

## Configuration Guide

# Novell® PlateSpin® Migrate

**9.0.2**

September 30, 2010

[www.novell.com](http://www.novell.com)



## Legal Notices

Novell, Inc., makes no representations or warranties with respect to the contents or use of this documentation, and specifically disclaims any express or implied warranties of merchantability or fitness for any particular purpose. Further, Novell, Inc., reserves the right to revise this publication and to make changes to its content, at any time, without obligation to notify any person or entity of such revisions or changes.

Further, Novell, Inc., makes no representations or warranties with respect to any software, and specifically disclaims any express or implied warranties of merchantability or fitness for any particular purpose. Further, Novell, Inc., reserves the right to make changes to any and all parts of Novell software, at any time, without any obligation to notify any person or entity of such changes.

Any products or technical information provided under this Agreement may be subject to U.S. export controls and the trade laws of other countries. You agree to comply with all export control regulations and to obtain any required licenses or classification to export, re-export or import deliverables. You agree not to export or re-export to entities on the current U.S. export exclusion lists or to any embargoed or terrorist countries as specified in the U.S. export laws. You agree to not use deliverables for prohibited nuclear, missile, or chemical biological weaponry end uses. See the [Novell International Trade Services Web page \(http://www.novell.com/info/exports/\)](http://www.novell.com/info/exports/) for more information on exporting Novell software. Novell assumes no responsibility for your failure to obtain any necessary export approvals.

Copyright © 2008 - 2010 Novell, Inc. All rights reserved. No part of this publication may be reproduced, photocopied, stored on a retrieval system, or transmitted without the express written consent of the publisher.

Novell, Inc.  
404 Wyman Street, Suite 500  
Waltham, MA 02451  
U.S.A.  
[www.novell.com](http://www.novell.com)

*Online Documentation:* To access the latest online documentation for this and other Novell products, see the [Novell Documentation Web page \(http://www.novell.com/documentation\)](http://www.novell.com/documentation).

## Novell Trademarks

For Novell trademarks, see the [Novell Trademark and Service Mark list \(http://www.novell.com/company/legal/trademarks/tmlist.html\)](http://www.novell.com/company/legal/trademarks/tmlist.html).

## Third-Party Materials

All third-party trademarks are the property of their respective owners.

# Contents

<b>About This Guide</b>	<b>5</b>
<b>1 PlateSpin Migrate Product Licensing</b>	<b>7</b>
1.1 Activating Your Product License	7
1.1.1 Online Activation	7
1.1.2 Offline Activation	8
1.2 About Per-Migration and Per-Workload Licensing	9
1.3 Using the License Manager	9
1.3.1 Accessing the License Manager	9
1.3.2 Managing Available License Keys	10
1.3.3 Managing Workload Designations	10
1.4 License Splitting	11
<b>2 Configuring PlateSpin Migrate and Your Network Environment</b>	<b>13</b>
2.1 Setting Up User Authorization and Authentication	13
2.1.1 PlateSpin Migrate Roles	13
2.1.2 Assigning PlateSpin Migrate Roles to Windows Users	15
2.2 Setting Up User Activity Logging	15
2.3 Access and Communication Requirements across your Migration Network	16
2.3.1 Requirements for Discovery	16
2.3.2 Requirements for Migration	17
2.4 Fine-Tuning Data Transfer Performance (Windows)	19
2.5 Increasing the Size Limit on Post-migration Actions Uploaded to the PlateSpin Migrate Server	20
2.6 Configuring PlateSpin Migrate Default Options	20
2.6.1 General Options	21
2.6.2 Notification Service	21
2.6.3 User Activity Logging	22
2.6.4 Default Job Values	22
2.6.5 Source Service Defaults	23
2.6.6 Target Service Defaults	23



# About This Guide

This text provides information about licensing your PlateSpin Migrate version 9 product, managing your license keys, setting up your network environment in preparation for your workload migration jobs, and configuring your product's default settings and behavior.

- ◆ [Chapter 1, “PlateSpin Migrate Product Licensing,” on page 7](#)
- ◆ [Chapter 2, “Configuring PlateSpin Migrate and Your Network Environment,” on page 13](#)

## Audience

This guide is intended for IT staff, such as data center administrators and operators, who use PlateSpin Migrate in their ongoing workload migration 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 submit your comments through the [Novell Documentation Feedback site \(http://www.novell.com/documentation/feedback.html\)](http://www.novell.com/documentation/feedback.html).

## Additional Documentation

This text is part of the PlateSpin Migrate documentation set. For a complete list of publications supporting this release, visit the [PlateSpin Migrate 9 Online Documentation Web Site \(http://www.novell.com/documentation/platespin\\_migrate\\_9\)](http://www.novell.com/documentation/platespin_migrate_9).

## Documentation Updates

For the most recent version of this text, visit the product's Online Documentation Web Site (see [Additional Documentation](#)).

## Additional Resources

We encourage you to use the following additional resources on the Web:

- ◆ [Novell User Forum \(http://forums.novell.com/\)](http://forums.novell.com/): A Web-based community with a variety of discussion topics.
- ◆ [Novell Support Knowledge Base \(http://www.novell.com/support/\)](http://www.novell.com/support/): A collection of in-depth technical articles.

## Technical Support

- ◆ Telephone (North America): +1-877-528-3774 (1 87 PlateSpin)
- ◆ Telephone (global): +1-416-203-4799
- ◆ E-mail: [support@platespin.com](mailto:support@platespin.com)



# PlateSpin Migrate Product Licensing

# 1

This section provides information about licensing and activating your PlateSpin Migrate product, as well as managing your license keys.

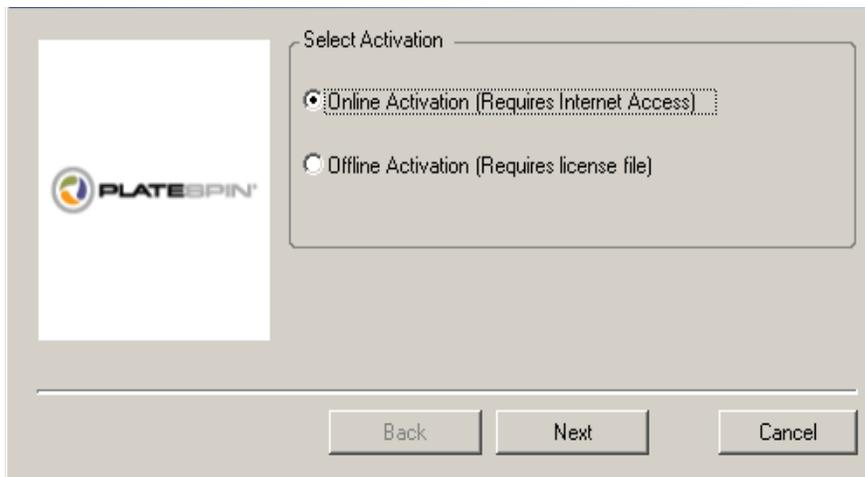
- ◆ Section 1.1, “Activating Your Product License,” on page 7
- ◆ Section 1.2, “About Per-Migration and Per-Workload Licensing,” on page 9
- ◆ Section 1.3, “Using the License Manager,” on page 9
- ◆ Section 1.4, “License Splitting,” on page 11

## 1.1 Activating Your Product License

For product licensing, you must have a license activation code. If you do not have a license activation code, request one through the [Novell Customer Center Web site \(http://www.novell.com/customercenter/\)](http://www.novell.com/customercenter/). A license activation code will be e-mailed to you.

When you launch the PlateSpin Migrate Client for the first time after installation, the License Activation Wizard opens and prompts you to activate your product license.

**Figure 1-1** License Activation Wizard



You have two options for activating your product license: online or offline.

- ◆ Section 1.1.1, “Online Activation,” on page 7
- ◆ Section 1.1.2, “Offline Activation,” on page 8

### 1.1.1 Online Activation

Online activation requires that your PlateSpin Migrate Client have Internet access.

---

**NOTE:** HTTP proxies might cause failures during online activation. If you are using an HTTP proxy server and are having problems with online activation, try the offline activation method.

---

- 1 In the License Wizard, select the *Online Activation* option and click *Next*.
- 2 Enter the e-mail address that you provided when placing your order, and the activation code you received.

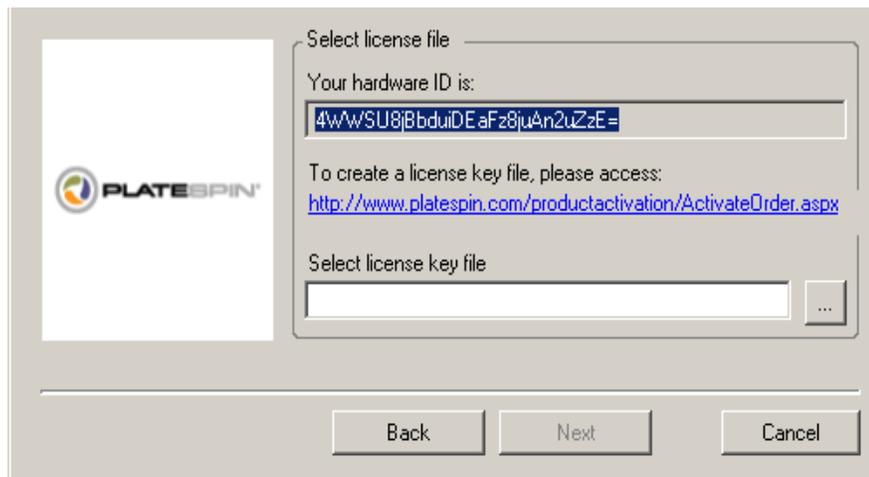
The PlateSpin Migrate Client obtains the required license over the Internet and activates the product.

## 1.1.2 Offline Activation

For offline activation, you obtain a license key over the Internet by using a machine that has Internet access.

- 1 In the License Wizard, select the *Offline Activation* option and click *Next*.

The Activate License dialog box is displayed:



The screenshot shows the 'Activate License' dialog box. On the left is the PlateSpin logo. The main area contains the following elements:

- A text box labeled 'Select license file'.
- A label 'Your hardware ID is:' followed by a text box containing the alphanumeric string: 4wWSU8jBbdulDEaFz8juAn2uzzE=.
- A label 'To create a license key file, please access:' followed by a blue hyperlink: <http://www.platespin.com/productactivation/ActivateOrder.aspx>.
- A text box labeled 'Select license key file' with a browse button (three dots) to its right.

At the bottom of the dialog box are three buttons: 'Back', 'Next', and 'Cancel'.

- 2 Save your hardware ID for use in the next steps.
- 3 Use a computer with Internet access to obtain a license key through the [Web-based license activation utility](http://www.platespin.com/productactivation/ActivateOrder.aspx) (<http://www.platespin.com/productactivation/ActivateOrder.aspx>).  
To obtain a license key, you must have a Novell account. If you are an existing PlateSpin customer and you don't have a Novell account, you must first create one. Use your existing PlateSpin username (a valid e-mail address registered with PlateSpin) as input for your Novell account username.
- 4 Save your new license key in a location accessible to your PlateSpin Migrate Client.
- 5 In the License Wizard, type the full path to, or browse to and select, the PlateSpin Migrate license file, then click *Next*.

The product is activated based on the selected license.

## 1.2 About Per-Migration and Per-Workload Licensing

PlateSpin Migrate licenses are sold on a per-migration or per-workload basis.

A per-migration license entitles you to perform a specific number of migrations, used on an unlimited number of workloads. Each time a migration is performed, the *Conversions remaining* number is decremented.

A per-workload license entitles you to an unlimited number of migrations on a specific number of workloads. With every migration, a workload unit of the license is assigned to either the source or the target. The machine that has the workload unit assigned to it can subsequently be migrated an unlimited number of times. Each time a workload is assigned, the *Workloads remaining* number is decremented.

The following is a summary of workload assignment behavior by portability task.

**Table 1-1** PlateSpin Migrate Workload License Assignment by Migration Type

Task	Workload Assignment Behavior
<i>Copy Workload</i>	A workload license remains with the source.
<i>Move Workload</i>	A workload license is transferred from the source to the target.
<i>Server Sync</i>	Not applicable
<i>Capture Image</i>	Not applicable
<i>Import Image</i>	Not applicable
<i>Deploy Image</i>	Not applicable

## 1.3 Using the License Manager

Use the License Manager to manage product licensing, add and delete license keys, generate licensing reports, view activation codes, and reset workload licensing. If you have multiple license keys and you want to select a specific, non-default license key for a particular migration job, see “[Selecting a License Key for a Migration Job](#)” in your *User Guide*.

- ◆ [Section 1.3.1, “Accessing the License Manager,”](#) on page 9
- ◆ [Section 1.3.2, “Managing Available License Keys,”](#) on page 10
- ◆ [Section 1.3.3, “Managing Workload Designations,”](#) on page 10

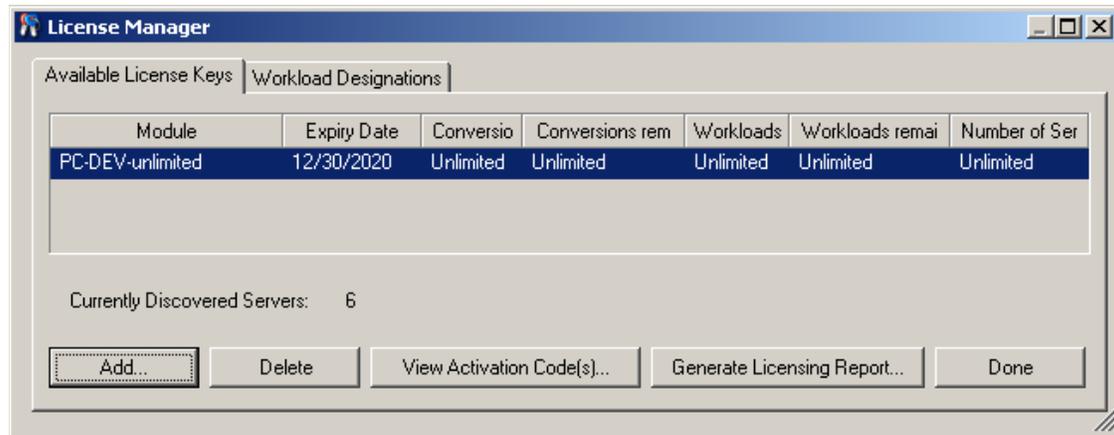
### 1.3.1 Accessing the License Manager

- 1 To access the License Manager, in your PlateSpin Migrate Client, click *Tools > License Manager*.

## 1.3.2 Managing Available License Keys

You can manage available license keys on the License Manager's *Available License Keys* tab (in your PlateSpin Migrate Client, click *Tools > License Manager > Available License Keys*).

**Figure 1-2** Available License Keys



The tab displays the license name (*Module*) along with its expiry date and entitlements. These depend on the license type. The *Number of Servers* column indicates the number of machines you can discover. This is generally the same as the number of machines that you can migrate. Use the buttons at the bottom for related license management tasks:

**Table 1-2** License Manager Command Buttons

Command	Description
<i>Add</i>	Adds licenses.
<i>Delete</i>	Deletes expired licenses.
<i>View Activation Code(s)</i>	Select a license and click this button to see the activation code and the date it was activated.
<i>Generate Licensing Report</i>	Creates a *.psl file that is used by Technical Support to troubleshoot licensing issues.

## 1.3.3 Managing Workload Designations

You can manage workload licensing on the License Manager's *Workload Designations* tab (in your PlateSpin Migrate Client, click *Tools > License Manager > Workload Designations*).

The tab lists workloads with assigned licenses. In the PlateSpin Migrate Client Servers view, each of these servers has a key icon adjacent to it.

You can reset workload licensing so that a license is no longer assigned to a particular machine. For example, you might want to do this when decommissioning servers that are already in the inventory of the PlateSpin Migrate Server.

To reset workload licensing:

- 1 On the License Manager's *Workload Designations* tab, select the required workload and click *Transfer Selected Workload*.

The Transfer License dialog box is displayed.

- 2 Use the displayed *Workload Transfer Request* string to obtain a workload transfer code from the [License Entitlement Web portal \(http://www.platespin.com/entitlementmgr/\)](http://www.platespin.com/entitlementmgr/). Log in with credentials associated with your purchase order.

You must have a Novell account. If you are an existing PlateSpin customer and you don't have a Novell account, you must first create one. Use your existing PlateSpin username (a valid e-mail address registered with PlateSpin) as input for your Novell account username.

- 3 Return to the License Manager and specify the newly obtained transfer code. Click *Next*.

PlateSpin Migrate resets the selected workload.

## 1.4 License Splitting

A license entitles you to one instance of PlateSpin Migrate per workload. Depending on the license you purchased, you can split a license either on a per-migration or a per-workload basis.

You can only split a license that has not yet been activated. For example, you can split a per-workload license of 1000 workloads into one license covering 400 workloads and another covering 600 workloads. You can split a per-migration license for 3000 migrations into one license for 1200 migrations and one license for 1800 migrations.

For assistance with multi-license scenarios, especially if you are uncertain how to utilize licenses across your network environment, see [KB Article 7920876 \(http://www.novell.com/support/viewContent.do?externalId=7920876\)](http://www.novell.com/support/viewContent.do?externalId=7920876).



# Configuring PlateSpin Migrate and Your Network Environment

# 2

This section provides information about setting up user authorization and authentication, configuring your network environment, and managing your product's default settings and behavior.

- ♦ [Section 2.1, “Setting Up User Authorization and Authentication,” on page 13](#)
- ♦ [Section 2.2, “Setting Up User Activity Logging,” on page 15](#)
- ♦ [Section 2.3, “Access and Communication Requirements across your Migration Network,” on page 16](#)
- ♦ [Section 2.4, “Fine-Tuning Data Transfer Performance \(Windows\),” on page 19](#)
- ♦ [Section 2.5, “Increasing the Size Limit on Post-migration Actions Uploaded to the PlateSpin Migrate Server,” on page 20](#)
- ♦ [Section 2.6, “Configuring PlateSpin Migrate Default Options,” on page 20](#)

## 2.1 Setting Up User Authorization and Authentication

PlateSpin Migrate's user authorization and authentication mechanism is based on user roles, and controls application access and operations that users can perform. The mechanism is based on Integrated Windows Authentication (IWA) and its interaction with Internet Information Services (IIS).

PlateSpin Migrate's user auditing functionality is provided through the capability to log user actions (see [“Setting Up User Activity Logging” on page 15](#)).

- ♦ [Section 2.1.1, “PlateSpin Migrate Roles,” on page 13](#)
- ♦ [Section 2.1.2, “Assigning PlateSpin Migrate Roles to Windows Users,” on page 15](#)

### 2.1.1 PlateSpin Migrate Roles

A PlateSpin Migrate role is a collection of PlateSpin Migrate privileges that entitle a particular user to perform specific actions. During installation, the PlateSpin Migrate installation program creates three local Windows groups on the PlateSpin Migrate Server host: PlateSpin Migrate Administrators, PlateSpin Migrate Power Users, and PlateSpin Migrate Operators. These groups map directly to the three PlateSpin Migrate roles that control user authorization and authentication:

- ♦ **PlateSpin Administrators:** Have unlimited access to all features and functions of the application. A local administrator is implicitly part of this group.
- ♦ **PlateSpin Power Users:** Have access to most features and functions of the application with some limitations, such as restrictions in the capability to modify system settings related to licensing and security.
- ♦ **PlateSpin Operators:** Have access to a limited subset of system features and functions, sufficient to maintain day-to-day operation.

When a user attempts to connect to a PlateSpin Migrate Server, the credentials provided through the PlateSpin Migrate Client are validated by IIS. If the user is not a member of one of the PlateSpin Migrate roles, connection is refused. If the user is a local administrator on the PlateSpin Migrate Server host, that account is implicitly regarded as a PlateSpin Migrate Administrator.

The following table lists permissions for each role.

**Table 2-1** *PlateSpin Migrate Roles and Permission Details*

<b>Role Details</b>	<b>Administrators</b>	<b>Power Users</b>	<b>Operators</b>
<b>Licensing:</b> Add, delete licenses; transfer workload licenses	yes	no	no
<b>Machines:</b> Discover, undiscover	yes	yes	no
<b>Machines:</b> Delete virtual machines	yes	yes	no
<b>Machines:</b> View, refresh, export	yes	yes	yes
<b>Machines:</b> Import	yes	yes	no
<b>Machines:</b> Export	yes	yes	yes
<b>PlateSpin Migrate Networks:</b> Add, delete	yes	no	no
<b>Jobs:</b> Create new job	yes	yes	no
<b>Jobs:</b> View, abort, change start time	yes	yes	yes
<b>Imaging:</b> View, start synchronization in existing contracts	yes	yes	yes
<b>Imaging:</b> Consolidate increments, apply increments to base, delete increments, install/delete image servers	yes	yes	no
<b>Block-Based Transfer Components:</b> Install, upgrade, remove	yes	no	no
<b>Device Drivers:</b> View	yes	yes	yes
<b>Device Drivers:</b> Upload, delete	yes	yes	no
<b>PlateSpin Migrate Server access:</b> View Web services, download client software	yes	yes	yes
<b>PlateSpin Migrate Server settings:</b> Edit settings that control user activity logging and SMTP notifications	yes	no	no
<b>PlateSpin Migrate Server settings:</b> Edit all server settings except those that control user activity logging and SMTP notifications	yes	yes	no
<b>Run Diagnostics:</b> Generate detailed diagnostic reports on jobs.	yes	yes	yes
<b>Post-conversion Actions:</b> Add, update, delete	yes	yes	no

## 2.1.2 Assigning PlateSpin Migrate Roles to Windows Users

To allow specific Windows domain or local users to carry out specific PlateSpin Migrate operations according to designated role, add the required Windows domain or user account to the applicable Windows local group (PlateSpin Administrators, PlateSpin Power Users, or PlateSpin Operators) on the PlateSpin Migrate Server host. For more information, see your Windows documentation.

## 2.2 Setting Up User Activity Logging

By default, PlateSpin Migrate records all user activities in a log file, `PlateSpin.UserActivityLogging.log`, located on your PlateSpin Migrate Server host, in the following directory:

```
..\PlateSpin Migrate Server\logs.
```

The format of an individual log entry is:

```
date|Category|description|user|details1|details2
```

The `Category` element describes the functional area applicable to a particular action, such as `Security`, `Inventory` (discovery operations), `LicenseManagement`, or `Migration` (workload portability operations).

Elements `details1` and `details2` depend on the `Category` and provide additional information if applicable.

Below is an example of a log entry recording the login action of a user with the domain account `MyDomain\John.Smith`.

```
2008-09-02 14:14:47|Security|User logged in|MyDomain\John.Smith
```

When the size of a log file reaches a specified value, it is rolled over to a new file with a sequential number appended to the name:

```
PlateSpin.UserActivityLogging.log.1  
PlateSpin.UserActivityLogging.log.2  
PlateSpin.UserActivityLogging.log.3
```

When the number of log files reaches a specified value, the system starts overwriting the oldest file each time a rollover is performed.

To enable or disable user activity logging, and to specify log file size and rollover options:

- 1 In the PlateSpin Migrate Client, click *Tools > Options*.
- 2 Click the *Logging* tab.
- 3 Specify the required options, then click *OK*.

## 2.3 Access and Communication Requirements across your Migration Network

Machines that you plan to designate as migration sources or targets, such as production workloads and virtual machine servers, must meet the following access and network requirements.

- ♦ [Section 2.3.1, “Requirements for Discovery,”](#) on page 16
- ♦ [Section 2.3.2, “Requirements for Migration,”](#) on page 17

### 2.3.1 Requirements for Discovery

The following table lists software, network, and firewall requirements that systems in your environment must meet for the discovery and inventory process. For information about the actual discovery procedures, see “[Discovering Source Workloads and Migration Targets](#)” in your *User Guide*.

**Table 2-2** *Network Communication Prerequisites for Discovery Operations*

System	Prerequisites
Windows 7; Windows Server 2008; Windows Vista	<ol style="list-style-type: none"><li>1. Built-in Administrator or a domain account credentials (mere membership in the local Administrators group is insufficient). On Vista, the account must be enabled (it is disabled by default).</li><li>2. Windows Firewall configured with these Inbound Rules enabled and set to Allow:<ul style="list-style-type: none"><li>♦ File and Printer Sharing (Echo Request - ICMPv4In)</li><li>♦ File and Printer Sharing (Echo Request - ICMPv6In)</li><li>♦ File and Printer Sharing (NB-Datagram-In)</li><li>♦ File and Printer Sharing (NB-Name-In)</li><li>♦ File and Printer Sharing (NB-Session-In)</li><li>♦ File and Printer Sharing (SMB-In)</li><li>♦ File and Printer Sharing (Spooler Service - RPC)</li><li>♦ File and Printer Sharing (Spooler Service - RPC-EPMAP)</li></ul></li></ol>

**NOTE:** These firewall settings are configured by using the Windows Firewall with Advanced Security utility (`wf.msc`). You can achieve the same result by using the basic Windows Firewall utility (`firewall.cpl`): select the *File and Printer Sharing* item in the list of exceptions.

System	Prerequisites
Windows Server 2003; Windows Server 2000; Windows XP; Windows NT 4	<ul style="list-style-type: none"> <li>◆ Windows Management Instrumentation (WMI) installed</li> <li>◆ Open ports 135/445 (TCP) for DCOM/RPC</li> </ul> <p>Windows NT Server does not include WMI as part of the default installation. Obtain the WMI Core from the Microsoft Web site. If WMI is not installed, discovery of the workload fails.</p> <p>WMI (RPC/DCOM) can use TCP ports 135 and 445 as well as random or dynamically assigned ports above 1024. If problems occur during the discovery process, consider temporarily placing the workload in a DMZ or temporarily opening the firewalled ports for the discovery process only.</p> <p>For additional information, such as guidance in limiting the port range for DCOM and RPC, see the following Microsoft technical articles.</p> <ul style="list-style-type: none"> <li>◆ <a href="http://msdn.microsoft.com/en-us/library/ms809327.aspx">Using DCOM with Firewalls (http://msdn.microsoft.com/en-us/library/ms809327.aspx)</a></li> <li>◆ <a href="http://support.microsoft.com/default.aspx?scid=kb;en-us;154596">Configuring RPC dynamic port allocation to work with firewalls (http://support.microsoft.com/default.aspx?scid=kb;en-us;154596)</a></li> <li>◆ <a href="http://support.microsoft.com/kb/248809">Configuring DCOM to work over a NAT-based firewall (http://support.microsoft.com/kb/248809)</a></li> </ul>
All Linux sources Citrix Xen Server VMware ESX Server 2.5	<ul style="list-style-type: none"> <li>◆ Secure Shell (SSH) server</li> <li>◆ Open port 22 (TCP)</li> <li>◆ Root-level access. For information on using an account other than root, see <a href="http://www.novell.com/support/viewContent.do?externalId=7920711">KB Article 7920711 (http://www.novell.com/support/viewContent.do?externalId=7920711)</a>.</li> <li>◆ Custom SSH ports are supported; specify the port number during discovery: <code>&lt;hostname   IP_address&gt;:port_number</code>.</li> </ul>
VMware ESX Server 3.5, ESX 4, 4.1, ESXi; vCenter Server	<ul style="list-style-type: none"> <li>◆ VMware account with an Administrator role</li> <li>◆ VMware Web services API and file management API (HTTPS / port 443 TCP)</li> </ul>
VMware ESX Server 3.0.x	<ul style="list-style-type: none"> <li>◆ VMware account with an Administrator role</li> <li>◆ Secure Shell (SSH) server</li> <li>◆ Open port 22 (TCP)</li> <li>◆ If you are using the root account, configure the ESX server to enable shell access for the root account.</li> <li>◆ Custom SSH ports are supported; specify the port number during discovery: <code>&lt;hostname   IP_address&gt;:port_number</code>.</li> </ul>
All Solaris source workloads and targets	<p>The user must be assigned a primary administrator profile through Solaris RBAC (role-based access control). See <a href="http://www.novell.com/support/viewContent.do?externalId=7920711">KB Article 7920711 (http://www.novell.com/support/viewContent.do?externalId=7920711)</a>.</p>

## 2.3.2 Requirements for Migration

The following table lists firewall requirements that systems in your environment must meet for problem-free operation during workload migration jobs.

**Table 2-3** Network Communication Prerequisites for Workload Portability

System	Open Port	Remarks
PlateSpin Migrate Server hosts	Either 80 (TCP) or 443 (TCP)	<ul style="list-style-type: none"> <li>◆ Port 80 (TCP) is required for HTTP communication among the PlateSpin Migrate Server, sources, and targets.</li> <li>◆ Port 443 (TCP) is required for HTTPS communication (if SSL is used) between the PlateSpin Migrate Server and the source or target machines.</li> </ul>
All source workloads except those in image deployment jobs.	3725 (TCP)	Required for targets to initiate communication during file-level data transfer, except for I2X jobs, during which this port needs to be open on the migration target only. For Server Sync jobs, this port is required for both sources and targets.
All targets	3725 (TCP)	Required for: File-based Server Sync / Image Sync <ul style="list-style-type: none"> <li>◆ All block-level migrations (full and Server Sync)</li> <li>◆ File-level Server Sync</li> <li>◆ Image synchronization jobs</li> </ul>
All Windows sources and targets	137 - 139 (NetBIOS)	Required for NetBIOS communications.
PlateSpin Migrate Server host; all sources	SMB (TCP 139, 445 and UDP 137, 138)	Required for Take Control communication and file-level data transfer.
All Linux sources	22 (TCP)	Required for Take Control communication.
VMware ESX Server 2.5		
VMware ESX Server 3.0.x		
Citrix Xen Server		
PlateSpin Migrate Server hosts; All Windows sources	135/445 (TCP)	For DCOM/RPC communication between PlateSpin Migrate Server and a source for taking control of and rebooting the workload through WMI.  <b>NOTE:</b> WMI (RPC/DCOM) can use TCP ports 135 and 445 as well as random/dynamically assigned ports above 1024.

## 2.4 Fine-Tuning Data Transfer Performance (Windows)

You can fine-tune your over-the-network data transfer for optimum performance in your specific environment. For example, you might need to control the number of your TCP connections or impose a packet-level compression threshold.

This functionality is supported for migration jobs that use the following data transfer methods:

- ◆ File-level
- ◆ Block-level with the Microsoft Volume Shadow Copy Service (VSS) option selected

Fine-tuning is done by modifying the product's `product\internal.config` configuration file, located on your PlateSpin Migrate Server host in the following directory:

```
..\PlateSpin Migrate Server\Web
```

The following table lists the configuration parameters with two sets of values: the defaults and the values recommended for optimum operation in a high-latency WAN environment.

**Table 2-4** Parameters for Fine-Tuning File-Level Data Transfer Performance

Parameter	Default Value	For High-Latency WANs
fileTransferThreadcount	2	4 to 6 (max)
Controls the number of TCP connections opened for file-based data transfer.		
fileTransferMinCompressionLimit	0	max 65536 (64 KB)
Specifies the packet-level compression threshold in bytes.		
fileTransferCompressionThreadsCount	(disabled)	
Controls the number of threads used for packet-level data compression. Ignored if compression is disabled.		
Because the compression is CPU-bound, this setting might have a performance impact during Live Transfer.		
fileTransferSendReceiveBufferSize	0 (8192 bytes)	max 5242880 (5 MB)
TCP/IP window size setting for file transfer connections; controls the number of bytes sent without TCP acknowledgement.		
When the value is set to 0, the default TCP window size is used (8 KB). For custom sizes, specify the size in bytes.		
Use the following formula to determine the proper value:		
$((LINK\_SPEED(Mbps) / 8) * DELAY(sec)) * 1024 * 1024$		
For example, for a 100 Mbps link with 10 ms latency, the proper buffer size would be:		
$(100/8) * 0.01 * 1024 * 1024 = 131072 \text{ bytes}$		

## 2.5 Increasing the Size Limit on Post-migration Actions Uploaded to the PlateSpin Migrate Server

By default, PlateSpin Migrate sets a 64 MB upload limit for each individual post-migration action, including its dependencies. See “[Managing Custom Actions](#)” in your *User Guide*.

You can increase this limit by modifying the PlateSpin Migrate Server’s `web.config` configuration file.

---

**IMPORTANT:** Decreasing the default size limit might have a negative impact on the stability of your PlateSpin Migrate Server.

---

- 1 Using a text editor, open the `web.config` configuration file, located in the following directory:

```
..\PlateSpin Migrate Server\Web
```

- 2 Locate the line defining the value of the `httpRuntime` element’s `maxRequestLength` attribute:

```
<httpRuntime maxRequestLength="8192" />
```

- 3 Replace the existing value with the required new value in kilobytes. For example, to increase the size to 16 MB, replace 8192 with 16384:

```
<httpRuntime maxRequestLength="16384" />
```

- 4 Save the `web.config` file.
- 5 Restart the PlateSpin Migrate Client.

## 2.6 Configuring PlateSpin Migrate Default Options

Default options control PlateSpin Migrate’s global settings and its default behavior. Configure the default options following installation or to reflect changes in your environment.

- ♦ [Section 2.6.1, “General Options,” on page 21](#)
- ♦ [Section 2.6.2, “Notification Service,” on page 21](#)
- ♦ [Section 2.6.3, “User Activity Logging,” on page 22](#)
- ♦ [Section 2.6.4, “Default Job Values,” on page 22](#)
- ♦ [Section 2.6.5, “Source Service Defaults,” on page 23](#)
- ♦ [Section 2.6.6, “Target Service Defaults,” on page 23](#)

## 2.6.1 General Options

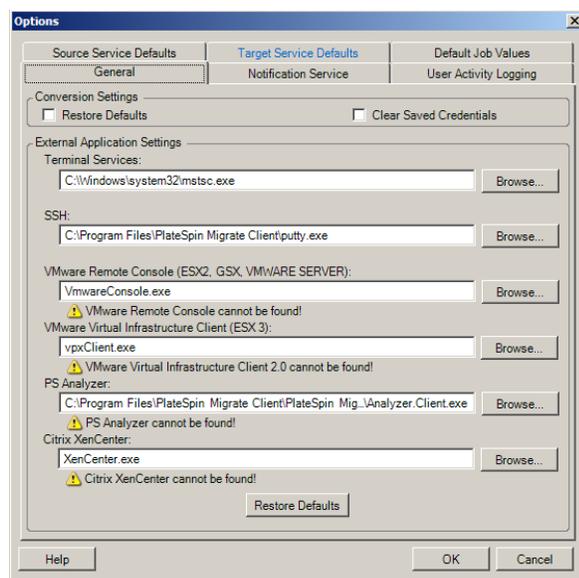
Use this tab to restore default settings, clear saved credentials, and to specify the locations of executable files for external applications you can launch from within the PlateSpin Migrate Client user interface. To access this dialog box in the PlateSpin Migrate Client, click *Tools > Options*.

**Restore Defaults:** When this option is selected, PlateSpin Migrate resets the job configuration method (launches the Actions dialog box after a drag-and-drop) and resumes checking for software updates on the Client startup.

**Clear Saved Credentials:** Removes stored usernames and passwords for source and target machines.

**External Application Settings:** Use the adjacent *Browse* buttons to locate application executables.

**Restore Defaults:** Resets the paths to their defaults.

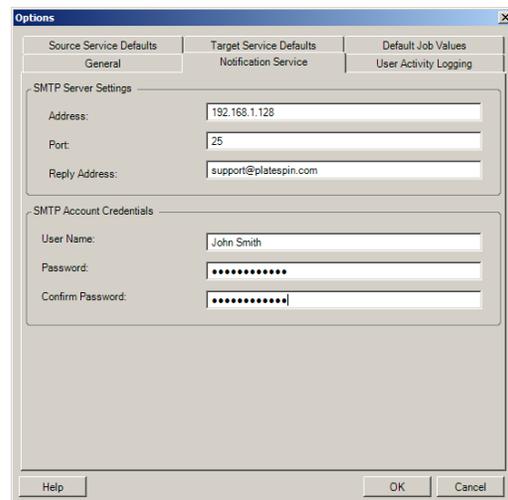


## 2.6.2 Notification Service

Use this tab to specify Simple Mail Transfer Protocol (SMTP) server settings for event and job progress notifications. To access this dialog box in the PlateSpin Migrate Client, click *Tools > Options*.

**SMTP Server Settings:** Specify your SMTP server's IP address, port, and a reply address for e-mail event and progress notifications.

**SMTP Account Credentials:** Provide valid credentials if your SMTP server requires authentication.



You can also configure migration progress notifications on a per-migration basis. See [“Configuring Automatic E-Mail Notifications of Job Status and Progress”](#) in your *User Guide*.

## 2.6.3 User Activity Logging

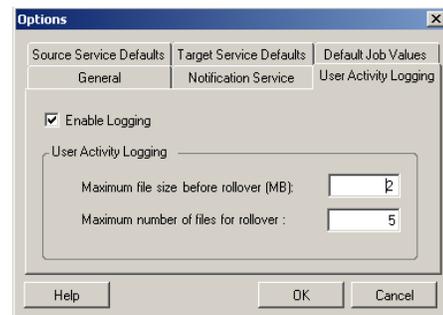
Use this tab to specify options related to user activity logging. See [“Setting Up User Activity Logging”](#) on page 15.

To access this dialog box in the PlateSpin Migrate Client, click *Tools > Options*.

**Enable Logging:** When this option is selected, PlateSpin Migrate logs all user activities.

**Maximum file size before rollover (MB):** When the size of a log file reaches the specified value, it is rolled over to a new file with a sequential number appended to the name.

**Maximum number of files for rollover:** When the number of log files reaches the specified value, the system starts overwriting the oldest file each time a rollover is performed.



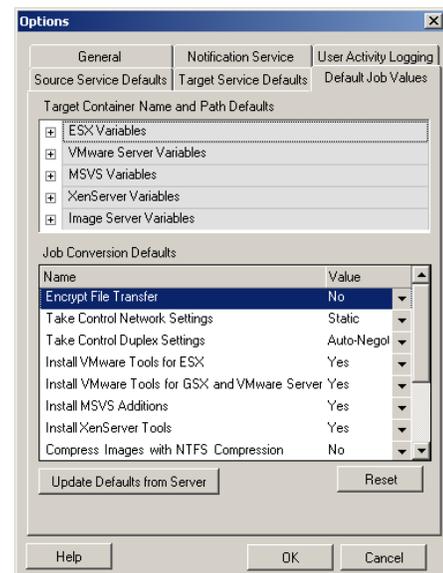
## 2.6.4 Default Job Values

Use this tab to specify default migration job values specific to the target virtualization platform. To access this dialog box in the PlateSpin Migrate Client, click *Tools > Options*.

**Target Container Name and Path Details:** These variables control naming conventions for target paths and containers. Expand a variable set and click a variable to edit its value.

**Job Conversion Defaults:** Use this area to set defaults that affect all migration jobs. Some of these defaults are platform-specific or job-specific. For example, *Virtual Disk Sizing Mode* only applies for VMware Server or MSVS Target Containers. *Take Control Duplex Settings* is only relevant for a migration involving a physical source machine.

**Reset:** Restores default job values.



## 2.6.5 Source Service Defaults

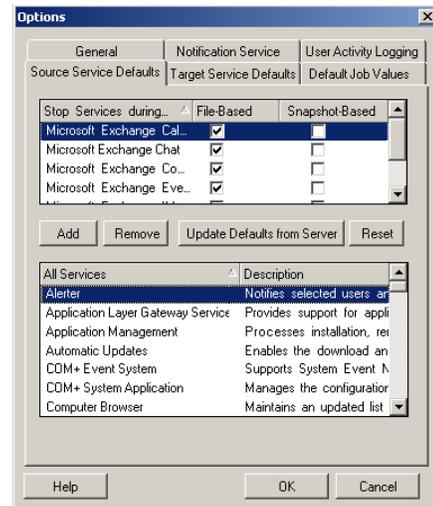
Use this tab to select Windows services daemons to stop on the source workload during a Live Transfer migration. See “[Handling Source Workload Services or Daemons During Live Transfer \(Windows and Linux\)](#)” in your *User Guide*.

To access this dialog box in the PlateSpin Migrate Client, click *Tools > Options*.

**Stop Services during Transfer** section: Lists services that are stopped by default. To stop a service during data transfer that uses a specific transfer method by default, select the corresponding check box. A deselected check box means the service remains active during Live Transfer.

**All Services** section: Lists unique services on all discovered machines. Click *Add* to add a selected service from the lower section to the upper section and set it to stop during the migration.

**Update Defaults from Server**: Retrieves defaults from PlateSpin Migrate Server.



## 2.6.6 Target Service Defaults

Use this tab to select Windows services whose mode on the target is to be different from that of the source. See “[Handling the Startup Mode of Services \(Windows Targets\)](#)” in your *User Guide*.

To access this dialog box in the PlateSpin Migrate Client, click *Tools > Options*.

**Configure Services** section: Lists services and their target startup modes. Select the *Restore After Conversion* check box to use the selected mode during the migration. The service is then restored to match the source after the migration is complete and the target machine is ready to run.

**All Services** section: Lists unique services on all discovered machines. Click *Add* to add a service to the upper section. Use the *Mode* drop-down list to select the service state for the target. This is set during the configuration step of the job.

**Remove**: Removes a service.

**Reset**: Clears the upper section. The modes of all services in the target will match those on the source.

