

Getting Started Guide

Novell. PlateSpin. Migrate for Dell*

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About This Guide

This document provides a focused information road map to Dell customers of PlateSpin® Migrate (part of PlateSpin® Portability Suite, formerly PlateSpin PowerConvert). It is designed to help you get started with the workload portability features of the software.

This text complements the PlateSpin® Portability Suite product documentation listed under “[Core Product Documentation](#)” on page 8 and is not intended to replace it, except for information about licensing and supported configurations (migration source and target specifics).

- ♦ [Chapter 1, “Getting Started with PlateSpin Migrate,”](#) on page 9
- ♦ [Appendix A, “Supported Configurations,”](#) on page 15

Terminology

For help with terms used in PlateSpin® Portability Suite documentation, see the [Portability Suite Glossary](#) (http://www.novell.com/documentation/platespin_portabilitysuite_810/user/data/bgqrp99.html) section at the end of your *User Guide* or in the online help.

Audience

This text is intended for IT staff, such as data center administrators and operators, who use PlateSpin® Migrate in their ongoing workload portability projects.

Feedback

We want to hear your comments and suggestions about this manual and the other documentation included with this product. Please use the User Comments feature at the bottom of each page of the online documentation, or go to www.novell.com/documentation/feedback.html and enter your comments there.

Documentation Conventions

In Novell® documentation, a greater-than symbol (>) is used to separate actions within a step and items in a cross-reference path.

A trademark symbol (®, ™, etc.) denotes a Novell trademark. An asterisk (*) denotes a third-party trademark.

When a single pathname can be written with a backslash for some platforms or a forward slash for other platforms, the pathname is presented with a backslash. Users of platforms that require a forward slash, such as Linux* or UNIX*, should use forward slashes as required by your software.

Core Product Documentation

The following is a list of product documentation accompanying PlateSpin® Portability Suite version 8.1.

<i>Portability Suite 8.1.0 Release Notes</i>	Provides late-breaking information, as well as information about known issues and suggested workarounds.
<i>Portability Suite 8.1.0 Installation Guide</i>	Provides information about installing, upgrading, and uninstalling the product.
<i>Portability Suite 8.1.0 Configuration Guide</i>	Provides information about licensing your product and managing license keys, setting up your network environment, and configuring your product's default settings.
<i>Portability Suite 8.1.0 User Guide</i>	Provides information about using the product in your workload migration and protection projects.
<i>Portability Suite 8.1.0 Integrated Help</i>	All product documentation in compiled HTML help (CHM) format, integrated with the product.
<i>Portability Suite 8.1.0 Online Documentation</i>	All product documentation in WebHelp format for browser-based access over the Internet. This distribution should contain the latest updates at all times.

With the exception of the integrated help, you can access these publications at the [PlateSpin® Portability Suite version 8.1 Documentation Web Site \(http://www.novell.com/documentation/platespin_portabilitysuite_810\)](http://www.novell.com/documentation/platespin_portabilitysuite_810).

Useful Links

- ◆ [Dell Support Web Site \(http://support.dell.com\)](http://support.dell.com)
- ◆ [Dell-PlateSpin Alliance Web Site \(http://www.dell.com/platespin\)](http://www.dell.com/platespin)
- ◆ [PlateSpin® Migrate for Dell 1 Pack Download \(http://www.platespin.com/downloads/dellone\)](http://www.platespin.com/downloads/dellone)
- ◆ [PlateSpin® Migrate for Dell 5 Pack Download \(http://www.platespin.com/downloads/dellfive\)](http://www.platespin.com/downloads/dellfive)
- ◆ [Novell® PlateSpin® User Forum \(http://forum.platespin.com\)](http://forum.platespin.com)
- ◆ [Novell® PlateSpin® Knowledge Base \(http://support.platespin.com/kb2/\)](http://support.platespin.com/kb2/)
- ◆ [Hardware compatibility list for Microsoft* Windows* source workloads and Take Control ISO images \(http://support.platespin.com/kb2/article.aspx?id=20314\)](http://support.platespin.com/kb2/article.aspx?id=20314)
- ◆ [Hardware compatibility list for Linux* source workloads \(http://support.platespin.com/kb2/article.aspx?id=20570\)](http://support.platespin.com/kb2/article.aspx?id=20570)

Technical Support

If you have purchased a Dell ProSupport contract, the PlateSpin® Migrate for Dell product offerings are covered under that agreement. If you do not have a ProSupport contract and want more information, contact your Dell sales representative.

Getting Started with PlateSpin Migrate

1

PlateSpin® Migrate is part of the PlateSpin® Portability Suite (formerly PlateSpin PowerConvert) and specializes in helping IT staff to relocate a workload—an operating system along with its applications and data—from one physical or virtual infrastructure to another, and to reconfigure the relocated workload to operate on the new infrastructure.

For example, you can migrate a workload:

- ♦ From a virtual machine infrastructure to a target physical (bare metal) Dell PowerEdge* server. This is known as a virtual-to-physical (V2P) migration.
- ♦ From a Dell PowerEdge server to a virtual machine infrastructure. This is known as a physical-to-virtual (P2V) migration.
- ♦ From one Dell PowerEdge server to another. This is known as a physical-to-physical (P2P) migration.

Workload portability capabilities and features of PlateSpin® Migrate depend on your specific license.

- ♦ [Section 1.1, “License Capabilities of PlateSpin Migrate for Dell,” on page 9](#)
- ♦ [Section 1.2, “Workload Migration Checklist,” on page 10](#)
- ♦ [Section 1.3, “Activating Your License and Accessing PlateSpin Downloads,” on page 10](#)
- ♦ [Section 1.4, “Installing PlateSpin Migrate,” on page 11](#)
- ♦ [Section 1.5, “Verifying Supported Workloads and Configurations,” on page 11](#)
- ♦ [Section 1.6, “Discovering Migration Sources and Targets,” on page 12](#)
- ♦ [Section 1.7, “Analyzing Discovered Workloads,” on page 12](#)
- ♦ [Section 1.8, “Adding Device Drivers to the PlateSpin Migrate X2P Device Driver Manager,” on page 13](#)
- ♦ [Section 1.9, “Pre-Migration Tasks \(P2V\),” on page 13](#)
- ♦ [Section 1.10, “Migrating Workloads,” on page 14](#)
- ♦ [Section 1.11, “Post-Migration Tasks \(V2P and P2P\),” on page 14](#)

1.1 License Capabilities of PlateSpin Migrate for Dell

PlateSpin® Migrate for Dell customers is offered with the following license types:

- ♦ **PlateSpin Migrate for Dell 1 Pack:** 1-Pack license offering. Activates the product for anywhere-to-anywhere workload portability and allows for 1 full migration.
- ♦ **PlateSpin Migrate for Dell 5 Pack:** 5-Pack license offering. Activates the product for anywhere-to-anywhere workload portability and allows for up to five full migrations.

These licenses provide only a subset of the capabilities of the full PlateSpin® Migrate product. For additional features, you can purchase additional licenses through Dell or Novell® PlateSpin®.

The full version of PlateSpin® Migrate features these additional capabilities:

- ♦ Incremental server synchronization to physical or virtual machine targets.
- ♦ Scheduled incremental updates to virtual machine targets.

1.2 Workload Migration Checklist

The following is a summary of steps you need to take to obtain, license, install, and use PlateSpin® Migrate.

- ♦ Register your purchase with Novell® PlateSpin®. Follow the instructions on your Dell-PlateSpin license card. You will receive a confirmation e-mail with further information.
- ♦ Follow the instructions in the confirmation e-mail to download the PlateSpin® Migrate software and to apply your activation code included in the e-mail. See [“Activating Your License and Accessing PlateSpin Downloads” on page 10.](#)
- ♦ Install your copy of PlateSpin® Migrate. See [“Installing PlateSpin Migrate” on page 11.](#)
- ♦ Verify that your workload migration scenario (such as workload type, migration source, and migration target) is supported. See [“Verifying Supported Workloads and Configurations” on page 11.](#)
- ♦ Perform any pre-migration tasks, such as uninstalling or disabling OpenManage services, as necessary. [“Pre-Migration Tasks \(P2V\)” on page 13.](#)
- ♦ Use PlateSpin® Migrate to:
 - ♦ Discover your sources and targets. See [“Discovering Migration Sources and Targets” on page 12.](#)
 - ♦ Analyze your sources and targets. See [“Analyzing Discovered Workloads” on page 12.](#)
 - ♦ Add device drivers if they are missing from the device driver database. See [“Adding Device Drivers to the PlateSpin Migrate X2P Device Driver Manager” on page 13.](#)
 - ♦ Set up and execute the required workload migration job. See [“Migrating Workloads” on page 14.](#)
- ♦ Perform any post-migration tasks, such as installing additional drivers or Dell OpenManage tools, as necessary. See [“Post-Migration Tasks \(V2P and P2P\)” on page 14.](#)

1.3 Activating Your License and Accessing PlateSpin Downloads

The certificate that you received with your Dell server is your proof of purchase. You must register the product and exchange the activation code listed on the certificate for a license key to use the software and receive maintenance services.

NOTE: Dell cannot reissue a lost activation code certificate. Ensure that you keep the certificate safe and register the product immediately.

To redeem your license with the activation code, register within 30 days at the applicable Novell® PlateSpin® download page:

- ◆ [PlateSpin® Migrate for Dell 1 Pack Download \(http://www.platespin.com/downloads/dellone\)](http://www.platespin.com/downloads/dellone)
- ◆ [PlateSpin® Migrate for Dell 5 Pack Download \(http://www.platespin.com/downloads/dellfive\)](http://www.platespin.com/downloads/dellfive)

On registration, your download should start automatically.

The e-mail address you provide as part of the registration process is important; it is used for authenticating downloads and access to PlateSpin® resources.

1.4 Installing PlateSpin Migrate

Install PlateSpin® Migrate on a dedicated virtual or physical machine running a supported Microsoft Windows server operating system with Microsoft IIS, ASP.NET, and .NET Framework 2.0 software installed.

For full details about system requirements and installation procedures, see the [Portability Suite Installation Guide \(http://www.novell.com/documentation/platespin_portabilitysuite_810/install/data/index.html\)](http://www.novell.com/documentation/platespin_portabilitysuite_810/install/data/index.html).

1.5 Verifying Supported Workloads and Configurations

This section provides information about servers that Dell and Novell® PlateSpin® have qualified for PlateSpin® Migrate P2V, V2P, and P2P functionality.

PlateSpin® Migrate might support additional system configurations not listed in this document. However, Dell provides support for only the hardware listed in this document.

- ◆ [Section 1.5.1, “Verifying Supported Configurations for P2V Migration,” on page 11](#)
- ◆ [Section 1.5.2, “Verifying Supported Configurations for V2P Migration,” on page 12](#)
- ◆ [Section 1.5.3, “Verifying Supported Configurations for P2P Migration,” on page 12](#)

1.5.1 Verifying Supported Configurations for P2V Migration

To determine if your configuration is supported for a P2V migration:

- 1 Verify that your target PowerEdge server is running a supported hypervisor. To find Dell documentation specific to the hypervisor you are running, see [“Useful Links” on page 8](#).
- 2 Verify that your PowerEdge server is a supported source for a P2V migration. See [Table A-1 on page 15](#). A PowerEdge server is validated for a P2V operation based on the onboard storage and networking peripherals shipped with the server.
- 3 Verify that the operating system running on your PowerEdge server is supported on your source physical server. Visit the [Dell OS Support Web site \(http://www.dell.com/ossupport\)](http://www.dell.com/ossupport).
- 4 Verify that a P2V migration of your source workload is supported for your target hypervisor. See [Section A.4, “Matrix of Supported Target Hypervisors and Source Workloads for P2V Migration,” on page 17](#).

1.5.2 Verifying Supported Configurations for V2P Migration

To determine if your configuration is supported for a V2P migration:

- 1 Verify that you are running a Dell-supported hypervisor on your source PowerEdge server. To find Dell documentation specific to the hypervisor you are running, see “[Useful Links](#)” on [page 8](#).
- 2 Verify that your target PowerEdge server is a supported V2P migration target. See [Section A.2, “Supported Targets for V2P and P2P Migration,”](#) on [page 16](#). A PowerEdge server is validated for a V2P migration based on the onboard storage and networking peripherals shipped with the server.
- 3 Verify that the operating system running inside the virtual machine is supported on your target PowerEdge Server. Visit the [Dell OS Support Web site \(http://www.dell.com/ossupport\)](http://www.dell.com/ossupport).
- 4 Verify that a V2P migration of your source workload is supported for your specific hypervisor as a source. See [Section A.3, “Matrix of Supported Source Hypervisors and Workloads for V2P Migration,”](#) on [page 16](#).

1.5.3 Verifying Supported Configurations for P2P Migration

To determine if your configuration is supported for a P2P migration:

1. Verify that the operating system running on your source machine is supported on your target PowerEdge Server. Visit the [Dell OS Support Web site \(http://www.dell.com/ossupport\)](http://www.dell.com/ossupport).
2. Verify that your target PowerEdge server is a supported P2P migration target. See [Section A.2, “Supported Targets for V2P and P2P Migration,”](#) on [page 16](#). A PowerEdge server is validated for a P2P migration based on the onboard storage and networking peripherals shipped with the server.

1.6 Discovering Migration Sources and Targets

For any migration job, you must have a discovered source and a discovered target. A discovery operation populates the Portability Suite database with detailed inventory information about a workload and its infrastructure.

For information on discovering migration sources and targets for your specific workload portability needs, see the “[Discovering Sources and Targets](http://www.novell.com/documentation/platespin_portabilitysuite_810/user/data/bgw397r.html)” topic (http://www.novell.com/documentation/platespin_portabilitysuite_810/user/data/bgw397r.html) in your *User Guide*.

1.7 Analyzing Discovered Workloads

Use PlateSpin[®] Analyzer to determine the suitability of discovered machines for PlateSpin[®] Migrate jobs. Identify potential conversion problems and correct them before you begin any large-scale migration projects.

For information on how to use PlateSpin[®] Analyzer, see the “[Analyzing Machines with PlateSpin Analyzer](http://www.novell.com/documentation/platespin_portabilitysuite_810/user/data/bgw399c.html)” topic (http://www.novell.com/documentation/platespin_portabilitysuite_810/user/data/bgw399c.html) in your *User Guide*.

1.8 Adding Device Drivers to the PlateSpin Migrate X2P Device Driver Manager

PlateSpin® Migrate ships with the latest drivers for storage and network peripherals in supported Dell PowerEdge servers. During V2P migration jobs, the required drivers are installed automatically. To determine if the required drivers are available, use the PlateSpin® Analyzer.

If you encounter missing or incompatible drivers when you set up an X2P conversion job, you might need to add drivers to the PlateSpin® Migrate driver database. Use the Device Driver Manager for this task.

To download the latest supported drivers for your peripherals, visit the [Dell Support Web site \(http://support.dell.com\)](http://support.dell.com).

For more information, see the “[Working with Device Drivers](http://www.novell.com/documentation/platespin_portabilitysuite_810/user/data/bgw399m.html)” topic (http://www.novell.com/documentation/platespin_portabilitysuite_810/user/data/bgw399m.html) in your *User Guide*.

1.9 Pre-Migration Tasks (P2V)

If you have Dell OpenManage Server Administrator (OMSA) installed on the source physical machine, uninstall OMSA from the source or disable OMSA services before the migration. This is required because OMSA is not supported inside a virtual machine environment. For details on how to uninstall OMSA, see your *OpenManage User Guide*.

The following table lists common OMSA services that you should disable during a P2V migration.

Depending on the hardware configuration of the source server, the services might be different.

Table 1-1 Dell OpenManage Server Administrator Services

MS Windows OMSA Service Names	Linux OMSA Service Names
DSM SA Connection Service	Dataeng
DSM SA Data Manager	dsm_om_connsvc
DSM SA Event Manager	dsm_om_shrsvc
DSM SA Shared Services	dsm_sa_ipmi
mr2kserv	Instsvcdrv
RAC Win VNC Service	Racser
Remote Access Controller (RAC) Service	racsvc
Remote Access Controller 4 (RAC4)	racsvc
	racXvnc

1.10 Migrating Workloads

To migrate a workload, drag a discovered source onto a discovered target in the PlateSpin® Migrate user interface. For details, see the following *User Guide* topics.

- ♦ “Converting a Workload to a Virtual Machine (P2V, V2V)” (http://www.novell.com/documentation/platespin_portabilitysuite_810/user/data/bhi928v.html)
- ♦ “Converting a Workload to a Physical Machine (P2P, V2P)” (http://www.novell.com/documentation/platespin_portabilitysuite_810/user/data/bhi928w.html)

1.11 Post-Migration Tasks (V2P and P2P)

PlateSpin® Migrate automatically installs the necessary storage and network drivers for the target Dell platform. After a V2P conversion process, drivers might be missing for some devices. Download any missing drivers for your platform from the [Dell Support Web Site \(http://support.dell.com\)](http://support.dell.com) and manually install them.

Dell and Novell have worked together to include the latest Dell supported drivers in PlateSpin Portability Suite. However, newer drivers released by Dell might not be part of your installed version. You should regularly check the [Dell Support Web site \(http://support.dell.com\)](http://support.dell.com) for the latest drivers. You can either install the drivers manually or upload them to the PlateSpin® Migrate X2P Device Driver Manager so that they are automatically installed as part of the migration job.

Dell OpenManage Server Administrator (OMSA) can be installed on the target physical platform after a V2P conversion job has finished. Visit the [Dell Support Web site \(http://support.dell.com\)](http://support.dell.com) to download the supported OMSA version for your target PowerEdge server and operating system combination. The Dell OpenManage Server Administrator software is found under the *Systems Management downloads* section.

Supported Configurations

A

This section provides information about configurations supported by your PlateSpin® Migrate for Dell* product for workload migration: source and target PowerEdge systems, workload operating systems, and virtualization platforms (hypervisors).

NOTE: Your product’s workload portability capabilities depend on your specific license, as well as on a constantly expanding list of supported workload operating systems. For the most up-to-date list of configurations supported by the current version of PlateSpin® Portability Suite 8.1.x, see the [Supported Source Workloads and Target Platforms \(http://www.novell.com/documentation/platespin_portabilitysuite_810/user/data/bgw13jb.html\)](http://www.novell.com/documentation/platespin_portabilitysuite_810/user/data/bgw13jb.html) topic in the online documentation set.

- ◆ Section A.1, “Supported Source Systems for P2V and P2P Migration,” on page 15
- ◆ Section A.2, “Supported Targets for V2P and P2P Migration,” on page 16
- ◆ Section A.3, “Matrix of Supported Source Hypervisors and Workloads for V2P Migration,” on page 16
- ◆ Section A.4, “Matrix of Supported Target Hypervisors and Source Workloads for P2V Migration,” on page 17

A.1 Supported Source Systems for P2V and P2P Migration

The following Dell PowerEdge systems are supported as sources for physical-to-virtual (P2V) workload migration using PlateSpin® Migrate:

Table A-1 Supported Dell PowerEdge Source Systems for P2V Migration

◆ 1750	◆ 2900	◆ M600	◆ R200	◆ T100
◆ 1850	◆ 2900 III	◆ M605	◆ R210	◆ T110
◆ 1855	◆ 2950	◆ M610	◆ R300	◆ T300
◆ 1950	◆ 2950 III	◆ M710	◆ R310	◆ T310
◆ 1950 III	◆ 2970	◆ M805	◆ R410	◆ T410
◆ 1955	◆ 6800	◆ M905	◆ R510	◆ T605
◆ 2800	◆ 6850	◆ M910	◆ R610	◆ T610
◆ 2850	◆ 6950		◆ R710	◆ T710
			◆ R805	
			◆ R810	
			◆ R900	
			◆ R905	
			◆ R910	

A.2 Supported Targets for V2P and P2P Migration

The following Dell PowerEdge systems are supported for virtual-to-physical (V2P) and physical-to-physical (P2P) workload migration using PlateSpin® Migrate:

Table A-2 Supported Dell PowerEdge Systems for V2P and P2P Migration

- ◆ 1950 III
- ◆ 2900 III
- ◆ 2950 III
- ◆ M600
- ◆ M605
- ◆ M610
- ◆ M710
- ◆ M805
- ◆ M905
- ◆ M910
- ◆ R200
- ◆ R210
- ◆ R300
- ◆ R310
- ◆ R410
- ◆ R510
- ◆ R610
- ◆ R710
- ◆ R805
- ◆ R810
- ◆ R900
- ◆ R905
- ◆ R910
- ◆ T100
- ◆ T110
- ◆ T300
- ◆ T310
- ◆ T410
- ◆ T605
- ◆ T610
- ◆ T710

A.3 Matrix of Supported Source Hypervisors and Workloads for V2P Migration

Table A-3 Supported Source Hypervisors and Operating Systems for V2P Migration

Source OS	Windows Server* 2008 Std & Ent	Windows Server 2003 /R2 & SP2 Std & Ent	Windows Small Business Server 2003	Windows Small Business Server 2003 R2	Red Hat* Enterprise Linux (3.x - 5.x)	SUSE* Linux Enterprise Server (9.x - 11.x)
Arch	x86 & x64	x86 & x64	x86	x86	x86 & x64	x64
VMware*						
Take Control Transfer	No	Yes	Yes	Yes	Yes	Yes
Live Transfer File-based	No	Yes	Yes	Yes	No	No
Live Transfer VSS-based	Yes	Yes	No	No	N/A	N/A
Citrix* XenServer* Dell Edition						

Source OS	Windows Server* 2008 Std & Ent	Windows Server 2003 /R2 & SP2 Std & Ent	Windows Small Business Server 2003	Windows Small Business Server 2003 R2	Red Hat* Enterprise Linux (3.x - 5.x)	SUSE* Linux Enterprise Server (9.x - 11.x)
Arch	x86 & x64	x86 & x64	x86	x86	x86 & x64	x64
Take Control Transfer	No	Yes	Yes	Yes	No	No
Live Transfer File-based	No	Yes	Yes	Yes	No	No
Live Transfer VSS-based	Yes	Yes	No	No	N/A	N/A
Microsoft Hyper-V*						
Take Control Transfer	No	Yes	Yes	Yes	No	Yes
Live Transfer File-based	No	Yes	Yes	Yes	No	No
Live Transfer VSS-based	Yes	Yes	No	No	N/A	N/A

A.4 Matrix of Supported Target Hypervisors and Source Workloads for P2V Migration

Table A-4 Supported Target Hypervisors and Source Workloads for P2V Migration

Source OS	Windows 2000 Server SP4	Windows Server 2003 /R2 & SP2 Std & Ent	Windows Small Business Server 2003	Windows Small Business Server 2003 R2	Windows Server 2008	Red Hat Enterprise Linux (3.x - 5.x)	SUSE Linux Enterprise Server (9.x - 11)
Arch		x86 & x64	x86	x86	x86 & x64	x86 & x64	x64
VMware: GSX Server 3.1, 3.2 (Windows only); VMware Server 1.0; ESX Server 2.1.1, 2.5.x, 3.0.x, 3.5, 3.5i, 4, 4i; VMware Virtual Infrastructure 3.0 - 3.0.1, 3.5							
Take Control Transfer	Yes	Yes	Yes	Yes	No	Yes	Yes
Live Transfer File-based	Yes	Yes	No	Yes	No	No	No
Live Transfer VSS-based	No	Yes	No	Yes	Yes	N/A	N/A
Citrix XenServer Dell Edition: 4.1, 5, 5.5							

Source OS	Windows 2000 Server SP4	Windows Server 2003 /R2 & SP2 Std & Ent	Windows Small Business Server 2003	Windows Small Business Server 2003 R2	Windows Server 2008	Red Hat Enterprise Linux (3.x - 5.x)	SUSE Linux Enterprise Server (9.x - 11)
Arch		x86 & x64	x86	x86	x86 & x64	x86 & x64	x64
Take Control Transfer	Yes	Yes	Yes	Yes	No	Yes	Yes
Live Transfer File-based	Yes	Yes	No	Yes	No	No	No
Live Transfer VSS-based	No	Yes	No	Yes	Yes	N/A	N/A
Microsoft Hyper-V; Windows Server 2008 Hyper-V R2							
Take Control Transfer	Yes	No	No	No	No	No	No
Live Transfer File-based	Yes	No	No	No	No	No	No
Live Transfer VSS-based	No	No	No	No	Yes	N/A	N/A