

Parallels[®] Panel

Installation, Upgrade, Migration, and Transfer Guide

Parallels Plesk Panel 11.5

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Get Started

There are four ways to perform Panel deployment described in this guide: installation, upgrade, transfer, and migration.

Installation



Panel installation can be performed either manually (suits best for single installation) or in an automated, unattended, manner. The latter way is recommended for installing Panel on multiple servers. For mass Panel deployments, we also recommend that you install Panel instances to Parallels Virtuozzo Containers.

Learn more in the chapter **Installing Panel** (on page 7).

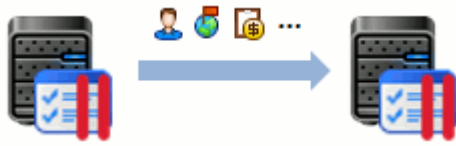
Upgrade



If you use an earlier Panel version, you can upgrade it to a later version when it is available. There are two ways of upgrading Panel: *in-place upgrade* and *upgrade by transfer*. While in-place upgrade is the updating of Panel components within one server, upgrade by transfer implies moving of data from the server with earlier Panel version (source) to the server with a later Panel version (destination).

Learn more in the chapter **Upgrading Panel** (on page 53).

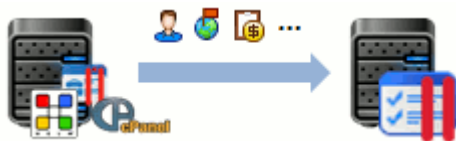
Transfer



Panel supports transferring hosting data (service plans, subscriptions, and so on) from one Panel server to another. This allows you, for example, to seamlessly move your Panel to a more productive server.

Learn more in the chapter **Transferring Data Between Panels** (on page 104).

Migration



Migration is the only way to switch to Panel from other hosting solutions (CPanel, Confirx, and other). This is done by transferring hosting data from a source server to Panel.

Learn more in the chapter **Migrating from Other Panels** (on page 124).

Installing Panel

There are a number of installation scenarios depending on your environment:

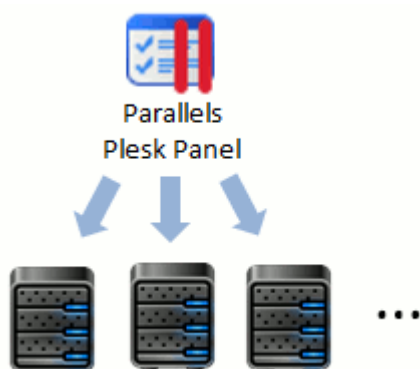
Dedicated server	<ul style="list-style-type: none"> Manual or automated installation.
Virtual server	<ul style="list-style-type: none"> Manual or automated installation. Cloning Panel from server to server. Installation using Virtuozzo templates (only for Parallels Virtuozzo Containers).
Cloud Platform	<ul style="list-style-type: none"> Deployment in Amazon Web Services and Windows Azure. Cloning Panel from server to server.

Manual Installation



This is the best way if you want a new *single* installation of Panel. *Manual* means that the installation requires user input. The wizard will prompt you to enter various installation settings such as Panel version, installed components, and so on. Manual installation is performed by the Parallels Installer utility that you should download from the official Parallels website and run either in the GUI or in the command-line mode. For those who want to quickly install Panel in the most typical configuration, we offer the One-Click Installer utility. Learn more in the section **Manual Installation** (on page 20).

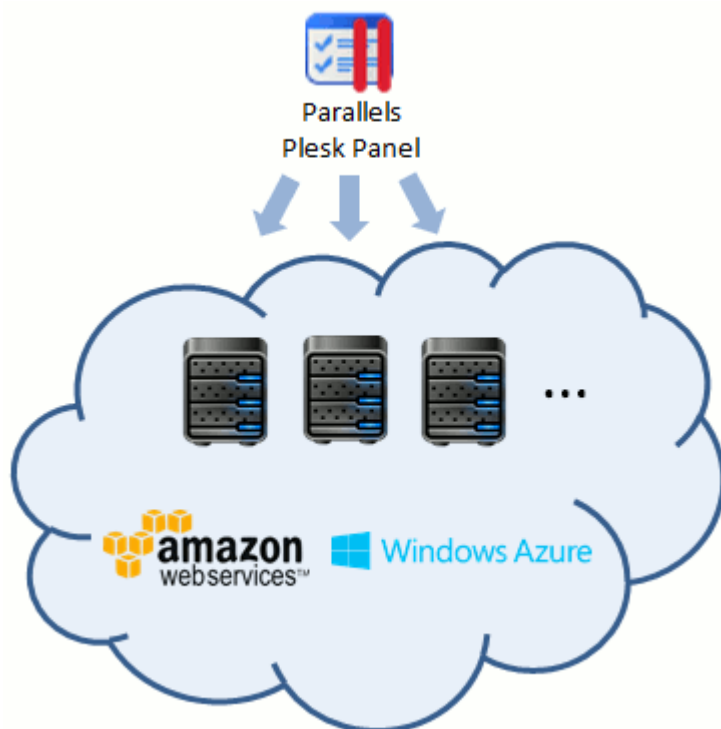
Automated Installation



A manual Panel installation is time-consuming when it comes to handling a large number of servers. To facilitate these complex deployments, we offer the automated type of installation. The main idea is to run the installation without any user input. This is done by setting up all installation parameters with the help of Parallels Installer command-line options. Moreover, on Linux systems we suggest that you write a script that copies and simultaneously runs the Installer utility on a number of servers. Learn more in the section **(Advanced) Automated Installation** (on page 23).

Note that automated installations can be significantly speeded up if you create a local mirror of the Parallels updates server. Learn more in **Appendix C: Mirroring Parallels Updates Server** (on page 188).

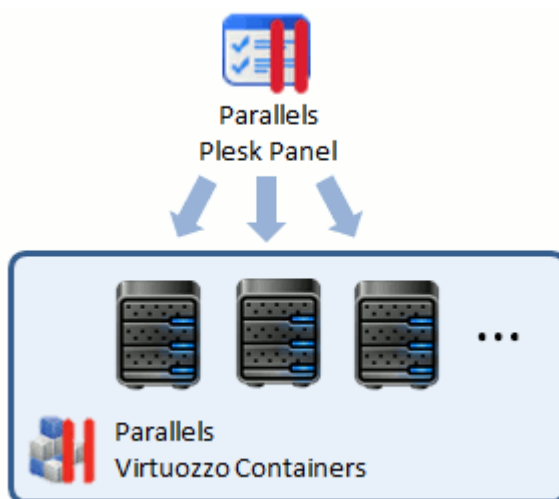
Installation on Cloud Platforms



Panel fully supports installation on cloud platforms such as Amazon Web Services and Windows Azure. To deploy Panel on these platforms, use the following guidelines:

- **Amazon Web Services**
 - Instructions for Linux (<http://kb.parallels.com/en/114216>) and Windows (<http://kb.parallels.com/114947>).
 - Video tutorial.
- **Windows Azure**
 - Instructions (<http://kb.parallels.com/en/114648>).
 - Video tutorial (http://www.youtube.com/watch?v=PVfzE1_6l0A).

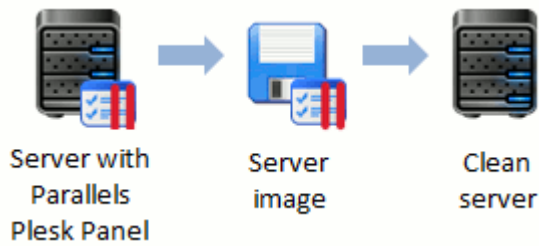
Installation to Parallels Virtuozzo Containers



Parallels Virtuozzo Containers (PVC) is a virtualization solution employed by a large number of service providers. You can install Panel to Virtuozzo Containers using either the manual or automated installation way described above but the best way to do it is to use PVC app templates. A PVC app template is a package containing app data and configuration scripts that are necessary for installation. The main benefit of PVC templates is that you install an app template to your server just once, and then install the app from the template to a number of containers simultaneously. Further app upgrades are also applied through templates.

When installing Panel with a PVC template, you do not need to use the Installer utility. You just apply a certain template to a container (or a number of containers) using the Virtuozzo commands. If you need a number of containers with Panel, you can clone the container with the installed template as many times as you need. Learn more in the section **(Advanced) Installation to Parallels Virtuozzo Containers** (on page 27).

Cloning Panel from Server to Server



Panel cloning is the copying of the same Panel instance to different virtual machines without compromising Panel operability. This scenario is applicable in case you already have a working Panel instance in some virtual environment and want to get a new Panel server by simply cloning the virtual server image. Learn more about cloning in **(Advanced) Cloning Panel in Virtual Environment** (on page 39).

Installation Steps

Typical installation begins with some preliminary steps (on page 11) (checking requirements, choosing the proper Panel version, and so on) and ends with some post-installation configuration (on page 42) (initializing Panel, installing a license key, and so on). Most of these steps are the same for all installation types. The only difference is that in manual installations, post-installation steps should be performed through the GUI, while for automated installations we suggest using Panel API or command-line interface to automatically perform the post-installation configuration.

Note that Panel supports many third-party services that are not installed by default (such as support for Google Services, UNITY Mobile Services, Microsoft Web Deploy, and others). If you want Panel to provide such services, you must install them after all post-installation steps are finished. Learn more in **Appendix A: Installing Third-Party Services** (on page 176).

Moreover, you can significantly extend Panel functionality on Linux systems by installing Panel extensions. You can access such extensions directly from the Panel GUI and gain control over many additional and handy features, such as a file server, firewall, and others. Learn how to install additional Panel extensions in **Appendix B: Installing Panel Extensions (Linux)** (on page 187).

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Before Installing Panel

There are a few preliminary steps that you might need to perform before installing Panel. These steps apply to all installation scenarios.

Next in this section:

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2. Choose a Release Tier 14
3. Choose Panel Components 15
4. (Advanced) Use Alternative Package Repositories 19

1. Check Installation Requirements

Before you install Panel on a server, make sure you meet the following requirements.

Requirements for Linux Systems

We recommend that you install Panel on a clean operating system. Before installing Parallels Plesk Panel for Linux, make sure that the following requirements are met:

- Your server meets the requirements described in the Panel release notes.
- A static IPv4 address is preliminarily configured. If you have an environment that uses only IPv6 addresses, ensure the proper address translation to the IPv4 segment of the Internet.
- Certain ports should be open. For details, see <http://kb.parallels.com/en/391>.
- PHP 5 is required for the Presence Builder component.
- The AppArmor app is disabled. For details, see <http://kb.parallels.com/en/112903>.
- The disk space allocated to the `/tmp` directory exceeds three gigabytes.
- A user who runs the installer can execute files in the `/tmp` directory. This makes it possible to install the system packages required for Panel. When the installation is completed, we recommend that you mount `/tmp` with the `noexec` option. For details on how to do it, see <http://kb.parallels.com/en/1410> (<http://kb.parallels.com/en/1410>).
- If you run Debian, CloudLinux, or Ubuntu, add updates and security repositories to your `apt` (package manager) configuration.
- Your hard drive must be properly partitioned. For instructions, see the article on partitioning tips at http://kb.parallels.com/article_17_819_en.html.
- On Debian and Ubuntu operating systems, the path `/usr/local/psa` is reserved for system needs. We highly recommend that you neither manually create this directory nor mount a separate partition to this location. Instead, if you want to use a separate partition for Panel, mount the partition to `/opt/psa/`, the commonly used path for Debian and Ubuntu installations. If you do not follow this recommendation, Panel will not be able to apply updates.

If you wish to install Panel with the Business Manager component, you should first check that the MySQL server configuration option `sort_buffer_size` is set to 2 megabytes (`sort_buffer_size=2M`) or more. This option is set in the `/etc/my.cnf` file. After the configuration change, restart the `mysqld` service:

```
service mysqld restart
```

Requirements for Windows Systems

Before installing Parallels Plesk Panel for Windows, back up all your server data and make sure that the following requirements are met:

- Your server meets the requirements described in the Panel release notes.

- Your server is *not* working as a Windows Domain Controller (neither primary nor backup). If this requirement is not fulfilled, a system crash may occur during the creation of domains with certain names.
- Internet Information Services (IIS) should be installed on the server. The default components of the Web Server Role are required.
- A static IPv4 address should be configured in the OS prior to the Panel installation. If you have an environment that uses only IPv6 addresses, ensure the proper address translation to the IPv4 segment of the Internet.
- Certain ports should be open. For details, see <http://kb.parallels.com/en/391>.
- The installation path of the Panel must contain only ASCII symbols.
- Panel can be installed only on NTFS partitions.
- If you plan to use Microsoft SQL Server support in the Panel, the SQL Server should be installed and configured to use standard or mixed security mode. If the SQL Server is not installed, you can select it to be installed with the Panel and configured with administrator name 'sa' and a random password.
- Prior to upgrading Panel, ensure that you have the latest version of the Microsoft Visual C++ Redistributable Package.

Note: To install Microsoft SQL Server 2008 as a part of Plesk installation, preliminarily install Microsoft Installer 4.5 and .NET Framework 2.0 SP 2.

If you want to install Panel with the Business Manager component, you should first check that the MySQL server configuration option `sort_buffer_size` is set to 2 megabytes (`sort_buffer_size=2M`) or more. This option is set in the `%plesk_dir%\Databases\MySQL\Data\my.ini` file. After the configuration change, restart the `mysqld` service by running these two commands from shell:

```
net stop mysql
net start mysql
```

2. Choose a Release Tier

One more step before installing Panel is to choose the proper Panel version depending on its release tier.

Each major version of Panel passes through a number of development stages. It is natural that on earlier stages, some of newly implemented features may not be in their final state and may require some further modification. The functionality of such features in subsequent Panel versions is improved as they receive more customer feedback over time. To indicate the stage of the current Panel version, we assign one of the following release tiers to it: *Testing release*, *Early Adopter release*, *General release*, and *Late Adopter release*. The decision on what tier to use is absolutely up to you. For example, consider installing the early adopter release if you want to try new features before the general availability of Panel. On the other hand, if you want to get the solution that received all major updates and is successfully used by a number of service providers, wait until Panel gets the late adopter release status (it may be a couple of months after the general release).

Choose one of the following:

- *Testing release.*
We start each release cycle with publishing a number of testing releases for preview purposes and let you sequentially upgrade from the first one to the last, and then upgrade to higher release tiers. We do not provide technical support for such builds even if they were upgraded to higher tiers. Thus, avoid using this build in a production environment.

Notes:

1. By default, testing builds are not shown as available for installation. You can install the testing Panel version only by running Parallels Installer with one of the special options. Learn more in **Manual Installation**.
 2. Upgrade to the next testing release is available only to the users of a testing build. Subsequent Panel builds do not have the corresponding option in the GUI.
-

- *Early Adopter release.*
An early adopter release has all claimed features and previous versions successfully upgrade to it. The quality of this version is eventually improved by updates. By selecting the early adopter release you become the first to see the new features and receive the freshest updates.
- *General release.*
A general release has passed all quality tests. Minor issues are promptly fixed by updates. We recommend that you always upgrade Panel to general release versions.
- *Late Adopter release.*
A late adopter release has received all major updates issued for the current Panel version, and a number of service providers have successfully used it for some time.

During the manual installation, selection of a release tier is one of the installation wizard steps. If an installation is automated by a script, you should specify a certain tier using Installer options. For users of PVC templates, the general release is the only option.

3. Choose Panel Components

Panel employs a number of interchangeable components for providing its services. For example, mail services on Linux can be provided by either Postfix or Qmail. The decision about what component to choose is made during Panel installation. Also, some components that you may find useful are not installed by default. Before installing Panel, acquaint yourself with available Panel components and choose the ones to include in your final Panel configuration. Next in this section, we will give recommendations on which components to choose under various circumstances. The components from the list below are not installed by default unless explicitly stated.

Note: Some components may be unavailable to you due to the limitations of your Panel license key.

Billing Automation

- *Customer & Business Manager*
Customer & Business Manager is a billing automation solution available with Panel out of the box. This automates the subscribing of customers to hosting services, along with all attendant business operations. Do not install the component if you want to use a third-party solution or if you do not need billing automation at all.
- *Payment gateway and registrar modules adapted to Business Manager*
Install this component if you want to connect your Business Manager to online payment systems and domain name registrars. On Windows, these modules are installed automatically when you install Business Manager.

Web Hosting

Web hosting components are used to switch the support for a certain web hosting service. For example, support for a certain scripting language or support for FTP connections.

- *Plesk Web hosting*
(Installed by default). Install this component if you want to use your Panel for web hosting.
- *Apache mod_fcgid module*
(Installed by default). Install this component if you want to turn on FastCGI support for the Apache web server.
- *Apache mod_perl module*
(Installed by default). Install this component if you want to turn on support for Perl scripts by the Apache web server.
- *ProFTPD FTP server*
(Installed by default). Install this component if you want to allow users to connect to Panel using FTP.
- *Bandwidth Limiter for Apache support (mod_bw)*
Install this component if you want to manage bandwidth limiting for incoming connections.
- *Apache ASP support*
Install this component if you want to turn on support for ASP scripts by the Apache web server.

- *Tomcat Java Servlets support*
Install this component if you want to turn on support for Java servlets.
- *Apache mod_python module*
Install this component if you want to turn on support for Python scripts by the Apache web server.
- *Ruby on Rails support*
Install this component if you want to turn on support for Ruby on Rails scripts.
- *ColdFusion support for Plesk*
Install this component if you want to turn on support for ColdFusion scripts.
- *MIVA Empresa support*
Install this component if you want to turn on support for MIVA scripts.
- *Webalizer web statistics package*
(Installed by default). This component allows users to collect site visit statistics by means of the Webalizer software.
- *AWStats web statistics package*
(Installed by default). This component allows users to collect site visit statistics by means of the AWStats software.
- *Cloudflare Apache Module*
This component allows improving performance of websites hosted in the server using the Cloudflare service.

Apache Web Server Versions (Linux Hosting)

If you use RHEL 5 or CentOS 5, you can choose one of the following options:

- *Apache web server support*
Typical Apache web server used to deliver websites to Internet users.
- *Apache web server with SNI support*
(Installed by default). Server Name Indication (SNI) is a feature that extends the SSL protocol. Install this component if you want to use separate SSL certificates for websites with a shared IP address.

Nginx Web Server and Reverse Proxy Support

- *Nginx reverse proxy support*
(Installed by default).
- *php-fpm support for nginx*
On Linux systems other than SuSE, Debian 7, and Ubuntu 12.04, installing this component requires enabling third-party repositories (on page 19).

Plesk Webmail Support

Specify the webmail software that allows Panel users to access their mail accounts through a browser:

- *Horde webmail support*
- *Roundcube webmail support*

Mail (Linux Hosting)

Select the mail services Panel should provide:

- *Kaspersky antivirus*
Install this component if you want to use Kaspersky antivirus software for checking mail.
- *Parallels Premium antivirus (Installed by default)*. Install this component if you want to use Parallels Premium antivirus software for checking mail.
- *Mailman mailing list manager support*
This component adds mailing list functionality to Panel.
- *SpamAssassin support*
Install this component if you want to use SpamAssassin software to effectively stop email spam.

Choose one of the following mail servers that best suits your needs:

- *Postfix mail server (Installed by default)*.
- *Qmail mail server*
- *MSMTP relay only mailserver (SMTP client)*
Select this option if you do not want to install mail server. When you log in to Panel with no mail server installed, it will offer you to specify an external SMTP server for sending outgoing mail.

Databases

The default database server in Panel is MySQL. It is installed by default. However, since version 11.5, on Linux you can replace it with MariaDB or Percona Server. For instructions on replacing MySQL server with these alternatives, refer to the **Advanced Administration Guide**, section **Using MariaDB or Percona Server as the Default Database Server**.

- *PostgreSQL server support*
If you require support for PostgreSQL databases (for example, this may be a requirement of certain web apps), select this option to install PostgreSQL to your Panel server.
- *MS SQL Server 2008 (on Windows)*
- *MS SQL Server 2012 (on Windows)*

Important: If MS SQL server is already installed on your server, you should exclude this component from your Panel installation. Otherwise, Panel will perform a clean installation of MS SQL server and data stored in your MS SQL server will be lost. To let Panel use your MS SQL server, connect it to Panel once you complete the installation. To learn how to connect a database to Panel, refer to the **Administrator's Guide**, section **Adding and Removing Database Servers**.

DNS Server

- *BIND DNS server support*
(Installed by default on Linux). On Linux, deselect this component if you do not want to run the DNS service on the server. On Windows, select this component if you want to use BIND instead of the Microsoft DNS.
- *Microsoft DNS server*
(Installed by default on Windows). Deselect this component if you do not want to run the DNS service on the server or if you want to use BIND instead.

Important: If you exclude the DNS server from your installation, the DNS service will not work for websites hosted on your server. Excluding the DNS server makes sense only if you are going to use an external DNS server. Learn more in the section **Using External DNS Servers** of the **Administrator's Guide**.

System Monitoring

- *Health monitor*
Install this component if you want to track all main server health parameters, such as memory and CPU usage by different services, hard disk utilization, number of running processes, and so on.

Backup and Migration

- *Plesk Migration & Transfer Manager*
Install this component if you want to perform data transfer from another Panel or migration from another hosting platform. Install this component to a *destination server*.

Extensions (Linux Hosting)

You can extend Panel functionality by installing additional extensions. Note that these extensions require post-installation configuration. Learn more in the chapter **Appendix B: Installing Panel Extensions (Linux)** (on page 187).

- *Plesk Firewall extension*
Install this component if you want to protect a Panel server and private network from unauthorized access with a firewall.
- *Plesk VPN extension*
Install this component if you want to set up a VPN connection between a Panel server and a remote host through the Panel GUI.
- *Plesk File Server extension and SMB file server package*
Install this component if you want to share files on your Panel server.
- *Watchdog (System monitoring extension)*
Install this component if you want to use the Watchdog software to monitor your system. This ensures that your server is clean from malware, that all services are up and running, and that there is enough free disk space on the server.

4. (Advanced) Use Alternative Package Repositories

By default, Parallels Installer fetches the packages required for Panel installation or upgrade from the standard repository of your operating system. However, if you want to have a latest package version that is not yet available in the standard repository, you can install this version from an alternative repository. To do this, enable this repository on your server. The instructions on enabling alternative repositories are available on the websites of these repositories.

If you enable alternative repositories in your system, Parallels Installer uses the latest versions of packages it finds in all available repositories when installing or upgrading Panel. For example, if Parallels Updates contains MySQL v.5.5.30, and another repository enabled on your server (for example, IUS) contains MySQL v.5.5.34, the most current version (5.5.34) will be installed.

Important: If you upgraded to Panel 11.5 from an earlier version and configured alternative repositories according to the instructions in previous version of this guide, we strongly recommend that you revert all changes you made according to this instruction and use alternative repositories according to this document.

Manual Installation

Once you have completed the steps described in the section **Before Installing Panel** (on page 11), you can proceed directly to the Panel installation.

To install Panel on Linux- or Windows-based servers, use the Parallels Installer utility. The *Parallels Installer* utility is available for download from <http://www.parallels.com/products/plesk/download/>. There are several distributions of Parallels Installer created for different operating systems and platforms, so be sure to obtain the Parallels Installer version that matches your host's operating system. Parallels Installer can be used either via a browser-based user interface or the command line.

If you run Linux and want to quickly install the latest version of Panel in the typical configuration, we recommend that you use our separate utility called *One-Click Installer*. It is available at <http://autoinstall.plesk.com/one-click-installer>.

Once the installation is finished, complete the post-installation setup. This includes Panel initialization and installation of a license key. See the section **After Installing Panel** (on page 42) for details.

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Installation from the Web Interface

➤ *To install Panel through the web interface:*

1. Download the Parallels Installer utility that suits your operating system from <http://www.parallels.com/products/plesk/download/>.

2. (Only for Linux) Set the execution permission for Parallels Installer:

```
chmod +x parallels_products_installer_file_name
```

3. Run the Parallels Installer.

On a Linux/Unix server: `./parallels_products_installer_file_name --web-interface`

On a Windows server: `parallels_products_installer_file_name`

(Only for Linux) Open your browser and enter `https://host-name:8447/` or `https://IP-address:8447/` in the address bar. The Parallels Installer Web interface opens.

(Only for Windows) Parallels Installer wizard opens in a new browser window. When the installer starts, an additional console window opens. This window displays the operations performed by the utility. It is closed upon the successful installation, or after 30 minutes of inactivity.

Note: As described in the section **Before Installing Panel** (on page 11), you can select what Panel build to install depending on its release tier. *By default, Installer shows you only the latest general and late adopter releases as available for installation.* To be able to install other Panel releases, use the following Installer options:

`--all-versions` to view all available Panel versions.

`--tier <release_tier>` to view the latest available versions with the specified release tier.

4. Log in to the web interface.

- If you are running Windows, type the administrator's username ("Administrator"), administrator's password, and click **Log In**.
- If you are running Linux, type the `root` username and password, and click **Log In**.

5. Follow the installation steps.

Installation from the Command Line

➤ *To install Panel from the command line:*

1. Download the Parallels Installer utility that suits your operating system from <http://www.parallels.com/products/plesk/download/>.

2. (Only for Linux) Set the execution permission for Parallels Installer:

```
chmod +x parallels_products_installer_file_name
```

3. Run the Parallels Installer.

On a Linux/Unix server:

```
./parallels_products_installer_file_name
```

On a Windows server:

```
parallels_products_installer_file_name --console
```

Note: As described in the section **Before Installing Panel** (on page 11), you can select what Panel build to install depending on its release tier. *By default, Installer shows you only the latest general and late adopter releases as available for installation.* To install other Panel releases, use the following Installer options:

`--all-versions` to view all available Panel versions.

`--tier <release_tier>` to view the latest available versions with the specified release tier.

4. Follow the installation steps.

Typical Installation with One-Click Installer

Use the One-Click Installer utility to perform a clean installation of Panel in one step. The utility automatically determines your operating system and installs the latest version of an appropriate distribution package in the typical configuration. One-Click Installer works *only* on Linux operating systems.

To install Panel, run one of the following commands on behalf of the root user.

- If you have the `wget` utility, run

```
wget -O - http://autoinstall.plesk.com/one-click-installer | sh
```

- If you have the `curl` utility, run

```
curl http://autoinstall.plesk.com/one-click-installer | sh
```

- If you have the `fetch` utility, run

```
fetch -o - http://autoinstall.plesk.com/one-click-installer | sh
```

(Advanced) Automated Installation

Once you have completed the steps described in the section **Before Installing Panel** (on page 11), you can proceed directly to the Panel installation.

To install Panel on Linux- or Windows-based servers, use the Parallels Installer utility. The *Parallels Installer* utility is available for download from <http://www.parallels.com/products/plesk/download/>. There are several distributions of Parallels Installer created for different operating systems and platforms, so be sure to obtain the Parallels Installer that matches your host's operating system. Normally, Parallels Installer binaries are distributed under names in the following format:

```
parallels_installer_v<installer version>_os_<operating system version>_<platform>.
```

How to Automate Panel Installation

The typical manual installation takes a long time when it comes to mass deployment of Panel, so we recommend that you automate this process. The automatic process is based on using the command line options of the Parallels Installer utility that allow you to predefine all installation parameters. Thus, *you can run an installation that does not require any user input*. To learn how to run such installations, refer to the section **Running Automated Installations** (on page 25).

Moreover, if you are going to perform mass deployment of Panels for Linux, you can write a script that automatically copies and runs Installer on a specified group of servers. See the script examples in the section **Installation Script Examples (Linux)** (on page 27). On Windows systems, scripts with the remote commands execution are also possible but require additional tools such as PsExec. Thus, we do not give examples of such scripts for Windows.

Automating Post-Installation Steps

After a typical manual installation is finished, you should log in to Panel to perform some post-installation operations (initialize Panel, install a license key, and so on). If you have multiple Panels, this process can be automated as well. If you want to avoid user input in the Panel interface, the best approach is to perform the same operations either from the command-line interface or with the remote API (also known as API RPC). To learn more about how to complete Panel installation in an automated manner, refer to the corresponding sub-sections of **After Installing Panel** (on page 42).

Speeding Up Automated Installations

Note that you can significantly speed up multiple installations if you create a local mirror of the Parallels Updates server. This will allow you to save time and bandwidth, and to secure your installations. Learn how to set up a custom mirror in **Appendix C: Mirroring Parallels Updates Server** (on page 188).

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Running Automated Installations

To install Parallels Plesk Panel without requiring any user input, run the command:

```
parallels_installer <packages source options> --select-release-id <ID>
<components installation options> [other options]
```

where

- `packages source options` define the location where the installer should obtain the Panel packages for installation

```
<packages source options> =
--source <URL>
if using a mirror of the Parallels Updates server
OR
--source <path>
if using local file system
OR
none
if installing from the Parallels Updates server
```

- `--select-release-ID` option define what Panel version should be installed. `<ID>` is a unique Panel version identifier, like `PLESK_11_0_9`. You can get the list of available Panel version IDs by running Installer with the `--show-releases` option. Note that by default, Installer shows you only IDs of the publicly released production versions (learn more about Panel release tiers in the section **Before Installing Panel** (on page 11)). If you want to obtain a full list of available Panel versions including those intended for product preview and testing purposes, add the `--skip-branch-filter` option.

- `components installation options` define what Panel components should be installed

```
<components installation options> =
--installation-type
```

The installation type can be `Full` or `Typical`.

```
OR
--install-component component1 [--install-component component2
[... [--install-component componentN]]]
```

You can get the full list of components available for a certain release by running Installer with the following options: `--select-release-id <ID> --show-components`

- other options include those that define proxy settings, installation logging and so on. For full details, please refer to the **Appendix D: Parallels Installer Options** (on page 189).

Modifying Default Installation Paths (Windows)

Panel provides extra flexibility for installations on Windows: It lets users modify its default installation paths from command-line. The customization is granted by the `--set-option` key. The `--set-option` value should be a "key=value", where key is a constant that specifies one of the parts of Panel's data, and the value is the path where you want these data to be located. Currently, the following keys are available:

- `PLESK_INSTALLDIR`. This key designates the part of Panel data that insignificantly change over time. This includes the application code, configuration files, utilities, and so on.

- *PLESK_DATADIR*. This key designates the part of Panel data that significantly change over time. This includes customer databases, APS packages, log files, and so on.
- *PLESK_VHOSTSDIR*. This key designates the path where the content of all your customers' domains will be stored. This is typically the largest part of the Panel content.

This sample demonstrates how to use the `--set-option` key:

```
ai.exe --select-product-id panel --select-release-id PANEL_11_0_9_WIN --
install-component base --install-component management --install-component
spamassassin --install-component webalizer --install-component drweb --
set-option "PLESK_INSTALLDIR=C:\Plesk Dir" --set-option
"PLESK_DATADIR=C:\Plesk Data" --set-option "PLESK_VHOSTSDIR=C:\Plesk
Vhosts"
```

Examples, Linux/Unix

1. The following command installs Parallels Plesk Panel 11 (release ID is `PLESK_11_0_9`) from the mirror set up on the server `mirror.example.com` available via HTTP. Installation files will temporarily be stored at `/tmp/panel`, and the installation status will be reported to the email `admin@example.com`. The installed components are base Panel packages, PostgreSQL server, and SpamAssassin spam filter.

```
./parallels_installer --source http://mirror.example.com/ --target
/tmp/panel --select-release-id PLESK_11_0_9 --install-component base --
install-component postgresql --install-component spamassassin --notify-
email admin@example.com
```

2. The following command performs the complete installation (all available product components are installed) of Parallels Plesk Panel 11 (release ID is `PLESK_11_0_9`) from the Parallels Update server. All installer output will be redirected to an XML file.

```
./parallels_installer --select-release-id PLESK_11_0_9 --install-everything
--enable-xml-output
```

Examples, Windows

1. The following command installs Parallels Plesk Panel 11 (release ID is `PANEL_11_0_9_WIN`) from the mirror set up on the server `mirror.example.com` available via HTTP. Installation files will temporarily be stored at the `%SystemDrive%\Parallels\` folder, and the installation status will be reported to the email `admin@example.com`. The installed components are base Panel packages, Bind name server, MailEnable mail server, PHP scripting engine, Presence Builder, and Horde Webmail.

```
parallels_installer.exe --source http://mirror.example.com/ --target
%SystemDrive%\Parallels --select-release-id PANEL_11_0_9_WIN --install-
component base --install-component dns --install-component mailenable --
install-component php5 --install-component sitebuilder --install-component
webmail --notify-email admin@example.com
```

2. The following command performs the complete installation (all available product components are installed) of Parallels Plesk Panel 11 (release ID is `PANEL_11_0_9_WIN`) from the Parallels Update server. All installer output will be redirected to an XML file.

```
parallels_installer.exe --select-release-id PANEL_11_0_9_WIN --install-
everything --enable-xml-output
```

Installation Script Examples (Linux)

This section provides notes on implementation and execution of an installation script, and also presents a couple of installation script samples.

Implementation and Execution Notes

- To avoid being prompted for password each time you connect via SSH to the servers where the Panel should be installed, place your public key to the list of authorized keys of a user on whose behalf the script is run on each server (see SSH documentation for details on the procedure).
- If you have a local mirror of the Panel updates server (as described in **Appendix C: Mirroring Parallels Updates Server**), use the following option:

```
--source <mirror URL>
```

- By default, all downloaded packages are stored under the `/root` directory. To use another directory, use the following option:

```
--target <directory-name>
```

Example

This script performs a typical installation of the latest Panel version on the specified servers.

```
#!/bin/sh
SERVERS_LIST="node1.example.com node2.example.com"
for current_server in $SERVERS_LIST; do
ssh -f root@$current_server 'wget http://autoinstall.plesk.com/plesk-
installer -O - | sh /dev/stdin --source http://autoinstall.plesk.com/ --
target /tmp/plesk-installation --select-product-id plesk --select-release-
latest --installation-type "Typical" --notify-email admin@example.com'
done
```

(Advanced) Installation to Parallels Virtuozzo Containers

Parallels Virtuozzo Containers is a container-based virtualization solution that is employed by a large number of service providers. Each Virtuozzo container is a separate virtual server that acts exactly like a stand-alone one. Parallels Virtuozzo Containers exist in both Linux and Windows versions.

If you want to deploy Panel on Virtuozzo containers, we recommend that you follow the workflow:

1. *Create a container.*

2. Install Panel into the container.

Though you can perform a typical manual or automated installation, we recommend that you use *PVC templates* for this purpose. A PVC app template is a package containing everything an app needs to be installed to a server. The main benefit of PVC templates is that you install an app template to your physical server just once and then add the app from the template to a number of containers simultaneously.

3. Clone the container as many times as you need.

This step is optional. If you have a number of *already created* containers where Panel should be installed, the best option is to deploy Panel there using a Panel PVC template.

4. Perform post-installation setup.

The post-installation setup for Panel in a Virtuozzo container is absolutely the same as for other types of installation. It includes Panel initialization, installation of a license key, and so on. You can either perform it manually or automate the process using the Panel API. Learn more in the section **After Installing Panel** (on page 42).

Details on how to perform these operations are provided next in this section.

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Linux PVC Templates

PVC application templates are RPM packages which, when installed on a node, allow easy deployment of an application in as many Containers as required, saving a lot of critical system resources like disk space. You may obtain the Panel templates at the Parallels website, or download them using the PVC command-line utility call "`vzup2date -z`" (PVC 4 and later) or by means of `yum` on Parallels Cloud Server.

Versioned and version-free templates

Starting with Parallels Plesk Panel 10.4, Parallels ships two sets of EZ templates for each Panel release: *major-version templates*, and *version-free templates*. Both provide the same software components, the only difference between them is that template updates are installed when a Container is updated:

- *Provider-controlled versioned templates* automatically get all the latest updates and upgrades released for the *major version* of the Panel.
For example, if the versioned template of the Panel 10 (`pp10`) is installed in a Container, the `vzpkg update <CT_ID>` command will update it to the latest released version of the Panel 10.x.x, be it 10.0.1 or 10.1.0.
More specifically, versioned templates perform upgrades allowed by a typical Panel license. This license allows you to perform upgrades within the second major version number. For example, from 10.1 to 10.2, but not from 10.4 to 11.0.
- *Version-free auto-upgrade templates* get all updates and upgrades regardless of the Panel license key. In other words, such templates *automatically update* to the last available Panel version regardless of its number *once this version is released*. For example, this can be an upgrade from 10.3 to 10.4 or from 10.4 to 11.0. Note that if your Panel license does not allow complex upgrades, you will need to obtain a new license key after each such upgrade.
For example, if the version-free base template of the Panel (`pp`) is installed in a Container (for example, 10.x.x), the `vzpkg update <CT_ID>` command will update it to the latest released version of the Panel x.x.x, be it 10.x.x or 11.x.x.

You can tell versioned templates and version-free ones apart from their names: The name prefix of the first type contains the major version (`pp11.5`), while the latter does not contain any version numbers (`pp`).

Toggling auto detection of EZ templates

PVC 4.0 and later versions can discover EZ templates in a container and perform automatic actions depending on the templates. This feature provides opportunities for business automation software (like PBAs) to automatically find products installed in a container and start billing the container owner.

The discovery algorithm is straightforward: If the system finds all packages included in an EZ template, it considers the template to be installed. The major drawback of this approach is that Panel 9.x and SMB are very close to each other in terms of packages, so the auto-detection engine can make incorrect decisions. For example, if only one of the applications is present in a container, the system considers that both templates are installed. The most noticeable outcome of this detection problem is that the system fails to update both applications and set proper billing for them.

It is possible to stop the auto-detection if you use the billing automation software or if you want to install tightly bound Parallels products. To do this, modify the `/etc/vztt/vztt.conf` file by setting `APP_TEMPLATE_AUTODETECTION=no`.

Shipped templates

Since both versioned and version-free sets of templates provide the same components, we will list only the versioned ones for the simplicity sake.

The following EZ templates are shipped for Parallels Plesk Panel 11:

<code>pp11.5</code>	The Panel core template. Contains base components, backup manager, and Presence Builder.
<code>pp11.5-antivirus</code>	Parallels Premium Antivirus.
<code>pp11.5-bind</code>	BIND DNS server support. If you do not install this template, DNS server will not be installed on Panel nodes.
<code>pp11.5-cf-support</code>	ColdFusion support: libraries necessary to run ColdFusion with the Panel.
<code>pp11.5-kav</code>	Kaspersky Antivirus extension.
<code>pp11.5-mailman</code>	Mailman mailing list manager.
<code>pp11.5-migration</code>	The Panel Migration & Transfer Manager, allows transferring hosting data from other Panels and migrating from other hosting platforms.
<code>pp11.5-mod-cloudflare</code>	CloudFlare Apache module support.
<code>pp11.5-msmtp</code>	msmtp relay only mail server (SMTP client). Install it if you plan to use external mail servers.
<code>pp11.5-mysql5.5</code>	MySQL 5.5 support. Available only on RHEL 5 and CentOS 5.
<code>pp11.5-nginx</code>	nginx reverse proxy support.

<code>pp11.5-panel-addons</code>	The Panel extensions: Firewall, VPN and File Server.
<code>pp11.5-php5</code>	PHP5 support
<code>pp11.5-php53</code>	PHP5.3 support. Available only on RHEL 5 and CentOS 5.
<code>pp11.5-postfix</code>	Postfix mail server. Alternate to Qmail and msmtpl.
<code>pp11.5-qmail</code>	Qmail mail server. Alternate to Postfix and msmtpl.
<code>pp11.5-spamassassin</code>	SpamAssassin spam filtering tool.
<code>pp11.5-tomcat</code>	Tomcat support.
<code>pp11.5-vps-optimized</code>	VPS-optimized configuration. Configures Container to consume the minimum resources. Note that some hosting features will be disabled. For details, refer to the section (Optional) Optimize Panel for Operation in VPS (on page 49).
<code>pp11.5-watchdog</code>	Watchdog system monitoring extension.
<code>pp11.5-webhosting-addons</code>	Hosting features support: mod_bw, MIVA, perl-Apache-ASP, and Ruby on Rails.
<code>pp11.5-webmail</code>	Horde and Roundcube webmail tools.

Installation on PVC for Linux

Deploying Parallels Plesk Panel in a Parallels Containers environment implies the following two stages:

1. Installing the Panel application template on a hardware node.
2. Creating a Container and deploying the application from the template.

For further details on Parallels Container CLI, or the Parallels Containers API (XML or SOAP) functionality, refer to the Parallels Containers developer documentation (<http://www.parallels.com/ptn/documentation/virtuozzo/>).

The first stage is performed on each hardware node only once: As soon as an application template is installed on a hardware node, it can be deployed to as many Containers as required. Instead of creating a new Container every time you need to deploy a Container with the Panel, you can clone an existing Container where the Panel is installed, which acts as a sort of Template Container.

When the template is being installed on a hardware node, the core set of files is deployed, which includes defining of the application packages repository. Then, when the application is installed in a container, Parallels Containers communicates with the repository (the default one resides at <http://autoinstall.plesk.com>), retrieves the application packages, and installs them in the container. The packages are stored in the node cache until it is cleaned up, and then the packages are retrieved from the repository again when the application is installed in the Container. To save time and bandwidth, you may want to use a custom mirror of the Panel repository. For details, see (Advanced) Mirroring Parallels Updates Server.

➤ ***To install a Panel template on a Parallels Containers hardware node using the `vzup2date` utility:***

1. Connect to the target Parallels Containers hardware node over SSH.
2. Install the application template by running a command in the following format:

```
vzup2date -z
```

3. Select the required operating system and application templates and click **Next** to start installation.

Note: On Parallels Cloud Server, the `vzup2date` utility is deprecated. You should use `yum` instead.

➤ ***To install a Panel template on a Parallels Containers hardware node manually:***

1. Obtain the template from the Parallels website and upload it to the target Parallels Containers hardware node.
2. Install the application template by running a command in the following format:

```
rpm -Uvh <absolute path to the template>
```


For example, the following command installs Qmail:

```
rpm -Uvh pp11.5-centos-5-x86_64-ez-3.0.0-35.prl.293476.noarch.rpm
```

➤ **To use a custom mirror:**

1. Set up a mirror as explained in the section (Advanced) Mirroring Parallels Updates Server.
2. On the hardware node, edit the file defining the repository URL.

The file for editing is `/vz/template/<os>/<os-version>/<platform>/config/app/<app-template-name>/default/repositories`. For example: `/vz/template/<os>/<os-version>/<platform>/config/app/pp10/default/repositories`.

3. Replace the Parallels Updates server URLs with the corresponding ones of your mirror and save the file.
4. Clean or re-fetch the packages metadata.

You can do this, for example, with the `vzpkg clean` command. For details, refer to the Parallels Containers for Linux Reference Guide located at the Parallels Technology Network (<http://www.parallels.com/ptn/documentation/virtuozzo/>).

➤ **To create a new Container and install Panel to it:**

1. Create a container and configure it.

Issue the following commands:

```
vzctl create <CTID> [options]
vzctl set <CTID> <setting_name> <value> [--save]
```

where

- `<CTID>` defines an arbitrary container ID number higher than 100, which is unique on the hardware node
- `--save` switch tells `vzctl` whether to save changes into the Container configuration file

Note: For details on the Container creation and configuration options, refer to the *Parallels Containers for Linux Reference Guide* located at the Parallels Technology Network (<http://www.parallels.com/ptn/documentation/virtuozzo/>).

The commands below do the following:

1. Create a Container with ID 444 and IP 10.100.1.2, based on the Debian 5 operating system template.
2. Set a barrier and limit for unswappable kernel memory, private (or potentially private) memory, number of files opened by all Container processes, disk space and the total number of disk inodes (files, directories, symbolic links) a Container can allocate.
3. Save the barrier/limit values to the Container configuration file.
4. Enable Power Panel on the vzpp port with the "`--offline_management yes --offline_service vzpp`" options.

```
# vzctl create 444 --ostemplate debian-5.0-x86_64
# vzctl set 444 --ipadd 10.100.1.2 --hostname example.com --save
```

```
# vzctl set 444 --save --kmemsize 24299200:26429120 --privvmpages
362144:392912 --numfile
12000:12000 --diskspace 5117880:5242880 --diskinodes 350000:370000
# vzctl set 444 --save --offline_management yes --offline_service
vzpp
```

Important: It is mandatory to use exactly these values for the options to ensure the Panel compatibility with the Virtuozzo environment.

Important: The Panel needs the container to be configured with an IPv4 address in order to work properly.

2. Start the newly created Container:

```
# vzctl start <CTID>
```

3. Install the Panel template into the container:

- with EZ templates:

```
vzpkg install <CTID> <ppp_template_name> ...
```

For example, the following command installs the Panel base components, BIND DNS server, and Kaspersky antivirus:

```
# vzpkg install 444 pp11.5 pp11.5-bind pp11.5-kav
```

➤ *To clone a Container:*

Issue a command in the following format:

```
vzmlocal -C {CT List}
{CT List} = <source_CTID>:<dst_CTID>[:[<dstCT_private>][:<dstCT_root>]]
[...]
```

You should specify the source Container ID (<source_CTID>) and the destination Container ID (<dst_CTID>). Specifying the destination Container private area path (<dstCT_private>) and root path (<dstCT_root>) is optional allowing you to override the default paths - /vz/private/<dst_CTID> and /vz/root/<dst_CTID>, respectively. For details on the command options, refer to the *Parallels Containers for Linux Reference Guide* located at the Parallels Technology Network (<http://www.parallels.com/ptn/documentation/virtuozzo/>).

For example, to clone the Container with the Panel created during the previous procedure, run the following command:

```
# vzmlocal -C 444:445
```

Windows PVC Templates

PVC application templates are packages which, when installed on a node, allow easy deployment of the application in as many containers as required, saving a lot of critical system resources like disk space. You may obtain the Panel templates at the Parallels website.

Shipped Templates

The following templates are shipped for Parallels Plesk Panel 11:

PANEL_11.5.30

The main template, includes the essential set of components:

- Base: the Panel core components, such as Control Panel, Backup Manager, MySQL admin, and so on.
- Presence Builder
- Migration Manager
- SpamAssassin
- AWStats, Webalizer
- BIND DNS Server
- Parallels Premium Antivirus 5
- FastCGI
- MailEnable mail server, Atmail Open, webmail tools
- MySQL Client, MySQL ODBC
- Microsoft SQL Web Admin, myLittleAdmin, phpMyAdmin,
- Perl, Python, PHP4, PHP5
- Stunnel

Installation on PVC for Windows

This section covers only the essential steps that must be taken to deploy Parallels Plesk Panel inside Parallels Containers for Windows. Before proceeding with installation, please familiarize yourself with Parallels Containers documentation available at <http://www.parallels.com/products/virtuozzo/docs/>.

Deploying Parallels Plesk Panel in a Parallels Containers environment implies the following two stages:

1. Installing the Panel application template on a hardware node.
2. Creating a Container and deploying the application from the template.

The first stage is performed on each hardware node only once: As soon as an application template is installed on a hardware node, it can be deployed to as many Containers as required.

Instead of creating a new Container every time you need to deploy a Container with the Panel, you can clone an existing Container where the Panel is installed, which acts as a sort of Template Container.

Note: If your operating system is Microsoft Windows 2008 and the container offline management is turned on, you can log in to the Panel by visiting <https://host-name:8443/> or <https://IP-address:8443/> and providing your local administrator credentials, or by visiting <http://host-name:8880/> or <http://IP-address:8880/> and providing global administrator credentials.

➤ *To install Panel in Parallels Containers for Windows:*

1. Obtain the Panel template from the Parallels website and upload it to the target Parallels Containers hardware node.
2. Install application templates of the Panel by issuing a command of the following format:

```
vzpkgdeploy [-q|-v] -i <template-file>
```

where

- `-q` disables logging to the display and to the log file
- `-v` sets the log level to the maximum possible value for this `vzpkgdeploy` session

For example,

```
vzpkgdeploy -i PANEL_10.0.0/20100804.10
```

➤ *To create a new Container and install Panel into it:*

1. Create a container and configure it according to your needs.

Issue the following commands:

```
vzctl create <CT_ID> --pkgset name [options]
```

```
vzctl set <CT_ID> <setting_name> <value> [--save]
```

where

- <CT_ID> defines an arbitrary container ID number higher than 100, which is unique on the hardware node
- --pkgset *name* denotes the operating system template to be used for Container creation
- --save switch tells `vzctl` whether to save changes into the Container configuration file

Note: For details on the Container creation and configuration options, refer to the *Parallels Containers for Windows Reference Guide* located at the Parallels Technology Network (<http://www.parallels.com/ptn/documentation/virtuozzo/>).

The commands below do the following:

- Create a Container with ID 444 and IP 192.0.2.44, based on the OS template w2k3.
- Set a disk space limit to 4+ gigabytes, private memory limit to 1 gigabyte and Administrator's password to "P4\$\$w0rd".
- Enable Power Panel on the vzpp port with the "--offline_management yes --offline_service vzpp" options.

Important: It is mandatory to use exactly these values for the options to ensure the Panel compatibility with the Virtuozzo environment.

Important: The Panel needs the container to be configured with an IPv4 address in order to work properly.

```
vzctl create 444 --pkgset w2k3 --ipadd 192.0.2.44
vzctl set 444 --save --diskspace 4500000 --vprvmem 1024 --
userpasswd Administrator:P4$$w0rd
vzctl set 444 --save --offline_management yes --offline_service
vzpp
```

2. Start the newly created Container:

```
vzctl start <CT_ID>
```

3. Install the Microsoft .NET framework version 2.0 or later into your Container:

```
vzpkgadd <CT_ID> <dotnet_template_name>
```

For example,

```
vzpkgadd 444 dotnet2.0_frmwk-2.0.50727.42/20070613
```

4. Install the Panel template into the Container:

```
vzpkgadd <CT_ID> <plesk_template_name>
```

For example,

```
vzpkgadd 444 PANEL_10.0.0/20100804.10
```

➤ To clone a Container:

Issue a command in the following format:

```
vzlocal -C <CT_List>
<CT_List> = <source_CTID>:<dest_CTID>[:<dest_private>] [options]
```

You should specify the source Container ID (*<source_CTID>*) and the destination Container ID (*<dest_CTID>*). Specifying the destination Container private area path (*<dest_private>*) is optional; it allows you to override the default path of `X:\vz\private\<CT_ID>`. For details on the command options, refer to the *Parallels Containers for Windows Reference Guide* located at the Parallels Technology Network (<http://www.parallels.com/ptn/documentation/virtuozzo/>).

For example, to clone the Container with the Panel created during the previous procedure, issue the following command:

```
vzmlocal -C 444:445
```

(Advanced) 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 new Panel should have unique entities, for example, an SSL certificate, and if you simply keep copying Panel, all the instances will share the same certificate.

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 (Amazon Web Services, 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.

On Linux:

```
# /usr/local/psa/bin/ipmanage --auto-remap-ip-addresses true
```

On Windows:

```
%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 [After Installing Panel](#) (on page 42).
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.

On Linux:

```
# /usr/local/psa/bin/cloning --update -prepare-public-image true -reset-license true
```

On Windows:

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

Important: By default, the cloning command resets the customized configuration of the source Panel instance to default: You may need to additionally configure cloned instances. To preserve the configuration of the source Panel instance in new instances, use the option `-reset-init-conf` with the `false` value. The `true` value resets the Panel configuration to default .

To preserve a custom Panel configuration in images of your Panel server, use the `cloning` command with the following options:

On Linux:

```
# /usr/local/psa/bin/cloning --update -prepare-public-image true -reset-init-conf false
```

On Windows:

```
%plesk_cli%\cloning --update -prepare-public-image true -reset-init-conf false
```


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

How to Clone Panel on Linux

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. Stop (shut down) the virtual machine.
3. Create a virtual machine image (snapshot) by means of virtual machines management software you use. Refer to the software vendors' documentation for respective instructions.

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

How to Clone Panel on Windows

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:

- IP pool
- Panel GUIDs
- Administrator's password
- SSL certificates (only the default certificate, `cloning` does not change user-defined certificates)
- (Optionally) License key

The rest of the data remain intact.

After Installing Panel

The post-installation setup is an obligatory sequence of steps that is required to prepare Panel for work. As well as the installation, this setup can be performed either manually (the administrator should do it through the GUI) or automatically in an unattended manner. The manual type of setup should be performed in the case of a single Panel deployment. The automated setup is recommended for multiple Panel deployments as this can save significant time.

There are only two obligatory post-installation steps: Panel initialization and installation of a license key. All other steps described in this section are optional.

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Initialize Panel

The Panel initialization - also known as initial configuration - is the first thing you need to do in Panel after installing it. Until Panel is initialized, any other operations are prohibited. Initialization sets the Panel administrator password, email, and contact information.

➤ *To initialize Panel:*

1. Log in to Panel at `https://<host-name-or-IP>:8443` using the server power user (root on Linux, Administrator on Windows) credentials.
2. Specify email, new password, contact info and click **OK**.

➤ *(Advanced) To initialize Panel via API RPC:*

Send to the server a request packet that satisfies the following conditions:

1. The server power user credentials are specified as the `HTTP_AUTH_LOGIN` and `HTTP_AUTH_PASSWD` values in HTTP header of the packet.
2. The packet content is as follows:

```
<packet version="1.6.3.0">
<server>
<initial_setup>
  <admin>
    <admin_cname>JohnDoe BV.</admin_cname>
    <admin_pname>John Doe</admin_pname>
    <admin_phone>+49 893333333</admin_phone>
    <admin_fax>+49 893333303</admin_fax>
    <admin_email>john@example.com</admin_email>
    <admin_address>Theatinerstrasse 96</admin_address>
    <admin_city>Muenchen</admin_city>
    <admin_state>Bavaria</admin_state>
    <admin_pcode>80333</admin_pcode>
    <admin_country>DE</admin_country>
    <send_announce>>true</send_announce>
  </admin>
  <password>Qwerty1234</password>
  <server_name>example.com</server_name>
</initial_setup>
</server>
</packet>
```



➤ *(Advanced) To initialize Panel via CLI:*

Run the following command (you should have the power user privileges):

- On Linux/Unix:

```
/usr/local/psa/bin/init_conf --init -passwd jskekekHTD -email
johndoe@example.com
```

- On Windows:

```
%plesk_cli%\init_conf.exe --init -passwd jskekekHTD -email johndoe@example.com
```

Install a License Key

Right after the installation, Panel uses a trial license key. To get a new license key, proceed to the Parallels online store (**Tools & Settings > License Management > Order New Key**).

Once you purchase the key, you will receive an activation email with your activation code and a license key file. You can install a Panel license key either by entering the activation code or by uploading the file from this email.

➤ *To install a license key using an activation code:*

1. Go to **Tools & Settings > License Management > Parallels Panel License Key** and click **Install Key**.
2. Enter the code you received in the email to the **Enter an activation code** field and click **OK**.

➤ *To install a license key using a license key file:*

1. Go to **Tools & Settings > License Management > Parallels Panel License Key** and click **Install Key**.
2. Choose **Upload a license key file**.
3. Specify the path to the key file you received in the email and click **OK**.

If you experience any problems, please contact sales@parallels.com.

```
(Advanced) To install a license key through the command-line interface:  
license <--install|-i> <path-to-key-file | activation-code>
```

For example,

On Linux using a key file:

```
./license -i /tmp/pp11.5key.xml
```

On Linux using an activation code:

```
./license -i AB1C23-4DEF56-7GHI89-JK1L23-MNP456
```

On Windows using a key file:

```
license.exe -i "D:\keys\pp11.5key.xml"
```

On Windows using an activation code:

```
license.exe -i AB1C23-4DEF56-7GHI89-JK1L23-MNP456
```

(Optional) Define Panel View

Right after installation, you can choose what Parallels Panel view to use, depending on what tasks the prospective Panel administrator is going to accomplish. The following views are available to choose from: *Service Provider* and *Power User*. The first view, Service Provider, is the best for reselling hosting accounts. In this view, you are able to manage service plans, subscriptions, and customer accounts. Power User view is convenient when you use Panel for personal purposes (run a portal, a mail server, and so on).

Power User view has a subtype, *Custom View*, which allows you to simplify the GUI by hiding the tools that may seem too complex for inexperienced administrators. In addition, you can prohibit such administrators to switch Panel back to Power User view or make any changes in Custom view settings. In means of Panel, this is called *to lock Custom view*.

To define administrator permissions in Custom view and the list of available Panel tools, use the `admin` utility. Learn more about the utility options in **Parallels Plesk Panel 11.5 for Linux (Windows): Reference for Command Line Utilities**.

Note: To switch from Service Provider to Power User, Panel should not have customer or reseller accounts.

For more information on Panel views, see **Administrator's Guide**, section **The Panel GUI**.

➤ **To switch Panel to Power User view via Panel command line utility:**

- On Linux systems, run the command:

```
/usr/local/psa/bin/poweruser --on -ip <ip-address> -domain <domain_name>
```

- On Windows systems, run the command:

```
"%plesk_dir%\bin\poweruser.exe" --on -ip <ip-address> -domain <domain_name>  
where
```

- `<ip-address>` is the IP address allocated to administrator's default hosting account. This option is required in case there are no subscriptions belonging to administrator.
- `<domain_name>` is the domain name to be linked to the specified IP address. If the `-domain` option is not specified, the server's host name will be used. The option makes sense only when used together with the `-ip` option.

➤ **To switch Panel in Power User view to Custom view and lock it via Panel command line utility:**

- On Linux systems, run the command:

```
/usr/local/psa/bin/poweruser --on -simple true -lock true
```

- On Windows systems, run the command:

```
"%plesk_dir%\bin\poweruser.exe" --on -simple true -lock true
```

If you do not want to lock Custom view, do not use the `-lock` option.

➤ **To switch Panel to Service Provider view via the command line utility:**

- On Linux systems, run the command:

```
/usr/local/psa/bin/poweruser --off
```

- On Windows systems, run the command:

```
"%plesk_dir%\bin\poweruser.exe" --off
```

For details, see the section [Using Command Line Utilities > Power User View: poweruser Utility of Panel command line reference](#).

➤ **To switch Panel to Power User view through API RPC:**

Send the following request packet to the server:

```
<packet version="1.6.3.0">  
<server>  
<set>  
<mode>poweruser</mode>  
</set>  
</server>  
</packet>
```

Note that the `poweruser` command of API RPC does not create a default web space. To be able to switch Panel to the Power User view through API RPC, create the default web space first.

➤ **To switch Panel back to Service Provider view through API RPC:**

Send the following request packet to the server:

```
<packet version="1.6.3.0">  
<server>  
<set>  
<mode>standard</mode>  
</set>  
</server>  
</packet>
```

For details, see the section [Supported Operations > Managing Plesk Server of API RPC Manual](#).

(Optional) Specify Administrator's Password

When Parallels Plesk Panel is installed, a random password is generated for the user *admin*, which replaces the old scheme when the same default password was used on all installations. This change was done to protect servers with freshly installed Panel from hacking by bots that use the default password.

After the installation is finished, you can set the admin's password being authenticated in the Panel with credentials of the server system power user, which is "root" on Linux systems, and "Administrator" on Windows systems. Such authentication with administrator's system account works in both cases of logging in to the Panel GUI and using API RPC.

The admin's password can be set up during the Panel initialization (this is the best way) or afterwards.

Specify Password During the Panel Initialization

Setting up administrator's password is an essential part of the Panel initialization. For details on setting up the password during the Panel initialization, refer to the section **Initialize Panel**.

In case your Panel instance has already been initialized, refer to the following section for instructions on how to set up the administrator's password.

Specify Password After the Panel Initialization

In case your Panel instance has already been initialized, it is still possible to set the administrator's password being authenticated as the server power user.

➤ **To set up the administrator's password using API RPC:**

Send to the server a request packet satisfying the following conditions:

1. The server power user credentials specified as the `HTTP_AUTH_LOGIN` and `HTTP_AUTH_PASSWD` values in HTTP header of the packet.
2. The packet content is as follows:

```
<packet version="1.6.3.0">
  <server>
    <set>
      <password>gogo4ward</password>
    </set>
  </server>
</packet>
```

➤ **To set up the administrator's password using CLI:**

Issue the following command (you should have the power user privileges):

On Linux/Unix:

```
PSA_PASSWORD=<new_password> /usr/local/psa/bin/init_conf --set-admin-
password -passwd "
```

On Windows:

```
%plesk_cli%\init_conf.exe --set-admin-password -passwd <new_password>
```

➤ **To set up the administrator's password using GUI if you do not know the current administrator's password:**

1. Log in to the Panel using the server power user credentials.
2. If you have at least one own subscription, skip this step. Otherwise, create a subscription:
 - a. In the left frame, click **Hosting Services > Subscriptions**.
 - b. Click **Add New Subscription**.
 - c. Specify a domain name and subscription info and click **OK**.
3. Go to the Control Panel: click the **Control Panel** link next to your subscription.
4. Go to the **Users** tab.
5. Click the 'Admin' link in the list of user account.
6. Under **Panel Preferences**, type in the new password, confirm it, and click **OK**.

(Optional) Set Up Panel Locale

➤ **To change the default en-US locale:**

1. Log in to the Parallels Plesk Panel server via SSH.
2. Change the locale by running the utility:

On Linux:

```
/usr/local/psa/bin/admin --update -locale en-US
```

On Windows:

```
%plesk_cli%\admin --update -locale en-US
```


(Optional) Optimize Panel for Operation in VPS

If you deploy Parallels Plesk Panel in Parallels Virtuozzo Containers for Linux, consider switching the Panel to a special mode of operation - optimized for virtual environments. The mode switches off InnoDB engine in MySQL database server, and Apache web server modules that are not critical for hosting services. This makes the Panel use less memory than other control panels available on the market, which ensures better utilization of hardware resources and increased density of virtual environments per server.

The only disadvantages of using the optimized mode are as follows:

- Web applications requiring InnoDB will not work.
- Perl, python and ASP scripts will not work because the required Apache modules will be switched off (see the list below).
- PHP will be available only through CGI.

Note: The optimized mode can be switched on only on the clean Panel installations. It is not applicable to the Panel installations upgraded from earlier versions.

➤ *To switch to the VPS-optimized mode:*

Install the `pp11.5-vps-optimized` EZ template. The template applies the necessary configuration.

Important: The optimized mode can only be enabled on fresh installations of the Panel which have not yet been initialized, or, in other words, have not undergone the initial configuration.

➤ *If you need to switch the Panel back to the normal mode of operation, perform the following steps:*

1. Switch on the InnoDB engine.
 - a. Open for editing the file `/etc/my.cnf`.
 - b. Locate the lines containing entries `skip-innodb` and remove them, or comment them out.
 - c. Save the file.
 - d. Restart MySQL server.
2. Switch on the required Apache modules.

On Debian Linux, use the `a2enmod` utility to switch on all required modules. For example, if you want to switch on the PHP module, issue the following command:

```
a2enmod php5
```

On other distributions of Linux, edit the main Apache configuration file, which, in most Linux installations, is located in `/etc/httpd/conf/`.

- a. Open for editing the file `/etc/httpd/conf/httpd.conf`.

- b. Locate the lines `LoadModule <module_name>` corresponding to the modules that you want to switch on, and uncomment the lines.
 - c. Save the file.
 - d. Restart Apache.
3. Switch the Panel back to normal operation mode by issuing the following SQL query:

```
mysql -uadmin -p`cat /etc/psa/.psa.shadow` psa -e "update misc set val='0'
where param='vps_optimized_mode_status';"
```

Apache Modules Switched Off in VPS-Optimized Mode

The following Apache modules are switched off in the optimized mode:

- authn_alias
- authn_anon
- authn_dbm
- authn_default
- authz_user
- authz_owner
- authz_groupfile
- authz_dbm
- authz_default
- ldap
- authnz_ldap
- ext_filter
- mime_magic
- deflate
- usertrack
- dav_fs
- vhost_alias
- speling
- proxy_balancer
- cache
- disk_cache
- file_cache
- mem_cache
- version
- asis
- bw
- proxy_ajp
- auth_ldap
- perl

- python
- php5
- php4

The list of the modules can vary depending on the operating system distribution and architecture. When Parallels Plesk Panel is installed and the optimized mode is switched on, you can check the list in the following files:

- On 32-bit operating systems - `/usr/lib/plesk-9.0/vps_optimized_aspects/apache-modules-all`
- On 64-bit operating systems - `/usr/lib64/plesk-9.0/vps_optimized_aspects/apache-modules-all`

(Optional) Hide Power Panel Controls for PVC Installations

When Panel is installed to PVC, administrators refer to Panel when performing web hosting operations and to Parallels Power Panel (PPP) when managing their container. The PPP becomes available when the administrators turn on *offline-management* mode. When this mode is on and Panel is installed, some controls and menus of PPP become available on top and left navigation panes of Panel. In other words, PPP partially builds into Panel in offline-management mode.

Since Panel 10, the integration between panels leads to unexpected results. For example, some icons in Panel might not be displayed or layout might be broken when the offline management is on. To resolve these problems, we recommend that you do not use the integration and access the panels on different ports (4643 and 8443).

➤ **To make PPP and Panel operate on different ports, do the following:**

- On Linux servers, connect to the hardware node over SSH and run the following command:

```
vzctl set CT_ID --offline_management yes --offline_service vzpp --save
```

- On Windows servers, connect to the hardware node over Remote Desktop and run the following commands:

```
vzctl set CT_ID --offline_management yes --save  
vzcfgt set CT_ID offlineservices vzpp
```

(Optional) Set Up Upgrade Notifications

Each new Panel build is given one of the four release tiers - *testing release*, *early adopter release*, *general release*, *late adopter stable*. The purpose of these tiers is to notify Panel administrators when the next version of the desired quality is released so that they can schedule an upgrade to this version. To prevent Panel administrators from upgrading to unstable Panel versions, you can make Panel show only releases or updates complying with the desired quality levels. If you are new to release tiers, read **Before Installing Panel** (on page 11).

Hiding Release Tiers

You can explicitly configure Panel to show *only* upgrades that are of equal or higher quality than a certain tier (from *testing* to *stable*). To do this, add the following lines to the `panel.ini` file:

```
[updates]
releaseTier = <release-tier>
```

where `<release-tier>` is one of the following:

- `testing` for testing release.
- `current` for early adopter release.
- `release` for general release.
- `stable` for late adopter release.

On Linux, `panel.ini` is located in `$PRODUCT_ROOT/admin/conf`.

On Windows, `panel.ini` is located in `%plesk_dir%\admin\conf\` (`%plesk_dir%` is an environment variable denoting the Panel installation directory).

(Optional) Change or Hide Web Interface Elements

A freshly installed Panel may include promotional items, for example, an invitation to install Presence Builder or a link to the Parallels store where customers can order domain names and SSL certificates. If, for some reason, you do not want to display these options to Panel users (for example, if you use competitive software and alternative partner programs to resell domain names), Panel provides means for changing or hiding these promotional items. To know which items are customizable and how to manage them, refer to the **Advanced Administration Guide for Linux and for Windows**.

Upgrading Panel

If you are using one of the earlier Panel versions, you can choose between two ways of upgrading to Panel 11.5: *in-place upgrade* or *upgrade by transfer*. Choosing the upgrade way is up to you. Next in this section we will provide basic considerations on both ways.

Important: If you upgrade from Panel 9 or earlier, you should perform additional steps to complete transition to the new business model used since Panel 10. The instructions on what to do after upgrading from Panel 9 and earlier are provided in the chapter **Completing Upgrade from Panel 9 and Earlier Versions** (on page 96).

In-Place Panel Upgrading



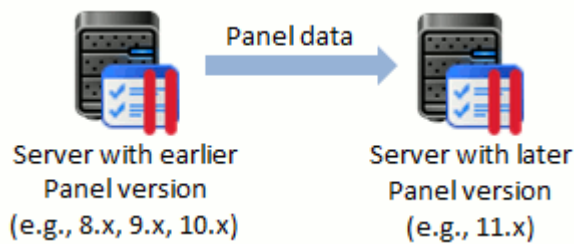
Server with
Parallels
Plesk Panel

In-place upgrading implies updating Panel components within one server. This way of upgrading has the following pros and cons:

- Supports the following Panel versions: Panel 8.x and later.
- *Does not support* operating system (OS) upgrading. Thus, if your current OS is not supported by the Panel version you want to upgrade to, it is *not possible* to upgrade the OS first and then upgrade Panel.
- Can be automated for a number of Panel servers.
- Preserves all custom configurations of system services. All third-party services and Panel extensions remain intact.
- Issues arising during an in-place upgrade (for example, a hardware failure) may lead to Panel inoperability.

Learn how to perform in-place upgrade in **In-Place Panel Upgrading** (on page 55).

Upgrading Panel by Transfer



Upgrade by transfer means moving Panel data (subscriptions, accounts, and so on) from a server with an earlier Panel version (*source*) to the server with a clean Panel 11.5 installation (*destination*). This way of upgrading has the following pros and cons:

- Supports the following Panel versions: Panel 7.5 and later.
- Allows you to move Panel from a server with currently unsupported OS to the server with a later (supported) OS version.
- *Cannot* be automated for a number of Panel servers.
- *Does not* preserve custom configurations of system services, third-party services, and Panel extensions. They are *not* transferred to the destination server.
- The source server is not affected by the upgrade in any way. Even if the upgrade is unsuccessful, the source server continues working.

Learn how to perform upgrade by transfer in **Upgrading Panel by Transfer** (on page 78).

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In-Place Panel Upgrading

Note: Before you proceed, we recommend that you acquaint with Panel versioning.

In-place upgrade is a process of updating Panel components on a server. After an upgrade, Panel increases its major or minor version, for example, from 10.3 to 10.4 or from 10.4 to 11.5.

There are three main scenarios of in-place upgrade: Manual, automated, and upgrade in Parallels Virtuozzo Containers. In this chapter, you will learn which of them to choose depending on your environment and how to perform in-place upgrades.

Manual Upgrade



This is a typical scenario if you want to upgrade a single Panel installation. *Manual* means that user input is required during the upgrade. The wizard prompts you to enter various upgrade settings such as the Panel version, select the components to be upgraded, and so on. If you use Panel 10 and later, you can start an upgrade directly from Panel. Users of earlier Panel versions should download and use the Parallels Installer utility. The table below shows the possible ways of upgrading a particular Panel version to the latest one.

Panel Version	Upgrade Through...
8.x, 9.x	Parallels Installer
10.x, 11.x	Panel GUI (Tools & Settings > Updates and Upgrades), Parallels Installer Note: Since 10.4, you can set up Panel to apply upgrades automatically once they become available. Learn more in the Administrator's Guide , section Panel Updates and Upgrades .

Learn how to manually upgrade Panel in the section **Manual Upgrade** (on page 61).

Important: If you upgrade from earlier Panel versions (7.x, 8.x, or 9.x), you should perform additional Panel configuration steps once data transfer is finished. These steps are required for successful switching of all your Panel objects to the new business model. Learn more in the chapter **Completing Upgrade from Panel 9 and Earlier Versions** (on page 96).

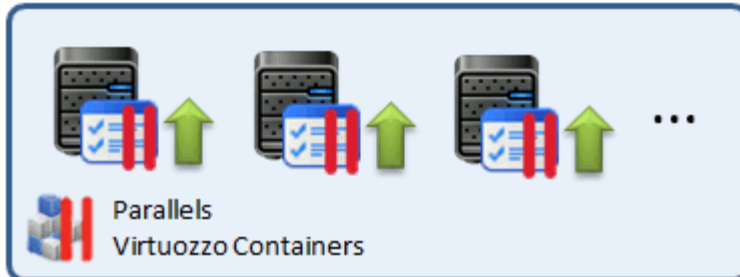
Automated Upgrade



If you maintain a large number of Panel installations, we recommend that you use the Parallels Installer utility ran in an unattended manner. This utility accepts all upgrade parameters as command-line options, so you can fully automate Panel upgrades by writing custom upgrade scripts. Learn more in the section **(Advanced) Automated Upgrade** (on page 66). On Linux systems, you can upgrade all Panels at the same time by running a script that copies and simultaneously runs the Installer utility on a number of servers. See the script examples in the section **Upgrade Script Examples (Linux)** (on page 70). On Windows systems, scripts with remote command execution are also possible but require additional tools such as PsExec. Thus, we do not give examples of such scripts for Windows.

Note that automated upgrades can be significantly speeded up if you create a local mirror of the Parallels updates server. Learn more in **Appendix C: Mirroring Parallels Updates Server**.

Upgrade in Parallels Virtuozzo Containers



Panels that run in Parallels Virtuozzo Containers can be upgraded using the manual or automated upgrade ways described above. Nevertheless, if Panel was installed to a container via a PVC template, we strongly recommend that you perform all further Panel upgrades via templates. In this case, the upgrade is performed by running Virtuozzo commands.

Learn more in the section **(Advanced) Upgrade in Parallels Virtuozzo Containers** (on page 71).

In-Place Upgrade Steps

Before upgrading a Panel installation, you should perform a number of preliminary steps. Learn more in the section **Before Upgrading Panel** (on page 57).

Note that after the upgrade is completed, it may be required to perform some post-upgrade steps, for example, to provide a new license key. Learn more in the section **After Upgrading Panel** (on page 74).

Note: In-place Panel upgrades do not remove or upgrade PHP currently installed on your server. All installed PHP versions remain unchanged. On Windows, Panel additionally installs the newest PHP version available in its installation package. If you need newer PHP versions on Linux, install them manually as described in the **Administrator's Guide**, section **Multiple PHP Versions**.

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Before Upgrading Panel

There are a few preliminary steps that you might need to perform before upgrading Panel. These steps apply to all in-place upgrade scenarios.

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1. Check Requirements

Before you start in-place upgrading, make sure you meet the following requirements.

Requirements for Linux Systems

Before upgrading Parallels Plesk Panel for Linux, back up your server data and make sure that the following requirements are met:

- PHP 5 is required for the Presence Builder component.
- The disk space allocated to the `/tmp` directory exceeds three gigabytes.
- A user who runs the installer can execute files in the `/tmp` directory. This makes it possible to install the system packages required for Panel.
- If you run Debian, CloudLinux, or Ubuntu, add updates and security repositories to your `apt` package manager configuration.

If you wish to install the Business Manager component during the Panel upgrade, you should first check that the MySQL server configuration option `sort_buffer_size` is set to two megabytes (`sort_buffer_size=2M`) or more. This option is set in the `/etc/my.cnf` file. After the configuration change, restart the `mysqld` service by using the following command:

```
service mysqld restart
```

Requirements for Windows Systems

Before upgrading Parallels Plesk Panel for Windows, back up your server data and make sure that the following requirements are met:

- If you plan to use Microsoft SQL Server support in the Panel, the SQL Server should be installed and configured to use standard or mixed security mode. If the SQL Server is not installed, you can select it to be installed with the Panel upgrade and configured with administrator name 'sa' and a random password.
- Prior to upgrading Panel, ensure that you have the latest version of the Microsoft Visual C++ Redistributable Package.

Note: To install Microsoft SQL Server 2008 during the Panel upgrade, first install Microsoft Installer 4.5 and .NET Framework 2.0 SP 2.

If you wish to install the Business Manager component during the Panel upgrade, you should first check that the MySQL server configuration option `sort_buffer_size` is set to 2 megabytes (`sort_buffer_size=2M`) or more. This option is set in the `%plesk_dir%\Databases\MySQL\Data\my.ini` file. After the configuration change, restart the `mysqld` service by running these two commands from shell:

```
net stop mysql
net start mysql
```

2. Perform Pre-Upgrade Check-Up

The *pre-upgrade checker* tool checks for potential business logic issues and other problems of upgrading to Panel 11.5, and returns recommendations that will help you solve the problems. It runs automatically as part of Parallels Installer when you upgrade Parallels Panel. You can also download and run the checker manually before you start the upgrade operation. We strongly recommend that you run this tool.

You can download the pre-upgrade checker and find the descriptions of the report messages at <http://kb.parallels.com/9436>.

Note: When you upgrade Parallels Panel from PVC templates, no pre-upgrade checker report appears. However, the upgrade issues might exist.

3. Choose a Release Tier

One more step before upgrading a Panel installation is to choose a proper Panel version depending on its release tier.

Each major version of Panel passes through a number of development stages. It is natural that on earlier stages, some of newly implemented features may not be in their final state and may require some further modification. The functionality of such features in subsequent Panel versions is improved as they receive more customer feedback over time. To indicate the stage of the current Panel version, we assign one of the following release tiers to it: *Testing release*, *Early Adopter release*, *General release*, and *Late Adopter release*. The decision about what tier to use is absolutely up to you. For example, consider upgrading to the early adopter release if you want to try new features before the general availability of Panel. On the other hand, if you want to have the solution that received all major updates and is successfully used by a number of service providers, wait until Panel achieves the late adopter release status (it may be a couple of months after the general release).

Choose one of the following:

- *Testing release.*
We start each release cycle with publishing a number of testing releases for preview purposes and let you sequentially upgrade from the first one to the last, and then upgrade to higher release tiers. We do not provide technical support for such builds even if they were upgraded to higher tiers. Thus, avoid using this build in a production environment.

Notes:

1. By default, testing builds are not shown as available for installation. You can install the testing Panel version only by running Parallels Installer with one of the special options. Learn more in the chapter **Manual Upgrade** (on page 61).

2. Upgrade to the next testing release is available only to the users of a testing build. Subsequent Panel builds do not have the corresponding option in the GUI.

- *Early Adopter release.*
An early adopter release has all claimed features and previous versions successfully upgrade to it. The quality of this version is eventually improved by updates. By selecting the early adopter release you become the first to see the new features and receive the freshest updates.
- *General release.*
A general release has passed all quality tests. Minor issues are promptly fixed by updates. We recommend that you always upgrade Panel to general release versions.
- *Late Adopter release.*
A late adopter release has received all major updates issued for the current Panel version, and a number of service providers have successfully used it for some time.

During the manual in-place upgrade, selection of a Panel version is one of the installation wizard steps. If an upgrade is automated by a script, you should specify a certain Panel version using Installer options. For users of PVC templates, a *release* Panel version is the only option.

Manual Upgrade

Once you have completed the steps described in the section **Before Upgrading Panel** (on page 57), you can proceed directly to the Panel upgrade.

If you use Panel 10 or later, you can perform the upgrade directly from Panel. Details on how to do this are provided later in this section.

If you want to upgrade from earlier Panel versions, use the Parallels Installer utility. The *Parallels Installer* utility is available for download from <http://www.parallels.com/products/plesk/download/>. Several distributions of Parallels Installer have been created for different operating systems and platforms, so be sure to obtain the Parallels Installer version that matches your host operating system. Parallels Installer binaries are usually distributed under names in the following format: `parallels_installer_v<installer version>_os_<operating system version>_<platform>`. Parallels Installer can be used either via a browser-based user interface or command line. Learn more in the corresponding sections below.

Some Panel licenses do not grant permission to perform complex upgrades (upgrades that change a major version number: for example, from 10.3.1 to 10.4.0). On attempting to perform such an upgrade, Panel will warn you about license limitations. Nevertheless, you will still be able to perform the upgrade. When it is finished, you will need to obtain and install a license key for the new Panel version. For more information about installing a license key after upgrade, refer to the section **Installing a License Key** (on page 76).

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Upgrade from the Panel GUI (Panel 10 and later)

Starting from Panel 10, you can apply upgrades directly from Panel in **Tools & Settings > Updates and Upgrades**.

We recommend that you set up Panel to notify you when upgrades to the chosen version (early adopter, general, or late adopter release) become available. After you select the desired release tier in **Tools & Settings > Update and Upgrade Settings**, Panel will check for upgrades once a day. When an upgrade with the selected release tier becomes available, Panel will notify you on the **Home > System Overview**.

Upgrade from the Web Interface

To upgrade 8.x or 9.x versions of Parallels Plesk Panel to the latest version via the Web interface, follow the instructions given below.

Important:

1. Parallels Plesk Sitebuilder 4.5 is not upgraded. Alternatively, the new version of Presence Builder (former Sitebuilder) installs beside the previous one. Hence, you have the opportunity to manage existing sites in Sitebuilder 4.5 and create new sites either in Web Presence Builder or in Sitebuilder 4.5. The upgrade of existing sites to the new format is performed manually.
 2. If you used Parallels Plesk Billing, add the Customer & Business Manager component to the list of components to upgrade.
-

➤ **To upgrade Panel from the Web interface:**

1. Download the Parallels Installer utility that suits your operating system from <http://www.parallels.com/products/plesk/download/>.

2. (Only for Linux) Set the execution permission for Parallels Installer.

```
chmod +x parallels_products_installer_file_name
```

3. Run Parallels Installer.

On a Linux/Unix server:

```
./parallels_products_installer_file_name --web-interface
```

On a Windows server:

```
parallels_products_installer_file_name
```

(Only for Linux) Open your browser and enter <https://your-host-name-or-IP-address:8447/> in the address bar. The Parallels Installer Web interface opens.

(Only for Windows) Parallels Installer wizard opens in a new browser window. When the installer starts, an additional console window opens. This window displays the operations performed by the utility. It is closed upon the successful installation, or after 30 minutes of inactivity.

Note: As described in the section **Before Upgrading Panel** (on page 57), you can select a Panel build for an upgrade depending on its release tier. *By default, Installer shows you only the latest general and late adopter releases.* To be able to upgrade to other Panel releases, use the following Installer options:

`--all-versions` to view all available Panel versions.
`--tier <release_tier>` to view the latest available versions with the specified release tier.

4. (Only for Windows) Select the language for the installation wizard.
5. Log in to the web interface.
 - If you are running Windows, type the administrator's username ("Administrator"), administrator's password, and click **Log In**.
 - If you are running Linux, type the system root user and password, and click **Log In**.
6. Click **Updates source and installation settings** and specify the source of Parallels Plesk Panel distribution package:
 - By default, the **Official Parallels Updates server** is selected. Specify the location where the installation files will be stored.
 - If you select **Mirror server**, specify the `.inf3` file location in the **URL to the directory with .inf3 file** field. Specify the location where the installation files will be stored.
 - If you select **Local media**, specify the `.inf3` file location in the **Absolute path to the .inf3 file** field.
7. If you use a proxy server, select the **Connect using a proxy** checkbox and specify the following settings:
 - Specify proxy host name and port number in the **Proxy address and port** fields.
 - If this proxy server requires authentication, select the **Require authentication** checkbox and specify username and password.
8. (Only for Linux) Select the installation language and click **Save** to save the installation preferences and proceed to installation.
9. Click **Install or Upgrade Product**. You are taken to the products list.
10. Select the checkbox corresponding to Parallels Plesk Panel and the Parallels Plesk Panel product versions to which you want to upgrade. By default, the latest product versions are selected.
11. To review the components that will be installed, select the **Preview components selection** checkbox and click **Continue**. You can see the list of available components. To select or deselect a component, select or clear the corresponding checkbox. To select or deselect all the components, click **Select all** or **None** respectively.
12. To start the upgrade, click **Continue**.

The packages will be downloaded and installed. When the upgrade is finished, you will see a notification saying "All products and components have been successfully installed and upgraded." Click **OK**.

Forcing integration with Business Manager

If you upgrade Panel with Business Manager, the components require some time (not more than five minutes) to set up integration after the upgrade is completed. During this period, you may not see Business Manager links in Panel, Business Manager may require your password to log in, and you may see a message about invalid credentials when logging in.

If you want to force the integration, log in to Business Manager and reconnect Panel manually. To do this, go to **Home**, group **Sync Statistics**, click the corresponding link, select Panel ID, and click **Reconnect**.

Upgrade from the Command Line

To upgrade 8.x or 9.x versions of Parallels Plesk Panel to the latest version via the command line, follow the instructions given below.

Important:

1. Parallels Plesk Sitebuilder 4.5 is not upgraded. Alternatively, the new version of Presence Builder (former SiteBuilder) installs beside the previous one. Hence, you have the opportunity to manage existing sites in Sitebuilder 4.5 and create new sites either in Presence Builder or in SiteBuilder 4.5. The upgrade of existing sites to the new format is performed manually.
 2. If you used Parallels Plesk Billing, add the Customer & Business Manager component to the list of components to upgrade.
-

➤ *To update or upgrade your Panel through the command line:*

1. Download the Parallels Installer utility that suits your operating system from <http://www.parallels.com/products/plesk/download/> and save it on your server's hard drive.

2. (Only for Linux) Set the execution permission for Parallels Installer:

```
chmod +x parallels_products_installer_file_name
```

3. Run Parallels Installer.

On a Linux/Unix server:

```
./parallels_products_installer_file_name
```

On a Windows server:

```
parallels_products_installer_file_name --console
```

Note: As described in the section **Before Upgrading Panel** (on page 57), you can select a Panel build for an upgrade depending on its release tier. *By default, Installer shows you only the latest general and late adopter releases.* To be able to upgrade to other Panel releases, use the following Installer options:

--all-versions to view all available Panel versions.

--tier <release_tier> to view the latest available versions with the specified release tier.

4. To confirm upgrade, type 'y' and press ENTER.

5. Specify the source of Parallels Plesk Panel distribution package.

You can choose to upgrade from a local medium, the official Parallels Updates server, or another site. By default, the official server is selected. If you wish to retrieve installation files from a local medium or network storage:

a Type 's' and press ENTER.

b To choose a local medium, type 1. To choose a network storage device, type 3. Press ENTER.

c If you chose a local medium, specify the location of psa.inf configuration file. If you chose a network storage, specify the address. For example, <http://example.com>, <http://192.168.10.10>, <ftp://192.168.10.10>.

Note: If you are running Windows, it is possible to use local system paths when specifying the source. Network shares cannot be used directly, only if you preliminarily map a network drive to a local drive.

6. If you use a proxy server, specify the following settings:
 - a **Proxy host name and port number.** To specify them, type 's', type the host name, type the port number, and press ENTER to continue.
 - b **User name and password.** If this proxy server requires authentication, type 'a', press ENTER, specify username and press ENTER, type password and press ENTER.
 - c When finished with specifying proxy settings, type 'n' and press ENTER to continue.
7. Select the product version to which you want to upgrade: type the number corresponding to the product version you need and press ENTER, then type 'n' and press ENTER to continue.
8. Select the components that you want to install or upgrade.

Tip: The selected packages are marked with `[*]` symbols. The packages that are already installed and do not require updating are marked with `[=]` symbols. The component groups that contain selected components are marked with `[.]`. To select or deselect a package, type the corresponding number and press ENTER..

9. To continue with the upgrade, type 'n' and press ENTER. When prompted, confirm upgrading: type 'n' and press ENTER again.

The packages will be downloaded and installed.

Forcing integration with Business Manager

If you upgrade Panel with Business Manager, the components require some time (not more than five minutes) to set up integration after the upgrade is completed. During this period, you may not see Business Manager links in Panel, Business Manager may require your password to log in, and you may see a message about invalid credentials when logging in.

If you want to force the integration, log in to Business Manager and reconnect Panel manually. To do this, go to **Home**, group **Sync Statistics**, click the corresponding link, select Panel ID, and click **Reconnect**.

(Advanced) Automated Upgrade

Once you have completed the steps described in the section **Before Upgrading Panel** (on page 57), you can proceed directly to the Panel upgrade.

To upgrade Panel on Linux- or Windows-based servers, use the Parallels Installer utility. The *Parallels Installer* utility is available for download from <http://www.parallels.com/products/plesk/download/>. Several distributions of Parallels Installer have been created for different operating systems and platforms, so be sure to obtain the Parallels Installer that matches your host operating system. Normally, Parallels Installer binaries are distributed under names in the following format:

```
parallels_installer_v<installer version>_os_<operating system
version>_<platform>.
```

How to Automate Panel Upgrade

If you need to simultaneously upgrade a large number of Panel servers, we recommend that you automate this process. The automation is based on using the command-line options of the Parallels Installer utility that allows you to predefine all upgrade parameters. Thus, *the upgrade can be carried out without user input*. To learn how to perform such upgrades, refer to the section **Running Automated Upgrades** (on page 68).

Moreover, if you plan to upgrade a number of Panels for Linux, you can write a script that automatically copies and runs Installer on a specified group of servers. See the script examples in the section **Upgrade Script Examples (Linux)** (on page 70). On Windows systems, scripts with remote command execution are also possible but require additional tools such as PsExec. For this reason, we do not give examples of such scripts for Windows.

Note that after an upgrade, you may be asked to install a new license key. This may happen with those Panel license keys that do not grant permission to perform complex upgrades (upgrades that change the major version number, for example, from 10.3.1 to 10.4.0). For this reason, when the upgrade is finished, you will need to obtain and install a license key for the new Panel version. You can automate this process as well. For more information about installing a license key after upgrade, refer to the section **Installing a License Key** (on page 76).

Speeding Up Automated Upgrades

You can significantly speed up multiple upgrades if you create a local mirror of the Parallels Updates server. This will save time and bandwidth. Learn how to set up a custom mirror in **Appendix C: Mirroring Parallels Updates Server**.

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Running Automated Upgrades

To upgrade Panel without needing to supply any information in the process, run the command:

```
parallels_installer <packages source options> --select-release-id <ID> --
upgrade-installed-components <components installation options> [other
options]
```

where

- **packages source options** define the location where Installer should obtain the Panel packages for upgrade

```
<packages source options> =
--source <URL>
if using a mirror of the Parallels Updates server
OR
--source <path>
if using a local file system
OR
none
if installing from the Parallels Updates server
```

- **--select-release-ID** option defines Panel version for the upgrade. **<ID>** is a unique Panel version identifier, like **PLESK_11_0_9**. You can get the list of available Panel version IDs by running Installer with the **--show-releases** option. Note that by default, Installer shows you only IDs of the publicly released production versions (learn more about Panel release tiers in the section **Before Installing Panel** (on page 11)). If you want to obtain the full list of available Panel versions including those intended for the product preview and testing purposes, add the **--skip-branch-filter** option.
- **components installation options** define which Panel components should be additionally installed during an upgrade

```
<components installation options> =
--installation-type
```

The installation type can be **Full** or **Typical**.

```
OR
--install-component component1 [--install-component component2
[... [--install-component componentN]]]
```

You can get the full list of components available for a certain release by running Installer with the following options: **--select-release-id <ID> --show-components**

- other options include those that define proxy settings, installation logging and so on. For full details, please refer to the **Appendix D: Parallels Installer Options** (on page 189).

Examples, Linux/Unix

1. The following command upgrades Panel to the 11.0.9 release version (ID is **PLESK_11_0_9**) from the mirror set up on the server **mirror.example.com** available via HTTP. Installation files will temporarily be stored at **/tmp/panel**, and the installation status will be reported to the email **admin@example.com**. The PostgreSQL server component is additionally installed.

```
./parallels_installer --source http://mirror.example.com/ --target  
/tmp/panel --select-release-id PLESK_11_0_9 --upgrade-installed-components  
--install-component postgresql --notify-email admin@example.com
```

2. The following command performs the upgrade to the Panel 11.0.9 release version (ID is PLESK_11_0_9) from the Parallels Updates server. All Installer's output is redirected to an XML file.

```
./parallels_installer --select-release-id PLESK_11_0_9 --upgrade-installed-  
components --enable-xml-output
```

Examples, Windows

1. The following command upgrades Panel to the 11.0.9 release version (ID is PANEL_11_0_9_WIN) from the mirror set up on the server `mirror.example.com` available via HTTP. Installation files will temporarily be stored in the `%SystemDrive%\Parallels\` folder, and the installation status will be reported to the email `admin@example.com`. The Bind name server component is additionally installed.

```
parallels_installer.exe --source http://mirror.example.com/ --target  
%SystemDrive%\Parallels --select-release-id PANEL_11_0_9_WIN --upgrade-  
installed-components --install-component dns --notify-email  
admin@example.com
```

2. The following command performs the upgrade to the Panel 11.0.9 release version (ID is PANEL_11_0_9) from the Parallels Updates server. All installer output is redirected to an XML file.

```
parallels_installer.exe --select-release-id PANEL_11_0_9_WIN --upgrade-  
installed-components --enable-xml-output
```

Upgrade Script Examples (Linux)

This section provides notes on implementation and execution of an upgrade script, and also presents a couple of script samples.

Implementation and Executions Notes

- To avoid being prompted for password each time you connect via SSH to the servers where the Panel should be installed, place your public key to the list of authorized keys of a user on whose behalf the script is run on each server (see SSH documentation for details on the procedure).
- If you have a local mirror of the Panel updates server (as described in the chapter **(Advanced) Mirroring Parallels Updates Server**), use the following option:

```
--source <mirror URL>
```

Example

This script upgrades Panel installed on the specified servers to the latest available version.

```
#!/bin/sh
SERVERS_LIST="node1.example.com node2.example.com"
for current_server in $SERVERS_LIST; do
ssh -f root@$current_server 'plesk installer --select-release-latest --
upgrade-installed-components --notify-email admin@example.com'
done
```

(Advanced) Upgrade in Parallels Virtuozzo Containers

Parallels Virtuozzo Containers is a container-based virtualization solution employed by a large number of service providers. Each Virtuozzo container is a separate virtual server that acts exactly like a stand-alone one.

The main way of installing an app to Virtuozzo Containers is to use a *PVC template*. A *PVC app template* is a package containing everything an app needs to be installed to a server. You install an app template to your server just once and then install the app from the template to a number of containers simultaneously. The main benefit of using PVC templates is that the software installed in containers is unified - you have one PVC template that is applied to all containers on your hardware node. If Panel was installed to a container via a PVC template, we strongly recommend that you perform all further Panel upgrades via templates. If you have a number of Panel containers, this will allow you to keep all Panels consistent within your hardware node.

Upgrade via PVC templates is performed in two steps: you install the latest available Panel template to your hardware node and then start an upgrade on each container with the help of Virtuozzo commands.

As well as in the other upgrade scenarios, after the upgrade in Virtuozzo Containers, Panel may require the installation of a new license key. You can do this either manually or automatically. For more information about installing a license key after upgrade, refer to the section **Installing a License Key** (on page 76).

In this section, we will describe how to perform an upgrade of Panel installed to a Virtuozzo container via a PVC template on both Linux and Windows platforms.

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Upgrading Panel on PVC for Linux

When you upgrade Panel operating in Parallels Virtuozzo Containers for Linux, please note the following:

- You should not remove Panel PVC templates from containers before upgrading.
- During upgrade to a newer version of Parallels Plesk Panel, ensure that you upgrade all installed components. This is required to avoid conflicts caused by outdated components.

➤ **To upgrade Panel installed with versioned EZ templates in Parallels Virtuozzo Containers environment:**

1. Obtain the new templates from the Parallels website and install them using the following command:

```
vzup2date -m batch -z install <list of templates>
```

Note: On Parallels Cloud Server, the `vzup2date` utility is deprecated. You should use `yum` instead.

For more information about shipped templates, refer to the section **Linux PVC Templates** (on page 29).

To learn what Panel templates are currently installed on the server, run `vzpkg list` and find the ones with names starting with `pp`.

2. Install the latest versions of the Panel templates to each container by running the commands like this:

```
vzpkg install <CTID> <list of templates>
```

Where `<CTID>` is the ID of the container on which you install the templates and `<list of templates>` lists templates upgraded or installed during step 1.

For example:

```
vzpkg install 444 pp11.5 pp11.5-kav
```

Note: Mail server templates `pp11.5-qmail` and `pp11.5-postfix` must not be installed at the same time.

Important: We strongly recommend that you add the new template `pp11.5-bind` after installing new versions of templates that were already installed. Otherwise, all new Panel containers deployed on this hardware node will not have the DNS server installed. To learn more about how Panel works without a DNS server, refer to the **Administrator's Guide**, section **Panel Without a DNS Server**.

3. If you used versioned templates before upgrading, remove them from each container by running the command like this:

```
vzpkg remove <CTID> <list of old templates>
```

For example:

```
vzpkg remove 444 pp10 pp10-kav
```


➤ **To upgrade Panel installed with version-free EZ templates in Parallels Virtuozzo Containers environment:**

1. Upgrade Panel templates installed on the server to the latest available version and add new templates that you need. To do this, run the following command:

```
vzup2date -m batch -z install <list of templates>
```

Note: On Parallels Cloud Server, the `vzup2date` utility is deprecated. You should use `yum` instead.

For more information about shipped templates, refer to the section **Linux PVC Templates** (on page 29).

To learn what Panel templates are currently installed on the server, run `vzpkg list` and find the ones with names starting with `pp`.

2. Install the latest versions of the Panel templates to each container by running the commands like this:

```
vzpkg install -f <CTID> <container's list of templates>  
vzpkg update <CTID>
```

Where `<CTID>` is the ID of the container on which you install the templates and `<container's list of templates>` is a consistent list of all templates installed on the container as well as new templates that you want to install on it during the upgrade.

For example:

```
vzpkg install -f 444 pp pp-kav
```

Note: Mail server templates `pp-qmail` and `pp-postfix` must not be installed at the same time.

Important: We strongly recommend that you add the new template `pp-bind` after installing new versions of templates that were already installed. Otherwise, all new Panel containers deployed on this hardware node will not have the DNS server installed. To learn more about how Panel works without a DNS server, refer to the **Administrator's Guide**, section **Panel Without a DNS Server**.

For more information about operating in a PVC environment, refer to Parallels Virtuozzo Containers documentation available at the PVC page of the Parallels website.

Upgrading Panel on PVC for Windows

➤ ***To upgrade Panel installed with standard templates in Parallels Virtuozzo Containers environment:***

1. Obtain new templates from the Parallels website and upload them to your server.

Note: For more information about shipped templates, refer to the section **Windows PVC Templates** (on page 35).

2. Deploy the new templates on the server
3. Install the templates to containers.

For details on performing these operations and other administrative actions in a PVC environment, refer to Parallels Virtuozzo Containers documentation available at the PVC page of the Parallels website.

After Upgrading Panel

Post-upgrade setup includes some steps that may be required after an upgrade:

- *Installing a Panel license key* (on page 76).
Some Panel licenses do not grant the permission to perform complex upgrades (upgrades that change a major version number: for example, from 10.3.1 to 10.4.0). On attempt to perform such an upgrade, Panel will warn you about license limitations. Nevertheless, you will still be able to perform the upgrade. When it is finished, you will need to obtain and install a license key for the new Panel version.
- *Configuring Business Manager Connections to Remote Panels of earlier versions* (on page 77).
Parallels Customer and Business Manager 11.5 uses the new improved protocol for communications with remote Panels. Therefore, if you have upgraded Business Manager to the 11 version, we strongly recommend that you upgrade all connected Panels to the 11 version as well. Nevertheless, if for some reason you wish to continue using earlier versions of Panel with your Business Manager 11.5, you should manually configure connections to them to use the new improved protocol. Note that in this case, some Business Manager features will not work on these Panels.
- *Complete switching to the new business model after upgrading from Panel 9 or earlier.* (on page 96)
Due to changes in Panel business model introduced in version 10, if you upgrade from Panel 9 or earlier, you should perform additional configuration steps to complete the upgrade.

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Installing a License Key

Once the upgrade is finished, Panel may ask you to install a new license key. This may happen with those Panel license keys that do not grant the permission to perform complex upgrades (upgrades that change the major version number: such as, for example, from 10.3.1 to 10.4.0).

You can install an existing license key either manually from the GUI or remotely from the command-line interface. The latter way is recommended when upgrading multiple Panel installations.

To get a new license key, proceed to the Parallels online store (**Tools & Settings > License Management > Order New Key**). Once you purchase the key, you will receive an activation email with your activation code and a license key file. You can install a Panel license key either by entering the activation code or by uploading the file from this email.

➤ *To install a license key using an activation code:*

1. Go to **Tools & Settings > License Management > Parallels Panel License Key** and click **Install Key**.
2. Enter the code you received in the email to the **Enter an activation code** field and click **OK**.

➤ *To install a license key using a license key file:*

1. Go to **Tools & Settings > License Management > Parallels Panel License Key** and click **Install Key**.
2. Choose **Upload a license key file**.
3. Specify the path to the key file you received in the email and click **OK**.

➤ *To install a license key through the command-line interface:*

To install a Panel license key, use the `license` utility:

```
license <--install|-i> <path-to-key-file | activation-code>
```

For example,

On Linux using a key file:

```
/usr/local/psa/bin/license -i /tmp/pp11.5key.xml
```

On Linux using an activation code:

```
/usr/local/psa/bin/license -i AB1C23-4DEF56-7GHI89-JK1L23-MNP456
```

On Windows using a key file:

```
"%plesk_dir%\bin\license.exe" -i "D:\keys\pp11.5key.xml"
```

On Windows using an activation code:

```
"%plesk_dir%\bin\license.exe" -i AB1C23-4DEF56-7GHI89-JK1L23-MNP456
```

Configuring Business Manager Connections to Remote Panels of Earlier Versions

In order to improve Panel security, in version 11.0, we changed the protocol of interaction between Business Manager and connected Panels. By default, after upgrading to this version, Business Manager continues using the old protocol for interaction with connected Panels of version 10.4 and earlier. To switch the connections between Business Manager and such Panels to the new improved protocol, you should perform the additional configuration steps described below.

➤ ***To restore the connection between Business Manager 11.5 and a remote Panel 10.4 or earlier:***

1. Go to **Business Setup > All Settings > Hosting Panels**.
2. Find the remote Panel in **Panel Groups**. This Panel will have a warning icon (⚠) near its name. Click **Edit**.
3. Re-enter the administrator's password.
4. Specify the **Business Manager IP address** - an IP address that Panel will use to communicate with Business Manager. Usually, this address is the IP address of Business Manager server in its local network. However, the address may be different, for example, if Business Manager communicates with this Panel through a firewall or a NAT router.
5. Click **OK**.

Upgrading Panel by Transfer

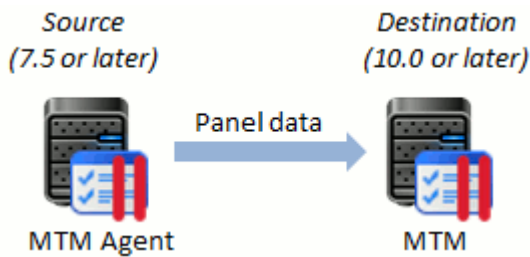
Upgrade by transfer is a process of switching to the latest Panel version by moving all hosting data (service plans, accounts, subscriptions with content, and so on) from your current Panel server (*source*) to a server with a later Panel version (*destination server*). This upgrade method is appropriate, for example, if the latest Panel version does not support in-place upgrade from your Panel or does not support the operating system you use on the server. In addition, you can use this type of upgrade if you want not only to update your Panel, but also to move it to a more productive server or a new operating system. You can perform upgrade by transfer in the following ways: using the Migration & Transfer Manager utility or using the backup files.

Supported Upgrades

Source	Destination
Plesk for Unix 7.5 and later	Parallels Plesk Panel for Linux 10.0 or later
Plesk for Windows 7.5.6 and later	Parallels Plesk Panel for Windows 10.0 or later

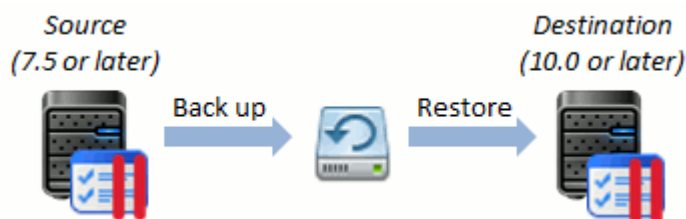
Important: If you upgrade from earlier Panel versions (7.x, 8.x, or 9.x), you should perform additional Panel configuration steps once the data transfer is finished. These steps are required for successful switching of all your Panel objects to the new business model. Learn more in the chapter **Completing Upgrade from Panel 9 and Earlier Versions** (on page 96).

Upgrade Using the Migration & Transfer Manager Utility (Recommended)



We recommend that you perform upgrade by transfer using the *Migration & Transfer Manager* utility. This utility runs on a destination server and automatically copies hosting data from your source Panel. Learn how to upgrade your Panel using Migration & Transfer Manager in the section **Upgrading with Migration & Transfer Manager** (on page 81).

Upgrade Through Backup Files



If for some reason, Migration & Transfer Manager cannot connect to the source server (for example, due to firewall restrictions), you can transfer data from the source to the destination server using backup files. To perform such an upgrade, you should back up the data on the source server, transfer the resulting archive file to the destination server manually, and restore the data on this server. You can back up and restore Panel data either through the Panel GUI, or by means of the command-line utilities `pleskbackup` and `pleskrestore`. Learn how to perform upgrade using backup files in the section **Upgrading Through Backup Files** (on page 92).

What Is Transferred

After you perform an upgrade by transfer, the destination Panel will contain service plans, add-ons, customer accounts, and subscriptions that existed on the source server before the upgrade. The majority of Panel settings will be transferred as well. However, some objects and settings are not transferred to the destination Panel, namely:

- Panel settings from the list below:
 - The list of connected database servers and their settings (**Tools & Settings > Database Servers**)

Important: If a database server connected to the source server is not connected to the destination server, all databases from this database server will be transferred to the destination server's default database server of the same type.

- The settings of Apache modules (**Tools & Settings > Apache Modules**)
- Backup settings (**Tools & Settings > Backup Settings**)
- Customers' backup files and FTP repository settings (**Control Panel > Websites & Domains > Backup Manager > Personal FTP Repository Settings**).
- Panel extensions.
- Third-party software and services, for example, Adobe ColdFusion or Google services.

Administrators and customers should configure these settings and add missing objects manually.

Best Practices

You might find useful the following Parallels Knowledge Base articles:

- Parallels Plesk Panel for Linux: Migration Best Practices and Usecases (<http://kb.parallels.com/en/113586#different>).
- Parallels Plesk Panel for Windows: Migration Best Practices and Usecases (<http://kb.parallels.com/en/113590>).

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Upgrading with Migration & Transfer Manager

The steps of transferring Panel data using the Migration & Transfer Manager utility are the following:

1. Install Migration & Transfer Manager on the destination server and prepare both servers to transfer according to instructions in the section **Preparing for Upgrade** (on page 81).
2. Run the Migration & Transfer Manager tool and go through the wizard steps. See the section **Performing Upgrade** (on page 90) for details on how to do it.

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Preparing for Upgrade

Before you can transfer data to Parallels Plesk Panel, you need to do the following:

1. Install Migration & Transfer Manager on the destination server. You can do this in one of the following ways:
 - *Through the Server Administration Panel.*
To install it through the Server Administration Panel, go to **Tools & Settings > Updates and Upgrades**. The Parallels Installer web interface will open in a new window or tab. In the Installer window, click **Add Components**, select the checkbox corresponding to the **Migration & Transfer Manager** component, and click **Continue**.
 - *From the command line.*
To install Migration & Transfer Manager from the command line, run the Parallels Installer on the destination server as described in the section **Upgrade from the Command Line** (on page 65) and add this component.
2. If a source or a destination server is protected by a firewall, configure the firewall to allow the data exchange between the servers.
When migrating from Windows platforms, allow TCP connections to the ports **6489** (Migration & Transfer Manager). When migrating from Linux, allow TCP connections to the port **22** (SSH).
3. If you are going to migrate from Windows-based platforms, install the Migration & Transfer Agent utility on the source server, as described in the section **Preparing to Transfer Data from Panel for Windows** (on page 82).

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Preparing to Transfer Data from Panel for Windows

Automatic transfer of data from one Windows server to another is possible only when a specific connection is established between the servers. The connection is established by Migration & Transfer Manager installed on a destination server and the *Migration & Transfer Agent* utility on a source server, provided that they are configured identically.

Migration & Transfer Agent is a utility which transfers data from a source to a destination server. To learn how to install Migration & Transfer Agent on the server, see the section **Installing Migration & Transfer Agent** (on page 83). If the default settings of Migration & Transfer Agent conflict with your network configuration (for example, you already use the default utility's port for some other purposes), you can change them as described in the section **Configuring Migration & Transfer Agent on the Source Server** (on page 84). If you change the Migration & Transfer Agent settings, you should do the corresponding changes to the Migration & Transfer Manager configuration as described in the section **Configuring Migration & Transfer Manager on the Destination Server** (on page 88).

The following settings are used by Migration & Transfer Agent by default:

- *Port* - number of the port that is used by the Panel for connecting to Migration & Transfer Agent. (The default is 6489.)

When changing the port, consider the following:

- It can be any number from 1 to 65535.
- It must be free on the server from which data will be migrated, that is, this port should not be used by any other programs or services on both servers.
- It must be allowed by firewall on the source server.
- *Channel type* - protocol communication between Migration & Transfer Manager and Migration & Transfer Agent. (The default is HTTP.)

When selecting the channel type, consider the following characteristics:

- TCP provides better performance than HTTP.
- HTTP is more public as it uses HTTP protocol, which is allowed by most firewalls.

Note: If these connection parameters are not the same in Migration & Transfer Manager and Migration & Transfer Agent configurations, migrations will fail.

Next in this section:

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Configuring Migration & Transfer Agent on the Source Server	84
Configuring Migration & Transfer Manager on the Destination Server	88

Installing Migration & Transfer Agent

➤ ***To install Migration & Transfer Agent:***

1. Log in to Server Administration Panel on the destination server.
2. Go to **Tools & Settings > Migration & Transfer Manager** (in the **Tools & Resources** group).
3. To obtain the latest version of the Migration & Transfer Agent, click **Download Migration & Transfer Agent**.
4. Upload the file to the source server.
5. Log in to the source server over Remote Desktop, and run the installation file.
6. Click **Next** several times to complete installation.

Once you have installed Migration & Transfer Agent, it starts automatically with the default settings. So, you can proceed to transferring data.

Configuring Migration & Transfer Agent on the Source Server

Migration & Transfer Agent is fully operable with the default settings, so there is no need to change them. However, if you want to change the port or protocol used by the agent, you can do so by following the instructions provided in this section.

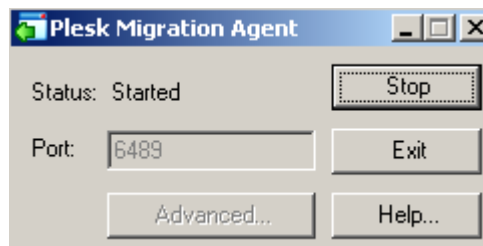
Changing Migration & Transfer Agent configuration includes the following:

- Changing parameters of the Migration & Transfer Agent connection with Migration & Transfer Manager (port and channel type).
This can be done using either Migration & Transfer Agent interface or Migration & Transfer Agent configuration file.
- Changing the location of data files on the source server.
This is necessary if, for example, there is not enough space on the disk where Migration & Transfer Agent is installed.

➤ **To change the connection parameters using Migration & Transfer Agent GUI:**

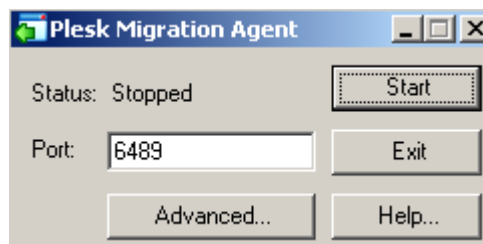
1. Run the `WINAgentMng.exe` file. If Migration & Transfer Agent was installed in the default location, you can access it by clicking **Start > Programs > Parallels > Panel > Plesk Migration & Transfer Agent**, or browsing to `C:\Program Files\Parallels\Plesk Migration Agent\WINAgentMng.exe`.

The Migration & Transfer Agent window opens.



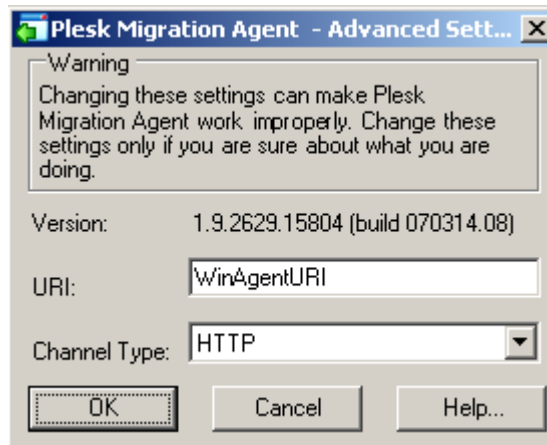
2. Click **Stop**.

This makes changing Migration & Transfer Agent settings available.



3. Enter the desirable value next to **Port** to change the port number.
4. To change Migration & Transfer Agent channel type:
 - a. Click **Advanced**.

The advanced options window opens.



- b. Select an appropriate item in the **Channel Type** menu to set up a channel type.
 - c. Click **OK**.
This applies the changes made to advanced options and closes the advanced options window.
5. Click **Start**.
This applies changes made to the port number and starts Migration & Transfer Agent with new settings.

Editing Migration & Transfer Agent Configuration File

You can edit the Migration & Transfer Agent configuration settings manually. For the changes to take effect after manual editing, restart Migration & Transfer Agent.

➤ **To change the connection parameters by editing configuration file:**

1. Open for editing the `<migration-agent-installation-directory>\WINAgentMng.exe.config` file and locate the `"/configuration/appSettings"` element.

By default, Migration & Transfer Agent is installed in `C:\Program Files\Parallels\PleskMigrationAgent`.

Warning: It is strongly recommended that you do not change anything beyond the contents of the `<appSettings>` node, as doing this will most probably crash Migration & Transfer Manager and make migrations impossible.

2. To change port number, enter a desired value in the `<add key="Port" value="6489" />` string instead of `6489`.

For example, if you want port 7788 to be used, this string should be `<add key="Port" value="7788" />`.

3. To change channel type, enter a desired value in the `<add key="ChannelType" value="HTTP" />` instead of HTTP.
For example, if you want to use TCP, this string should be `<add key="ChannelType" value="TCP" />`.
4. To change the Migration & Transfer Agent's IP address, enter the IP address value in the string `<add key="IPAddress" value="" />`.
This will allow Migration & Transfer Manager to connect to Migration & Transfer Agent through the specified IP address only. Type `0.0.0.0` or remove the string from the file altogether to allow Migration & Transfer Manager to connect to Migration & Transfer Agent through any IP address available on the source server.
5. Save file.
6. Restart Migration & Transfer Agent.

➤ **To change the location of data files gathered by Migration & Transfer Agent:**

1. Open for editing the `<migration-agent-installation-directory>\WINAgentMng.exe.config` file and locate the `"/configuration/appSettings"` element.

By default, Migration & Transfer Agent is installed in `C:\Program Files\Parallels\PleskMigrationAgent`.

Warning: It is strongly recommended that you do not change anything beyond the contents of the `<appSettings>` node, as doing this will most probably crash the Migration & Transfer Manager and make migrations impossible.

2. Add the full path (starting with the drive root) to folder where the file should be stored into the `<add key="DumpDirectory" value="" />` string.
For example, if you want the migration dump to be stored in folder `H:\Store\Plesk_migration`, this string should be `<add key="DumpDirectory" value="H:\Store\Plesk_migration" />`. If such directory does not exist on disk H, it will be created.
3. Save file.
4. Restart Migration & Transfer Agent.

The default content of the configuration file

```
<?xml version="1.0" encoding="utf-8"?>
<configuration>
  <startup>
    <supportedRuntime version="v2.0.50727" />
    <supportedRuntime version="v1.1.4322" />
  </startup>
```

```
<system.runtime.remoting>
  <customErrors mode="off" />
  <application name="Parallels Foreign Migration Agent" />
</system.runtime.remoting>
<runtime>
  <assemblyBinding xmlns="urn:schemas-microsoft-com:asm.v1">
    <probing privatePath="BackupUtils" />
  </assemblyBinding>
</runtime>
<appSettings>
  <add key="Port" value="6489" />
  <add key="ObjectUri" value="WinAgentURI" />
  <add key="ChannelType" value="HTTP" />
  <add key="IPAddress" value="" />
  <add key="DumpDirectory" value="" />
  <add key="UseWebserver" value="false" />
  <add key="WebServerPort" value="6490" />
  <add key="LogUseDefaultCulture" value="false" />
</appSettings>
</configuration>
```

Configuring Migration & Transfer Manager on the Destination Server

Important: Change settings of Migration & Transfer Manager connection to Migration & Transfer Agent only if you did the same changes to the Migration & Transfer Agent configuration.

➤ **To change parameters of Migration & Transfer Manager connection to Migration & Transfer Agent:**

1. Open for editing the `%plesk_dir%\PMM\Migration\migrmng.exe.config` file and locate the `"/configuration/appSettings"` element.
`%plesk_dir%` is the system variable defining the folder where PPP is installed.
2. To change the port number, enter the required value in the string `<add key="Port" value="6489" />` instead of 6489.
For example, if you want port 7788 to be used, this string should be `<add key="Port" value="7788" />`.
3. To change Migration & Transfer Agent URI, enter the required value in the string `<add key="ObjectUri" value="WinAgentURI" />` instead of WinAgentURI.
For example, if you want "MigrationAgent325" to be used as the Migration URI, the string should be `<add key="ObjectUri" value="MigrationAgent325" />`.
4. To change channel type, enter the required value in the string `<add key="ChannelType" value="HTTP" />` instead of HTTP.
For example, if you want to use TCP, this string should be `<add key="ChannelType" value="TCP" />`.
5. Save the file.

The default content of the migrmng.exe configuration file

```
<?xml version="1.0" encoding="utf-8" ?>
<configuration>
  <configSections>
    <section name="Platforms"
type="ForeignMigratorEngineCore.Configuration.PlatformsSectionHandler,
ForeignMigratorEngineCore"/>
  </configSections>
  <startup>
    <supportedRuntime version = "v2.0.50727" />
    <supportedRuntime version = "v1.1.4322" />
  </startup>
<!-- These are the settings you may reconfigure -->
  <appSettings>
    <add key="Port" value="6489" />
    <add key="ObjectUri" value="WinAgentURI" />
    <add key="ChannelType" value="HTTP" />
```



```
        <!-- The dump file location and file name defined in Panel
GUI override settings in this configuration file -->
        <add key="DumpDirectory" value="" />
        <add key="DumpName" value="" />
        <add key="UnixDumpDirectory" value="/usr/local" />
        <add key="LogUseDefaultCulture" value="false" />
    </appSettings>
<!-- End of the settings you may reconfigure -->
    <Platforms>
        ...
    </Platforms>
</configuration>
```

Performing Upgrade

➤ **To transfer accounts and websites with applications from other hosting servers:**

1. Log in to Parallels Plesk Panel on the destination server.
2. Go to **Tools & Settings > Migration & Transfer Manager** (in the **Tools & Resources** group).
3. Click **Synchronize** to check if there are any updates for Migration & Transfer Manager components.
4. Click **Start New Migration**.
5. Leave the **Transfer data from another server** option selected, and specify the following:
 - The source server's address and port number (on Linux/Unix systems). Specify either the IP address or the host name of the server, from which you want to transfer data.

If the source server is on an IPv6 address, then you should specify the server's host name instead of IP address.
 - The username and password of the administrator of the source server.

Note: The option **Transfer data already processed by the Migration & Transfer Agent and located on the local host** can be used to import data from a file, as described in the section **Troubleshooting Migration and Transfer Issues** (on page 170). This is another way to transfer data, which can be used in cases when the source server is offline, and you have previously gathered data from it.

6. If you use Parallels Plesk Panel for Linux, you can also specify the directory on the source server where the Migration & Transfer Agent should be uploaded.
7. Specify the path to the directory where temporary files will be stored.
8. Specify whether you want to transfer all data related to user accounts, domains, and services configuration from the source server, or only specific items.

In case you choose to perform the full server transfer, you can configure Migration & Transfer Manager to transfer a license key from the source server. The option is useful if the license key suits the Panel version installed on the destination server and you want to use it instead of the current one.
9. If some of Panel objects from the source server (such as user accounts, domains, and so on) are already present on the destination server, you can replace them by choosing the **Replace existing objects** checkbox.
10. Click **Next**. Migration & Transfer Manager will connect to the specified server and gather information about the business objects of the source hosting platform.

11. If you have chosen to transfer only specific items, at this step, select the checkboxes corresponding to the user accounts and domains that you want to transfer. Also, specify what types of data should be transferred:

- All settings and content.
- All settings and content except mail.
- Only mail accounts with email messages.

12. Click **Next**.

13. If the system detects potential transfer issues, such as missing required components, you will see the list of these issues. We recommend that you resolve all these issues using the links available on this page and then proceed by clicking **Next**.

14. Specify the new IP addresses that should be used. If you have a great number of IP addresses, at this step, you can download the current IP mapping file, correct it in a text editor or by running a custom find-and-replace script, and then upload it back to the server.

The syntax of the IP mapping file is shown in the following example:

```
10.10.10.10 192.168.1.2
```

Where `10.10.10.10` is an IP address used on the source server and `192.168.1.2` is a new IP address that should be used on the destination server. There is a white space between the two IP addresses. When compiling the list of addresses, place each mapping entry on a separate line.

15. Click **Next**. The data transfer process will start immediately.

Upgrading Through Backup Files

In addition to using Migration & Transfer Manager, you can back up data on a source server, transfer the resulting archive file to the destination server, and restore the data there. Backing up and restoring can be performed through the Panel user interface or by means of command-line utilities `pleskbackup` and `pleskrestore`. The utilities are located in the `/usr/local/psa/bin/` directory on Linux systems, and `%plesk_cli%` on Windows systems.

Important: The backup and restore utilities and the corresponding functions in Panel are available only if you install the optional Panel components that are not included in typical installations. You can install these components by using the web-based installation and update wizard: in Server Administration Panel, go to **Tools & Settings > Updates and Upgrades > Add Components**, and select **Plesk Backup Manager** in the **Server backup solutions** group.

The backup format changes from version to version, so it may be impossible to restore data from a backup through command line due to compatibility problems. Therefore, if you want to transfer data from earlier Panel versions, do it through the Panel user interface: In this case, the destination Panel will automatically convert the backup file to the appropriate format.

➤ **To back up data on a source server by means of Parallels Plesk Panel user interface:**

Follow the instructions in the Administrator's Guide for your Plesk version:

- Parallels Plesk Panel 11: <http://download1.parallels.com/Plesk/PP11/11.5/Doc/en-US/online/plesk-administrator-guide/59256.htm>.
- Parallels Plesk Panel 10: <http://download1.parallels.com/Plesk/PP10/10.4.4/Doc/en-US/online/plesk-administrator-guide/59256.htm>.
- Plesk 9.5: <http://download1.parallels.com/Plesk/PPP9/Doc/en-US/plesk-9.5-administrators-guide/59256.htm>.
- Plesk 8.6: <http://download1.parallels.com/Plesk/Plesk8.6/Doc/en-US/plesk-8.6-unix-administrators-guide/17391.htm>.

If you have a Plesk version earlier than 8.6, use the Help link in the navigation pane to access the Administrator's Guide.

➤ **To back up all data on a source server by means of command-line utilities, issue the following command:**

- On a Linux-based server - `/usr/local/psa/bin/pleskbackup all <backup_file_name>`.
- On a Windows-based server running Plesk 9 and 10 - `"%plesk_cli%\pleskbackup.exe" all <backup_file_name>`.

- On a Windows-based server running Plesk 8.6 and earlier -
"%plesk_cli%\backup.exe" all <backup_file_name>.

If you want to save backup files to an FTP server, specify a URL like `ftp://[<login>[:<password>]@]<server>/<file_path>` instead of `<backup_file_name>`.

If you want to improve backup security, encrypt the backup by adding the `-backup-password <your_password>` option. Learn more about password-protected backups in the Administrator's Guide, section **Backup and Restoration**.

If you want to perform a selective backup by means of command-line tools, follow the instructions for your Plesk version:

- Parallels Plesk Panel 10 and 11: <http://download1.parallels.com/Plesk/Doc/en-US/online/plesk-linux-advanced-administration-guide/68837.htm> (for Linux) and <http://download1.parallels.com/Plesk/Doc/en-US/online/plesk-win-advanced-administration-guide/68481.htm> (for Windows).
- Plesk 9.5: <http://download1.parallels.com/Plesk/PPP9/Doc/en-US/plesk-9.5-backup-cli-guide/62004.htm>.
- Plesk 8.6 for Windows: <http://download1.parallels.com/Plesk/Plesk8.6/Doc/en-US/plesk-8.6-win-backup-restore-guide/22876.htm>.
- Plesk 8.6 for Linux/Unix: <http://download1.parallels.com/Plesk/Plesk8.6/Doc/en-US/plesk-8.6-unix-backup-restore-guide/18900.htm>.

After the data you want to transfer are backed up, upload the backup file to the server and restore the data it contains.

➤ ***To upload backup file to the destination server and restore data by means of the GUI:***

1. Log in to Server Administration Panel on the destination server.
2. Go to **Tools & Settings > Backup Manager** (in the **Tools** group).
3. Click **Upload Files to Server Repository**.
4. Click **Browse** and select the backup file you want to upload.
5. If the backup was encrypted, specify the password that you used for encryption.
6. Click **OK**. The file is uploaded to the server repository.
7. On the **Server Repository** tab, click the link corresponding to the backup file you have just uploaded.
8. Select the types of data you want to restore and specify restoring options.
9. Click **Restore** and follow the on-screen instructions to complete restoring.

➤ **To restore all data on the destination server by means of the `pleskrestore` command-line utility:**

1. Upload a backup file to the server.
2. Prepare a mapping file, so that you could specify which IP addresses should be used on the server:

- a. To create a mapping file, issue the following command.

- On a Linux-based server - `/usr/local/psa/bin/pleskrestore --create-map <path to backup file> -map <path to mapping file>`
- On a Windows-based server - `"%plesk_cli%\pleskrestore.exe" --create-map <path to backup file> -map <path to mapping file>`

- a. Open the created mapping file with a text editor.

- b. Locate the section starting with `[ip-map]`. It should contain entries like in the following example:

```
[ip-map]
# Unchanged IP addresses:
# Please review default IP addresses mapping below:
10.52.30.170 shared -> 10.52.30.170 shared # ip address does
not exist 10.52.30.170
10.52.120.243 exclusive -> 10.52.120.243 exclusive # ip
address does not exist 10.52.120.243
```

- c. In the right part of each line after the `->` characters, replace the present IP addresses with those that should be used on the destination server, and make sure that the allocation scheme for the new addresses is correctly indicated by the words `shared` and `exclusive`. `Shared` indicates a shared IP address, and `exclusive`, a dedicated IP address.

- d. Save the file.

3. Restore the data from backup by issuing the following command:

- On a Linux-based server - `/usr/local/psa/bin/pleskrestore --restore <path_to_backup_file> -level server -map <path to mapping file>`
- On a Windows-based server - `"%plesk_cli%\pleskrestore.exe" <path_to_backup_file> -level server -map <path to mapping file>`

If the backup was protected by password, use the `-backup-password` option to specify the password that you used for encryption.

If the restoration fails with the error message `Unable to resolve all conflicts`, refer to the section **Troubleshooting Migration & Transfer Issues**.

Note: If you want to perform a selective restoration by means of command-line tools, follow the instructions in the **Advanced Administration Guide** for Linux and for Windows.

After data are restored, each migrated website is associated with a separate hosting service subscription not linked to any particular hosting plan. To simplify further maintenance, you can now review properties of all new subscriptions and associate them with hosting plans.

Important: If you upgrade from Panel 9 or earlier, you should complete the transfer according to instructions provided in the chapter **Completing Upgrade from Panel 9 and Earlier Versions** (on page 96).

Completing Upgrade from Panel 9 and Earlier Versions

Compared to the earlier versions of Plesk software (Plesk 9 and earlier), Parallels Plesk Panel 10 and later versions introduce a number of significant changes in the business model, for example, services are offered by means of service plans and subscriptions instead of templates and domains, and domain administrators are replaced with auxiliary users. Learn more about the changes in the **Administrator's Guide**, section **After Upgrading to Panel 11.5**.

This chapter describes the steps required to complete the transition to the new business model.

During upgrade or transfer to Parallels Plesk Panel 11.5, most of the user accounts and domains are transformed automatically to comply with the new business model. However, because of changes in the resource allocation scheme, you need to carry out several actions and decide how the resources should be allocated in your new system.

These actions are as follows:

1. Complete the accounts and resources transition using the transition assistant in the Panel. Learn how to do this in the section **Completing the Transition** (on page 101). For details on how objects are converted, refer to the section **Conversion Schemes and Recommended Steps** (on page 97).
2. Set up hosting (reseller) plans corresponding to your service offerings and associate the transferred accounts and subscriptions with the plans. Learn more in the section **Associating New Accounts and Subscriptions with Plans** (on page 103).

For detailed information about service plans and subscriptions, refer to the **Administrator's Guide**, chapter **Customers and Resellers**.

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Conversion Schemes and Recommended Steps

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Reseller Accounts

Conversion made: Reseller accounts from earlier Plesk versions become reseller accounts with custom subscriptions, not tied to any existing reseller plan.

Further recommended action: To simplify account management, subscribe the resellers to reseller plans.

Administrator's Clients and Their Domains

Conversions made:

- Administrator's client accounts became customer accounts belonging to the administrator.
- All domains were converted to individual subscriptions, one subscription per each domain. All subscriptions were assigned to the customers who owned the corresponding domains.
- The former client limits and permissions were converted to a subscription-like entity called My Resources. The entity is not tied to any existing hosting plan, but only keeps the information about the resources that were allocated to the user before transition.
- Domain administrators were converted to customers' users whose accounts have access only to the subscription that contains their domain.

Further recommended actions:

1. Complete transition of the customer accounts by using the following schemes:
 - Clients who had one domain are converted to customers with a custom subscription. The subscription is allocated the minimal amount of resources from the former client or domain limits. Domain administrators become users who can access the Panel.
 - Clients who had several domains and who were not allowed to adjust resource usage allotments, are converted to customers with custom subscriptions.
Each subscription inherits resource allotments from the former domain limits.
Former domain administrators become users with suspended accounts, so that they cannot log in to the Panel and view all domains and subscriptions of the customer.
 - Clients who had several domains and who were allowed to adjust resource usage allotments and create new domains, can be converted to:
 - Reseller. A former client is upgraded to reseller. Reseller subscription resources are inherited from the former client's limits. If domain administrator account was enabled for a former domain, it is upgraded to a customer account and corresponding subscription is associated with it. Otherwise, subscriptions belong directly to reseller.
 - Customer. A former client remains customer. The client's resources are shared among all subscriptions of the client. Domain administrator accounts remain users with access only to the subscription that contains their domain.
2. To simplify account management, associate the new subscriptions with your hosting plans.

Resellers' Clients and Their Domains

Conversions made:

- All client accounts that belonged to a reseller in the previous version of Plesk are converted to customer accounts owned by the respective resellers.
- Resources of each client are converted to a subscription-like entity called My Resources, which will be removed once the transition is complete.
- All the clients' domains are converted to subscriptions (one new subscription per each domain).
- Domain administrators are converted to customers' users whose accounts have access only to the subscription that contains their domain.

Further recommended steps:

1. Complete transition of the customer accounts by using the following schemes:
 - Clients who had one domain and were not allowed to adjust resource allotments are converted to customers. New subscription resources are equal to the minimum from the former client or domain limits.
 - Clients who had one domain and were allowed to adjust resource allotments are converted to customers. New subscription resources are equal to the former client limits.
 - Clients who had several domains and who were not allowed to adjust resource usage allotments, are converted to customers.
Each subscription inherits resource allotments from the former domain limits.
 - Clients who had several domains and who were allowed to adjust resource usage allotments and create new domains, are converted to customers.
The client's resources are shared among all subscriptions of the client.
2. To simplify account management, associate the new subscriptions with your hosting plans.

Domains Belonging to Administrator

Conversions made:

- All domains belonging to administrator in previous versions of Plesk are converted to administrator's own subscriptions.
- Domain administrators are converted to administrator's users whose accounts have access only to the subscription that contains their domain.

Further recommended steps:

1. For domains that had domain administrator accounts configured, you can keep the automatic conversion results or choose to use any of the following schemes:
 - Upgrade the former domain administrators to customers and assign the domains to them.
 - Convert to subscription with users. Domain administrator accounts remain users with access only to that subscription.
 - Convert to subscription without users. The former domain administrator account is removed.
2. To simplify management of subscriptions, associate the new subscriptions with your hosting plans.

Domains Belonging to Resellers

Conversions made: All domains that belonged to resellers in a previous version of Plesk are converted to the resellers' own subscriptions preserving the ownership. Domain administrators are converted to resellers' users whose accounts have access only to the subscription that contains their domain.

Further recommended steps:

For domains that had domain administrator accounts configured, you can keep the automatic conversion results or choose to use any of the following schemes:

- Upgrade the former domain administrators to resellers' customers and assign the domains to them.
- Convert to subscription with users. Domain administrator accounts remain users with access only to that subscription.
- Convert to subscription without users. The former domain administrator account is removed.

Completing the Transition

➤ ***To complete the transition to the new business model after upgrading or migrating to Panel 11.5:***

1. Log in to the Server Administration Panel as administrator.
2. On the Home page, click the link **Complete switching to the Panel 10 business model**. This link is located in a message box that shows if some of user accounts were not transitioned.

Alternately, you can go to **Tools & Utilities > Complete Switching to the Panel 10 Business Model**.

3. On the **Recommended Actions** tab, review the accounts and subscriptions, and the recommended transition schemes.
4. If the recommended actions suit your needs, select the corresponding checkboxes **Transition these customers** and **Transition these subscriptions**, and click **OK**.

This will transition the selected customers and subscriptions. Once the transition is complete, they will not be shown in the list any more.

5. Alternatively, transition customers or subscriptions selecting a transition scheme based on your own judgement:

- a. Click the **Selective Transition of Customers** or **Selective Transition of Subscriptions** tab.

To help you choose an appropriate transition scheme for an account, consider the number of domains belonging to a customer, the amounts of previously allocated resources, and granted privileges. The number of domains belonging to each customer is shown in the list of customers, in the **Subscriptions** column. To learn about allocated resources and granted privileges, click a link with the customer's name, and then click **My Resources**. After that, click **Up Level** to return to the previous page.

- b. Select checkboxes corresponding to the customers or subscriptions you wish to transition using one of the schemes.
- c. From the **Apply Transition Scheme** menu, select the suitable option:

For customers:

- **Subscription inherits the lesser from client or domain.** Resources allocated to each new subscription are equal to the minimum from the former client or domain limits.
- **Subscription inherits from the client.** Resources allocated to each new subscription are equal to the former client limits.
- **Subscription inherits from the domain.** Resources allocated to each new subscription are equal to the former domain limits.
- **Distribute client's resources.** The remaining part of former client's resources that was not allocated to domains is equally divided among customer's subscriptions and is added to their resources.

- **Upgrade to reseller.** A former client is upgraded to reseller. Reseller subscription resources are equal to the former client's limits. If a domain administrator account was enabled for a client's domain, then it is upgraded to a customer account and the corresponding subscription is associated with it. If there were no domain administrator accounts, then the subscriptions belong directly to the reseller.

For subscriptions:

- **Upgrade to customer.** The former domain administrator is converted to customer and the subscription is assigned to them.
- **Subscription with user.** The former domain administrator account becomes a Panel user, who has access only to the subscription containing his or her domain.
- **Subscription without user.** The former domain administrator account is removed.

Associating New Accounts and Subscriptions with Plans

As soon as all customers and subscriptions are transferred, the transition assistant will disappear from Panel.

To complete the switch of transferred accounts and subscriptions to the new business model, do the following:

1. Set up reseller and hosting plans corresponding to your service offerings

To add a hosting or reseller plan in the Server Administration Panel, run the **Add New Plan** wizard in **Service Plans > Hosting Plans** and **Service Plans > Reseller Plans** correspondingly. Learn more about plans' settings in the **Administrator's Guide**, sections **Hosting Plans and Subscriptions** and **Reseller Plans**.

2. Associate the transferred accounts and subscriptions with the plans

- To associate reseller accounts with a reseller plan, click the **Change Plan** button for a certain reseller in **Resellers** and specify the plan you added.
- To associate hosting service subscriptions with a hosting plan, click the **Change Plan** button for certain subscriptions in **Subscriptions** and specify the hosting plan.

For detailed information about service plans and subscriptions, refer to the **Administrator's Guide**, chapter **Customers and Resellers**.

Execution of Scripts via Cron Task Scheduler (Linux Hosting)

In previous versions of Panel, the users who were granted the permission to schedule tasks with cron but were not allowed access to server shell, could still run scripts in the shell under which the cron was running. This allowed them to gain access to the data that could be potentially used to compromise the server. Starting from Parallels Plesk Panel 10.1, execution of cron tasks is automatically restricted to the chrooted shell environment. This is the default setting applied on clean installations of Panel 10.1 and in cases when data were migrated from other platforms or earlier Plesk versions. If you upgraded to Parallels Plesk Panel 10.1 from previous versions (including 10.0), then the chrooted shell is not automatically selected so as not to break execution of any scheduled tasks that your customers could have running.

If you trust your customers enough to allow execution of scripts in a non-chrooted environment, then you can select the required shell by issuing the following command in the console:

```
# /usr/local/psa/bin/server_pref -u -crontab-secure-shell "/bin/sh"
```

If you want to revert this setting and set again the default shell used by the system, issue the following command in the console:

```
# /usr/local/psa/bin/server_pref -u -crontab-secure-shell ""
```

Transferring Data Between Panels

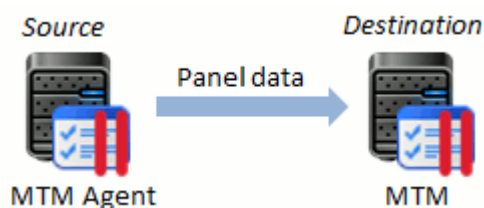
Transfer is a process of moving hosting data (service plans, accounts, subscriptions with content, and so on) from one Panel server (*source*) to another server with Panel of the same version (*destination server*). Transfer lets you, for example, seamlessly move your Panel to a more productive server or from one Linux distribution to another. You can transfer Panel data in the following ways: using the Migration & Transfer Manager utility or using the backup files.

Important: Transfer between Panel for Linux and Panel for Windows is not supported.

Supported Transfer Scenarios

Source	Destination
Plesk for Unix 8.6 or later	Parallels Plesk Panel for Linux 10 or later
Plesk for Windows 8.6 or later	Parallels Plesk Panel for Windows 10 or later

Transfer Using the Migration & Transfer Manager Utility (Recommended)



We recommend that you transfer hosting data using the *Migration & Transfer Manager* utility. This utility runs on a destination server and automatically copies hosting data from your source Panel. Learn how to transfer hosting data using Migration & Transfer Manager in the section **Transferring Data with Migration & Transfer Manager** (on page 106).

Transfer Through Backup Files



If for some reason, Migration & Transfer Manager cannot connect to the source server (for example, due to firewall restrictions), you can transfer data from the source to destination server using backup files. To perform the transfer, you should back up data on the source server, transfer the resulting archive file to the destination server manually, and restore the data on this server. You can back up and restore Panel data either through the Panel GUI, or by means of the command-line utilities `pleskbackup` and `pleskrestore`. Learn how to transfer data using backup files in the section **Transferring Data Through Backup Files** (on page 121).

What Is Transferred

After you perform a transfer, the destination Panel will contain service plans, add-ons, customer accounts, and subscriptions that existed on the source server before the transfer. The majority of Panel settings will be transferred as well. However, there are objects and settings that are not transferred to the destination Panel, namely:

- Panel settings from the list below:
 - The list of connected database servers and their settings (**Tools & Settings > Database Servers**)

Important: If a database server connected to the source server is not connected to the destination server, all databases from this server will be transferred to the destination server's default database server of the same type. To learn more about transferring domains with remote databases, refer to the section **Transferring Subscriptions with Remote Databases** (on page 118).

- The settings of Apache modules (**Tools & Settings > Apache Modules**)
- Backup settings (**Tools & Settings > Backup Settings**)
- Customers' backup files and FTP repository settings (**Control Panel > Websites & Domains > Backup Manager > Personal FTP Repository Settings**).
- Panel extensions.
- Third-party software and services, for example, Adobe ColdFusion or Google services.

Administrators and customers should configure these settings and add missing objects manually.

Best Practices

You might find useful the following Parallels Knowledge Base articles:

- Parallels Plesk Panel for Linux: Migration Best Practices and Usecases (<http://kb.parallels.com/en/113586#different>).
- Parallels Plesk Pa70376nel for Windows: Migration Best Practices and Usecases (<http://kb.parallels.com/en/113590>).

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Transferring Data with Migration & Transfer Manager

The steps of transferring Panel data using the Migration & Transfer Manager utility are typically the following:

1. Install Migration & Transfer Manager on the destination server and prepare both servers to transfer according to instructions in the section **Preparing for Transfer** (on page 107).
2. Run the Migration & Transfer Manager tool and go through the wizard steps. See the section **Performing Transfer** (on page 116) for details on how to do it.

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Preparing for Transfer

Before you can transfer data to Parallels Plesk Panel, you need to do the following:

1. Install Migration & Transfer Manager on the destination server. You can do this in one of the following ways:
 - *Through the Server Administration Panel.*
To install it through the Server Administration Panel, go to **Tools & Settings > Updates and Upgrades**. The Parallels Installer web interface will open in a new window or tab. In the Installer window, click **Add Components**, select the checkbox corresponding to the **Migration & Transfer Manager** component, and click **Continue**.
 - *From the command line.*
To install Migration & Transfer Manager from the command line, run the Parallels Installer on the destination server as described in the section **Upgrade from the Command Line** (on page 65) and add this component.
2. If a source or a destination server is protected by a firewall, configure the firewall to allow the data exchange between the servers.
When migrating from Windows platforms, allow TCP connections to the ports **6489** (Migration & Transfer Manager). When migrating from Linux, allow TCP connections to the port **22** (SSH).
3. If you are going to migrate from Windows-based platforms, install the Migration & Transfer Agent utility on the source server, as described in the section **Preparing to Transfer Data from Panel for Windows** (on page 82).

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Preparing to Transfer Data from Panel for Windows

Automatic transfer of data from one Windows server to another is possible only when a specific connection is established between the servers. The connection is established by Migration & Transfer Manager installed on a destination server and the *Migration & Transfer Agent* utility on a source server, provided that they are configured identically.

Migration & Transfer Agent is a utility which transfers data from a source to a destination server. To learn how to install Migration & Transfer Agent on the server, see the section **Installing Migration & Transfer Agent** (on page 83). If the default settings of Migration & Transfer Agent conflict with your network configuration (for example, you already use the default utility's port for some other purposes), you can change them as described in the section **Configuring Migration & Transfer Agent on the Source Server** (on page 84). If you change the Migration & Transfer Agent settings, you should do the corresponding changes to the Migration & Transfer Manager configuration as described in the section **Configuring Migration & Transfer Manager on the Destination Server** (on page 88).

The following settings are used by Migration & Transfer Agent by default:

- *Port* - number of the port that is used by the Panel for connecting to Migration & Transfer Agent. (The default is 6489.)

When changing the port, consider the following:

- It can be any number from 1 to 65535.
- It must be free on the server from which data will be migrated, that is, this port should not be used by any other programs or services on both servers.
- It must be allowed by firewall on the source server.
- *Channel type* - protocol communication between Migration & Transfer Manager and Migration & Transfer Agent. (The default is HTTP.)

When selecting the channel type, consider the following characteristics:

- TCP provides better performance than HTTP.
- HTTP is more public as it uses HTTP protocol, which is allowed by most firewalls.

Note: If these connection parameters are not the same in Migration & Transfer Manager and Migration & Transfer Agent configurations, migrations will fail.

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Installing Migration & Transfer Agent

➤ ***To install Migration & Transfer Agent:***

1. Log in to Server Administration Panel on the destination server.
2. Go to **Tools & Settings > Migration & Transfer Manager** (in the **Tools & Resources** group).
3. To obtain the latest version of the Migration & Transfer Agent, click **Download Migration & Transfer Agent**.
4. Upload the file to the source server.
5. Log in to the source server over Remote Desktop, and run the installation file.
6. Click **Next** several times to complete installation.

Once you have installed Migration & Transfer Agent, it starts automatically with the default settings. So, you can proceed to transferring data.

Configuring Migration & Transfer Agent on the Source Server

Migration & Transfer Agent is fully operable with the default settings, so there is no need to change them. However, if you want to change the port or protocol used by the agent, you can do so by following the instructions provided in this section.

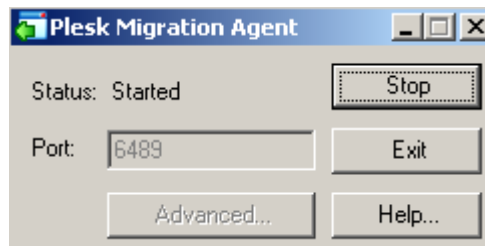
Changing Migration & Transfer Agent configuration includes the following:

- Changing parameters of the Migration & Transfer Agent connection with Migration & Transfer Manager (port and channel type).
This can be done using either Migration & Transfer Agent interface or Migration & Transfer Agent configuration file.
- Changing the location of data files on the source server.
This is necessary if, for example, there is not enough space on the disk where Migration & Transfer Agent is installed.

➤ **To change the connection parameters using Migration & Transfer Agent GUI:**

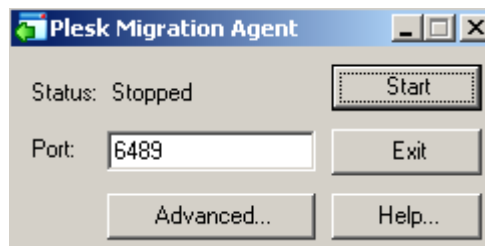
1. Run the `WINAgentMng.exe` file. If Migration & Transfer Agent was installed in the default location, you can access it by clicking **Start > Programs > Parallels > Panel > Plesk Migration & Transfer Agent**, or browsing to `C:\Program Files\Parallels\Plesk Migration Agent\WINAgentMng.exe`.

The Migration & Transfer Agent window opens.



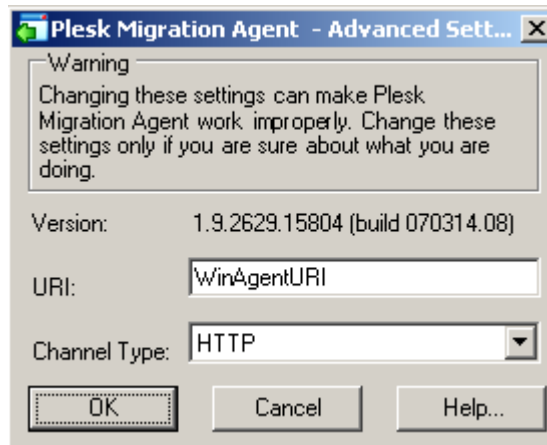
2. Click **Stop**.

This makes changing Migration & Transfer Agent settings available.



3. Enter the desirable value next to **Port** to change the port number.
4. To change Migration & Transfer Agent channel type:
 - a. Click **Advanced**.

The advanced options window opens.



- b. Select an appropriate item in the **Channel Type** menu to set up a channel type.
 - c. Click **OK**.
This applies the changes made to advanced options and closes the advanced options window.
5. Click **Start**.
This applies changes made to the port number and starts Migration & Transfer Agent with new settings.

Editing Migration & Transfer Agent Configuration File

You can edit the Migration & Transfer Agent configuration settings manually. For the changes to take effect after manual editing, restart Migration & Transfer Agent.

➤ **To change the connection parameters by editing configuration file:**

1. Open for editing the `<migration-agent-installation-directory>\WINAgentMng.exe.config` file and locate the `"/configuration/appSettings"` element.

By default, Migration & Transfer Agent is installed in `C:\Program Files\Parallels\PleskMigrationAgent`.

Warning: It is strongly recommended that you do not change anything beyond the contents of the `<appSettings>` node, as doing this will most probably crash Migration & Transfer Manager and make migrations impossible.

2. To change port number, enter a desired value in the `<add key="Port" value="6489" />` string instead of `6489`.

For example, if you want port 7788 to be used, this string should be `<add key="Port" value="7788" />`.

3. To change channel type, enter a desired value in the `<add key="ChannelType" value="HTTP" />` instead of HTTP.
For example, if you want to use TCP, this string should be `<add key="ChannelType" value="TCP" />`.
4. To change the Migration & Transfer Agent's IP address, enter the IP address value in the string `<add key="IPAddress" value="" />`.
This will allow Migration & Transfer Manager to connect to Migration & Transfer Agent through the specified IP address only. Type `0.0.0.0` or remove the string from the file altogether to allow Migration & Transfer Manager to connect to Migration & Transfer Agent through any IP address available on the source server.
5. Save file.
6. Restart Migration & Transfer Agent.

➤ ***To change the location of data files gathered by Migration & Transfer Agent:***

1. Open for editing the `<migration-agent-installation-directory>\WINAgentMng.exe.config` file and locate the `"/configuration/appSettings"` element.

By default, Migration & Transfer Agent is installed in `C:\Program Files\Parallels\PleskMigrationAgent`.

Warning: It is strongly recommended that you do not change anything beyond the contents of the `<appSettings>` node, as doing this will most probably crash the Migration & Transfer Manager and make migrations impossible.

2. Add the full path (starting with the drive root) to folder where the file should be stored into the `<add key="DumpDirectory" value="" />` string.
For example, if you want the migration dump to be stored in folder `H:\Store\Plesk_migration`, this string should be `<add key="DumpDirectory" value="H:\Store\Plesk_migration" />`. If such directory does not exist on disk H, it will be created.
3. Save file.
4. Restart Migration & Transfer Agent.

The default content of the configuration file

```
<?xml version="1.0" encoding="utf-8"?>
<configuration>
  <startup>
    <supportedRuntime version="v2.0.50727" />
    <supportedRuntime version="v1.1.4322" />
  </startup>
```



```
<system.runtime.remoting>
  <customErrors mode="off" />
  <application name="Parallels Foreign Migration Agent" />
</system.runtime.remoting>
<runtime>
  <assemblyBinding xmlns="urn:schemas-microsoft-com:asm.v1">
    <probing privatePath="BackupUtils" />
  </assemblyBinding>
</runtime>
<appSettings>
  <add key="Port" value="6489" />
  <add key="ObjectUri" value="WinAgentURI" />
  <add key="ChannelType" value="HTTP" />
  <add key="IPAddress" value="" />
  <add key="DumpDirectory" value="" />
  <add key="UseWebserver" value="false" />
  <add key="WebServerPort" value="6490" />
  <add key="LogUseDefaultCulture" value="false" />
</appSettings>
</configuration>
```

Configuring Migration & Transfer Manager on the Destination Server

Important: Change settings of Migration & Transfer Manager connection to Migration & Transfer Agent only if you did the same changes to the Migration & Transfer Agent configuration.

➤ **To change parameters of Migration & Transfer Manager connection to Migration & Transfer Agent:**

1. Open for editing the `%plesk_dir%\PMM\Migration\migrmng.exe.config` file and locate the `"/configuration/appSettings"` element.
`%plesk_dir%` is the system variable defining the folder where PPP is installed.
2. To change the port number, enter the required value in the string `<add key="Port" value="6489" />` instead of 6489.
For example, if you want port 7788 to be used, this string should be `<add key="Port" value="7788" />`.
3. To change Migration & Transfer Agent URI, enter the required value in the string `<add key="ObjectUri" value="WinAgentURI" />` instead of WinAgentURI.
For example, if you want "MigrationAgent325" to be used as the Migration URI, the string should be `<add key="ObjectUri" value="MigrationAgent325" />`.
4. To change channel type, enter the required value in the string `<add key="ChannelType" value="HTTP" />` instead of HTTP.
For example, if you want to use TCP, this string should be `<add key="ChannelType" value="TCP" />`.
5. Save the file.

The default content of the migrmng.exe configuration file

```
<?xml version="1.0" encoding="utf-8" ?>
<configuration>
  <configSections>
    <section name="Platforms"
type="ForeignMigratorEngineCore.Configuration.PlatformsSectionHandler,
ForeignMigratorEngineCore"/>
  </configSections>
  <startup>
    <supportedRuntime version = "v2.0.50727" />
    <supportedRuntime version = "v1.1.4322" />
  </startup>
<!-- These are the settings you may reconfigure -->
  <appSettings>
    <add key="Port" value="6489" />
    <add key="ObjectUri" value="WinAgentURI" />
    <add key="ChannelType" value="HTTP" />
  </appSettings>
</configuration>
```

```
        <!-- The dump file location and file name defined in Panel
GUI override settings in this configuration file -->
        <add key="DumpDirectory" value="" />
        <add key="DumpName" value="" />
        <add key="UnixDumpDirectory" value="/usr/local" />
        <add key="LogUseDefaultCulture" value="false" />
    </appSettings>
<!-- End of the settings you may reconfigure -->
    <Platforms>
        ...
    </Platforms>
</configuration>
```

Performing Transfer

➤ ***To transfer accounts and websites with applications from other hosting servers:***

1. Log in to Parallels Plesk Panel on the destination server.
2. Go to **Tools & Settings > Migration & Transfer Manager** (in the **Tools & Resources** group).
3. Click **Synchronize** to check if there are any updates for Migration & Transfer Manager components.
4. Click **Start New Migration**.
5. Leave the **Transfer data from another server** option selected, and specify the following:
 - The source server's address and port number (on Linux/Unix systems). Specify either the IP address or the host name of the server, from which you want to transfer data.

If the source server is on an IPv6 address, then you should specify the server's host name instead of IP address.
 - The username and password of the administrator of the source server.

Note: The option **Transfer data already processed by the Migration & Transfer Agent and located on the local host** can be used to import data from a file, as described in the section **Troubleshooting Migration and Transfer Issues** (on page 170). This is another way to transfer data, which can be used in cases when the source server is offline, and you have previously gathered data from it.

6. If you use Parallels Plesk Panel for Linux, you can also specify the directory on the source server where the Migration & Transfer Agent should be uploaded.
7. Specify the path to the directory where temporary files will be stored.
8. Specify whether you want to transfer all data related to user accounts, domains, and services configuration from the source server, or only specific items.

In case you choose to perform the full server transfer, you can configure Migration & Transfer Manager to transfer a license key from the source server. The option is useful if the license key suits the Panel version installed on the destination server and you want to use it instead of the current one.
9. If some of Panel objects from the source server (such as user accounts, domains, and so on) are already present on the destination server, you can replace them by choosing the **Replace existing objects** checkbox.

10. Click **Next**. Migration & Transfer Manager will connect to the specified server and gather information about the business objects of the source hosting platform.
11. If you have chosen to transfer only specific items, at this step, select the checkboxes corresponding to the user accounts and domains that you want to transfer. Also, specify what types of data should be transferred:
 - All settings and content.
 - All settings and content except mail.
 - Only mail accounts with email messages.
12. Click **Next**.
13. If the system detects potential transfer issues, such as missing required components, you will see the list of these issues. We recommend that you resolve all these issues using the links available on this page and then proceed by clicking **Next**.
14. Specify the new IP addresses that should be used. If you have a great number of IP addresses, at this step, you can download the current IP mapping file, correct it in a text editor or by running a custom find-and-replace script, and then upload it back to the server.

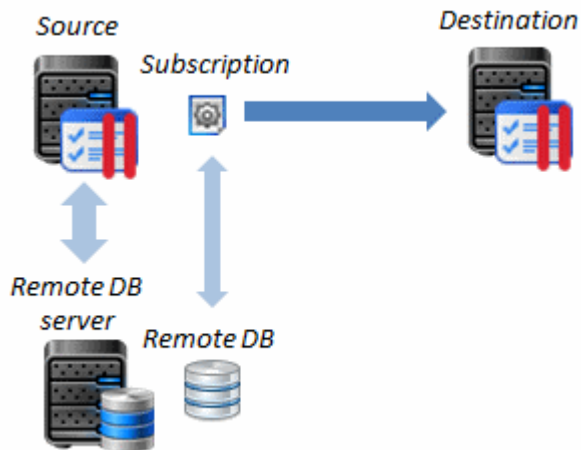
The syntax of the IP mapping file is shown in the following example:

```
10.10.10.10 192.168.1.2
```

Where 10.10.10.10 is an IP address used on the source server and 192.168.1.2 is a new IP address that should be used on the destination server. There is a white space between the two IP addresses. When compiling the list of addresses, place each mapping entry on a separate line.
15. Click **Next**. The data transfer process will start immediately.

Transferring Subscriptions with Remote Databases

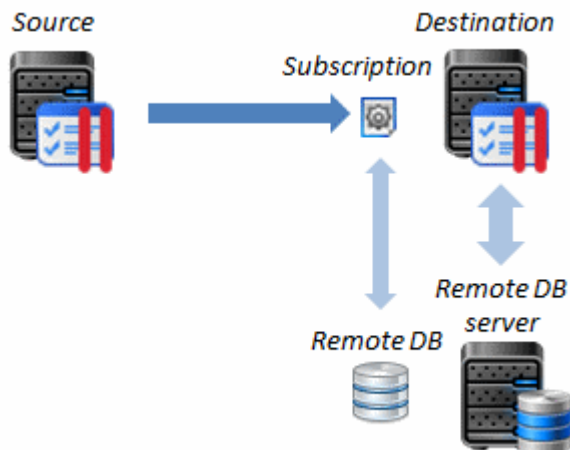
In some cases, you may need to transfer subscriptions that use databases located on external database servers, or *remote databases*.



MTM offers you the following options for transferring subscriptions with remote databases:

- Leave remote databases on the external server and attach this server to the destination Panel.
- Copy remote databases to the default database server of the destination Panel.

Transferring a Subscription While Leaving Remote Databases in Place



This way requires registering the external database server in the destination Panel. If the server is registered at the moment of transfer, transferred subscriptions on the destination server will use exactly the same database instances as the subscriptions on the source server.

Note: MTM saves the backups of remote databases on the source server before the transfer.

➤ **To transfer subscriptions leaving remote databases on the external database server:**

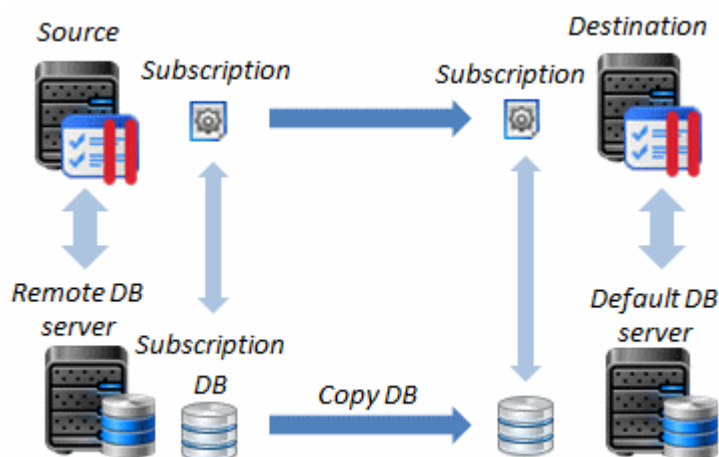
1. Register the external database server in the destination Panel. Learn how to do this in the Administrator's Guide, section **Adding and Removing Database Servers**.
2. Transfer the subscriptions as described in the section **Performing Transfer** (on page 116).

Important: If you transfer subscriptions from Panel versions earlier than 11.5, *do not remove* the subscriptions on the source server after transfer. This will remove the subscription's databases from the remote servers and the transferred subscriptions will lose all data from these databases. To stop serving the subscriptions on the source server, suspend them instead of removing.

If you had accidentally removed the remote database, you can restore it from the backup that MTM creates on the source server when starting the transfer.

If you perform the transfer from Panel 11.5 or later, you can remove the transferred subscriptions: This will not affect the remote databases.

Transferring a Subscription with Remote Databases



If you want to transfer remote databases to the default database server of the destination Panel, ensure that the database server on which the databases are located is not registered in this Panel.

➤ ***To transfer subscriptions and copy their remote databases to the default database server of the destination Panel:***

1. Make sure that the database server on which the databases are hosted is not registered in the destination Panel. You can check this on the **Tools & Settings > Database Servers** page.
2. Transfer subscriptions as described in the section **Performing Transfer** (on page 116).

Important: If no database servers of the required type are registered in the destination Panel, MTM will offer you to install such a server on the destination server. If you do not install the server or connect a remote server of the required type, the databases will not be transferred.

Transferring Data Through Backup Files

In addition to using Migration & Transfer Manager, you can back up data on a source server, transfer the resulting archive file to the destination server, and restore the data there. Backing up and restoring can be performed through the Panel user interface or by means of command-line utilities `pleskbackup` and `pleskrestore`. The utilities are located in the `/usr/local/psa/bin/` directory on Linux systems, and `%plesk_cli%` on Windows systems.

Important: The backup and restore utilities and the corresponding functions in Panel are available only if you install the optional Panel components that are not included in typical installations. You can install these components by using the web-based installation and update wizard: in Server Administration Panel, go to **Tools & Settings > Updates and Upgrades > Add Components**, and select **Plesk Backup Manager** in the **Server backup solutions** group.

➤ ***To back up data on a source server by means of Parallels Plesk Panel user interface:***

Follow the instructions in the Administrator's Guide, section **Backup and Restoration**.

➤ ***To back up all data on a source server by means of command-line utilities, issue the following command:***

- On a Linux-based server - `/usr/local/psa/bin/pleskbackup all <backup_file_name>`.
- On a Windows-based server running Plesk 9 and 10 - `"%plesk_cli%\pleskbackup.exe" all <backup_file_name>`.
- On a Windows-based server running Plesk 8.6 and earlier - `"%plesk_cli%\backup.exe" all <backup_file_name>`.

If you want to save backup files to an FTP server, specify a URL like `ftp://[<login>[:<password>]@]<server>/<file_path>` instead of `<backup_file_name>`.

If you want to improve backup security, encrypt the backup by adding the `-backup-password <your_password>` option. Learn more about password-protected backups in the Administrator's Guide, section **Backup and Restoration**.

If you want to perform a selective backup by means of command-line tools, follow the instructions in the **Advanced Administration Guide** for Linux and for Windows.

After the data you want to migrate is backed up, upload the backup file to the server and restore the data it contains.

➤ **To upload backup file to the destination server and restore data by means of the GUI:**

1. Log in to Server Administration Panel on the destination server.
2. Go to **Tools & Settings > Backup Manager** (in the **Tools** group).
3. Click **Upload Files to Server Repository**.
4. Click **Browse** and select the backup file you want to upload.
5. If the backup was encrypted, specify the password that you used for encryption.
6. Click **OK**. The file is uploaded to the server repository.
7. On the **Server Repository** tab, click the link corresponding to the backup file you have just uploaded.
8. Select the types of data you want to restore and specify restoring options.
9. Click **Restore** and follow the on-screen instructions to complete restoring.

➤ **To restore all data on the destination server by means of the pleskrestore command-line utility:**

1. Upload a backup file to the server.
2. Prepare a mapping file, so that you could specify which IP addresses should be used on the server:
 - a. To create a mapping file, issue the following command.
 - On a Linux-based server - `/usr/local/psa/bin/pleskrestore --create-map <path to backup file> -map <path to mapping file>`
 - On a Windows-based server - `"%plesk_cli%\pleskrestore.exe" --create-map <path to backup file> -map <path to mapping file>`
 - a. Open the created mapping file with a text editor.
 - b. Locate the section starting with `[ip-map]`. It should contain entries like in the following example:

```
[ip-map]
# Unchanged IP addresses:
# Please review default IP addresses mapping below:
10.52.30.170 shared -> 10.52.30.170 shared # ip address does
not exist 10.52.30.170
10.52.120.243 exclusive -> 10.52.120.243 exclusive # ip
address does not exist 10.52.120.243
```

- c. In the right part of each line after the `->` characters, replace the present IP addresses with those that should be used on the destination server, and make sure that the allocation scheme for the new addresses is correctly indicated by the words `shared` and `exclusive`. `Shared` indicates a shared IP address, and `exclusive`, a dedicated IP address.
 - d. Save the file.
3. Restore the data from backup by issuing the following command:
 - On a Linux-based server - `/usr/local/psa/bin/pleskrestore --restore <path_to_backup_file> -level server -map <path to mapping file>`
 - On a Windows-based server - `"%plesk_cli%\pleskrestore.exe" <path_to_backup_file> -level server -map <path to mapping file>`

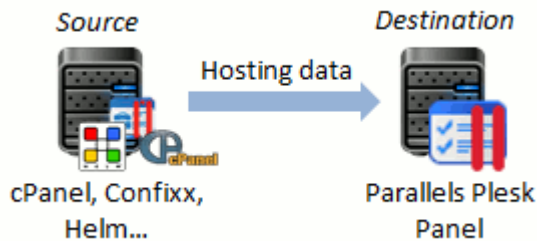
If the backup was protected by password, use the `-backup-password` option to specify the password that you used for encryption .

If the restoration fails with the error message `Unable to resolve all conflicts`, refer to the section **Troubleshooting Migration & Transfer Issues**.

Note: If you want to perform a selective restoration by means of command-line tools, follow the instructions in the **Advanced Administration Guide** for Linux and for Windows.

After data are restored, each transferred website is associated with a separate hosting service subscription not linked to any particular hosting plan. To simplify further maintenance, you can now review properties of all new subscriptions and associate them with hosting plans.

Migrating from Other Panels



Migration is a process of switching to Panel from another hosting solution, for example, cPanel or Confixx. Migration is performed by transferring hosting data from a server with another solution (*source server*) to your Panel server (*destination server*). Currently, Panel supports migrations listed in the table below.

Migration Steps

Migration steps are typically the following:

1. Install the *Migration & Transfer Manager* utility on the destination server and prepare the source server to migration. The source server preparation steps depend on a migration scenario and may include, for example, turning off some system services, opening some TCP ports, and other. Read more about preparing source and destination servers for migration in the section **Preparing for Migration** (on page 126).
2. Run the Migration & Transfer Manager tool and go through the migration wizard steps. See the **Performing Migration** (on page 157) section for details on how to do it.

Supported Migrations

Source	Destination
cPanel for Unix, versions 9, 10, 11	Linux-based Parallels Plesk Panel 10.0 or later
Confixx 3.3.9 for Linux	Linux-based Parallels Plesk Panel 10.2 or later
Parallels Pro Control Panel for Linux version 10.3.4 (formerly known as Ensim Pro)	Linux-based Parallels Plesk Panel 10.1 or later
Parallels Helm 3.2	Windows-based Parallels Plesk Panel 10.4 or later
Linux-based Parallels Small Business Panel 10.x	Linux-based Parallels Plesk Panel 10.3 or later
Windows-based Parallels Small Business Panel 10.x	Windows-based Parallels Plesk Panel 10.3 or later

For more information about migration from Parallels Small Business Panel, see **Migrating from Parallels Small Business Panel** (on page 160).

Best Practices

You might find useful the following Parallels Knowledge Base articles:

- Parallels Plesk Panel for Linux: Migration Best Practices and Usecases (<http://kb.parallels.com/en/113586#different>).
- Parallels Plesk Panel for Windows: Migration Best Practices and Usecases (<http://kb.parallels.com/en/113590>).

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Preparing for Migration

Before you can migrate to Parallels Plesk Panel, you need to do the following:

1. Install Migration & Transfer Manager on the destination server. You can do this in one of the following ways:
 - *Through the Server Administration Panel.*
To install it through the Server Administration Panel, go to **Tools & Settings > Updates and Upgrades**. The Parallels Installer web interface will open in a new window or tab. In the Installer window, click **Add Components**, select the checkbox corresponding to the **Migration & Transfer Manager** component, and click **Continue**.
 - *From the command line.*
To install Migration & Transfer Manager from the command line, run the Parallels Installer on the destination server as described in the section **Upgrade from the Command Line** (on page 65) and add this component.
2. If a source or a destination server is protected by a firewall, configure the firewall to allow the data exchange between the servers.
When migrating from Windows platforms, allow TCP connections to the ports 6489 (Migration & Transfer Manager). When migrating from Linux, allow TCP connections to the port 22 (SSH).
3. Perform additional preparation steps described in the appropriate subsection of this section.

Next in this section:

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cPanel

This chapter describes the steps you might need to perform before starting migration from cPanel and explains what data can be migrated.

What to Do Before You Start Migration

To avoid issues related to migration of cPanel's virtual hosts to Parallels Plesk Panel, you should do the following:

1. Switch off SELinux on the destination server.
2. Configure the Parallels Plesk Panel-managed destination server to use the same directory for storing virtual host files as is used on the source cPanel server. You should do this only if you did not create new domains/websites on the destination server by using command-line tools.

➤ **To switch off SELinux:**

1. Open the file `/etc/selinux/config` in a text editor and locate the line `SELINUX=<value>`.
2. Change it to `SELINUX=disabled`.
3. If you cannot find this file, open the file `/boot/grub/grub.conf` in a text editor and add the parameter `selinux=0` to Grub Boot Loader:


```
title SE-Linux Test System
  root (hd0,0)
  kernel /boot/vmlinuz-2.4.20-selinux-XXXXXXXXXX ro root=/dev/hda1
  noub selinux=0
  #initrd /boot/initrd-2.4.20-selinux-XXXXXXXXXX.img
```
4. Restart the server to apply the changes.
5. If you do not want to restart, issue the command `setenforce 0`.

➤ **To change the location of virtual hosts on the destination server:**

1. Open the file `/etc/psa/psa.conf` and set the `HTTPD_VHOSTS_D` value to `/home` instead of `/var/www/vhosts`.

Important: The directory containing virtual hosts and document root directories of all sites must be located on the same partition where Parallels Plesk Panel is installed. Otherwise, migration will fail.

2. Move all existing files and directories from `/var/www/vhosts/` to `/home/` by using the following command:

```
mv /var/www/vhosts/* /home/
```

3. Rebuild all apache configuration files to pick up all virtual hosts from the new location:

```
/usr/local/psa/admin/bin/websrvmng --reconfigure-all
```

After that, webspaces for all new websites will be created in the `/home` directory, which is typically used by cPanel's virtual hosts.

Alternately, you can change the location of virtual hosts on the destination server by using the command-line utility `transvhosts.pl`:











```
/usr/local/psa/bin/transvhosts.pl --dest-dir /home --correct-scripts
```

Migrated Objects and Settings






The following table describes what objects and settings are migrated.

Object or setting on cPanel source server	Migration result
Main domain with settings and web content.	✓ For each domain, a new separate subscription (with webspace) belonging to the server administrator is created.
Subdomains.	✓ Only those cPanel subdomains that are not aliases to addon domains are migrated.
Addon domains.	✓ Migrated as additional domains.
Parked domains.	✓ Migrated as domain aliases.

<p>Custom error pages.</p>	<p>✓</p> <p>Only pages for error codes supported by Parallels Plesk Panel are migrated:</p> <ul style="list-style-type: none"> ▪ 400 Bad Request. ▪ 401 Authorization Required. ▪ 403 Forbidden. ▪ 404 Not Found. ▪ 405 Method Not Allowed. ▪ 406 Not Acceptable. ▪ 407 Proxy Authentication Required. ▪ 412 Precondition Failed. ▪ 414 Request-URI Too Long. ▪ 415 Unsupported Media Type. ▪ 500 Internal Server Error. ▪ 501 Not Implemented. ▪ 502 Bad Gateway. ▪ 503 Service Temporarily Unavailable. <p>Also, after migration, the custom tags that could be used in error pages (Referring URL, Visitor's IP address, Requested URL, Server name, Visitor's browser, Redirect status code) are not substituted with actual values.</p>
<p>Mail accounts with content and webmail settings.</p>	<p>✓</p>
<p>Mail forwarders.</p>	<p>✓</p>
<p>Autoresponders.</p>	<p>✓</p>
<p>Default email address for catching mail to non-existent accounts.</p>	<p>✓</p> <p>Migrated with settings and content.</p>
<p>Mailing lists with content.</p>	<p>✓</p>
<p>FTP accounts.</p>	<p>✓</p> <p>Migrated; however passwords for FTP accounts are not migrated, new passwords are generated instead. You can view these passwords in the migration log that is available for download after migration completion, and notify your users about password change.</p>
<p>Anonymous FTP shares, their settings and files.</p>	<p>✓</p>
<p>Password-protected directories.</p>	<p>✓</p>

Databases with data and database user accounts.	 <p>During migration, database users who had access to several databases under a single domain are transformed into separate database user accounts, one account per database.</p> <p>For example, in cPanel, a database user <i>jdoe_dbuser1</i> had access to databases <i>jdoe_db1</i> and <i>jdoe_db2</i>. After migration, there will be two database users in Parallels Plesk Panel: <i>jdoe_dbuser1</i> for database <i>jdoe_db1</i>, and <i>jdoe_dbuser_x</i> for database <i>jdoe_db2</i>.</p>
Installed web applications.	 <p>Migrated, but not shown in the list of installed applications in Panel.</p>
Installed CGI scripts.	 <p>The files are migrated, but are not registered in the Panel's database as belonging to any web application or CGI script.</p>
Records about allocation of disk space resources.	
Records about allowed number of mail accounts.	
Records about allowed number of subdomains.	
Records about allowed number of add-on domains.	
Records about allowed number of FTP accounts.	
Records about allowed number of databases.	
Records about allowed number of mailing lists.	

The following table describes what objects and settings are not migrated.

Object or setting on cPanel source server	Migration result
User accounts.	
Records about service plans (packages).	
Wild-card redirects.	
DNS zone configurations	 <p>After migration, you can check the DNS zone settings of the migrated domains, and add custom records, if required.</p>
Mail domain forwarders.	

Server-side IMAP mail filters.	✘
Settings of email authentication with DomainKeys mechanism.	✘
Settings of email authentication with Sender Policy Framework mechanism.	✘
IP blacklist for domains, IP addresses, and address ranges.	✘
SSL certificates.	✘ After migration is finished, you can transfer them manually.
The list of hosts allowed to remotely connect to the websites' MySQL databases.	✘
Perl and PHP extension modules.	✘
Records about allowed monthly bandwidth usage.	✘
Records about allowed number of parked domains.	✘
Settings of CGI support on hosting accounts.	✘
Cron jobs.	✘
Web statistics program.	✘

Confixx

This chapter describes the steps you might need to perform before starting migration from Confixx and explains what data can be migrated.

Steps to Perform on the Source Confixx Server

Before you start migration, do the following:

1. To check your Confixx installation for any possible issues or errors that might occur during migration, download the Compatibility Checker utility by following the link in the KB article at <http://kb.parallels.com/en/112698>.

This utility, developed by Parallels, is intended to assist administrators with migration to Parallels Plesk Panel. It examines a Confixx installation and produces a report with the following information: which items will be migrated, how the migrated objects or settings will be transformed during migration, what issues you may encounter and how to resolve them.

2. Run the utility on the source server.
3. Resolve all issues by following recommendations of the utility.

Steps to Perform on the Destination Parallels Plesk Panel Server

Before starting migration, add the same number of dedicated IP addresses to the destination server, as used on the source Confixx server. To add IP addresses: In Server Administration Panel, go to **Tools & Settings > IP Addresses > Add IP Address**.

If you plan to transfer mailing lists to Parallels Plesk Panel, do the following on the destination server:

1. Install the Mailman mailing lists server component. To do this, in the Server Administration Panel, go to **Tools & Settings > Updates and Upgrades > Add Components**, select the **Mailman mailing list manager support** option in the **Additional mail services** group, and click **Continue**.
2. After this component is installed, specify the mailing list server administrator's email address and password. To do this, in the Server Administration Panel, go to **Tools & Settings > Set Up Mailing Lists Server** (in the **Resources** group).
3. To ensure proper migration of mailing list subscriber addresses, insert the following lines into the Mailman configuration file `/etc/mailman/mm_cfg.py`:

```
DEFAULT_ADMIN_NOTIFY_MCHANGES = No
DEFAULT_SEND_WELCOME_MSG = No
DEFAULT_SEND_GOODBYE_MSG = No
```

If you plan to transfer SpamAssassin settings, do the following on the destination server:










1. Install the SpamAssassin spam filter. To do this, in the Server Administration Panel, go to **Tools & Settings > Updates and Upgrades > Add Components**, select the **SpamAssassin support** option in the **Additional mail services** group, and click **Continue**.

2. After this component is installed, switch on spam filtering: Go to **Tools & Settings > Spam Filter Settings** (in the **Mail** group), select the **Switch on server-wide SpamAssassin spam filtering** checkbox and click **OK**.

Migrated Objects and Settings

The following table describes what objects and settings are migrated.

Object or setting on Confixx source server	Migration result
User accounts (resellers and customers).	<p>✓</p> <p>Customer accounts are migrated with all their domains: There is no way to select which domains should be migrated and which should not be.</p> <p>Note: If there are user accounts that have passwords containing umlauts or other special characters (quotes, white spaces, or national alphabet characters), the users of these accounts will not be able to log in to Panel after migration. We strongly recommend that you notify all your users about this issue, and advise them to contact you (the administrator) if they cannot log in to Panel, so that you could set new valid passwords for them.</p>
Personal information of administrator and other users.	<p>✓</p> <p>Migrated except for values in custom user-defined fields and predefined fields (like ZIP code and phone number) if they do not conform to Parallels Plesk Panel format or are not supported by it. Phone numbers with slashes are migrated, but the slashes are removed during migration.</p> <p>It is possible either to migrate the administrator's personal information or not. The default choice is not to migrate the information.</p>
Customer account templates.	<p>✓</p> <p>Migrated as Panel's service plans.</p> <p>However, registration email template settings are not migrated.</p> <p>Note the difference between customer account templates in Confixx and hosting plans in Parallels Plesk Panel: Unlike hosting plans in Parallels Plesk Panel, customer account templates in Confixx are used only for creating new accounts. Modifying customer account templates does not affect accounts that were created based on them. In Parallels Plesk Panel, subscriptions and user accounts maintain relations with their service plans.</p>

Customer's system domain name.	 Migrated as customer's subscription. For customers who do not have any domains, Parallels Plesk Panel will create system domains during migration.
Regular domain names and subdomains with web content.	 Migrated as sites under a customer's subscription.
Single-word domains.	 Parallels Plesk Panel does not support single-word domain names. Such domain names will be renamed during migration.
Wildcard subdomains.	
International domain names.	
Global DNS template.	 Migrated with the following changes: NS record templates are replaced with those conforming to the Parallels Plesk Panel format.
Domain DNS zone configurations.	
SSL certificates installed on websites.	
HTTPD specials.	 Migrated with limitations. All options are migrated to the vhost.conf files and are commented out. The specials you added in the advanced mode are migrated as well. We recommend that you review these entries after migration and uncomment them if they are needed. Also, be sure to replace the variables like <code>##user##</code> and <code>##user_home##</code> with the exact values because the variables will no longer work. For example, <code>##user_home##/##user##</code> can be replaced with <code>/var/www/vhosts/some-user-domain.tld/httpdocs</code> .

<p>Mail accounts with content.</p>	<p>✓</p> <p>Each mailbox from Confixx is transformed into a Panel mailbox and is associated with the first email address as configured in Confixx. If a source mailbox is not associated with any email address, then an email address is automatically generated and assigned to that mailbox on the destination server.</p> <p>During migration of email addresses, the target recipients designated in the Forward To field in Confixx (POP3 boxes and email addresses) are migrated to mailboxes and forwarding addresses respectively.</p> <p>All email addresses that are not associated with a mailbox, and only refer to another address under the same domain are migrated as mail aliases.</p> <p>During migration, all transformations of mail accounts are recorded in the log file <code>/usr/local/psa/PMM/var/*/Confixx-mailmaplog.txt</code>. We recommend that you save this file for future reference, so that you can learn how the email addresses and POP3 boxes were migrated.</p>
<p>Catch-all addresses (*@example.com).</p>	<p>✓</p> <p>A single catch-all address specified for one or more of the customer's domains in Confixx is migrated as is. In Parallels Plesk Panel, catch-all is a subscription-wide setting, therefore, a migrated catch-all address will be used for all domains included in the subscription.</p> <p>Catch-alls are not migrated if there is more than one catch-all address specified for a single customer.</p>
<p>Autoresponders.</p>	<p>✓</p> <p>Migrated, except for catch-all addresses like *@example.com.</p> <p>During migration, the "Sender's name" and "Sender's email address" field values are migrated into "Text" field.</p>
<p>Mailing lists.</p>	<p>✓</p> <p>Migrated without message archives.</p> <p>To make sure that all mailing list subscribers are safely migrated, follow the recommendations we give in http://kb.parallels.com/en/11202.</p>
<p>Mail address book.</p>	<p>✓</p>
<p>Individual SpamAssassin spam protection settings for mailboxes.</p>	<p>✓</p> <p>Only the following settings supported by Parallels Plesk Panel are migrated: what to do with spam mail, score, message subject.</p>
<p>FTP accounts.</p>	<p>✓</p>

Password-protected directories.	✓
Databases with data and database user accounts.	✓
Permission to use web statistics package on hosting accounts.	✓ Either Webalizer or AWStats is provided to hosting accounts, the both cannot be provided at the same time.
Permission to use shell access.	✓ SSH access is migrated for all users including web0. By default, the web0 user in Confixx is allowed to access shell, but cannot actually access it. After migration, the web0 user in Parallels Plesk Panel is allowed to access shell and can actually access it. The permission to transfer files to the server over Scp or SFTP is not migrated.
Resource usage limits and permissions for operations.	✓
Traffic usage information.	✓
Web statistics and Apache logs.	✓ The statistics data (Webalizer HTML and data files, AWStats data files) are put into the <code>private/confixx-statistics</code> directory relatively to a customer's home directory. The migrated Apache log files are available under a customer's system domain (named <code>webNN.provider.tld</code> , where NN is the user's number and the provider.tld is the host name of the machine with Confixx).
A custom index page template configured by the administrator or resellers.	✓
Cron jobs.	✓ Cron jobs are migrated as is. File system paths specified in cron jobs are not changed, so customers should manually change them after the migration is complete.

The following table describes what objects and settings are not migrated.

Object or setting on Confixx source server	Migration result
Shared domains.	✗
@ domains.	✗
Reseller DNS templates.	✗

Reseller help messages.	✘
Custom error pages.	✘
Backup files.	✘
Remote backup settings.	✘
Server SSL certificates.	✘
Server-wide SpamAssassin spam protection settings.	✘
List of IP addresses allowed to access control panel.	✘
List of domain names restricted for use in control panel.	✘

Parallels Pro Control Panel for Linux

This chapter describes the steps you might need to perform before starting migration from Parallels Pro Control Panel for Linux (formerly known as Ensim Pro), and explains what data can be migrated.

Steps to Perform on the Source Parallels Pro Control Panel Server

Before you start migration, do the following:

1. To check your PPCPL installation for any possible issues or errors that might occur during migration, download the Compatibility Checker utility by following the link in the KB article at <http://kb.parallels.com/en/112695>.

This utility, developed by Parallels, is intended to assist administrators with migration to Parallels Plesk Panel. It examines a PPCPL installation and produces a report with the following information: which items will be migrated, how the migrated objects or settings will be transformed during migration, what issues you may encounter and how to resolve them.

2. Run the utility on the source server.
3. Resolve all issues by following recommendations of the utility.

Steps to Perform on the Destination Parallels Plesk Panel Server

If you plan to transfer mailing lists to Parallels Plesk Panel, do the following on the destination server:

1. Install the Mailman mailing lists server component. To do this, in the Server Administration Panel, go to **Tools & Settings > Updates and Upgrades > Add Components**, select the **Mailman mailing list manager support** option in the **Additional mail services** group, and click **Continue**.
2. After this component is installed, specify the mailing list server administrator's email address and password. To do this, in the Server Administration Panel, go to **Tools & Settings > Set Up Mailing Lists Server** (in the **Resources** group).
3. To ensure proper migration of mailing list subscriber addresses, insert the following lines into Mailman configuration file `/etc/mailman/mm_cfg.py`:







```
DEFAULT_ADMIN_NOTIFY_MCHANGES = No
DEFAULT_SEND_WELCOME_MSG = No
DEFAULT_SEND_GOODBYE_MSG = No
```













If you plan to transfer SpamAssassin settings, do the following on the destination server:

1. Install the SpamAssassin spam filter. To do this, in the Server Administration Panel, go to **Tools & Settings > Updates and Upgrades > Add Components**, select the **SpamAssassin support** option in the **Additional mail services** group, and click **Continue**.
2. After this component is installed, switch on spam filtering: Go to **Tools & Settings > Spam Filter Settings** (in the **Mail** group), select the **Switch on server-wide SpamAssassin spam filtering** checkbox and click **OK**.

Migrated Objects and Settings

The following table describes what objects and settings are migrated.

Object or setting on PPCPL source server	Migration result
User accounts.	 Resellers are mapped to Parallels Plesk Panel resellers and site administrators, to Parallels Plesk Panel customers.
Sites.	 As there is 1 to 1 relation between user accounts and sites, the site migration is the same as user account migration. However, the site migration is more convenient as usernames are sometimes meaningless, so in the migration wizard you select sites. Related user accounts are migrated as well. Note: If there are two sites with the same site administrator's usernames, duplicates will be automatically renamed during migration.
Domains with hosting scripting settings and web content.	
Domain aliases.	
Subdomains.	 If a subdomain's owner in PPCPL was not a site/domain administrator, then a new FTP user account is created for that subdomain. The FTP account username format is <owner of subdomain in PPCPL>_<subdomain name>. This FTP user has access only to his or her subdomain. Subdomains are migrated into /var/www/vhosts/<site>/subdomains_wwwroot directory.
DNS zone configurations	 Migrated, except for the zone's NS record. A default NS record in Parallels Plesk Panel will be created instead.

Mail accounts with content and webmail settings.	 <p>After migration, the users will need to update IP addresses of POP3/IMAP/SMTP servers in mail client settings, and refresh the list of IMAP folders in webmail clients. Note that mail names are case-insensitive in Parallels Plesk Panel and case-sensitive in PPCPL. That is why if several mail names in PPCPL differ only by case, only one of them will be migrated to Parallels Plesk Panel.</p>
Mail forwarders.	
Mail aliases.	
Catch-all mail addresses.	
Autoresponders.	
Mailing lists.	 <p>Only administrator's email and password, subscribers' email addresses are migrated. Message archives are not migrated.</p>
Settings of SpamAssassin spam filter.	 <p>Migrated, except for the following global settings: number of simultaneous spam scans to allow, enable/disable tests that connect to remote servers.</p>
FTP accounts.	 <p>FTP usernames that exceed 16 characters in length or coincide are automatically corrected by the migration utility.</p>
Anonymous FTP shares, their settings and files.	 <p>Migrated only for IP-based sites.</p> <p>For name-based sites, Panel migrates the content of FTP shares but does not support anonymous FTP on such sites. If you wish a customer on a shared IP to continue using anonymous FTP, assign a dedicated IP to them and turn on the anonymous FTP service manually.</p> <p>Panel adds an informative warning message about inability to set up the FTP service on name-based sites to the migration log.</p>
Web users who do not have their own domain names or subdomains.	 <p>Migrated as web users.</p>
Password-protected directories.	
SSL certificates and SSL support settings.	 <p>Only customers' SSL certificates are migrated.</p>

Databases with data and database user accounts.	✓
Installed web applications.	Not migrated, but all files belonging to applications are transferred. After migration, your customers can clean up their sites over FTP.
Records about allocation of disk space resources.	✓
Records about allowed monthly bandwidth usage.	✓
Records about allowed number of mail accounts.	✓
Records about allowed number of subdomains.	✓

The following table describes what objects and settings are not migrated.

Object or setting on PPCPL source server	Migration result
Service plans.	✗
Server SSL certificate.	✗
Installed web applications.	✗ Not migrated, but all files belonging to applications are transferred.
Vacation messages.	✗
Cron jobs.	✗
DNS logging.	✗
Sendmail reject lists.	✗
Web statistics data and logs.	✗

Helm

This chapter describes the steps you might need to perform before starting migration from Parallels Helm 3.2, and explains what data can be migrated.

What to Do Before You Start Migration

Before you start migration, do the following:


1. Install and configure the *Migration & Transfer Agent* utility a, as described in the section **Installing and Configuring Migration & Transfer Agent** (on page 149).
2. To check your Helm installation for any possible issues or errors that might occur during migration, on the source server, run the `Helm3CompatibilityChecker.exe` application located in `C:\Program Files\Parallels\PleskMigrationAgent\`. This utility is shipped with the Migration & Transfer Agent package, starting from Panel 10.4.
3. Resolve all issues by following recommendations of the `Helm3CompatibilityChecker.exe` utility.

Migrated Objects and Settings

The following table describes what objects and settings are migrated, and where to find the corresponding items in Parallels Plesk Panel after migration.

Object or setting on a Helm source server	Migration result	Location in Panel
Administrator account information.	✓	Server Administration Panel > Profile & Preferences
Global DNS settings.	✓	Server Administration Panel > Tools & Settings > DNS Template
Reseller accounts.	✓ Resellers accounts are migrated along with their contact information, hosting plans, extra features (with limitations), DNS settings (with limitations). The following items are not migrated: <ul style="list-style-type: none"> ▪ Reseller DNS templates. ▪ Domain registration settings. ▪ Custom Extra Feature. 	Server Administration Panel > Resellers

<p>User accounts.</p>	<p>✓</p> <p>User accounts are transformed to customer accounts.</p> <p>Users' packages are transformed to subscriptions.</p>	<p>Server Administration Panel > Customers</p>
<p>Reseller plans.</p>	<p>✓</p> <p>Migrated, excepts for the following objects, settings, and permissions:</p> <ul style="list-style-type: none"> ▪ Reseller DNS templates. ▪ Custom Extra Feature. ▪ Extra MRA Recipients. ▪ Enable MIME Type Manager. ▪ Enable File Manager. ▪ Enable Custom HTTP Error Pages. ▪ Enable Web Forwarding. ▪ Enable Parent Paths. ▪ Enable Web Permissions. ▪ Enable Default Docs. ▪ Extra Virtual Directories. ▪ Extra ASP, PERL, PHP, PHP5, ASP.NET, ASP.NET2 Websites. ▪ Extra CGI-Bin Installation. ▪ Extra ASP.NET Website. ▪ Extra ASP.NET 2 Website. ▪ Extra Python Website. ▪ Extra ColdFusion Website. ▪ Extra Secure Folder Installation. ▪ Extra LiveStats 5, 6, or XSP Installation. ▪ Extra AWStats Installation. ▪ Extra Database User. ▪ Extra SmarterStats Installation. 	<p>Server Administration Panel > Service Plans > Reseller Plans tab</p>

Reseller's extra features.	 <p>All resellers' extra features are converted to custom reseller plans and resellers are subscribed to them.</p> <p>The following items are not migrated:</p> <ul style="list-style-type: none">▪ Custom Extra Feature.▪ Extra MRA Recipients.▪ Enable MIME Type Manager.▪ Enable File Manager.▪ Enable Web Forwarding.▪ Enable Parent Paths.▪ Enable Default Docs.▪ Extra Virtual Directories.▪ Extra PHP or ASP.NET Website.▪ Extra Secure Folder Installation.▪ Extra LiveStats 5, 6, or XSP Installation.▪ Extra AWStats Installation.▪ Extra Database User.▪ Extra SmarterStats Installation.	Server Administration Panel > Service Plans > Reseller Plans tab
----------------------------	--	---

<p>Hosting plans.</p>	<p>✓</p> <p>Extra features defined at plan level in Helm are gathered from all hosting plans and converted to add-on plans of the corresponding resellers in Panel.</p> <p>Add-on plans in Panel must have unique names. For this reason, a numeric ID is added to coinciding names of add-on plans during migration.</p> <p>The following plan settings are not migrated:</p> <ul style="list-style-type: none"> ▪ Custom Extra Feature. ▪ Extra MRA Recipients. ▪ Enable MIME Type Manager. ▪ Enable File Manager. ▪ Enable Web Forwarding. ▪ Enable Parent Paths. ▪ Enable Default Docs. ▪ Extra Virtual Directories. ▪ Extra PHP or ASP.NET Website. ▪ Extra Secure Folder Installation. ▪ Extra LiveStats 5, 6, or XSP Installation. ▪ Extra AWStats Installation. ▪ Extra Database User. ▪ Extra SmarterStats Installation. 	<p>Server Administration Panel > Service Plans > Hosting Plans tab</p>
<p>Hosting plans' extra features.</p>	<p>✓</p> <p>Migrated to plan add-ons.</p>	<p>Server Administration Panel > Service Plans > Hosting Plans tab</p>

<p>Packages.</p>	<p>✓</p> <p>Transformed to subscriptions.</p> <p>In Parallels Plesk Panel, subscriptions differ from packages in Helm:</p> <ul style="list-style-type: none"> ▪ Each subscription has the main domain (the first domain name created for a subscription and associated with it). This domain name cannot be deleted. ▪ A customer can add many domain names to a single subscription, and can have several subscriptions. <p>Shared SSL content of the main domain is migrated into Panel's <code>httpsdocs</code> folder, SSL folders of addon domains are transferred into <code>private/<domain name>/SSL</code> folders.</p>	<p>Server Administration Panel > Subscriptions</p>
<p>Domains.</p>	<p>✓</p> <p>Domains are migrated with DNS zone settings and web content.</p>	<p>Server Administration Panel > Domains</p> <p>or</p> <p>Control Panel > Websites & Domains tab</p>
<p>Domain forwarders.</p>	<p>✓</p>	<p>Control Panel > Websites & Domains tab</p>
<p>Domains without hosting.</p>	<p>✓</p>	<p>Control Panel > Websites & Domains tab</p>
<p>Subdomains.</p>	<p>✓</p>	<p>Control Panel > Websites & Domains tab</p>
<p>Domain aliases.</p>	<p>✓</p>	<p>Control Panel > Websites & Domains tab</p>
<p>Mail accounts and services.</p>	<p>✓</p> <p>The following items are migrated:</p> <ul style="list-style-type: none"> ▪ POP3 accounts. ▪ Content of mailboxes. ▪ Forwarders. ▪ Autoresponders. ▪ Catch-all address. ▪ Multi-recipient addresses. 	<p>Mail accounts: Control Panel > Mail tab</p> <p>Mail forwarders: Control Panel > Mail tab > email address > Forwarding tab.</p> <p>Autoresponders: Control Panel > Mail tab > email address > Auto-Reply tab.</p> <p>Catch-all: Control Panel > Mail tab > Change Settings.</p> <p>Multi-recipient addresses: Control Panel > Mail tab > email address > Forwarding tab.</p>
<p>FTP accounts.</p>	<p>✓</p>	<p>Control Panel > Websites & Domains tab > FTP Access</p>

<p>Databases.</p>	<p>✓</p> <p>Only MySQL and MSQL databases are migrated with user accounts and content.</p> <p>Microsoft Access databases are not migrated.</p>	<p>Control Panel > Websites & Domains > Databases</p>
<p>MIME types definitions.</p>	<p>✓</p>	<p>Control Panel > Websites & Domains tab > Virtual Directories > <i>domain name</i> > MIME Types.</p>
<p>ODBC data source names.</p>	<p>✓</p> <p>Migrated except for "Text" records (.csv, and .txt files).</p>	<p>Control Panel > Websites & Domains tab > ODBC Data Sources</p>
<p>Web scheduler tasks.</p>	<p>✓</p> <p>They are migrated, however, become inoperable after migration because Panel accepts commands to execute scripts instead of URLs, as in Helm.</p>	<p>Control Panel > Websites & Domains tab > Scheduled Tasks.</p>
<p>Shared SSL settings.</p>	<p>✓</p> <p>Migrated with the following limitations:</p> <ul style="list-style-type: none"> ▪ SSL certificates are not migrated. The administrator must manually transfer the SSL certificate file to the site in Panel. ▪ Shared SSL status for add-on domains (second and subsequent domains in a package) is not migrated. All content of SSL folders is moved to the private/SSL folder in Panel, so a site administrator can enable shared SSL using Panel UI and move the content using Panel's File Manager. 	<p>Control Panel > Websites & Domains tab > Shared SSL.</p>
<p>Virtual directories.</p>	<p>✓</p> <p>Migrated with limitations:</p> <p>Virtual directories that redirect to URLs are not migrated.</p>	<p>Control Panel > Websites & Domains tab > Virtual Directories.</p>
<p>Settings of services, such as web, Databases, DNS, and FTP.</p>	<p>✓</p> <p>Settings of services are mapped to global server-wide Panel settings, limits are transferred to every reseller plan.</p>	<p>Global settings of various Panel services: Server Administration Panel > Tools & Settings.</p> <p>Reseller plans: Server Administration Panel > Service Plans > Reseller Plans tab.</p>

Note: For each migrated site, the migration utility creates a file named `MigrationIssues.txt` and places it into the directory `/private` under the corresponding hosting account. This file contains information about any migration issues or changes to the site settings or FTP account credentials that the site owner should be aware of. After migration, you can advise all your customers to connect to their hosting accounts over FTP and check the contents of the file `/private/MigrationIssues.txt`.

The following table describes what objects and settings are not migrated.

Object or setting on Helm source server	Migration result
Domain registration settings.	✘
Secure folders.	✘
ColdFusion data source names.	✘
ColdFusion sites or scripts. They are migrated as files, but become inoperable after migration.	✘
FrontPage sites or scripts. They are migrated as files, but become inoperable after migration.	✘
Custom error pages.	✘

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Installing and Configuring Migration & Transfer Agent

Automatic transfer of data from one Windows server to another is possible only when a specific connection is established between the servers. The connection is established by Migration & Transfer Manager installed on a destination server and the *Migration & Transfer Agent* utility on a source server, provided that they are configured identically.

Migration & Transfer Agent is a utility which transfers data from a source to a destination server. To learn how to install Migration & Transfer Agent on the server, see the section **Installing Migration & Transfer Agent** (on page 83). If the default settings of Migration & Transfer Agent conflict with your network configuration (for example, you already use the default utility's port for some other purposes), you can change them as described in the section **Configuring Migration & Transfer Agent on the Source Server** (on page 84). If you change the Migration & Transfer Agent settings, you should do the corresponding changes to the Migration & Transfer Manager configuration as described in the section **Configuring Migration & Transfer Manager on the Destination Server** (on page 88).

The following settings are used by Migration & Transfer Agent by default:

- *Port* - number of the port that is used by the Panel for connecting to Migration & Transfer Agent. (The default is 6489.)

When changing the port, consider the following:

- It can be any number from 1 to 65535.
- It must be free on the server from which data will be migrated, that is, this port should not be used by any other programs or services on both servers.
- It must be allowed by firewall on the source server.
- *Channel type* - protocol communication between Migration & Transfer Manager and Migration & Transfer Agent. (The default is HTTP.)

When selecting the channel type, consider the following characteristics:

- TCP provides better performance than HTTP.
- HTTP is more public as it uses HTTP protocol, which is allowed by most firewalls.

Note: If these connection parameters are not the same in Migration & Transfer Manager and Migration & Transfer Agent configurations, migrations will fail.

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Installing Migration & Transfer Agent

➤ ***To install Migration & Transfer Agent:***

1. Log in to Server Administration Panel on the destination server.
2. Go to **Tools & Settings > Migration & Transfer Manager** (in the **Tools & Resources** group).
3. To obtain the latest version of the Migration & Transfer Agent, click **Download Migration & Transfer Agent**.
4. Upload the file to the source server.
5. Log in to the source server over Remote Desktop, and run the installation file.
6. Click **Next** several times to complete installation.

Once you have installed Migration & Transfer Agent, it starts automatically with the default settings. So, you can proceed to transferring data.

Configuring Migration & Transfer Agent on the Source Server

Migration & Transfer Agent is fully operable with the default settings, so there is no need to change them. However, if you want to change the port or protocol used by the agent, you can do so by following the instructions provided in this section.

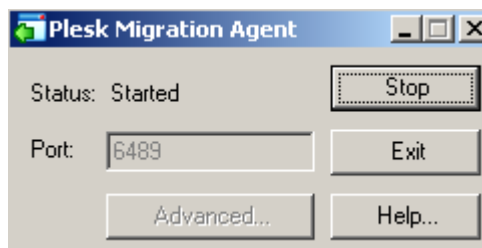
Changing Migration & Transfer Agent configuration includes the following:

- Changing parameters of the Migration & Transfer Agent connection with Migration & Transfer Manager (port and channel type).
This can be done using either Migration & Transfer Agent interface or Migration & Transfer Agent configuration file.
- Changing the location of data files on the source server.
This is necessary if, for example, there is not enough space on the disk where Migration & Transfer Agent is installed.

➤ *To change the connection parameters using Migration & Transfer Agent GUI:*

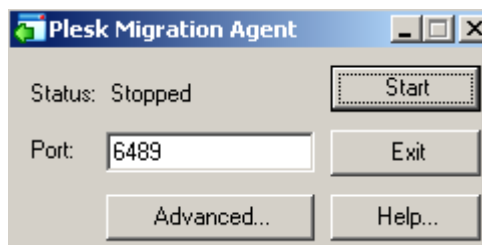
1. Run the `WINAgentMng.exe` file. If Migration & Transfer Agent was installed in the default location, you can access it by clicking **Start > Programs > Parallels > Panel > Plesk Migration & Transfer Agent**, or browsing to `C:\Program Files\Parallels\Plesk Migration Agent\WINAgentMng.exe`.

The Migration & Transfer Agent window opens.



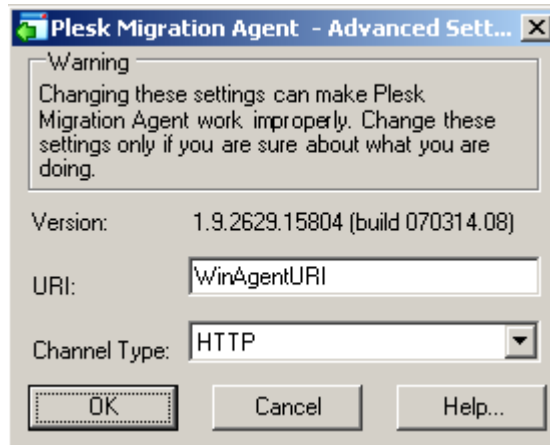
2. Click **Stop**.

This makes changing Migration & Transfer Agent settings available.



3. Enter the desirable value next to **Port** to change the port number.
4. To change Migration & Transfer Agent channel type:
 - a. Click **Advanced**.

The advanced options window opens.



- b. Select an appropriate item in the **Channel Type** menu to set up a channel type.
 - c. Click **OK**.
This applies the changes made to advanced options and closes the advanced options window.
5. Click **Start**.
This applies changes made to the port number and starts Migration & Transfer Agent with new settings.

Editing Migration & Transfer Agent Configuration File

You can edit the Migration & Transfer Agent configuration settings manually. For the changes to take effect after manual editing, restart Migration & Transfer Agent.

➤ **To change the connection parameters by editing configuration file:**

1. Open for editing the `<migration-agent-installation-directory>\WINAgentMng.exe.config` file and locate the `"/configuration/appSettings"` element.

By default, Migration & Transfer Agent is installed in `C:\Program Files\Parallels\PleskMigrationAgent`.

Warning: It is strongly recommended that you do not change anything beyond the contents of the `<appSettings>` node, as doing this will most probably crash Migration & Transfer Manager and make migrations impossible.

2. To change port number, enter a desired value in the `<add key="Port" value="6489" />` string instead of 6489.

For example, if you want port 7788 to be used, this string should be `<add key="Port" value="7788" />`.

3. To change channel type, enter a desired value in the `<add key="ChannelType" value="HTTP" />` instead of HTTP.

For example, if you want to use TCP, this string should be `<add key="ChannelType" value="TCP" />`.

4. To change the Migration & Transfer Agent's IP address, enter the IP address value in the string `<add key="IPAddress" value="" />`.

This will allow Migration & Transfer Manager to connect to Migration & Transfer Agent through the specified IP address only. Type `0.0.0.0` or remove the string from the file altogether to allow Migration & Transfer Manager to connect to Migration & Transfer Agent through any IP address available on the source server.

5. Save file.
6. Restart Migration & Transfer Agent.

➤ **To change the location of data files gathered by Migration & Transfer Agent:**

1. Open for editing the `<migration-agent-installation-directory>\WINAgentMng.exe.config` file and locate the `"configuration/appSettings"` element.

By default, Migration & Transfer Agent is installed in `C:\Program Files\Parallels\PleskMigrationAgent`.

Warning: It is strongly recommended that you do not change anything beyond the contents of the `<appSettings>` node, as doing this will most probably crash the Migration & Transfer Manager and make migrations impossible.

2. Add the full path (starting with the drive root) to folder where the file should be stored into the `<add key="DumpDirectory" value="" />` string.

For example, if you want the migration dump to be stored in folder `H:\Store\Plesk_migration`, this string should be `<add key="DumpDirectory" value="H:\Store\Plesk_migration" />`. If such directory does not exist on disk H, it will be created.

3. Save file.
4. Restart Migration & Transfer Agent.

The default content of the configuration file

```
<?xml version="1.0" encoding="utf-8"?>
<configuration>
  <startup>
    <supportedRuntime version="v2.0.50727" />
    <supportedRuntime version="v1.1.4322" />
  </startup>
  <system.runtime.remoting>
    <customErrors mode="off" />
    <application name="Parallels Foreign Migration Agent" />
  </system.runtime.remoting>
```

```
<runtime>
  <assemblyBinding xmlns="urn:schemas-microsoft-com:asm.v1">
    <probing privatePath="BackupUtils" />
  </assemblyBinding>
</runtime>
<appSettings>
  <add key="Port" value="6489" />
  <add key="ObjectUri" value="WinAgentURI" />
  <add key="ChannelType" value="HTTP" />
  <add key="IPAddress" value="" />
  <add key="DumpDirectory" value="" />
  <add key="UseWebserver" value="false" />
  <add key="WebServerPort" value="6490" />
  <add key="LogUseDefaultCulture" value="false" />
</appSettings>
</configuration>
```

Configuring Migration & Transfer Manager on the Destination Server

Important: Change settings of Migration & Transfer Manager connection to Migration & Transfer Agent only if you did the same changes to the Migration & Transfer Agent configuration.

➤ **To change parameters of Migration & Transfer Manager connection to Migration & Transfer Agent:**

1. Open for editing the `%plesk_dir%\PMM\Migration\migrmng.exe.config` file and locate the `"/configuration/appSettings"` element.
`%plesk_dir%` is the system variable defining the folder where PPP is installed.
2. To change the port number, enter the required value in the string `<add key="Port" value="6489" />` instead of 6489.
 For example, if you want port 7788 to be used, this string should be `<add key="Port" value="7788" />`.
3. To change Migration & Transfer Agent URI, enter the required value in the string `<add key="ObjectUri" value="WinAgentURI" />` instead of WinAgentURI.
 For example, if you want "MigrationAgent325" to be used as the Migration URI, the string should be `<add key="ObjectUri" value="MigrationAgent325" />`.
4. To change channel type, enter the required value in the string `<add key="ChannelType" value="HTTP" />` instead of HTTP.
 For example, if you want to use TCP, this string should be `<add key="ChannelType" value="TCP" />`.
5. Save the file.

The default content of the migrmng.exe configuration file

```
<?xml version="1.0" encoding="utf-8" ?>
<configuration>
  <configSections>
    <section name="Platforms"
type="ForeignMigratorEngineCore.Configuration.PlatformsSectionHandler,Forei
gnMigratorEngineCore"/>
  </configSections>
  <startup>
    <supportedRuntime version = "v2.0.50727" />
    <supportedRuntime version = "v1.1.4322" />
  </startup>
  <!-- These are the settings you may reconfigure -->
  <appSettings>
    <add key="Port" value="6489" />
    <add key="ObjectUri" value="WinAgentURI" />
    <add key="ChannelType" value="HTTP" />
  </appSettings>
</configuration>
```

```
        <!-- The dump file location and file name defined in Panel GUI
override settings in this configuration file -->
        <add key="DumpDirectory" value="" />
        <add key="DumpName" value="" />
        <add key="UnixDumpDirectory" value="/usr/local" />
        <add key="LogUseDefaultCulture" value="false" />
    </appSettings>
<!-- End of the settings you may reconfigure -->
    <Platforms>
        ...
    </Platforms>
</configuration>
```

Performing Migration

➤ **To migrate accounts and websites with applications from other hosting servers:**

1. Log in to Parallels Plesk Panel on the destination server.
2. Go to **Tools & Settings > Migration & Transfer Manager** (in the Tools group).
3. Click **Synchronize** to check if there are any updates for Migration & Transfer Manager components.
4. Click **Start New Migration**.
5. Leave the **Transfer data from another server** option selected, and specify the following:
 - The source server's address and port number (on Linux/Unix systems). Specify either the IP address or the host name of the server, from which you want to transfer data.
If the source server is on an IPv6 address, then you should specify the server's host name instead of IP address.
 - The username and password of the administrator of the source server.

Note: The option **Transfer data already processed by the Migration & Transfer Agent and located on the local host** can be used to import data from a file, as described in the section **Troubleshooting Migration & Transfer Issues** (on page 170). This is another way to transfer data, which can be used in cases when the source server is offline, and you have previously gathered data from it.

6. If you use Parallels Plesk Panel for Linux, you can also specify the directory on the source server where the Migration & Transfer Agent should be uploaded.
7. Specify the path to the directory where temporary files will be stored.
8. Specify what you want to migrate:
 - *The whole server.* All data related to user accounts, domains, global server settings and services configuration will be transferred from the source server.
 - *Only manually selected resellers, customers and domains.* You will be able to select them in the next screen of Migration Manager.

If you choose to migrate the whole server, you can configure Manager to:

- *Skip server global settings and systems services configuration.* Only user accounts and domains will be transferred. You will need to configure the destination server settings later after migration. All these settings are available from **Tools & Settings** by the following links:
 - **Application Vault**
 - **Scheduled Tasks**
 - **DNS Template Settings**

- **Restrict Creation of Subzones**
- **File Sharing Settings**
- **Website Preview Settings**
- **Notifications**
- **Panel Branding**
- **Interface Management**
- **Mail Server Settings**
- **Virus Protection Settings**
- **Spam Filter Settings**
- **Webmail**
- **Event Manager**
- **Virtual Host Template**

If you want to transfer these settings from the source server, do not select the **Skip server global settings and systems services configuration** option.

- *Transfer a license key* from the source server. The option is useful if the license key suits the Panel version installed on the destination server and you want to use it instead of the current one.
9. If some of Panel objects from the source server (say, user accounts, domains, and so on) already present on the destination server, you can replace them by choosing the **Replace existing objects** checkbox.
 10. If you use Parallels Plesk Panel for Linux, select the **Use rsync transport** checkbox. This reduces the amounts of disk space, bandwidth, and time required to perform migration.
 11. Click **Next**. Migration & Transfer Manager will connect to the specified server and gather information about the business objects of the source hosting platform.
 12. If you have chosen to transfer only specific items, at this step, select the checkboxes corresponding to the user accounts and domains that you want to transfer. Also, specify what types of data should be transferred:
 - All settings and content.
 - All settings and content except mail.
 - Only mail accounts with email messages.
 13. Click **Next**.
 14. Once the data are retrieved from the source server, specify the new IP addresses that should be used. If you have a great number of IP addresses, at this step, you can download the current IP mapping file, correct it in a text editor or by running a custom find-and-replace script, and then upload it back to the server.

The syntax of the IP mapping file is shown in the following example:

```
10.10.10.10 192.168.1.2
```

Where 10.10.10.10 is an IP address used on the source server and 192.168.1.2 is a new IP address that should be used on the destination server. There is a white space between the two IP addresses. When compiling the list of addresses, place each mapping entry on a separate line.

15. Click **Next**. The data transfer process should start immediately.

Note: After the migration process started, you can see the progress and detailed notes about the migration state by clicking the link in the **Source Hostname** column in the **Migration Tasks** table.

Migrating from Parallels Small Business Panel

This chapter is intended for hosting service providers and individual users of Parallels Small Business Panel (SBP) who are considering moving from SBP to Panel 11.5. *The only possible way to move from SBP to Panel is to use one of the migration scenarios described in this chapter.* Other ways of moving to Panel 11.5 are not guaranteed to work. For example, you will not succeed if you back up SBP and then restore the data to Panel 11.5.

Migration is possible for the following products:

Source	Destination
Linux-based Parallels Small Business Panel 10.x	Linux-based Parallels Plesk Panel 10.3 or later
Windows-based Parallels Small Business Panel 10.x	Windows-based Parallels Plesk Panel 10.3 or later

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Important Facts about Migration

Consider the following facts before migrating SBP servers to Panel 11.5.

SBP License Migration

SBP license is not compatible with Panel. During the SBP to Panel migration, an SBP license is converted to a Panel license with the same coverage. For the details on how exactly your license is converted, refer to the table below.

After you perform the migration, your *SBP license will be revoked within 30 days or less.*

SBP License	New Panel License
SBP 1 User	Plesk Panel 100 Domains + SpamAssassin Add-on (Free)

SBP 2 Users	Plesk Panel 100 Domains + SpamAssassin Add-on (Free)
SBP 5 Users	Plesk Panel 100 Domains + SpamAssassin Add-on (Free)
SBP Unlimited Users	Plesk Panel Unlimited Domains + SpamAssassin Add-on (Free)

Note: A license is migrated only if complete server migration is carried out, including server settings and services configuration.

What Is Not Migrated

Due to the differences between SBP and Panel in mailing list service implementation, the following objects and settings are not migrated:

- Mailing list contents.
- Mailing list auto-reply settings.

Migration Scenarios

There are three typical scenarios of migrating from SBP to Panel. Each of them requires that you first tune the destination server to ensure smooth migration. Read more about the steps you should take before starting the migration in the section **Preparing for Migration from SBP** (on page 162).

After you prepare the Panel server, choose one of these migration scenarios:

- *Migration within one server (local migration).*
This scenario is useful for hosting providers or individual SBP users who want to replace SBP installed on their server with Panel. This type of migration is called *local*, as it is performed within one server.
- *Migration between two servers (server-to-server migration).*
This scenario is useful for hosting providers or individual SBP users who migrate between two dedicated servers.
- *Migration between two containers within a Virtuozzo node.*
This scenario is useful for hosting providers who operate a number of virtual environments with installed SBP. You can perform migration between SBP and Panel installed in separate containers within a Virtuozzo node.

All the migration scenarios suppose that you prepare a server with a fresh Panel installation and then transfer the SBP data there.

Preparing for Migration from SBP

We assume that you have a server (preferably, with a freshly installed operating system) and you wish to migrate data to this server. Regardless of the migration scenario you choose, you should take the following steps to prepare the destination server and thus ensure a successful migration:

- *Install Panel on the destination server.*
The first and obligatory requirement is that your *destination server should have a clean Panel 10.3 (or later) installation*. For more information on how to install Panel, refer to the **Installation and Upgrade Guide**.
- *Configure Panel on the destination server.*
If your SBP used mailing lists, PostgreSQL, or Site Editor, ensure that they are installed and configured in Panel. Next in this section, we discuss each of the configuration steps in detail.

1. Configure Panel Services (on Linux Platforms)

If you used mailing lists or PostgreSQL databases in your SBP for Linux, configure these services on a *destination Panel server*.

- *Mailing Lists*
The mailing lists service has another implementation in Panel and does not work without configuration. Before the migration, set the administrator's password and email for that service in **Server Management > Tools & Settings > Set Up Mailing Lists Server**.
- *PostgreSQL*

If you used PostgreSQL in SBP, you should provide support for it in Panel. As PostgreSQL is an additional Panel component, you can install it through **Server Management > Tools & Settings > Updates**. After the installation, set the administrator's credentials in **Server Management > Tools & Settings > Database Servers**.

2. Install Site Editor

Site Editor is an SBP tool that allows easy website creation. For the same purpose, Panel provides the much more powerful Presence Builder tool. Websites created in Site Editor are not compatible with Presence Builder. Thus, if your SBP installation contains such sites, you should install Site Editor to Panel to be able to maintain them after migration.

➤ *To make support of Site Editor sites available:*

1. Download the Parallels Installer utility that suits your operating system from <http://www.parallels.com/products/plesk/download/>.
2. Run the Parallels Installer with the `source` option and follow the on-screen instructions:

On Linux:

```
#<path_to_installer> --source  
http://autoinstall.plesk.com/SiteEditor/
```

On Windows:

```
<path_to_installer> --source http://autoinstall-  
win.pp.parallels.com/SITEEDITOR/
```

where `<path_to_installer>` is a full path to the Parallels Installer utility.

Performing Migration from SBP

There are three available migration scenarios: local, server-to-server migration, and migration between Virtuozzo containers.

Some of these scenarios can be performed only with the special command-line utility, `smb-to-plesk-migration`, which is not provided with Panel by default. The utility is available at the following locations:

- For Linux: http://autoinstall.plesk.com/PSA_10.4.4/smb-to-plesk-migration/smb-to-plesk-migration.tar
- For Windows: http://autoinstall-win.pp.parallels.com/PANEL-WIN_10.4.4/dist-msi-Microsoft-2003-i386/smb-to-plesk-migration.zip

Note that unlike Migration & Transfer Manager (the standard Panel migration utility), `smb-to-plesk-migration` can perform *only whole server migration*.

This section provides examples only of basic utility usage. For more details on the utility options, refer to the built-in help:

On Linux:

```
#./smb-to-plesk-migration.sh --help
```

On Windows:

```
smb-to-plesk-migration.cmd --help
```

Next in this section, you will find details on the migration scenarios.

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Local Migration

Local migration is migration *within one server* (mainly virtual). This type of migration is available only with the `smb-to-plesk-migration` tool. First, the tool creates a backup of the SBP data and then restores it to Panel 10.

The backup log is stored in `<path_to_utility>/psadump.log`, while the restoration log is in `<path_to_Panel>/PMM/logs/restore-YYYY-MM-DD-hh-mm-nnn/`. Here, `YYYY-MM-DD-hh-mm` is the date and time when migration or restoration was performed and `nnn` is a randomly generated number..

➤ *To perform a local migration:*

1. Download the archive with the `smb-to-plesk-migration` tool to the server from <http://autoinstall.plesk.com/PSA10/smb-to-plesk-migration/>.
2. Extract the archive to the desired destination.
3. Perform a full backup of your SBP:

On Linux:

```
#./smb-to-plesk-migration.sh --backup-local --destination-dir=<backup_path>
```

On Windows:

```
smb-to-plesk-migration.cmd --backup-local --destination-dir=<backup_path>
```

where:

- `<dest_path>` - path to store the backup.

4. Prepare your server as instructed in the section **Preparing for Migration from SBP** (on page **162**).
5. Restore data from the backup:

On Linux:

```
#./smb-to-plesk-migration.sh --restore-local --backup-name=<backup_path>
```

On Windows:

```
smb-to-plesk-migration.cmd --restore-local --backup-name=<backup_path>
```

where `<backup_path>` is a full path to the backup file.

Server-to-Server Migration

If you want to perform a migration between two servers, we recommend that you use the standard Panel migration utility - Migration & Transfer Manager. In that case, the migration procedure is exactly the same transferring data from one Panel to another. You prepare a Panel server, start Migration & Transfer Manager, and point to the source SBP server. While adjusting migration settings, *always choose the whole server migration including global settings and services configuration*. This is the only option for the successful migration of all SBP objects including license, user accounts, and user roles. For information on how to transfer Panel data with the Migration & Transfer Manager utility, refer to the section **Transferring Data Using Migration & Transfer Manager** (on page 106).

Alternatively, you might use `smb-to-plesk-migration` if you consider this tool more convenient. In this case, you should also pay careful attention to the IP pools: The number and values of *IP addresses on the source and destination servers should be exactly the same*. The migration procedure using `smb-to-plesk-migration` is similar to the local migration: You back up SBP on a source server and restore it on the destination server.

Migration Between Containers within a Virtuozzo Node

Some hosting providers maintain a number of SBP installations in virtual environments within a Virtuozzo node. If this applies to you, you should first create a container with Panel 10.3 (or later) and then migrate SBP to this container. The migration procedure is handled by the `smb-to-plesk-migration` utility: First, it creates a backup of the SBP container and then restores it on a Panel container.

The backup log is stored in `<path_to_utility>/psadump.log`, while the restore log is stored on the destination container in

`<path_to_Panel>/PMM/rsessions/YYYYMMDDhhmmnnnn/migration.log`. Here, `YYYYMMDDhhmmnnnn` is the directory name, consisting of the date and time the migration or restoration was performed (the `YYYYMMDDhhmm` part) and a randomly generated number (the `nnnnn` part).

➤ *To perform the migration between two containers within a Virtuozzo node:*

1. Download the archive with the `smb-to-plesk-migration` tool to your node server from <http://autoinstall.plesk.com/PSA10/smb-to-plesk-migration/>.
2. Extract the archive to the desired destination.
3. Perform a full backup of SBP in the desired container:

On Linux:

```
#./smb-to-plesk-migration.sh --backup-ct --ct-id=<ct_id> --
destination-dir=<backup_path>
```

On Windows:

```
smb-to-plesk-migration.cmd --backup-ct --ct-id=<ct_id> --
destination-dir=<backup_path>
```

where:

- `<ct_id>` - ID of the SBP container.
- `<dest_path>` - path to store the backup on the node server.

4. Prepare the destination container according to the section **Preparing for Migration from SBP** (on page 162).

5. Restore data from the backup:

On Linux:

```
#./smb-to-plesk-migration.sh --restore-ct --ct-id=<ct_id> --
backup-name=<backup_path>
```

On Windows:

```
smb-to-plesk-migration.cmd --restore-ct --ct-id=<ct_id> --backup-
name=<backup_path>
```

where:

- `<ct_id>` - ID of the Panel container.
- `<backup_path>` - full path to the backup file on the node server.

CHAPTER 9

Troubleshooting

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Troubleshooting Installation and Upgrade Issues

This section describes how to troubleshoot difficulties that may occur when you try to install or upgrade Panel. If you experience a problem that is not resolved in the table below, visit the Parallels support site (<http://www.parallels.com/support/>).

Problem	Solution
<p>You are unable to deselect the Presence Builder component when installing the Panel.</p>	<p>Presence Builder is a core component and is required for the proper Panel installation.</p>
<p>The system does not recognize that IIS is installed during the Panel installation. It displays the following message: "Error: You should install the Microsoft Internet Information Server (IIS) with WWW service prior to installing Plesk. Please click the Start button, then select Settings->Control Panel->Add/Remove programs, choose Add\Remove windows components and install IIS with FTP and WWW services. Refer to Windows Help for details". After you install the required services and continue the wizard, the error remains.</p>	<p>Retry the IIS recognition by restarting the wizard in your browser. To do this, open the page <a href="http://<your-host-name-or-ip>:8447">http://<your-host-name-or-ip>:8447 and repeat the installation steps from the beginning.</p>
<p>You are unable to install the Kaspersky Antivirus component on Windows 2008.</p> <p>If you select the Kaspersky Antivirus component when installing the Panel for Windows 2008, the following error is displayed: "A dependency problem has been found: Windows 2008 or higher is not supported by Kaspersky anti-virus".</p>	<p>The component is not supported for this operating system. Go to the Select Components page, deselect the component, and continue the installation.</p>

Troubleshooting Migration and Transfer Issues

This section is designed to help you complete migration in cases when first steps of migration succeeded, and the following, failed. A simplified description of migration process is as follows:

1. (Linux/Unix source only) Migration & Transfer Manager connects to a source server and uploads the Migration & Transfer Agent to it.
In case of Windows source server, you need to install the Migration & Transfer Agent manually as described in the section **Installing Migration & Transfer Agent** (on page 83).
2. Migration & Transfer Manager connects to the Migration & Transfer Agent and passes the migration parameters to it.
3. Migration & Transfer Agent gathers all necessary data basing on the information received on the previous step, and saves them to a file (further referred to as migration data file).
In Parallels Plesk Panel for Linux/Unix, the default location for data files is `/usr/local/`.
In Parallels Plesk Panel for Windows, the default location for data files is `C:\PMMtemp`, it may be changed as described in the section **Configuring Migration & Transfer Agent on the Source Server** (on page 84).
4. Migration & Transfer Agent starts transferring the data file to the destination server.
On the destination server, the data file is saved at the **Temporary Files Location** defined on the **Migration Settings** screen.
5. Migration & Transfer Agent removes the data file from the source server as soon as the transfer is completed.
In case the transfer fails, the data file remains on the source server.
6. Migration & Transfer Manager imports data from the file into Parallels Plesk Panel.

The information provided here should be useful in the following cases:

- (Linux/Unix only) Uploading Migration & Transfer Agent failed.
- (Linux/Unix only) Creating data file failed.
- Data file transfer failed.
- Data file import on the target server failed.

Generally, if you experience problems with migration or transfer, you can find detailed information about this migration or transfer in its log files. These files are located in the following directory:

- On Linux: `/usr/local/psa/PMM/logs/migration-YYYY-MM-DD-hh-mm-nnn/`
- On Windows: `<plesk_dir>\PMM\logs\migration-YYYY-MM-DD-hh-mm-nnn\`

Where `YYYY-MM-DD-hh-mm` is the date and time when migration or restoration was performed and `nnn` is a randomly generated number.

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Troubleshooting on Linux Systems

➤ **To complete migration if the data file transfer to the target server failed:**

1. On the source server, locate the required directory.
By default, the directories are created in `/usr/local/`.
2. Open the file `content-list.xml` to see what files were created.
3. Move all these files, including `dump.xml`, to the destination server.
4. In a web browser, log in as administrator to the target Parallels Plesk Panel.
5. Go to **Tools & Settings > Migration & Transfer Manager** (in the Tools group), and then click **Start New Migration**.
6. Select the option **Transfer data already processed by the Migration & Transfer Agent and located on the local host**.
7. In the **Migration data file location** box, type the path to the directory where you saved the data at the step 3.
8. Click **Next**.

➤ **To complete migration if data import to Parallels Plesk Panel failed:**

1. In a Web browser, log in as administrator to target Parallels Plesk Panel.
2. Go to **Tools & Settings > Migration & Transfer Manager** (in the Tools group), and then click **Start New Migration**.
3. Select the option **Transfer data already processed by the Migration & Transfer Agent and located on the local host**.
4. In the **Migration data file location** box, type the path to the directory specified previously as **Temporary Files Location**.
By default, it is `/usr/local/psa/PMM/var/`.
5. Click **Next**.

In case a data file creation fails, you can try creating it manually by using the Linux/Unix Migration & Transfer Agent - the `PleskX.pl` utility.

➤ **To create a data file manually using command line:**

1. Locate the following directories on your Parallels Plesk Panel destination server, and copy all their content to a single directory on the source server.

```
<parallels_plesk_panel_installation_directory>/PMM/Agents/PleskX/  
<parallels_plesk_panel_installation_directory>/PMM/Agents/shared/
```

2. On the source server, run the `PleskX.pl` utility with the appropriate command line options:

- To make a copy of all accounts and domains:

```
# PleskX.pl -dump-all
```

- To make a copy of specific domains:

```
# PleskX.pl -dump-domains=<comma-separated list of domain names>
```

- To make a copy of specific user accounts:

```
# PleskX.pl -dump-resellers=<comma-separated list of resellers' IDs assigned by the source Plesk system>
```

or

```
# PleskX.pl -dump-clients=<comma-separated list of clients' IDs assigned by the source Plesk system>
```

- To read about additional command line options supported by the `PleskX` utility, issue the command:

```
# PleskX.pl --help
```

3. Proceed as described in the first procedure in this section.

➤ **To complete migration in case of unresolved conflicts:**

If you are migrating data by means of command-line backup and restore utilities, restoration may fail with the following error: `Unable to resolve all conflicts`. This can happen when some settings or services on the destination server are not configured, and for this reason, migration is impossible.

For example, a website on the source server used PostgreSQL databases, but on the destination server, PostgreSQL database server is not installed or configured.

You can learn about the unresolved conflicts in the log located in the file `/usr/local/psa/PMM/logs/migration-YYYY-MM-DD-hh-mm-nnn/conflict_description`, where `YYYY-MM-DD-hh-mm-nnn` is the date and time when migration or restoration was performed and `nnn` is a randomly generated number.

Troubleshooting on Windows Systems

➤ *To complete migration in case of the network connectivity problems:*

If the Migration & Transfer Manager shows the error message **Network connection failed. Cannot connect to Plesk Migration & Transfer Agent on the remote host**, it means that a machine or network configuration causes connectivity problems between the Migration & Transfer Manager and Migration & Transfer Agent.

If you encounter this issue, do the following:

1. Stop migration.
2. Check the IP address key value in the Migration & Transfer Agent configuration file (on page 84) `WINAgentMng.exe.config`.
 - If the key is not specified, or is set to 0.0.0.0, specify a valid IP address for the key, and do the following:
 - a. Start migration. On the **Remote Host Connection Setup** screen, type the IP address specified in the `IP address` key in the `WINAgentMng.exe.config` file into the **Source host** field under **Remote host connection settings**.
 - b. Proceed with migration as described in the chapter **Performing Migration** (on page 157).
 - If a specific IP address is set for the `IP address` key in the `WINAgentMng.exe.config` file, make sure that it is a valid address and that it is the same as the address entered in **Source host** field on the **Remote Host Connection Setup** screen during migration setup. If it is different, either set the value of the key to "0.0.0.0" or remove the key from the `WINAgentMng.exe.config` file altogether.

If Migration & Transfer Manager is installed behind a NAT and you experience this problem, it cannot be resolved in such a way. You should get both servers to connect without the NAT between them and enable the migration.

➤ *To complete migration if data file transfer to the target server failed:*

1. On the source server, locate the directory with a required data file: `<data files directory>\migrator backup\<the latest date of creation>`.

By default, `<data files directory>` is `C:\PMMTemp\`; the location may be changed as described in the **Configuring Migration & Transfer Agent on the Source Server** (on page 84) section.

2. Copy the directory to the destination server.
3. In a web browser, log in as administrator to the target Parallels Plesk Panel.
4. Go to **Tools & Settings > Migration & Transfer Manager** (in the Tools group), and then click **Start New Migration**.

5. Select the option **Transfer data already processed by the Migration & Transfer Agent and located on the local host**.
6. In the **Migration data file location** box, type the path to the directory where you saved the data at the step 3.
7. Click **Next**.

➤ ***To complete migration if data import to Parallels Plesk Panel failed:***

1. In a Web browser, log in as administrator to the target Parallels Plesk Panel.
2. Go to **Tools & Settings > Migration & Transfer Manager** (in the Tools group), and then click **Start New Migration**.
3. Select the option **Transfer data already processed by the Migration & Transfer Agent and located on the local host**.
4. In the **Migration data file location** box, type the path to the directory specified previously as **Temporary Files Location**.
By default, it is `C:\temp`.
5. Click **Next**.

Appendix A: Installing Third-Party Services

Panel supports a number of third-party services that are not installed by default:

- *Microsoft Web Deploy (Windows).*
Allows customers to publish their sites using WebMatrix®.
- *Adobe ColdFusion (Linux).*
Adds support for ColdFusion scripts.
- *Google Services for Websites.*
Adds support for many Google services, such as participation in the AdSense program, improving site visibility for search engines, and others.
- *UNITY Mobile Services.*
Allows customers to optimize their sites for mobile devices.
- *Miva E-Commerce Applications.*
Adds support for Miva applications.

This chapter gives details on how to install these services and include them in your hosting offers.

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Web Deploy 3.0

Web Deploy (Web Deployment Tool) is a Microsoft tool that significantly simplifies the 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 the *Microsoft Web Hosting Gallery*, a catalog in which hosting providers advertise hosting offers. If you want your hosting plans to be shown 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 like any other Panel component, from **Tools & Settings > Updates and Upgrades > Add / Remove Components**. If you use Panel 10.4 or earlier versions, the component installation is unavailable, so you should perform manual installation. For 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 the server (available by default since Windows 2008 R2). Learn how to install the component at <http://www.microsoft.com/powershell> (<http://www.microsoft.com/powershell>).

After successful installation, you can check that Web Deploy has been 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 will be set as not provided by default.

If your customers use MySQL databases for their applications, you should also 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. Particularly, the rules that Web Deploy adds by default let your customers change the .NET version in their application pools. Such a change may lead to malfunctioning of .NET applications that are not compatible with certain .NET versions. Moreover, if you use shared IIS application pools, the change will affect applications of all customers who share the pool.

To prevent changing the .NET version of application pools in IIS by non-administrators, Panel automatically adds an exception from the rule *appPoolPipeline*. However, 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 the 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> (<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.

Adobe ColdFusion (Linux)

If you want to support ColdFusion scripts on the server, you should obtain a distribution package from Adobe and then install it on the server. Parallels Plesk Panel supports Adobe ColdFusion versions 6, 7, and 8.

➤ ***After you have installed Adobe ColdFusion on your server, do the following:***

1. Log in to Parallels Plesk Panel as administrator.
2. Go to **Tools & Settings > Updates**.
3. Click a link corresponding to the appropriate release version.
4. Select the checkbox corresponding to the **ColdFusion support for Parallels Panel** item, and click **Install**. Confirm the installation when prompted.
5. Once the selected components are installed, go to **Tools & Settings > ColdFusion Settings** (in the **Applications** group).
6. Specify the path to ColdFusion installation directory and click **OK**.

Google Services for Websites

Parallels Plesk Panel provides hosting companies with the means to easily integrate with Google Services for Websites.

Participation in the Google Services for Websites program offers the following benefits for hosting providers and their customers:

- Providers can receive referral fees when their customers enroll in the Google AdSense program or subscribe to paid Google Site Search services.
- Site owners can use Google tools to improve site visibility, add a high quality search function and widgets that will engage and retain visitors, and monetize the traffic to websites with relevant ads.

To learn more about the program, visit

<http://www.google.com/webmasters/provider/overview.html> and <http://www.google.com/webmasters/provider/faq.html>.

➤ **To integrate Parallels Plesk Panel-managed servers with Google Services for Websites:**

1. Visit http://services.google.com/feedback/webmaster_provider_signup and sign up for a Google Apps account (Premier Edition), a Google AdSense account, and a Google Affiliate Network account.

For every hosting server managed by Parallels Plesk Panel you need to create a separate Google Apps account that is connected to Google AdSense and Google Affiliate Network accounts.

Once your application is processed by Google and your company is approved for the program, you will receive access credentials by email.

2. Generate an RSA private key and a digital self-signed certificate by using the free OpenSSL utility. This is included in your Linux distribution or can be downloaded from <http://www.openssl.org/related/binaries.html> and installed on Windows-based computers.

- a. Issue the command `openssl genrsa -out rsaprivatekey.pem 1024`.

This command generates a 1024-bit private key and stores it in the file `rsaprivatekey.pem`. The resulting private key should be kept secret.

- b. Issue the command `openssl req -new -x509 -key rsaprivatekey.pem -out rsacert.pem`.

After you answer a number of questions, the certificate will be created and saved as `rsacert.pem`. This is the file you will need to upload to Google Apps via the Google Apps Control Panel when configuring SSO.

3. Log in as the administrator to your Google Apps Control Panel at <http://www.google.com/a/<your-google-apps-domain>>.

4. Select **Advanced Tools**, and then **Set up single sign-on (SSO)**.
5. Do the following:
 - a. Select the **Enable Single Sign-on** checkbox.
 - b. In the **Sign-in page URL** field, specify the URL `https://<your-panel-server>:8443/plesk/gapps-identity-provider/`.
 - c. In the **Sign-out page URL** field, specify the URL `https://<your-panel-server>:8443/`.
 - d. In the **Change password URL** field, specify the URL `https://<your-panel-server>:8443/`.
 - e. In the **Verification certificate** field, upload your certificate.
 - f. Click **Save changes**.
6. Log in to your Parallels Plesk Panel as the administrator.
7. Click the **Tools & Settings** link in the navigation pane, and then click **Settings of Google Services for Websites**.
8. Specify the following settings:
 - **Google Apps domain name**.
 - **Google Apps domain administrator's username**.
 - **Google Apps domain administrator's password**.
 - **Google Affiliate Network ID**.
 - **Private key file**. If you created a private key file on a computer other than your hosting server, use this field to upload the key file to the server.
 - **Google AdSense API developer account email**.
 - **Google AdSense API developer account password**.
9. Click **OK**.

Now Parallels Plesk Panel is connected to your Google Apps domain account, and you can create user accounts in the Panel and associate them with Google Apps user accounts. These operations are described in the following section.

For information about using the Google Services for your own websites, see the **Customer's Guide**, section **Using Google Services**.

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Providing Access to Google Services on Websites

After you create a new user account in Parallels Plesk Panel, you need to associate that account with a Google Apps user account.

➤ *To create a Google Apps user account and associate it with a user account in Parallels Plesk Panel:*

- For the Parallels Plesk Panel administrator's account, run the `admin` command-line utility with the option `--create-gapps-account`.

The path to the utility is `/usr/local/psa/bin/admin` on Linux systems, and `C:\Program Files\Parallels\Plesk\bin\admin.exe` on Windows systems.

- For a Parallels Plesk Panel reseller's account, run the `reseller` command-line utility with the option `--create-gapps-account <reseller's-username-in-the-panel>`.

The path to the utility is `/usr/local/psa/bin/reseller` on Linux systems, and `C:\Program Files\Parallels\Plesk\bin\reseller.exe` on Windows systems.

- For a Parallels Plesk Panel customer's account, run the `client` utility with the option `--create-gapps-account <customer's-username-in-the-panel>`.

The path to the utility is `/usr/local/psa/bin/client` on Linux systems, and `C:\Program Files\Parallels\Plesk\bin\client.exe` on Windows systems.

Now the user account in the Panel is associated with the newly created Google Apps user account, and the following items appear in the user's Control Panel:

- The **Google Services for Websites** links on the **Home** page and on the **Websites & Domains** tab.
- The **Google Services for Websites** page accessible via the aforementioned links.
This page enables users to add Custom Search engines to websites, create a new Google AdSense account, and provides links to webmaster tools and useful resources on the Google website. When users of Parallels Plesk Panel click these links they are taken to their Google accounts where they are logged in automatically.

➤ *To associate a user account in Parallels Plesk Panel with an already existing Google Apps user account:*

- For the Parallels Plesk Panel administrator's account, run the `admin` command-line utility with the options `--link-gapps-account -gapps-login <google-apps-account-username> -gapps-passwd <google-apps-account-password>`.

The path to the utility is `/usr/local/psa/bin/admin` on Linux systems, and `C:\Program Files\Parallels\Plesk\bin\admin.exe` on Windows systems.

- For a Parallels Plesk Panel reseller's account, run the `reseller` command-line utility with the options `--link-gapps-account <reseller's-username-in-the-panel> -gapps-login <google-apps-account-username> -gapps-passwd <google-apps-account-password>`.

The path to the utility is `/usr/local/psa/bin/reseller` on Linux systems, and `C:\Program Files\Parallels\Plesk\bin\reseller.exe` on Windows systems.

- For a Parallels Plesk Panel customer's account, run the `client` utility with the options `-link-gapps-account <customer's-username-in-the-panel> -gapps-login <google-apps-account's-username> -gapps-passwd <google-apps-account's-password>`.

The path to the utility is `/usr/local/psa/bin/client` on Linux systems, and `C:\Program Files\Parallels\Plesk\bin\client.exe` on Windows systems.

If you need to remove a user account from the Panel, then you must first remove the Google Apps account associated with this user, and then remove the user account from the Panel.

➤ ***To remove a Google Apps account associated with a user:***

- For the Parallels Plesk Panel administrator's account, run the `admin` command-line utility with the option `--remove-gapps-account`.

The path to the utility is `/usr/local/psa/bin/admin` on Linux systems, and `C:\Program Files\Parallels\Plesk\bin\admin.exe` on Windows systems.

- For a Parallels Plesk Panel reseller's account, run the `reseller` command-line utility with the option `--remove-gapps-account <reseller's-username-in-the-panel>`.

The path to the utility is `/usr/local/psa/bin/reseller` on Linux systems, and `C:\Program Files\Parallels\Plesk\bin\reseller.exe` on Windows systems.

- For a Parallels Plesk Panel customer's account, run the `client` utility with the option `--remove-gapps-account <customer's-username-in-the-panel>`.

The path to the utility is `/usr/local/psa/bin/client` on Linux systems, and `C:\Program Files\Parallels\Plesk\bin\client.exe` on Windows systems.

UNITY Mobile Services for Mobile Sites

Parallels Plesk Panel offers integration with UNITY Mobile online service, which enables website owners to create and manage copies of their sites optimized for viewing on mobile devices.

UNITY Mobile hosts the optimized site copies on their own servers. All subscription fees and charges for UNITY Mobile services are covered by an additional license key for Parallels Plesk Panel, which you can purchase from Parallels Online Store.

How it works:

1. A user creates a website with the domain name `example.com` and clicks the link **Create Mobile Site** in Control Panel.
2. The user is prompted to specify a domain name for access to the mobile site copy. The user specifies `mobile.example.com`.
3. The Panel connects to the UNITY Mobile hosting servers, sets up an account with UNITY Mobile for the domain name `mobile.example.com`.
4. The user's browser opens the UNITY Mobile website, where the user is automatically logged in to their account and prompted to import their website from the Panel-managed server.
5. After the site is imported and optimized for mobile viewing, it becomes accessible by the address `mobile.example.com`. The Panel's DNS server keeps a CNAME record pointing to the site on a UNITY Mobile server.

The user can now perform the following operations on mobile site using links in Control Panel:

- Open site editor.
- Remove mobile site.

➤ ***If you want to provision this service to your customers, do the following:***

1. Purchase an additional license key at Parallels online store (<https://shop.marketplace.parallels.com>) and install it to Parallels Plesk Panel.
 - a. Go to Server Administration Panel > **Tools & Settings** > **License Management** > **Additional License Keys** tab.
 - b. Click **Upload Key**.
 - c. Browse to the file and select it by clicking **OK**.
2. When setting up a reseller plan or a hosting plan, go to the **Resources** tab and in the **Mobile sites** box, specify a number of sites that can be created and hosted with the UNITY Mobile service.

For more information about UNITY Mobile services, visit their website at <http://www.unitymobile.com>.

For instructions on managing mobile sites through Control Panel, refer to **Administrator's Guide**, section **Setting Up Mobile Sites**.

Miva E-commerce Applications (Windows)

To allow your customers to use Miva e-commerce solutions, you need to install the Miva Empresa package on your server and enable support for Miva applications in hosting plans. Note that your customers will need to obtain a license from Miva and specify a serial number during the installation of Miva applications.

➤ **To install the support for Miva e-commerce applications on your server:**

1. Download the Miva Empresa package from the Miva website and install it on your server. The installation instructions can be found at http://docs.smallbusiness.miva.com/en-US/merchant/WebHost/webhelp/web_host_resources.htm.
2. Run Parallels Plesk Panel Reconfigurator, and then run the **Correct disk permissions** task.

After Miva support is switched on in hosting plans, the customers can install and use the required Miva applications. The installation instructions for Miva applications can be found at http://docs.smallbusiness.miva.com/en-US/merchant/WebHost/webhelp/web_host_resources.htm.

To learn more about Miva solutions, refer to <http://smallbusiness.miva.com>.

Miva E-commerce Applications (Linux)

To allow your customers to use Miva e-commerce solutions, you need to install on the server the Miva Empresa package shipped with Parallels Plesk Panel distribution (if you did not install it during installation of Parallels Plesk Panel), and then switch on support for Miva applications in hosting plans.

The Miva Fasttrack and Miva Merchant online store applications are shipped with Parallels Plesk Panel as standard web applications, which you or your customers can install from the Control Panel.

To learn more about Miva solutions, refer to http://docs.smallbusiness.miva.com/en-US/merchant/WebHost/webhelp/web_host_resources.htm.

➤ **To install the Miva Empresa package:**

1. Go to **Tools & Settings > Updates**.
2. Click the link corresponding to your version of Parallels Plesk Panel. For example, **Parallels Panel 11**.
3. Locate the **Miva Empresa Support** item and select the checkbox on the left.

4. Click **Install**. Now the Miva Empresa server environment is installed.

Appendix B: Installing Panel Extensions (Linux)

Using additional extensions is another way of extending the functionality of your Panel. Extensions are functional components (such as a file server, firewall, or system monitor) developed by Parallels or third parties.

Parallels Extensions (only on Linux)

Parallels provides the following extensions for Panel on Linux:

- *Counter-Strike game server extension.* Used to deploy Counter Strike game servers.
- *File Server extension.* Used to share directories on a network directly from Panel.
- *Firewall extension.* Used to protect the Panel server and private network from unauthorized access.
- *Watchdog extension.* Used for system monitoring.
- *VPN extension.* Used for establishing communications between geographically distributed LAN segments over public networks.

If your Panel license provides extension support, you can add these extensions during Panel installation (see the section **3. Choose Panel Components** (on page 15)). If you have not included extensions in Panel installation, you can add them to Panel at any time later in **Tools & Settings > Updates and Upgrades > Add Components**.

Learn how to configure and use extensions developed by Parallels in the **Administrator's Guide**, section **Panel Extensions (Linux)**.

Third-Party Additional Extensions

Parallels partners offer a large number of additional Panel extensions, which include antivirus protection software, advanced backup solutions, VOIP services, and much more.

To obtain add-ons developed by Parallels partners, visit our online store at <http://www.parallels.com/store/plesk/partners/>.

Typically, third-party extensions are delivered as packages and can be easily installed, removed, and configured directly from Panel (**Extensions > Manage Extensions**).

If an extension requires an additional license key, you can obtain it from Parallels as described in the section **Installing Additional License Keys for Panel Add-ons**. In some cases, you must obtain license keys for extensions from the extension developers.

Appendix C: Mirroring Parallels Updates Server

When it comes to deployment of a number of Panels, we strongly recommend creating a local mirror of the Parallels Updates server for Panel distributions. This will allow you to significantly speed up Panel deployments due to faster downloads. To create a local mirror, use the *Plesk Mirror Setup Tool*. For instructions on creating local mirrors of Parallels updates server, see the article <http://kb.parallels.com/en/113337>.

Appendix D: Parallels Installer Options

This reference covers only the Parallels Installer options related to installing Panel using CLI.

To learn about options related to upgrading already installed Panel or the host operating system, issue the following command:

```
parallels installer --help
```

Option	Description and possible arguments
<code>--source</code> <code><path> <url></code>	<p>When retrieving the Panel packages from a local file system, specify the <code>--source</code> option to point to the <code>.inf3</code> file that contains information on the Panel build you want to install.</p> <p>When retrieving the Panel packages from a network server, specify the <code>--source <URL></code> option to point to the directory where the mirror of the Panel update server resides.</p>
<code>--target <path></code>	<p>By default, the installer saves the retrieved files in the directory <code>/<current user name>/psa</code>. For instance, if the installer was executed by user <code>root</code>, the <code>/root/psa</code> directory will be created and used. If you want to use a custom directory for storing the retrieved files, use the <code>--target</code> option.</p> <p>Example:</p> <pre>--target /opt/storage/psa OR --target D:\temp</pre>
<code>--proxy-host</code> <code><network address></code>	<p>When using a proxy server or a firewall, use this option to specify the proxy server's domain name or IP address.</p> <p>Example:</p> <pre>--proxy-host proxy.example.com</pre>
<code>--proxy-port <port number></code>	<p>The default port for connecting to a proxy server is 3128. If your proxy server uses different port number, you should specify it using this option.</p> <p>Example:</p> <pre>--proxy-port 5741</pre>
Proxy authentication options: <code>--proxy-user <user-name></code> <code>--proxy-password <password></code>	<p>If your proxy server requires authentication, you should use these options to authenticate the installer at the proxy server.</p> <p>Example:</p> <pre>--proxy-user smith --proxy-password flsZ9AnQ4En052</pre>
<code>--all-versions</code>	Show all available Panel versions regardless of their release tiers.
<code>--tier <release-tier></code>	Show all available Panel versions with a specified release tier.

Option	Description and possible arguments
<code>--show-releases</code>	Specify this option to retrieve a list of available releases for the operating system where the installer is executed. You will be given a list of release identifiers and release descriptions. The release identifiers are what you will need to deal with.
<code>--show-all-releases</code>	This option shows all releases available from the Panel updates server.
<code>--select-release-id <ID></code>	Use this option to specify a release version that you want to install or view properties of.
<code>--select-release-latest</code>	Use this option to select the latest release available for your operating system.
<code>--show-components</code>	Specify this to obtain the information on the components available for the selected release. Components' descriptions and names will be displayed. The component names are what you need to specify when selecting additional components to install.
<code>--install-component <component-name></code>	Use this option to specify a component that you wish to install. If you want to install two or more components at once, repeat this option for each component. Example: <pre>--install-component base --install-component postgresql --install-component spamassassin</pre>
<code>--installation-type</code>	Use this option to specify the installation type: <code>Typical</code> or <code>Full</code> .
<code>--show-os-list</code>	Use this option to find out what operating systems are supported by the Panel version you selected.
<code>--no-space-check</code>	Installs packages even if you are low on disk space.
<code>--no-daemon</code>	Performs installation process in the foreground.
<code>--notify-email <email></code>	Use this option to have the installer send you status reports by email. A successful completion report includes a list of installed/upgraded packages with a detailed log.
<code>--enable-xml-output</code>	This option is designed for communicating with the Panel, and it may be used for interaction with other applications. When you specify this option, all output of the installer is XML-wrapped. Note that this option disallows the installer to report errors by exit code. Exit code is always zero and all errors are reported inside XML output.
<code>--query-status</code>	Because RPM database does not allow multiple accesses, the installer makes a lock on its functionality. Run this option to find out if the installer is active. This will check for a lock, and will return either an exit code (0 - the installer is idle, 1 - the installer is running and busy), or XML-formatted output.
<code>--truncate-log</code>	Clears the log file on Parallels Installer start.
<code>--separate-log</code>	Uses a new log file for each start of Parallels Installer.
<code>--debug</code>	Turns on detailed output into the log file.

Option	Description and possible arguments
--version	Shows Parallels Installer's version.

Appendix E: Configuring Panel for Linux to Access Vendor Updates

To keep your server's operating system up-to-date, you may want to configure the Parallels Installer so as to notify you of new update packages available from your vendor. Note that the Parallels Installer will not install any packages without your confirmation, it will only notify you.

Note: This option is available only for RPM-based operating systems. For DEB-based systems, vendor updates repository is added to the sources list of the APT package manager.

➤ ***To have the Parallels Installer check vendor sites for updates:***

1. Create a text file with name `.autoinstallerrc` in the `/root/` directory on the server, or, if you previously created this file, modify it. Add the following line to the file:

```
ADDITIONAL_SOURCE="<type>, <priority>, <url>, <username>,  
<password>"
```

where you should replace `<type>` with `repomd` value, `<priority>` with a number from 1 to 999 (999 is the highest priority), and `<url>` with a URL of the vendor updates source. The values `<username>` and `<password>` are required only if your vendor's site requires authentication.

2. Save the file and exit from the text editor.

Appendix F: Enabling Support for SecureLVE

If you want to deploy the Secure Lightweight Virtual Environment (SecureLVE) extension on a server running Cloud Linux, install the SecureLVE packages by following the instructions at <http://www.cloudlinux.com/docs/securelve.php>.

You can install SecureLVE before or after installing Parallels Plesk Panel.

To make sure that SecureLVE functions properly, you need to install the following package versions:

- `liblve-0.7.3-2.el5.cloudlinux`
- `securelve-0.6-3.el5.cloudlinux`
- `vixie-cron-4.1-77.2.el5.cloudlinux`
- `lve-0.7.3-2.el5.cloudlinux`

After installing SecureLVE, you must initialize it by issuing the following command in the console:

```
securelve_init
```

Important: If you install or upgrade Parallels Plesk Panel after installing SecureLVE, you need to run the `securelve_init` command again. After upgrading, also use the command `securelve_user <username>` to enable SecureLVE shell for each system user account that used it.

After SecureLVE initialization, to update the list of shells available in the system, log in to Panel as the administrator, go to **Tools & Settings > Server Components** and click **Refresh**.

Now you can set up access to the server over SSH for your customers by modifying service plans.

➤ ***To allow the customers to log in to the SecureLVE shell:***

1. Log in to the Server Administration Panel.
2. Go to **Service Plans > plan name > Hosting Parameters** tab.
3. Select the checkbox **SSH access to the server shell under the subscription's system user**, and select the `securelve_sh` option from the menu.
4. Click **OK** to save the plan properties.