given VPS. By default, 20 records are shown, but you may have more records displayed by pressing the appropriate link on top of the table. The description of all possible VPS statuses is provided in the **VPS Statuses** section.

You may have the **Status Changes** table display only those log records that have a particular date and time. On top of the table, press the  icon to display the fields where you can specify the boundaries of the time interval for which you wish to view the log; then click on the **Search** link.

Viewing Alerts Log


Every time your VPS consumes more of a resource than is specified by the limit on that resource, or is coming close to that limit, an alert is generated and logged. Turn to the **Monitoring Resources** section to know more about limits for corresponding resources. You shall pay attention to the problem resource and correct the situation.

You may have the **QoS Alerts** table display only those alerts that have a particular date and time. On top of the table, press the  icon to display the fields where you can specify the boundaries of the time interval for which you wish to view the log; then click on the **Search** link.

The alerts log is shown on the **QoS Alerts** page available on clicking the **QoS Alerts** link on the VZPP menu.

Viewing Actions Log

The **Actions Log** page keeps track of your latest operations performed by means of VZPP. You may consult this page to check the status of any VPS operation you have recently performed. You can access this page by following the **Actions Log** link on the VZPP main menu.

By default, 20 records are shown, but you may have more records displayed by pressing the appropriate link on top of the table. You may also have the **Actions Log** table display only those log records that have a particular date and time. On top of the table, press the  icon to display the fields where you can specify the boundaries of the time interval, the VPS ID, or the VPS status you wish to view the log for; then click on the **Search** link.

The actions list is presented as a table with the following columns:

Column Name	Description
Time	The time when the operation began.
VPS #	The ID assigned to the VPS.
Operation	The name of the operation.
Status	Indicates whether the operation succeeded or failed.

Clicking on the **Details** link next to an operation displays the corresponding success/failure details in a pop-up window.

Viewing Traffic Log

The **Traffic Statistics** page enables you to view the information on all incoming and outgoing traffic for your Virtual Private Server over a specified time period in the past. This page can be accessed by clicking the **Traffic Log** link on the VZPP main menu.

To display traffic statistics, you should perform the following operations:

- 1 In the **Show traffic for** field, specify the time span for which you wish to see your traffic by selecting the corresponding duration unit on the drop-down menu. Depending on the selected unit, the field to the right of the drop-down menu will change and offer you a list of appropriate values to choose from. The duration units are listed below:
 - **Day:** Click on the calendar and specify the exact date (i.e. day, month, and year) for which you wish to view your network traffic statistics.
 - **Month:** Specify the month and year to display your traffic statistics for.
 - **Year:** Specify the year to display your traffic statistics for.
 - **Period:** Specify the period for which you wish to view your traffic statistics by selecting the start and end dates on the calendar.
- 2 In the **Traffic unit** field, specify the unit of measurement your traffic statistics will be displayed in.
- 3 Click on the **Submit** button to display your traffic statistics for the specified period.

The results will be presented in the table having the following columns:

Column Name	Description
<Period>	Denotes the specified period. The name of this column depends on the duration unit selected in the Period field.
Incoming	The amount of input traffic statistics (in the selected unit of measurement) during the specified period.
Outgoing	The amount of output traffic (in the selected unit of measurement) during the specified period.

The **Total** row at the bottom of the table summarizes all the incoming and outgoing network traffic for the specified time span.

Viewing Task Details

The **Task Details** page provides information on the Virtuozzo utilities messages when performing this or that operation. In other words, these messages would be displayed as if you performed a VPS operation not by means of VZPP, but by means of the command line (for example, over ssh).

You can access this page from the **Actions Log** page by clicking on the **Details** link next to the corresponding operation. Another way to access this page is to follow the **Details** link right after performing the operation, i.e. before going to any other VZPP page.

The task details are presented as a table with the following columns:

Column Name	Description
Time	The time when a certain operation stage began.
Event	The corresponding Virtuozzo utility message.

The table is preceded by a heading informing you of the current status of the operation - **In progress**, **Completed**, or **Failed**.

Viewing Error Details

The Error Details page provides specific information in case of an operation failure. When you are trying to perform some operation on a VZPP page and that operation fails, the corresponding VZPP page is refreshed with a thick red line across the page informing you of the failure and providing the [Details](#) link to learn more about this failure.

This page presents a complete response as to why the operation failed. This response might help you understand the reason for the failure. It is also recommended to bear in mind the following point:

- An operation might fail, but a green line is displayed informing that the operation has been scheduled. It means that the failure occurred after the operation had been scheduled. That is why, it is desirable to always check the status of the scheduled operation by following the [Details](#) link at the right end of the green line to make sure that the operation succeeded.
- An operation might fail, but a green line is displayed informing that the operation has been scheduled. It means that the failure occurred after the operation had been scheduled. That is why, it is desirable to always check the status of the scheduled operation by following the [Details](#) link at the right end of the green line to make sure that the operation succeeded.

CHAPTER 5

Customizing VZPP Interface

Clicking on the **Configure** link on the VZPP left menu opens the Virtuozzo Power Panel interface configuration page where you can set a number of parameters related to the VZPP interface. The options provided on the **Configure Power Panels** page are the following:

Option	Description
Interface Skin	Here you may choose a suitable interface skin for your VZPP affecting such elements as the VZPP general layout (framed or non-framed), icons and images, and the color palette.
Status Bar Refresh	This setting affects the refreshing period of the status bar located at the top of any VZPP page (see VZPP Interface Overview (on page 7)). If you select the Smart Update option, the status bar will be refreshed only when you follow VZPP links, but not more frequently than once per 60 seconds. If this option is disabled, it means that the chosen interface skin does not use frames, so it is impossible to reload only part of the page.
Local Time Zone	This setting affects the date and time information found on such VZPP pages as Status Changes , QoS Alerts , Actions Log . Choose the time zone you wish to be used when viewing different kinds of logs.
Interface Language	Available only for VPSs residing on the Hardware Nose with the Linux operating system installed. As VZPP is localized into a number of languages, this drop-down menu lets you choose the default interface language for VZPP. This setting affects the language of both your current VZPP session, and all future sessions if User Default is chosen as the interface language on the VZPP login screen.
Contact email	Available only for VPSs residing on the Hardware Nose with the Linux operating system installed. This field should be filled in with a correct email address to enable the functionality of restoring the password, should the current user forget it. This email address pertains to the current user only; other VZPP users of the given VPS may fill in this field with other addresses. The link for restoring the password is located on the VZPP login page.

After you decide on the suitable configuration and press the **Submit** button, the settings will be remembered for the current browser only. If you change the browser or move to another computer for working with VZPP, the default settings will be used until you perform a new customization.

CHAPTER 6

Troubleshooting

Virtuozzo Power Panel is an indispensable means for solving various kinds of problems related to the VPS functioning. It is still more flexible due to its ability to work with not running VPSs. The common groups of problems lending themselves readily to be handled by VZPP boil down to the following:

- Services inaccessibility;
- Elusive problems.

You can also consult the **Network Problems** section to try to find out why your VPS is inaccessible by network.

Note: The problem situations described in this chapter mainly concern Virtual Private Servers with the Linux operating system installed. However, it can be also of great use for those persons who manage VPSs running Windows 2003 Server.

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Services Inaccessibility

Various tasks you are accustomed to perform by means of your VPS (accessing your web site or sending email and the like) may fail if the corresponding services are inaccessible. If Plesk Control Panel is installed inside your VPS and you are working with this panel, the **Service Unavailable** screen may sometimes be displayed when you are trying to perform this or that Plesk-related operation. Try consecutively the following three steps to determine the reason for this and do away with it:

- 1 Check if your VPS is running. To this effect, log in either as a Service VPS user or as your VPS root user and look at the status bar to determine if the VPS is running or down. If you are on the Service Unavailable screen, click the link provided on this screen to check the status of your VPS. If the VPS is down, click **Boot VPS** on the menu (if necessary) and press the **Start VPS** button. Wait a little for the VPS and all the services to start.
- 2 Go to the **Services** page and check the status of the service in question. The service must be running for the corresponding functionality to be accessible. For example, `psa` and `mysqld` must be running for the Plesk Control Panel to handle your requests, `httpd` - for your web site to function properly, `sshd` - for the VPS to be accessible by `ssh`, `sendmail` - for you to be able to send email, `popa3d` - to receive email by the POP3 protocol, etc. You may also try to stop the `iptables` service to see if it solves the problem, because some `iptables` rules might prevent certain network connections.

- 3 Go to the **Resources** page to determine if your VPS is short of any resources. If some of the resources are marked in red or black, this is a hazardous situation that should be resolved immediately. For more information on resources, turn to the **Resources** section of this guide.
- 4 In case you are dealing with the **Service Unavailable** screen, you may also try to reinstall the Plesk Control Panel into your VPS. The Plesk installation might be corrupted.

Elusive Problems

Sometimes it is hard to determine the exact reason for a problem. The problem might persist in spite of any actions undertaken. The most grievous situation of the kind happens when you cannot even start your VPS. Such problems call for going back to an earlier state of your VPS with these problems missing. This change-over is usually conducted in three steps:

- 1 Mounting your VPS in the repair mode and copying your valuable personal data to a secure place outside the VPS. Using the repair mode is covered in the **Repairing VPS** section.
- 2 Restoring your VPS from a working backup or reinstalling the VPS. Choose the way that suits you most. These methods are described in the **Restoring VPS** and **Reinstalling VPS** sections, correspondingly.
- 3 Copy your personal data back to the recovered VPS and start the VPS.

Network Problems

Problem

Your VPS is inaccessible by its hostname or IP address, or you cannot log in as root.

Solution

- If you are using the hostname, try to use the IP address, and vice versa.
- Ping your VPS.
- Ask your provider to create a **Services VPS** user for you. Log in to the **Service VPS** which is responsible for managing all your Virtual Private Servers and check the problem VPS hostname and IP address.
- Log in to the **Service VPS** and change the VPS root/Administrator password.
- Log in to the **Service VPS** and disable the `iptables` service inside the problem VPS.

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