Parallels® Plesk Panel

Advanced Administration Guide

Parallels Plesk Panel 11.0 for Microsoft Windows

Revision 1.0

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Preface

In this section:

Typographical Conventions

The following kinds of formatting in the text identify special information.

Formatting convention	Type of Information	Example
Special Bold	Items you must select, such as menu options, command buttons, or items in a list.	Go to the **QoS** tab.
	Titles of chapters, sections, and subsections.	Read the **Basic Administration** chapter.
Italics	Used to emphasize the importance of a point, to introduce a term or to designate a command line placeholder, which is to be replaced with a real name or value.	The system supports the so called *wildcard character* search.
`Monospace`	The names of style sheet selectors, files and directories, and CSS fragments.	The license file is called `license.key`.

`Preformatted Bold`	What you type, contrasted with on-screen computer output.	Unix/Linux:
		`# cd /root/rpms/php`
		Windows:
		`>cd %myfolder%`

`Preformatted`	On-screen computer output in your command-line sessions; source code in XML, C++, or other programming languages.	Unix/Linux:
		`# ls -al /files`
		`total 14470`
		Windows:
		`>ping localhost`
		`Reply from 127.0.0.1:`
		`bytes=32 time<1ms`
		`TTL=128`

Feedback

If you have found an error in this guide, or if you have suggestions or ideas on how to improve this guide, please send your feedback using the online form at http://www.parallels.com/en/support/usersdoc/. Please include in your report the guide's title, chapter and section titles, and the fragment of text in which you have found an error.

CHAPTER 1

About This Guide

Parallels Plesk Panel for Windows Advanced Administration Guide is a companion guide for *Parallels Panel Administrator's Guide*. It is intended for server administrators whose responsibilities include maintaining hosting servers and troubleshooting server software problems.

The guide provides step-by-step instructions to perform server management tasks that require use of Panel functionality other than the GUI and GUI-only tasks that administrators may need to perform only in rare specific situations. Administrators can use several additional tools that are supplied in the standard Parallels Plesk Panel distribution package to add customized automation tasks, back up and restore data, and repair Panel components and system settings. The tools include a number of standalone Windows applications, command-line utilities, and the ability to integrate custom scripting with Parallels Plesk Panel.

This guide consists of the following chapters:

- **Introduction to Panel**. Describes the main components and services operated by Panel, licensing terms, and the ways to install and update Panel components.
- **System Maintenance**. Describes how to change server host name, IP addresses, and locations of directories for storing virtual host files, backups, and mail content. This chapter also introduces Panel's command-line tools, a mechanism for running scripts on Panel events, and service monitor that allows monitoring and restarting services without logging in to Panel.
- **Backing Up, Restoring, and Migrating Data**. Describes how to back up and restore Panel data by means of the command-line utilities `pleskbackup` and `pleskrestore`, and introduces the tools for migrating hosted data between servers.
- **Changing Security Settings for File System Objects and Accounts**. Describes the process of applying Parallels Plesk Panel security rules to file system objects and accounts. Presents examples of commonly used security rules with explanations.
- **Customizing Panel Appearance and GUI Elements**. Introduces Panel themes that can be used to customize Panel appearance and branding and describes how to remove specific elements of Panel GUI or change their behaviour.
- **Statistics and Logs**. Describes how to run calculation of statistics on disk space and traffic usage on demand and access web server logs.
- **Localization**. Introduces the means to localize Panel GUI into languages for which Parallels does not provide localization.
- **Troubleshooting**. Describes how to troubleshoot malfunction of Panel services.
- **Glossary**. Explains terms used in this guide.

CHAPTER 2

Introduction to Panel

Parallels Plesk Panel consists of the following main components:

- Front-end GUI service. The GUI, served with the Internet Information Services (IIS) server, is the main means of interaction with Panel.
- Panel core. The core processes management requests from the Panel GUI, command line interface, and API RPC. The core contains scripts, binary files and other resources used to link Panel components with each other and with external services.
- Panel's main database called `psa`. The database stores information about Panel objects, such as IP addresses, domains, user accounts, and many others. The database is served by MySQL or the Microsoft SQL database engine.
- Panel's configuration files.
- Panel's log files.
- Command-line utilities. Command-line interface allows integration of third-party software with Panel, and provides the means to manage Panel through the server console. For more information about the Panel command-line interface, refer to **Panel Command Line Reference**.
- *API RPC*. This interface is another way to integrate third-party software with Panel. It allows to manage Panel objects from remote by sending specifically structured XML packets and receiving responses from Panel. For more information on API RPC, refer to **Developer's Guide: Read Me First** and **API RPC Protocol Reference**.

Services Managed by Panel

Panel uses standard packages for the following services:

- `IIS` as a set of Internet services including HTTP, FTP, and others.
- `FTP servers -` ServU, Gene-6, used as alternative FTP servers.
- `Mail servers -` MailEnable, IceWarp (Merak), CommuniGate Pro, or SmarterMail.
- `BIND` or `MS DNS` - used as the domain name server.
- `MySQL` used to store the Panel's database called `psa` that is used for administrative purposes
- `MSSQL` or `MySQL` - used as a database server by Panel users.
- `Tomcat` - used as an infrastructure for servlet and JSP-based applications shipped in the `*.war` format.
- `JDK (j2sdk)` - used as a library for `java` applications.
- `SpamAssassin` - used as protection against spam e-mail messages.
- `Parallels Premium Antivirus, Kaspersky Antivirus`, or `IceWarp Antivirus` - used as e-mail antivirus tools.

Files and Directories Used by Panel Installations

Parallels Plesk Panel and its components are installed by default in the directory `C:\Program Files\Parallels\Plesk\` on a physical server, or `C:\Program Files\Plesk\` in the Parallels Containers environment. The default installation directory is referred to as `%plesk_dir%` in the following list. Some of the subdirectories with corresponding components are listed below.

- `%plesk_dir%\admin\` - The core components used by Panel GUI.
- `%plesk_dir%\admin\plib\` - Panel's PHP files.
- `%plesk_dir%\admin\bin\` - Binary utilities.
- `%plesk_dir%\bin\` - Binary utilities.
- `%plesk_dir%\etc\` - Configuration files.
- `%plesk_dir%\MailServer`\ - Mail servers.
- `%plesk_dir%\backup\` - Backup files.
- `%plesk_dir%\dns\` - BIND name server files.
- `%plesk_dir%\MySql\` - Panel's MySQL database server.
- `%plesk_dir%\Databases\` - Database servers for serving user data.

In this chapter:

Installation and Upgrade Overview

The most common way of installing and upgrading Parallels Plesk Panel is to use the *Parallels Installer* utility. This utility connects to the Parallels Updates server where the Panel distribution packages are stored. It then retrieves, downloads, and installs Panel. You can download the Parallels Installer utility from http://www.parallels.com/eu/download/plesk/products/.

For detailed instructions on how to use Parallels Installer, refer to the **Installation, Upgrade, Migration, and Transfer Guide**.

For information about installing third-party software services on Panel-managed servers, refer to the section Installing and Updating Third-Party Applications (on page 12).

Installing Panel in Parallels Virtuozzo Containers Environment

If you operate in the Parallels Virtuozzo Containers (PVC) environment, you can use *application templates* for installing Panel on containers.

When the application templates are installed on a PVC hardware node, they allow you to easily deploy the application on as many containers as required, saving system resources such as disk space.

You can obtain the Panel templates at http://www.parallels.com/eu/download/plesk/products/ or download them using the PVC command line utility call `vzup2date -z` (available on PVC 4 and above).

For more information on installing Panel on PVC, read the **Installation, Upgrade, Migration, and Transfer Guide**, chapter **(Advanced) Installation to Parallels Virtuozzo Containers**.

Checking Potential Issues Before Upgrading to Panel 11

If you use Parallels Plesk Panel 9 or earlier and want to upgrade it to Panel 11, you may encounter problems due to changes in the Panel business model. In particular, it might be impossible to transfer some settings and business objects.

To efficiently anticipate or resolve the problems, we offer a tool called `plesk101_preupgrade_checker.php`. This checks potential business logic issues with upgrading to Panel 10 and later and gives recommendations that help you fix the possible problems related to transition of Panel objects. You can download the tool and find descriptions of the report messages at http://kb.parallels.com/9436.

In this section:

Installing and Updating Third-Party Applications

To enable basic hosting services and functions on a Panel-managed server, Panel distribution package includes several *third-party software applications*, that are installed along with Parallels Plesk Panel. These applications are ultimately responsible for providing various hosting services such as DNS, e-mail, FTP, and others.

All software components shipped with Panel can be installed and updated by means of Parallels Installer. These components are listed at http://download1.parallels.com/Plesk/PP11/11.0/release-notes/parallels-plesk-panel-11.0-for-windows-based-os.html#4.

You can also install and manage through Parallels Plesk Panel many other third-party applications that are not included in the Parallels Plesk Panel distribution package. For the complete list of third-party applications currently supported by Panel, refer to http://download1.parallels.com/Plesk/PP11/11.0/release-notes/parallels-plesk-panel-11.0-for-windows-based-os.html#5.

Automatic Detection of Pre-installed Components

Supported third-party applications that have already been installed on a server prior to Panel installation will be automatically detected during installation of Panel by Parallels Installer and integrated as Panel components.

Manual Installation, Update, and Integration of Components Supported by Panel

If Panel is already installed and you want to install an application package or an update that you obtained from a software vendor, you need to do the following:

1. Upload the package to the Panel-managed server and run the package installation program or, when applicable, follow the vendor's installation instructions.
2. Complete the component installation or update by integrating the application with Panel:
   a. Log in to Panel as administrator.
   b. Go to **Tools & Settings** > **Server Components**. The list of the currently registered Panel components is displayed.
   c. Click **Refresh** under **Tools**. The list of registered Panel components is refreshed. The integrated component entry appears in the list.

   Alternately, you can use the following command line call to ensure detection of installed components: `"%plesk_bin%\defpackagemng.exe" --get --force`

Note: For some newly installed applications, you might need to additionally configure the application settings to ensure proper integration.

Installation of Software not Supported by Panel

You might want to install and use on the server other third-party applications not supported by Panel. The applications will operate properly but will not be manageable through Panel.

In accordance with Panel security policies, Panel sets permissions for all its partitions to restrict users' access to each other and to third-party applications which are unknown to Panel. For this reason, to ensure proper operation of third-party applications not supported by Panel, you need to set required permissions in Panel. For more information about Panel security policies, see the chapter Changing Security Settings for File System Objects and Accounts (on page 100).

To enable a third-party application not supported by Panel, allow the `psacln` and `psaserv` groups the required access level to required directories of the application.

If you are installing any IIS extensions or COM components that need to be available on customers' websites, we highly recommend that you install 32-bit versions of these applications because websites that Panel creates are 32-bit.

Ports Used by Panel

On servers protected by a firewall, the following ports must not be blocked to ensure proper operation of Panel and accessibility of Panel-managed services.

Service name	Ports used by service
Administrative interface of Panel	TCP 8443, 8880
Samba (file sharing on Windows networks)	UDP 137, UDP 138, TCP 139, TCP 445
VPN service	UDP 1194
Web server and Panel Updater	TCP 80, TCP 443
FTP server	TCP 20, 21, 990
SSH (secure shell) server	TCP 22
SMTP (mail sending) server	TCP 25, TCP 465
POP3 (mail retrieval) server	TCP 110, TCP 995
IMAP (mail retrieval) server	TCP 143, TCP 993
Mail password change service	TCP 106
MySQL server	TCP 3306
MS SQL server	TCP 1433
Tomcat Java service	TCP 9080, 9008
Licensing Server connections	TCP 5224
Domain name server	UDP 53, TCP 53
Panel upgrades and updates	TCP 8447

Licensing

After you install Parallels Plesk Panel, a trial license key for 14 days is installed by default. To continue using Panel after the trial license key expires, you should obtain a lease license key or purchase a permanent license key.

A leased license implies that you pay for a limited time during which you can use Panel, say, for a couple of months. During the lease period, Panel will perform free monthly updates of your license key. The lease license includes free upgrades to all new major versions of Panel.

The permanent license implies that you buy a Panel license for a lifetime. A permanent license is updated every three months for free. Upgrading a Panel installation with a permanent license to the next major version requires a separate payment unless you use *Software Update Service* (*SUS*). See http://www.parallels.com/support/sus/ for more information on SUS.

Panel license keys have a *grace period* of 10 days right before the *expiration date*. During the grace period, Panel automatically performs daily attempts to update the license key automatically. If an automatic update fails, Panel notifies the administrator. If you do not update a license key during the grace period, it expires and blocks Panel functions until you install a valid license key.

Panel defines whether it needs to update the license key using the `update-keys.php` utility located in the %plesk_dir%`\admin\plib\DailyMaintainance\` directory, where %plesk_dir% is an environment variable denoting the Panel installation directory. This utility checks the license grace period and expiration date and tries to retrieve a new license key or blocks Panel.

Panel runs the utility every day as a part of the daily maintenance script. If you want to check for license updates, you can run the script manually by executing the command `"%plesk_bin%\php.exe" -d auto_prepend_file="%plesk_dir%\admin\plib\DailyMaintainance\script.php"`.

You can retrieve and manage license keys through the Panel GUI. The information about current license key and controls for managing license keys are located in **Server Administration Panel** > **Tools & Settings** > **License Management**.

CHAPTER 3

System Maintenance

This chapter describes how to perform the following tasks:

- Change server's host name.
- Change server IP addresses. You may need to do this when, for instance, you are moving your Panel server to a new datacenter, and need to reconfigure the Panel installation to run on new IP addresses.
- Move the directory where virtual hosts reside to another location on the same or another partition. You might want to do this when disk space on the current partition is running out.
- Move the directory where Panel backup files are stored to another location on the same or another partition. You might want to do this when, for instance, there is insufficient disk space on the current partition to house new backup files, and you want to move them all to a new, larger volume.
- Move the directories that house mail content to another location on the same or another partition. You might want to do this when there is insufficient amount of disk space on the current partition to serve a larger amount of mailboxes, and you want to move them all to a new larger volume.
- Switch the database server engine used by Panel.
- Stop, start, and restart Panel-managed services from command line, and access their logs and configuration files.

In this chapter:

Changing Your Server's Host Name

You specify your server's host name during your very first login to Panel. If you want to change the host name later, you can do it through Panel.

Note: Specifying an invalid host name will result in unpredictable Panel behavior and server malfunction. The host name must resolvable from the Panel-managed server, especially if Customer and Business Manager is installed.

To change your server's host name:

1. Log in to Server Administration Panel.
2. Go to **Tools & Settings** > **Server Settings**.
3. Enter the new host name in the **Full hostname** field.

   This should be a fully qualified host name, but without an ending dot (for example, `host.example.com`).
4. Click **OK**.

Changing IP Addresses

You can switch from an existing IP address on your Panel-managed server to a newly created IP address or to another existing address.

During life-time of a Panel installation, you may need to replace IP addresses used for hosting with other IP addresses. Replacing all old IP addresses with new ones may be necessary when moving a Panel server onto a new network. More often, you may need to introduce more subtle changes in your server's IP address pool. For example, you may need to free up one or more IP addresses currently used for hosting on the server. This will allow you to use the addresses for other purposes or to eliminate them from the server's IP pool altogether.

Every time you replace an IP address with a new one on a Parallels Plesk Panel server, you need to reconfigure Panel and various services to use the new IP address instead of the replaced one.

You can switch from one IP address to another and automatically reconfigure Panel and all hosting services on the server to use the new address by using the *Change Server IP Addresses* option in the Reconfigurator utility.

Note: By using this feature, you can only replace one IP address with another. You cannot migrate a group of select domains from one or more IP addresses to a new IP address.

➢ *To change from one IP address on a Panel-managed server to another, follow these steps:*

1. Log in to the Panel-managed server as a user with administrator rights by using Remote Desktop.
2. In the Windows **Start** menu, select **All Programs** > **Parallels** > **Panel** > **PP Reconfigurator**. The Reconfigurator application window opens.
3. Select the **Change server IP addresses** option. The **IP Addresses Reconfiguring** window opens.
4. Under **Select the IP addresses to be changed**, select the checkboxes corresponding to the IP addresses that you want to change to other IP addresses.

   To view the list of domains hosted on particular IP address, click the IP address entry to highlight it. The list of hosted domains using the highlighted IP address is displayed in a window to the right.

5. Map each selected to an IP address of your choice.
   a. To map a selected address, click on the selected address entry. The entry is highlighted.
   b. Select the address to map to:
      - To map to an existing IP address, select **Existing Address** option and then select an existing address entry. The entry information is displayed in the **Mapping Information** column for the selected IP address entry under **Select the IP addresses to be changed**.
      - To map to a new IP address that will be created during mapping, select **Create New IP address** option and then enter the IP address, network mask, and network interface name. The entry information is displayed in the **Mapping Information** column for the selected IP address entry under **Select the IP addresses to be changed**.
6. Click **Next.**

   Panel installation is reconfigured to use the newly specified IP addresses in place of the old ones. All relevant records in the Panel's database are updated, network adapters settings are changed accordingly (the old IP addresses are removed), FTP and web servers are reconfigured accordingly, DNS records are updated accordingly.

Note: If changing IP address fails during execution, all changes are rolled back. When connected to the server through the Remote Desktop connection, a change of your server’s IP address will terminate your session.

Moving the Virtual Hosts Directory

This option allows moving the directory where virtual hosts reside to another location on the same or another partition. Use this feature when disk space is insufficient on the current partition to house new virtual hosts, and you want to move them all to a new, larger volume.

➢ ***To move the virtual hosts directory to a new location, follow these steps:***

1. Log in to the Panel-managed server as a user with administrator rights by using Remote Desktop.
2. In the Windows **Start** menu, select **All Programs** > **Parallels** > **Panel** > **PP Reconfigurator**. The Reconfigurator application window opens.
3. Select the **Change Virtual Hosts location** option.
4. Specify the destination directory name. If the directory does not exist, it will be created.
5. Click **Next.**

During this operation all Panel's services will be restarted.

Moving the Directory for Storing Panel Backups

By using Panel Reconfigurator utility, you can move the Panel backup files storage directory to another location on the same or another partition. Use this option when disk space is insufficient on the current partition to house new backup files, and you want to move them all to a new, larger volume.

➢ ***To change location of the backup files directory, follow these steps:***

1. Log in to the Panel-managed server as a user with administrator rights by using Remote Desktop.
2. In the Windows **Start** menu, select **All Programs** > **Parallels** > **Panel** > **PP Reconfigurator**. The Reconfigurator application window opens.
3. Select the **Change Plesk Backup Data location** option.
4. Specify the destination directory name. If the directory does not exist, it will be created.
5. Click **Next**. During this operation, all services will be restarted.

Moving the Directories for Storing Mail Data

You can move the directories that store mail content to another location on the same or another partition. Use this option when disk space is insufficient on the current partition to serve larger data volume or amount of mailboxes and you want to move all mail content to a new, larger volume.

➢ ***To move the mail content directories to another location, follow these steps:***

1. Log in to the Panel-managed server as a user with administrator rights by using Remote Desktop.
2. In the Windows **Start** menu, select **All Programs** > **Parallels** > **Panel** > **PP Reconfigurator**. The Reconfigurator application window opens.
3. Select the **Change Plesk Mail Data location** option.
4. Specify the destination directory name. If the directory does not exist, it will be created.
5. Click **Next**. During this operation, Panel's services will be restarted.

Switching Between MySQL and MSSQL Database Server Engines

Panel can use several different database engines to access the Panel's internal database. At any time you can change the database location and select to use different database engine to access the database. To switch from one database server to another, you need to migrate the database to a new database server and configure Panel to connect to the server to access the database. The following database servers are supported by Panel:

- MySQL
- Microsoft SQL

You can use the **Switch Database Provider** option in Reconfigurator to switch between database servers to access Panel's internal database. Reconfigurator will migrate the Panel's internal database to a new database server and configure Panel to access the database by means of the new database server.

Two methods exist for switching between database servers: by using the Reconfigurator GUI (on page 22) and by using the command-line interface (on page 23). This section describes both of these methods.

In this section:

Using GUI to Switch Between Database Servers

You can migrate Panel's internal database to a new database engine and configure Panel to access the database at the database server.

➢ *To switch between database servers through Reconfigurator GUI, follow these steps:*

1. Log in to the Panel-managed server as a user with administrator rights by using Remote Desktop.
2. In the Windows **Start** menu, select **All Programs** > **Parallels** > **Panel** > **PP Reconfigurator**. The Reconfigurator application window opens.
3. Select the **Switch DB provider** option.
4. Enter the supported database server engine type in the **Server type** field.
5. Enter the server address (IP address or host name) and, if different from default, port number in the corresponding fields.

   (The field are available only if **MySQL** or **MSSQL** server type is entered.)
6. Enter the new server administrator's login and password.

Note: If you switch to MySQL database in Panel 8.2 or later, note the following:
* if MySQL database was not used as a Panel database provider before, MySQL administrator's login is '`admin`' and password is '`setup`'.
* if MySQL database was already used as a Panel database provider in the past, you should use MySQL administrator's login and password which were used before changing of the Panel database provider from MySQL to another server type.

7. Under **Create a new database to locate data in**, enter information about the new Panel's database that the data will be migrated to:
   a. In the **Database** field, enter the new database name. For example: `plesk_new`.
   b. In the **Database user name** field, enter user name to be used by Panel to access the migrated database.
   c. In the **Password** and **Confirm password** fields, type the database user password.

Warning! By changing the database user password, you also change the Panel administrator's password for accessing Panel. The Panel administrator's password and database user password are always the same (although usernames can be different).

➢ ***To change MySQL database user password, follow these steps:***

1. Go to `%Plesk_dir%\MySQL\Data`.
2. Open the `my.ini` file and add to the `[PleskSQLServer]` section the following line:

```
skip-grant-table
```

3. Go to **Administrative Tools** > **Computer Management** and start Panel's SQL server.
4. Issue the following in command line:

```
cd %Plesk_dir%\mysql\bin
mysql -P8306
mysql> use mysql
mysql> update user set password=password('<as your Panel admin
password>') where user="admin";
```

5. Go to `%Plesk_dir%\MySQL\Data`.
6. Erase from the `[PleskSQLServer]` section of the `my.ini` file the following line:

```
skip-grant-table
```

7. Restart the Panel's SQL server.

Using Command-Line Interface to Switch Between Database Servers

You can migrate Panel's internal database to a new database server and configure Panel to access the database at the database server.

The command for switching the Panel's database servers has the following syntax:

```
reconfigurator --switch-plesk-database --new-provider=<provider name> --
host=<host name> --db=<database name> --login=<database user login> --
password=<database user password> [--password=<port number>] [--admin-
login=<administrator login>] [--admin-password=<administrator password>]
```

See the following table for the command options descriptions.

Options

Option	Parameter	Description	Comment
`--new-provider`	`MSSQL`|`MySQL`	The new database server type.	

Option	Parameter	Description	Comment
`--db`	<database name>	Name of the Panel's database on the new database server.	For MySQL and MSSQL databases, you need to specify only the database name on the server. For example: `"--db=psa_new"`
`--host`	`<host name>`	Database server IP address or host name.	
`--login`	<user login name>	Database user name used by Panel.	
`--password`	<user password>	Password used by Panel.	
`--port`	<port number>	New database server port number. This parameter is optional.	Define a port number if the new database server uses a non-default port number.
`--admin-login`	<administrator login name>	Database server administrator login name. This parameter is optional.	Define the server administrator credentials if you want a new database user created with the username and password specified by the `--login` and `--password` options. If the options are omitted from the command, Panel will be configured to use the database user credentials specified by the `--login` and `--password` options, no new user will be created for the database.
`--admin-password`	<administrator password>	Database server administrator password. This parameter is optional.	

➢ ***To switch between database servers through command-line interface, follow these steps:***

1. Log in to the server as a user with administrator rights by using Remote Desktop.
2. Start `cmd.exe`.
3. Change directory to the `%plesk_dir%\admin\bin\` folder (where `%plesk_dir%` is the system variable defining the folder where Panel is installed).
4. Execute the server switch command.

   For example, to migrate the Panel's internal database to a new location accessible at `c:\Program Files\Parallels\Plesk\admin\db\psa3.mdb`, and instruct Panel to use existing user credentials (login name `dbadmin` and password `dbadminpass`) to access the database, use the following command:

```
reconfigurator --switch-plesk-database --host=localhost “--db=c:\Program
Files\Parallels\Plesk\admin\db\psa3.mdb” --login=dbadmin --
password=dbadminpass
```

Warning! By changing the database user password, you also change the administrator's password for accessing Panel. The administrator's password and database user password are always the same (although user login names can be different).

Programming Event Handlers to Execute Custom Scripts

Parallels Plesk Panel provides a mechanism that allows administrators to track specific Panel events and make Panel execute custom scripts when these events occur. The events include operations that Panel users perform on accounts, subscriptions, websites, service plans, and various Panel settings.

It works the following way: you create a script to be executed upon a certain Panel event, and then set up an event handler in Server Administration Panel that triggers processing of the event by the script. You can assign several handlers to a single event.

To learn how to track Panel events and set up execution of commands or custom scripts, refer to **Parallels Plesk Panel Administrator's Guide**, chapter **Event Tracking** available at http://download1.parallels.com/Plesk/PP11/11.0/Doc/en-US/online/plesk-administrator-guide/59205.htm.

Automating Administration Tasks with Command-Line Utilities

Parallels Plesk Panel command-line utilities are designed to facilitate the processes of creating various entities in Parallels Plesk Panel bypassing the Panel GUI. Command-line utilities are executed via command prompt opened in the `%plesk_dir%\admin\bin\` folder (where `%plesk_dir%` is a system variable containing the Panel installation directory). You can see the list of available commands and options by running an utility with `--help` or `-h` command. For more information about command line utilities usage refer to **Parallels Plesk Panel for Windows Command Line Interface Reference** at http://download1.parallels.com/Plesk/PP11/11.0/Doc/en-US/online/plesk-win-cli/.

Monitoring Status of System Services

You can monitor the status of your Panel-managed server without logging in to Panel. To do this, you need to access your server over Remote Desktop.

A utility called Parallels Plesk Panel Services Monitor is loaded automatically every time Panel starts. To manage the status of Panel's services, open the Parallels Plesk Panel Services Monitor by double-clicking its icon in the taskbar. The look of the icon depends on the state of crucial Panel services: the icon means that all Panel's services are functioning, and the icon means that some services are stopped or not working correctly.

Once you open the Services Monitor, you can see the status of all vital Panel's services. The icon indicates that a corresponding service is working correctly, and the icon indicates that the corresponding service is stopped or is not working correctly.

To stop a service, select the corresponding checkbox and click **Stop**.

To restart a service, select the corresponding checkbox and click **Restart**.

To start a service, select the corresponding checkbox and click **Start**.

Note: You can use **Select All** and **Clear All** buttons to select or clear all available checkboxes.

To refresh the list of services and their respective statuses, click **Refresh**.

To remove all information about Panel sessions from Panel's database and disconnect all users from Panel, click **Delete Sessions**. This is useful when you need to restart Panel, but some users are still connected to it, and you want to avoid possible data loss or files corruption.

Note: You can also start, stop, restart services and delete sessions by right-clicking the Parallels Plesk Panel Services Monitor icon and selecting the required option from the menu.

To hide the Services Monitor back in the taskbar, click **Hide**.

Managing Services from the Command Line and Viewing Service Logs

This section describes how to stop, start, and restart services managed by Panel, and access their logs and configuration files.

Parallels Plesk Panel web interface

To stop the service through command line:

```
net stop plesksrv
```

To start the service through command line:

```
net start plesksrv
net start poppassd
```

To restart the service through command line:

```
net stop plesksrv
net start plesksrv
net start poppassd
```

Panel's log file is located in:

`%plesk_dir%\admin\logs\W3SVC<IIS site ID>\ex<date>.log`

Panel's PHP configuration file is located in:

`%plesk_dir%\admin\php.ini`

Internet Information Services log file is accessible at:

IIS manager > **Sites/Application Pools** > **PleskControlPanel**

Web Presence Builder

`%plesk_dir%\SiteBuilder\_logs` Configuration files are accessible at:

IIS manager > **Sites/Application Pools** > **sitebuilder(default) / SiteBuilderSitesWebAppPool**

phpMyAdmin

Log files are located in:

`%plesk_dir%\admin\logs\W3SVC<IIS site ID>\ex<date>.log`

Configuration files are accessible at:

`%plesk_dir%admin\htdocs\domains\databases\phpMyAdmin\config.inc.php`

ASP.Net Enterprise Manager

Configuration files are accessible at:

IIS manager > Sites > sqladmin(default)\mssql

myLittleAdmin 2000/2005

Configuration files are accessible at:

IIS manager > Sites > sqladmin(default)\myLittleAdmin

```
%plesk_vhosts%\sqladmin\myLittleAdmin\2005\config.xml
```

MailEnable

To stop the service through command line:

```
net stop meimaps && net stop melcs && net stop memtas && net stop mepops &&
net stop mepocs && net stop mesmtpcs
```

To start the service through command line:

```
net start meimaps && net start melcs && net start memtas && net start
mepops && net start mepocs && net start mesmtpcs
```

To restart the service through command line:

```
net stop meimaps && net stop melcs && net stop memtas && net stop mepops &&
net stop mepocs && net stop mesptpcs && net start meimaps && net start
melcs && net start memtas && net start mepops && net start mepocs && net
start mesmtpcs
```

Log files are located in:

```
%plesk_dir%Mail Servers\Mail Enable\Logging
```

Configuration files are accessible at:

```
%plesk_dir%\Mail Servers\Mail Enable\Bin\MailEnable.msc
```

DNS / Named / BIND

To stop the service through command line:

```
net stop named
```

To start the service through command line:

```
net start named
```

To restart the service through command line:

```
net stop named && net start named
```

Log files are accessible through Windows Event Viewer.

Configuration files are accessible at:

```
%plesk_dir%\dns
```

MySQL

To stop the service through command line:

```
net stop plesksqlserver
```

To start the service through command line:

```
net start plesksqlserver
```

To restart the service through command line:

```
net stop plesksqlserver && net start plesksqlserver
```

Log files are accessible through Windows Event Viewer.

Configuration file is accessible at:

`%plesk_dir%MySQL\Data\my.ini`

SpamAssassin

Log files are accessible through Windows Event Viewer.

Configuration files are accessible at:

`%plesk_dir%\Additional\Perl\site\var\spamassassin\3.003001`

Dr.Web Antivirus

To stop the service through command line:

```
net stop DrWebCom
```

To start the service through command line:

```
net start DrWebCom
```

To restart the service through command line:

```
net stop DrWebCom && net start DrWebCom
```

Log file is located in:

`%plesk_dir%DrWeb\drcom.log`

FTP service

To stop the service through command line:

```
net stop iisadmin
```

To start the service through command line:

```
net start iisadmin
```

To restart the service through command line:

```
net stop iisadmin && net start iisadmin
```

Log files are located in:

`%plesk_vhosts%Servers\<ID>\logs`

Configuration files are accessible at:

IIS Manager > **FTP sites** > <IP address>

Kaspersky Antivirus

To stop the service through command line:

```
net stop kavsvc
```

To start the service through command line:

```
net start kavsvc
```

To restart the service through command line:

```
net stop kavsvc && net start kavsvc
```

Log file is accessible through Windows Event Viewer.

Internet Information Services

To stop the service through command line:

```
net stop iisadmin
```

To start the service through command line:

```
net start iisadmin
```

To restart the service through command line:

```
net stop iisadmin && net start iisadmin
```

Web server log file is accessible through Windows Event Viewer.

Website logs are available at:

```
%plesk_vhosts%<domain>\statistics\logs\<SITE ID>
```

Configuration is available through IIS Manager.

AWStats

Configuration file is accessible at:

```
%plesk_vhosts%\<domain>\statistics\webstat\AWStats\cgi-
bin\awstats.<domain>.conf
```

Webalizer

Configuration file is accessible at:

```
%plesk_dir%\Additional\Webalizer\conf\webalizer.conf
```

Plesk Backup Manager

Backup log files are located in:

```
%plesk_dir%\PMM\<session>\psadump.log
```

```
%plesk_dir%\PMM\<session>\migration.log
```

```
%plesk_dir%\PMM\logs\migration.log
```

```
%plesk_dir%\PMM\logs\pmmcli.log
```

Restoration log files are located in:

```
%plesk_dir%\PMM\rsessions\<session>\conflicts.log
```

```
%plesk_dir%\PMM\rsessions\<session>\migration.log
```

```
%plesk_dir%\PMM\logs\migration.log
```

```
%plesk_dir%\PMM\logs\pmmcli.log
```

Plesk Migration Manager

Log files are located in:

```
%plesk_dir%\PMM\msessions\<session>\migration.log
```

```
%plesk_dir%\PMM\rsessions\<session>\migration.log
```

```
%plesk_dir%\PMM\rsessions\<session>\conflicts.log
```

```
%plesk_dir%\PMM\logs\migration.log
```

```
%plesk_dir%\PMM\logs\pmmcli.log
```

```
%plesk_dir%\PMM\logs\migration_handler.log
```

Horde

Log file is located in:

```
%plesk_dir%\tmp\horde
```

Configuration files are accessible at:

Web interface - **IIS manager** > **Sites** > **webmail (horde)**

PHP settings - `%plesk_vhosts%\webmail\horde\php.ini`

Application settings - `%plesk_vhosts%\webmail\horde\config\`

Atmail

Error log is located in:

`%plesk_dir%\tmp\atmail`

Configuration files are accessible at:

Web interface - **IIS manager** > **Sites** > **webmail (atmail)**

Application settings - `%plesk_vhosts%\webmail\atmail\libs\Atmail\config.php`

Predefining Values for Customizable PHP Parameters

Panel allows to define custom PHP configuration for a certain service plan, add-on plan, subscription, website, and even subdomain. For this purpose, the Panel GUI exposes 16 most often used PHP parameters that allow customization. The administrator or a customer can set the value of each parameter either by *selecting a value from a preset, typing a custom value, or leaving the default value*. In the latter case, Panel takes the parameter value from the server-wide PHP configuration.

Using the `%plesk_dir%\admin\conf\panel.ini` file you can specify what PHP parameters values will be available in the preset and toggle the visibility of the custom value field.

Defining the Preset Values
To set the list of predefined values for a certain PHP parameter, add the line of the following type to the `[php]` section of the `panel.ini` file:

```
settings.<parameter_group>.<parameter_name>.values[]=<value>
```

where

- `<parameter_group>` - a group of a PHP parameter: `performance` for the performance PHP settings and `general` if the parameter is placed in to the common group. For more information about the groups of PHP parameters, read the **Administrator's Guide, Customizing PHP Configuration**.
- `<parameter_name>` - a name of a PHP parameter. Use the same syntax as in `php.ini`.
- `<value>` - a parameter's value added to the preset. Use the same syntax as in `php.ini`.

Add such line for each value in the preset. For example, if you want Panel users to choose the value of the `memory_limit` parameter between `8M` and `16M`, add the following lines to `panel.ini`:

```
[php]
settings.performance.memory_limit.values[]=8M
settings.performance.memory_limit.values[]=16M
```

Hiding the Custom Value Fields

To hide the field that allows entering the custom value for a certain PHP parameter, add the line of the following type to the `[php]` section of the `panel.ini` file:

```
settings.<parameter_group>.<parameter_name>.custom=false
```

where

- `<parameter_group>` - a group of a PHP parameter: `performance` for the performance PHP settings and `general` if the parameter is placed in to the common group. For more information about the groups of PHP parameters, read the Administrator's Guide,
- `<parameter_name>` - a name of a PHP parameter. Use the same syntax as in `php.ini`.

For example, if you do not want Panel users to set custom values to the `memory_limit` parameter, add the following line to `panel.ini`:

```
[php]
settings.performance.memory_limit.custom=false
```

To switch the custom value field back on, replace `false` with `true`.

Website Applications

Multiple Web Apps in a Single Directory

Since Panel 10.4, when a site employs a number of various web apps, a site administrator may apply the following site structure:

- Install a number of apps to the same directory. More specifically, install one app into a subdirectory of another.
- Use the same document root for a subdomain and a web app.

For example, you can install an online store app to the `httpdocs` directory of your domain (say, *example.com*), create a subdomain (say, *support.example.com*) in the `httpdocs/support`, and install a help desk system there.

All earlier Panel versions (before 10.4) prohibited such scenarios as sometimes (in very rare cases), the installation of two web apps into one directory could lead to the improper functioning of one of them. If you want to return this restriction back, add the following lines into `%plesk_dir%\admin\conf\panel.ini`:

```
[aps]
unsafePaths=false
```

Hiding Commercial Apps

You can hide commercial web applications by default, so that your customers are able to install only free applications. To do this, add the following lines into `panel.ini`:

```
[aps]
commercialAppsEnabled = false
```

Spam Protection

SpamAssassin is a rule-based mail filter that identifies spam. It uses a wide range of heuristic tests on mail headers and body text to identify spam.

SpamAssassin filtering is configured on two levels:

- Server-level configuration is done by Panel administrator.
- Mail directory-level configuration is done by users for specific mail directories.

At the server level, you (as a Panel administrator) can enable or disable any of these two types of filters. Thus, there are four possible situations:

- No filtering is applied:
  - both filters are disabled by the Parallels Plesk Panel administrator.
  - the personal filter is disabled at the mail directory level.
- Filtering is applied at the server level only.
- Filtering is applied at the mail box level only.
- Filtering is applied at both levels.

When both filters are enabled for a specific mail name, a combined filter is created for the corresponding mail directory. When processing messages, SpamAssassin calculates the number of hits according to its internal rules. A message is considered to be spam if the number of hits exceeds the established threshold, which is set to 7 by default. You can change the threshold in Panel. White and Black lists can be considered special rules, which assign constant hit rates to messages conforming to mail address patterns in these lists:

- If the message source address conforms to the Black list, the message gets +100 hits by default.
- If the message source address conforms to the White list, the message gets -100 hits by default.

Sometimes, a message matches both Black and White lists. In that case, it has +100-100=0 hits.

If the message destination address is included in the server-wide ignore list, then all messages to this address will go directly to the addressed mail directory.

At the server level, you can configure SpamAssassin to mark messages with a special string if they are recognized as containing spam. At the mailbox level, you can make SpamAssassin delete or mark the message if it is considered as spam.

Starting from Panel 9.x, the maximum message size to filter is hardcoded in the spam handler and set to 256KB. This value provides normal server loading. Since the SpamAssassin service consists of perl modules, they may result in a heavy server load when processing long messages.

You can obtain more information about SpamAssassin at spamassassin.apache.org

In this section:

Configuring SpamAssassin

The SpamAssassin configuration is stored in the *spamfilter* and *spamfilter_preferences* tables of the *psa* database. You can manage it with the `%plesk_dir%\admin\bin\spammng.exe` utility. It displays help if started without any options.

Server-wide SpamAssassin settings are stored in the following files:

- The `%plesk_dir%\Additional\Perl\site\var\spamassassin\3.003001\updates_spamassassin_org\*.cf` files contain configuration details, e.g. `White` list and `Black` list scores are assigned in the `50_scores.cf` configuration file.
- The `%plesk_dir%\Additional\Perl\site\etc\mail\spamassassin\local.cf` stores server-wide filter settings.

Personal user settings are stored in the file `%plesk_dir%\Additional\SpamAssassin\SpamFilterUserConfigsPath\<mailname>\user_prefs`.

For more information about the SpamAssassin configuration, refer to the respective documentation at http://spamassassin.apache.org/doc/Mail_SpamAssassin_Conf.html.

To apply changes in the configuration files, you should restart SpamAssassin with the following command:

```
for /F "usebackq tokens=5" %i in (`cmd /c "netstat -aon | findstr 
0.0.0.0:8783"`) do taskkill /F /PID %i
```

Optimizing the Task Manager Performance

Parallels Customer and Business Manager automates certain hosting providers' tasks such as creating Panel accounts and subscriptions, registering domain names, issuing invoices, and so on. To do this, Business Manager uses its own *task manager*. This task manager does the following:

- Schedules and runs tasks.
- Stores task details and execution statuses.
- Suggests how to resolve possible task execution problems.

If you want to utilize your server resources better, consider optimizing task manager performance in your environment by changing its settings defined in the `%plesk_dir%\billing\task-manager\config\config.ini` configuration file. The paragraphs of this section describe the ways to optimize certain aspects of the task manager.

Reducing Disk Space Consumption

If you want the task manager to consume less disk space, you can reduce the size of its own database. To do this, adjust the following settings that define how much information the task manager stores in the database:

- *How long task manager stores information about processed tasks.* The parameters that set these intervals for completed, failed and canceled tasks are `completedTasksClearInterval`, `failedTasksClearInterval`, and `canceledTasksClearInterval` correspondingly.

  By default, these intervals are equal to 1 year. If you want to change them, specify the values in the ISO 8601 standard, for example, *P1Y* for the 1 year interval.
- *How much information about each task execution is stored.* For troubleshooting purposes, the task manager writes information about task executions to log files, one file per each execution. The parameter that sets maximum number of stored log files for each task is the `maxTaskLogs`. Its default value is 5. To make the logs consume less disk space, specify a smaller value of this parameter.

Note: When you set the task removal intervals described above, remember that setting too small values may make troubleshooting difficult since you may not have enough information about recent task executions.

Increasing Task Manager Performance

When you run all scheduled tasks at once, task manager starts processing a certain number of tasks simultaneously. After completing (or failing to complete) the task, the task manager starts another task from the queue and so on. To make processing of multiple tasks faster, increase the maximum number of tasks processed simultaneously. The parameter that sets this number is `runAllMaxInstances`.

However, when you set a greater value for this parameter, remember that too big values increase the system load and therefore may reduce the Panel performance or even block customer access to the Control Panel.

Increasing Logs Detalization

To make the task manager produce more information that may help you in troubleshooting issues, adjust the logging settings in the following ways:

- *Increase the number of execution logs for each task.* To do this, edit the value of the `maxTaskLogs` parameter. When you set a greater value, remember that this will increase the disk space consumption.
- *Increase the verbosity of the logs.* By default, the task manager writes only error information to log files. To get more information on tasks execution, include tasks execution messages into the logs by changing values of the parameters *log.info* and *log.sql to* 1*.*

Important: Including debug information into the task manager logs will reduce its performance; Therefore, we recommend that you include this information only when you troubleshoot certain issues.

Cloning Panel in Virtual Environment

Why Do I Need Panel Cloning?

The popular and efficient way to start offering Panel services is to install Panel in a cloud and then seamlessly scale your infrastructure and install more Panel instances as your business grows. The challenge in this approach is that it is not possible just to copy the same Panel again and again to different virtual machines because of the following:

- Some clouds constantly change allocated IP addresses pools. If a Panel service was bound to an IP address which was later removed from the system, the service will not be operable.
- Each Panel object, for example, a customer account, should have a unique identifier, so-called GUID. This requirement is mandatory to avoid conflicts during migration from one server to another or during recovery from a backup. If you simply keep copying Panel, all the instances will share the same GUIDs.

The Panel *cloning* technology solves these and other scaling problems.

What Is Panel Cloning?

Panel *cloning* is the technology of copying the same Panel instance to different virtual machines without compromising Panel operability. Two prevailing usage scenarios of the cloning are:

- *Fast Panel setup*. If you wish to create virtual machines (GoDaddy cloud, Amazon cloud, KVM, Xen, and so on) with Panel on demand, the easiest way to streamline this process is to create an image of a virtual machine with specifically prepared Panel and then create new machines from this preset as many times as needed.
- *Full backup*. Cloning is a recovery solution too because almost all Panel data remain in cloned instances. Thus, you can first copy a prepared Panel to another virtual machine and then start the machine if your original machine becomes inoperable.

The application scope of Panel cloning is wider: For example, you can clone Panel and then safely test new features or configurations on it, but in this section, we will consider only the given scenarios because others are their extensions or combinations.

Cloning and Panel Licensing

Before you start cloning Panel, please contact our sales representatives and provide the range of IP addresses within which your Panel instances will be installed. Our licensing system will activate Panel servers from this range only.

Preparing a Panel Instance for Cloning

If you want to use Panel cloning, you should start with preparing your Panel instance. The following preparatory steps help you reset all environment- and initialization-specific settings (like the IP addresses pool) to prevent copying of unique information to other virtual machines. Omit steps 2 and 3 if your scenario is full backup.

1. *(Fast setup, full backup) Instruct Panel to reconfigure its IP pool after restart*. After running the following command, a Panel instance will discover actual IP addresses and reconfigure its IP pool each time you restart the corresponding virtual machine.

   ```
   # %plesk_cli%\ipmanage --auto-remap-ip-addresses true
   ```

   Note: This step is not mandatory if a virtual machine to which you want to copy Panel uses a static IP address. Moreover, omitting this option will make Panel start faster because Panel will not reconfigure its IP pool on each startup. However, we highly recommend to complete this step if you deploy Panel to a cloud.

2. *(Fast setup only, optional) Initialize the instance programmatically or from the Panel GUI.* Specify the administrator's information, locale, and other initialization settings using the `init_conf` command-line utility or the Panel GUI. Read more about the initialization in the **Installing Panel** > **Post-Installation Setup** section of the **Installation, Upgrade, Migration, and Transfer Guide**.

3. *(Fast setup only) Prepare Panel for cloning by resetting some of its data (for example, the administrator's password, see the full list below) and remove the license key on the next start.* Note that this utility does not perform cloning, it only modifies Panel settings.

   ```
   # %plesk_cli%\cloning --update -prepare-public-image true -reset-license true
   ```

When preparing a Panel instance for cloning, avoid restarting `Plesk Management Service` and shutting down the virtual machine on which the instance is installed.

How to Clone Panel

We assume that you have a virtual machine with Panel and you wish to clone this machine. The cloning procedure consists of three steps:

1. Prepare the Panel instance for cloning using the instructions we provided earlier.
2. If your software for managing virtual machines supports creating copies of virtual machines, which is normally true, stop (shut down) the virtual machine and create the image copy. Otherwise, if images copying is unavailable, you should use a special shutdown call that resets some instance data and then copy the machine by available means. The shutdown is performed by the following command from the command prompt (`Cmd.exe`):

   ```
   sysprep /oobe /generalize /shutdown
   ```

Once you have the virtual machine image, use it as a preset for new virtual machines or as a Panel snapshot.

What Data Are Reset by the `cloning` Utility?

The following list contains the items that are reset by the `cloning` utility:

- The IP pool
- Panel GUIDs
- Passwords for all IIS users (Anonymous and Application pool users for the Panel website and all sites created by Panel: Horde, Atmail, and all customer sites)
- The administrator's password
- (Optionally) The license key

The rest of the data, *including the default SSL certificate*, remain intact.

Removing Panel

You can remove Panel as any other program in Windows by using **Control Panel > Uninstall a Program**. For the complete instruction on how to remove programs in Microsoft Windows, read this article: http://windows.microsoft.com/en-US/windows-vista/Uninstall-or-change-a-program.

CHAPTER 4

Third-Party Components

This chapter explains how to install and configure third-party components on the Panel-managed server.

In this chapter:

Web Deploy 2.0

Web Deploy (Web Deployment Tool) is a Microsoft's tool that significantly simplifies migration, management, and deployment of IIS web servers, web applications, and websites.

Here are two reasons to have Web Deploy on your server:

- *Simple applications publishing.* Web developers who write code in *Visual Studio®* (IDE) and *WebMatrix®* (development tool) can use Web Deploy to publish their applications to a production server. If you would like to give your customers this time-saving and easy-to-use publication method, install Web Deploy on your server.

  Note: You should not install Visual Studio® and WebMatrix® on Panel servers. This software is installed by customers themselves on their PCs.

- *New market for your hosting plans.* WebMatrix® helps its users find a suitable hosting plan in *Microsoft Web Hosting Gallery*, a catalog where hosting providers advertise hosting offers. If you want your hosting plans to be present in the gallery, one of the requirements is to have Web Deploy.

1. Install Web Deploy

There are two ways of installing Web Deploy - as a Panel component, the recommended way, or manual installation. The first way assumes that you install Web Deploy as any other Panel component, from **Tools & Settings** > **Updates and Upgrades** > **Add / Remove Components**. If you use Panel 10.4 and earlier versions, the component installation is unavailable, so you should perform manual installation. For the installation instructions, see the **Manual Installation of Web Deploy** section below.

Note: Microsoft Windows Powershell is required for proper installation of Web Deploy. Ensure that it is installed on server. (It should be available automatically in Windows 2008 R2). Learn how to install the component at http://www.microsoft.com/powershell.

After the successful installation, you are able to check that Web Deploy is discovered by Panel. To do this, log in as the Panel administrator and go to **Tools & Settings** > **Server Components**. The new component, **Web Publishing**, will appear in the list. Additionally, the ability to use web publishing will be added to all existing subscriptions, to the **Hosting Parameters** tab, and set as not provided by default.

If your customers use MySQL databases for their applications, you should additionally install the *MySQL Connector/Net* component from Microsoft Web Platform Installer.

2. Improve the Security Level

During the installation, Web Deploy adds a number of delegation rules to IIS that allow non-administrators to perform operations on databases and files on their IIS sites. Panel automatically adds an exception from one of the rules, namely, from *appPoolPipeline*. This exception prevents Panel from changing the .NET version of application pools in IIS. But for this automatic amendment, the version change will lead to malfunctioning of .NET applications that are not compatible with the updated version. Say, if the version has changed from 2.0 to 3.5, some apps that required 2.0 will not run.

In addition to this rule change, we recommend that you set IIS to run applications of each subscription in a separate pool. This setting will guarantee that other pools will continue to operate even if a certain app damages a pool on a certain subscription. You can specify to use separate pools in plan settings, the **Performance** tab > **Dedicated IIS application pool**.

3. Secure the Service with a Valid Certificate

During its installation, Web Deploy installs (as needed) and activates IIS Manager service that secures connections to Web Deploy. We highly recommend that you provide IIS Manager with a valid SSL certificate to let your customers verify your server's identity before transferring their data to your server. Learn how to do it in http://learn.iis.net/page.aspx/144/how-to-set-up-ssl-on-iis-7/. If you choose not to do it, your customers will fail to publish their sites if they specify to use a secure connection in publication settings of Visual Studio® or WebMatrix®.

4. Activate Web Deploy in Hosting Plans and Subscriptions

Now when you have successfully installed and configured Web Deploy, activate this feature in **Hosting Parameters** of hosting plans and existing unsynced subscriptions as needed.

Manual Installation of Web Deploy

To successfully install Web Deploy, you should meet the following requirements:

- The target operating system must be Windows Server 2008 or later.
- The server must have Windows PowerShell installed. Windows Server 2008 does not have this component by default (though 2008 R2 has it). Learn how to install the component at http://www.microsoft.com/powershell.
- The server must have the *Management Service* role service (*Server Manager* > *Web Server* > *Add Role Services*, under *Management Tools*).

The installation procedure is straightforward: In *Microsoft Web Platform Installer*, find the *Web Deployment Tool* product and add it to the server. For more information about the installer, see http://www.microsoft.com/web/downloads/platform.aspx.

Alternatively, you can download the Web Deploy binary and run it as administrator. The download link is available at http://www.iis.net/download/WebDeploy.

Note: You should select either the complete installation or select the custom installation and specify the *Configure for Non-Administrator Deployments* option.

CHAPTER 5

Backing Up, Restoring, and Migrating Data

This chapter describes how to back up and restore data by means of the command-line utilities pleskbackup and pleskrestore, and introduces the tools for migrating hosted data between servers.

Backing up by means of the pleskbackup utility is done by issuing a command that specifies the objects to be backed up. The utility creates a backup archive containing settings and content. You can then perform a full or a selective restoration of data, and specify how to resolve possible conflicts that might occur.

In this chapter:

Backing Up Data

To perform backup of Panel hosting data, you need to execute the `pleskbackup` utility command composed so that it does the following:

1. Defines the data that need to be backed up.
2. Defines the way of how the backup process will be performed.
3. Defines properties of the files that will be contained in backup.
4. Defines options for exporting backup as a single file.

Note: Only the first component is obligatory, others are optional.

The following sections explain each component meaning and implementation in detail.

The `pleskbackup` utility is located in `%plesk_dir%\bin\`
where `%plesk_dir%` is an environment variable for Panel installation directory. By default, it is `"C:\Program Files\Parallels\Plesk"`

To see a complete list of the `pleskbackup` commands and options, refer to the section **Backup Utility Commands and Options** (on page 65).

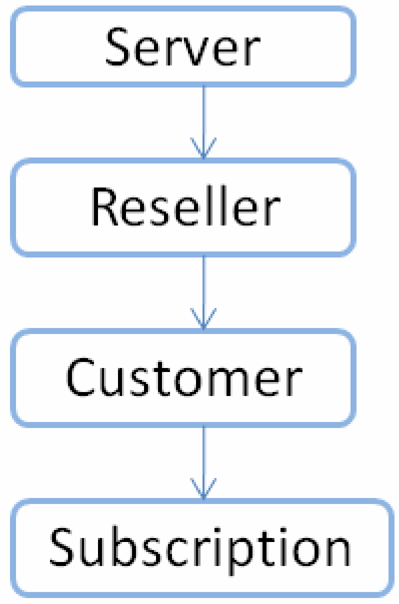
If the command execution succeeds, backup is created in the default server backups location or exported to a file in case exporting options were specified. For details on exporting options, refer to the section **Exporting Backup Files** (on page 62). If the command execution fails, backup is not created.

You can perform advanced configuration of the backup operation through the file %plesk_dir%`/admin/share/pmmcli/pmmcli-rc.` For more details, refer to the section **Defining How the Backup Process Is Performed** (on page 64).

In this section:

Backup Objects: Hierarchy and Volume

Panel provides opportunities for backing up and restoring nearly all hosting data, which includes its major objects: administrator account, settings for Panel-managed services, reseller accounts, customer accounts, subscriptions, websites, databases and mail accounts. These backup objects are organized into a hierarchy where parent object is always an owner of its children. The hierarchy comprises of four levels: *server*, *resellers*, *customers* and *subscriptions*. The levels are such that a higher level includes objects on the lower levels but a lower level is completely separated from the higher objects.



You can create either a full or a partial backup. A full backup is the highest-level backup, it includes all data related to a Panel installation. A partial backup includes only backup objects you need, of any of the levels. For information on available options when creating a partial backup, refer to the section **Defining Data for Backup** (on page 53).

Restoring a backup, in turn, can also be either full or partial. Full restoration recovers all data contained in a backup, and partial recovers a part. For information on available options when restoring data from backup, refer to the **Defining Objects for Restoration** (on page 69) section.

Each backup object includes the following:

- *Configuration* defines properties of the backup object *and its descendants*.
- *Content* contains binary data related *only* to the backup object (website content and content of mailboxes).

This table shows what data (configuration and content) are related to each backup object.

Backup Object Type	**Configuration**	**Content**
server	This backup level includes the following: ▪ Administrator's information. ▪ Web Presence Builder settings. ▪ SSO settings. ▪ IP addresses. ▪ Database server settings. ▪ DNS settings. ▪ Mail server settings. ▪ Antivirus and spam protection settings. ▪ SSL certificates. ▪ Reseller plans, hosting plans, and add-on plans. ▪ Information about administrator's subscriptions, reseller accounts, customer accounts and websites. ▪ Information about user roles. ▪ Information about auxiliary users who can access Control Panel. ▪ Information about mail accounts and individual settings for protection from spam and viruses . ▪ Site isolation settings. ▪ Settings for notification on system events.	License keys for Panel, virtual host templates, website content, error documents, log files, and content of mailboxes.

Backup Object Type	Configuration	Content
reseller	This backup level includes the following: ▪ Reseller information. ▪ Reseller's hosting plans. ▪ Resource allotments and permissions for operations in Panel. ▪ Allocated IP addresses. ▪ Information about customer accounts, subscriptions, and websites with DNS settings. ▪ Information about user roles. ▪ Information about auxiliary users who can access Control Panel. ▪ Information about mail accounts and individual settings for protection from spam and viruses.	Website content, error documents, log files, content of mailboxes.
customer	This backup level includes the following: ▪ Customer information. ▪ Hosting plans to which the customer is subscribed. ▪ Resource allotments and permissions for operations in Control Panel. ▪ IP addresses used by customer's subscriptions. ▪ Information about websites with DNS settings. ▪ Information about user roles. ▪ Information about auxiliary users who can access Control Panel. ▪ Information about mail accounts and individual settings for protection from spam and viruses.	Website content, error documents, log files, content of mailboxes.
subscription	This backup level includes the following: ▪ Information about a subscription, its owner and associated hosting plan. ▪ IP addresses allocated to the subscription. ▪ Resource allotments and permissions for operations in Control Panel. ▪ Information about websites with DNS settings. ▪ Information about mail accounts and individual settings for protection from spam and viruses.	Website content, error documents, log files, content of mailboxes.

Specifying Data for Backing Up

Defining data that should be backed up includes the following:

1. Defining backup level and, unless it is the server level, optionally, selecting which resellers, customers, or subscriptions should be backed up.
2. (optional) Defining which resellers, customers, or subscriptions should be excluded from the backup.
3. (optional) Restricting backup to either only mail or only web hosting settings, and only to configuration.
4. (optional) Defining that log files are excluded from backup.

Generally speaking, the data that can be backed up with one call of the `pleskbackup` utility are represented by any single cell of the following table.

		(All)		**Only web hosting settings** option: `--only-hosting`		**Only mail** option: `--only-mail`	
		(All)	**Only configuration** option: `-c`	**(All)**	**Only configuration** option: `-c`	**(All)**	**Only configuration** option: `-c`
Server command: `--server`	**(All)**						
	Excluding resellers options: `--exclude-reseller` or `--exclude-reseller-file`						
	Excluding customers options: `--exclude-client` or `--exclude-client-file`						
	Excluding subscriptions options: `--exclude-domain` or `--exclude-domain-file`						

All or selected resellers
command:
`--resellers-name`
or
`--resellers-id`
	(All) / (All selected)				Example 1		

	Excluding resellers options: `--exclude-reseller` or `--exclude-reseller-file`				Example 1*		

	Excluding customers
	options:
	`--exclude-client or`
	`--exclude-client-file`						

	Excluding subscriptions options: `--exclude-domain` or `--exclude-domain-file`						

All or selected customers
command:
`--clients-name`
or
`--clients-id`
	(All) / (All selected)						

	Excluding customers
	options:
	`--exclude-client or`
	`--exclude-client-file`						

	Excluding subscriptions options: `--exclude-domain` or `--exclude-domain-file`						

All or selected subscriptions
command:
`--domains-name`
or
`--domains-id`
	(All) / (All selected)					Example 2	

	Excluding subscriptions options: `--exclude-domain` or `--exclude-domain-file`						

Example 1: With one call of `pleskbackup`, you can back up hosting data for several resellers (row 5 or 6 in the table, depending on what is more convenient: to list resellers that should be included or those excluded) and restricting the backup data to configuration of web hosting on sites owned by the resellers or their customers (column 4 in the table).

To back up website hosting configuration of resellers with usernames `reseller1` and `reseller2`, issue the following command:

```
pleskbackup --resellers-name "reseller1 reseller2" --only-hosting -c
```

Example 2: With one call of `pleskbackup`, you can back up mail configuration and content of mail accounts (column 5) for all subscriptions existing on the server (row 12).

To back up mail accounts with messages for all subscriptions:

```
pleskbackup --domains-name --only-mail
```

The rest of this section explains each option in detail and provides examples of commands.

Defining backup level and selecting objects

To define backup level and select backup objects, the commands of `pleskbackup` utility are used.

If performing a selective backup, resellers, customers or subscriptions selected for the backup should be specified by their identifiers which are either usernames or IDs. The specification can be done in one of the following two ways:

- *Command line specification*. The backup command takes objects identifiers as arguments separated with spaces.
- *File specification*. The backup command takes the `--from-file` option which specifies the file where the identifiers of objects are listed. The file must be in plain text format, and object identifiers are separated by line breaks (i.e., one identifier per line).

Note: If a command contains both specifications, file specification is used and the command line specification is ignored.

➢ *To back up all data related to Panel installation:*

```
pleskbackup --server
```

➢ *To back up all resellers, customers, or subscriptions:*

```
pleskbackup --<resellers|clients|domains>-<name|id>
```

For example, to back up all customer accounts:

```
pleskbackup clients-name
```

or

```
pleskbackup clients-id
```

➢ *To back up several resellers, customers, or subscriptions defined in the command line:*

```
pleskbackup --<resellers|clients|domains>-<name|id> [
<identifier1> [
<identifier2> ... [<identifier n>]]
```

For example, to back up three resellers defined in the command line:

```
pleskbackup --resellers-name "johndoe janedoe josephine"
To back up several resellers, customers, or subscriptions listed in a
file: pleskbackup --<resellers|clients|domains>-<name|id> --from-
file=<file>
```

For example,

```
pleskbackup --resellers-name --from-file="E:\backup lists\j.txt"
```

Defining which objects should be excluded

Objects that should be excluded from backup are specified by their usernames (reseller, customer accounts) or domain names (subscriptions). The specification can be done as follows:

- *Command line specification*. The backup command takes objects identifiers as values of the `--exclude-<reseller|client|domain>` option separated by commas.
- *File specification*. The backup command takes the objects identifiers from the file specified by the `--exclude-<reseller|client|domain>-file` option. The file must be in plain text format, and object identifiers are separated by line breaks (that is, one identifier per line).

Note: It is acceptable to use both specifications in one command. In such case, all specified objects are excluded from backup.

➢ *To back up all reseller accounts except for several selected resellers:*

```
pleskbackup --resellers-name --exclude-
reseller=<login1>,<login2>[,<login n>]
```

or

```
pleskbackup --resellers-name --exclude-reseller-file=<file>
```

For example,

```
pleskbackup --resellers-name --exclude-reseller=johndoe,janedoe
```

or

```
pleskbackup --resellers-name --exclude-reseller-file="E:\backup
lists\j.txt"
```

➢ *To back up a selected reseller without several subscriptions belonging to him or her, or his or her customers:*

```
pleskbackup --resellers-name <username> --exclude-
domain=<name1>,<name2>,<name n>
```

or

```
pleskbackup --resellers-name <username> --exclude-domain-file=<file>
```

For example,

```
pleskbackup --resellers-name johndoe --exclude-
domain=example.com,example.net,example.org
```

or

```
pleskbackup --resellers-name johndoe --exclude-domain-file="D:\backup-
lists\excl-example-domains.txt"
```

Restricting backup to only mail or only physical hosting, and to only configuration

The amount of backup data can be further narrowed to backing up either mail or physical hosting content and configuration by using the `--only-mail` or `--only-hosting` options, respectively.

Specifying the `--only-hosting` option results in backing up only website-specific data which includes the following, for each domain with physical hosting:

- website content (including protected directories, web users, MIME types)
- web hosting configuration (including settings of anonymous FTP, log rotation, hotlink protection, shared SSL, web users)
- installed site applications
- databases
- subdomains

Specifying the `--only-mail` option results in backing up only mail-specific data which includes the following:

- if used for the partial backup, for each domain included in backup:
  - configuration of per-subscription mail settings
  - mail accounts
  - mailing lists
- if used for the full backup, *in addition to previous*:
  - RBL protection settings
  - ACL white and black list configurations

The amount of backup data can also be narrowed in another way: by specifying that only configurations of the selected objects should be backed up. The specification is done by using the `--only-configuration` option.

Such backups are useful when the objects content is backed up by a third-party system.

```
To back up mail configuration on subscriptions belonging to a
customer: pleskbackup --clients-<name|id> <name|id> --only-mail --
configuration
```

For example,

```
pleskbackup --clients-id 42 --only-mail --configuration
```

➢ *To back up websites content and hosting configuration on subscriptions belonging to all resellers:*

```
pleskbackup --resellers-id --only-hosting
```

Excluding log files from back up

In case Panel's log files related to the hosted objects are not required to be backed up, they can be excluded from the backup by using the `--skip-logs` option.

➢ *To back up the Panel configuration without log files:*

```
pleskbackup --server -c --skip-logs
```

Defining Properties of Files That Compose Backup

Defining properties of the files that will be contained in backup includes the following:

1. Defining that archives with backup object contents should not be compressed.
2. Defining that a prefix should be added to names of the backup files.
3. Defining that backup files should be split into parts of the specified size.

Defining that archives with backup object contents should not be compressed

By default, Panel saves backed up content to compressed `.zip` archives to save disk space when the backup is stored. However, restoring backups that contain compressed archives requires almost two times more disk space than restoring those with uncompressed files. If you want to create your backups without compression, use the `-z` option in your backup command.

Defining that a prefix should be added to names of the backup files

In order to better distinguish files that were created during one backup session from another, `pleskbackup` adds a prefix to backup file name. By default, it is `backup`, so every backup file name looks like `backup_`*`<file-name>`*`.`*`<ext>`*. The prefix in names of the files that compose a particular backup can be customized by using the `--prefix` option. The option's value will be added as a prefix to names of files of the created backup.

For example, to create a backup of the server mail configuration so that all files in backup have prefix `mail-friday`:

```
pleskbackup --server --only-mail --configuration --prefix="friday"
```

Defining that backup files should be split into parts of the specified size

The `pleskbackup` utility is capable of splitting backup files into parts of a particular size, which is vitally useful in cases when the file size is critical. Such cases can be, for example, the following:

- if backups are burnt to DVDs, file size should not exceed approximately 4 Gbytes
- if backups are stored on the FAT32 file system, file size should not exceed approximately 4 Gbytes
- if backups are stored on FTP, FTP server may have its own restrictions on the size of a single file transferred to the server

To make pleskbackup split the backup files to parts of a particular size, use the `-s|--split` option and specify the required size as the option value. For details on the format of size specification, refer to the section **Backup Utility Commands and Options** (on page 65). The default value used by `pleskbackup` if no custom size is specified is 2 Gbytes. The utility numbers file parts created as a result of split by adding numerical suffixes to the file names starting from `.1`.

For example, to back up a subscription and split backup files into parts of no more than 700 Mbytes:

```
pleskbackup --domains-name example.com --only-hosting --split=700M
```

Exporting Backup Files

By default, `pleskbackup` stores backups in Panel's backup repository located on the server in `%plesk_dir%\Backup\`.

Panel is capable of exporting the created backup as a single `.zip` file in one of the following ways:

- to `stdout`
- to local file system
- to FTP server

To export backup as a single file, use the `--output-file` option. Particular export mode requires specific option values.

Important: After a backup is exported, `pleskbackup` removes it from the Panel's backup repository.

The exported file can also be created not compressed and/or split in parts of a particular size, just as the files composing backup in repository (details (on page 60)).

Exporting to stdout

To export a backup as file to `stdout`, use the `--output-file` option with the `stdout` value.

For example, to create backup of a subscription with ID **1** and export it to stdout:

```
pleskbackup --domains-id 1 --output-file stdout
```

Exporting to local file system

To export a backup as a file to local file system, use the `--output-file` option with a *`<full-path-to-file>`*`\`*`<file-name>`* value.

For example, to create backup of a subscription with ID **1** and export it to the file **domain1.zip** located at `c:\tmp` folder:

```
pleskbackup --domains-id 1 --output-file="c:\tmp\domain1.zip"
```

Exporting to FTP server

To export a backup as a file to an FTP server, use either of the following options:

- `--output-file=ftp://`*`<login>`*`:`*`<password>`*`@`*`<server>`*`/`*`<filepath>`*
- `--output-file=ftp://`*`<server>`*`/`*`<filepath>`* `--ftp-login=`*`<ftp login>`* `--ftp-password=`*`<ftp password>`*

You may want to use passive mode FTP connection in case a firewall prevents the export. For this, use the `--ftp-passive-mode` option.

For example, to create backup of a subscription with ID **1** and export it to FTP server **example.com** to the **storage/backups/** directory, using **johndoe** as login and **jjFh6gsm** as password:

```
pleskbackup --domains-id 1 --output-
file=ftp://johndoe:jjFh6gsm@example.com/storage/backups
```

or

```
pleskbackup --domains-id 1 --output-
file=ftp://example.com/storage/backups --ftp-login=johndoe --ftp-
password=jjFh6gsm
```

Defining How the Backup Process Is Performed

You can specify the following options for the backup operation:

1. Do not perform the backup if your server does not have specified free disk space.
2. Do not perform the backup if your server does not have enough free disk space to store the backup content.
3. Temporarily suspend websites during backup.
4. Configure the backup utility to include more details in backup reports.

Specifying disk space requirements for the backup

You can prevent the start of the backup operation if your server has not enough disk space to complete it. To set the free disk space requirements, change the parameters in the file `%plesk_dir%/admin/share/pmmcli/pmmcli-rc`.

There are two ways to prevent the start of the backup operation:

- Specify minimal free disk space on your server.
  If the server does not have the specified disk space, Panel will not start the backup operation. Set the minimal free disk space in MB by changing the value of the `FREE_DISK_SPACE` parameter. Say, to prevent the backup if free disk space on the server is less than 100 MB, edit the line in the following way:

```
FREE_DISK_SPACE 100
```

- Restrict the backup if your server does not have enough free disk space to store the backup content. If this option is turned on, Panel calculates the future backup size and compares it with the free disk space on the server. If there is not enough disk space, Panel will not start the backup operation. Note that this option can significantly increase the backup time.
  To turn this option on, set the `CHECK_BACKUP_DISK_SPACE` to `1`. To turn this option off, set the parameter to `0`. Say:

```
CHECK_BACKUP_DISK_SPACE 0
```

Suspending websites

If your backup will include websites, we recommend that you suspend them during the backup process by using the `--suspend` option of the backup utility. This will help you avoid possible errors that may be caused by changes done to the site configuration or content during the backup.

The suspension is made up to be as short as possible: each site is suspended only for the time it is being backed up: The site is started automatically as soon as its data are processed.

Defining level of backup verbosity

Verbose mode of backup process is defined by the `-v` option:

1. *No -v option used*. The minimum level, only general errors are displayed, like, for example, syntax errors (no or wrong command specified, invalid input parameters), runtime errors and unhandled exceptions, low disk space for backup, and so on.
2. *The -v option used*. Sets up the maximum verbosity level: additionally includes debugging information and response/request messages to the internal backup utility.

Note: `pleskbackup` outputs information on its execution to `stdout` only. If you want to have the backup log saved, redirect the utility output to a file with standard command line means.

➢ ***To run a task on creating a complete server backup with maximum level of verbosity:***

```
pleskbackup --server -v
```

Backup Utility Commands and Options

Location

```
%plesk_dir%\bin\pleskbackup
where %plesk_dir% is an environment variable for Panel installation
directory. By default, it is "C:\Program Files\Parallels\Plesk".
```

Usage

```
pleskbackup <command> [<arguments>] [<options>]
```

Commands

Command	Argument	Description
`--server`		Backs up all data related to the Panel installation.
`--resellers-name`	`[<username-1> <username-2> <...> <username-n>]`	Backs up all data for the resellers specified by usernames. Usernames should be separated by spaces and enclosed in quotes. Can be used with the `--from-file` option. In such case, resellers specified in the file are backed up and resellers specified as command arguments are ignored. If no usernames are specified and the `-f` option is not used, all resellers are backed up.

Command	Argument	Description
`--resellers-id`	[*<ID1> <ID2> <...> <IDn>*]	Backs up all data for the resellers specified by IDs. IDs should be separated by spaces and enclosed in quotes. Can be used with the `--from-file` option. In such case, resellers specified in the file are backed up and resellers specified as command arguments are ignored. If no IDs are specified and the `-f` option is not used, all resellers are backed up.
`--clients-name`	[*<username-1> <username-2> <...> <username-n>*]	Backs up all data for the customers specified by usernames. Usernames should be separated by spaces and enclosed in quotes. Can be used with the `--from-file` option. In such case, customers specified in the file are backed up and customers specified as command arguments are ignored. If no usernames are specified and the `-f` option is not used, all customer accounts are backed up.
`--clients-id`	[*<ID1> <ID2> <...> <IDn>*]	Backs up all data for the customers specified by IDs. IDs should be separated by spaces and enclosed in quotation marks. Can be used with the `--from-file` option. In such case, customers specified in the file are backed up and customers specified as command arguments are ignored. If no IDs are specified and the `-f` option is not used, all customer accounts are backed up.
`--domains-name`	[*<name-1> <name-2> <...> <name-n>*]	Backs up all data for the subscriptions specified by domain names. Names should be separated by spaces and enclosed in quotation marks. Can be used with the `--from-file` option. In such a case, subscriptions specified in the file are backed up and subscriptions specified as command arguments are ignored. If no names are specified and the `-f` option is not used, all subscriptions are backed up.
`--domains-id`	[*<ID1> <ID2> <...> <IDn>*]	Backs up all data for the subscriptions specified by IDs. IDs should be separated by spaces and enclosed in quotation marks. Can be used with the `--from-file` option. In such case, subscriptions specified in the file are backed up and subscriptions specified as command arguments are ignored. If no IDs are specified and the `-f` option is not used, all subscriptions are backed up.
`--help`		Displays help on the utility usage.

Exclude Options

Option	Description
`--exclude-reseller[=<username1>,<username2>,...]`	Skips resellers with the specified usernames during backup.
`--exclude-reseller-file[=<file>]`	Skips resellers listed in the specified file during backup.
`--exclude-client=[<username1>,<username2>,...]`	Skips customer accounts with the specified usernames during backup.
`--exclude-client-file=<file>`	Skips customer accounts listed in the specified file during backup.
`--exclude-domain[=<name1>,<name2>,...]`	Skips subscriptions with the specified names during backup.
`--exclude-domain-file=<file>`	Skips subscriptions listed in the specified file during backup.

General Options

Option	Description
`-v|--verbose`	Shows more information about the backup process.
`-c|--configuration`	Backs up only configurations of Panel objects, excluding their content.
`-s|--split[=<integer>[K|M|G]]`	Splits the backup files into parts of the specified size. The parts are numbered by appending numerical suffixes starting with `.1`. Size is specified in Kbytes, Mbytes or Gbytes. If none is defined, then interpreted as being in bytes. If no argument is specified, the default value of **2 Gbytes** is used.
`-z|--no-gzip`	Sets that objects content is archived without compressing.
`--only-mail`	Backs up only mail configuration and content. When used with the `resellers|clients|domains-login|id` commands, backs up configuration of domain-level mail system, and content and configuration of mail accounts. When used with the `server` command, backs up also server-wide mail configuration. Cannot be used together with the `--only-hosting` option.
`--only-hosting`	Backs up only web hosting configuration and website content, including site applications, databases and subdomains. Cannot be used together with the `--only-mail` option.
`--suspend`	Suspends sites during backup operation.

Option	Description
`-f| --from-file=<file>`	Backs up resellers|customers|subscriptions listed in the specified file, ignoring those specified in the command line as arguments. The file should be in plain text format and should contain a list of resellers|customers|subscriptions, one per line. Used only with the `resellers-name`, `resellers-id`, `clients-name`, `clients-id`, `domains-name`, `domains-id` commands. Depending on the command, resellers|customers|subscriptions are listed in the file by either usernames or IDs.
`--skip-logs`	Sets that log files are not saved to backup.
`--prefix=<string>`	Adds specified prefix to the backup file names. Used to customize backup file name which is created with the **backup** prefix by default.

FTP Options

Option	Description
`--ftp-login=<ftp_username>`	Specifies FTP account username that will be used for uploading backup file to the FTP server.
`--ftp-password=<ftp_password>`	Specifies password that will be used for uploading backup file to the FTP server.
`--ftp-passive-mode`	Specifies that the passive mode for FTP connection should be used.

Output File Option

Option	Description
`--output-file`	Exports backup as a single file to `stdout` and removes backup from Panel's repository.
`--output-file=<fullpath/filename>`	Exports backup as a single file with the specified name to a local file system and removes backup from Panel's repository.
`--output-file=<ftp://[<username>[:<password>]@]<server>/<filepath>>`	Exports backup as a single file to the specified FTP server and removes backup from Panel's repository. The `FTP_PASSWORD` environment variable can be used for setting password. The `--ftp-login` and `--ftp-password` FTP options can be used for setting username and password.

Restoring Data

To perform restoration of Panel hosting data, you should execute the `pleskrestore` utility command composed so that it does the following:

1. Defines the Panel objects to be restored.
2. Defines how the restore process will be performed.
3. Defines conflict resolution rules and policies.

The following sections explains each component in detail.

The `pleskrestore` utility is located in `%plesk_dir%\bin\`
where `%plesk_dir%` is an environment variable for the Panel installation directory. By default, it is `"C:\Program Files\Parallels\Plesk\"`.

To see a list of the `pleskrestore` commands and options, refer to the section **Restoration Utility Commands and Options** (on page 98).

In this section:

Defining Objects for Restoration

Defining objects for restoration includes the following:

1. Specifying a source backup file.
2. Defining the level of restored objects.
3. Applying filter on the specified level.

Generally speaking, the data that can be restored with one call of the `pleskrestore` utility are represented by any cell of the following table.

	Restoration levels specified with the -level option						
	Server	**Resellers**		**Customers**		**Subscriptions**	
			Selected with the -filter option		Selected with the -filter option		Selected with the -filter opti

Backup file	**<server>.xml | zip**	Full restoration	All reseller accounts	Selected reseller accounts	All customer accounts belonging to administrator	Selected customer accounts belonging to administrator	All subscriptions belonging to administrator	Selected subscript ns belonging to administr or
	<reseller>.xml | zip		Full restoration of a reseller account		All customer accounts belonging to reseller	Selected customer accounts belonging to reseller	All subscriptions belonging to reseller	Selected subscript ns belonging to reselle
	<customer>.xml | zip				Full restoration of a customer account		All subscriptions belonging to customer	Selected subscript ns belonging to custom
	<subscription>.xml | zip						Full restoration of a subscription	

Specifying a source backup file

The source backup file defined for restoration can be of one of the following types:

- *<info>*.xml - backup metadata file, in case of restoring from backup located in Panel's repository.
- *<backup>*.*<zip>* - archived backup file, in case of restoring from an exported backup.

For example, to restore the whole server backup, you choose a *<backup repository root>\<server>*.xml file, or an exported server backup file. To restore a customer account belonging to a reseller, you choose a *<backup repository root>*\resellers\*<reseller ID>*\clients\*<customer ID>\<customer>*.xml file.

Defining level of restored objects

Defining level of restored objects allows you to narrow the amount of restored data according to your needs. For example, you may want to restore only subscriptions which belong to a customer or a reseller, skipping all other data not related to subscriptions.

To define the level of restored objects, use the `-level` option with appropriate value. The option is required, so in cases when you do not need any narrowing but just restoring all data from a backup, define the level equal to the level of file.

➢ To restore entire server:

```
pleskrestore --restore <backup repository root>\<server>.xml -level
server
```

Note: When the whole server backup is restored, license keys are not restored by default. To restore license keys along with other server content, use the `-license` option in your restore command.

➢ To restore entire server with license keys:

```
pleskrestore --restore <backup repository root>\<server>.xml -level
server -license
```

➢ To restore all subscriptions and sites belonging to a reseller:

```
pleskrestore --restore <backup repository root>\resellers\<reseller
ID>\<reseller>.xml -level domains
```

➢ To restore all reseller accounts:

```
pleskrestore --restore <backup repository root>\<server>.xml -level
resellers
```

Applying filter on the specified level

To perform a more selective restore, use a filter (the `-filter` option) which selects for restoring particular objects of the specified level (resellers, customers, subscriptions). The objects are specified by their names, which are domain names for subscriptions, and usernames for resellers and customers. The specification can be done as follows:

- *Command line specification*. The restore command takes objects identifiers as values of the `-filter` option defined in the following string: `list:<item1>,<item2>,...,<itemN>`.
- *File specification*. The restore command takes the objects identifiers from the file specified as argument of the `-filter` option. The file must be in plain text format, and object identifiers are separated by line breaks (that is, one identifier per line).

➢ *To restore two resellers from a server backup:*

```
pleskrestore --restore <backup repository root>\<server>.xml -level
resellers -filter list:JohnDoe,JaneDoe
```

or

```
pleskrestore --restore <upload directory>\<server backup name>.zip -
level resellers -filter list:JohnDoe,JaneDoe
```

➢ *To restore two subscriptions owned by server administrator:*

```
pleskrestore --restore <backup repository root>\<server>.xml -level
domains -filter list:example.com,sample.org
```

➢ *To restore several subscriptions of a customer defined in a file:*

```
pleskrestore --restore <backup repository
root>\resellers\SandyLee\clients\JaneDow\<customer>.xml -level domains
-filter <path to the file>\restore-subscriptions.txt
```

In this section:

Backup File Structure

By default, all backups are created in a backup repository located on the Panel-managed server: in `%plesk_dir%\Backup\` folder, where %plesk_dir% is environment variable specifying directory where Panel is installed (if installed to default locations, it is "`C:\Program Files\Parallels\Plesk\`")

The repository is structured as follows, starting with the content of repository root folder (we omit auxiliary files and folders which are irrelevant for backing up and restoring Panel data using `pleskbackup` and `pleskrestore` utilities).

🗐	`<info>.xml`	Metadata files of full and server-level backups, one per backup, describe configuration and content.

📂 <content>.<zip>				Archives with content related to server configuration and Panel settings.
	📂 clients\			Directory containing the following backup data: ▪ customer accounts belonging to the server administrator ▪ objects related to those accounts Organization of the directory is the same as that of <repository>\resellers\<reseller ID>\clients\.
	📂 domains\			Directory containing the following backup data: ▪ subscriptions belonging to the server administrator ▪ objects related to administrator's subscriptions Organization of the directory is the same as that of <repository>\resellers\<reseller ID>\clients\<client ID>\domains.
		📂 <subscription name 1>.tld		Directory containing data related to all sites hosted under a subscription.
		📂 <subscription name 2>.tld		Directory containing data related to all sites hosted under a subscription.
	📂 resellers\			Directory containing the following backup data: ▪ reseller accounts ▪ objects owned by the resellers
		📂 <reseller ID>\		Directories containing backup data of particular resellers, one reseller per directory, and the objects owned by them. The reseller ID stands for the reseller username.
			📄 <info>.xml	Metadata files of the reseller backups, one file per backup, describe configuration and content of the reseller and the objects they own.
			📄 <content>.<zip>	Archives with the content.

📂 domains\						Directory containing the following backup data: ▪ subscriptions owned by the reseller ▪ objects owned by the subscriptions Organization of the directory is the same as that of *<repository>*\resellers\*<reseller ID>*\clients\*<client ID>*\domains\\.
📂 clients\						Directory containing the following backup data: ▪ customer accounts owned by the reseller ▪ objects owned by the customers
	📂 *<customer's username>*\					Directories containing backup data of particular customers, one customer per directory, and the objects owned by them.
		📄 *<info>*.xml				Metadata files of the customer backups, one file per backup, describe configuration and content of the customer account and the objects it owns.
		📄 *<content>*.*<zip>*				Archives with the customer content.
			📂 domains\			Directory containing the following backup data: ▪ subscriptions owned by the customer ▪ objects owned by the subscriptions
				📂 *<subscription name 1>*.*tld*		Directory containing data related to all sites hosted under a subscription.
					📄 *<info>*.xml	Metadata files of the domain backups, one file per backup, describe configuration and content of the backed up webspace.
					📂 *<content>*	ZIP archives containing data related to the hosted websites and mail accounts.

Files of each backup are placed in the repository folders according to the described structure.

If a partial backup is created, its files will be places according to the place the backup objects have in the hierarchy. For example, if backing up domain example.com owned by reseller *JaneDoe*, its files will be located in the `<repository root directory>\resellers\JaneDoe\domains\example.com\` folder. If backing up reseller *JohnDoe* who owns the subscription *joe.info* and has one customer *Client1* who owns the subscription *sample.org*, the backup files will be located in the following folders:

1. `<repository root directory>\resellers\JohnDoe\`
2. `<repository root directory>\resellers\JohnDoe\domains\joe.info\`
3. `<repository root directory>\resellers\JohnDoe\clients\Client1\`
4. `<repository root directory>\resellers\JohnDoe\clients\Client1\domains\sample.org\`

To distinguish files belonging to different backups of the same object, specific prefix and suffix are added to the file names:

- the `backup` is added by default, and, if you like, you can change it to your own on a per-backup basis
- suffix designating the backup creation date is always added to each backup file, the date format is *<yymmddhhmm>*. For example, files of backup created on 6 April 2011, 8:58 PM will have suffix `1104062058`.

Panel is capable of exporting backup as a single `.zip` file. Each archive has the same structure as the repository, the only difference is that there is only one `<info>.xml` file on each level.

In case a partial backup is exported, the resulting file structure is reduced from the top so that the highest level corresponds to the level of the highest backup object. For example, if a backup of a single customer (called, for example, SandyLee) is exported, the resulting file will have the following structure:

zip {

- `<sandy lee info>.xml`
- *<content>*`.zip`
- `domains\`
  - `subscription1\`
    - `...`
  - `subscription_N\`
  - `...`

}

Defining How the Restoration Process Is Performed

When restoring data, you can also do the following:

1. Temporarily suspend websites during restoration.
2. Configure the restoration utility to include more details in backup reports.

Suspending websites

If you are going to restore websites, we recommend that you suspend them during the restoration by using the `-suspend` option. This will help you avoid possible errors in the restored sites that may be caused by changes done to the site configuration or content during the restoration.

The suspension is made up to be as short as possible: each site is suspended only for the time it is being restored: The site is started automatically as soon as the data are processed.

Defining level of restore verbosity

pleskrestore works in one of the following verbosity modes:

1. *Non-verbose mode*. Default mode. The minimum level, only general errors are displayed, like, for example, syntax errors (no or wrong command specified, invalid input parameters), runtime errors and unhandled exceptions, and so on.
2. *Verbose mode*. Restore runs with verbosity level which additionally includes deployer errors, information about conflicts (read about restore conflicts in the section **Conflict Resolution Rules and Policies** (on page 77)), and so on. Enabled by adding the `-verbose` option to the `pleskrestore` command.

Conflict Resolution Rules and Policies

Conflict is a situation when settings in a backup and settings in a destination Panel are such that restoring backup objects leads to an error or unpredictable Panel behavior.

Types of Conflicts

The restoration process can encounter several types of conflicts, which are the following:

- **Timing conflicts**. An object being restored might exist in the system and its last modification date might be more recent than the date of backup. Or an object could be deleted from the system later than the backup was created.
- **Resource usage conflicts**. There are two groups of resource usage conflicts:
  - **Common resource usage conflict**: The total amount of measurable resources after restoration might appear to be over the limits for this particular user (e.g., disk space limit).
  - **Unique resource usage conflict**: An object being restored requires a unique resource which is already used by another object in the system or does not exist (e.g., domain).
- **Configuration conflicts**. It might happen that configuration being restored is not enabled on the destination server. Two types of cases can happen here:
  - Configuration options are not enabled for the domain.
  - Required configuration options are not available (e.g., site applications are not available for the customer, database server is not configured on the host, IP address is not allocated to the reseller, etc.)

Conflict Resolutions

The following types of conflicts resolutions are possible:

- **Overwrite**. Means that all objects will be restored from the backup files regardless of their current presence in the system. Overwrite works as follows:
  - If an object/setting from backup does not exist in Panel, it is created.
  - If an object/setting from backup exists in Panel, it replaces the existing.
  - If an object/setting exists in Panel but is missed in a backup, the existing remains.
- **Proceed with current**. Means that objects which currently present in the system won't be affected by the restoration process. The restoration process will move to the objects belonging to that one, not touching the object itself.
- **Do not restore**. Means that the objects which currently present in the system or were deleted after the backup won't be restored together with the lower level objects belonging to it.
- **Automatic**. Means that configuration option that should be enabled for domain is enabled automatically.

- **Overuse**. Means that objects are restored with the resources overuse. Can be applied only to objects that belong to a reseller who works in the oversell mode.
- **Rename**. Means that unique resources for the restored domain are reassigned with the specified, existing in the system (mapping).

Conflict Resolution Policies and Rules

Depending on the scope of a conflict resolution, we distinguish conflict resolution *rules* and *policies*:

- Rule defines the way of how a specific single conflict should be resolved.
- Policy defines the way of how all conflicts of a particular type should be resolved.

Conflicts Resolving Mechanism: Default Policies, Custom Policies, and Rules

The restoration utility brings a set of default, hard-coded conflict resolution policies, which are as follows:

- for timing conflicts - Overwrite
- for common resource usage conflicts - Overuse
- for unique resource usage conflicts - Do not restore
- for configuration conflicts - Automatic

The default policies are always applied during restoration and cannot be changed or overridden.

Applying default policies may resolve not all the conflicts occurred. In such cases, those who perform restore should additionally define custom rules and/or policies that resolve the remaining conflicts. Custom rules and policies are defined in an XML format as described in the section **Resolutions Description Format** (on page 81).

Simplified presentation of the conflicts resolving during restore is as follows:

1. Administrator runs `pleskrestore` with specific parameters.
2. `pleskrestore` detects the conflicts occurred and resolves them with the default policies.
3. `pleskrestore` checks if any conflicts remain unresolved.

   In case all conflicts are resolved, the restoration continues.
4. `pleskrestore` stops the restoration and, if run in debug or verbose mode, returns detailed description (in XML format) of each remaining conflict.
5. Basing on the returned description of the conflicts, administrator creates a file that defines a resolution for each conflict (with rules) and/or in bulk (with custom policies).
6. Administrator runs the `pleskrestore` utility with the `--conflicts-resolution` option and the file created at the previous step as its argument.
7. `pleskrestore` detects the conflicts occurred and resolves them with the default policies.

8. pleskrestore processes the remaining conflicts:
   - a pleskrestore applies resolution rules from the file.
   - b pleskrestore applies resolution policies from the file to the rest of the conflicts.
9. pleskrestore checks if any conflicts remain unresolved.
   - In case all conflicts are resolved, the restoration continues.
   - In case any conflicts remain unresolved, pleskrestore stops the restoration and, if run in debug or verbose mode, returns detailed description (in XML format) of each remaining conflict.

     To have such dump restored, admin should add resolution rules for each remaining conflict to the conflict resolution file and repeat the restoration task.

In this section:

Custom Conflict Resolutions

This section describes how to implement custom conflict resolutions during restore.

In this section:

Conflict Description Messages

Conflict descriptions returned by pleskrestore utility contain message elements included for the GUI generation purposes. Despite of the self-explaining character of XML conflict descriptions, values of the message elements may be confusing, so this section describes the meanings of these messages as they are displayed in Panel GUI.

Value of message element	Message displayed in Panel GUI
backup__restore__object_vhost	Virtual host
backup__restore__object_plesk_admin	server administrator
backup__restore__conflict_object_name	<object name>
backup__restore__conflict_object_complex_name	<object name> of <group name>

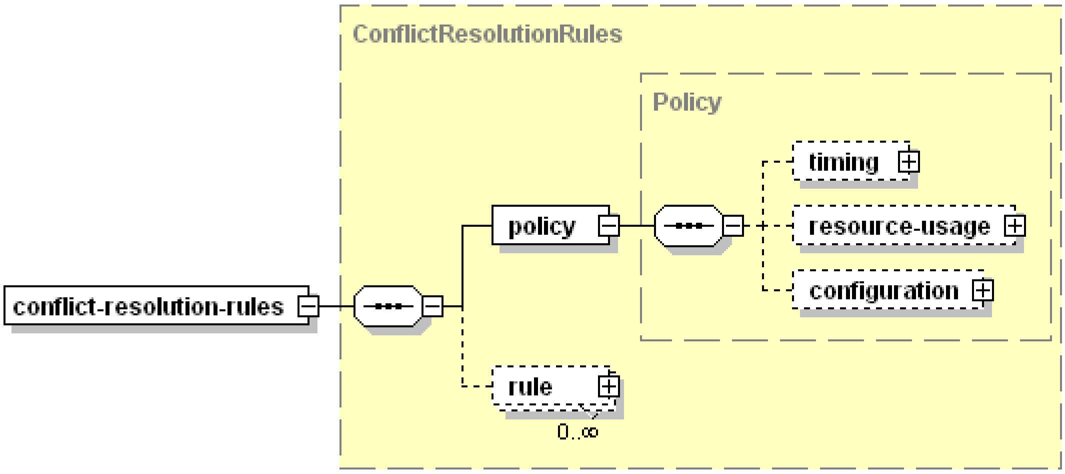
Value of message element	Message displayed in Panel GUI
backup__restore__conflict_object_mailname	<mail name>@<domain name>
backup__restore__object_ftpuser	FTP account
backup__restore__object_frontpageuser	Frontpage account
backup__restore__object_webuser	web user
backup__restore__object_domain	subscription name or domain name
backup__restore__object_subdomain	subdomain
backup__restore__object_domainalias	domain alias
backup__restore__object_client	customer
backup__restore__object_reseller	reseller
backup__restore__object_autoresponder	auto-reply
backup__restore__object_mailalias	mail alias
backup__restore__object_database	database
backup__restore__object_mailname	mail account
backup__restore__conflict_timing_reason_owner_absent	Cannot restore object: object owner is not specified
backup__restore__conflict_timing_reason_wrong_owner	Cannot restore object: object owner does not exist in Panel
backup__restore__conflict_timing_reason_object_already_exists	Cannot restore <object name>: <object name> <object type> already exists in Panel
backup__restore__conflict_configuration_reason_ip	Cannot restore object: required IP address <IP> not found in owner's IP pool
backup__restore__conflict_configuration_reason_db	Cannot restore database: required database server <host> is not registered in Panel
backup__restore__conflict_configuration_reason_site_app	Cannot restore web application: required web application <application name> not found in owner's web application pool
backup__restore__conflict_unique_reason_name_already_used	Cannot restore <object>: name <unique resource name> is already used in Panel by another <object>
backup__restore__conflict_resource_usage_reason	Cannot restore object: resource limit <limit name> will be exceeded (required: <value>, available: <value>)

Resolutions Description Format

In this section:

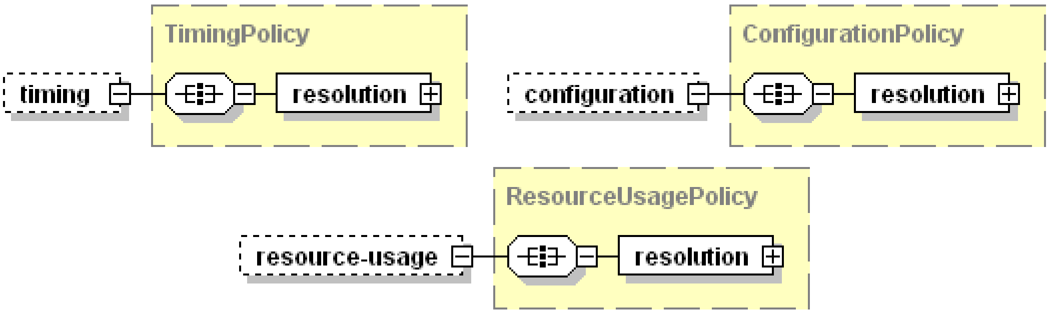
Policies

The file should be structured as follows.

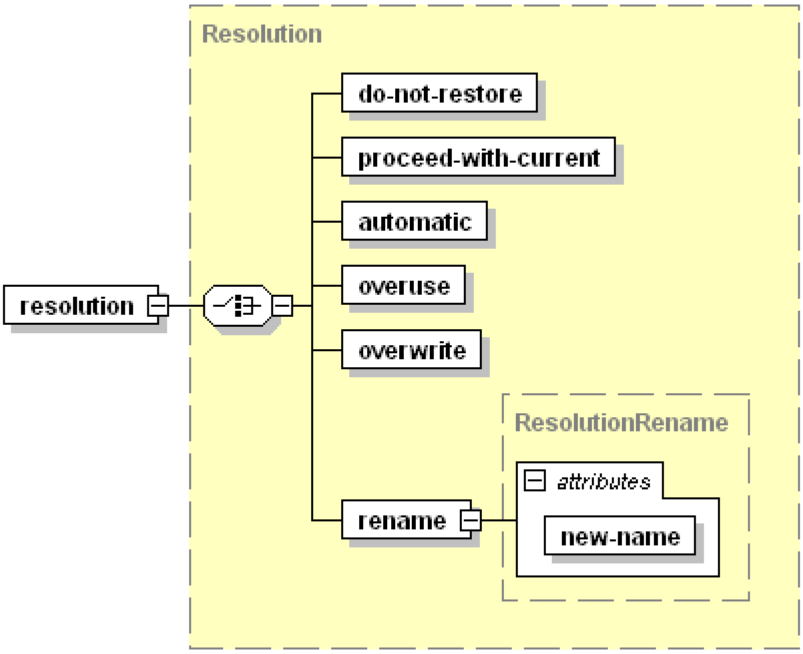


- `conflict-resolution-rules`
  Required, document root element.
- `policy`
- Required, contains the policies descriptions. Children, if present, *must* be placed in the order shown on the scheme.
  - `timing`
    Optional, contains description of policy on resolving timing conflicts. See the structure below.
    Must be present in the document if a timing policy should be used during the restore.
    May not be present in the document if no policy required for timing conflicts.
  - `resource-usage`
    Optional, contains description of policy on resolving resource usage conflicts. See the structure below.
    Must be present in the document if a resource usage policy should be used during the restore.
    May not be present in the document if no policy required for resource usage conflicts.
  - `configuration`
    Optional, contains description of policy on resolving configuration conflicts. See the structure below.
    Must be present in the document if a configuration policy should be used during the restore.
    May not be present in the document if no policy required for configuration conflicts.
- `rule`
  Optional, contains the rule descriptions. For details on the node structure, refer to the **Resolutions Description Format: Rules** section.

The policy elements have the same structure:



- `resolution`
  Required, contains a definition of conflict resolution. Structured as follows:

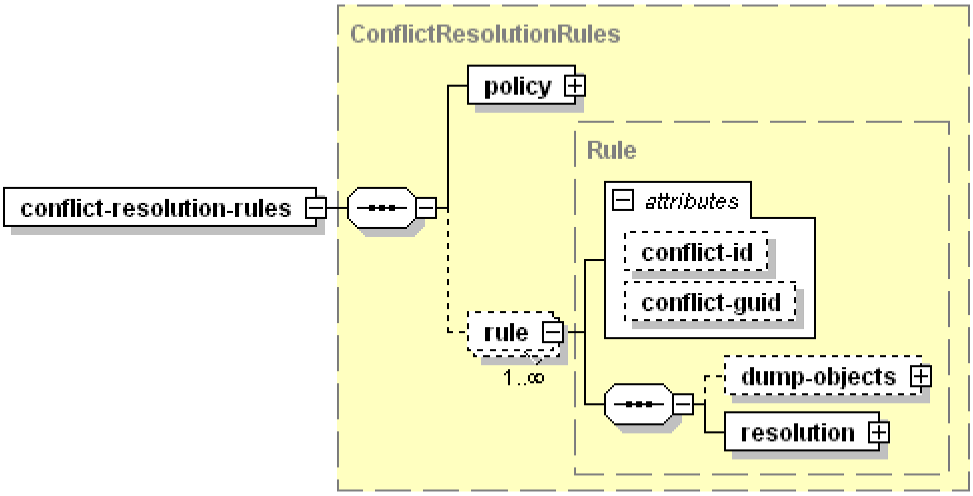


The `resolution` element *must not* be empty, it is *required* that it contains one, and only one of its children elements:

- `do-not-restore`
  Sets the Do Not Restore resolution, *empty value.*
- `proceed-with-current`
  Sets the Proceed With Current resolution, *empty value.*
- `automatic`
  Sets the Automatic resolution, *empty value.*
- `overuse`
  Sets the Overuse resolution, *empty value.*
- `overwrite`
  Sets the Overwrite resolution, *empty value.*
- `rename`
  Sets the Rename resolution, *empty value.*
  - `new-name`
    Required, makes sense only if defined for configuration conflicts. Specifies a name of new configuration that should be assigned to all conflict objects. The value must be a string.

Rules

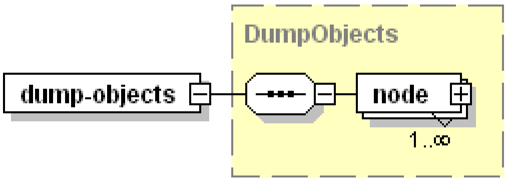
The file should be structured as follows.



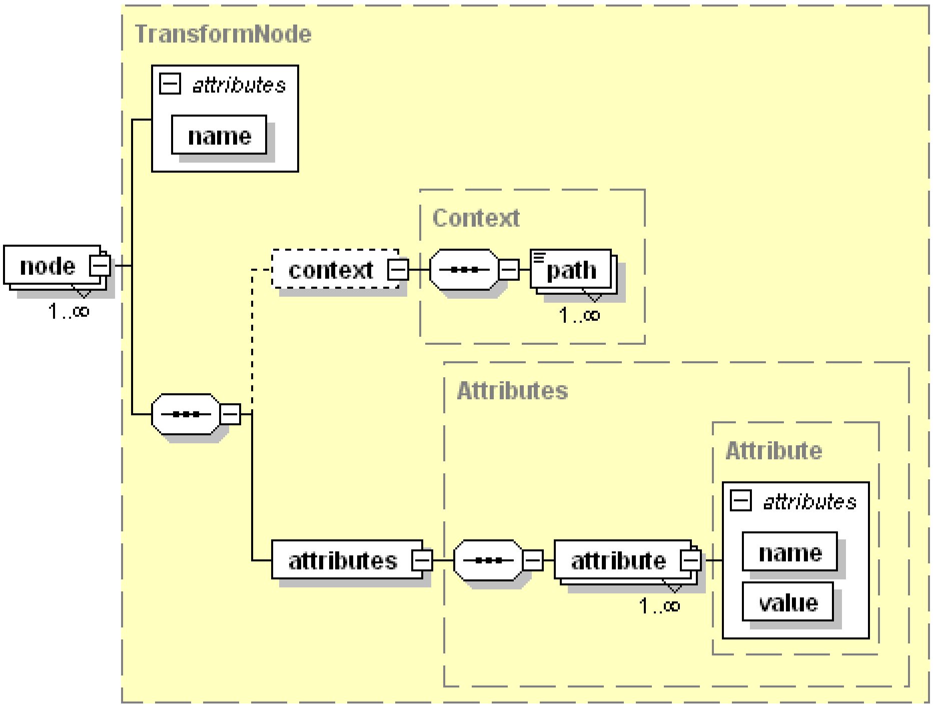
- `conflict-resolution-rules`
  Required, document root element.
  - `policy`
    Required, contains the policies descriptions. For details on the node format, refer to the section **Resolutions Description Format: Policies** (on page 81).
    The element content *must* reflect the conditions under which the conflicts were detected.
  - `rule`
    Optional, contains a rule description.
    Must be present in the document when defining conflict resolution rules. Should be present as many times as the number of unresolved conflicts.

    At least one of the attributes (`conflict-id`, `conflict-guid`) MUST be present.
    - `conflict-id`
      Optional, defines ID of the conflict being resolved. Value is integer.
      The ID should be obtained from the conflict description returned by `pleskrestore` (the "`/conflicts-description/conflict[@id]`" attribute value)
    - `conflict-guid`
      Optional, defines global ID of the conflict being resolved. Value is string.
      The GUID should be obtained from the conflict description returned by `pleskrestore` (the "`/conflicts-description/conflict[@guid]`" attribute value).
      If omitted, the conflict for resolution is identified by ID.
    - `dump-objects`
      Optional, holds a collection of descriptions of backup objects involved into the conflict and taking the same conflict resolution
      Must be present in the document in case when different objects involved in the same conflict should be resolved in different ways.
      May not be present in the document in case when all objects involved in the conflict should be resolved the same way.
      See the structure below.
    - `resolution`
      Required, contains definition of resolution for the conflict, see the structure below.

`dump-objects` structure:

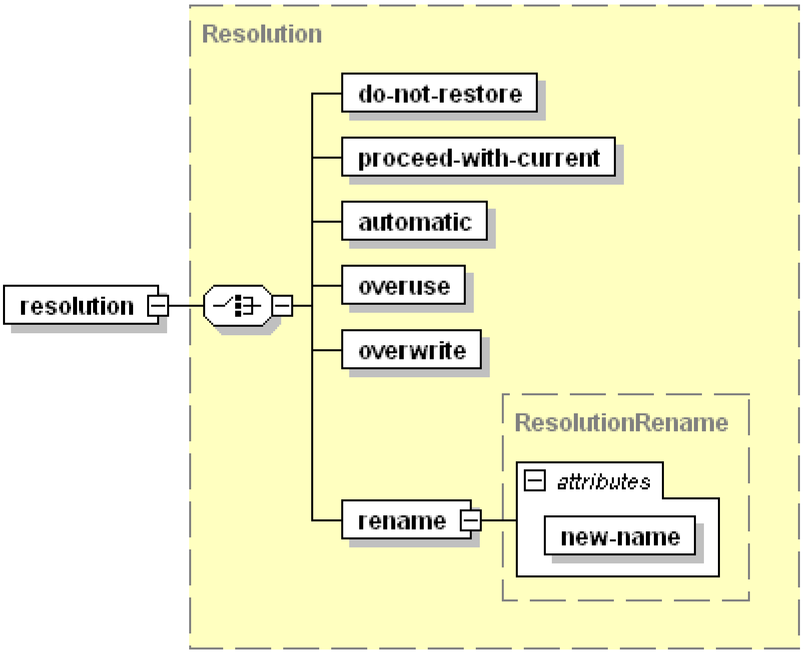


- `node`
  Required, contains a description of backup object involved in the conflict.
  The element contents *must* be taken from the conflict description returned by `pleskrestore` (the "`/conflicts-description/conflict/conflicting-objects/node`" element).
  Structured as follows:



- `name`
  Required, specifies the object type, value must be a string.
- `context`
  Optional, holds a collection of data specifying the object position in backup.
  - `path`
    Required if the `context` element is present in the document, specifies the location of object definition in the backup metadata. Value must be a string conforming to the XPath notation.
- `attributes`
  Required, holds a collection of the object properties.
  - `attribute`
    Required, specifies a particular property of the object (e.g., login, ID, GUID, etc.), *empty value*.
    - `name`
      Required, specifies the property name, value must be a string.
    - `value`
      Required, specifies the property value, value must be a string.

`resolution` structure:



The `resolution` element *must not* be empty, it is *required* that it contains one, and only one of its children elements:

- `do-not-restore`
  Sets the Do Not Restore resolution for the conflict, *empty value.*
- `proceed-with-current`
  Sets the Proceed With Current resolution for the conflict, *empty value.*
- `automatic`
  Sets the Automatic resolution for the conflict, *empty value.*
- `overuse`
  Sets the Overuse resolution for the conflict, *empty value.*
- `overwrite`
  Sets the Overwrite resolution for the conflict, *empty value.*
- `rename`
  Sets the Rename resolution for the conflict, *empty value.*
  - `new-name`
    Required, specifies a name of unique resource that should be assigned to the conflicting objects, value must be a string.
    Makes sense only for unique resource usage conflicts (mapping of IP, database server, object owner).

Samples of Policy Description

The default conflict resolution policies are described in the following XML:

```
<?xml version="1.0" encoding="UTF-8"?>
<conflict-resolution-rules>
  <policy>
    <timing>
      <resolution>
        <proceed-with-current />
      </resolution>
    </timing>
    <resource-usage>
      <resolution>
        <do-not-restore />
      </resolution>
    </resource-usage>
    <configuration>
      <resolution>
        <automatic />
      </resolution>
    </configuration>
  </policy>
</conflict-resolution-rules>
```

The following conflict resolution file resolves all configuration conflicts with database mapping. This can be done in case all configuration conflicts beyond default policies appear because a database server defined in the backup is missed on the target Panel installation.

```
<?xml version="1.0" encoding="UTF-8"?>
<conflict-resolution-rules>
  <policy>
    <configuration>
      <resolution>
        <rename new-name="host:192.0.2.12:port:3306"/>
      </resolution>
    </configuration>
  </policy>
</conflict-resolution-rules>
```

Samples of Conflict Resolution With Rules

This reference section contains format specification of conflict resolution rules description, and several examples of conflicts that may appear and their possible resolutions.

In this section:

Sample 1: Configuration Conflict with Missing IP Address

This sample represents descriptions of a conflict which appeared unresolved upon using default policies, and its resolution.

The conflict appears because of the following mismatch in backup data and destination Panel configuration:

Backup	Destination Panel
Subscription example.com owned by the reseller with ID 30 has web hosting configured on shared IP address 192.0.2.200.	Reseller with ID 30 does not have shared IP address 192.0.2.200 in his or her IP pool.

The conflict is resolved with IP mapping suggesting that the restored subscription will be hosted on shared IP 192.0.2.34 which is in the owner's IP pool.

Note that the conflict resolution XML contains no conflict resolution policies.

In this section:

Conflicts Description

```
<conflicts-description>
      <conflict id="0">
    <type>
      <configuration>
        <reason-description>
          <required-resource-description>
            <ip type="shared" value="192.0.2.200"></ip>
          </required-resource-description>
          <plesk-object-identifier>
          <!-- beginning of definition of Panel object that conflicts
with an object in the backup -->
          <!-- In resource usage conflicts, the plesk-object-
identifier element specifies Panel object which is an owner of the
conflicting resource. In this example, the conflicting resource is IP,
and its owner is a described reseller with ID 30. -->
            <type>reseller</type>
            <database-id>30</database-id>
            <guid>93dbe1b1-cff5-430f-8466-5b810099772f</guid>
          </plesk-object-identifier>
          <!-- end of definition of Panel object that conflicts with
an object in the backup -->
        </reason-description>
        <resolve-options>
          <option name="do-not-restore"></option>
          <option name="rename"></option>
          <option name="automatic"></option>
        </resolve-options>
        <!-- resolve-options element lists all resolutions that are
possible for this particular conflict. When composing the conflict
resolution rule, you should choose one of these resolutions. -->

      </configuration>
    </type>
    <conflicting-objects>
    <!-- beginning of definition of backup objects that conflict with
destination Panel objects. Here, it is a domain example.com -->
      <node children-processing-type="" name="domain">
        <attributes>
          <attribute name="id" value="25"></attribute>
          <attribute name="guid" value="0822c175-a10d-459e-bd3a-
e5cbc497e1f0"></attribute>
          <attribute name="owner-guid" value="93dbe1b1-cff5-430f-8466-
5b810099772f"></attribute>
          <attribute name="name" value="example.com"></attribute>
        </attributes>
      </node>
    </conflicting-objects>
    <!-- end of definition of backup objects that conflict with
destination Panel objects -->
    <overview>
    <!-- beginning of more detailed conflict overview. Here, the
conflict appears because the required IP 192.0.2.200 is not in the
owner's IP pool -->
      <object>
        <message>backup__restore__conflict_object_name</message>
        <name>example.com</name>
        <type>domain</type>
        <reasons>
          <reason>

<message>backup__restore__conflict_configuration_reason_ip</message>
            <param name="ip-address" value="192.0.2.200"></param>
            <param name="ip-type" value="shared"></param>
            <param name="type" value="reseller"></param>
          </reason>
        </reasons>
      </object>
    </overview>
    <!-- end of detailed conflict overview  -->

  </conflict>
</conflicts-description>
```

Conflicts Resolution

```
<?xml version="1.0" encoding="UTF-8"?>
<resolve-conflicts-task-description>
  <conflict-resolution-rules>
    <policy />
    <rule conflict-id="0">
      <dump-objects>
        <node name="domain">
          <attributes>
          <attribute name="id" value="25"></attribute>
          <attribute name="guid" value="0822c175-a10d-459e-bd3a-
e5cbc497e1f0"></attribute>
          <attribute name="owner-guid" value="93dbe1b1-cff5-430f-8466-
5b810099772f"></attribute>
          <attribute name="name" value="example.com"></attribute>
          </attributes>
        </node>
      </dump-objects>
      <resolution>
      <!-- beginning of the conflict resolution definition: IP 
mapping: upon restore, the conflicting domain example.com should have 
hosting configured on IP 192.0.2.34 -->
        <rename new-name="ip-type:shared:ip-address:192.0.2.34"/>
      </resolution>
      <!-- end of the conflict resolution definition -->

    </rule>
  </conflict-resolution-rules>
</resolve-conflicts-task-description>
```

Sample 2: Configuration Conflict With Missing Database Server

This sample represents description and resolution of configuration conflicts which appeared unresolved due to the lack of the required database server on the destination server.

The conflicts appear because of the following mismatches in backup data and destination Panel configuration.

Backup	Destination Panel
Domain sample.net has database mysql_db2_7469 on the MySQL database server with host name 192.0.2.15 listening on port 3306.	No MySQL servers configured on host 192.0.2.15.
Domain 69.sample.net has database mysql_db1_6319 on the MySQL database server with host name 192.0.2.15 listening on port 3306.	

These conflicts are resolved with database mapping (Rename resolution) suggesting that the first databases will be restored on the MySQL server with host name 192.0.2.12, and the second to the local MySQL database server.

In this section:

Conflicts Description

```
<conflicts-description>
  <conflict id="0">
    <type>
      <configuration>
        <reason-description>
          <required-resource-description>
            <db-server host="192.0.2.15" type="mysql"
port="3306"></db-server>
          </required-resource-description>
          <plesk-object-identifier>
          <!-- beginning of definition of Panel object that conflicts
with an object in the backup. In resource usage conflicts it is owner
of the conflicting resource. Here, it is Panel administrator who is
the owner of all database servers -->
            <type>admin</type>
            <database-id>1</database-id>
            <guid>00000000-0000-0000-0000-000000000000</guid>
          </plesk-object-identifier>
          <!-- end of definition of Panel object that conflicts with
an object in the backup -->
        </reason-description>
        <resolve-options>
          <option name="do-not-restore"></option>
          <option name="rename"></option>
          <option name="automatic"></option>
        </resolve-options>
      </configuration>
    </type>
    <conflicting-objects>
    <!-- beginning of definition of backup objects that conflict with
destination Panel objects. Here, it is database mysql_db2_7469  -->
      <node children-processing-type="" name="database">
        <attributes>
          <attribute name="guid" value="86124f4a-5935-48c4-80df-
6d3e9c645378_db_20"></attribute>
          <attribute name="owner-guid" value="86124f4a-5935-48c4-80df-
6d3e9c645378"></attribute>
          <attribute name="name" value="mysql_db2_7469"></attribute>
        </attributes>
      </node>
    </conflicting-objects>
    <!-- end of definition of backup objects that conflict with
destination Panel objects -->
    <overview>
    <!-- beginning of detailed overview of the conflict. This conflict
appears because database mysql_db2_7469 requires MySQL database server
with host name 192.0.2.15 listening on port 3306, which is not
configured on the destination Panel. -->
      <object>

<message>backup__restore__conflict_object_complex_name</message>
        <name>mysql_db2_7469</name>
        <type>database</type>
        <owner-name>sample.net</owner-name>
        <reasons>
          <reason>
```

```
<message>backup__restore__conflict_configuration_reason_db</message>
            <param name="db-type" value="mysql"></param>
            <param name="db-host" value="192.0.2.15"></param>
            <param name="db-port" value="3306"></param>
            <param name="type" value="admin"></param>
            <param name="name"
value="backup__restore__object_plesk_admin"></param>
          </reason>
        </reasons>
      </object>
    </overview>
    <!-- end of detailed overview of the conflict -->
  </conflict>
  <!-- =============== begin new conflict description ===============
-->
  <conflict id="1">
    <type>
      <configuration>
        <reason-description>
          <required-resource-description>
            <db-server host="192.0.2.15" type="mysql" port="3306">
</db-server>
          </required-resource-description>
          <plesk-object-identifier>
          <!-- beginning of definition of Panel object that conflicts
with an object in the backup. In resource usage conflicts it is the
owner of the conflicting resource. Here, it is Panel administrator who
is the owner of all database servers -->
            <type>admin</type>
            <database-id>1</database-id>
            <guid>00000000-0000-0000-0000-000000000000</guid>
          </plesk-object-identifier>
          <!-- end of definition of Panel object that conflicts with
an object in the backup -->
        </reason-description>
        <resolve-options>
          <option name="do-not-restore"></option>
          <option name="rename"></option>
          <option name="automatic"></option>
        </resolve-options>
      </configuration>
    </type>
    <conflicting-objects>
    <!-- beginning of definition of backup objects that conflict with
destination Panel objects. Here, it is database mysql_db1_6319  -->
      <node children-processing-type="" name="database">
        <attributes>
          <attribute name="guid" value="e1fbb4b2-538b-4542-9220-
56808741a3d3_db_19"></attribute>
          <attribute name="owner-guid" value="e1fbb4b2-538b-4542-9220-
56808741a3d3"></attribute>
          <attribute name="name" value="mysql_db1_6319"></attribute>
        </attributes>
      </node>
    </conflicting-objects>
    <!-- end of definition of backup objects that conflict with
destination Panel objects -->
    <overview>
    <!-- beginning of detailed overview of the conflict. This conflict
appears because database mysql_db1_6319 requires MySQL database server
with host name 192.0.2.15 listening on port 3306, which is not
configured on the destination Panel server. -->
      <object>

<message>backup__restore__conflict_object_complex_name</message>
        <name>mysql_db1_6319</name>
        <type>database</type>
        <owner-name>69.sample.net</owner-name>
        <reasons>
          <reason>

<message>backup__restore__conflict_configuration_reason_db</message>
            <param name="db-type" value="mysql"></param>
            <param name="db-host" value="192.0.2.15"></param>
            <param name="db-port" value="3306"></param>
            <param name="type" value="admin"></param>
            <param name="name"
value="backup__restore__object_plesk_admin"></param>
          </reason>
        </reasons>
      </object>
    </overview>
    <!-- end of detailed overview of the conflict -->
  </conflict>
</conflicts-description>
```

Conflicts Resolution

```
<?xml version="1.0" encoding="UTF-8"?>
<resolve-conflicts-task-description>
  <conflict-resolution-rules>
    <policy />
    <rule conflict-id="0">
    <!-- beginning of the first conflict resolution rule: restore the
database described in the  node  element on local MySQL server
listening on the port 3306 -->
      <dump-objects>
        <node name="database">
          <attributes>
            <attribute name="name" value="mysql_db2_7469"/>
          </attributes>
        </node>
      </dump-objects>
      <resolution>
        <rename new-name="host:192.0.2.12:port:3306"/>
      </resolution>
    </rule>
    <!-- end of the first conflict resolution rule -->
    <rule conflict-id="1">
    <!-- beginning of the second conflict resolution rule: restore the
database described in the  node  element on local MySQL server
listening on the port 3306 -->
      <dump-objects>
        <node name="database">
          <attributes>
            <attribute name="name" value="mysql_db1_6319"/>
          </attributes>
        </node>
      </dump-objects>
      <resolution>
        <rename new-name="host:localhost:port:3306"/>
      </resolution>
    </rule>
    <!-- end of the second conflict resolution rule -->
  </conflict-resolution-rules>
</resolve-conflicts-task-description>
```

Restoration Utility Commands and Options

Location

```
%plesk_dir%\bin\pleskrestore
where %plesk_dir% is an environment variable for Panel installation
directory. By default, it is "C:\Program Files\Parallels\Plesk\".
```

Usage

```
pleskrestore <command> [<arguments>] [<options>]
```

Commands

Command	Argument	Description
`--restore`	*`<backup_file>`*	Restores data from the specified backup. Requires the `-level` option.
`--check-backup`	*`<backup_file>`*	Checks integrity of the specified backup file, which is: ▪ backup digital sign match ▪ backup file format ▪ content files integrity
`-i|--info`	*`<backup_file>`*	Shows the backup file description.
`-h|--help`		Displays help on the utility usage.

Options

Option	Argument	Description
`-level`	`clients|resellers|domains|server`	Specifies restoring level. Required with the `--restore` command.
`-filter`	`<file>|<list:<item1_name>[,<item2_name>[,...]]>`	Specifies list of subscription, customer or reseller names for restoring. The object names are listed either in a specified file, one per line, or as the option argument, separated by commas.
`-license`		Restores Panel license key from the backup.
`-verbose`		Enables verbose restore mode.
`-debug`		Enables debugging restore mode.
`-conflicts-resolution`	*`<file>`*	Specifies file that describes conflict resolution policies and rules.
`-suspend`		Suspends the sites being restored.

Migrating Data

You can migrate data to Parallels Plesk Panel 11.0.0 from other servers managed by Panel 10 or earlier by using the Panel's Migration Manager function. This function is available in **Server Administration Panel** > **Tools & Settings** > **Migration Manager** if the corresponding component is installed on the server. This component is not included in typical installations.

For detailed information about migrating data to Panel-managed servers, refer to **Parallels Plesk Panel Installation, Upgrade, and Migration Guide** at http://download1.parallels.com/Plesk/PP11/11.0/Doc/en-US/online/plesk-installation-upgrade-migration-guide/.

CHAPTER 6

Changing Security Settings for File System Objects and Accounts

Panel has a built-in mechanism for customizing security settings for Windows objects on the server disks. You can specify security rules and then have Panel automatically apply the rules to Windows object security settings. The security files are easily accessible, and once you understand the logic of their use, you will be able to customize security settings on any folder or file found on a Panel-managed server.

Incorrect security settings on Windows objects found on Panel-managed servers may result in a number of server problems including but not limited to unavailability of site applications and services. We recommend that you become acquainted with this section before attempting to modify security settings on folders and files found on Panel-managed server.

Panel creates different Windows user accounts to manage servers and to serve Internet requests by IIS. Panel has to assign the user accounts necessary permissions to access and manage Windows objects on managed servers. When assigning user account permissions, Panel exercises two different security policies towards Windows objects - *Disk security* and *Hosting security*. Security settings for all Windows objects on a Panel-managed server are initially configured according to the policies during Panel installation. Compliance with the policies ensures maximum security without compromising server performance. The Windows objects security settings can be further customized. To manage object security settings, Panel uses a flexible system based on Panel's own security metadata files and the DACL inheritance mechanisms implemented in Windows. Security settings can be customized by using the security metadata files and command-line utilities that are distributed with Parallels Plesk Panel.

Warning: Before making any changes to the security metadata, make a backup copy of the metadata file that you want to modify. For information why backing up security metadata files before modifying them is a good idea, see the sections **Customizing Disk Security** (on page 110) and **Customizing Hosting Security** (on page 111).

In this chapter:

Panel's Security Policies

Panel exercises two different security policies towards Windows objects: *disk security* and *hosting security*. The difference between the policies is dictated by the different security requirements for hosted content as opposed to the rest of the server disks. Both policies are defined by security rules specified in corresponding Panel security metadata files. The disk security policy is defined by the disk security metadata file and is applied to all server disks except for the contents of the `%plesk_vhosts%` directory, where all hosted content is located. For more information about the disk security metadata file, see **Disk Security Metadata File** (on page 108). All hosting directories are governed by security policies defined by corresponding hosting security metadata files. Hosting security metadata files are automatically generated from hosting security metadata file templates. For more information about security metadata file templates, see **Hosting Security Metadata File Templates** (on page 109).

Windows Accounts Used by Panel to Manage Windows Objects

The following table describes Windows user accounts and groups used by Panel to manage Windows objects on server disks.

Account	Description
psaadm	Used by Panel to log on to the system and access files and folders.
psacln	All users created by Panel are members of this group.
psaserv	Some auxiliary Internet users are members of this group.

In this section:

Default User Permissions for Disks

Path	Account	Default Permissions *
Disk root	Everyone	Read & Execute for this object only.
	psaadm	Deny Full Control.

Path	Account	Default Permissions *
	psacln	
Program Files	psacln	Deny Full Control except Read Attributes.
Program Files\Common Files	psaadm	Read & Execute.
	psacln	
	psaserv	
	NETWORK SERVICE	
Program Files\IIS	psaadm	Access is not allowed.
	psacln	
Program Files\Reference Assemblies	psacln	Access is not allowed.
Windows	psaadm	Access is not allowed.
	psacln	
	psaserv	
	NETWORK SERVICE	
Documents and Settings	psaadm	Access is not allowed.
	psacln	
	psaserv	
	NETWORK SERVICE	
Application Data(ProgramData)	psaadm	Access is not allowed.
	psacln	
	psaserv	
	NETWORK SERVICE	
RECYCLER (Recycle Bin)	psaadm	Access is not allowed.
	psacln	
	psaserv	
%SystemDrive%\inetpub\temp	users	View, create folders, and read, write, execute files.
	psaadm	View folder contents, read and execute files.
	psacln	
	psaserv	
Windows\Temp	psaadm	View folder contents, read and execute files.
	psacln	

Path	Account	Default Permissions *
	psaserv	
	NETWORK SERVICE	
`%plesk_dir%` (Panel installation directory, which, by default, is `c:\Program Files\Parallels\Plesk`.)	psaadm	Read & Execute.
	psacln	Deny Full Control.
	psaserv	
	NETWORK SERVICE	
`%plesk_dir%\isapi`	psaadm	View folder contents, read and execute files.
	psacln	
	psaserv	
	NETWORK SERVICE	
`%plesk_bin%` (The directory containing Panel's internal utilities, which, by default, is `c:\Program Files\Parallels\Plesk\admin\bin`.)	psaadm	Read and execute files.
	psacln	Read Attributes for this object only; Read & Execute for files
`%plesk_vhosts%` (The directory containing files related to virtual hosts, which, by default, is `c:\inetpub\vhosts`.)	psacln	Deny Full Control except Read Attributes for this object only.
	psaadm	Deny Full Control for this object only.
	psaserv	
	NETWORK SERVICE	

* Actual permissions set on Windows objects may differ from the default permissions listed in this table because some of them may result from a combination of several security rules. For more information about security rules, see **Customizing Object Security Settings in Panel** (on page 107).

Windows Accounts Used by Panel to Manage Hosted Windows Objects

Panel administers the server on which it is installed by using a number of Windows user accounts. The user accounts are used by Panel or remote users logging in to the Panel-managed server. The following table lists several Windows user accounts and groups that are used by Panel or remote users to access and manage website content. The default permissions on the main webspace folder are also described for each account.

Account	Description	Default permissions for the webspace folder
ftp_subaccounts	A Windows user group. Additional FTP user accounts created on domains or subdomains are assigned membership in this user group.	No access permissions.
Plesk domain user	A Windows user account. It is created for domain content management purposes at the time of domain creation. For each domain, a separate *Plesk domain user* account is created. Remote users can access domain content by logging in to the server by using the FTP user credentials. The account is also used by Panel to manage hosted domain content.	FileNonRemovable (on page 123) for this object and Full Control for subfolders and files.
Plesk IIS user	A Windows user account. It is used for serving incoming HTTP requests. The account is automatically created during domain creation. For each domain a separate account is created. For security reasons, the user account should not be granted full access rights.	Read for files, Read & Execute for folders.
<IIS Application Pool user>	A Windows user account created specifically to use IIS Application Pool. The use of separate user accounts corresponding to dedicated IIS Application Pools ensures the maximum degree of domain isolation. For each domain a separate account can be created. For security reasons, the user account should not be granted full access rights.	Read for files, Read & Execute for folders.

Administering Windows Objects Security on Panel-managed Server

The initial security configuration of all disks on a Panel-managed server is performed during Panel installation. Panel applies its own security settings to all existing Windows objects on the server according to the disk and hosting security policies.

Once security has been configured, you have several options to manage security settings for Windows objects. We recommend that you use Panel's security metadata files to set and edit security settings for Windows objects on Panel-managed servers. The changes made in the files can be then applied to Windows objects by running the `ApplySecurity.exe` and `HostingSecurity.exe` command-line utilities.

You can also modify the security settings for each object individually either through Panel GUI or Windows Explorer directly by going to **Security** tab in the object's **Properties**. However, neither of these options is recommended. The main reason is that the changes made in the security settings by using these options may be overwritten by security settings applied by `ApplySecurity.exe`, `HostingSecurity.exe`, or `Reconfigurator.exe` command-line utilities.

The following advantages are afforded by using the security metadata files to configure security settings for Windows objects:

- The ability to apply security rules to multiple objects at once.
- Easy track of security settings changes.
- Easy portability of customized security settings between domains and servers.

In this section:

Initial Windows Security Configuration During Panel Installation or Hosting Account Creation

The initial security configuration of Windows objects is performed automatically by Panel during installation. Panel creates a number of default accounts and sets user permissions on all Windows objects found on the freshly installed Panel-managed server. All pre-existing security settings are erased and new security settings are applied according to the security rules found in the default disk security metadata file (on page 108).

Subsequently, each time a new hosting account is created, the created default hosted objects are assigned user account permissions based on the security rules found in the corresponding hosting security metadata file (on page 109) instantiated from a current hosting security metadata file template (on page 109).

If a folder or a file is created, for which no security rule is set in the security metadata, the object will automatically inherit security settings of their respective parent containers.

Browsing Object Security Settings Through Panel GUI

Panel provides GUI access to the current security settings of Windows objects that it manages. You can browse and modify hosted objects security settings through Control Panel. User account permissions on hosted objects can be viewed and edited by any Panel user authorized to access hosted objects through Panel.

Note: Security settings for some critical folders on hosting accounts are not allowed to be changed through Panel to prevent potential security problems or website malfunction that may be caused by inadvertent user interference with the security settings.

For example, to browse the user permissions for the `/httpdocs` directory on domain `example.com`, follow these steps:

1. Log in to Control Panel as the customer who owns domain `example.com`.
2. Go to the **Websites & Domains** tab > **File Manager**. The list of files and directories located in the domain root directory is displayed.
3. Click on the **Lock** icon corresponding to the `/httpdocs` directory. The list of Windows user accounts is displayed on the left under **Group or user names**. By default, the upper entry in the user account list is highlighted. On the right, the access permissions for the highlighted user account are displayed.
4. Click on the user account or user group name in the list to view the assigned permissions.

Note: To view the advanced security settings, click **Advanced**.

Customizing Object Security Settings in Panel

The preferred way to customize Windows object security settings is by adding new or modifying existing `Entry` elements in a disk security metadata file (for disk security) or in a hosting security metadata file instance corresponding to the hosting account that is authorized to access and manage the hosted objects (for hosting security). To learn why other customization options are not recommended, see **Administering Object Security on Panel-managed Server** (on page 105). For detailed description of the `Entry` element contents, see **General Security Metadata Structure** (on page 121). For step-by-step instructions on modifying the disk security metadata file, see **Customizing Disk Security** (on page 110). For step-by-step instructions on modifying the hosting security metadata files, see **Customizing Hosting Security** (on page 111).

Warning: Before making any changes to the security metadata, make a backup copy of the metadata file that you want to modify. For information why backing up security metadata files before modifying them is a good idea, see the sections **Customizing Disk Security** (on page 110) and **Customizing Hosting Security** (on page 111).

In this section:

Security Metadata Files and Templates

Panel's security rules for managed objects on hosted domains and web user folders are stored in security metadata files. Because Panel has two different security policies applied to Windows objects, it uses two different types of security metadata files: disk security metadata file (on page 108) and hosting security metadata files (on page 109).

The disk security metadata file defines security rules for Windows objects on server disks except for the contents of the `%plesk_vhosts%` directory, which contains hosted content for hosting accounts and is governed by a different security policy.

Security rules for Windows objects in the `%plesk_vhosts%` directory are defined by hosting security metadata files. Separate instances of hosting security metadata files are automatically created for each hosting account (domain or web user) from the corresponding template files during hosting account creation in Panel.

You can manually modify security rules by editing corresponding security metadata files or templates. For detailed information about modifying Panel's security rules, see the sections **Customizing Disk Security** (on page 110) and **Customizing Hosting Security** (on page 111).

In this section:

Disk Security Metadata File

The disk security metadata file is named `DiskSecurity.xml`. The file defines security rules for all disks on a Panel-managed server except for the `%plesk_vhosts%` folder where hosted domain folders are located. The file is located in the `%plesk_dir%\etc\DiskSecurity` directory, where `%plesk_dir%` is the Windows environment variable designating the Panel installation directory.

Warning: Exercise caution when changing disk security rules by editing the `DiskSecurity.xml` file. Follow recommendations in the section **Customizing Disk Security** (on page 110) to avoid potential problems in administering disk security policy in Panel.

Hosting Security Metadata File Templates

Panel's *hosting security metadata template files* are XML files that contain default security rules to be included in separate instances of security metadata files (on page 109) for each hosting account. Separate security template files exist for the following types of hosting accounts - domains and web users. When a new hosting account is created, the security metadata file template corresponding to the account's type is used to create a separate instance of a security metadata file for the account. At the time of account creation, the metadata file contains the default security configuration for all hosted objects manageable by the account. The file is stored in the root folder of the file system segment that the account is authorized to access and manage. For example, the security metadata file for domain `example.com` will be located in the `%plesk_vhosts%\example.com` directory.

The following security settings template files are used to create security metadata files when instantiating new hosting accounts:

- `%plesk_dir%\etc\hosting_template.xml`
- `%plesk_dir%\etc\webuser_template.xml`

Note: You can also define your own templates and use them to apply security rules by using the `HostingSecurity.exe` utility.

Hosting Security Metadata Files

Separate instances of security metadata files exist for all hosting accounts created in Panel - domains and web user hosting accounts. The files are located in the root folders of corresponding hosting accounts and contain security rules for all objects manageable by the authorized hosting account.

The following security metadata files are used by Panel to administer security of hosted content for different hosting accounts:

- `%plesk_vhosts%\<domain root path>\.security` (domains)
- `%plesk_vhosts%\<domain root path>\.Web.<Web user name>.security` (web users)

Warning: Exercise caution when changing hosting security rules by editing security metadata files. Follow recommendations in the section **Customizing Hosting Security** (on page 111) to avoid potential problems in administering hosting security policy in Panel.

Customizing Disk Security

Custom changes to disk security metadata should not be applied to the `DiskSecurity.xml` file itself. The disk security metadata can be contained in multiple files. All disk security metadata do not have to be contained only in the `DiskSecurity.xml` file. You can create any number of additional disk security metadata files. To customize disk security, you should create an additional file with the `xml` extension in the `%plesk_dir%\etc\DiskSecurity` directory and specify additional security rules in the file. This will enable you to track changes and manipulate sets of security metadata easily.

➢ *To customize disk security rules in Panel:*

1. Log in as administrator to a Panel-managed server over Remote Desktop.
2. Determine the Windows objects for which you would like to set new security rules.
3. Open the `%plesk_dir%\etc\DiskSecurity` folder.
4. In the folder, create a new file with the `xml` extension.

   You can name this file anything you want.
5. Open and edit the file by using your favorite XML file editor to create security rule entries.

   Disk security rule entries have the same format as hosting security rule entries. For help in completing this step, see **Adding New Security Rule to Hosting Security Metadata File Template** (on page 113). See also an explanatory example of a security rule entry following this procedure. For entry attribute descriptions and possible values, see **General Security Metadata Structure** (on page 121).
6. Save and close the file.
7. Once you have made necessary modifications to the security metadata file, run the `ApplySecurity.exe` utility to apply the security rules to Windows objects.

   For information about using the `ApplySecurity.exe` utility, consult **Parallels Plesk Panel for Microsoft Windows: Reference for Command-Line Utilities** at http://download1.parallels.com/Plesk/PP11/11.0/Doc/en-US/online/plesk-win-cli/45411.htm.

For example, you have an application (say, IIS module) installed into the folder `c:\Program Files\AppName`. This module is used on customers' sites, but it does not work properly because Panel's default security rules prohibit customers from accessing arbitrary folders on the disk. To resolve this, you can create a file named AppName.xml, add your security rules as described further, and place the file into the directory `%plesk_dir%\etc\DiskSecurity`.

Example:

```
<?xml version="1.0" encoding="utf-8" ?>
<Entries>
<Entry AccounType="1" Account="Psacln" Path="{ProgramFiles}"
SubPath="AppName" AceFlags="ThisFolderSubfoldersAndFiles"
AccessMask="FullAccess" EntryFlags="0" />
<Entry AccounType="1" Account="Psaadm" Path="{ProgramFiles}"
SubPath="AppName" AceFlags="ThisFolderSubfoldersAndFiles"
AccessMask="FullAccess" EntryFlags="0" />
</Entries>
```

Explanation:

Because the names `Psacln` and `Psaadm` are not standard Windows system accounts, they have to be resolved in the system (hence, `AccounType="1"`). `Path="{ProgramFiles}"` and `SubPath="AppName"` specify that the security rules will be applied to the folder where your application is installed. `AceFlags="ThisFolderSubfoldersAndFiles"` specifies that, according to these rules, ACEs with permission defined by `AccessMask="FullAccess"` will be created for the specified folder, and all of its subfolders and files. `EntryFlags="0"` sets the ACE type to `Allow`.

Customizing Hosting Security

Custom changes in hosting security rules can be made both at the level of the security metadata template files and at the level of the security metadata file instances on individual hosting accounts. However, direct modification of security metadata file instances is not recommended. The preferred way of customizing hosting security is through creation of additional security metadata template files.

Note: If you do decide to modify a security metadata file instance directly, be sure to make a backup copy of the file before modifying it.

Once a template file with additional security rules is created, the security rules can be added into or removed from hosting security metadata files by using the `HostingSecurity.exe` utility. For information about using the `HostingSecurity.exe` utility to modify security rules in security metadata files, consult **Parallels Plesk Panel for Microsoft Windows: Reference for Command-Line Utilities** at http://download1.parallels.com/Plesk/PP11/11.0/Doc/en-US/online/plesk-win-cli/45525.htm.

➢ *To customize hosting security rules for Windows objects in Panel:*

1. Log in as administrator to a Panel-managed server over Remote Desktop.
2. Determine the Windows objects for which you want to set new security rules.
3. Create a new hosting security metadata template file or open an existing one by using your favorite XML file editor.

   For information about locating the appropriate template file, see **Hosting Security Metadata File Templates** (on page 109).
4. Add or modify security rule entries in the file as needed.

For help in completing this step, see the section **Adding New Security Rule to Security Metadata File Template** (on page 113). For entry attribute descriptions and possible values, see **General Security Metadata Structure** (on page 121). For entry examples with explanations, see **Common Security Rule Entry Examples** (on page 115).

5. Save and close the file.
6. Apply the changes by running the `HostingSecurity.exe` utility.

In this section:

Adding New Security Rule to Hosting Security Metadata File Template

A security rule is an access permission for a Windows user account or group that will be added to a Windows object once the rule is applied to it. A single rule may be applied to more than one object depending on the attribute values specified. To add a new security rule, you need to create a new `Entry` element in a security metadata file template and include in it the necessary information by using the available declaration options for the element's attributes. For detailed description of the attributes and information about values that can be assigned to the attributes, see **General Security Metadata Structure** (on page 121).

➢ *To add a new security rule:*

1. Identify the Windows object for which you want to create a new security rule.

   The example used here assumes that you want to add a new security rule for the `error_docs` folder located in the domain root directory.

2. Identify the Windows object to which the rule will be applied by specifying the `Path` and, if applicable, the `SubPath` attribute in the new `Entry` element.

   Consult **General Security Metadata Structure** (on page 121) for applicable declaration options.

   For example,

   ```
   <Entry AccounType="" Account="" Path="[HTTPD_VHOSTS_D]"
   SubPath="error_docs" AceFlags="" AccessMask="" EntryFlags="" Tag=""
   Tag2="" />
   ```

3. Specify the Windows user account to which you want to assign the security rule.

   For example, to specify a domain FTP user account, make the following declarations:

   ```
   <Entry AccounType="0" Account="Null" Path="" SubPath="" AceFlags=""
   AccessMask="" EntryFlags="" Tag="DomainUser" Tag2="" />
   ```

   Note: The name `Null` will be replaced by an actual domain FTP user account name in metadata security files instantiated from the the template file. You can also include a `SidStr` attribute if a SID for a particular Windows account is known. For more information about the `SidStr` attribute, see **General Security Metadata Structure** (on page 121).

4. Define the type of the rule (`Allow` or `Deny`, just like you would for an ACE) and how the rule is to be propagated to child objects by specifying the `EntryFlags` element.

   For help in completing this step, see **Possible EntryFlags Attribute Values** (on page 123). For example, to enable application of the security rule only to files contained in the specified `error_docs` folder, but not to the folder itself you need to use the `0x80` flag. The rule is set to the `Allow` type by default (the `0x0` flag) unless the `0x1` flag (`Deny`) is included.

   ```
   <Entry AccounType="" Account="" Path="" SubPath="error_docs\*.*"
   AceFlags="" AccessMask="" EntryFlags="0x80" Tag="" Tag2="" />
   ```

Note: When you use the `0x80` flag, a file mask must be included in the `Path` or `SubPath` attribute, whichever is applicable. In this example the ***.*** mask must be used. You can use other entry flags to further fine-tune the application of the rule to Windows objects.

5. Set the permissions for the user account on Windows objects to which the rule will be applied by specifying the `AccessMask` attribute.

   For help in completing this step, see **Possible AccessMask Attribute Values** (on page 123).

   For example, to grant the *Read* and *Write* permissions for the Windows user account, specify `ReadWrite`:

   ```
   <Entry AccounType="" Account="" Path="" SubPath="" AceFlags=""
   AccessMask="ReadWrite" EntryFlags="" Tag="" Tag2="" />
   ```

6. Define if ACEs must be created for the Windows object and its child objects based on this security rule by specifying the `AceFlags` attribute.

   For help in completing this step, see **Possible AceFlags Attribute Values** (on page 122). For example, to create ACEs only for the `error_docs` folder and all files contained within that folder use `AceFlags="FilesOnly"`.

This is the resulting security rule entry:

```
<Entry AccounType="0" Account="Null" Path="[HTTPD_VHOSTS_D]"
SubPath="error_docs\*.*" AceFlags="FilesOnly" AccessMask="ReadWrite"
EntryFlags="0x80" Tag="DomainUser" Tag2="" />
```

Rule Description

Because the name `Null` is a standard system account name, it does not have to be resolved in the system (hence, `AccounType="0"`).(The name `Null` will be replaced by an actual domain FTP user account name in metadata security files instantiated from the the template file). The optional `Domain` and `SidStr` attributes do not need to be defined for the same reason. The `HTTPD_VHOSTS_D` component path in the `Path` attribute specifies the path to the domain root folder where the `error_docs` folder is located. The `SubPath` attribute sets the mask for all files in the `error_docs` folder to which the rule will be applied. `AceFlags="FilesOnly"` specifies that, according to this rule, an ACE with permission defined by `AccessMask="ReadWrite"` will be created only for the `error_docs` folder and all files contained within that folder. However, `EntryFlags="0x80"` further restricts the ACE creation only to the files within the folder, excluding the `error_docs` folder from this rule. `Tag="DomainUser"` designates the security rule as pertaining to a domain hosting account and is used by Panel to properly organize the processing of security metadata.

Note: When entry flag `0x80` is included in a security rule entry, the path to the objects defined by the `Path` and `SubPath` attributes must include a file mask. This example uses file mask `*.*`.

Common Security Rule Examples

This section describes several security rule entry examples commonly found in security metadata files and templates.

In this section:

Example of Security Rule Entry in Security Metadata File

The following security rule sets access rights to objects that belong to domain `example.com` for the Windows user account named `domainuser1`.

Security rule entry

```
<Entry AccounType="1" Account="domainuser1" SidStr="S-1-5-21-821798554-
1223697094-3523996037-1043" Path="[HTTPD_VHOSTS_D]" SubPath="example.com"
AceFlags="FilesOnly" AccessMask="Read" EntryFlags="0x140" Tag="DomainUser"
Tag2="" />
```

Explanation

Because the name `domainuser1` is not a standard system account name, it has to be resolved in the system (hence, `AccounType="1"`). The optional `SidStr` attribute is defined to improve Panel stability. The `HTTPD_VHOSTS_D` component path in the `Path` attribute specifies the common part of the path to the domain root folder where the `example.com` folder is located. The `SubPath` attribute sets the specific domain root folder to which the rule will be applied. `AceFlags="FilesOnly"` specifies that, according to this rule, an ACE with permission defined by `AccessMask="Read"` will be created and added only to the `example.com` folder and all files contained within that folder. `EntryFlags="0x140"` enables (i) creation of the domain root folder (which is necessary during domain creation) and (ii) strict enforcement of the access permissions defined by the `AccessMask="Read"` permission mask. `Tag="DomainUser"` designates the security rule as pertaining to a domain hosting account and is used by Panel to properly organize the processing of security metadata.

Setting File Access Rights Different From Parent Container's

The following rule sets access rights to files in the `error_docs` folder on domain `example.com` for the Windows user account named `domainuser1`.

Security rule entry

```
<Entry AccounType="1" Account="domainuser1" SidStr="S-1-5-21-821798554-
1223697094-3523996037-1043" Path="[HTTPD_VHOSTS_D]"
SubPath="example.com\error_docs\*.*" AceFlags="FilesOnly"
AccessMask="ReadWrite" EntryFlags="0x80" Tag="DomainUser" Tag2="" />
```

Note: When entry flag `0x80` is included in a security rule entry, the path to the objects defined by the `SubPath` attribute must include a file mask. This example uses file mask `*.*`.

Explanation

Because the name `domainuser1` is not a standard system account name, it has to be resolved in the system (hence, `AccounType="1"`). The optional `SidStr` attribute is defined to improve Panel stability. The `HTTPD_VHOSTS_D` component path in the `Path` attribute specifies the common part of the path to the domain root folder where the `example.com` folder is located. The `SubPath` attribute completes the path to the `error_docs` folder to which the rule will be applied. `AceFlags="FilesOnly"` specifies that, according to this rule, an ACE with permission defined by `AccessMask="ReadWrite"` will be created and added only to the `error_docs` folder and all files contained within that folder. However, `EntryFlags="0x80"` further restricts the ACE creation only to the files within the folder, excluding the `error_docs` folder from this rule. `Tag="DomainUser"` designates the security rule as pertaining to a domain hosting account and is used by Panel to properly organize the processing of security metadata.

Prohibiting Container Deletion When Deletion of its Parent Container Contents Is Disabled

The following two security rules set different sets of access rights for a parent object (in this example, the httpdocs folder on domain example.com) and its child objects - subfolders and files contained in the folder. The resulting security configuration will prohibit deletion of the parent container by a domain user but will allow the user full control for files and folders contained in the httpdocs folder.

Security rule entry 1

The following rule sets access rights to files in the httpdocs folder on domain example.com for the Windows user account named domainuser1, prohibiting deletion of the folder.

```
<Entry AccounType="1" Account="domainuser1" SidStr="S-1-5-21-2767697126-
2621801917-3613110436-1022" Path="[HTTPD_VHOSTS_D]"
SubPath="example.com\httpdocs" AceFlags="ThisObjectOnly"
AccessMask="FileNonRemovable" EntryFlags="0x140" Tag="DomainUser" Tag2=""
/>
```

Explanation

Because the name domainuser1 is not a standard system account name, it has to be resolved in the system (hence, AccounType="1"). The optional SidStr attribute is defined to improve Panel stability. The HTTPD_VHOSTS_D component path in the Path attribute specifies the common part of the path to the domain root folder where the example.com folder is located. The SubPath attribute completes the path to the httpdocs folder to which the rule will be applied. AceFlags="ThisObjectOnly" specifies that, according to this rule, an ACE with permission defined by AccessMask="FileNonRemovable" will be created and added only to the httpdocs folder on domain example.com. EntryFlags="0x140" enables (i) creation of the folder (which is necessary during domain creation), (ii) strict enforcement of the access permissions defined by the AccessMask="FileNonRemovable" permission mask, and (iii) sets the ACE type to Allow Access. Tag="DomainUser" designates the security rule as pertaining to a domain hosting account and is used by Panel to properly organize the processing of security metadata.

Security rule entry 2

The rule sets full control rights to the httpdocs folder, its subfolders and files on domain example.com for the Windows user account named domainuser1.

```
<Entry AccounType="1" Account="domainuser1" SidStr="S-1-5-21-2767697126-
2621801917-3613110436-1022" Path="[HTTPD_VHOSTS_D]"
SubPath="example.com\httpdocs" AceFlags="SubfoldersAndFilesOnly"
AccessMask="FullAccess" EntryFlags="0x140" Tag="DomainUser" Tag2="" />
```

Explanation

Because the name `domainuser1` is not a standard system account name, it has to be resolved in the system (hence, `AccounType="1"`). The optional `SidStr` attribute is defined to improve Panel stability. The `HTTPD_VHOSTS_D` component path in the `Path` attribute specifies the common part of the path to the domain root folder where the `example.com` folder is located. The `SubPath` attribute completes the path to the `httpdocs` folder to which the rule will be applied. `AceFlags="SubfoldersAndFilesOnly"` specifies that, according to this rule, an ACE with permission defined by `AccessMask="FullAccess"` will be created and added to the `httpdocs` folder and all of its subfolders and files on domain `example.com`. `EntryFlags="0x140"` enables (i) creation of the folder (which is necessary during domain creation) and (ii) strict enforcement of the access permissions defined by the `AccessMask="FullAccess"` permission mask. `Tag="DomainUser"` designates the security rule as pertaining to a domain hosting account and is used by Panel to properly organize the processing of security metadata.

Prohibiting Container Deletion When Deletion of its Parent Container Contents Is Allowed

The following two security rules set different sets of access rights for a parent object (in this example, the `picture_library` folder on domain `example.com`) and its child objects - subfolders and files contained in the folder. The resulting security configuration will prohibit deletion of the parent container by a website owner, but will allow the user full control for files and folders contained in the `picture_library` folder.

Security rule entry 1

The following rule sets access rights to files in the `httpdocs\picture_library` folder on domain `example.com` for the Windows user account named `domainuser1`, prohibiting deletion of the folder.

```
<Entry AccounType="1" Account="domainuser1" SidStr="S-1-5-21-821798554-
1223697094-3523996037-1043" Path="[HTTPD_VHOSTS_D]"
SubPath="example.com\httpdocs\picture_library" AceFlags="ThisObjectOnly"
AccessMask="FileRemovable" EntryFlags="0x141" Tag="DomainUser" Tag2="" />
```

Explanation

Because the name `domainuser1` is not a standard system account name, it has to be resolved in the system (hence, `AccounType="1"`). The optional `SidStr` attribute is defined to improve Panel stability. The `HTTPD_VHOSTS_D` component path in the `Path` attribute specifies the common part of the path to the domain root folder where the `example.com` folder is located. The `SubPath` attribute completes the path to the `httpdocs\picture_library` folder to which the rule will be applied. `AceFlags="ThisObjectOnly"` specifies that, according to this rule, an ACE with permission defined by `AccessMask="FileRemovable"` will be created and added only to the `httpdocs\picture_library` folder on domain `example.com`. `EntryFlags="0x141"` enables (i) creation of the folder (which is necessary during domain creation), (ii) strict enforcement of the access permissions defined by the `AccessMask="FileRemovable"` permission mask, and (iii) sets the ACE type to `Deny Access`. `Tag="DomainUser"` designates the security rule as pertaining to a domain hosting account and is used by Panel to properly organize the processing of security metadata.

Security rule entry 2

The rule sets full control rights to the `httpdocs\picture_library` folder, its subfolders and files on domain `example.com` for the Windows user account named `domainuser1`.

```
<Entry AccounType="1" Account="domainuser1" SidStr="S-1-5-21-821798554-
1223697094-3523996037-1043" Path="[HTTPD_VHOSTS_D]"
SubPath="example.com\httpdocs\picture_library"
AceFlags="ThisFolderSubfoldersAndFiles" AccessMask="FullAccess"
EntryFlags="0x140" Tag="DomainUser" Tag2="" />
```

Explanation

Because the name `domainuser1` is not a standard system account name, it has to be resolved in the system (hence, `AccounType="1"`). The optional `SidStr` attribute is defined to improve Panel stability. The `HTTPD_VHOSTS_D` component path in the `Path` attribute specifies the common part of the path to the domain root folder where the `example.com` folder is located. The `SubPath` attribute completes the path to the `httpdocs\picture_library` folder to which the rule will be applied. `AceFlags="ThisFolderSubfoldersAndFiles"` specifies that, according to this rule, an ACE with permission defined by `AccessMask="FullAccess"` will be created and added to the `httpdocs\picture_library` folder and all of its subfolders and files on domain `example.com`. `EntryFlags="0x140"` enables (i) creation of the folder (which is necessary during domain creation) and (ii) strict enforcement of the access permissions defined by the `AccessMask="FullAccess"` permission mask. `Tag="DomainUser"` designates the security rule as pertaining to a domain hosting account and is used by Panel to properly organize the processing of security metadata.

General Security Metadata Structure

A security metadata template or file contains security rule *entries* for Windows objects. Each such entry consist of a single `Entry` element that has multiple attributes specifying a security rule and the identity of one or more Windows objects to which the rule applies. In addition, each `Entry` element declares *entry flags* specifying how existing DACL security settings associated with Windows objects and Panel security rules are combined and inherited by Windows objects. The element can also have optional *tags* that are used by Panel to organize processing of security metadata.

Panel follows Windows security processing rules when translating the security rule entries stored in the metadata files into ACEs.

The following security rule entry definition format is adopted for the files:

<Entry AccounType="" Account="" Path="" AceFlags="" AccessMask="" EntryFlags="" Tag="" Tag2="" />

When applying security rules listed in the metadata files to Windows objects, Panel can write, modify, or erase existing ACEs in object DACLs, depending on what entry tags are specified by the corresponding `Entry` element.

The following table describes the attributes that are used in the `Entry` element and provides mappings to DACL's ACEs components where applicable.

Attributes and Their Mapping to ACE Components

Attribute	ACE component	Required	Comment
`Account`	**Name** (the user part)	Yes	Symbolic Windows user account name for which the security rule is created.
`Domain`	**Name** (the domain part)	No	Symbolic Windows domain name to which the Windows user account belongs.
`SidStr`	**Name**'s SID	No	Windows user account SID corresponding to the Windows user account name specified by the `Account` attribute.
`AceFlags`	**Apply to** flags	Yes	ACE control flag symbolic name or actual flag bits setting ACE inheritance rules that are applied to ACEs in object DACLs. See also **Possible AceFlags Attribute Values** (on page 122).
`AccessMask`	**Permission**	Yes	Access mask that defines specific permissions for ACEs created from the security rule. See also **Possible AccessMask Attribute Values** (on page 123).
`EntryFlags`	**Type**	Yes	ACE type and other flags that define rules for combining DACL security settings with the security rule defined by the Entry element. Several flags can be combined together. See also **Possible EntryFlags Attribute Values** (on page 123).

Attribute	ACE component	Required	Comment
`AccounType`	none	Yes	Windows user account type. This attribute specifies if the account has a well-known SID (`AccountType=0`) or must be resolved in the system (`AccountType=1`) by using the symbolic name specified by the `Account` attribute.
`Path`	none	Yes	A Panel component path or environment variable that sets a standard path for hosted objects. See also **Possible Path Attribute Values** (on page 124).
`SubPath`	none	No	Remaining part of the object path if the path is not fully defined by the `Path` attribute.
`Tag`	none	Yes	The Tag attributes are used by Panel for processing the security rules defined in a security metadata template file. The tag attributes are required for security metadata templates, but are optional for the security metadata file `.Security`. See also **Possible Tag Attribute Values** (on page 124).
`Tag2`	none	No	

In this section:

Possible AceFlags Values

AceFlags Value	Description
`ThisObjectOnly`	The ACE created based on this rule will be assigned to this object only.
`ThisFolderAndFiles`	The ACE created based on this rule will be assigned to this folder and files contained in the folder.
`FilesOnly`	The ACE created based on this rule will be assigned only to files in the specified folder and the folder itself.
`ThisFolderAndSubfolders`	The ACE created based on this rule will be assigned to the specified folder and its subfolders only.
`ThisFolderSubfoldersAndFiles`	The ACE created based on this rule will be assigned to the specified folder and its subfolders and files only.
`SubfoldersAndFilesOnly`	The ACE created based on this rule will be assigned only to subfolders and files of the specified folder.

Possible AccessMask Values

AccessMask Value	Corresponding Permissions
`NoAccess`	None
`Read`	Generic *read*
`ReadAndExecute`	Generic *execute*
`ReadAndDelete`	Generic *delete*
`ReadWrite`	Generic *write*
`Modify`	Generic *write*, *execute*, and *delete*
`FullAccess`	*Full control*
`FileRemovable`	*Write extended attributes*, *delete and write to DACL*, *write owner*, *delete subfolders and files*.
`FileNonRemovable`	*Full control* excluding *write attributes* for files, *write extended attributes* for files, *delete and write to DACL*, *write owner*, and *delete subfolders and files*.
`FtpSubaccountsNonRemovable`	*Write extended attributes*, *add file*, *create directory*, *write attributes*, and *delete subfolders and files*.

Possible EntryFlag Attribute Values

Note: Several flags can be combined together.

EntryFlags value	Description
`0x0`	Allow access for the user account. This is the default value.
`0x1`	Deny access for the user account.
`0x2`	Applies the security rule to all parent containers in the object's path.
`0x4`	Breaks DACL inheritance from parent containers, erases existing ACEs, and creates new ACEs in the object's DACL based on the security rules found in the security metadata files.
`0x8`	Enables Panel to proceed with applying other security rules to other objects even if an error occurs while applying a security rule carrying this flag.
`0x10`	Blocks propagation of the security rule to child objects of the specified folder.
`0x20`	Instructs Panel to cancel applying any Panel security rules to the specified folder.
`0x40`	Enables creation of absent folders.

EntryFlags value	Description
`0x80`	Enables application of the security rule only to files contained in the specified folder, but not to the folder itself. Requires that an object path specified by the `Path` attribute includes a file mask.
`0x100`	Enables strict enforcing of access masks specified by the security rule. If the flag is not included in the rule, extra access permissions that already exist are left intact.

Possible Path Attribute Values

Path value	Description
`/`	Disk's root folder.
`*`	Any path.
`<number>`	A well-known path. Consult MSDN for Windows' well-known paths.
`a string enclosed in square brackets`	Parallels Plesk Panel component path.
`<path>`	The path to the Windows file or folder

Possible Tag Attribute Values

Tag Value	Description
`FtpSubaccounts`	The tag is used for processing security rules for *ftp_subaccounts* user group.
`PsaAdmin`	The tag is used for processing security rules for the *psaadm* user account.
`psaServer`	The tag is used for processing security rules for the *psaserv* user group.
`DomainUser`	The tag is used for processing security rules for FTP user accounts (domain FTP user or an FTP user associated with a web user account).
`AnonymousDomainUser`	The tag is used for processing security rules for anonymous Internet user accounts (IIS users).
`ParentUser`	The tag is used for processing security rules for domain FTP user accounts created to access web user folders.
`AnonymousParentUser`	The tag is used for processing security rules for anonymous Internet user accounts (IIS users) created to access files on web user folders.

Restoring Disk User Permissions

Maintaining proper user permissions on Windows objects on server disks is necessary to ensure the maximum security of Panel-managed servers while enabling full functionality of hosted content. Misconfiguration of object security settings may result in unavailability of hosted content.

By using the Panel reconfigurator utility, you can restore disk security settings based on the security rules specified in the `DiskSecurity.xml` file and other XML files found in the `%plesk_dir%\etc\DiskSecurity` directory.

Note: You can change the disk security rules in the XML files found in the `%plesk_dir%\etc\DiskSecurity` directory as desired before running the Reconfigurator. For more information about Panel security policies and configuring security on Panel-managed servers, see **Administering Windows Obejcts Security on Panel-managed Servers** (on page 105).

➢ ***To restore the disk user permissions according to the Panel's security metadata files, follow these steps:***

1. Log in to the Panel-managed server as a user with administrator rights by using Remote Desktop.
2. In the Windows **Start** menu, select **All Programs** > **Parallels** > **Panel** > **PP Reconfigurator**. The Reconfigurator application window opens.
3. Select the **Correct disk permissions** option.
4. Using check boxes in the **Volume** column, select the drives for which you want to restore the user permissions.
5. Click **Set** to set the correct permissions for the selected drives. This operation may take some time.

For information about the default user permissions on server disks, see **Default User Permissions for Disks** (on page 101).

CHAPTER 7

Statistics and Logs

This chapter describes how to run calculation of statistics on disk space and traffic usage on demand and access web server logs.

In this chapter:

Calculating Statistics on Demand

During installation of Parallels Plesk Panel, several scheduled tasks are automatically created. One of such tasks, `statistics`, collects statistical information about resources used by sites, such as inbound and outbound traffic, disk space occupied by web content, log files, databases, mailboxes, web applications, mailing list archives, and backup files.

You can adjust which data the `statistics` task should count and run the statistics calculation on demand. To do this, run the `statistics` task with a necessary combination of options specifying the parts of statistics you want to collect.

To run the statistics task with required options, follow these steps:

1. Using Remote Desktop, log in as administrator to the Panel-managed server.
2. Start `cmd.exe`.
3. Change directory to `%plesk_dir%\admin\bin` (where `%plesk_dir%` is the system variable defining the folder where Parallels Plesk Panel is installed).
4. Run the `statistics.exe` task with required options. See the list of options and their descriptions in the tables below.

   For example, to calculate statistics in the mode that will skip all FTP logs, you can use the following command:

   ```
   statistics.exe --http-traffic --disk-usage --mailbox-usage --mail-traffic --notify --update-actions
   ```

The resource usage information kept in the Panel's database and shown in reports in Panel will be updated with the new data.

Main options

Each main option defines the part of statistics to be calculated. When only main options are used, the specified statistics will be collected for all subscriptions and sites.

Option	Description
`--mailbox-usage`	Disk usage will be calculated for all mailboxes.
`--disk-usage`	Disk usage for domains and all mailboxes will be calculated.
`--http-traffic`	HTTP traffic will be calculated.
`--ftp-traffic`	FTP traffic will be calculated.
`--mail-traffic`	Mail traffic will be calculated. **Note:** Panel does not support traffic calculation on hMail and CommunigatePro mail servers.
`--notify`	Traffic usage statistics will be updated and the due subscription expiration notices will be sent to subscription owners.
`--update-actions`	Action log will be rotated and action events will be launched.

`--all`	This option is the combination of all previous options, the complete statistics will be collected.
`--antivirus`	This option calculates spam and antivirus statistics.
none	When no options are specified, the complete statistics will be collected, like in the case when the `--all` option is selected.

Additional options

Additional options allow you to specify the set of domain names for which statistics will be calculated. Domain names or masks specified in these options should be separated by the `','` or `';'` symbol. You may combine additional options and use them without main options. If you use additional options without main ones, complete statistics will be calculated only for selected domain names. Domains specified directly have higher priority than those specified by masks. Also, the 'skip' list has higher priority than the 'process' list.

Option	**Description**
`--process-domains`	Only domain names specified in this option will be processed.
`--process-domain-mask`	Only domain names corresponding to the mask specified in this option will be processed. When this options is used and there are no domain names corresponding to the specified mask, all domains will be processed.
`--skip-domains`	Domains specified by this option will not be processed.
`--skip-domain-mask`	Domains corresponding to the mask specified by this option will not be processed.
`--single-notify`	The expiration notification will be sent only to the specified website owner owner.
`--verbose`	The utility outputs more details in statistics reports.

Log Files and Log Rotation

All connections to the web server and requests for files that were not found on the server are registered in log files. These log files are analyzed by the statistical utilities running on the server, which then present graphical reports on demand. You may want to download these log files to your computer for processing by third-party statistical utilities, or view their contents for web server debugging purposes.

If you deal with large volumes of data, log files can grow too rapidly. In this case you can enable automatic cleanup and recycling of log files. This can be done on a per-subscription basis.

To adjust recycling of log files:

1. In Control Panel, go to the **Websites & Domains** tab > **Logs** (in the **Advanced Operations** group) > **Log Rotation** and click **Switch On**.

   If you see the **Switch Off** button, this means that log recycling is already switched on.

2. Specify the recycling period for the log files and how many instances of each log file to store on the server. Also, specify whether they should be compressed and sent to an e-mail address after processing.
3. Click **OK**.

Additionally, you may want to keep track of actions performed by various users in the system. All actions will be recorded in a log file that you will be able to download for viewing.

You can configure logging of actions and download the log file in **Server Administration Panel** > **Tools & Settings** > **Action Log**.

CHAPTER 8

Customizing Panel Appearance and GUI Elements

This chapter introduces Panel themes that can be used to customize Panel appearance and branding. It also describes how to remove links for access to Web Presence Builder, Google Services for Websites, reconfigure behaviour of the link to Support service and other GUI elements.

In this chapter:

Customizing Panel Appearance and Branding

Administrators and resellers can change the following settings related to Panel branding and appearance:

- By means of Panel GUI - change the Panel logo image, URL attached to it, and Panel name shown in browser's title bar text.
- By means of custom themes - change the Panel logo image, URL attached to it, Panel name shown in browser's title bar text, and visual appearance of Panel's pages (CSS styles and images used for button backgrounds).

A theme is a ZIP archive containing all CSS and image files used by Panel. Preparing a custom theme involves the following steps:

1. Obtaining a ZIP archive with the default Panel theme.
2. Unpacking the archive and changing the necessary files.
3. Packing the archive with modified files, uploading it to the server, and installing the theme.

To learn about creating and using custom themes, refer to the document **Parallels Plesk Panel 11.0: Creating Custom Themes** at http://download1.parallels.com/Plesk/PP11/11.0/Doc/en-US/online/plesk-administrator-guide/plesk-themes-guide/.

Hiding and Changing Panel GUI Elements

This section describes how to switch on or off or modify various Panel features and customize links in Panel.

The following customizations of the Panel functionality are possible:

- Allowing or prohibiting users to upgrade to new versions of the Panel.
- Hiding links and buttons related to Web Presence Builder.
- Hiding "Google Services for Websites" controls.
- Changing and hiding links for SSL certificates selling and domain registration services.
- Changing the link View Services that points to a hosting provider's website.
- Hiding the link to the store offering products from Parallels partners.
- Changing the links to the online store where license keys for the Panel and its add-ons can be purchased.
- Hiding or displaying controls related to mail service.
- Creating own and hiding built-in promos. A promo is an information box with text that is shown in Panel.
- Customizing the Support link in Panel so that it refers to your company's website or sends an e-mail.
- Customizing links to Web Presence Builder **Getting Started** video and user documentation.

You can modify these items by using command-line utilities, by changing Panel configuration file or license key properties.

In this section:

Ways of Changing the Panel Functionality

To display, hide, or edit Panel interface elements, you can use one of the following approaches or their combination: run a special command-line command, modify a license key to Panel, or perform changes to a particular configuration file. Here are some details about these approaches:

- *Command line*. This is performed by running the `panel_gui` and the `server_pref` utilities. For more information, see the **Command Line** section (on page 135) and **Reference for Command Line Utilities** at http://download1.parallels.com/Plesk/PP11/11.0/Doc/en-US/online/plesk-win-cli/.
- *License key*. Upgrades of license keys are performed the via web-based Key Administrator interface or Partner API - an XML-based remote-call protocol. For more information, see the **License Key** section (on page 134).
- *Configuration files*. This requires editing the configuration files:
  - `panel.ini` for Panel customizations
  - `config` for Web Presence Builder customizations.

  For more information, see the **Configuration Files** Section (on page 136).

The table below shows which of them can be used for each customizable element:

Panel Elements	**Command Line**	**License**	**Configuration File**
Links to domain registration and management services	Yes (change and hide)	Yes (only hide)	No
Links to SSL certificates selling services	Yes(change and hide)	Yes (only hide)	No
Link to provider's website	Yes(change and hide)	Yes (only hide)	No
Google Services for Websites controls	No	Yes	No
Store button	No	Yes	No
Web Presence Builder buttons	No	Yes	No
Panel upgrades	No	Yes	No
Mail service controls	Yes	No	No
Links for purchasing Panel license and add-on keys	No	No	Yes (change)
Promos	No	No	Yes

In this section:

License Key

There are extra features that can be turned on or off in the Panel license. These changes are available to those who have access to the Parallels Key Administrator web-based management interface or Partner API.

The license modifications can be done on a per-license level, or be a default for you and applied automatically to all the licenses created for you. In both cases, you should contact Parallels sales: to apply the partner-wide defaults, or to enable a particular extra customization on a per-license level.

Important: Once you have turned off a feature through the Partner API, there are no documented methods to turn it back on. If you need to perform this reverse operation, please use the web-based user interface, or contact your sales representative.

In a license key, you can turn off the following features:

- Links to domain registration and management services (on page 137)
- Links to SSL certificates selling services (on page 140)
- Link to provider's website (on page 147)
- Google Services for Websites controls (on page 149)
- Store button (on page 151)
- Web Presence Builder buttons (on page 153)
- Panel upgrades (on page 155)

By default, all these features are turned on.

In this section:

Web-based Key Administrator User Interface

You can turn off the listed earlier features through the KA web-based user interface by adding them to your license. The features reside in the *Parallels Panel Extras* group.

- To turn off required features for a *new license*, start the New Key wizard() and add the features at step three, the feature management.
- To turn off required features for an *existing license*, start the Key Upgrade wizard () and add the features at step two, the feature management.

To turn on a license feature, detach it from the license.

For details on managing license features, please see the **KA Client User Guide**, Chapter **Managing Keys**. You can access this document by clicking the help link in the KA user interface.

Partner API

To turn off the extra features in new or existing licenses by means of Partner API, run the appropriate API method with specific feature API identifiers set.

For new licenses:

Add API identifiers of the required features to the "array of identifiers of upgrade plans" parameter of method `partner10.createKey` and execute it.

For details on the method specification, please see:

http://www.parallels.com/ptn/documentation/ka/, section **Specifications of Methods** / **partner10.createKey**

For existing licenses:

Add API identifiers of the required features to the "upgrade plan name" parameter of `partner10.upgradeKey` method and execute it.

For details on the method specification, please see:

http://www.parallels.com/ptn/documentation/ka/, section **Specifications of Methods** / **partner10.upgradeKey**

For instructions on how to customize Panel elements using Partner API, see the **Customizing Panel Controls** chapter (on page 137).

Command Line

You can change or hide the links to additional services using the `panel_gui` and the `server_pref` command-line utilities. The utilities are located in `%plesk_cli%` folder. It is the environment variable pointing to the folder with Panel's command-line utilities. By default, it is `C:\Program Files\Parallels\Plesk\bin.` The utilities should be run with power user privileges.

The following table describes what customizations may be performed using these utilities:

Panel element	Utility	Possible actions
Links to domain registration and management services (on page 137)	`panel_gui`	Specify URLs and hide
Links to SSL certificates selling services (on page 140)	`panel_gui`	Specify URLs and hide
Link to provider's website (on page 147)	`panel_gui`	Specify URLs and hide
Mail service controls (on page 156)	`server_pref`	Hide

Configuration Files

To use this way, you need to create a text file named `panel.ini` in the following directory on the Panel managed server:

`%plesk_dir%\admin\conf\` (`%plesk_dir%` is an environment variable denoting the Panel installation directory).

Otherwise, you can edit the file `%plesk_dir%\sb\config` on the Panel managed server.

You can add or remove the specific lines of text from these files in order to perform the following Panel functionality customizations:

Panel element	Possible actions
Links for Purchasing Panel License and Add-On Keys (on page 160)	Change the links URL
Promos (on page 163)	Create custom promos and disable the built-in promos
Links to Builder Help and Getting Started Video (on page 172)	Change or remove the link to the video, change the link to user's guide.

Changing the Panel Functionality

This section describes each customizable item of the Panel web interface and explains how to hide and, if possible, to change it.

In this section:

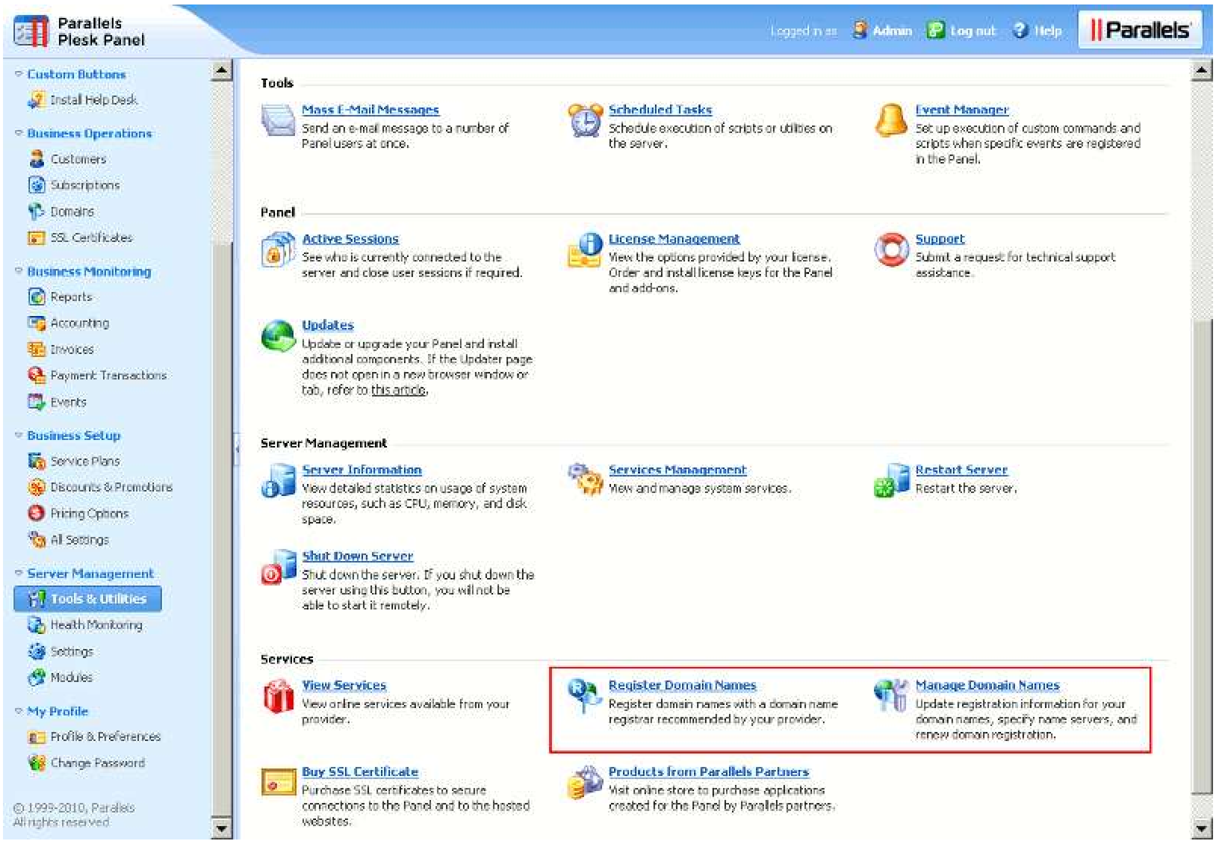
Domain Registration and Management Services

These buttons let your customers visit a website where they can purchase new or manage existing domain names. By customizing them, you can make the customers use your preferred domain name registrar.

In this section:

Location of Domain Registration and Domain Management Buttons

- Server Administration Panel: **Tools & Settings** > **Register Domain Names** and **Manage Domain Names** buttons.



Tools

Mass E-Mail Messages Send an e-mail message to a number of Panel users at once.

Scheduled Tasks Schedule execution of scripts or utilities on the server.

Event Manager Set up execution of custom commands and scripts when specific events are registered in the Panel.

Panel

Active Sessions See who is currently connected to the server and close user sessions if required.

License Management View the options provided by your license. Order and install license keys for the Panel and add-ons.

Support Submit a request for technical support assistance.

Updates Update or upgrade your Panel and install additional components. If the Updater page does not open in a new browser window or tab, refer to this article.

Server Management

Server Information View detailed statistics on usage of system resources, such as CPU, memory, and disk space.

Services Management View and manage system services.

Restart Server Restart the server.

Shut Down Server Shut down the server. If you shut down the server using this button, you will not be able to start it remotely.

Services

View Services View online services available from your provider.

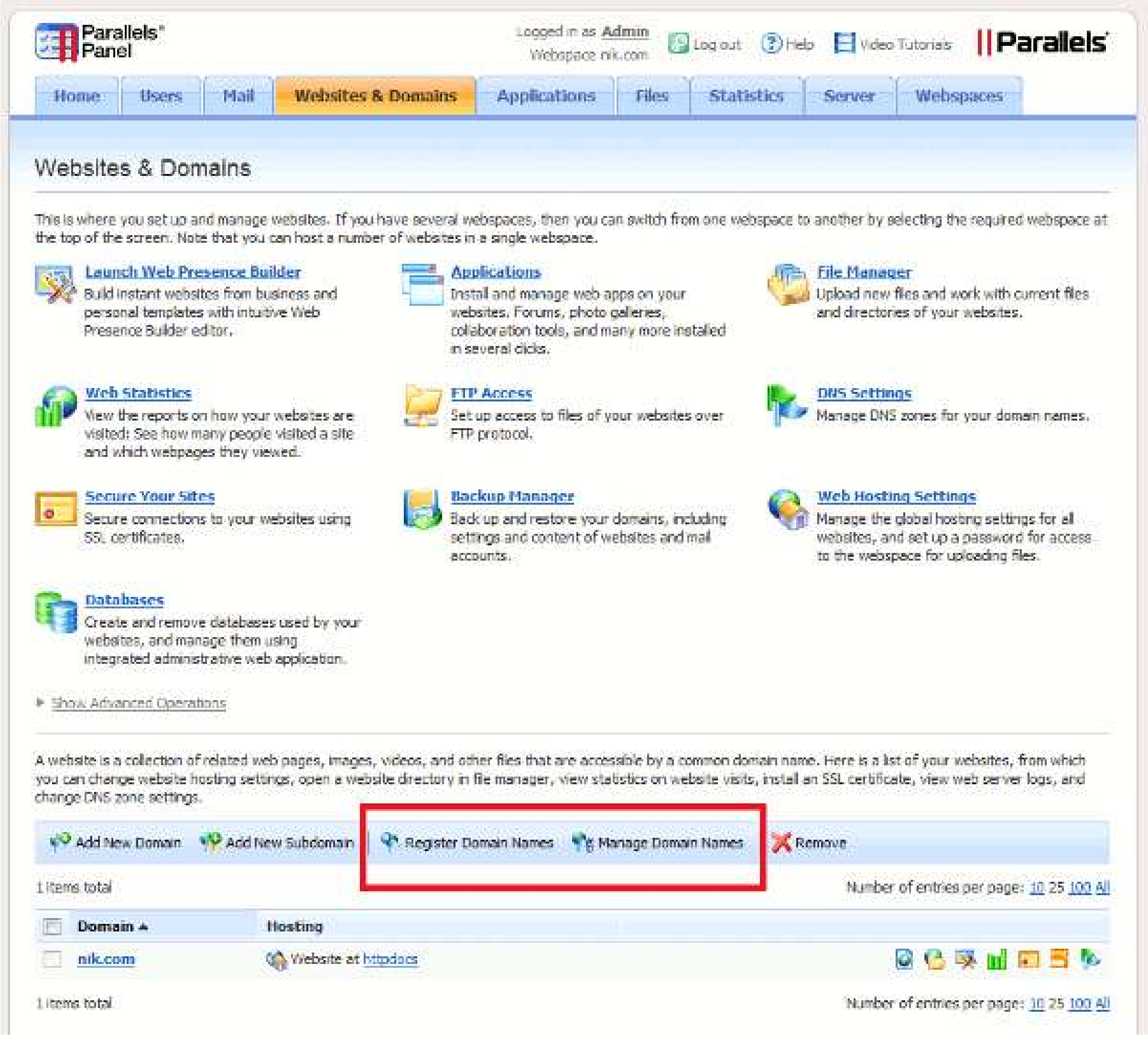
Register Domain Names Register domain names with a domain name registrar recommended by your provider.

Manage Domain Names Update registration information for your domain names, specify name servers, and renew domain registration.

Buy SSL Certificate Purchase SSL certificates to secure connections to the Panel and to the hosted websites.

Products from Parallels Partners Visit online store to purchase applications created for the Panel by Parallels partners.

- Control Panel: **Websites & Domains** tab > **Register Domain Names** and **Manage Domain Names** buttons.



Websites & Domains

This is where you set up and manage websites. If you have several webspaces, then you can switch from one webspace to another by selecting the required webspace at the top of the screen. Note that you can host a number of websites in a single webspace.

Launch Web Presence Builder
Build instant websites from business and personal templates with intuitive Web Presence Builder editor.

Applications
Install and manage web apps on your websites. Forums, photo galleries, collaboration tools, and many more installed in several clicks.

File Manager
Upload new files and work with current files and directories of your websites.

Web Statistics
View the reports on how your websites are visited: See how many people visited a site and which webpages they viewed.

FTP Access
Set up access to files of your websites over FTP protocol.

DNS Settings
Manage DNS zones for your domain names.

Secure Your Sites
Secure connections to your websites using SSL certificates.

Backup Manager
Back up and restore your domains, including settings and content of websites and mail accounts.

Web Hosting Settings
Manage the global hosting settings for all websites, and set up a password for access to the webspace for uploading files.

Databases
Create and remove databases used by your websites, and manage them using integrated administrative web application.

▸ Show Advanced Operations

A website is a collection of related web pages, images, videos, and other files that are accessible by a common domain name. Here is a list of your websites, from which you can change website hosting settings, open a website directory in file manager, view statistics on website visits, install an SSL certificate, view web server logs, and change DNS zone settings.

1 items total Number of entries per page: 10 25 100 All

□ Domain ▲	Hosting
□ nik.com	Website at httpdocs

1 items total Number of entries per page: 10 25 100 All

Changing Domain Name Registrar's URLs

You can change the domain name registrar's URLs only through command line.

➢ ***To change the Register Domain Names button URL, issue the following command:***

```
%plesk_cli%\panel_gui.exe -p -domain_registration_url <url>
```

➢ ***To change the Manage Domain Names button URL, issue the following command:***

```
%plesk_cli%\panel_gui.exe -p -domain_management_url <url>
```

Hiding Domain Registration and Domain Management Buttons

You can hide the domain name registration and domain management buttons both through command line and Partner API.

➢ ***To remove the Register Domain Names button using command line, issue the following command:***

```
%plesk_cli%\panel_gui.exe -p -domain_registration true
```

➢ ***To remove the Manage Domain Names button using command line, issue the following command:***

```
%plesk_cli%\panel_gui.exe -p -domain_management true
```

➢ ***To remove the Register Domain Names button and Manage Domain Names button using the Partner API:***

Use the `partner10.createKey` or `partner10.upgradeKey` with the API identifier "EXTRAS_BUTTONS_OFF" in the "array of identifiers of upgrade plans" parameter.

For details on the methods specification, please see http://www.parallels.com/ptn/documentation/ka/, section **Specifications of Methods / partner10.createKey** and section **Specifications of Methods / partner10.upgradeKey**

Note: API identifier "EXTRAS_BUTTONS_OFF" also disables the controls related to SSL certificate selling services and link to the provider's website.

Important: Once you have turned off a feature through the Partner API, there are no documented methods to turn it back on. If you need to perform this reverse operation, please use the web-based user interface, or contact your sales representative.

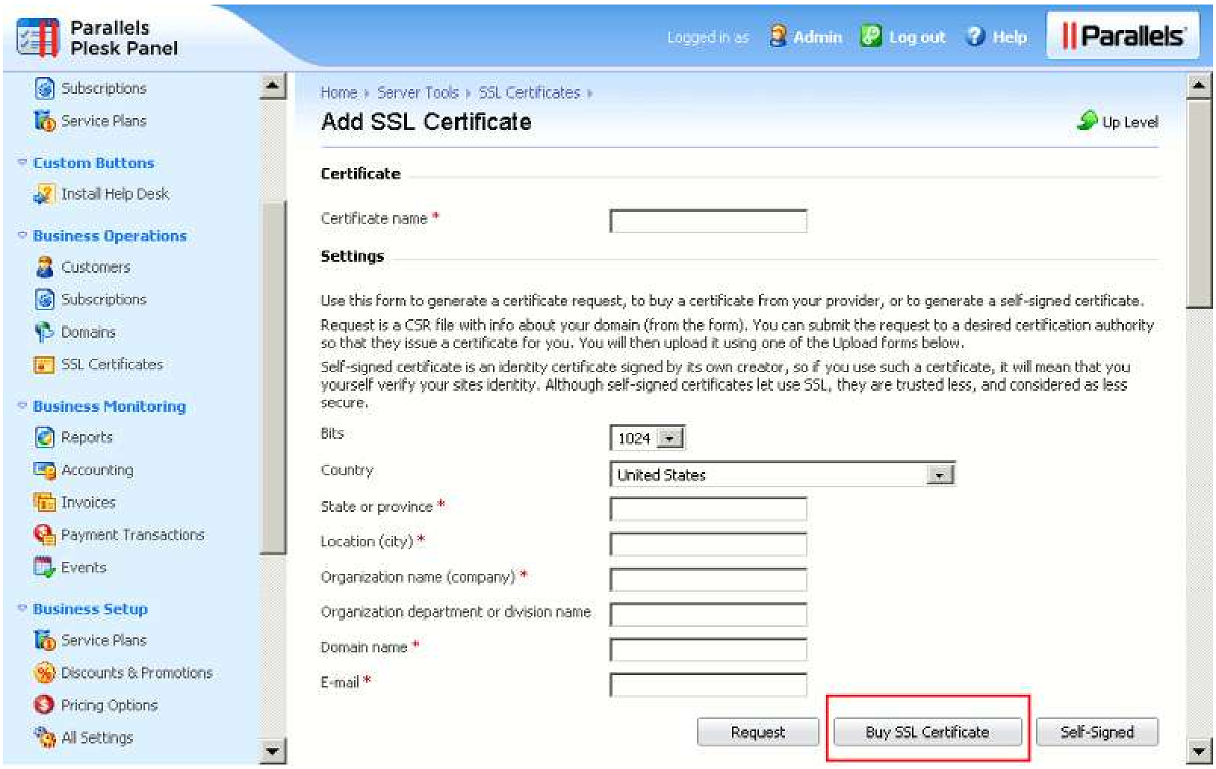
SSL Certificates Selling Services

These buttons lead to a website where your customers can purchase and view SSL certificates. By customizing these controls, you can make the customers use your preferred SSL certificates vendor.

In this section:

Locations of Links for Purchasing and Viewing SSL Certificates

- Server Administration Panel: **Tools & Settings** > **SSL Certificates** > **Add SSL Certificate** > **Buy SSL Certificate** button.



Add SSL Certificate

Certificate

Certificate name *

Settings

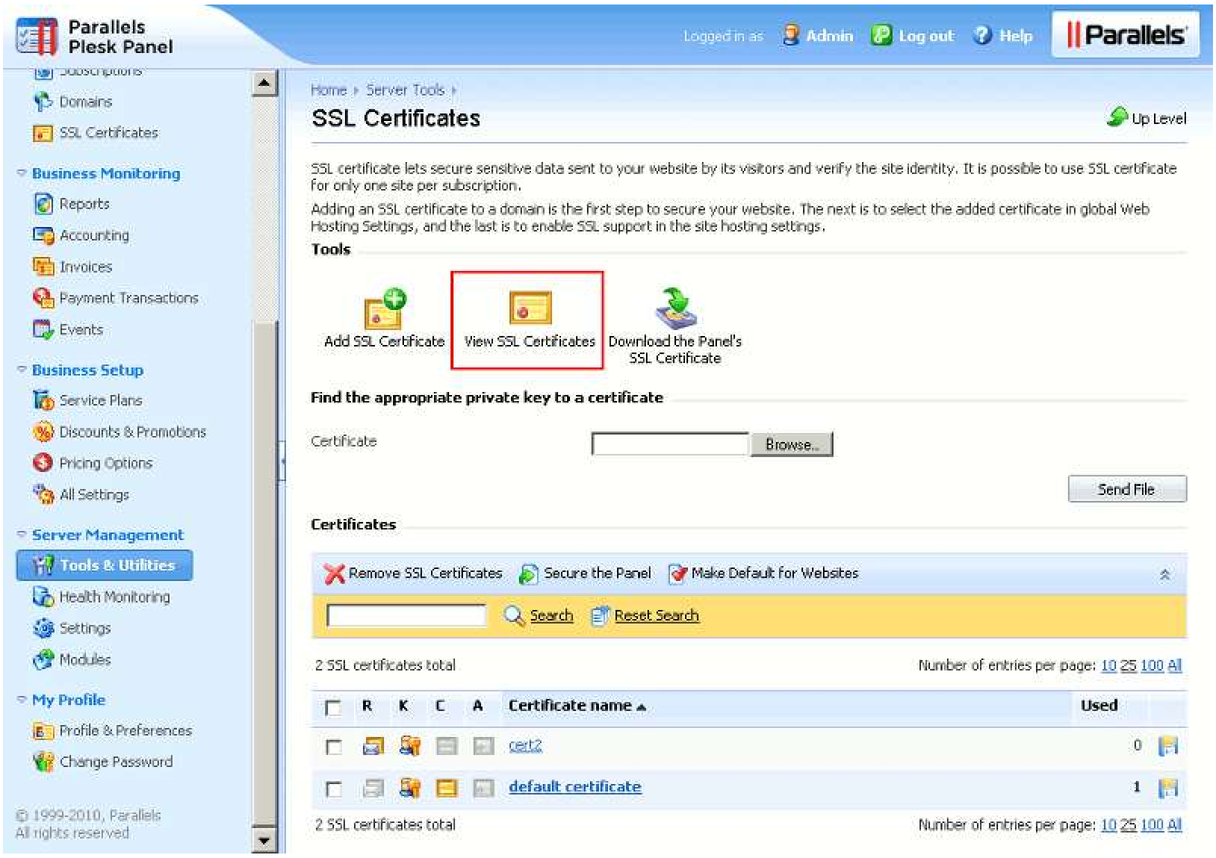
Use this form to generate a certificate request, to buy a certificate from your provider, or to generate a self-signed certificate.

Request is a CSR file with info about your domain (from the form). You can submit the request to a desired certification authority so that they issue a certificate for you. You will then upload it using one of the Upload forms below.

Self-signed certificate is an identity certificate signed by its own creator, so if you use such a certificate, it will mean that you yourself verify your sites identity. Although self-signed certificates let use SSL, they are trusted less, and considered as less secure.

Bits: 1024
Country: United States
State or province *
Location (city) *
Organization name (company) *
Organization department or division name
Domain name *
E-mail *

- Server Administration Panel: **Tools & Settings** > **SSL Certificates** > **View SSL Certificates** button.



SSL Certificates

SSL certificate lets secure sensitive data sent to your website by its visitors and verify the site identity. It is possible to use SSL certificate for only one site per subscription.

Adding an SSL certificate to a domain is the first step to secure your website. The next is to select the added certificate in global Web Hosting Settings, and the last is to enable SSL support in the site hosting settings.

Find the appropriate private key to a certificate

Certificate

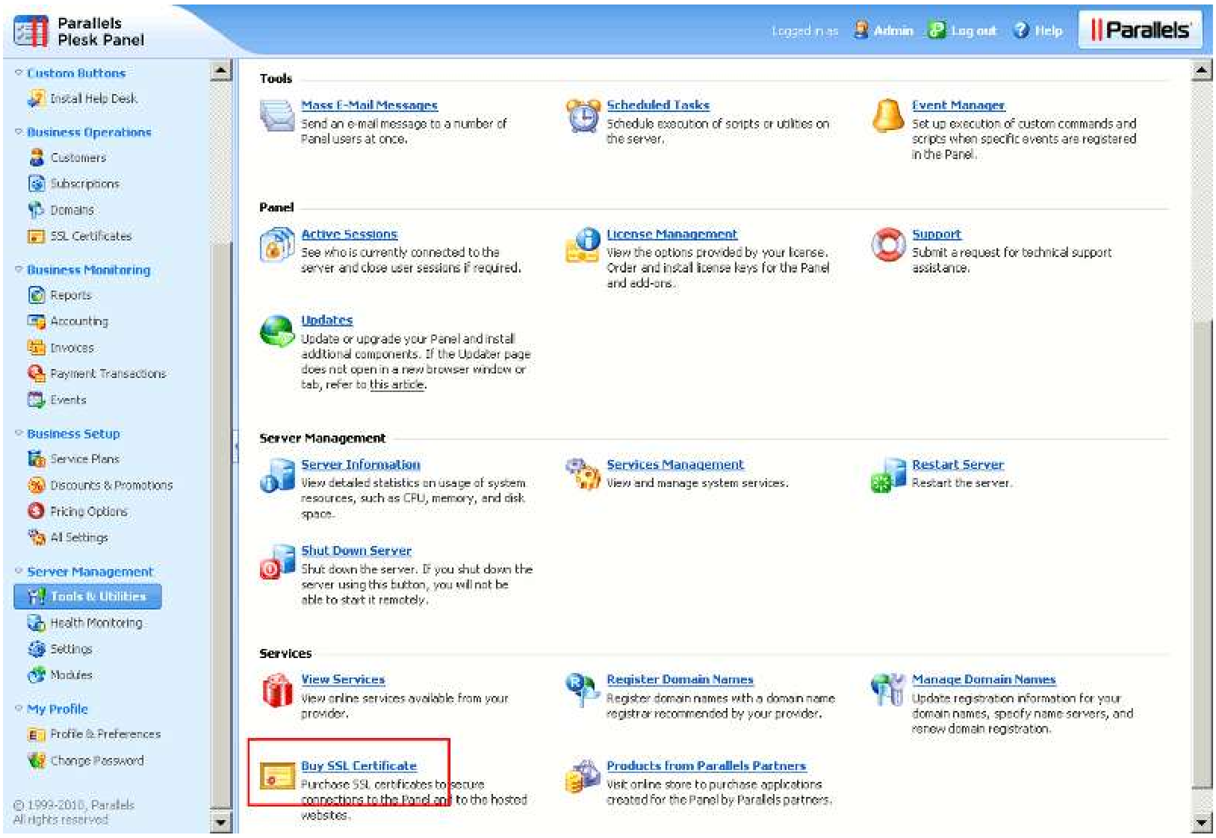
Certificates

2 SSL certificates total   Number of entries per page: 10 25 100 All

□	R	K	C	A	Certificate name ▲	Used	
□					cert2	0	
□					default certificate	1	

2 SSL certificates total   Number of entries per page: 10 25 100 All

- Server Administration Panel: **Tools & Settings** > **Buy SSL Certificate** button.



Parallels Plesk Panel

Logged in as Admin Log out Help ||Parallels

Custom Buttons
- Install Help Desk

Business Operations
- Customers
- Subscriptions
- Domains
- SSL Certificates

Business Monitoring
- Reports
- Accounting
- Invoices
- Payment Transactions
- Events

Business Setup
- Service Plans
- Discounts & Promotions
- Pricing Options
- All Settings

Server Management
- Tools & Utilities
- Health Monitoring
- Settings
- Modules

My Profile
- Profile & Preferences
- Change Password

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Tools

Mass E-Mail Messages
Send an e-mail message to a number of Panel users at once.

Scheduled Tasks
Schedule execution of scripts or utilities on the server.

Event Manager
Set up execution of custom commands and scripts when specific events are registered in the Panel.

Panel

Active Sessions
See who is currently connected to the server and close user sessions if required.

License Management
View the options provided by your license. Order and install license keys for the Panel and add-ons.

Support
Submit a request for technical support assistance.

Updates
Update or upgrade your Panel and install additional components. If the Updater page does not open in a new browser window or tab, refer to this article.

Server Management

Server Information
View detailed statistics on usage of system resources, such as CPU, memory, and disk space.

Services Management
View and manage system services.

Restart Server
Restart the server.

Shut Down Server
Shut down the server. If you shut down the server using this button, you will not be able to start it remotely.

Services

View Services
View online services available from your provider.

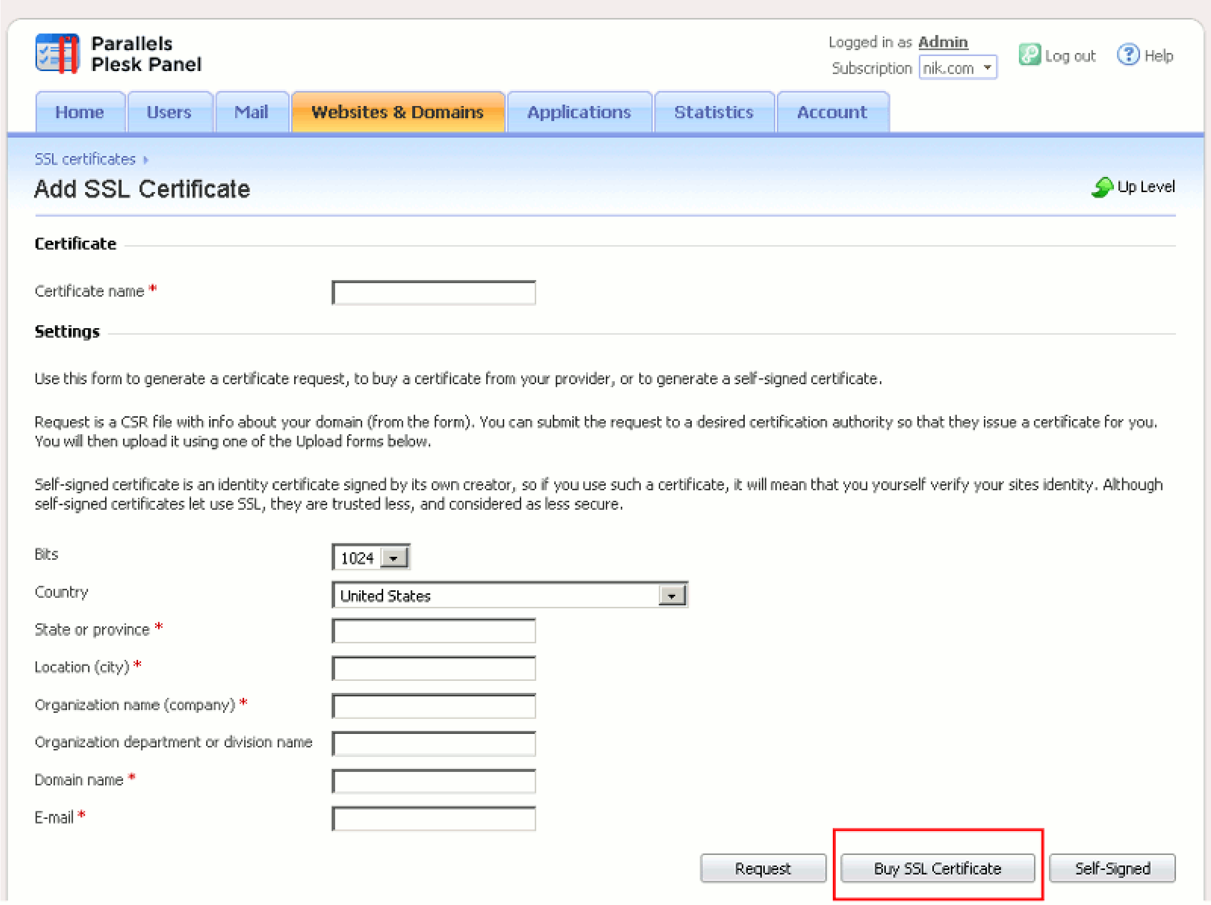
Register Domain Names
Register domain names with a domain name registrar recommended by your provider.

Manage Domain Names
Update registration information for your domain names, specify name servers, and renew domain registration.

Buy SSL Certificate
Purchase SSL certificates to secure connections to the Panel and to the hosted websites.

Products from Parallels Partners
Visit online store to purchase applications created for the Panel by Parallels partners.

- Control Panel: **Websites & Domains** tab > **SSL Certificates** > **Add SSL Certificate** > **Buy SSL Certificate** button.



Add SSL Certificate

Certificate

Certificate name *

Settings

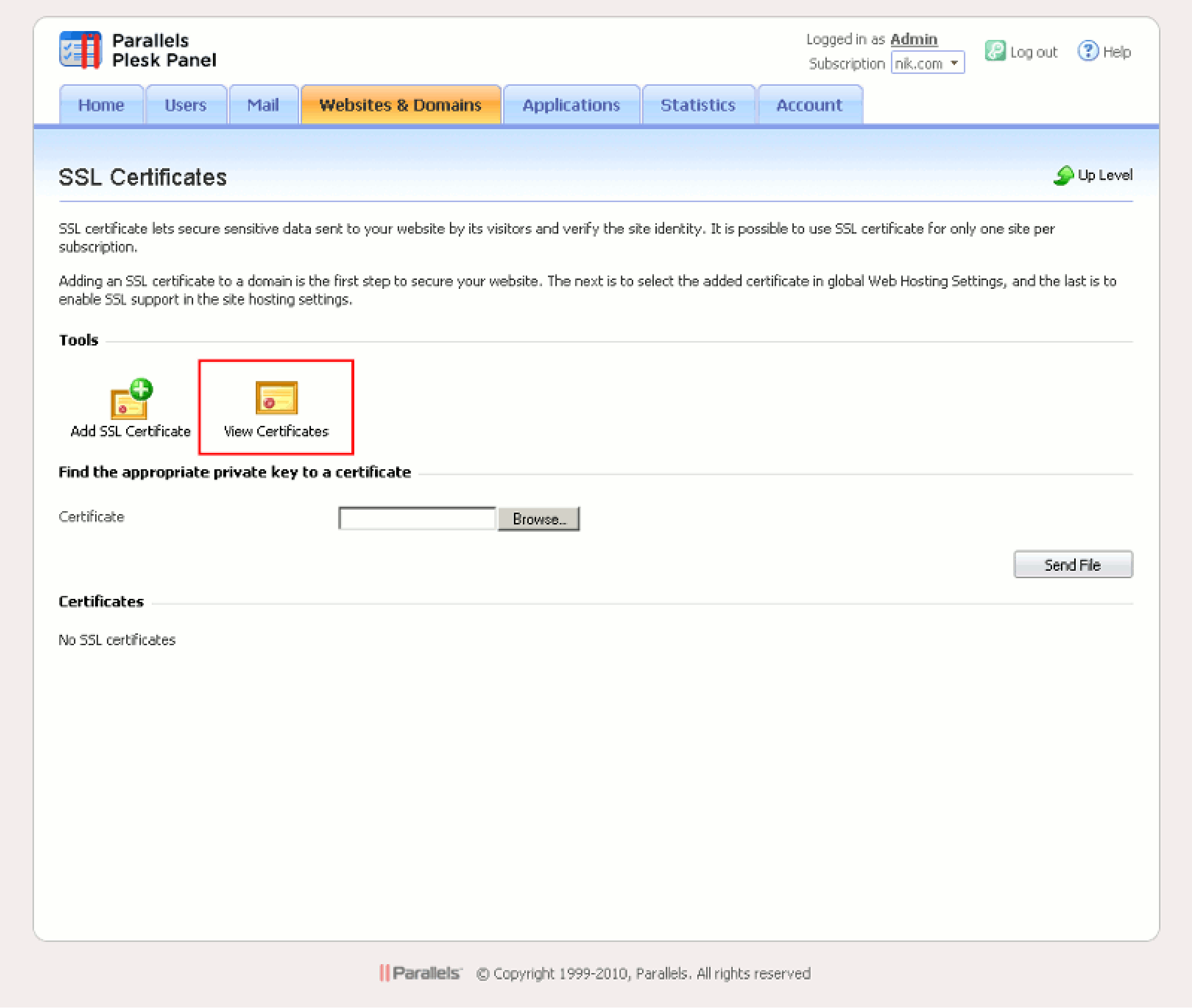
Use this form to generate a certificate request, to buy a certificate from your provider, or to generate a self-signed certificate.

Request is a CSR file with info about your domain (from the form). You can submit the request to a desired certification authority so that they issue a certificate for you. You will then upload it using one of the Upload forms below.

Self-signed certificate is an identity certificate signed by its own creator, so if you use such a certificate, it will mean that you yourself verify your sites identity. Although self-signed certificates let use SSL, they are trusted less, and considered as less secure.

Bits: 1024
Country: United States
State or province *
Location (city) *
Organization name (company) *
Organization department or division name
Domain name *
E-mail *

- Control Panel: **Websites & Domains** tab > **SSL Certificates** > **View Certificates** button.



SSL Certificates

SSL certificate lets secure sensitive data sent to your website by its visitors and verify the site identity. It is possible to use SSL certificate for only one site per subscription.

Adding an SSL certificate to a domain is the first step to secure your website. The next is to select the added certificate in global Web Hosting Settings, and the last is to enable SSL support in the site hosting settings.

Tools

Find the appropriate private key to a certificate

Certificate

Certificates

No SSL certificates

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Changing SSL Certificate Vendor's URLs

You can change the SSL certificate vendor's URLs only through command line.

➢ *To change URLs for the Buy SSL Certificate and View Certificates buttons, issue the following command:*

```
%plesk_cli%\panel_gui.exe -p -cert_purchasing_url <url>
```

The Format of a POST Request

Note that buttons used to buy or view SSL certificates do not just lead to a URL specified with the command above. Actually, Panel sends a POST request to this URL. The format of the POST request body varies depending on a button function. For example, if a button is used to buy SSL certificates, the request body contains such CSR parameters as a domain name, business name, country, and so on.

The table below provides the details on the parameters which are sent in POST requests.

Button location	**Parameters in the POST request body**	**Example**

▪ Server Administration Panel, **Tools & Settings > SSL Certificates > Buy SSL Certificate**.
▪ Control Panel, **Websites & Domains > Secure Your Sites > Add SSL Certificate > Buy SSL Certificate**.
	csr = <encoded request>
	csr_domain = <domain name>
	csr_bits = <key size>
	csr_email = <administrator's e-mail>
	csr_company = <company name>
	csr_department = <organization department name>
	csr_state = <state>
	csr_city = <city>
	csr_country = <country>
	action = CREATE_CERT
		csr = -----BEGIN CERTIFICATE REQUEST----- MIICyTCCAbECA QAwgYMxCzAJBg NVBAYTAlJVMQww CgYDVQQIEwNOc2 sxDDAKBgNV ... -----END CERTIFICATE REQUEST-----
		csr_domain = example.com
		csr_bits = 2048
		csr_email = admin@example.com
		csr_company = ACME
		csr_department = IT
		csr_state = Illinois
		csr_city = Chicago
		csr_country = US
		action = CREATE_CERT

▪ Server Administration Panel, **Tools & Settings > SSL Certificates > View SSL Certificates**. ▪ Server Administration Panel, **Tools & Settings > Buy SSL Certificate**. ▪ Control Panel, **Websites & Domains > Secure Your Sites > View Certificates**.	action = MODIFY_CERT	

Hiding Buttons for Viewing and Purchasing SSL Certificates

You can hide the buttons for viewing and purchasing SSL certificates both through command line and Partner API.

➢ *To remove the buttons for viewing and purchasing SSL certificates using command line, issue the following command:*

```
%plesk_cli%\panel_gui.exe -p -cert_purchasing true
```

➢ *To remove the buttons for viewing and purchasing SSL certificates using the Partner API:*

Use the `partner10.createKey` or `partner10.upgradeKey` with the API identifier "EXTRAS_BUTTONS_OFF" in the "array of identifiers of upgrade plans" parameter.

For details on the methods specification, please see

http://www.parallels.com/ptn/documentation/ka/, section **Specifications of Methods** / **partner10.createKey** and section **Specifications of Methods** / **partner10.upgradeKey**

Note: API identifier "EXTRAS_BUTTONS_OFF" also disables the controls related to SSL certificate selling services and link to the provider's website.

Important: Once you have turned off a feature through the Partner API, there are no documented methods to turn it back on. If you need to perform this reverse operation, please use the web-based user interface, or contact your sales representative.

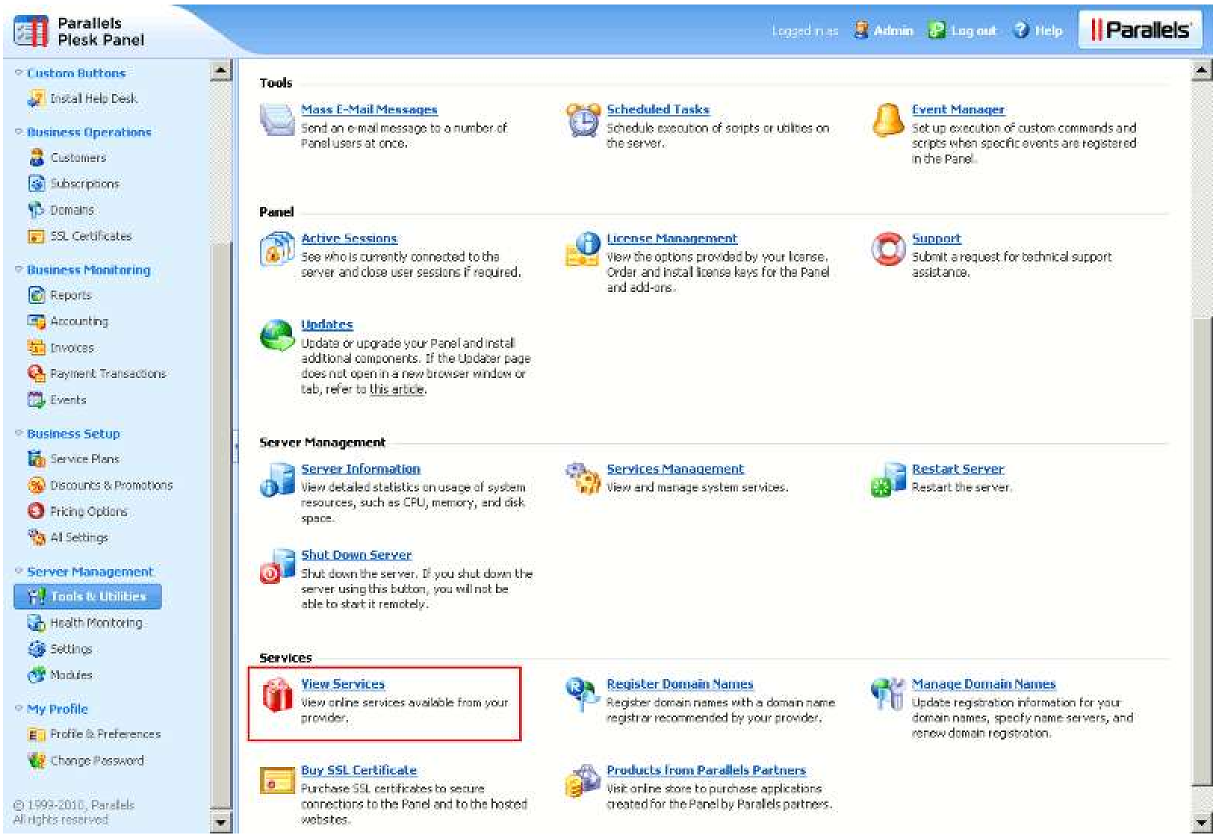
Link to Provider's Website

This button redirects customers to your site where they can purchase and use services provided by your company.

In this section:

Location of the Link to Provider's Website

Server Administration Panel > **Tools & Settings** > **View Services** button.



Tools

Mass E-Mail Messages
Send an e-mail message to a number of Panel users at once.

Scheduled Tasks
Schedule execution of scripts or utilities on the server.

Event Manager
Set up execution of custom commands and scripts when specific events are registered in the Panel.

Panel

Active Sessions
See who is currently connected to the server and close user sessions if required.

License Management
View the options provided by your license. Order and install license keys for the Panel and add-ons.

Support
Submit a request for technical support assistance.

Updates
Update or upgrade your Panel and install additional components. If the Updater page does not open in a new browser window or tab, refer to this article.

Server Management

Server Information
View detailed statistics on usage of system resources, such as CPU, memory, and disk space.

Services Management
View and manage system services.

Restart Server
Restart the server.

Shut Down Server
Shut down the server. If you shut down the server using this button, you will not be able to start it remotely.

Services

View Services
View online services available from your provider.

Register Domain Names
Register domain names with a domain name registrar recommended by your provider.

Manage Domain Names
Update registration information for your domain names, specify name servers, and renew domain registration.

Buy SSL Certificate
Purchase SSL certificates to secure connections to the Panel and to the hosted websites.

Products from Parallels Partners
Visit online store to purchase applications created for the Panel by Parallels partners.

Changing the View Services Button URL

You can change the **View Services** button URL only through command line.

➢ ***To change the URL that opens when the View Services button is clicked, issue the following command:***

```
%plesk_cli%\panel_gui.exe -p -mpc_portal_url <url>
```

Hiding the View Services Button

You can hide the **View Services** button both through command line and Partner API.

➢ ***To remove the View Services button using command line, issue the following command:***

```
%plesk_cli%\panel_gui.exe -p -extras true
```

➢ ***To remove the View Services buttons using partner API:***

Use the `partner10.createKey` or `partner10.upgradeKey` with the API identifier "EXTRAS_BUTTONS_OFF" in the "array of identifiers of upgrade plans" parameter.

For details on the methods specification, please see

http://www.parallels.com/ptn/documentation/ka/, section **Specifications of Methods** / **partner10.createKey** and section **Specifications of Methods** / **partner10.upgradeKey**

Note: API identifier "EXTRAS_BUTTONS_OFF" also disables the controls related to SSL certificate selling services and link to the provider's website.

Important: Once you have turned off a feature through the Partner API, there are no documented methods to turn it back on. If you need to perform this reverse operation, please use the web-based user interface, or contact your sales representative.

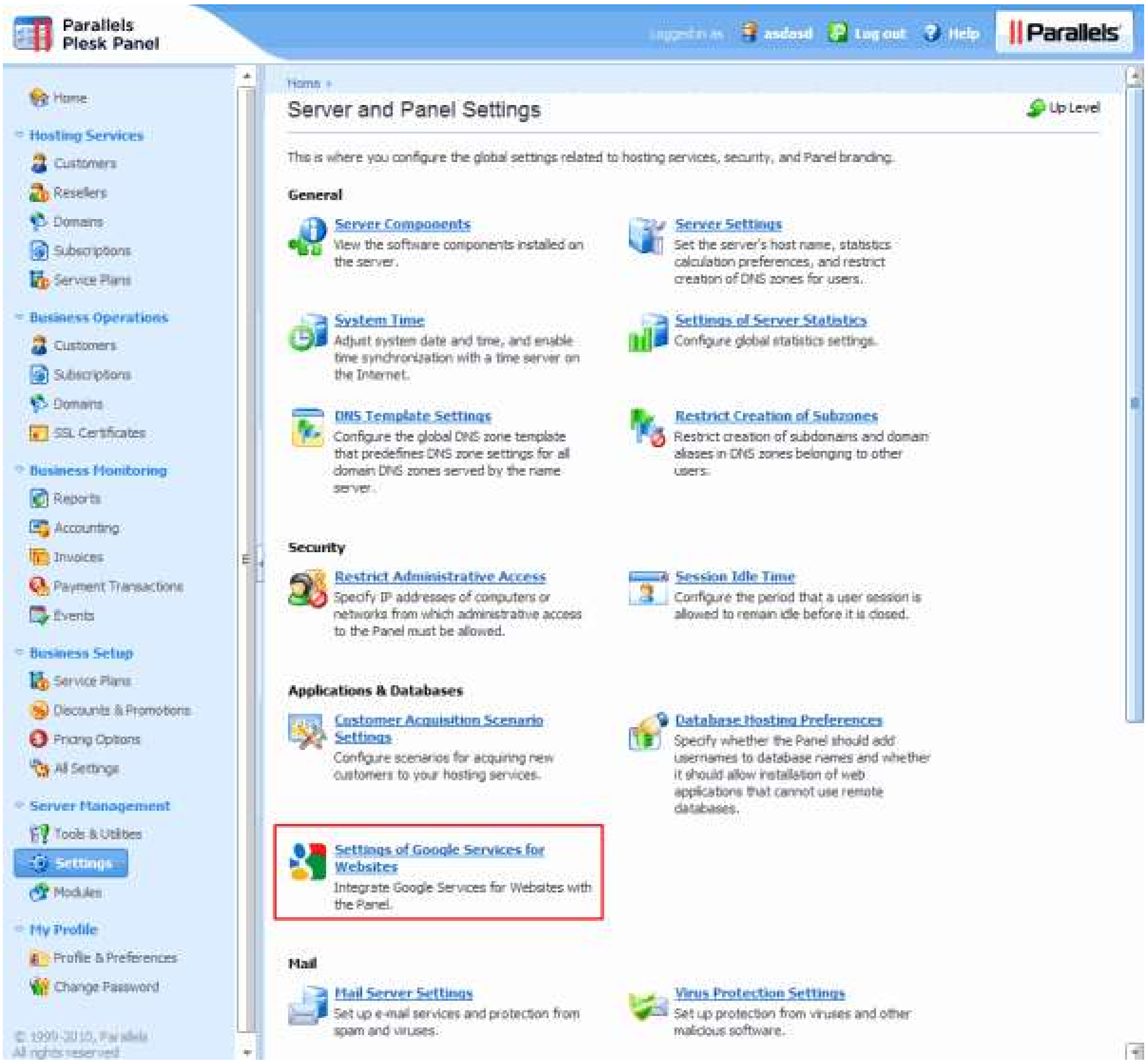
Google Services for Websites Buttons

If you are signed up to the Google Services for Websites access provider program, your customers will see the **Google Services for Websites** button in Control Panel. You can hide this button if you do not want them to use Google Services for Websites.

In this section:

Location of the Google Services for Websites Controls

- Server Administration Panel > **Tools & Settings** > **Settings of Google Services for Websites** button.



Server and Panel Settings

This is where you configure the global settings related to hosting services, security, and Panel branding.

General

Server Components
View the software components installed on the server.

Server Settings
Set the server's host name, statistics calculation preferences, and restrict creation of DNS zones for users.

System Time
Adjust system date and time, and enable time synchronization with a time server on the Internet.

Settings of Server Statistics
Configure global statistics settings.

DNS Template Settings
Configure the global DNS zone template that predefines DNS zone settings for all domain DNS zones served by the name server.

Restrict Creation of Subzones
Restrict creation of subdomains and domain aliases in DNS zones belonging to other users.

Security

Restrict Administrative Access
Specify IP addresses of computers or networks from which administrative access to the Panel must be allowed.

Session Idle Time
Configure the period that a user session is allowed to remain idle before it is closed.

Applications & Databases

Customer Acquisition Scenario Settings
Configure scenarios for acquiring new customers to your hosting services.

Database Hosting Preferences
Specify whether the Panel should add usernames to database names and whether it should allow installation of web applications that cannot use remote databases.

Settings of Google Services for Websites
Integrate Google Services for Websites with the Panel.

Mail

Mail Server Settings
Set up e-mail services and protection from spam and viruses.

Virus Protection Settings
Set up protection from viruses and other malicious software.

- Control Panel > **Websites & Domains** tab > **Google Services for Websites** button. It is shown if the Services are enabled by Administrator.

Hiding the Google Services for Websites Buttons

You can hide the Google Services for Websites only through Partner API.

➢ *To hide the Google Services for Websites buttons:*

Use the `partner10.createKey` or `partner10.upgradeKey` with the API identifier "DISABLE_GOOGLE_TOOLS" in the "array of identifiers of upgrade plans" parameter.

For details on the methods specification, please see

http://www.parallels.com/ptn/documentation/ka/, section **Specifications of Methods** / **partner10.createKey** and section **Specifications of Methods** / **partner10.upgradeKey**

Important: Once you have turned off a feature through the Partner API, there are no documented methods to turn it back on. If you need to perform this reverse operation, please use the web-based user interface, or contact your sales representative.

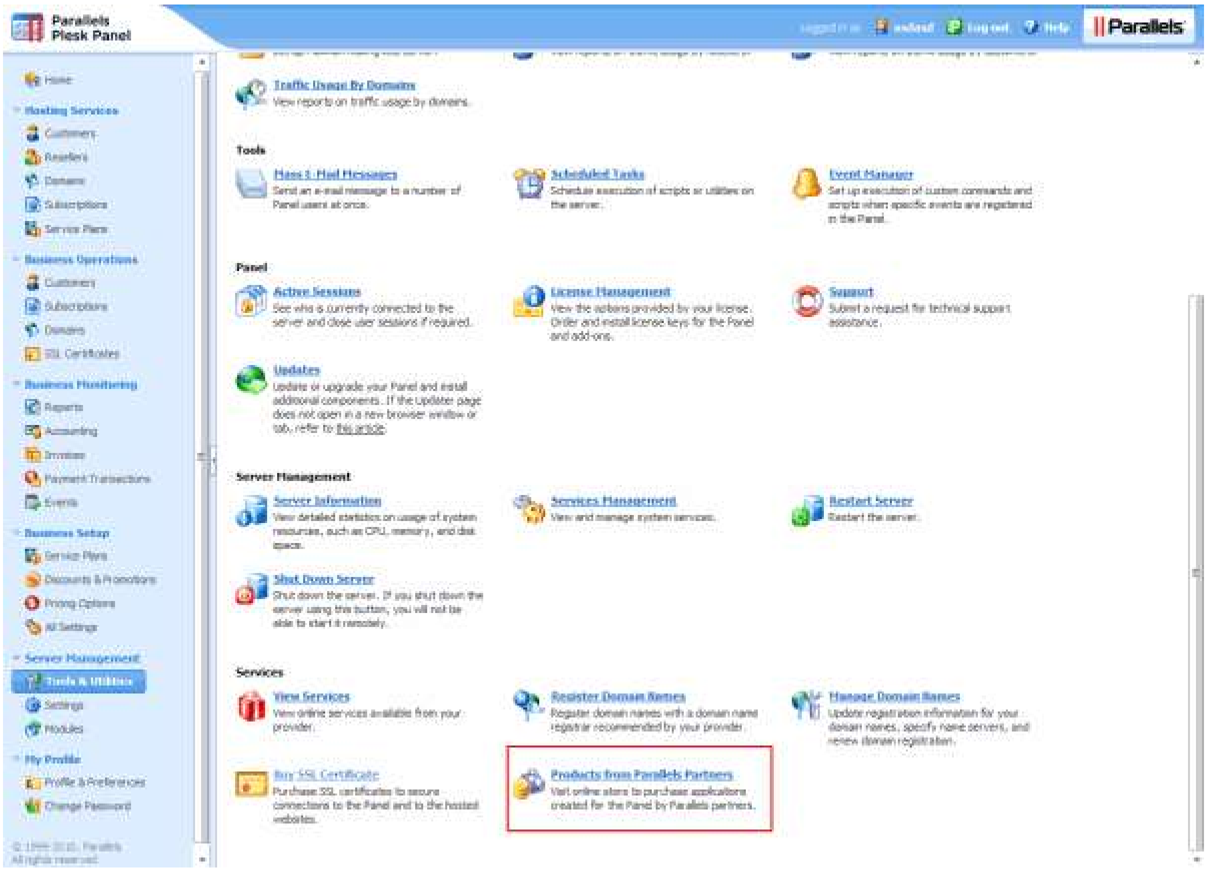
Products from Parallels Partners Button

This button leads to the store where your customers can purchase software products from Parallels partners. The link is not editable. You can hide this button.

In this section:

Location of the Products from Parallels Partners Button

Server Administration Panel > **Tools & Settings** > **Products from Parallels Partners** button.



Traffic Usage By Domains
View reports on traffic usage by domains.

Tools

Mass E-Mail Messages
Send an e-mail message to a number of Panel users at once.

Scheduled Tasks
Schedule execution of scripts or utilities on the server.

Event Manager
Set up execution of custom commands and scripts when specific events are registered in the Panel.

Panel

Active Sessions
See who is currently connected to the server and close user sessions if required.

License Management
View the options provided by your license. Order and install license keys for the Panel and add-ons.

Support
Submit a request for technical support assistance.

Updates
Update or upgrade your Panel and install additional components. If the Updater page does not open in a new browser window or tab, refer to this article.

Server Management

Server Information
View detailed statistics on usage of system resources, such as CPU, memory, and disk space.

Services Management
View and manage system services.

Restart Server
Restart the server.

Shut Down Server
Shut down the server. If you shut down the server using this button, you will not be able to start it remotely.

Services

View Services
View online services available from your provider.

Register Domain Names
Register domain names with a domain name registrar recommended by your provider.

Manage Domain Names
Update registration information for your domain names, specify name servers, and renew domain registration.

Buy SSL Certificate
Purchase SSL certificates to secure connections to the Panel and to the hosted websites.

Products from Parallels Partners
Visit online store to purchase applications created for the Panel by Parallels partners.

Hiding the Products from Parallels Partners Button

You can hide the **Products from Parallels Partners** button only through Partner API.

➢ *To hide the button Products from Parallels Partners:*

Use the `partner10.createKey` or `partner10.upgradeKey` with the API identifier "STORE_BUTTON_OFF" in the "array of identifiers of upgrade plans" parameter.

For details on the methods specification, please see:

http://www.parallels.com/ptn/documentation/ka/, section Specifications of Methods / partner10.createKey and section Specifications of Methods / partner10.upgradeKey

Important: Once you have turned off a feature through the Partner API, there are no documented methods to turn it back on. If you need to perform this reverse operation, please use the web-based user interface, or contact your sales representative.

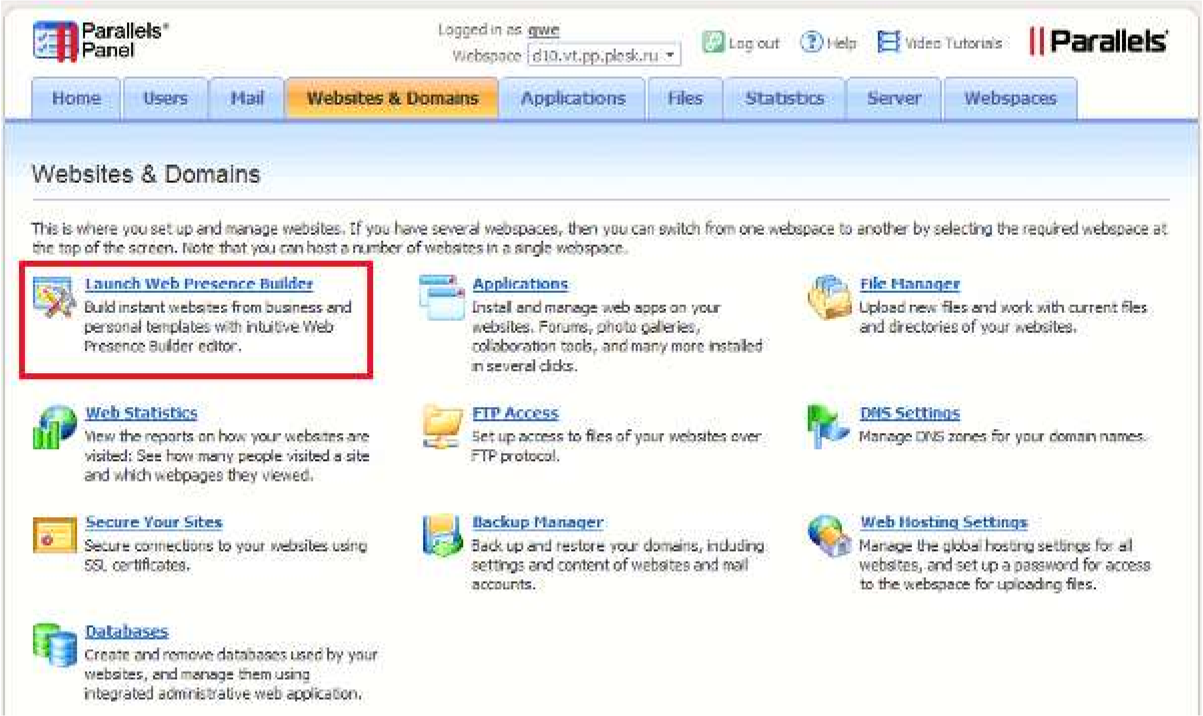
Web Presence Builder Buttons

These are controls that open Web Presence Builder. You can hide them from customer's interface. This will not disable Web Presence Builder.

In this section:

Location of the Web Presence Builder Buttons

- Control Panel: **Websites & Domains** tab > **Launch Web Presence Builder**.



Websites & Domains

This is where you set up and manage websites. If you have several webspaces, then you can switch from one webspace to another by selecting the required webspace at the top of the screen. Note that you can host a number of websites in a single webspace.

Launch Web Presence Builder
Build instant websites from business and personal templates with intuitive Web Presence Builder editor.

Applications
Install and manage web apps on your websites. Forums, photo galleries, collaboration tools, and many more installed in several clicks.

File Manager
Upload new files and work with current files and directories of your websites.

Web Statistics
View the reports on how your websites are visited: See how many people visited a site and which webpages they viewed.

FTP Access
Set up access to files of your websites over FTP protocol.

DNS Settings
Manage DNS zones for your domain names.

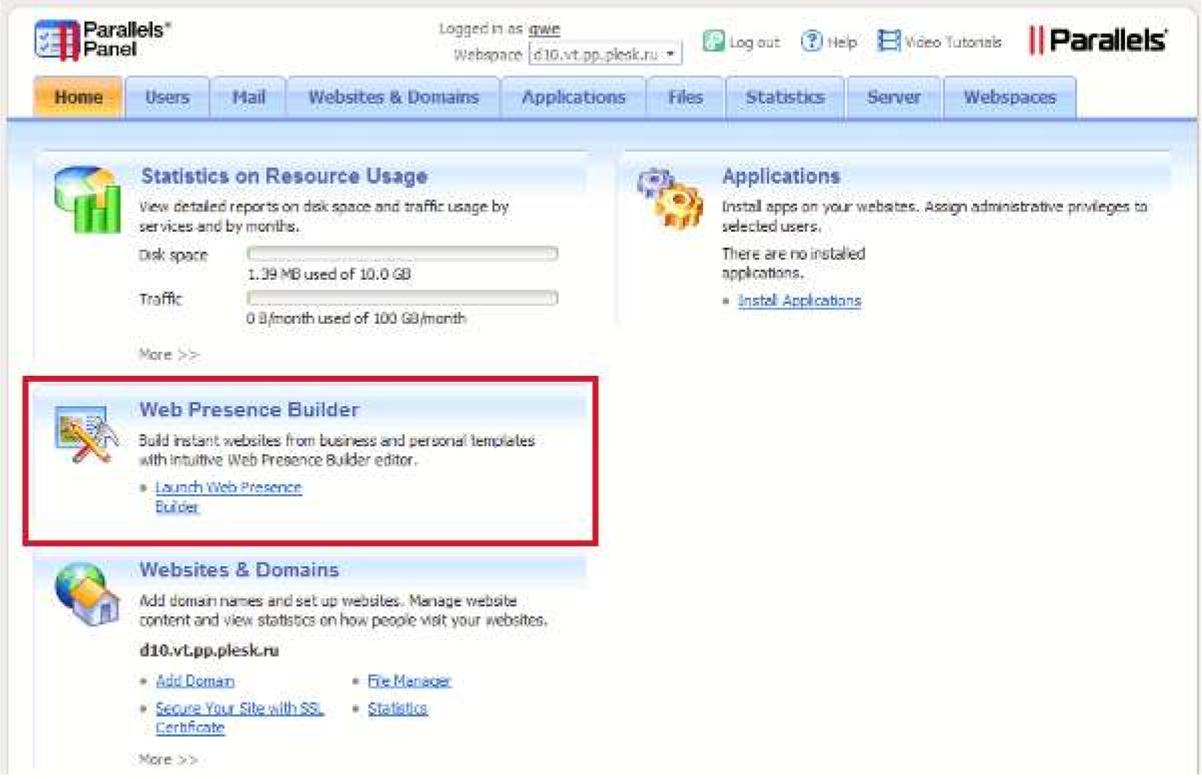
Secure Your Sites
Secure connections to your websites using SSL certificates.

Backup Manager
Back up and restore your domains, including settings and content of websites and mail accounts.

Web Hosting Settings
Manage the global hosting settings for all websites, and set up a password for access to the webspace for uploading files.

Databases
Create and remove databases used by your websites, and manage them using integrated administrative web application.

- Control Panel: **Home** tab > **Launch Web Presence Builder**.



Statistics on Resource Usage
View detailed reports on disk space and traffic usage by services and by months.
Disk space: 1.39 MB used of 10.0 GB
Traffic: 0 B/month used of 100 GB/month
More >>

Applications
Install apps on your websites. Assign administrative privileges to selected users.
There are no installed applications.
- Install Applications

Web Presence Builder
Build instant websites from business and personal templates with intuitive Web Presence Builder editor.
- Launch Web Presence Builder

Websites & Domains
Add domain names and set up websites. Manage website content and view statistics on how people visit your websites.
d10.vt.pp.plesk.ru
- Add Domain
- File Manager
- Secure Your Site with SSL Certificate
- Statistics

More >>

Hiding the Web Presence Builder Buttons

You can hide the Web Presence Builder buttons only through Partner API.

➢ *To hide the Web Presence Builder buttons:*

Use the `partner10.createKey` or `partner10.upgradeKey` with the API identifier "DISABLE_SITEBUILDER" in the "array of identifiers of upgrade plans" parameter.

For details on the methods specification, please see

http://www.parallels.com/ptn/documentation/ka/, section **Specifications of Methods** / **partner10.createKey** and section **Specifications of Methods** / **partner10.upgradeKey**

Important: Once you have turned off a feature through the Partner API, there are no documented methods to turn it back on. If you need to perform this reverse operation, please use the web-based user interface, or contact your sales representative.

Panel Upgrades

When a new minor or major version of the Panel is released, Parallels Updater adds an information box to the Server Administration Panel home page offering to update the Panel. This can be disabled, so that only updates for the current version are installed.

In this section:

Disabling Panel Upgrades

You can disable the Panel upgrades only by modifying license keys, through the Partner API.

➢ *To disable panel upgrades:*

Use the `partner10.createKey` or `partner10.upgradeKey` with the API identifier "DISABLE_FEATURE_UPGRADES" in the "array of identifiers of upgrade plans" parameter.

For details on the methods specification, please see

http://www.parallels.com/ptn/documentation/ka/, section **Specifications of Methods** / **partner10.createKey** and section **Specifications of Methods** / **partner10.upgradeKey**

Important: Once you have turned off a feature through the Partner API, there are no documented methods to turn it back on. If you need to perform this reverse operation, please use the web-based user interface, or contact your sales representative.

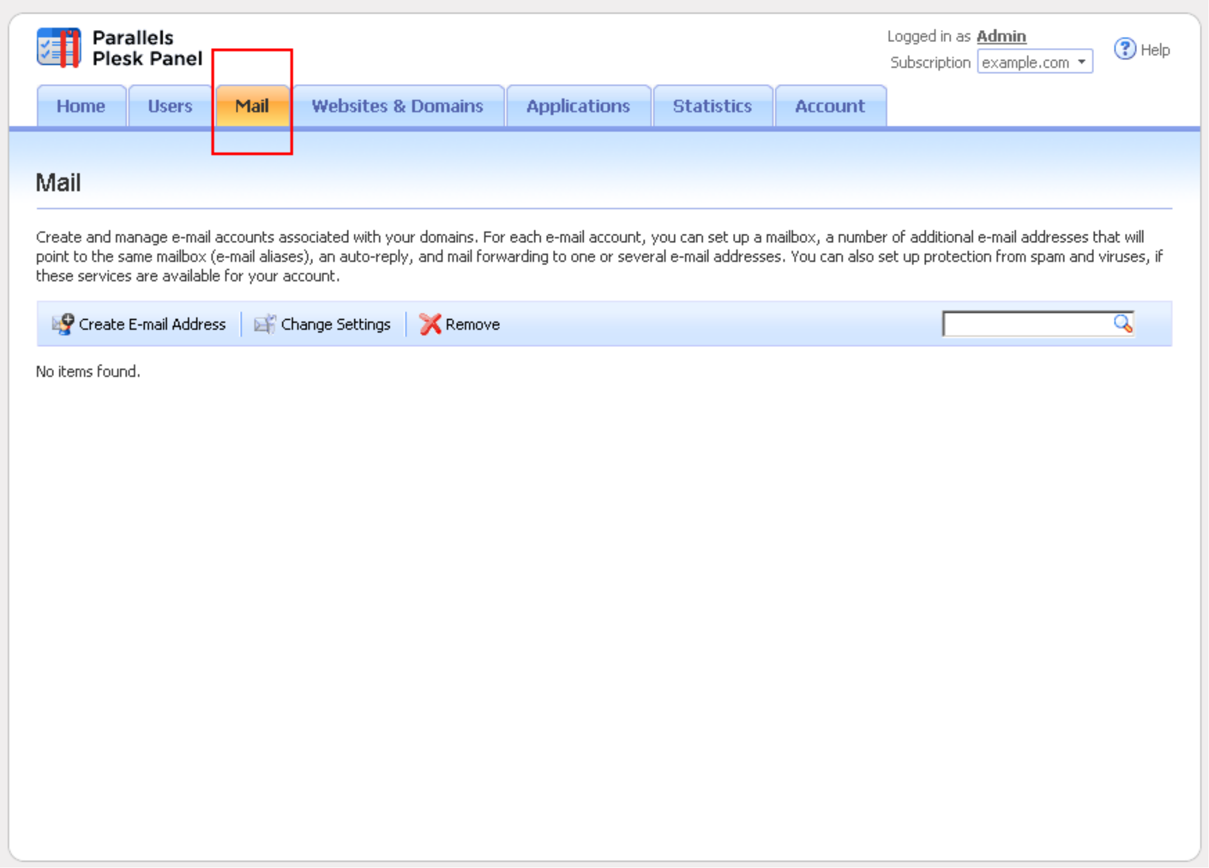
Mail Service Controls

These are the controls that let hosting customers use the mail services integrated with Panel. If you want to use a mail server running on a separate machine, or want to prohibit Panel users from operating mail services, you can remove the corresponding controls from customer's interface. This option does not actually switch off the Panel-managed mail server.

In this section:

Location of the Mail Service Controls

- Control Panel: **Mail** tab.

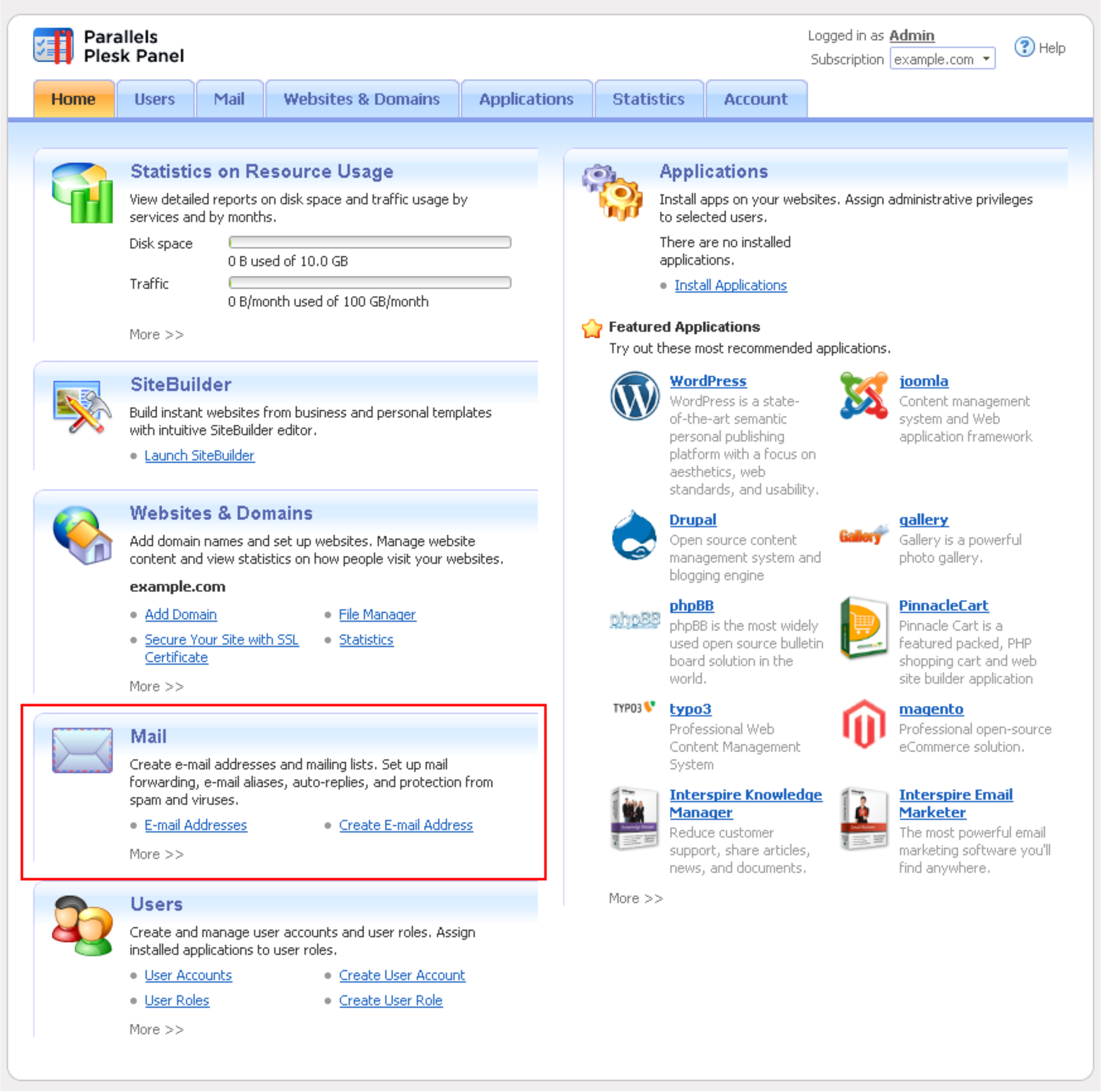


Mail

Create and manage e-mail accounts associated with your domains. For each e-mail account, you can set up a mailbox, a number of additional e-mail addresses that will point to the same mailbox (e-mail aliases), an auto-reply, and mail forwarding to one or several e-mail addresses. You can also set up protection from spam and viruses, if these services are available for your account.

No items found.

- Control Panel: **Home** tab > **Mail** group.



Statistics on Resource Usage

View detailed reports on disk space and traffic usage by services and by months.

Disk space 0 B used of 10.0 GB

Traffic 0 B/month used of 100 GB/month

More >>

SiteBuilder

Build instant websites from business and personal templates with intuitive SiteBuilder editor.

- Launch SiteBuilder

Websites & Domains

Add domain names and set up websites. Manage website content and view statistics on how people visit your websites.

example.com

- Add Domain
- File Manager
- Secure Your Site with SSL Certificate
- Statistics

More >>

Mail

Create e-mail addresses and mailing lists. Set up mail forwarding, e-mail aliases, auto-replies, and protection from spam and viruses.

- E-mail Addresses
- Create E-mail Address

More >>

Users

Create and manage user accounts and user roles. Assign installed applications to user roles.

- User Accounts
- Create User Account
- User Roles
- Create User Role

More >>

Applications

Install apps on your websites. Assign administrative privileges to selected users.

There are no installed applications.

- Install Applications

Featured Applications

Try out these most recommended applications.

WordPress WordPress is a state-of-the-art semantic personal publishing platform with a focus on aesthetics, web standards, and usability.

joomla Content management system and Web application framework

Drupal Open source content management system and blogging engine

gallery Gallery is a powerful photo gallery.

phpBB phpBB is the most widely used open source bulletin board solution in the world.

PinnacleCart Pinnacle Cart is a featured packed, PHP shopping cart and web site builder application

typo3 Professional Web Content Management System

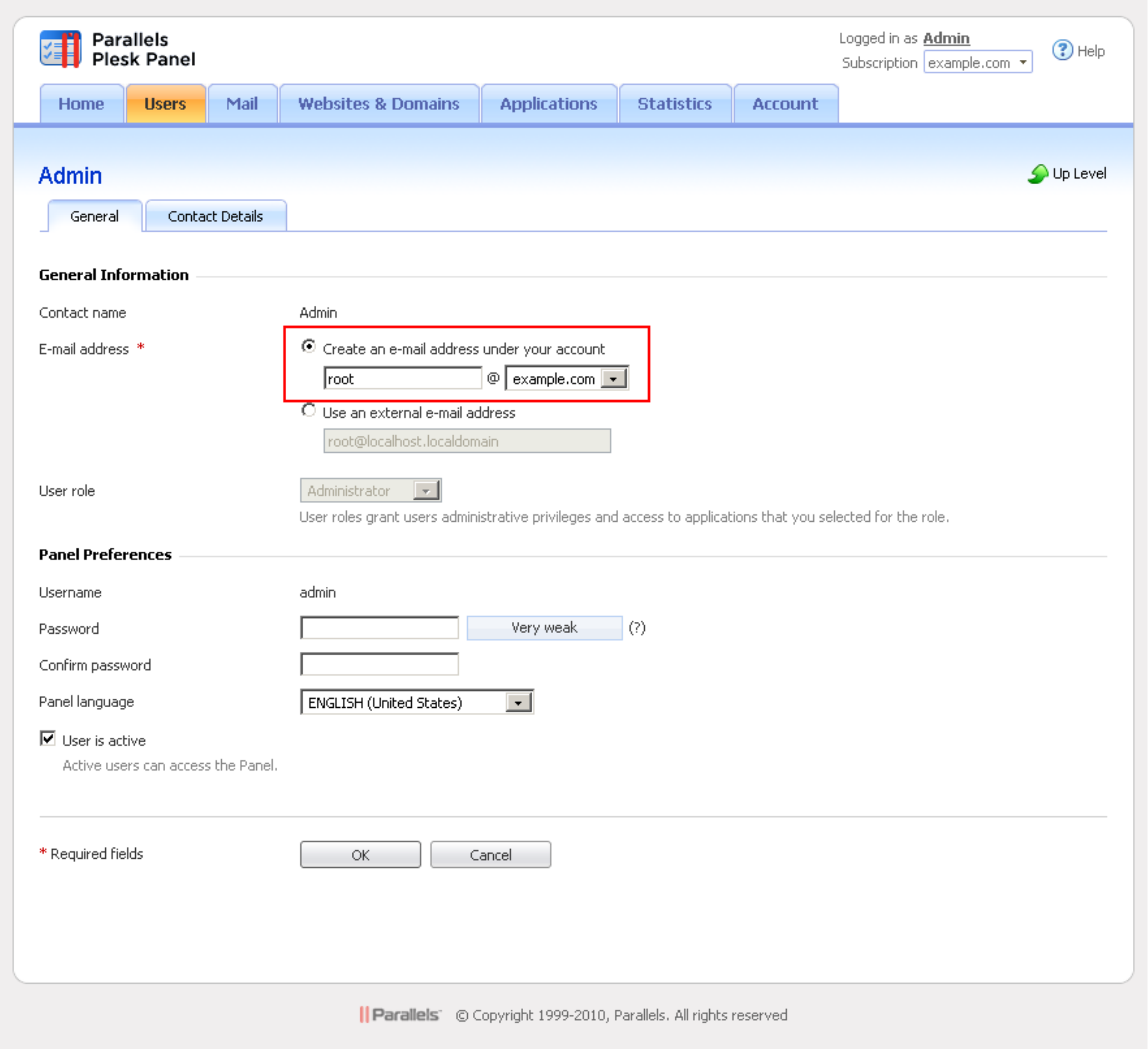
magento Professional open-source eCommerce solution.

Interspire Knowledge Manager Reduce customer support, share articles, news, and documents.

Interspire Email Marketer The most powerful email marketing software you'll find anywhere.

More >>

- Control Panel: **Users** tab > ***user name*** > **Create an e-mail address under your account** option.



Admin

General Information

Contact name: Admin

E-mail address *

● Create an e-mail address under your account

root @ example.com

○ Use an external e-mail address

root@localhost.localdomain

User role: Administrator

User roles grant users administrative privileges and access to applications that you selected for the role.

Panel Preferences

Username: admin

Password: Very weak (?)

Confirm password:

Panel language: ENGLISH (United States)

☑ User is active

Active users can access the Panel.

* Required fields

Hiding the Mail Service Controls

You can hide the mail service controls using the Panel user interface or command line.

➢ ***To hide mail service controls using the Panel interface:***

1. In the Server Administration Panel, go to **Tools & Settings** > **Mail Server Settings** (in the **Mail** group).
2. Clear the **Enable mail management functions in Panel** checkbox.
3. Click **OK**.

➢ ***To hide the mail service controls using command line, issue the following command:***

```
"%plesk_cli%\server_pref.exe" -u -disable-mail-ui true
```

Displaying the Mail Service Controls

You can display the mail service controls using the Panel user interface or the `server_pref` command-line utility.

➢ ***To display the mail service controls using the Panel interface:***

1. In the Server Administration Panel, go to **Tools & Settings** > **Mail Server Settings** (in the **Mail** group).
2. Select the **Enable mail management functions in Panel** checkbox.
3. Click **OK**.

➢ ***To display the mail service controls using command line, issue the following command:***

```
"%plesk_cli%\server_pref.exe" -u -disable-mail-ui false
```

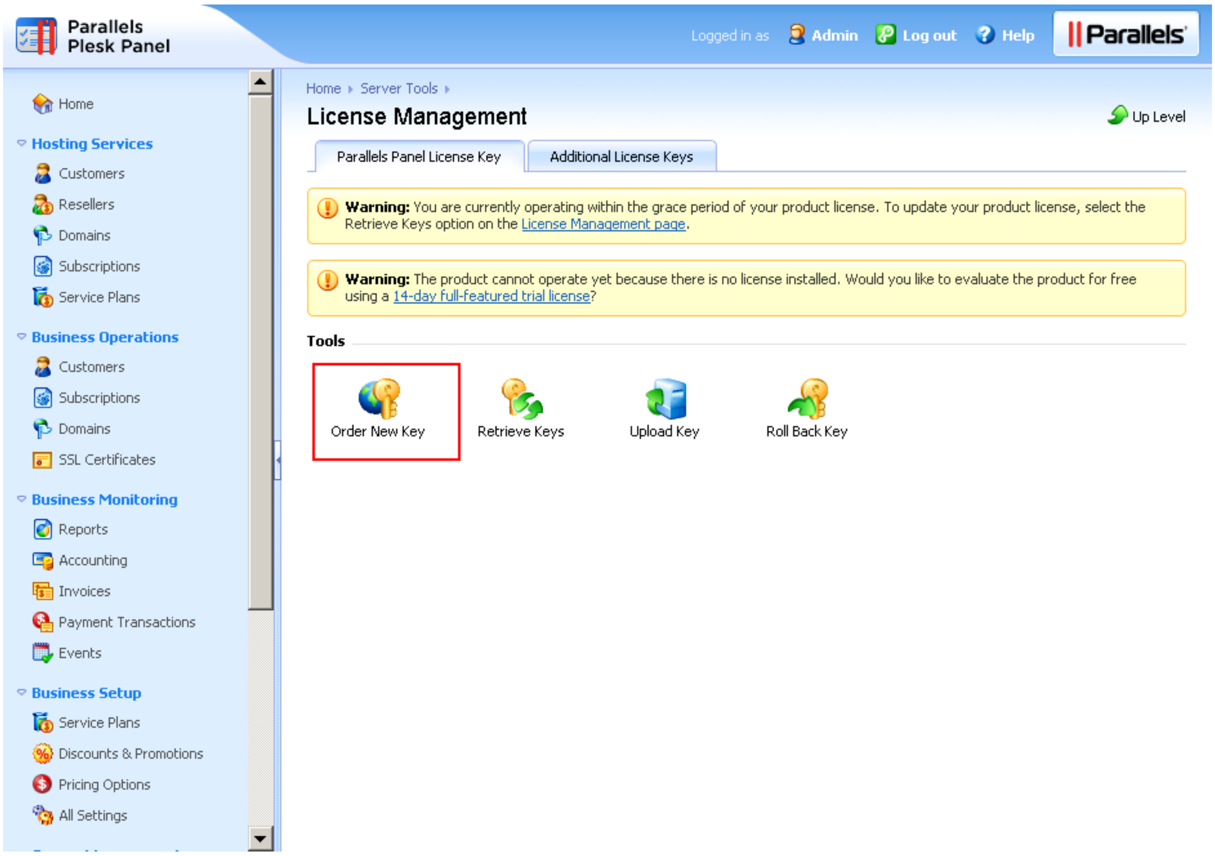
Links for Purchasing Panel License and Add-On Keys

These buttons open the site where your customers can buy Panel license keys, add-ons and upgrades. By default, they lead to the Parallels website, but you can change them to point at a different website.

In this section:

Location of Links for Purchasing Panel License and Add-On Keys

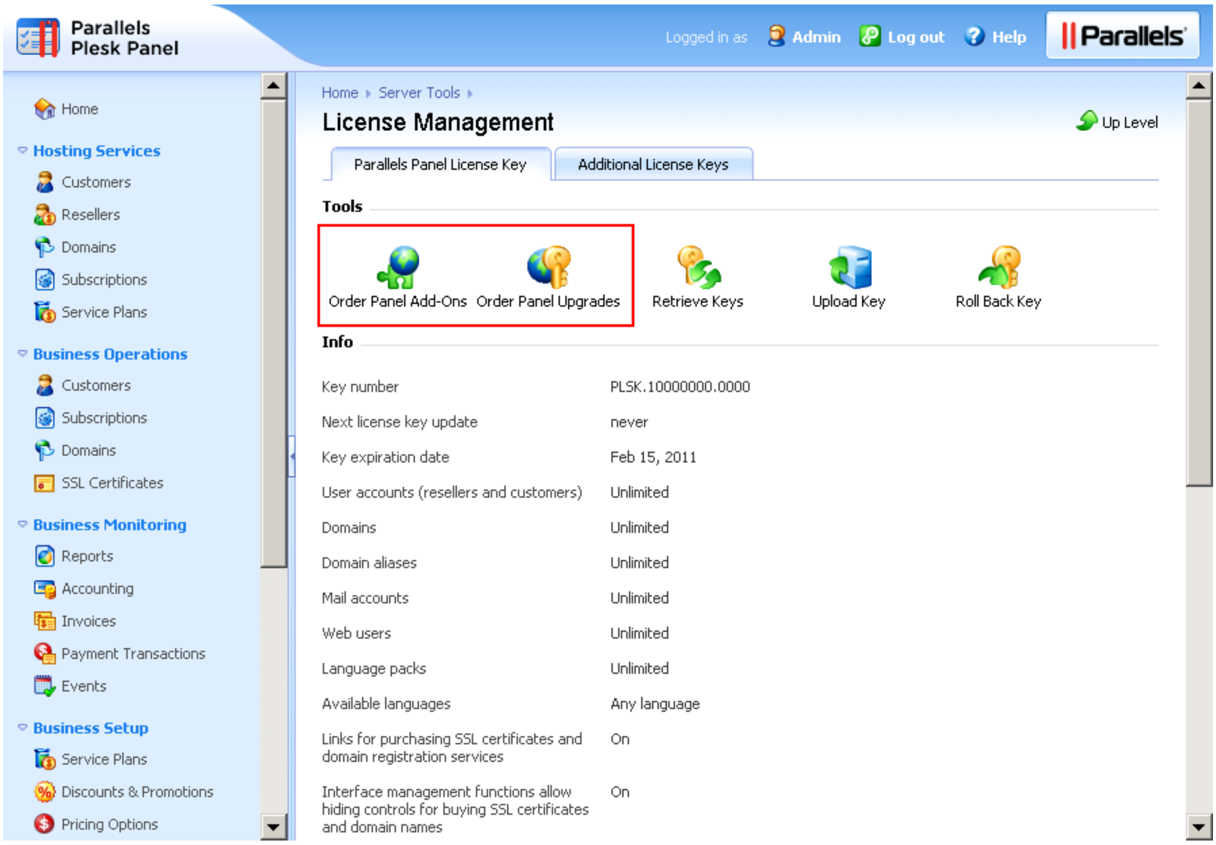
- Server Administration Panel > **Tools & Settings** > **License Management** > **Order New Key** button.



Warning: You are currently operating within the grace period of your product license. To update your product license, select the Retrieve Keys option on the License Management page.

Warning: The product cannot operate yet because there is no license installed. Would you like to evaluate the product for free using a 14-day full-featured trial license?

- Server Administration Panel > **Tools & Settings** > **License Management** > **Order Panel Add-Ons** and **Order Panel Upgrades** buttons.



License Management

Key number	PLSK.10000000.0000
Next license key update	never
Key expiration date	Feb 15, 2011
User accounts (resellers and customers)	Unlimited
Domains	Unlimited
Domain aliases	Unlimited
Mail accounts	Unlimited
Web users	Unlimited
Language packs	Unlimited
Available languages	Any language
Links for purchasing SSL certificates and domain registration services	On
Interface management functions allow hiding controls for buying SSL certificates and domain names	On

Changing the Links URL

You can change the links for purchasing Panel license and add-on keys only by editing the `panel.ini` configuration file (on page 136).

➢ *To change the links URL:*

1. Open the configuration file `panel.ini` located in the following directory on the Panel-managed server:

   `c:\Program Files\Parallels\Plesk\admin\conf\`

   If the file does not exist, create it.

2. Place the following lines in the file and save it:

```
[marketplace]
panelAndAddonsLicensesStore = "http://my-store.tld"
```

   If you want to remove these links from Panel, leave the URL empty:

```
[marketplace]
panelAndAddonsLicensesStore = ""
```

To undo the change and return to default values, remove these lines from `panel.ini`.

Promos

Promos are the promotion banners that are shown both in the Server Administration Panel and Control Panel. There are built-in Parallels promos of Parallels Customer and Business Manager (they are shown if Business Manager is not installed), Help Desk, and a number of other featured applications. You can create your own promos and insert them in Panel. All promos can be hidden.

In this section:

Location of Promos

- Server Administration Panel: **Home.**
- Server Administration Panel: **Tools & Settings.**
- Server Administration Panel: **Tools & Settings > Mail Server Settings.**
- Control Panel in the Power User view: **Home.**

Creating a Promo

You can create your own promo by editing the `panel.ini` configuration file.

➢ *To create a promo:*

1. Open the configuration file `panel.ini` located in the following directory on the Panel-managed server:

   `%plesk_dir%\admin\conf\`

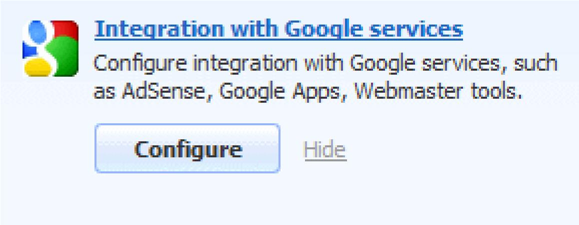
   If the file does not exist, create it.

2. Add the line `[promos]` to the file.

3. Specify parameters of your promo by adding the lines like "<***promo_name***>.<***parameter***>=<***value***>" after the line "`[promos]`". You can use the following parameters:

   - **active.** Shows if your promo will appear by default or not. You can use either **true** or **false** values.
   - **icon.** URL of an icon that will be shown in the promo.
   - **title.** Title of the promo.
   - **text.** The promo description.
   - **buttonUrl.** A URL that opens upon clicking the promo button.
   - **buttonText.** A caption of the promo button.
   - **hideText.** A text of the link for hiding the promo.

   For example, you want to create a promo that looks like the following (it is the Panel default Google Integration promo):



Integration with Google services

Configure integration with Google services, such as AdSense, Google Apps, Webmaster tools.

   You need to add the following lines to the `panel.ini`:

```
[promos]
custom.googleIntegration.active=true
custom.googleIntegration.icon=http://www.softicons.com/download/internet-cons/webset-icons-by-graphicriver/png/48/google.png
custom.googleIntegration.title=integration With Google Services
custom.googleIntegration.text=Configure Integration with Google Services, such as AdSense, Google Apps, Webmaster tools.
custom.googleIntegration.buttonUrl=https://plesk.server:8443/plesk/server/google-tools/
custom.googleIntegration.buttonText=Configure
custom.googleIntegration.hideText=Hide
```

4. Save the file.

Hiding Parallels Promos

You can either hide promos at all or hide some specific promos, namely:

- Promos on the Server Administration Panel > **Tools & Settings** pages.
- A certain promo on the Home page of the Server Administration and Control Panels.

In all these cases, modify the `panel.ini` configuration file to get the desired result.

To hide all promos in Panel:

1. Open the configuration file `%plesk_dir%\admin\conf\panel.ini` on the Panel-managed server. If the file does not exist, create it.
2. Place the following lines in the file and save it:

```
[promos]
enabled=off
[aps]
serverAppsPromoEnabled=off
```

To hide promos on the Server Administration Panel and Control Panel > Home pages:

1. Open the configuration file `%plesk_dir%\admin\conf\panel.ini` on the Panel-managed server. If the file does not exist, create it.
2. Place the following lines in the file and save it:

```
[promos]
enabled=off
```

To hide Parallels promos on the Server Administration Panel > Tools & Settings and Tools & Settings > Mail Server Settings pages:

1. Open the configuration file `%plesk_dir%\admin\conf\panel.ini` on the Panel-managed server. If the file does not exist, create it.
2. Place the following lines in the file and save it:

```
[aps]
serverAppsPromoEnabled=off
```

➢ *To hide a certain promo on the Server Administration Panel and Control Panel > Home pages:*

1. Open the configuration file `%plesk_dir%\admin\conf\panel.ini` on the Panel-managed server. If the file does not exist, create it.
2. Place the following lines in the file and save it:

```
[promos]
<promo_id>.active=false
```

The <***promo_id***> may be one of the following:

- `cbm` - for the Parallels Customer and Business Manager promo.
- `cloudFlare` - for the mod_cloudflare Apache module promo.
- `commTouch` – for the Parallels Premium Outbound Antispam promo.
- `googleIntegration` - for the Integration with Google Services promo.
- `helpDesk` - for the HelpDesk promo.
- `mobile` – for the Parallels Plesk Server Mobile Monitor and Parallels Plesk Server Mobile Manager promos.
- `sitebuilderTrial` - for the Web Presence Builder Try and Buy mode promo.

Otherwise, it can be your own promo name.

Link to Online Support Service

If you provide dedicated Panel-managed servers to your customers, you might want to configure the **Support** link in Panel to redirect server administrators to your website when they need assistance.

By default, the Support button (located in Server Administration Panel > **Tools & Settings**) opens the *Parallels Plesk Panel Online Server Support* form at the Parallels website, with a number of parameters automatically collected and filled in, such as the Panel administrator's name, company, e-mail, phone, product key number, operating system details, Panel version, and build number.

You can choose to:

- Configure the **Support** button in Server Administration Panel to open the support form page on your website with the above listed parameters pre-collected (see page 168).
- Configure the **Support** button in Server Administration Panel to open a user's mail client and prompt to compose a new message with your support e-mail address specified in the address line and the above listed parameters pre-collected (see page 169).

In this section:

Creating Link to Support Form on Your Site

The Parallels support form link is defined by the support_url parameter in the psa.misc table of the Panel's database. If the support_url parameter is absent or empty, upon clicking the **Tools & Settings** > **Support** button, the user is redirected to Parallels support through the following URL:

```
'https://register.parallels.com/support/form.php?sv=' .
urlencode(serialize($val))
```

where $val is an associative PHP array containing the following parameters:

- firstName, the Panel administrator's contact name.
- company, the Panel administrator's company name.
- email, the Panel administrator's e-mail address.
- phone, the Panel administrator's phone number.
- keyNumber, the Panel license key number used on the server.
- operatingSystem, the operating system installed on the server.
- PSAVersion, the version number of the Parallels Plesk Panel software.
- PSABuild, the build number of the Parallels Plesk Panel software.
- PSAInstType, the type of Parallels Plesk Panel software installation.

Before changing the link, consider the following to ensure that the support page of your site is configured properly:

- Your support page will accept the sv variable through the GET method. The value of this variable is a serialized associative array of pre-collected parameters.
- You can get the array of parameters on your web site page in the following way:

```
$params = unserialize($_GET['sv']);
```

- You can address any parameter of this array in the following way:

```
$params['firstName']
$params['company']
...
```

To make the **Support** button open the support form on your website, follow these steps:

1. Connect to the Panel's database (psa).
2. Run the following query:
   - If the support_url parameter is absent, run:

```
insert into misc(param, val) values('support_url',
'https://example.com/support')
```

Where 'https://example.com/support' is the URL of the support page on your website.

- If the support_url parameter already exists, run:

```
update misc set val = 'https://example.com/support' where param =
'support_url'
```

Where 'https://example.com/support' is the URL of the support page on your website.

Note: You can use the `dbclient.exe` utility to add the information to the Panel's database. For information about using the `dbclient.exe` utility, consult **Parallels Plesk Panel for Microsoft Windows: Reference for Command Line Utilities** at http://download1.parallels.com/Plesk/PP11/11.0/Doc/en-US/online/plesk-win-cli/44693.htm.

Creating Link to Compose E-mail Message

You can modify the link to Parallels support, so that after clicking the **Tools & Utilities** > **Support** button in Server Administration Panel, your customers are offered to compose an e-mail with your support address already specified in the address line. The customer's contact details and server information will be automatically collected and included in the message body.

You can customize the link to Parallels support by specifying your e-mail address in the `support_url` parameter of the `psa.misc` table of the Panel's database.

To make the Support button of the Server Administration Panel open the page for composing e-mail with your support e-mail address, follow these steps:

1. Connect to the Panel's database (psa).
2. Run the following query:
   - If the `support_url` parameter is absent, run:

```
insert into misc(param, val) values('support_url',
'mailto:yoursupport@example.com')
```

Where 'yoursupport@example.com' is the e-mail address where you want your customers' support requests to be sent.

   - If the `support_url` parameter already exists, run:

```
update misc set val = 'mailto:yoursupport@example.com' where param =
'support_url'
```

Where 'yoursupport@example.com' is the e-mail address where you want your customers' support requests to be sent.

Note: You can use the `dbclient.exe` utility to add the information to the Panel's database. For information about using the `dbclient.exe` utility, consult **Parallels Plesk Panel for Microsoft Windows: Reference for Command Line Utilities** at http://download1.parallels.com/Plesk/PP11/11.0.0/Doc/en-US/online/plesk-win-cli/44693.htm.

The Facebook Like Button

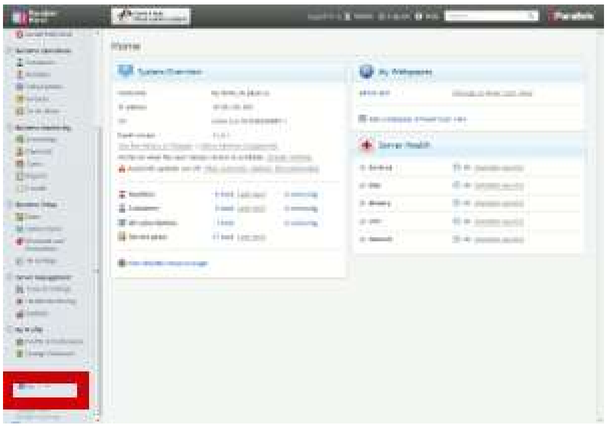
The *Like* button allows administrators to share the link to the Parallels Panel page on Facebook with their Facebook friends. When the administrator clicks the Like button in Panel, a story appears in the user's friends' News Feed with a link back to page. You can hide this button. Customers and resellers do not see this button.

In this section:

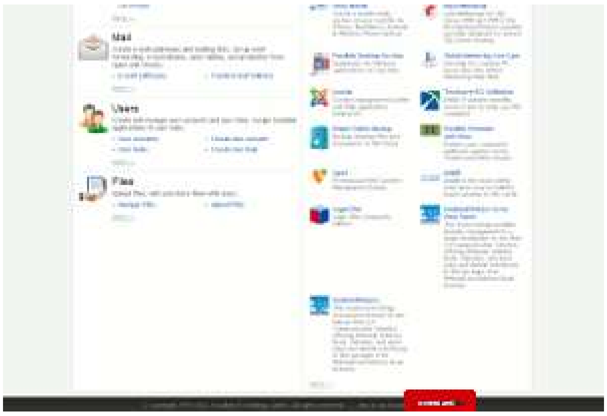
Location of the Like Button

The button is located in the following places of the Panel web interface:

1. The Server Administration Panel, in the bottom-left corner of the left navigation pane.



2. The Control Panel, in the page footer.



Hiding the Like Button

You can hide the Facebook Like button only by editing the `panel.ini` configuration file.

➢ ***To hide the Like button:***

1. Open the configuration file %plesk_dir%\admin\conf\panel.ini. If the file does not exist, create it.
2. Place the following lines in the file and save it:

```
[facebook]
showLikeLink = false
```

To undo the change and return to the default values, remove these lines from `panel.ini`.

Product Rating Widget

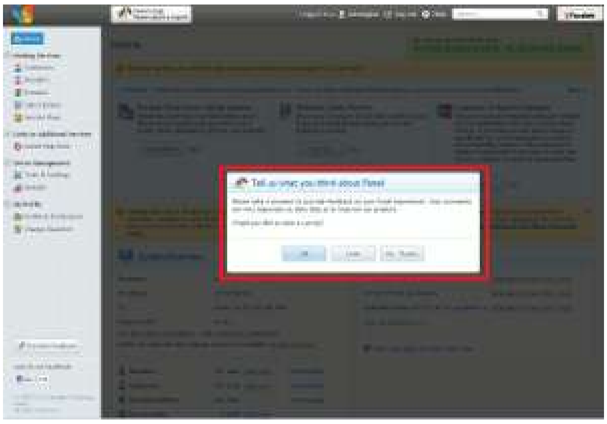
The product rating widget allows administrators to provide feedback on their Panel user experience. The form which offers to rate the product and send comments appears after one month of using Panel. If the administrator choose to provide feedback later, Panel adds the **Provide Feedback** button to the navigation pane of the Server Administration Panel and to the bottom of the Control Panel in Power User view.

You can hide the product rating widget. Customers and resellers do not see the widget.

In this section:

Location of the Widget

The widget appears right in front of the Panel GUI, once the administrator logs in to Panel.



Hiding the Widget

You can hide the product rating widget only by editing the `panel.ini` configuration file.

➢ ***To hide the product rating widget:***

1. Open the configuration file `%plesk_dir%\admin\conf\panel.ini`. If the file does not exist, create it.
2. Place the following lines in the file and save it:

```
[rating]
enabled=false
```

If you do not want to hide the form but only want to change the period of time after which the form is shown to the administrator, add the following lines to the file:

```
[rating]
enabled=true
showAfterDays=60
```

The `showAfterDays` parameter sets the number of days after which you want the widget to be displayed.

To undo the change and return to the default values, remove these lines from `panel.ini`.

Changing Web Presence Builder Functionality

You can remove certain user interface elements from the Web Presence Builder editor, or change their behavior. This can be done by editing the configuration file `%plesk_dir%\sb\config` located on the Panel-managed server.

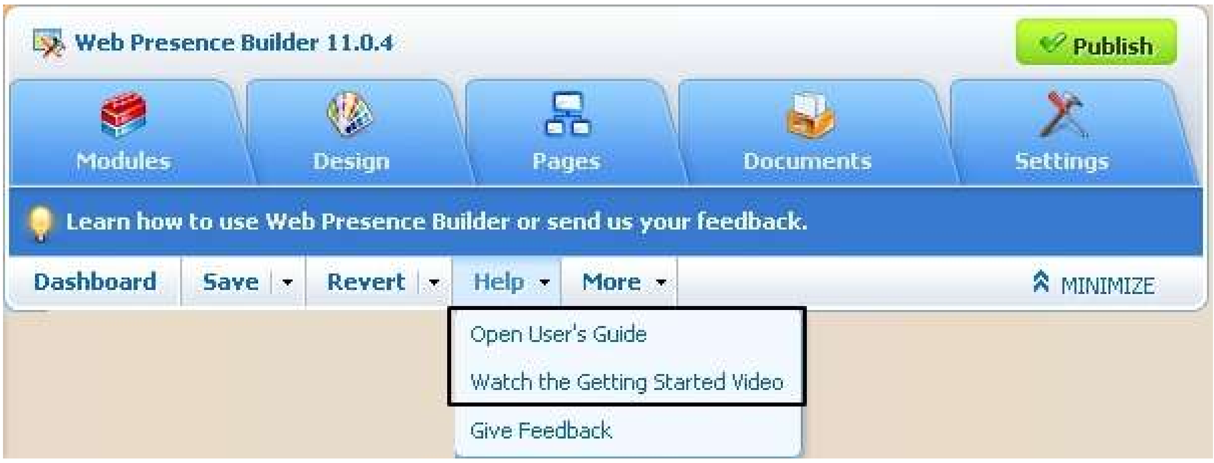
This chapter discusses how to do the following customizations:

- Change the **Open User's Guide** link in the editor to point to your own documentation.
- Embed your own **Getting Started** video into the editor for branding purposes.
- Embed your own **Getting Started** video in languages other than English. If most of your customers speak other languages, you might want to prepare custom localized videos.
- Remove the link to the **Getting Started** video from the editor.
- Prohibit your customers from removing their sites from the editor. You can do this by removing the **Remove Site** button.
- Make the following modules unavailable in the editor: Text & Images, Embedded Video, Image Gallery, Blog, Online Store, Shopping Cart, Commenting, Contact Form, Social Sharing, Advertisement, Search, Navigation, Breadcrumbs, Banner, Site Logo, Script.
- Make the functionality for importing sites from SiteBuilder 4.5 unavailable.

In this section:

Changing the Links to the User's Guide and Getting Started Video

The image below shows the location of the links to the **User's Guide** and the **Getting Started** video in the editor.


Web Presence Builder 11.0.4
Publish
Modules
Design
Pages
Documents
Settings
Learn how to use Web Presence Builder or send us your feedback.
Dashboard
Save
Revert
Help
More
MINIMIZE
Open User's Guide
Watch the Getting Started Video
Give Feedback

Changing the Link to the User's Guide

➢ ***To change the link to the User's Guide:***

1. Open the configuration file `%plesk_dir%\sb\config` on the Panel-managed server.
2. Add the line `[help]` to the file. If it is already present, skip this step.
3. Add the following line after the line `[help]`:

```
help_url = <link_to _your_documentation>
```

For example: http://example.com/user-guide/index.html?%%CONTEXT%%

At the end of this link, the mechanism providing context-sensitive help will automatically add a GUI screen identifier, so the resulting URL will look like: http://example.com/user-guide/index.html?%2FSiteBuilder%2FPanel.

The value that you specify as `help_url` may contain the following placeholders:

- `%%LOCALE%%` - 4-letter code of the locale currently set in the editor, for example, *en-US* or *ru-RU*.
- `%%VERSION%%` - full Web Presence Builder version, for example, *11.0.9*.
- `%%MAJOR_VERSION%%` – major Web Presence Builder version (first two numbers), for example, "11.0".
- `%%CONTEXT%%` - GUI screen identifier.

For example: If a user views the Web Presence Builder 11 editor in English, and clicks the **Help** link on the first page of the editor (which opens after clicking the **Create Site** button), the link http://example.com/%%MAJOR_VERSION%%/%%VERSION%%/%%LOCALE%%/user-guide/index.html?%%CONTEXT%% will be replaced with http://example.com/11.0/11.0.9/en-US/user-guide/index.html?%2FSiteBuilder%2FPanel.

4. Save the file.

Changing the Link to the Getting Started Video

To change the link to the Getting Started video:

1. Open the configuration file `%plesk_dir%\sb\config` on the Panel-managed server.
2. Add the line `[help]` to the file. If it is already present, skip this step.
3. Add the following lines after the line `[help]`:

```
getting_started_video_url = <video_link>
getting_started_video_enabled = on
```

4. Save the file.

Adding Localized Getting Started Videos

➢ ***To use a custom Getting Started video for a specific language:***

1. Open the configuration file `%plesk_dir%\sb\config` on the Panel-managed server.
2. Add the following line below `getting_started_video_url`:

```
getting_started_video_url_locale_<locale name> = <localized_video_link>
```

   Where **<locale-name>** is the 4-letter code of the Web Presence Builder locale (for example, *en_US* or *ru_RU)* in which the video will show*.*

   Note: The locale must be supported by the Web Presence Builder editor.

3. Ensure that the file contains the following line:

```
getting_started_video_enabled = on
```

4. Save the file.

Removing the Link to the Getting Started Video

➢ ***To remove the link to the Getting Started video:***

1. Open the configuration file `%plesk_dir%\sb\config` on the Panel-managed server.
2. Add the line `[help]` to the file. If it is already present, skip this step.
3. Add the following line after the line `[help]`:

```
getting_started_video_enabled = off
```

   If the file contains the line `getting_started_video_enabled = on`, just change `on` to `off`.

4. Save the file.

Prohibiting Users from Removing Their Sites

The following procedure describes how to prevent your customers from deleting their sites from the editor. You can do this by removing the **Remove Site** button.

➢ *To remove the button from the editor:*

1. Open the configuration file `%plesk_dir%\sb\config` on the Panel-managed server.
2. In the `[general]` section of the file, locate the following line:

```
allow_delete_site_ui = true
```

3. Replace the `true` value with `false`.
4. Save the file.

Making Modules Unavailable in the Editor

If you want to prevent your customers from using certain modules in the editor, you can remove these modules by adding a line to the configuration file `%plesk_dir%\sb\config`.

➢ *To remove modules from the editor:*

1. Open the configuration file `%plesk_dir%\sb\config` on the Panel-managed server.
2. In the `[general]` section of the file, add the following line:

```
hidden_widgets = <module's code name 1>, <module's code name 2>
```

   Where `<module's code name 1>` and `<module's code name 2>` are code names of the modules separated with a comma.

3. Save the file.

The following is a list of codes for all modules present in Web Presence Builder 11.

Module's name in the editor	Module's code name
Text & Images	text
Embedded Video	video
Image Gallery	imagegallery
Blog	blog
Online Store	eshopCatalog
Shopping Cart	eshopBasket
Commenting	commenting
Contact Form	contact
Social Sharing	sharethis
Advertisement	advertisement
Search	search

Navigation	navigation
Breadcrumbs	breadcrumbs
Banner	header
Site Logo	siteLogo
Script	script

Making the Site Import Functionality Unavailable

If you want to prevent your customers from importing sites from SiteBuilder 4.5 hosting accounts, you can remove the **Import Site from SiteBuilder 4.5** button from the editor. This can be done by adding a line to the configuration file `%plesk_dir%\sb\config`.

➢ *To make the site import functionality unavailable to users:*

1. Open the configuration file `%plesk_dir%\sb\config` on the Panel-managed server.
2. In the `[general]` section of the file, add the following line:

```
show_import_site_button = 0
```

3. Save the file.

Customizing Website Topics

Web Presence Builder (also referred to as *editor*) comes with a set of website topics. A topic is a site template containing several webpages prefilled with relevant text, banner images, navigation menus, appropriate scripts, and meta information for use by search engines.

Website topics work in the following way:

1. A user selects a suitable topic in Web Presence Builder by browsing in a list of topics or searching by a *keyword*.

   A number of keywords can be defined for each topic.
2. The user specifies a website name, selects a language, and specifies personal information, such as name, company, address, e-mail, and phone number.

   This information is inserted into the appropriate areas of the website, for example, on the "About Us" and "Contact Us" pages. This is done by means of *placeholder variables*. The following variables can be used in topics: `%%companyName%%`, `%%address%%`, `%%city%%`, `%%country%%`, `%%phone%%`, `%%email%%`.
3. After the user clicks **Submit and Create Site**, the editor does the following:
   - Loads the selected website topic with the prefilled text.
   - Inserts the information supplied by the user in the appropriate areas.
   - Picks a random color scheme and layout for the site. They are randomly selected by the editor to ensure a unique appearance of the site; however, when creating your own topic, you can apply a custom layout and style and make the editor use them for your topic.
   - Picks an appropriate image file to show as the site header (masthead). For each topic, you can specify a list of suitable images.
   - Loads the scripts (or *modules*) that should be used on the site. The modules provided by the editor include Text & Images, Contact Form, Image Gallery, Blog, Embedded Video, Online Store, Social Sharing, Site Search, and Advertising.

     When creating a custom topic, you should include only the following modules: Text & Images, Contact Form, Blog, Embedded Video, Comments, and Social Sharing.
4. The user makes the desired changes to the site content and publishes the site to a hosting account.

In this section:

CHAPTER 9

Adding Custom Website Topics

Creation of a custom topic involves the following steps:

1. Log in to Web Presence Builder and create a site with custom design and content: add pages, text, scripts, upload images to be used in the header background, and select custom layout and styles.
2. Save the created site to a snapshot and download the snapshot.
3. Upload the snapshot to the server file system and convert it to a ZIP package.

   You can do this by using the command-line utility `snapshot2wst.php`, which is shipped with Web Presence Builder.
4. Extract the package contents for further editing and edit the files that compose the site topic. In this step, you can:
   - Make corrections to the text shown on website pages.
   - Translate all text in the topic into a different language.
   - Upload an icon that should accompany the site topic on the topic selection screen.
   - Specify a title and description for the new topic.
   - Specify a title and description for the topic category if you have decided to create a new category.
5. Register the newly created topic with Web Presence Builder by means of the `snapshot2wst.php` utility. After registration, the new topic will appear on the topic selection screen in the Web Presence Builder editor.
6. Verify that the topic was successfully added to Web Presence Builder.

In this chapter:

Step 1: Creating a Site in Web Presence Builder

➢ ***To create a site:***

1. Log in to the Web Presence Builder editor.
2. Select a site topic that you want to use as a basis for your custom topic. Click **Create Site**.
3. On the **Prefill Your Website** step, do not enter any information. If it is prefilled, delete it.
4. Click **Submit and Create Site**.
5. Edit the design and content of the site as desired:
   - Add, edit, or remove pages, and change their order.
   - Add text, images, scripts, and other useful functions provided by modules.

     Note: You should insert only the following modules: Text and Images, Contact Form, Blog, Embedded Video, Comments, and Social Sharing. When inserting the modules, be sure to add them to the *page-specific areas*.

     All other modules, including those inserted into *site-wide areas*, will not be saved in a snapshot, and therefore, will not be available in the site topic. Other items that cannot be saved in a snapshot are documents uploaded through the Document Manager and the site ownership verification file.
   - Change layout and colors of the site elements.
   - When adding or editing text in the topic, you can use the following placeholders: `%%companyName%%`, `%%address%%`, `%%city%%`, `%%country%%`, `%%phone%%`, `%%email%%`.
   - Upload your own banner images if you want to include them in the site topic. If you upload several images for a topic, Web Presence Builder will randomly pick one of them when creating a new site based on the topic.

     To upload images, click in the header area, select the option **Selection from: own file**, and upload all images that you want to include, one by one. You should use images in GIF, JPEG, or PNG formats, preferably not exceeding 900-1000 pixels in width.

If you need assistance with the Web Presence Builder editor, open the **User's Guide** by clicking **Help** > **Open User's Guide**.

When your site topic is ready, save it to a snapshot as described in the following section.

Step 2: Saving a Site to a Snapshot

In this step, you need to save your topic to a snapshot.

➢ ***To save and download a site snapshot:***

1. In the Builder editor’s main menu, click the icon ▾ next to the **Save** link.
2. Type a name for the snapshot.
3. Click **Save**.
4. To download it, click the 💾 (Download) icon.

To prepare the snapshot for further editing, upload it to the Web Presence Builder server and convert to a ZIP archive as described in the following section.

Step 3: Uploading the Snapshot and Preparing for Editing

In this step, you need to upload the site snapshot to the Web Presence Builder server and convert it to a ZIP archive for further editing.

➢ ***To upload a snapshot to the server and convert it to a ZIP package:***

1. Connect to the server using SSH or a Remote Desktop connection.
2. Upload your snapshot file to the server. You can upload it, for example, to the `/home` directory on Linux systems, and `c:\Temp` on Windows systems.
3. Convert the snapshot file to a ZIP archive by issuing the following command:
   - On Linux systems:
     ```
     /usr/local/psa/bin/sw-engine-pleskrun
     /usr/local/sb/utils/snapshot2wst.php --create --
     snapshot=<source_snapshot_file.ssb> --
     file=<resulting_ZIP_archive.zip> --
     templateCategory=<category_code> --
     templateCode=<topic_code> --useSnapshotDesign
     ```
   - On Windows systems:
     ```
     “C:\Program Files (x86)\Parallels\Plesk\admin\bin\php.exe"
     -c "C:\Program Files (x86)\Parallels\Plesk\admin\php.ini" -
     dauto_prepend_file="" "C:\Program Files
     (x86)\Parallels\Plesk\sb\utils\snapshot2wst.php" --create -
     -snapshot=<source_snapshot_file.ssb> --
     file=<resulting_ZIP_archive.zip> --
     templateCategory=<category_code> --
     templateCode=<topic_code> --useSnapshotDesign
     ```

Where:

<source_snapshot_file.ssb> is the path to the source snapshot archive in SSB format that you uploaded to the server. For example: `/home/source-snapshot.ssb`.

<resulting_ZIP_archive.zip> is the location and file name of the resulting ZIP package. For example: `/home/package-file.zip`.

<category_code> is an identification code of the topic category. You can specify a name of a new category if you want to create it, or specify the code of an existing category. Do not use white spaces in category names. You will be able to set a human-readable name for this category later, by editing a file in the topic archive (`/resources/locale/en_US/SiteTemplates.lng`).

The following is a list of codes for the default categories present in Web Presence Builder 11.

Category name	Category code
Services	Services
Construction & Housing	ConstructionHousing
Retail Businesses	Retail
Organizations	Organization
Entertainment & Leisure	Entertainmentleisure
Arts & Design Services	ArtsDesign
Health & Sport	HealthSport
Education Services	Education
Fan & Hobby	FanHobby
Personal	Personal
Other	Other

<topic_code> is an identification code for the new topic. Be sure to use a unique name that does not coincide with an already existing one, otherwise, your custom topic will overwrite an existing topic. Do not use white spaces in topic codes. You will be able to set a human-readable name for this topic later, by editing a file in the topic archive (`/resources/locale/en_US/site_templates/<topic_code>/info.lng`).

Note that the option `--useSnapshotDesign` indicates that the styles, colors, layout, images, and header used in the site snapshot must be applied to the new website topic, and should not be overridden when new sites are generated based on that topic.

After the ZIP archive is created, you can unpack it for further editing, or you can edit the files without unpacking if your ZIP archive manager supports that.

Step 4: Editing the Files That Compose the Site Topic

Although you have prepared most of the content for the topic in the Web Presence Builder editor in **Step 1** (on page 180), you might also need to do the following:

- Optional steps:
  - Correct typos in text or make other minor changes, if required.
  - Translate the text in the site topic into another language, if required.
- Required steps:
  - Specify a title and a description for the new topic.
  - Specify a title and a description for the new topic category, if you have decided to create a new category.
  - Add an icon that should accompany the site topic on the topic selection screen in the Web Presence Builder editor.

➢ *To make changes to text contained in the website pages:*

1. In the topic archive structure, open the following file for editing: `/resources/locale/en_US/site_templates/<topic_code>/content.lng`.
2. Make the required changes to the text and save the file.

Note: If you want to correct the site slogan shown in the header area, or a site description added to the <META> tags of HTML pages of the site, edit the file `/resources/locale/en_US/site_templates/<topic_code>/site.lng`.

➢ *To specify a title and a description for the topic:*

1. In the topic archive structure, open the following file for editing: `/resources/locale/en_US/site_templates/<topic_code>/info.lng`.
2. Type the title and description in quotation marks.

Note: Here you can also specify keywords that can be used for searching for the topic on the topic selection screen. These keywords are also added to the `<META>` tags of HTML pages of the site. Search engines use them when searching for sites. If you want to specify several keywords, separate them with commas but no spaces.

3. Save the file.

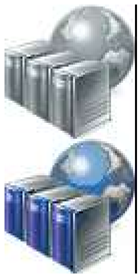
➢ *To specify a title and a description for the new topic category:*

1. In the topic archive structure, open the following file for editing: `/resources/locale/en_US/CustomSiteTemplates.lng`.
2. Type the title and description in quotation marks.
3. Save the file.

➢ *To add an icon for the topic:*

1. Prepare an image with the dimensions of 67 x 134 pixels, and save it to the PNG format, under the file name `icon.png`.

   The PNG file must contain a composite image created by combining two icons with the dimensions of 67 x 67, aligned vertically: The upper half of the image must contain a grey icon, and the lower half of the image, a full-colored icon. The grey icon is shown on the topic selection screen when the mouse pointer is not hovered over the topic, and the lower half of the image, the full-colored icon, is shown when the topic is selected. The following is an example of the composite image that you need to create.

2. In the topic archive structure, upload the file to `/htdocs/site_templates/<topic_code>/`.
3. When prompted, confirm you want to overwrite the existing file.

When you have finished editing the files, pack them into a ZIP archive and register with your Web Presence Builder installation, as described in the following section.

Step 5: Registering the New Topic with Web Presence Builder

To finish adding your custom topic to the Web Presence Builder editor and make it available for selection by users, you need to register the topic with Web Presence Builder.

➢ *To register a topic with Web Presence Builder, issue the following command:*

- On Linux systems:

```
/usr/local/psa/bin/sw-engine-pleskrun
/usr/local/sb/utils/snapshot2wst.php --register --
file=<path_to_ZIP_archive_with_topic>
```

- On Windows systems:

```
"C:\Program Files (x86)\Parallels\Plesk\admin\bin\php.exe"
-c "C:\Program Files (x86)\Parallels\Plesk\admin\php.ini" -
dauto_prepend_file="" "C:\Program Files
(x86)\Parallels\Plesk\sb\utils\snapshot2wst.php" --register
--file=<path_to_ZIP_archive_with_topic>
```

Step 6: Checking the New Topic

➢ *To verify that your new topic was successfully added to Web Presence Builder:*

1. Log in to the Web Presence Builder editor.
2. On the topic selection screen, select your topic and click **Create Site**.
3. Click **Submit and Create Site**.
4. Review the site content to ensure that everything looks as expected.

CHAPTER 10

Rearranging and Removing Topics and Categories

You can rearrange and remove topics and categories by editing a configuration file and then applying it to a Web Presence Builder installation.

➢ *To modify the list of topics and categories available on a Web Presence Builder server, do the following:*

1. Log in to the server over SSH or Remote Desktop.
2. Create a configuration file by issuing the following command:
   - On Linux systems:

     ```
     /usr/local/psa/bin/sw-engine-pleskrun
     /usr/local/sb/utils/snapshot2wst.php --export --
     file=<configuration_file>.cfg
     ```

   - On Windows systems:

     ```
     "C:\Program Files (x86)\Parallels\Plesk\admin\bin\php.exe"
     -c "C:\Program Files (x86)\Parallels\Plesk\admin\php.ini" -
     dauto_prepend_file="" "C:\Program Files
     (x86)\Parallels\Plesk\sb\utils\snapshot2wst.php" --export -
     -file=<configuration_file>.cfg
     ```

3. Edit the resulting configuration file:
   - To remove unwanted topics or categories, comment out the corresponding entries in the file: place a semicolon (;) at the beginning of each line.

     Categories are represented by lines containing text enclosed in square brackets. For example: `[Retail]`.

     Topics are represented in the list by lines like `<topic_code>.info = "Topic title"`.
   - To change the order of topics or categories, move the corresponding lines within the file.
4. Save the file.

5. Apply the modified configuration file to the Web Presence Builder installation by issuing the following command:

   - On Linux systems:

     ```
     /usr/local/psa/bin/sw-engine-pleskrun
     /usr/local/sb/utils/snapshot2wst.php --import --
     file=<configuration_file>.cfg
     ```

   - On Windows systems:

     ```
     "C:\Program Files (x86)\Parallels\Plesk\admin\bin\php.exe"
     -c "C:\Program Files (x86)\Parallels\Plesk\admin\php.ini" -
     dauto_prepend_file="" "C:\Program Files
     (x86)\Parallels\Plesk\sb\utils\snapshot2wst.php" --import -
     -file=<configuration_file>.cfg
     ```

➢ *To restore the default set of topics and categories in Web Presence Builder:*

Issue the following command:

- On Linux systems:

  ```
  /usr/local/psa/bin/sw-engine-pleskrun
  /usr/local/sb/utils/snapshot2wst.php --reset
  ```

- On Windows systems:

  ```
  "C:\Program Files (x86)\Parallels\Plesk\admin\bin\php.exe" -c
  "C:\Program Files (x86)\Parallels\Plesk\admin\php.ini" -
  dauto_prepend_file="" "C:\Program Files
  (x86)\Parallels\Plesk\sb\utils\snapshot2wst.php" --reset
  ```

CHAPTER 11

Localization

Parallels Plesk Panel 11.0 is shipped with the following interface languages:

- American English
- Dutch
- French
- German
- Italian
- Japanese
- Polish
- Portuguese
- Russian
- Spanish
- Simplified Chinese
- Traditional Chinese

It is possible to translate Parallels Plesk Panel interface (including Web Presence Builder) into other languages and apply the translation to a Panel installation.

For detailed instructions on translating Panel into your language, refer to **Parallels Plesk Panel Localization Guide** available at the following locations:

- Online HTML version - http://download1.parallels.com/Plesk/PP11/11.0/Doc/en-US/online/plesk-localization-guide/
- PDF file - http://download1.parallels.com/Plesk/PP11/11.0/Doc/en-US/pdf/plesk-localization-guide.pdf

CHAPTER 12

Registering Additional Services with Panel Notifications

Hosting companies can add value to hosting plans and enhance the Panel capabilities by adding third-party services to Panel. In the terms of Panel, such services are called *additional*. An additional service can be any resource available at a certain URL (like a Panel extension, web app, and so on), even if it is completely independent from Panel. It can be a spam filter, statistics analytic tool, helpdesk or other services.

The administrator and resellers associate these additional services with hosting plans when setting up a distribution strategy. For example, if you have a service that performs custom mail filtering, Panel lets you offer this service with, say, the Silver hosting plan and do not offer with others.

To make Panel aware of an additional service, you should add the service to Panel. In the simplest case, when the service resides on a remote URL and does not require any notifications from Panel, add it from the Panel GUI, page **Service Plans** > **Additional Services**. From there, you can also associate the service with a custom button that is instantly added to the **Websites & Domains** page of each subscriber.

Another way to add a service is to make a programming call to Panel. The benefit of this approach is that it lets your service to receive Panel notifications about the object changes. For example, the mail filtering service we mentioned earlier must track account name changes to serve renamed accounts as well. Though you can make a call that adds a service and does not subscribe it to notifications, this operation does not make much sense as it is easier to add such services through the GUI. Thus, we consider that you will generally use programming means to both add services and register them with Panel Notifications (PN).

The possible inconvenience of adding services by a call is that you are unable to edit details of the services through the Panel GUI. Please consider it when designing service names and descriptions. Another peculiar feature of adding services by a call is that are not automatically visible to customers. We recommend that you use custom buttons or write an extension to display the service in the Control Panel.

PN sends notifications about subscriptions, sites, and e-mail accounts related to the service. The relation *subscription - service* is derived from plans: A service is associated with plans, whereas subscriptions are plan instances. If a subscription has sites or e-mail accounts, the changes of these supplementary objects are also tracked.

If you wish to register your service with the PN, do the following:

1. Create a service-specific class that implements interface *Plan_Item_Interface*.

   By implementing this interface, you specify the service properties in Panel and define what type of changes it should receive and how it should handle them. When a change happens, Panel executes the change handling code from this class. This code runs in the Administrator context.
2. Register this class by an appropriate call.

For details on interface *Plan_Item_Interface* and instructions on how to implement it, see section **Preparing a Service for Registration** (on page 191).

To learn how to register a prepared class, see section **Registering the Service** (on page 192).

Note: This section does not explain how to write third-party services, integrate them into the Panel GUI, or get access to the Panel resources. If you wish to make a registered service available to customers, create a custom button pointing to the service URL and place it on pages available to customers. This can be done through the command line interface (CLI) and will work only if your service receives enough information from PN. If your service requires access to other Panel resources or you want to build your service into the Panel GUI, consider writing an extension.

In this chapter:

CHAPTER 13

Preparing a Service for Registration

To prepare a service for registration with Panel Notifications, create a PHP file containing a class that implements interface *Plan_Item_Interface* and put the file into a directory available to the Panel. The directory must have a unique name and reside in `/PRODUCT_ROOT_D/admin/plib/`, where `PRODUCT_ROOT_D` is the installation directory of the Panel.

When designing names of the class that implements the interface and the file that includes this class, follow Zend naming conventions. For example, if you create a directory `/PRODUCT_ROOT_D/admin/plib/servicedir` and put there file `servicefile.php`, then the class name must be *servicedir_servicefile*. To learn more about the naming conventions, see http://framework.zend.com/manual/en/coding-standard.naming-conventions.html.

We offer a sample class you can use as a base when writing own classes to help you with the implementation. The code is supplemented by comments that explain the interface organization. To view the code, refer to the **Implementation of Plan_Item_Interface section** (on page 194).

CHAPTER 14

Registering the Service

We suppose that you have prepared the *Plan_Item_Interface* implementation and want to register your service with Panel Notifications. To perform the registration, create an arbitrary PHP file, say, `register.php`, and paste the code given below into the file. Substitute *servicedir_servicefile* with your class name throughout the code. When ready, run the code by using one of these shell commands:

- On Linux, run `/usr/local/psa/bin/sw-engine-pleskrun register.php`
- On Windows, run `%plesk_bin%\php register.php`

Note: We suppose that the Panel is installed to the default installation directory. If you use a custom directory, please update the paths correspondingly.

To view the `register.php` code, refer to the **Implementation of Plan_Item_Interface section** (on page 198).

If it is impossible for you to run the PHP code, you can register the service directly by running this MySQL statement customized to your class.

```
INSERT INTO PlanItems (
     classname,
     name,
     applicableToEmail,
     uuid
 )
 VALUES (
     'servicedir_servicefile',
     'urn:isv:custom-item-connector:1',
     1,
     '219b7656-8e92-869d-828a-6814cda71a1s');
```

The definition of the parameters that present in the statement is as follows:

- *classname*, string

  The name of the class that contains the interface implementation.

- *name*, string

  The unique name of the service.

- *applicableToEmail,* boolean (0,1)

  This parameter subscribes the service to e-mail accounts changes. Alternatively, you can specify applicableToSite or applicableToSubscription to receive notifications about changes of the Panel subscriptions and sites.

- *uuid*, string

  The service identifier.

CHAPTER 15

Code Samples

Implementation of Plan_Item_Interface

```
<?php

/**
 * Sample implementation of a Service Plan Item declaration.
 *
 */

/**
 *
 * Plan_Item_Interface declares the following methods:
 *
 *   public function getName();
 *   public function getHint($locale);
 *   public function getDescription($locale);
 *   public function update(
 *       $subject,
 *       $change,
 *       $subscriptionUuid,
 *       $planItemUuid
 *   );
 *
 * Additional descriptions are available as annotations to method
 * implementations below.
 *
 */
class servicedir_servicefile implements Plan_Item_Interface
{
    private $_logFile = '/tmp/custom-item-connector.log';
    private $_locales = array(
        'en-US' => array(
            'description' => 'External Mail Filtering Service',
            'hint' => 'Filter all incoming mail throug cloud mail filter',
        ),
        'de-DE' => array(
            'description' => 'This is a description in German',
            'hint' => 'And hint is also in German',
        ),
    );

    /**
     * Returns a unique name of an additional service.
     * The Panel uses this name to distinguish services from each other.
     *
     *
     * @return string
     */
    public function getName()
    {
        return 'urn:isv:custom-item-connector:1';
    }

    /**
     * Returns a localized name of the service, that will be
     * displayed in the Panel (in Service Plans > Additional Services).
     *
     *
     * @param string $locale Currently used locale in format 'xx-XX' (RFC
1766).
     * @return string
     */
    public function getHint($locale)
    {
        return $this->_('hint', $locale);
    }

    /**
     * Returns a localized name of the service, that will be
     * displayed in the Panel (in Service Plans > Additional Services).
     *
     *
     * @param string $locale Currently used locale in format 'xx-XX'
     * @return string
     */
    public function getDescription($locale)
    {
        return $this->_('description', $locale);
    }

    /**
     * Receives update notifications about related Panel objects. The
objects are
     * specified with object implementing Plan_Item_Subject interface that
     * declares the following methods:
     *
     *   public function getType() - Returns type of a changed object
     *       as specified by Plan_Item_Subject constants
     *
     *          Available types: Plan_Item_Subject::EMAIL,
Plan_Item_Subject::SITE,
     *          Plan_Item_Subject::SUBSCRIPTION
     *
     *
     *   public function getProperties() - Returns the current values of
     *      subject properties. The properties are returned as key => value
pairs.
     *      For deleted objects, properties values remain as they were
     *      before deletion. For created objects, properties values are
those
     *      that were assigned to these objects upon creation.
     *
     *
     *      Available properties.
     *
     *      For subscriptions:
     *        GUID: string
     *        status: boolean
     *
     *      For sites:
     *        status: boolean
     *        name: string
     *        GUID: string
     *
     *      For e-mail accounts:
     *        email: string (account name)

     *
     * Changes are specified with $change that is one of
     * Plan_Item_Notification::{CREATED,UPDATED,DELETED} constants.
     *
     * $subscriptionUuid is a GUID of subscription.
     *
     * $planItemUuid is a GUID of the additional service.
     *
     *
     * @param Plan_Item_Subject $subject
     * @param int $change
     * @param string $subscriptionUuid
     * @param string $planItemUuid
     * @return void
     */
    public function update(
        Plan_Item_Subject $subject,
        $change,
        $subscriptionUuid,
        $planItemUuid
    )
    {
        $subjectType = Plan_Item_Subject::EMAIL === $subject->getType()
            ? 'Email address'
            : 'unknown';

        switch ($change) {
            case Plan_Item_Notification::CREATED:
                $this->_log("$subjectType created: " .
                    print_r($subject->getProperties(), true)
                );
                break;
            case Plan_Item_Notification::UPDATED:
                $this->_log("$subjectType updated: " .
                    print_r($subject->getProperties(), true)
                );
                break;
            case Plan_Item_Notification::DELETED:
                $this->_log("$subjectType deleted: " .
                    print_r($subject->getProperties(), true)
                );
                break;
        }
    }

    /**
     * Declares from what type of Panel objects the service will receive
notifications.
     * It returns either an array or a single type.
     *
     * Plan_Item_Subject::SUBSCRIPTION
     *       The service will recieve notifications about all changes made
to
     *    subscription (including activation/suspension of subscriptions,
     *    assigning/de-assigning the service to a subscription)
     *
     * Plan_Item_Subject::EMAIL
     *       The service will recieve notifications about all changes made
to
     *    e-mail accounts on affected subscriptions.
     *
     * Plan_Item_Subject::SITE
     *       The service will recieve notifications about all changes made 
to
     *    site names in the scope affected subscriptions.
     *
     */
    public static function getSubjectTypes()
    {
        return array(Plan_Item_Subject::EMAIL);
    }

    private function _($key, $locale)
    {
        if (!isset($this->_locales[$locale])) {
            return $this->_locales['en-US'][$key];
        }

        return $this->_locales[$locale][$key];
    }

    private function _log($message)
    {
        date_default_timezone_set('UTC');
        $logString = "[" . date("H:i:s") . "] " . $message;
        file_put_contents($this->_logFile, $message, FILE_APPEND);
    }
}
```

Registration of an Additional Service

```php
<?php

/**
 * Sample code to register an additional service in
 * the Panel 10.1 and above.
 *
 */

/**
 * Use the following instructions to initialize the Panel PHP
 * environment when running command-line PHP script with sw-engine-pleskrun
 * utility. On Linux OSes, it resides in /usr/local/psa/bin/.
 *
 * For Windows servers, use the following command to run the registration
script.
 * "%plesk_bin%\php.exe" -d auto_prepend_file="" "<ABSOLUTE-PATH-TO-
SCRIPT>"
 *
 * Comment the following two lines if you run the PHP script through the
Panel
 * web interface.
 */
require_once('api-common/cu.php');
cu::initCLI();

/**
 * The following code registers the service that was
 * implemented with the servicedir_servicefile class. This class must
 * be available for autoloading from the Panel.
 */

Db_Table_Broker::get('PlanItems')->register(
    new servicedir_servicefile(),
    servicedir_servicefile::getSubjectTypes()
);
```

CHAPTER 16

Troubleshooting

This chapter describes how to repair malfunctioning Panel services.

In this chapter:

Repairing Panel Installation

By using Parallels Plesk Panel Reconfigurator, you can check and repair Panel installation that is malfunctioning due to misconfiguration of one or more of its components.

The following problems can be identified and corrected by using the **Repair Plesk Installation** option:

- problems with mail delivery caused by user-made changes in DNS server addresses
- misconfigurations of system user accounts or groups used by Panel to access system objects
- malfunction of Panel's services
- misconfigurations in user access permissions for files and folders on server disks and hosting folders
- miscalculations of disk space usage by individual domains and subdomains

➢ *To check and repair Panel installation, follow these steps:*

1. Log in to the Panel-managed server as a user with administrator rights by using Remote Desktop.
2. In the Windows **Start** menu, select **All Programs** > **Parallels** > **Panel** > **PP Reconfigurator**. The Reconfigurator application window opens.
3. Select the **Repair Plesk installation** option.
4. Select repairing actions that you want to perform by using checkboxes. See the following table for explanation of each check and repair option.
5. Click **Check**. Reconfigurator automatically performs the following tasks:
   - Corrects the problems with mail delivery caused by the changes made to DNS server addresses.
   - Restores system accounts used by Panel to manage the server.
   - Checks and corrects Panel settings and system account used to run and manage various Panel services.
   - Resets security settings for files and folders.
   - Checks and corrects ownership of files and folders and recalculates disk space usage by individual domains and subdomains accordingly.

Check & Repair options

Option	Description

Plesk Mail Server	DNS settings from network adapters are applied to mail server; network name `localhost` is added to the relay list.
User Accounts Used by Plesk	During the full repair, Reconfigurator performs the following tasks: ▪ checks if Windows user accounts `psaadm`, `tomcat4`, `ASPNET`, and groups `psacln, and psaserv` exist and creates them if they do not exist. ▪ Restores members of the `psaserv` group but not the members of the `psacln` group. ▪ checks if the `psaserv` group includes the accounts: `ASPNET`, `LOCAL SERVICE`, `NETWORK SERVICE`, and `IUSR_`*<computer name>* (Internet Guest Account) and restores and adds them to the group if they are not. ▪ checks Panel's system accounts (including Internet accounts for anonymous access to domains) and IIS settings for anonymous domain access.
Plesk File Security	Reconfigurator checks security settings on the following folders: ▪ `%plesk_dir%` ▪ `%SystemRoot%\temp` ▪ `%plesk_vhosts%` ▪ `%plesk_vhosts%\default` ▪ `%plesk_vhosts%\sqladmin` ▪ `%plesk_vhosts%\webmail` ▪ `%plesk_vhosts%\.skel` checks security settings for subfolders and files found in the following directories ▪ `%plesk_dir%` ▪ `%SystemRoot%\temp`
Plesk Services	For each service, Reconfigurator performs the following tasks: ▪ checks and, if necessary, corrects the paths to the service binary file ▪ check and, if necesary, corrects the user account that is used to start the service ▪ registers with the correct paths all unregistered services registered ▪ starts all inactive services and changes their startup types to `Automatic` If the `Bind` service is disabled via Panel and is not registered in the system, it is not registered by Reconfigurator. If Reconfigurator finds the `Bind` service running on the server., it stops it and changes its startup type to `Disabled`. It also ensures that the Panel service uses the `psaadm` account to log on to the system.

Plesk Virtual Hosts Security	For each object, Reconfigurator first checks if the object's DACL corresponds to the object's security rules contained in Panel's security files. (For detailed information about security rules, see **Security Metadata Files and Templates** (on page 108).) If Reconfigurator cannot resolve a SID, it removes all ACEs corresponding to the SID from the DACL. If one or more SIDs specified by the security rules are missing in the DACL or specific access rights in the ACEs do not match those determined by the security rules, Reconfigurator updates the existing DACL.To enable this, Reconfigurator recreates all missing user accounts for which ACEs must be added to the DACL. Depending on the object type, Reconfigurator uses different access rights matching criteria and DACL update methods. For domain and subdomain root folders, after all unresolved SIDs' ACEs are removed from a DACL, Reconfigurator check if access rights defined in the existing DACL exactly match those defined by the security rules. If a mismatch is found (DACL contains SIDs that are not found in the security rules, required SIDs are missing, or SID's access rights are different), Reconfigurator compiles a new DACL based on the current Panel's security rules and completely overwrites the existing DACL. For objects other than domain and subdomain root folders, after all unresolved SIDs' ACEs are removed from a DACL, Reconfigurator only checks if all access rights defined by the security rules are found in the DACL. If some access rights are missing from the DACL, Reconfigurator merges the ACEs remaining in the existing DACL with the ACEs defined based on the security rules.
Plesk Database	Reconfigurator cleans up the Repository table of the Panel's internal database and checks application vaults' state.
Plesk Quotas	Reconfigurator checks that folders and files in a domain folder have proper ownership - are owned by to the corresponding user account or a web user of the corresponding domain. (If they are owned by other accounts, Panel may report wrong disk space usage by the corresponding hosing accounts).

Detecting Newly Installed Components

If you installed a third-party component but Panel does not recognize it and does not show it in **Server Components**, you can check the Parallels Plesk Panel registry subtree:

```
HKEY_LOCAL_MACHINE\SOFTWARE\PLESK\PSA Config\Config\Packages
```

Check if the necessary component is present there. If everything is correct, you need to check whether all required `*.dll` files are present in the `%plesk_bin%` folder. You can find the `*.dll` name in the following key:

```
HKEY_LOCAL_MACHINE\SOFTWARE\PLESK\PSA
Config\Config\Packages\package.name\component.name\dll
```

For example:

```
HKEY_LOCAL_MACHINE\SOFTWARE\PLESK\PSA
Config\Config\Packages\mailserver\mailenable\dll == 'C:\Program
Files\Parallels\Plesk\admin\bin\mailenableproviderw.dll'
```

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If the `*.dll` is not present in `%plesk_bin%` you need to locate it and copy to the `%plesk_bin%` folder. After that, log in to Server Administration Panel and click **Tools & Settings** > **Server Components** > **Refresh**. The component should appear.

Restoring Mail Configuration

You can restore your mail server functionality in cases when errors appear concerning the mail server misconfiguration or its mismatching with the Panel's internal database. This purpose is served by an internal utility `mchk.exe` residing at `%plesk_dir%\admin\bin\`. The utility restores the mail server configuration using the Panel's database data.

Note: The utility restores only configuration of the mail server selected as default in Server Administration Panel > **Tools & Settings** > **Server Components**.

In general, `mchk.exe` matches the mail server configuration with Panel's database. In case when you execute `mchk.exe --all --fix-all`, the utility resets the mail server configuration the following way: It deletes all existing configuration files of the mail server (leaving its content) and then creates them according to the Panel's database.

Warning: Use `--fix-all` option only if the mail server's configuration files are so much corrupt that the mail server itself cannot work with them properly and executing mchk.exe with other options does not solve the problem.

Usage: `mchk.exe` [options]

Available options

Option	Parameter	Action	Example
`--all`		Checks and restores server-wide mail settings and mail settings for all domains	`mchk.exe --all`
	`--fix-all`	Resets server-wide and domain's mail settings	`mchk.exe --all --fix-all`
`--domain`	`--domain-name`	Checks and restores mail settings for a specified domain	`mchk.exe --domain --domain-name=example.com`
`--all-domains`		Checks and restores mail settings for all domains	`mchk.exe --all-domains`
`--global-settings`		Checks and restores only server-wide mail settings	`mchk.exe --global-settings`

Note: This utility does not have any help reference, and executing it with arguments like `/?` will simply start restoring of mail configuration.

Reducing Amounts of Notifications from Antivirus

If you receive too many e-mail notifications from Parallels Premium Antivirus, you can switch them off. To do this, perform the following steps:

1. Log in to the database:

```
    "C:\%plesk_dir%\mysql\bin\mysql" -uadmin -p<password> -P8306 psa
```

2. Make sure that the record regarding antivirus notifications for administrator is present in the `psa.misc` table. Find it out with the following SQL query:

```
    mysql> select val from misc where param =
'AntivirusNotifyAdmin';
```

3. Notification can be enabled or disabled by switching the parameter using one of the following queries:

   - To enable notifications:

```
mysql> update misc set val='1' where param = 'AntivirusNotifyAdmin';
```

   - To disable notifications:

```
mysql> update misc set val='0' where param = 'AntivirusNotifyAdmin';
```

   - To insert the value if it is not present in the database, issue the following:

```
mysql> insert into misc values ('AntivirusNotifyAdmin','0');
```

Recovering Forgotten Password

In addition to the password reminder link on the login screen, you can use the `plesksrvclient.exe` utility located in the `%plesk_bin%` folder to view the password or set up a new password.

To view the current password, issue the following command:

```
"%plesk_bin%\plesksrvclient.exe" -get
```

To set a new password, issue the following command:

```
"%plesk_bin%\plesksrvclient.exe" -set <new_password> true
```

Checking and Correcting Component and Folder Permissions

Panel sets permissions for all server partitions so as to prevent users from interfering with each other or accessing unknown third-party software. For this reason, Panel components or third-party applications used with Panel can have insufficient permissions for proper operation. The *Check component and folder permissions* option of the Reconfigurator utility can be used to check and correct permissions for files and folders after installing third-party applications on the Panel-managed server. With this option, you do not have to scan the whole disk, but you can check and correct permissions just for one or several applications, or for a selected partition or directory.

➢ *To check and correct permissions for third-party applications, follow these steps:*

1. Log in to the Panel-managed server as a user with administrator rights by using Remote Desktop.
2. In the Windows **Start** menu, select **All Programs** > **Parallels** > **Panel** > **PP Reconfigurator**. The Reconfigurator application window opens.
3. Select the **Check component and folder permissions** option.
4. Select one or several Panel components from the list or select the partition where the third-party application is installed in the **Path to check** field.
5. Click **Check**.

   View the progress at the bottom of the form. As soon as the check is complete and the permissions are fixed, you are taken back to the main window of Reconfigurator.

CHAPTER 17

Glossary

DACL (Discretionary Access Control List)

Part of the security descriptor for an object. The DACL can be applied to a newly created object in order to restrict access to the object.

ACE (Access Control Entry)

An individual entry in an access control list (ACL). An access control entry (ACE) contains an SID and describes the access rights to a system resource by a specific user or group of users. Each object has a set of all ACEs, which is used to determine whether an access request to the object is granted.

SID (Security Identifier)

A value, unique across time and space, that identifies a process in the security system. SIDs can either identify an individual process, usually containing a user's logon identifier, or a group of processes.

ACL (Access Control List)

An ordered list of access control entries (ACEs).

ACCESS RIGHT

A permission granted to a process to manipulate a specified object in a particular way (by calling a system service). Different system object types support different access rights, which are stored in an object's access control list (ACL).

SECURITY DESCRIPTOR

A data structure used to hold per-object security information, including the object's owner, group, protection attributes, and audit information.