



PlateSpin® Migrate 2019.2 Installation and Upgrade Guide

March 2019

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License bought for PlateSpin Migrate 9.3 and later versions cannot be used with PlateSpin Migrate 9.2 and prior versions.

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About This Guide

This guide provides information to help you install your PlateSpin Migrate product.

- ♦ [Chapter 1, “Installing PlateSpin Migrate,”](#) on page 7
- ♦ [Chapter 2, “Deploying PlateSpin Migrate Server in the Cloud,”](#) on page 37
- ♦ [Chapter 3, “Upgrading PlateSpin Migrate,”](#) on page 51
- ♦ [Chapter 4, “Troubleshooting Installation and Upgrade Problems,”](#) on page 63
- ♦ [Appendix A, “Documentation Updates,”](#) on page 67

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.

Additional Documentation

This guide is part of the PlateSpin Migrate documentation set. For a complete list of publications supporting this release, visit the [PlateSpin Migrate 2019.2 Documentation website \(https://www.microfocus.com/documentation/platespin/platespin-migrate-2019-2\)](https://www.microfocus.com/documentation/platespin/platespin-migrate-2019-2).

Documentation Updates

The most recent version of this guide can be found at the [PlateSpin Migrate Documentation website \(https://www.microfocus.com/documentation/platespin/platespin-migrate-2019-2\)](https://www.microfocus.com/documentation/platespin/platespin-migrate-2019-2).

Contacting Micro Focus

For specific product issues, contact Micro Focus Support at <https://support.microfocus.com/contact/>.

Additional technical information or advice is available from several sources:

- ♦ Product information and resources: <https://www.microfocus.com/products/platespin/migrate>
- ♦ Micro Focus Customer Center: <https://www.microfocus.com/customercenter/>
- ♦ Product knowledge base and videos: <https://www.microfocus.com/support-and-services/>
- ♦ Micro Focus Communities: <https://www.microfocus.com/communities/>
- ♦ PlateSpin Idea Exchange: https://community.softwaregrp.com/t5/PlateSpin-Idea-Exchange/idb-p/PlateSpin_Ideas/

1 Installing PlateSpin Migrate

PlateSpin Migrate is a Windows application that runs on server operating systems. Its functionality depends on several software components, including the Microsoft Internet Information Services (IIS) Web server software along with its feature extension modules, the ASP.NET Web application framework, the Microsoft .NET Framework library and runtime, as well as a dedicated Microsoft SQL Server database instance.

- ♦ [Section 1.1, “Preparing to Install PlateSpin Migrate,” on page 7](#)
- ♦ [Section 1.2, “Installing Prerequisite Software,” on page 13](#)
- ♦ [Section 1.3, “Installing PlateSpin Migrate Software Components,” on page 21](#)
- ♦ [Section 1.4, “Installing the PlateSpin Migrate Software Components Using a Batch File,” on page 31](#)
- ♦ [Section 1.5, “Post-Installation Tasks,” on page 33](#)
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- ♦ [Section 1.7, “Modifying the Password for the SQL Server Express System Administrator User,” on page 34](#)
- ♦ [Section 1.8, “Configuring TLS Protocols for Migrate Hosts,” on page 35](#)
- ♦ [Section 1.9, “Security Best Practices for PlateSpin Hosts,” on page 36](#)

1.1 Preparing to Install PlateSpin Migrate

For trouble-free installation and operation of PlateSpin Migrate, you should review the system requirements and plan your installation.

- ♦ [Section 1.1.1, “System Requirements for PlateSpin Server,” on page 7](#)
- ♦ [Section 1.1.2, “System Requirements for PlateSpin Migrate Client,” on page 10](#)
- ♦ [Section 1.1.3, “System Requirements for PlateSpin Migrate Web Interface,” on page 11](#)
- ♦ [Section 1.1.4, “General Guidelines for Server Installation,” on page 11](#)
- ♦ [Section 1.1.5, “National Language Support,” on page 13](#)

1.1.1 System Requirements for PlateSpin Server

PlateSpin Server hosts must meet the system requirements in [Table 1-1](#). See also [“General Guidelines for Server Installation” on page 11](#).

Table 1-1 Host Requirements for PlateSpin Server

Requirement	Details
Dedicated host	Physical or virtual server

Requirement	Details
Operating System	<p>Any of the following Windows Server versions:</p> <ul style="list-style-type: none"> ◆ Windows Server 2016 ◆ Windows Server 2012 R2 <p>NOTE: You must activate the Microsoft license for your Windows operating system prior to installing PlateSpin Migrate.</p>
Processor	<p>Recommended (physical): multi-core, 2 GHz or higher</p> <p>Recommended (VM): 2 or more Virtual CPUs</p>
Memory	Recommended: 8 GB RAM
Disk Space	Minimum 50 GB
Database Server	<p>A dedicated Microsoft SQL Server database instance, running on one of the following:</p> <ul style="list-style-type: none"> ◆ Microsoft SQL Server 2017 Express Edition <p>A copy of this database software is included in your PlateSpin Migrate software distribution.</p> <p>NOTE: For upgrades of PlateSpin Migrate Server, your existing installation of Microsoft SQL Server 2014 Express is supported. The SQL Server Express software is not updated as part of the upgrade.</p> <ul style="list-style-type: none"> ◆ Microsoft SQL Server 2016 ◆ Microsoft SQL Server 2014 ◆ Microsoft SQL Server 2008 R2 <p>For remote database instances, the following additional requirements must be met:</p> <ul style="list-style-type: none"> ◆ Migrate Server: Install Microsoft SQL Server Native Client on the host server before you install PlateSpin Migrate. See “Installing SQL Server Native Client on the Host Server” on page 15. ◆ External SQL Server: If TLS 1.0 is disabled on the PlateSpin Migrate Server host, then the remote database and the host on which the database resides must support TLS 1.2. See TLS 1.2 Support for Microsoft SQL Server (https://support.microsoft.com/en-us/help/3135244/tls-1-2-support-for-microsoft-sql-server) in Microsoft Documentation. <p>While multiple PlateSpin Migrate Servers can use the same remote database server, each Migrate Server requires a separate dedicated database instance.</p> <p>NOTE: Prior to installing the product, ensure that your existing SQL Server database server and named database instance meet the Database guidelines.</p>

Requirement	Details
Prerequisite Software	<p>NOTE: You can install prerequisite software manually or use the PowerShell script provided on the PlateSpin Migrate Download site. See “Installing Prerequisite Software” on page 13.</p> <ul style="list-style-type: none"> ❑ To perform a batch-file installation of PlateSpin Migrate, you must install Visual C++ 2013 on the host server. See “Installing Visual C++ 2013 for Batch-File Installation of PlateSpin Migrate” on page 14. ❑ To use a remote database instance with PlateSpin Migrate, you must install Microsoft SQL Server Native Client on the host server. You can download the software from Microsoft: <ul style="list-style-type: none"> ◆ Microsoft SQL Server 2012 Native Client (https://www.microsoft.com/en-us/download/details.aspx?id=50402) <p>See Section 1.2.2, “Installing SQL Server Native Client on the Host Server,” on page 15.</p> ❑ All Windows hosts (recommended) <ul style="list-style-type: none"> ◆ Ensure that a licensed version of the OS is installed and the license has been activated. ◆ Apply the latest applicable OS updates (service packs, cumulative security updates, drivers, and so on). ❑ For Windows Server 2016 systems: <ul style="list-style-type: none"> ◆ Disable User Account Control (UAC). ◆ Install Microsoft .NET Framework 4.7.1. You can download .NET software from Microsoft: <ul style="list-style-type: none"> ◆ .NET Framework 4.7.1 (https://www.microsoft.com/en-us/download/details.aspx?id=56116) ◆ Install Microsoft IIS 10.0 <p>For more details, see “Installing Prerequisite Software on Windows Server 2016 Systems” on page 15.</p> ❑ For Windows Server 2012 R2 systems: <ul style="list-style-type: none"> ◆ Disable User Account Control (UAC). ◆ Install Microsoft .NET Framework 4.7.1. You can download .NET software from Microsoft: <ul style="list-style-type: none"> ◆ .NET Framework 4.7.1 (https://www.microsoft.com/en-us/download/details.aspx?id=56116) ◆ Install Microsoft IIS 8.0 <p>For more details, see “Installing Prerequisite Software on Windows Server 2012 R2 Systems” on page 18.</p>

Requirement	Details
TLS Protocol	<p>PlateSpin Migrate Server supports connections using Transport Layer Security (TLS) 1.0, 1.1, and 1.2 protocols, according to the protocols enabled in the Windows Registry settings on the Migrate Server host operating system. Installation and upgrade do not modify the existing host OS settings for the TLS protocol.</p> <p>Remote database: Ensure that the appropriate TLS settings are enabled for the operating systems on the intended Migrate Server host and the Microsoft SQL Server host before you install Migrate Server. See “Database Server”.</p> <p>Source workloads: The TLS settings on the Migrate Server host OS must allow connections appropriate for the source workloads. See Section 1.8, “Configuring TLS Protocols for Migrate Hosts,” on page 35.</p> <p>NOTE: If the source workload does not support TLS 1.2 or if TLS 1.2 is disabled on the source workload, you must enable TLS 1.0 and 1.1 on the Migrate server host to be able to migrate them.</p> <p>Some Windows operating systems do not support TLS 1.2 by default. To use TLS 1.2, Windows requires you to update the OS and Microsoft .NET Framework on the source workload, then configure its Windows Registry settings to use TLS 1.2. A reboot is required. See “Configuring Source Workloads to Connect Using TLS 1.2” in the <i>PlateSpin Migrate 2019.2 User Guide</i>.</p>

1.1.2 System Requirements for PlateSpin Migrate Client

You can install the PlateSpin Migrate Client on the PlateSpin Server host or on a separate computer. For information about migration tasks supported by Migrate Client, see [“Deciding on the Migration Interface”](#) in the *PlateSpin Migrate 2019.2 User Guide*.

A standalone PlateSpin Migrate Client host must meet the system requirements in [Table 1-2](#).

Table 1-2 Host Requirements for PlateSpin Migrate Client

Requirement	Details
Operating System	<p>Any of the following, running on dedicated hardware or in a virtual machine:</p> <ul style="list-style-type: none"> ◆ Windows Server 2016 ◆ Windows 8.1, 8 ◆ Windows Server 2012, Windows Server 2012 R2 ◆ Windows 7 ◆ Windows Server 2008, Windows Server 2008 R2 <p>NOTE: You must activate the Microsoft license for your Windows operating system prior to installing PlateSpin Migrate Client.</p>
Disk Space	Minimum 3 GB

Requirement	Details
Windows Software Components	<p>Microsoft .NET Framework 2 SP2, 3.5 SP1, and 4.7.1. You can download .NET software from Microsoft:</p> <ul style="list-style-type: none"> ◆ .NET Framework 2 SP2 ◆ .NET Framework 3.5 SP1 ◆ .NET Framework 4.7.1
TLS Protocol	<p>PlateSpin Migrate Client supports Transport Layer Security (TLS) 1.0, 1.1, and 1.2.</p> <p>Enable the same TLS protocols that you allow for the operating system on the PlateSpin Migrate Server host. See Section 1.8, “Configuring TLS Protocols for Migrate Hosts,” on page 35.</p>

1.1.3 System Requirements for PlateSpin Migrate Web Interface

PlateSpin Migrate provides a Web Interface that you can use to plan and execute automated migrations of workloads. The PlateSpin Migrate Web Interface is automatically installed when you install the PlateSpin Migrate Server. For information about migration tasks supported by Migrate Web Interface, see “[Deciding on the Migration Interface](#)” in the *PlateSpin Migrate 2019.2 User Guide*.

For information about supported web browsers and browser configuration requirements, see “[Supported Web Browsers](#)” in the *PlateSpin Migrate 2019.2 User Guide*.

For more information about working with the PlateSpin Migrate Web Interface, see “[About the PlateSpin Migrate Web Interface](#)” in the *PlateSpin Migrate 2019.2 User Guide*.

1.1.4 General Guidelines for Server Installation

Follow installation guidelines in [Table 1-3](#) for trouble-free installation and operation of PlateSpin Migrate.

Table 1-3 Pre-Installation Checklist

Guideline	Remarks
<input type="checkbox"/> Dedicated Host	Install the PlateSpin Server on a dedicated physical or virtual machine. See also Co-location .

Guideline	Remarks
<input type="checkbox"/> Credentials	<p>Perform all installation procedures using an account with administrative privileges.</p> <p>When you install PlateSpin Migrate Server on a domain computer, you must log in to the PlateSpin Server during installation, removal, or upgrade as a domain user who is a member of the Domain Admin group and the local Admin group.</p> <p>Windows Authentication for your Microsoft SQL Server Standard Edition or Enterprise Edition database server is supported in domain environments. If you use Windows Authentication for your database server, when you perform the PlateSpin Migrate Server installation or upgrade, you must log in to the PlateSpin Server as the domain user with SQL Admin rights. This user must also have local administrator rights to the PlateSpin Server. In addition, the Service User you specify for SQL Server credentials must have local administrator rights.</p>
<input type="checkbox"/> IP Address	Assign the PlateSpin Server host a static IP address.
<input type="checkbox"/> Co-location	<p>Do not co-locate the PlateSpin Server with:</p> <ul style="list-style-type: none"> ◆ Your domain controller ◆ Existing web servers with IIS applications ◆ A workload that you intend to migrate by using the product ◆ Other PlateSpin software (PlateSpin Protect and PlateSpin Recon)
<input type="checkbox"/> Database	<p>The Microsoft SQL Server Express Edition included with PlateSpin Migrate cannot be installed on a domain controller in accordance with Microsoft Developer Network recommendations.</p> <p>If you intend to use your own Microsoft SQL Server database (instead of the Microsoft SQL Server 2017 Express Edition included in your software distribution), ensure that it is supported and conforms to the product's database requirements. See SQL Server Installation Requirements for Platespin Protect and Migrate (KB Article 7009809).</p> <p>While multiple PlateSpin Migrate Servers can use the same remote database server, each Migrate Server requires a separate database instance.</p> <p>For deployment guidelines based on your operational needs, see "Database Server" in the PlateSpin Migrate 2019.2 User Guide.</p> <p>The database server and database instance for the Migrate Server must be available and configured to work with PlateSpin Migrate before you attempt to install the product. See "Installing the Database Server" on page 23.</p>
<input type="checkbox"/> UAC	Disable the User Account Control (UAC) during installation, removal, or upgrade.

Guideline	Remarks
<input type="checkbox"/> Installation Workflow	<p>Install the prerequisite software in the indicated order. Below is a high-level workflow for a typical PlateSpin Migrate installation:</p> <ol style="list-style-type: none"> 1. Supported operating system, followed by corresponding Windows Updates 2. ASP.NET/IIS, followed by corresponding Windows Updates 3. (Optional) Enable FIPS-Compliant Data Encryption 4. SQL Server database, followed by applicable Microsoft updates 5. PlateSpin Server 6. (Conditional on your migration goals) PlateSpin Migrate Client

1.1.5 National Language Support

In addition to the English version of PlateSpin Migrate, the product has been localized for installation and use on machines configured for the Japanese language. See “[Configuring Language Settings for International Versions](#)” in *PlateSpin Migrate 2019.2 User Guide*.

1.2 Installing Prerequisite Software

Before you install PlateSpin Migrate on the intended PlateSpin Migrate host server, you must install a [supported version of Microsoft Windows Server](#) and activate the Windows license, then install the [Prerequisite Software](#): Visual C++ (for batch-file installation), ASP.NET, IIS, and .NET Framework. You can optionally enable FIPS-compliant data encryption.

You can use the *Install PlateSpin Migrate Prerequisites* script provided on the Micro Focus Download site to install any missing software and apply the appropriate configuration on the intended PlateSpin Migrate server host. Alternatively, you can manually install and configure the prerequisite software on the intended PlateSpin Migrate server host by using the procedures in this section.

NOTE: The installation of prerequisite software might require a reboot of the intended PlateSpin Migrate host server. Depending on what prerequisite software needs to be installed, Internet access might be required.

To use the *Install PlateSpin Migrate Prerequisites* script to install prerequisite software:

- 1 Log in to the intended PlateSpin Migrate server as a user with Administrator privileges.
- 2 Launch a web browser, go to the [Micro Focus Downloads](#) page, search for PlateSpin Migrate and then proceed to the appropriate PlateSpin Migrate Download page.
- 3 Download the `Install_PlateSpin_Migrate_Prerequisites-2019_2.zip` file to the intended PlateSpin Migrate host server.
- 4 In a ZIP tool, use **Extract > All files/folders** to extract the files to a location on the server:

```
Install PlateSpin Migrate Prerequisites.ps1
Install PlateSpin Migrate Prerequisites.bat
readme.txt
```

- 5 Run the BAT file to execute the `Install PlateSpin Migrate Prerequisites.ps1` PowerShell script. In an Explorer browser, right-click `Install PlateSpin Migrate Prerequisites.bat` and select **Open**.

The PowerShell script automatically installs and configures the prerequisite software only on a [supported version of Microsoft Windows Server](#) operating system where you have previously activated the Windows license. The installation of prerequisite software might require a reboot of the intended PlateSpin Migrate host server. Depending on what prerequisite software needs to be installed, Internet access might be required.

- 6 Continue with [“Installing PlateSpin Migrate Software Components” on page 21](#).

To manually install prerequisite software:

NOTE: Because the packaging and distribution of these software components varies among different versions of the supported Windows Server platforms, procedures vary slightly. Use the appropriate procedure for the target platform in the indicated order of installation and setup.

- 1 Log in to the intended PlateSpin Migrate server as a user with Administrator privileges.
- 2 Install Visual C++.
See [Installing Visual C++ 2013 for Batch-File Installation of PlateSpin Migrate](#).
- 3 Install Windows Server components ASP .NET, IIS, and .NET Framework:
 - ♦ [Installing Prerequisite Software on Windows Server 2016 Systems](#)
 - OR-
 - ♦ [Installing Prerequisite Software on Windows Server 2012 R2 Systems](#)
- 4 (Optional) Enable FIPS-compliant data encryption.
See [Enabling Support for FIPS-Compliant Data Encryption Algorithms \(Optional\)](#).
- 5 Continue with [“Installing PlateSpin Migrate Software Components” on page 21](#).

1.2.1 Installing Visual C++ 2013 for Batch-File Installation of PlateSpin Migrate

Before you perform a batch-file installation of PlateSpin Migrate server, you must install Visual C++ 2013 on the planned Migrate server. This software is required to properly install the Event Messaging service that is used by PlateSpin Transformation Manager. A redistributable package of Visual C++ 2013 is available in the `PlateSpinMigrateSetup-2019.2.0.x.exe` file. You can alternatively download the Visual C++ 2013 package from Microsoft and install it.

To install VC++ 2013 on the planned Migrate server:

- 1 Extract the `PlateSpinMigrateSetup-2019.2.0.x.exe` to a location on the planned server host for PlateSpin Migrate.
- 2 In a file browser, navigate to the `..\Migrate-2019_2\PlateSpinImage\VCruntime-x64` folder.
- 3 Run `vcredist_x64.exe` as Administrator.

1.2.2 Installing SQL Server Native Client on the Host Server

To use a remote database instance with the Migrate Server, you must install Microsoft SQL Server Native Client on the host server.

- 1 Log in to the host server as a user with Administrator permissions.
- 2 To check if SQL Server Native Client is already installed on the host server, run `regedit` and navigate to find the following entry:

```
Computer\HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL Server Native Client 11.0
```

- 3 If SQL Server Native Client is not installed, download [Microsoft SQL Server 2012 Native Client](https://www.microsoft.com/en-us/download/details.aspx?id=50402) (<https://www.microsoft.com/en-us/download/details.aspx?id=50402>) from the Microsoft Download site, then install it on the host server.

1.2.3 Installing Prerequisite Software on Windows Server 2016 Systems

Use the following procedure to install [prerequisite software](#) on the Microsoft Windows Server 2016 servers where you plan to install PlateSpin Migrate Server. Before you begin, ensure that you are familiar with the “[System Requirements for PlateSpin Server](#)” on page 7 and “[General Guidelines for Server Installation](#)” on page 11.

To install required Microsoft software components:

- 1 Use the Local User Administrator (LUA) account to log in to your intended PlateSpin Server host.
- 2 Use Server Manager to install Web Server (IIS) and other software required by PlateSpin Server:
 - 2a Open Server Manager. Select **Start > Windows Administrative Tools > Server Manager**.
 - 2b In the Server Manager toolbar, select **Quick Start > Configure this local server > Add roles and features**.
 - 2c In the Add Roles and Features wizard, proceed to the Installation Type tab, then continue through the wizard:

Add Roles and Features Wizard	Action
1. Installation Type	Select Role-based or feature-based installation , then click Next .
2. Server Selection	Select your intended PlateSpin Server host, then click Next .
3. Server Roles	Select Web Server (IIS) , then click Next .
4. Pop-up prompt to Add features that are required for Web Server (IIS)	Select Include management tools , click Add Features to confirm your selection, then click Next on the Server Roles page to proceed to the Features list.

Add Roles and Features Wizard	Action
5. Features	<p>Keep the default set of features for the Web Server and add other required features along with their sub-features as shown, then click Next.</p> <ul style="list-style-type: none"> <input type="checkbox"/> .NET Framework 4.6 Features (3 of 7 installed) <ul style="list-style-type: none"> ◆ .NET Framework 4.6 ◆ ASP.NET 4.6 ◆ WCF Services (1 of 5 installed) <ul style="list-style-type: none"> — TCP Port Sharing <input type="checkbox"/> XPS Viewer
6. Web Server (IIS)	Read the information, then click Next .

Add Roles and Features Wizard	Action
7. Role Services	<p>Keep the default set of role services for the Web Server and add other required role services along with their sub-role services as shown, then click Next.</p> <p>NOTE: .NET 4.6 is installed by the OS. PlateSpin Server will use .NET 4.7.1, as installed in Step 2f.</p> <p>Web Server (IIS) > Role Services (23 of 43 installed):</p> <ul style="list-style-type: none"> <input type="checkbox"/> Web Server (17 of 34 installed) <ul style="list-style-type: none"> ◆ Common HTTP Features (4 of 6 installed) <ul style="list-style-type: none"> — Default Document — Directory Browsing — HTTP Errors — Static Content ◆ Health and Diagnostics (2 of 6 installed) <ul style="list-style-type: none"> — HTTP Logging — Request Monitor ◆ Performance (1 of 2 installed) <ul style="list-style-type: none"> — Static Content Compression ◆ Security (5 of 9 installed) <ul style="list-style-type: none"> — Requesting Filtering — Basic Authentication — IP and Domain Restrictions — URL Authorization — Windows Authentication ◆ Application Development (5 of 11 installed) <ul style="list-style-type: none"> — .NET Extensibility 4.6 — Application Initialization — ASP.NET 4.6 — ISAPI Extensions — ISAPI Filters <input type="checkbox"/> Management Tools (6 of 7 installed) <ul style="list-style-type: none"> ◆ IIS Management Console ◆ IIS 6 Management Compatibility (4 of 4 installed) <ul style="list-style-type: none"> — IIS 6 Metabase Compatibility — IIS 6 Management Console — IIS 6 Scripting Tools — IIS 6 WMI Compatibility ◆ IIS Management Scripts and Tools
8. Confirmation	Review the roles, role services, and features to be installed, then click Install .

2d Wait for the installation to complete, then close the Add Roles and Features wizard.

2e Exit Server Manager.

2f Download and install [Microsoft .NET Framework 4.7.1 \(https://www.microsoft.com/en-us/download/details.aspx?id=56116\)](https://www.microsoft.com/en-us/download/details.aspx?id=56116) on your intended PlateSpin Server host.

1.2.4 Installing Prerequisite Software on Windows Server 2012 R2 Systems

Use the following procedure to install [prerequisite software](#) on the Microsoft Windows Server 2012 R2 servers where you plan to install PlateSpin Migrate Server. Before you begin, ensure that you are familiar with the “[System Requirements for PlateSpin Server](#)” on page 7 and “[General Guidelines for Server Installation](#)” on page 11.

To install required Microsoft software components:

- 1 Use the Local User Administrator (LUA) account to log in to your intended PlateSpin Server host.
- 2 Use Server Manager to install Web Server (IIS) and other software required by PlateSpin Server:
 - 2a Open Server Manager. Select **Start > All Programs > Administrative Tools > Server Manager**.
 - 2b In the Server Manager toolbar, select **Manage > Add Roles and Features**.
 - 2c In the Add Roles and Features wizard, proceed to the Installation Type tab, then continue through the wizard:

Add Roles and Features Wizard	Action
1. Installation Type	Select Role-based or feature-based installation , then click Next .
2. Server Selection	Select your intended PlateSpin Server host, then click Next .
3. Server Roles	Select Web Server (IIS) , then click Next .
4. Pop-up prompt to Add features that are required for Web Server (IIS)	Select Include management tools , then click Add Features to confirm your selection, then click Next on the Server Roles page to proceed to the Features list.
5. Features	Keep the default set of features for the Web Server and add other required features along with their sub-features as shown, then click Next . NOTE: .NET 4.5 is installed by the OS. PlateSpin Server will use .NET 4.7.1, as installed in Step 2f . <input type="checkbox"/> .NET Framework 4.5 Features (3 of 7 installed) <ul style="list-style-type: none">◆ .NET Framework 4.5◆ ASP.NET 4.5◆ WCF Services (1 of 5 installed)<ul style="list-style-type: none">— TCP Port Sharing <input type="checkbox"/> XPS Viewer
6. Web Server (IIS)	Read the information, then click Next .

Add Roles and Features Wizard	Action
7. Role Services	<p>Keep the default set of role services for the Web Server and add other required role services along with their sub-role services as shown, then click Next.</p> <p>Web Server (IIS) > Role Services (23 of 43 installed):</p> <ul style="list-style-type: none"> <input type="checkbox"/> Web Server (17 of 34 installed) <ul style="list-style-type: none"> ◆ Common HTTP Features (4 of 6 installed) <ul style="list-style-type: none"> — Default Document — Directory Browsing — HTTP Errors — Static Content ◆ Health and Diagnostics (2 of 6 installed) <ul style="list-style-type: none"> — HTTP Logging — Request Monitor ◆ Performance (1 of 2 installed) <ul style="list-style-type: none"> — Static Content Compression ◆ Security (5 of 9 installed) <ul style="list-style-type: none"> — Requesting Filtering — Basic Authentication — IP and Domain Restrictions — URL Authorization — Windows Authentication ◆ Application Development (5 of 11 installed) <ul style="list-style-type: none"> — .NET Extensibility 4.5 — Application Initialization — ASP.NET 4.5 — ISAPI Extensions — ISAPI Filters <input type="checkbox"/> Management Tools (6 of 7 installed) <ul style="list-style-type: none"> ◆ IIS Management Console ◆ IIS 6 Management Compatibility (4 of 4 installed) <ul style="list-style-type: none"> — IIS 6 Metabase Compatibility — IIS 6 Management Console — IIS 6 Scripting Tools — IIS 6 WMI Compatibility ◆ IIS Management Scripts and Tools
8. Confirmation	Review the roles, role services, and features to be installed, then click Install .

2d Wait for the installation to complete, then close the Add Roles and Features wizard.

2e Exit Server Manager.

2f Download and install [Microsoft .NET Framework 4.7.1 \(https://www.microsoft.com/en-us/download/details.aspx?id=56116\)](https://www.microsoft.com/en-us/download/details.aspx?id=56116) on your intended PlateSpin Server host.

1.2.5 Enabling Support for FIPS-Compliant Data Encryption Algorithms (Optional)

PlateSpin Migrate supports data encryption algorithms that are compliant with FIPS (*Federal Information Processing Standards*, Publication 140-2).

If compliance with FIPS is required, it must be enabled on the intended PlateSpin Server host prior to the installation of the PlateSpin Server. This is because PlateSpin Migrate runs in FIPS-compliant mode only if it detects that a workload's operating system is running in FIPS-compliant mode.

NOTE: FIPS-compliant mode has a performance impact and might slow down the data transfer rate up to 30%.

To enable FIPS-compliant algorithms:

- 1 Enable FIPS-compliant algorithms in the security options of your PlateSpin Migrate host's local security policies:
 - 1a Run `secpol.msc` and browse to **Local Policies > Security Options**.
 - 1b Enable the **System cryptography: Use FIPS compliant algorithms for encryption** security option.
- 2 Configure ASP.NET for FIPS support:

- 2a Access the `machine.config` file located in the following directory of your PlateSpin Server host:

```
..Windows\Microsoft.Net\Framework\vX.X.XXXXX\Config
```

- 2b Add the following under the `<system.web>` element:

```
<machineKey validationKey="AutoGenerate,IsolateApps"
decryptionKey="AutoGenerate,IsolateApps" validation="3DES"
decryption="3DES"/>
```

- 3 Access the `web.config` file in each of the below listed directories of your PlateSpin Server host and add the following under the `<system.web>` element of each of the `web.config` file:

```
<machineKey validationKey="AutoGenerate,IsolateApps"
decryptionKey="AutoGenerate,IsolateApps" validation="3DES"
decryption="3DES"/>
```

- ◆ `PlateSpin Migrate Install Directory\PlateSpin Forge\web\`
- ◆ `PlateSpin Migrate Install Directory\Web\`
- ◆ `PlateSpin Migrate Install Directory\ConfigurationEditor.Web\`
- ◆ `PlateSpin Migrate Install Directory\Protection.WebServices\`
- ◆ `PlateSpin Migrate Install Directory\OfxWeb\`

1.3 Installing PlateSpin Migrate Software Components

After you have installed and configured the prerequisite software, you are ready to install and configure software components for PlateSpin Migrate.

- ◆ [Section 1.3.1, “Starting the PlateSpin Migrate Installation Launcher,” on page 21](#)
- ◆ [Section 1.3.2, “Installing the Database Server,” on page 23](#)
- ◆ [Section 1.3.3, “Installing PlateSpin Server,” on page 27](#)
- ◆ [Section 1.3.4, “Installing the PlateSpin Migrate Client,” on page 30](#)

1.3.1 Starting the PlateSpin Migrate Installation Launcher

To install or upgrade the product, you must use the PlateSpin Migrate Setup utility (PlateSpinMigrateSetup-2019.2.0.x.exe). It extracts files and opens the Installation Launcher for Migrate components. The file is available from [Micro Focus Downloads \(https://www.microfocus.com/support-and-services/download/\)](https://www.microfocus.com/support-and-services/download/).

- 1 From [Micro Focus Downloads \(https://www.microfocus.com/support-and-services/download/\)](https://www.microfocus.com/support-and-services/download/), download the PlateSpinMigrateSetup-2019.2.0.x.exe installation program. Copy it to an accessible location on your intended PlateSpin Server host.
- 2 Log in to the PlateSpin Server host as a user with administrator rights.
Ensure that you are logged in with sufficient rights to perform the installation or upgrade. See [Credentials guidelines in Table 1-3, “Pre-Installation Checklist,” on page 11.](#)
- 3 Run the installation program and click **Next** to launch the prerequisites check utility.
The prerequisites check queries the host where you intend to install the PlateSpin Server. It verifies that all of the required software is installed or enabled. If you see any cautions or omissions, you need to either enable or install the prerequisite software before you proceed with the installation.
- 4 Click **Next** to open the Installation Launcher.
The installation program extracts the required files and opens the Installation Launcher window.

5 Use the Installation Launcher to do one of the following:

Installation Launcher Option	Remarks
Install SQL Server Express	
Installs the SQL Server Express Edition included with your PlateSpin Migrate Distribution	<p>A database server is required before you install the product. You can use SQL Server Express, or use your own Microsoft SQL Server Standard Edition or Enterprise Edition installed locally or remotely.</p> <p>For requirements, see:</p> <ul style="list-style-type: none"> ◆ Database Server in Table 1-1, “Host Requirements for PlateSpin Server,” on page 7 ◆ Database guidelines in Table 1-3, “Pre-Installation Checklist,” on page 11 <p>For installation and database server configuration instructions, see “Installing the Database Server” on page 23.</p>
Install PlateSpin Server	
Installs PlateSpin Server	<p>For requirements and guidelines, see</p> <ul style="list-style-type: none"> ◆ Table 1-1, “Host Requirements for PlateSpin Server,” on page 7 ◆ Table 1-3, “Pre-Installation Checklist,” on page 11 <p>You must install and configure prerequisite software before you install the product. See “Installing Prerequisite Software” on page 13.</p> <p>For instructions, see “Installing PlateSpin Server” on page 27.</p>
Upgrades PlateSpin Server	<p>For requirements and preparation for upgrade, see “Prerequisites for Upgrade” on page 51.</p> <p>Ensure that your server meets the software prerequisites before you upgrade the product. See “Prerequisite Software” on page 9.</p> <p>For instructions, see:</p> <ul style="list-style-type: none"> ◆ “Upgrading Migrate” on page 55 ◆ “Upgrading Migrate to a New Host Platform” on page 56
Install PlateSpin Migrate Client	
Installs PlateSpin Migrate Client	<p>For requirements, see Table 1-2, “Host Requirements for PlateSpin Migrate Client,” on page 10.</p> <p>For instructions, see “Installing the PlateSpin Migrate Client” on page 30.</p> <p>For upgrade, uninstall PlateSpin Migrate Client using Windows Uninstall Programs, then re-install PlateSpin Migrate Client.</p>

1.3.2 Installing the Database Server

You must set up a database server and configure a database instance before you install the product. Refer to [Table 1-4](#) to determine what tasks are needed for your preferred database server deployment.

Table 1-4 Database Server Deployment Options for PlateSpin Server

Location	Installation and Configuration	Database Connection and Credentials
Microsoft SQL Server Express Edition		
Local (default)	Install SQL Server Express Edition on the intended PlateSpin Server. See “Installing the SQL Server Express Edition Database Server” on page 24.	<p>Accept the local database server and database instance when you are prompted for the database connection.</p> <p>.\PLATESPINDB</p> <p>Use SQL Authentication and accept the default database credentials presented for the SQL system administrator (sa) user in the Login ID and Password.</p>
Microsoft SQL Server Standard Edition or Enterprise Edition		
Local	After you install SQL Server Standard Edition or Enterprise Edition locally on the intended PlateSpin Server, you must configure SQL Server for use with PlateSpin Migrate. See “Configuring Your Local Microsoft SQL Server Database Server” on page 25.	<p>Point to your custom local database server when you are prompted for the database connection. You need the database server name and database instance name.</p> <p>(local)\<database_instance_name></p> <p>NOTE: If you use Windows Authentication, you must log in as the domain user with SQL Admin rights when you upgrade or update PlateSpin Server. This user must also have local administrator rights. Also, the user you specify as the database Service User must have local administrator rights.</p>

Location	Installation and Configuration	Database Connection and Credentials
Remote	<p>For your existing remote SQL Server, you must configure SQL Server for use with PlateSpin Migrate and configure your network to allow a connection with PlateSpin Migrate. See “Configuring Your Remote Microsoft SQL Server Database Server” on page 26.</p>	<p>Point to your external database server when you are prompted for the database connection. You need the database server name and database instance name.</p> <pre data-bbox="930 367 1461 430"><database_server>\<database_instance_name></pre> <p>The port number is required if you use dynamic ports.</p> <pre data-bbox="930 535 1461 598"><database_server>\<database_instance_name>,<port_number></pre> <p>NOTE: If you use Windows Authentication, you must log in as the domain user with SQL Admin rights when you upgrade or update PlateSpin Server. This user must also have local administrator rights. Also, the user you specify as the database Service User must have local administrator rights.</p>

- ♦ [“Installing the SQL Server Express Edition Database Server”](#) on page 24
- ♦ [“Configuring Your Local Microsoft SQL Server Database Server”](#) on page 25
- ♦ [“Configuring Your Remote Microsoft SQL Server Database Server”](#) on page 26

Installing the SQL Server Express Edition Database Server

If you do not have an existing [Microsoft SQL Server database server](#) to use with PlateSpin Migrate, you can install Microsoft SQL Server 2017 Express Edition, which is included in your PlateSpin Migrate software distribution. The SQL Server Express installation sets up SQL authentication.

NOTE: The Microsoft SQL Server Express Edition included with PlateSpin Migrate cannot be installed on a domain controller in accordance with [Microsoft Developer Network recommendations](#).

To install Microsoft SQL Server Express:

- 1 Log in to the PlateSpin Server host as a user with administrative privileges.
If the computer is a domain computer, you must log in as a domain user who is a member of the Domain Admin group and the local Admin group.
- 2 On your intended database server host, start the Installation Launcher.
See [“Starting the PlateSpin Migrate Installation Launcher”](#) on page 21.
- 3 Click **Install SQL Server Express** and follow the on-screen instructions.
The program installs a database server and the database instance required for the operation of PlateSpin Migrate. It also sets generates credentials needed for SQL authentication.

NOTE: A password for the SQL system administrator (sa) user is automatically generated during the installation of Microsoft SQL Server Express Edition. Keep the default sa credentials throughout the PlateSpin Migrate Server installation.

After the installation is complete and you have activated the license for the product, you should modify the SQL administrator password. See [“Modifying the Password for the SQL Server Express System Administrator User” on page 34.](#)

- 4 Continue with [“Installing PlateSpin Server” on page 27.](#)

Configuring Your Local Microsoft SQL Server Database Server

If you install your Microsoft SQL Server Standard Edition or Enterprise Edition on the intended PlateSpin Migrate server, you must configure specific settings in SQL Server and in your environment before you install the product.

NOTE: Using this local SQL Server database server to service other applications in your environment can negatively impact the performance of PlateSpin Migrate.

To configure SQL Server on the Migrate Server host:

- 1 Ensure that your database server is running a supported version of Microsoft SQL Server. See [“Database Server” on page 8.](#)
- 2 Ensure that you have a dedicated, named database instance to use with your intended PlateSpin Migrate server.

You need the database server name and database instance name during the product installation.
- 3 (Conditional, Windows Authentication) Windows Authentication for your existing database server is available in a domain environment. If you plan to use Windows Authentication to access the Microsoft SQL Server database, you must configure the following in Active Directory:
 - ◆ You must add the Microsoft SQL Server database server to the domain.
 - ◆ You need two domain user accounts for the PlateSpin Migrate installation.
 - ◆ **A Domain user with the sysadmin role set:** This user with SQL Admin rights is required to create databases, tables, and other schema objects.
 - ◆ **PlateSpin Service user:** The service user can be a low-privileged domain user in the domain. However, the service user must be a local administrator on the PlateSpin Migrate Server and should be granted that permission prior to the installation.

NOTE: If the Windows user’s password changes, you must update the password for the PlateSpin Service user and for the IIS App Pool. Consider using a Windows user whose password never expires to avoid the situation.

NOTE: If you use Windows Authentication, you must log in as the domain user with SQL Admin rights when you upgrade or update PlateSpin Server. This user must also have local administrator rights. Also, the user you specify as the database Service User must have local administrator rights.

- 4 Continue with [“Installing PlateSpin Server” on page 27.](#)

Configuring Your Remote Microsoft SQL Server Database Server

If you use a remote Microsoft SQL Server database server, you must configure specific settings in your environment before you install the product. These settings allow the remote connection between your SQL Server and PlateSpin Server.

NOTE: You can use the same remote Microsoft SQL Server database server to host database instances for multiple PlateSpin Protect and PlateSpin Migrate servers. Each database instance must be uniquely named and configured separately for its associated PlateSpin Server.

To prepare your existing remote SQL server:

- 1 Ensure that your database server is running a supported version of Microsoft SQL Server. See [“Database Server” on page 8](#).
- 2 Ensure that you have a dedicated, named database instance to use with your intended PlateSpin Migrate server. You need the database server name and database instance name during the product installation.
3. Ensure that you configure Microsoft SQL Server to allow both TCP/IP and Named Pipe connections.
- 4 (Conditional, Windows Authentication) Windows Authentication for your existing database server is available in a domain environment. If you plan to use Windows Authentication to access the Microsoft SQL Server database, you must configure the following in Active Directory:
 - ◆ You must add the Microsoft SQL Server database server to the domain.
 - ◆ You need two domain user accounts for the PlateSpin Migrate installation.
 - ◆ **A Domain user with the `sysadmin` role set:** This user with SQL Admin rights is required to create databases, tables, and other schema objects.
 - ◆ **PlateSpin Service user:** The service user can be a low-privileged domain user in the domain. However, the service user must be a local administrator on the PlateSpin Migrate Server and should be granted that permission prior to the installation.

NOTE: If the Windows user’s password changes, you must update the password for the PlateSpin Service user and for the IIS App Pool. Consider using a Windows user whose password never expires to avoid the situation.

NOTE: If you use Windows Authentication, you must log in as the domain user with SQL Admin rights when you upgrade or update PlateSpin Server. This user must also have local administrator rights. Also, the user you specify as the database Service User must have local administrator rights.

- 5 Open the following ports on the firewall to support authentication to your remote SQL Server:
 - ◆ **Ports 49152-65535/TCP:** Allow traffic for RPC for LSA, SAM, Netlogon.
 - ◆ **Port 1433/TCP:** Allow traffic for Microsoft SQL Server.
 - ◆ **Custom ports:** If you configure SQL Server to use a custom TCP port, you must open that port on the firewall.

NOTE: If you do not use dynamic ports, you must specify the dedicated port in the **Database Server** field.

6 (Conditional) If you want to use dedicated ports with PlateSpin Migrate, you must open the ports on the firewall:

6a On the database server, determine which ports need to be opened:

6a1 In the SQL Server Configuration Manager, expand SQL Server Network Configuration, select **Protocols for <your-database-instance-name>**, then right-click **TCP/IP** and select **Properties**.

6a2 In the TCP/IP Properties dialog, select the **IP Addresses** tab.

6a3 Under **IPAll**, you will see the ports used by the specified database instance of SQL Server in **TCP Dynamic Ports** for a dynamic port or **TCP Port** for a static port. If **TCP Port** or **TCP Dynamic Ports** is set to any value other than 0, open the specified ports on the firewall. These are the ports you use to connect to the SQL Server.

For example, if the **TCP Dynamic Ports** field is set to 60664, and the **TCP Port** field is set to 1555, then you must enable Port 60664 and 1555 in the firewall rules on the SQL server.

6b Open the ports on the firewall.

NOTE: If you have a value set for dynamic ports, you may not see your server in the list of SQL servers when you click **Browse** during an installation or upgrade process. In this case, you must specify the server manually in the **Database Server** input field of the PlateSpin Migrate installation.

For example, if your server name is `MYSQLSERVER`, the database instance name is `PLATESPINDB`, and the dedicated port set for the dynamic port is `60664`, you type the following text, and then select the desired authentication type:

```
MYSQLSERVER\PLATESPINDB,60664
```

You must open the port on the firewall.

7 Continue with [“Installing PlateSpin Server” on page 27](#).

1.3.3 Installing PlateSpin Server

1 Before you install PlateSpin Server, you must ensure the following requirements are met:

- ◆ The PlateSpin Server host meets the minimum system requirements. See [“System Requirements for PlateSpin Server” on page 7](#).
- ◆ The PlateSpin Server host has the necessary prerequisite software installed. See [“Installing Prerequisite Software” on page 13](#).
- ◆ A database server is available and has a dedicated database instance for PlateSpin Migrate. See [“Installing the Database Server” on page 23](#).

2 Log in to the PlateSpin Server host as a user with administrative rights.

If the server is a domain computer, you must log in as a domain user who is a member of the Domain Admin group and the local Admin group.

If you use Windows Authentication for your SQL Server Standard Edition or Enterprise Edition database server, you must log in as the domain user with SQL Admin rights. This user must also have local administrator rights. In addition, the Service User you specify for SQL Server credentials must have local administrator rights.

3 On the PlateSpin Server host, launch the Installation Launcher.

See “Starting the PlateSpin Migrate Installation Launcher” on page 21.

- 4 Click **Install PlateSpin Server** and follow the on-screen instructions.
- 5 Read the software license agreement, select the **I accept the terms in the license agreement** option, then click **Next**.
You must accept the software license agreement before installing the product.
- 6 Specify a location for the temporary setup files, then click **Next**.
- 7 (Database Server, Windows Authentication) If you use Windows Authentication for your existing database server (that you are using instead of SQL Server Express Edition), configure the database connection and provide appropriate credentials for the database administrator and database service user.

Installation Screen	Do the following:
Database Connection Information	<ol style="list-style-type: none"> 1. Click Browse to select the Database Server. <code><database_server>\<database_instance_name></code> If you use dynamic ports, you must also type the port number: <code><database_server>\<database_instance_name>, <port_number></code> 2. Select Windows Authentication as the Authentication Type. Windows Authentication is supported only in a domain environment. 3. Click Next.
Database Administrative Credentials	<ol style="list-style-type: none"> 1. Specify the credentials for the Database Administrator. For example: Down-Level Logon User: <code>CORPDOM\sqladmin</code> Password: <code><sqladminPwd></code> NOTE: You must specify the domain administrator credentials or the credentials of a domain user having sufficient administrator and database rights. 2. Click Validate Credentials to validate the credentials. 3. Click Next.
Database User Credentials	<ol style="list-style-type: none"> 1. Do one of the following: <ul style="list-style-type: none"> ♦ Select Same as the Database Administrator to use the database administrator credentials to access the database service. ♦ Specify the credentials for the Database Service user. For example: Down-Level Logon User: <code>CORPDOM\sqluser1</code> Password: <code><sqluser1Pwd></code> The Service User must also have local administrator rights. 2. Click Validate Credentials to validate the credentials. 3. Click Next.

Installation Screen	Do the following:
Confirm SQL Connection	<ol style="list-style-type: none"> 1. Review the information. 2. Click Back to edit the SQL connection information or click Next to continue.

- 8** (Database Server, SQL Authentication) If you use SQL Authentication for the database server, configure the database connection and provide appropriate credentials for the database administrator.

Use this option if you are using the Microsoft SQL Server Express Edition database server included in PlateSpin Migrate. The Installation automatically generates a password for the SQL system administrator user (sa) and uses it during the installation.

NOTE: You should set a custom password after the PlateSpin Server installation is completed and you have activated the license. See [“Modifying the Password for the SQL Server Express System Administrator User” on page 34.](#)

Installation Screen	Do the following:
Database Connection Information	<ol style="list-style-type: none"> 1. Click Browse to select the Database Server. SQL Server Express database: Leave the default selection of <code>.\PLATESPINDB</code> in the drop-down list and keep the suggested <code>sa</code> user credentials on the next screen. NOTE: If you subsequently move your PlateSpin Migrate database instance or change your SQL Server password, you must reset the PlateSpin Migrate database connection settings. See KB Article 7970523 (https://support.microfocus.com/kb/doc.php?id=7970523). Existing database: Browse to select from a list of available database servers. For example: <code>.\PLATESPINDB</code> <code><database_server>\<database_instance_name></code> <code><database_server>\<database_instance_name>, <port_number></code> 2. Select SQL Authentication as the Authentication Type. 3. Click Next.
Database Administrative Credentials	<ol style="list-style-type: none"> 1. Specify the credentials for the Database Administrator for SQL authentication. If you use the SQL Server Express database, keep the default values: Login ID: <code>sa</code> Password: <code><generated-password-obscured></code> 2. Click Validate Credentials to validate the credentials. 3. Click Next.

Installation Screen	Do the following:
Confirm SQL Connection	<ol style="list-style-type: none"> 1. Review the information. 2. Click Back to edit the SQL connection information or click Next to continue.

- 9 After you specify and validate credentials for the database server, click **Next**.
- 10 On the IIS Configuration screen, specify whether you want to allow HTTP or HTTPS connections. To allow unsecured connections (HTTP), select the **Allow unsecured connections (HTTP)** option.
If your IIS server has a signed SSL certificate, the communication protocol is HTTPS by default. Your browser might display a `untrusted connection` warning message. For information on how to proceed, see your browser-specific documentation.
- 11 Click **Next**, verify the installation settings, then click **Install** and follow the on-screen prompts.

NOTE: This process of installing the PlateSpin Migrate server might take several minutes to complete.

- 12 (Optional) Select **Start the Migrate web client** to launch the PlateSpin Migrate Web Client immediately after the installation is complete.
You can use the PlateSpin Migrate Web Interface to activate the license. For more information, see [“License Activation Using the Web Interface”](#) in the *PlateSpin Migrate 2019.2 User Guide*.
- 13 (Optional) Continue with [“Installing the PlateSpin Migrate Client”](#) on page 30.

1.3.4 Installing the PlateSpin Migrate Client

You have two installation options for the PlateSpin Migrate Client:

- ♦ [“Installing the Client from within the Installation Launcher”](#) on page 30
- ♦ [“Downloading the Client from Your PlateSpin Server”](#) on page 31
- ♦ [“Starting the Client and Activating the License”](#) on page 31

Installing the Client from within the Installation Launcher

Use this option to install the Client on the same host with your PlateSpin Server immediately after the completion of the Server installation.

- 1 Complete the Server installation.
See [“Installing PlateSpin Server”](#) on page 27.
- 2 In the Installation Launcher window, click **Install PlateSpin Client** and follow the on-screen instructions.
The installation program installs and configures the PlateSpin Migrate Client, preparing it to run.

Downloading the Client from Your PlateSpin Server

Use this option to install the Client on a remote host by using a Web browser at any time after the completion of the Server installation.

- 1 Complete the PlateSpin Server installation.
See [“Installing PlateSpin Server” on page 27](#).
- 2 Make sure your intended PlateSpin Migrate Client host meets the minimum system requirements.
See [“System Requirements for PlateSpin Migrate Client” on page 10](#).
- 3 On your intended PlateSpin Migrate Client host, open a Web browser and navigate to the following URL:

`http://<server_host>/platespinmigrate`

Replace `server_host` with the actual name or IP address of your PlateSpin Server host. If the PlateSpin Server is installed on the local computer, replace `server_host` with `localhost`. If SSL is enabled, use the `https` protocol in the URL.

The browser loads the PlateSpin Server’s home page.

- 4 Click the PlateSpin Migrate Client download link, download the PlateSpin Migrate Client software, and install it by following the on-screen instructions.

Starting the Client and Activating the License

To start the client, click **Start > Programs > PlateSpin Migrate > PlateSpin Migrate Client**. When you install and launch the PlateSpin Migrate Client for the first time, the License Wizard opens and prompts you to activate your copy of the software. For help with product licensing, see [“PlateSpin Migrate Product Licensing”](#) in the *PlateSpin Migrate 2019.2 User Guide*.

You can also use the PlateSpin Migrate Web Interface to activate the license. For more information, see [“License Activation Using the Web Interface”](#) in the *PlateSpin Migrate 2019.2 User Guide*.

1.4 Installing the PlateSpin Migrate Software Components Using a Batch File

To silently install the PlateSpin Migrate Software Components:

- 1 From [Micro Focus Downloads \(https://www.microfocus.com/support-and-services/download/\)](https://www.microfocus.com/support-and-services/download/), download the `PlateSpinMigrateSetup-2019.2.0.x.exe` installation program and save it on your intended PlateSpin Server host where you have installed and configured the prerequisite operating system and applications. See [Section 1.2, “Installing Prerequisite Software,” on page 13](#).
- 2 Double-click the `PlateSpinMigrateSetup-2019.2.0.x.exe` and extract the contents to a folder of your preference, such as `C:\Install\`.

IMPORTANT: Do not extract the contents of the `.exe` file to the default folder.

- 3 After the files are extracted, click **Cancel** to exit the installation wizard.

4 Depending on your desired installation type, copy and paste one of the following scripts to a batch file and execute the batch file after modifying the installation path as applicable.

◆ **For a local Microsoft SQL Server Express Edition database:**

```
C:\Migrate-2019_2\PlateSpinImage\ServerInstall\setup.exe /s /v/qn /
v"/l*v c:\install.log" ^
/v"DBINSTALLTYPE=customerinstall" ^
/v"IS_SQLSERVER_SERVER=(local)\PLATESPINDB" ^
/v"IS_SQLSERVER_USERNAME= domain\sqladminUser " ^
/v"IS_SQLSERVER_USER_USERNAME= domain\sqlServiceUser " ^
/v"IS_SQLSERVER_PASSWORD=sqlauthenticationpwd"
```

◆ **For a remote Microsoft SQL Server Express database:**

```
C:\Migrate-2019_2\PlateSpinImage\ServerInstall\setup.exe /s /v/qn /
v"/l*v c:\install.log" ^
/v"INSTALLDIR=c:\Migrate" ^
/v"DBINSTALLTYPE=remotedb" ^
/v"IS_SQLSERVER_SERVER=BM7W2K12SQL\BM8INSTANCE,59977" ^
/v"IS_SQLSERVER_AUTHENTICATION=0" ^
/v"IS_SQLSERVER_USERNAME= domain\sqladminUser " ^
/v"IS_SQLSERVER_USER_USERNAME= domain\sqlServiceUser " ^
/v"IS_SQLSERVER_USER_PASSWORD=sqlauthenticationpwd"
```

Property	Definition
DBINSTALLTYPE	Specifies the database install type: <ul style="list-style-type: none"> ◆ For an embedded database: customerInstall ◆ For a remote database: remotedb
INSTALLDIR	Specifies the installation directory. For example: C:\Program Files\PlateSpin Migrate Server
IS_SQLSERVER_AUTHENTICATION	Specifies the authentication method to be used: <ul style="list-style-type: none"> ◆ For Windows authentication: 0 ◆ For SQL authentication: 1
IS_SQLSERVER_SERVER	Specifies the database server: <ul style="list-style-type: none"> ◆ For a local database: (local)\PLATESPINDB ◆ For a remote database: DatabaseServerName\databaseInstance
IS_SQLSERVER_PASSWORD	Specifies the password for the database administrator.
IS_SQLSERVER_USER_PASSWORD	Specifies the password for the database service user.
IS_SQLSERVER_USERNAME	Specifies the database administrator user name in the format domain\sqladminUser.

Property	Definition
IS_SQLSERVER_USER_USERNAME	Specifies the database service user name in the format domain\sqlServiceUser.

1.5 Post-Installation Tasks

- 1 (Optional, recommended) Set a secure custom password for the SQL system administrator user (sa).
See [“Modifying the Password for the SQL Server Express System Administrator User”](#) on page 34.
- 2 (Optional) Configure the Migrate Server and source workloads to connect using only the TLS 1.2 protocol.
 - 2a Disable TLS 1.0 and 1.1 protocols for the Windows operating system on the PlateSpin Migrate Server host.
See [Section 1.8, “Configuring TLS Protocols for Migrate Hosts,”](#) on page 35.
 - 2b Configure source workload to connect using TLS 1.2.
See [“Configuring Source Workloads to Connect Using TLS 1.2”](#) in the *PlateSpin Migrate 2019.2 User Guide*.
- 3 Configure preferences for checking for Migrate software updates.
See [Section 1.6, “Checking for Software Updates,”](#) on page 33.

1.6 Checking for Software Updates

When the PlateSpin Migrate Client starts, it automatically checks the current version of the product and displays any available updates in the Update Availability dialog box.

To prevent the system from automatically checking for updates every time:

- 1 In the Update Availability dialog box, select the **Do not check for update at startup** option.
- 2 Click **OK**.

To re-enable automatic software update checks:

- 1 In the PlateSpin Migrate Client, click **Tools > Options**.
- 2 In the **General** tab, select **Restore Defaults**.
- 3 Click **OK**.

To manually check for version updates:

- 1 In the PlateSpin Migrate Client, click **Help > Check for Update**.

The system checks the current version of the product and shows updates if they are available. To download a specific software update or hotfix, follow the provided URL.

1.7 Modifying the Password for the SQL Server Express System Administrator User

If you installed Microsoft SQL Server Express Edition, the installation automatically generated a password for the SQL system administrator user (`sa`). You can use your Windows Administrator credentials and SQL management tools to modify the password without needing to know the generated password.

NOTE: For improved security, we strongly recommend that you modify the password for the `sa` credentials after the PlateSpin Server installation is completed and you have activated the license for the product. After you set a custom password for the `sa` user, you must be able to provide the password when you apply future upgrades for PlateSpin Server software.

The Microsoft SQLCMD (`sqlcmd`) utility is included in the SQL Server Express software. You can use this tool to modify the SQL system administrator password for your SQL Server Express database engine. After you change the password, you must update the information for PlateSpin Server and restart the Platespin Server service.

To change the SQL Server Express `sa` user password:

- 1 Log in to the PlateSpin Server host as the local Administrator user.
- 2 Launch the Administrator Command Prompt.
- 3 Modify the SQL system administrator password. Enter

```
sqlcmd -S .\PlateSpinDB -E -Q "ALTER LOGIN sa WITH PASSWORD =  
'${NewPassword}'"
```

This SQLCMD syntax executes the query that follows the `-Q` option, and then exits the SQLCMD utility.

NOTE: Run the command on the SQL Server Express host if you installed it on a different server.

This command uses the `ALTER LOGIN` syntax rather than the `sp_password` stored procedure as recommended by Microsoft in the [sp_password \(Transact-SQL\) documentation](#).

For information about syntax and commands for SQLCMD, see [SQLCMD Utility](#) on the Microsoft website.

- 4 Update PlateSpin with the new password for the SQL system administrator user. Enter

```
%PROGRAM FILES%\PlateSpin Migrate  
Server\bin\PlateSpin.UpdateConnectionString.exe /  
instance=.\PlateSpinDB /username=sa /password=${NewPassword}
```

- 5 Restart the PlateSpin Server service. Enter

```
%PROGRAM FILES%\PlateSpin Migrate  
Server\bin\RestartPlateSpinServer\RestartPlateSpinServer.exe
```

1.8 Configuring TLS Protocols for Migrate Hosts

PlateSpin Migrate server supports connections using Transport Layer Security (TLS) 1.0, TLS 1.1, or TLS 1.2 protocol, according to the protocols enabled on its host operating system. We recommend that you enable TLS 1.2 protocol in the Windows Registry settings on the Migrate Server host. For instructions, see “[TLS 1.2](https://docs.microsoft.com/en-us/windows-server/security/tls/tls-registry-settings)” in [Transport Layer Security \(TLS\) Registry Settings](https://docs.microsoft.com/en-us/windows-server/security/tls/tls-registry-settings) (<https://docs.microsoft.com/en-us/windows-server/security/tls/tls-registry-settings>) in Microsoft Documentation.

NOTE: For the PlateSpin Migrate Server images available in cloud marketplaces, TLS 1.2 is enabled by default on the Migrate Server host. See [Section 2.1.5, “TLS Protocols,” on page 40](#).

The TLS settings on the Migrate Server host must allow connections appropriate for the source workload. Conversely, the TLS settings and .NET Framework version installed on each source workload operating system must allow connections appropriate for the TLS protocols you enable for the Migrate server host OS.

The TLS protocols that you enable on the Migrate server host OS determine what TLS protocols that source workloads can use to connect. Allowing TLS 1.0 or TLS 1.1 enables you to migrate source workloads with older operating systems that do not support TLS 1.2 or that do not support TLS 1.2 by default. For example:

- ◆ Windows Server 2008 does not support TLS 1.2.
- ◆ Windows Server 2008 R2 supports TLS 1.2, but that protocol is disabled by default. To enable the source workload to connect to a Migrate Server using TLS 1.2, you must enable TLS 1.2 for the operating system on the source workload.
- ◆ Microsoft .NET 3.5 does not support TLS 1.2 by default. You must do one of the following on the source workload to enable connections using TLS 1.2:
 - ◆ Apply a Microsoft patch.
 - OR-
 - ◆ Install Microsoft .NET 4.x.

Enabling connections using TLS 1.2 protocol on a source workload might require that you install OS patches and Microsoft .NET Framework on the workload and modify its Windows Registry settings. For information about enabling TLS 1.2 on source Windows workloads, see “[Configuring Source Workloads to Connect Using TLS 1.2](#)” in the *PlateSpin Migrate 2019.2 User Guide*.

You can optionally disable TLS 1.0 and TLS 1.1 protocols for the operating system on the Migrate Server host. The same Registry settings can be used for the Migrate Client host and for source workloads that support TLS 1.2. For information about disabling TLS 1.0 and 1.1 protocols for Windows operating systems, see “[TLS 1.0](#)” and “[TLS 1.1](#)” in [Transport Layer Security \(TLS\) Registry Settings](https://docs.microsoft.com/en-us/windows-server/security/tls/tls-registry-settings) (<https://docs.microsoft.com/en-us/windows-server/security/tls/tls-registry-settings>) in Microsoft Documentation.

IMPORTANT: Disabling TLS 1.0 prevents operating systems that do not support TLS 1.2 from migrating.

1.9 Security Best Practices for PlateSpin Hosts

As a security best practice, you should apply patches that address security vulnerabilities to your PlateSpin Migrate Server host and PlateSpin Migrate Client host, as you would for other Windows servers in your enterprise.

Micro Focus is aware of the side-channel analysis vulnerabilities described in CVEs 2017-5715, 2017-5753 and 2017-5754, known as Meltdown and Spectre. The current recommended actions have been applied on the PlateSpin Server images in the cloud.

We strongly recommend that you continue to apply security updates that address such threats as recommended by Microsoft for the Windows operating system for the PlateSpin Server host and PlateSpin Migrate Client host. Consult the vendor documentation for information. See *Protect Your Windows Devices Against Spectre and Meltdown* (<https://support.microsoft.com/en-us/help/4073757/protect-your-windows-devices-against-spectre-meltdown>) on the Microsoft Support website.

2 Deploying PlateSpin Migrate Server in the Cloud

You can deploy a PlateSpin Migrate server in Amazon Web Services EC2 cloud or in Microsoft Azure cloud. You must deploy Migrate server in the cloud to support workload migrations to and from that cloud environment when no site-to-site VPN is available.

- ♦ **For Azure:** You can add the PlateSpin Migrate server from a template offered in a Azure marketplace, or install Migrate server on a virtual host that you have set up for that purpose.
- ♦ **For AWS:** You can use the AWS Quick Start to quickly and easily deploy PlateSpin Migrate server on the AWS Cloud, or install Migrate server on a virtual host that you have set up for that purpose.
- ♦ [Section 2.1, “Requirements for Deploying a Migrate Server in the Cloud,” on page 37](#)
- ♦ [Section 2.2, “Deployment for PlateSpin Migrate Server in the Cloud,” on page 40](#)
- ♦ [Section 2.3, “Required Network Security Group Settings for PlateSpin Migrate Server,” on page 41](#)
- ♦ [Section 2.4, “About PlateSpin Migrate Server Templates in Cloud Marketplaces,” on page 42](#)
- ♦ [Section 2.5, “About PlateSpin Migrate Support for AWS Quick Start,” on page 42](#)
- ♦ [Section 2.6, “Deploying a Migrate Server Image in AWS,” on page 43](#)
- ♦ [Section 2.7, “Deploying a Migrate Server Image in Azure,” on page 43](#)
- ♦ [Section 2.8, “Checklist for Manually Deploying a Migrate Server in the Cloud,” on page 44](#)
- ♦ [Section 2.9, “Configuring Advanced Settings for a Cloud-Based Migrate Server,” on page 45](#)
- ♦ [Section 2.10, “Configuring Advanced PlateSpin Settings for AWS,” on page 46](#)
- ♦ [Section 2.11, “Configuring the Contact Direction for the Replication Port,” on page 48](#)
- ♦ [Section 2.12, “Configuring Alternate IP Addresses for PlateSpin Server,” on page 49](#)
- ♦ [Section 2.13, “Enabling a Cloud-Based Migrate Server to Handle Migrations to Other Target Platforms,” on page 49](#)

2.1 Requirements for Deploying a Migrate Server in the Cloud

Before you install PlateSpin Migrate server in the cloud, ensure that you understand the following requirements for your cloud environment.

- ♦ [Section 2.1.1, “Cloud Account,” on page 38](#)
- ♦ [Section 2.1.2, “Non-VPN Deployment,” on page 39](#)
- ♦ [Section 2.1.3, “Static Public IP Address,” on page 40](#)

- ◆ Section 2.1.4, “Network Security Group,” on page 40
- ◆ Section 2.1.5, “TLS Protocols,” on page 40

2.1.1 Cloud Account

Set up an account in the cloud environment. Ensure that the cloud account is correctly configured and available. See [Table 2-1](#) for an AWS account or [Table 2-2](#) for an Azure account, as appropriate for your migration environment.

Table 2-1 AWS Account Requirements

AWS Configuration	Description
AWS Account	To create an AWS account, go to Amazon Web Services Console (http://aws.amazon.com) .
AWS EC2 Subscription	PlateSpin supports only Amazon Virtual Private Cloud (VPC).
Amazon Virtual Private Cloud (VPC)	Create an AWS VPC to launch AWS resources into your virtual network. See Amazon Virtual Private Cloud Documentation .
AWS user credentials	<p>You need an AWS Identity and Access Management (IAM) user in your AWS account, with an appropriate IAM role to perform migrations into the VPC using the AWS APIs.</p> <p>PlateSpin Migrate provides an AWS Role Tool to enable an administrative user to create a new IAM policy based on a default policy and assign an IAM user to the policy. See Creating an IAM Policy and Assigning an IAM User to the Policy in the PlateSpin Migrate 2019.2 User Guide.</p> <p>Enable Programmatic Access for the IAM user to generate an access key and a secret access key. AWS Management Console Access is optional, but it can be useful for troubleshooting. See Access Keys (Access Key ID and Secret Access Key) (https://docs.aws.amazon.com/general/latest/gr/aws-sec-cred-types.html#access-keys-and-secret-access-keys).</p> <p>NOTE: We recommend that administrators regularly rotate access keys for IAM users. However, the keys must be rotated only after ensuring that no migration workflow is in progress. See “Rotating Access Keys” in the AWS Identity and Access Management User Guide.</p>

Table 2-2 Azure Account Requirements

Azure Configuration	Description
Microsoft Azure Account.	<p>Create a account in the Azure environment where you will migrate workloads:</p> <ul style="list-style-type: none">◆ Azure Global (http://portal.azure.com/)◆ Azure China Portal (http://portal.azure.cn/)◆ Azure Government (https://portal.azure.us/)◆ Azure Germany (https://portal.microsoftazure.de/) <p>An administrator on the account is required to perform the Application setup, to enable PRE programmatic access, and to create a Contributor user that is to be used by Migrate.</p>
Azure Subscription ID	<p>The ID for the Azure Subscription in the specified Azure account that you want to bill for Azure-related costs. An account can have multiple subscriptions.</p>
Contributor user for the subscription created in Azure Active Directory	<p>A user created as a Contributor for the specified subscription in your Azure Active Directory.</p> <p>In Migrate, you use the Contributor user credentials to add Azure as a target in Migrate. Migrate uses the credentials for this user when it accesses the Migrate Azure API through the related subscription.</p>
Azure Virtual Network and Subnet	<p>You must create least one Virtual Network with a Subnet in the specified Subscription. If you have an site-to-site VPN set up, the subnet must be different than the default Gateway Subnet.</p>

2.1.2 Non-VPN Deployment

A cloud-based PlateSpin Migrate server does not require a site-to-site VPN connection between your local data center and the target cloud platform. When no VPN is provided:

- ◆ Internet access is required.
- ◆ Public IP addresses are required for the PlateSpin Migrate server, the replication network, and target machines. A public IP address is not required for the source machine when you use the Migrate Agent. If you do not use the Migrate Agent, then all components need public IP addresses.
- ◆ Use Migrate Agent to register workloads with the cloud-based Migrate server. Migrate Agent uses secure communications over the public Internet.
- ◆ You should encrypt data transfer between the source network and cloud location.
- ◆ For cloud targets, compression is enabled by default with a setting of Optimal.

2.1.3 Static Public IP Address

Use a static IP address for the Migrate server to ensure that the IP address does not change when the server is restarted. A change in IP address on the PlateSpin Server breaks the heartbeat communications with source workloads.

- ♦ **AWS:** Specify **Elastic** as the allocation method for the public IP address for the Migrate server.
- ♦ **Azure:** Specify **Static** as the allocation method for the public IP address of the Migrate server.

NOTE: You cannot specify the actual IP address assigned to the public IP resource. The cloud vendor allocates and reserves an IP address from a pool of its available IP addresses in the location where you deploy the Migrate server.

2.1.4 Network Security Group

Ensure that the network security group for the PlateSpin Migrate server allows the minimum port settings described in [Section 2.3, “Required Network Security Group Settings for PlateSpin Migrate Server,”](#) on page 41.

2.1.5 TLS Protocols

Transport Layer Security (TLS) 1.2 is automatically enabled for the Windows operating system on the PlateSpin Migrate Server virtual host for Migrate servers available in a cloud marketplace. TLS 1.0 and TLS 1.1 are disabled by default.

Migrate provides scripts to easily enable or disable TLS 1.0 and TLS 1.1 on the Migrate server virtual host in the C:\Windows\OEM folder:

```
DisableTLS-1_and_1.1  
EnableTLS-1_and_1.1
```

2.2 Deployment for PlateSpin Migrate Server in the Cloud

For information about non-VPN deployment scenarios that require a cloud-based PlateSpin Migrate server, see the following information in [“Preparing Your Migration Environment”](#) in the *PlateSpin Migrate User Guide*:

- ♦ [“Deployment for Migration to Amazon Web Services”](#)
- ♦ [“Deployment for Migration to Azure”](#)
- ♦ [“Prerequisites for Cloud-to-Cloud Migrations”](#)
 - ♦ [“Deployment for C2C Migration from AWS to Azure”](#)
 - ♦ [“Deployment for C2C Migration from Azure to AWS”](#)
 - ♦ [“Deployment for C2C Migration from Azure to vCloud”](#)
 - ♦ [“Deployment for C2C Migration from vCloud to Azure”](#)
 - ♦ [“Deployment for C2C Migration from AWS to vCloud”](#)
 - ♦ [“Deployment for C2C Migration from vCloud to AWS”](#)

2.3 Required Network Security Group Settings for PlateSpin Migrate Server

Table 2-5 describes the minimum default port settings required for the network security group for the PlateSpin Migrate server in the cloud. These settings are required in both VPN and non-VPN deployment scenarios.

NOTE: For PlateSpin Migrate servers available through a cloud marketplace, the network security group is created and configured automatically with the default port settings.

Additional ports might be required, depending on your migration scenario. See “[Access and Communication Requirements across Your Migration Network](#)” in the *PlateSpin Migrate 2019.2 User Guide*.

Table 2-3 Network Security Group Settings for PlateSpin Migrate Server Communications

Ports	Inbound/ Outbound	Protocol	Remark
443, TCP	Inbound and Outbound	HTTPS	
3389, TCP	Inbound and Outbound	RDP	Required only for traffic from your management network.
22, TCP	Outbound	SSH	Required to communicate with target Linux workloads.
123, TCP	Outbound	Network Time Protocol (NTP)	AWS uses this port to synchronize time for cloud instances in the Amazon Region where it is deployed by using the Amazon Time Sync Service. For Azure, add this port setting to the security group if you are using an NTP service outside the virtual network where you deploy the Migrate server.
61613, TCP	Outbound	STOMP	This port is closed by default on Migrate server. It is required only if you are using the Migrate server with PlateSpin Transformation Manager in a PlateSpin Migration Factory environment. NOTE: No messages are published by Event Messaging unless you open port 61613 on the Migrate server host to allow registration by subscribers, and a PlateSpin Migrate Connector subscribes.

For information about configuring a network security group in the cloud, refer to the following vendor documentation:

- ♦ **AWS:** *Security Groups for Your VPC* (https://docs.aws.amazon.com/AmazonVPC/latest/UserGuide/VPC_SecurityGroups.html) in Amazon Web Services EC2 Documentation.
- ♦ **Azure:** *Create, Change, or Delete a Network Security Group* (<https://docs.microsoft.com/en-us/azure/virtual-network/manage-network-security-group>) in Microsoft Azure Documentation.

2.4 About PlateSpin Migrate Server Templates in Cloud Marketplaces

PlateSpin Migrate provides preconfigured template for PlateSpin Migrate server in the Azure Marketplace. For usage information, see [Table 2-4](#).

NOTE: The preconfigured template for this release will be available shortly after General Availability of this release and is available until after General Availability of the next release when PlateSpin Migrate releases the updated version of the template.

Table 2-4 *PlateSpin Migrate Server Templates in Cloud Marketplaces*

Cloud Marketplace	Description
Microsoft Azure Global	Use for migration of Windows and Linux workloads to or from your Azure account in the Azure global cloud environment. See “ Deploying a Migrate Server Image in Azure ” on page 43.
Microsoft Azure China	Use for migration of Windows and Linux workloads to or from your Azure account in the Azure China cloud environment See “ Deploying a Migrate Server Image in Azure ” on page 43.

Each template sets up a Migrate server in your cloud account:

- ♦ It configures essential ports in a network security group for the virtual host VM.
- ♦ It creates a virtual host VM that has been sized according to your specifications.
- ♦ It applies a Migrate server template that contains the prerequisite software, Migrate server software, and the PlateSpin database.
- ♦ Migrate server is preconfigured with default settings for advanced PlateSpin Configuration parameters for the cloud environment.

You must perform these tasks manually when you install Migrate server on your own virtual host.

2.5 About PlateSpin Migrate Support for AWS Quick Start

PlateSpin Migrate supports AWS Quick Start to help you quickly and easily deploy PlateSpin Migrate Server on the AWS Cloud. For more information about the Quick Start, see the [Micro Focus PlateSpin Migrate on AWS](https://aws.amazon.com/quickstart/architecture/micro-focus-platespin-migrate/) (<https://aws.amazon.com/quickstart/architecture/micro-focus-platespin-migrate/>).

NOTE: The AWS Quick Start for this release will be available shortly after General Availability of this release and is available until after General Availability of the next release when PlateSpin Migrate releases the updated version of the Quick Start.

2.6 Deploying a Migrate Server Image in AWS

PlateSpin Migrate supports the AWS Quick Start to help you quickly and easily deploy PlateSpin Migrate server on the AWS Cloud. For more information about the Quick Start, see [Micro Focus PlateSpin Migrate on AWS \(https://aws.amazon.com/quickstart/architecture/micro-focus-platespin-migrate/\)](https://aws.amazon.com/quickstart/architecture/micro-focus-platespin-migrate/).

NOTE

- ♦ The AWS Quick Start for this release will be available shortly after General Availability of this release and is available until after General Availability of the next release when PlateSpin Migrate releases the updated version of the Quick Start.
- ♦ For PlateSpin Migrate Servers deployed through the AWS Quick Start, Migrate installs Microsoft SQL Server 2017 Express Edition for the PlateSpin database and generates a password for the SQL system administrator (sa) user. For improved security, we recommend that you modify the password for this user after the deployment is complete. For information, see [Section 1.7, “Modifying the Password for the SQL Server Express System Administrator User,”](#) on page 34.

You can alternatively install Migrate server on your own virtual host in AWS. See [Section 2.8, “Checklist for Manually Deploying a Migrate Server in the Cloud,”](#) on page 44

2.7 Deploying a Migrate Server Image in Azure

PlateSpin Migrate offers a PlateSpin Migrate Server image in Microsoft Azure through the Azure Marketplace in the Azure Global Cloud and the Azure China Cloud. The images will be available shortly after General Availability of the release.

NOTE: For PlateSpin Migrate Servers deployed through the Azure Marketplace, Migrate installs Microsoft SQL Server 2017 Express Edition for the PlateSpin database and generates a password for the SQL system administrator (sa) user. For improved security, we recommend that you modify the password for this user after the deployment is complete. For information, see [Section 1.7, “Modifying the Password for the SQL Server Express System Administrator User,”](#) on page 34.

You can alternatively install Migrate server on your own virtual host in Azure. See [Section 2.8, “Checklist for Manually Deploying a Migrate Server in the Cloud,”](#) on page 44.

To enable the deployment of the Migrate Server in Azure and assign relevant permissions, do the following:

- 1 Go to the appropriate Azure Portal and log in to your Azure account:
 - ♦ [Azure Portal \(http://portal.azure.com/\)](http://portal.azure.com/)
 - ♦ [Azure China Portal \(http://portal.azure.cn/\)](http://portal.azure.cn/)
- 2 In the portal menu, Select **Marketplace**, then click **New**.

- 3 Under **New**, search for PlateSpin.
- 4 On the PlateSpin Migrate Server page, view the deployment options and related prices.
- 5 Select the appropriate deployment model, then click **Create**.
- 6 Configure **Basics** and **Size** settings.
- 7 In **Settings**, specify **Static** as the assignment method for the public IP address:

NOTE: PlateSpin requires a public IP address only if a site-to-site VPN is not available.

7a In the **Settings** panel under **Network**, select **Public IP address**.

7b In the **Choose public IP address** panel, select **Create New**.

7c In the **Create public IP address** panel, specify `migrate-server-ip` as the name and **Static** as the assignment method.

7d Click **OK**.

Azure allocates and reserves an IP address from a pool of its available IP addresses in the Azure location where you deploy the Migrate server.

- 8 Review settings and approve the purchase.
- 9 (Optional, recommended) For improved security, modify the password for the SQL Administrator (sa) user on the deployed Migrate server in Azure.

See [Section 1.7, “Modifying the Password for the SQL Server Express System Administrator User,”](#) on page 34.

2.8 Checklist for Manually Deploying a Migrate Server in the Cloud

Use the checklist in [Table 2-5](#) to manually deploy a PlateSpin Migrate server in the cloud without a site-to-site VPN between your premises and the cloud environment.

Table 2-5 Checklist for Manual Migrate Server Deployment in the Cloud

Task	Remark
1. Ensure that your cloud account is configured and available.	See “Cloud Account” on page 38.
2. In your cloud account, create a network security group in the location where you will create the virtual host, then configure ports needed for the Migrate server.	See Section 2.3, “Required Network Security Group Settings for PlateSpin Migrate Server,” on page 41.
3. Create a Windows VM in your cloud account to use as the PlateSpin Migrate server host.	The target VM must meet the requirements in Section 1.1.1, “System Requirements for PlateSpin Server,” on page 7.
4. Install prerequisite software on the server host.	See Section 1.2, “Installing Prerequisite Software,” on page 13.

Task	Remark
5. Install PlateSpin Migrate Server on the server host with a public IP address.	See Section 1.3, “Installing PlateSpin Migrate Software Components,” on page 21. NOTE: PlateSpin requires a public IP address only if a site-to-site VPN is not available.
6. Perform post-installation tasks on the Migrate server host.	1. Set a secure custom password for the SQL system administrator user (sa). See “Modifying the Password for the SQL Server Express System Administrator User” on page 34. 2. Disable TLS 1.0 and 1.1 protocols for the Windows operating system on the PlateSpin Migrate Server host. See Section 1.8, “Configuring TLS Protocols for Migrate Hosts,” on page 35.
7. Configure PlateSpin advanced settings for the cloud-based Migrate server, depending on your intended use.	See Table 2-6, “PlateSpin Configuration Settings for PlateSpin Migrate Server in the Cloud,” on page 46.
8. (AWS) Configure the AWS settings for the Migrate server in AWS.	See “Configuring Advanced PlateSpin Settings for AWS” on page 46.
9. (AWS, optional) Configure the Windows instance for the Migrate virtual host to use Amazon Time Sync Service.	Amazon Time Sync Service uses NTP to synchronize the time for the cloud instance to the Amazon Region where it is deployed. Refer to “Configuring Network Time Protocol” (https://docs.aws.amazon.com/AWSEC2/latest/WindowsGuide/windows-set-time.html#windows-configuring-ntp) in the <i>Amazon Elastic Compute Cloud: User Guide for Windows Instances</i> .

2.9 Configuring Advanced Settings for a Cloud-Based Migrate Server

PlateSpin Migrate server images in a cloud marketplace configure PlateSpin advanced settings for workload migrations to the parent cloud, as described in [Table 2-6](#). If you intend to use the cloud-based Migrate server to migrate workloads from the parent cloud environment, you must modify the settings.

Table 2-6 PlateSpin Configuration Settings for PlateSpin Migrate Server in the Cloud

Parameter	Migrations to Cloud	Migrations from Cloud	Remarks
SourceListensForConnection	False Assumes that Migrate Agent is used to register workloads.	True (default)	If the source and target both have public IP addresses accessible to each other, then this setting does not need to be changed. See Section 2.11, “Configuring the Contact Direction for the Replication Port,” on page 48.
AlternateServerAddress	Migrate server’s public IP address	Migrate server’s public IP address	If you use Migrate Agent to register source workloads, the public IP address is set automatically for this parameter when you register the source. See Section 2.12, “Configuring Alternate IP Addresses for PlateSpin Server,” on page 49.
ServerIsHostedInCloud	Depending on the cloud location: ♦ azure -OR- ♦ aws	(no value, empty field)	This parameter limits the type of targets available in the Add Targets dialog. When it is empty, all target types are available. See Section 2.13, “Enabling a Cloud-Based Migrate Server to Handle Migrations to Other Target Platforms,” on page 49.

2.10 Configuring Advanced PlateSpin Settings for AWS

Some aspects of your PlateSpin Server behavior is controlled by configuration parameters that you set on a PlateSpin Configuration web page residing on your PlateSpin Server host at `https://Your_PlateSpin_Server/PlateSpinConfiguration/`.

To edit the value of the configuration parameters:

- 1 Log in as Administrator to the PlateSpin Migrate Web Interface, then open the PlateSpin Server Configuration page at: `https://Your_PlateSpin_Server/PlateSpinConfiguration/`.
- 2 Search the parameter you want to edit and make the required changes.
- 3 Save your settings and exit the page.

Advanced PlateSpin settings for AWS apply globally to all AWS target platforms that you define on the Migrate server.

- ♦ [Section 2.10.1, “Configuring the AWS Region Price List Endpoint To Be Used for Discovering Supported AWS Instance Types,”](#) on page 47
- ♦ [Section 2.10.2, “Configuring Target Instance Logging With Key Pair or Source Credentials,”](#) on page 47

- ♦ [Section 2.10.3, “Configuring PlateSpin Migrate Server to Use Public IP Address for AWS Migrations,”](#) on page 47
- ♦ [Section 2.10.4, “Configuring OS License Activation on Windows Targets Migrated to AWS,”](#) on page 48
- ♦ [Section 2.10.5, “Configuring the Number of Connection Attempts for a SSH Session from AWS Cloud-Based Migrate Server to Target VMs in PlateSpin Replication Environment,”](#) on page 48

2.10.1 Configuring the AWS Region Price List Endpoint To Be Used for Discovering Supported AWS Instance Types

By default, PlateSpin Migrate Server is preconfigured to use the AWS price list endpoint in the `us-east-1` region for discovering the AWS supported instance types. However, if the instance type that you want to use is not listed in the price list endpoint of the configured region, set the value of `AWSPriceListRegion` parameter to the name of region that has a price list endpoint listing the desired instance type.

2.10.2 Configuring Target Instance Logging With Key Pair or Source Credentials

By default, PlateSpin Migrate Server allows you to log in to an AWS target instance only by using the key pair configured in the migration job. PlateSpin Migrate controls this behavior by using the `AWSEnableSourceCredentialsForLinuxWithKeypair` parameter that is set to `False` by default. To enable logging into AWS Linux target instances either by using the key pair configured in the migration job or the source credentials, set the `AWSEnableSourceCredentialsForLinuxWithKeypair` parameter to `True`.

2.10.3 Configuring PlateSpin Migrate Server to Use Public IP Address for AWS Migrations

By default, PlateSpin Migrate Server is preconfigured to allow private IP addresses for communications during migrations to AWS. If the source workload cannot connect to the private IP address of the AWS target, then you require a public IP address for communications during migrations to AWS. To ensure that only public IP is used during migration:

- ♦ Set the value of the `UseOnlyPublicIPForAWS` parameter as `True`.
- ♦ Set the value of the `SourceListensForConnection` parameter setting to reverse (source to target) the default direction of the replication. See [Section 2.11, “Configuring the Contact Direction for the Replication Port,”](#) on page 48.
- ♦ Set the `AlternateServerAddress` parameter to the Migrate server’s public IP address. See [Section 2.12, “Configuring Alternate IP Addresses for PlateSpin Server,”](#) on page 49.

2.10.4 Configuring OS License Activation on Windows Targets Migrated to AWS

PlateSpin Migrate provides the following parameters to configure KMS server for Windows OS activation on the target workload:

- ♦ **AWSKMSServers:** This parameter lets you set the AWS KMS Server information that Windows instances use for activation. The target KMS Server should be in the same AWS Region where the Windows instance is running.
- ♦ **KMSClientSetupKeys:** This parameter lists the commonly used OS version-based Microsoft KMS client setup keys that are used for activating Windows through KMS server. If the key for a particular OS is not listed, you can add an entry in the following format:

```
OperatingSystemTypeandBranding="Microsoft provided KMS Key"
```

Example: For a Windows server with OS type as Windows 2016 and branding as Standard Server, the format is `Windows2016StandardServer="WC2BQ-8NRM3-FDDYY-2BFGV-KHKQY"`

2.10.5 Configuring the Number of Connection Attempts for a SSH Session from AWS Cloud-Based Migrate Server to Target VMs in PlateSpin Replication Environment

By default, PlateSpin Migrate Server attempts to establish a SSH connection with the target VMs in PlateSpin Replication Environment 25 times before timing out the session. PlateSpin Migrate controls this behavior by using the `AwsMaxRepEnvConnectionAttempts` parameter that is set to 25 by default. To avoid session timeout, edit the value of the `AwsMaxRepEnvConnectionAttempts` parameter to increase the connection attempts to 35 or more.

2.11 Configuring the Contact Direction for the Replication Port

By default, the target workload contacts the source workload to initiate the replication data transfer. When you use the Migrate Agent on the source workload, the source workload contacts the target workload for data transfers. The direction is controlled at the server level. You must reconfigure the replication port direction on the Migrate Server by setting the `SourceListensForConnection` parameter to `False` on the PlateSpin Configuration page.

NOTE: For PlateSpin Migrate servers available through a cloud marketplace, the `SourceListensForConnection` parameter is set by default to `False`.

To configure the direction of contact for replication traffic:

- 1 Log in as Administrator to the PlateSpin Migrate Web Interface, then open the PlateSpin Server Configuration page at:

```
https://Your_PlateSpin_Server/PlateSpinConfiguration/
```


- 2 Locate the **SourceListensForConnection** parameter and edit its value as `True` or `False`, depending on your migration environment.
 - ◆ **True:** (Default) The target workload contacts the source workload to initiate replication. The source listens for traffic on the replication port (default TCP/3725). The replication port must be open for inbound traffic on the source workload.
 - ◆ **False:** The source workload contacts the target workload to initiate replication. The target listens for traffic on the replication port (default TCP/3725). The replication port must be open for inbound traffic on the target workload.
- 3 Save your settings and exit the page.

2.12 Configuring Alternate IP Addresses for PlateSpin Server

You can add alternate IP addresses to the PlateSpin Configuration **AlternateServerAddresses** parameter in order to enable the PlateSpin Server to function across NAT-enabled environments.

To add alternate IP addresses for PlateSpin Server:

- 1 Log in as Administrator to the PlateSpin Migrate Web Interface, then open the PlateSpin Server Configuration page at:
`https://Your_PlateSpin_Server/PlateSpinConfiguration/`
- 2 Search to locate the **AlternateServerAddresses** parameter and add IP addresses for the PlateSpin Server.
- 3 Save your settings and exit the page.

A reboot or restart of PlateSpin services is not required to apply the changes.

2.13 Enabling a Cloud-Based Migrate Server to Handle Migrations to Other Target Platforms

For Migrate servers deployed from a cloud marketplace, the **ServerIsHostedInCloud** parameter is set to the parent cloud value, such as `azure` or `aws`. This setting determines what target types are available to you in the Add Target dialog in the Migrate Web Interface, as described in [Table 2-7](#).

Table 2-7 Target Types Allowed for Cloud-Based Migrate Servers

ServerIsHostedInCloud Value	Target Type in Add Target	Description
azure	Microsoft Azure Location	Default setting for Migrate servers in the Azure Marketplace.
aws	Amazon Cloud Region	Default setting for Migrate servers deployed using the AWS Quick Start.
No value	All target types	Remove the pre-assigned value if you are using the cloud-based Migrate server to migrate workloads from the parent cloud environment to a different target type.

If you are migrating workloads from the parent cloud of a cloud-based Migrate server to a different target type, you must remove the default value (leave the field blank) for the **ServerIsHostedInCloud** parameter. After you remove the value, all target types are available in the Add Target dialog in the Migrate Web Interface.

To enable migrations from the source cloud using a cloud-based Migrate server:

- 1 Log in as Administrator to the PlateSpin Migrate Web Interface, then open the PlateSpin Server Configuration page at:
`https://Your_PlateSpin_Server/PlateSpinConfiguration/`
- 2 Search to locate the **ServerIsHostedInCloud** parameter and remove the pre-configured cloud setting. Leave the field blank.
- 3 Save your settings and exit the page.
A reboot or restart of PlateSpin services is not required to apply the changes.

3 Upgrading PlateSpin Migrate

To upgrade your PlateSpin Server to PlateSpin Migrate 2019.2, you must have an existing installation of PlateSpin Migrate 2018.11 running on Windows Server 2012 R2 or Windows Server 2016, with or without interim patches and hotfixes applied. Other direct upgrades are not supported.

IMPORTANT

- ♦ **Migrate Server in the cloud:** Upgrade is not supported for Migrate servers provisioned in Azure Cloud. Complete your in-progress migrations by using the currently provisioned PlateSpin Migrate 2018.11 server. Provision a PlateSpin Migrate 2019.2 server for new migrations. See [Section 2.7, “Deploying a Migrate Server Image in Azure,” on page 43.](#)
- ♦ **Before You Upgrade:** Ensure that you complete the [“Prerequisites for Upgrade” on page 51.](#)
- ♦ **Upgrading to a New Host Platform:** To upgrade from an existing installation of PlateSpin Migrate 2018.11 Server to a supported new host platform, see [“Upgrading Migrate to a New Host Platform” on page 56.](#)

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- ♦ [Section 3.1, “Prerequisites for Upgrade,” on page 51](#)
 - ♦ [Section 3.2, “Preparing for Upgrade,” on page 53](#)
 - ♦ [Section 3.3, “Upgrading Migrate,” on page 55](#)
 - ♦ [Section 3.4, “Upgrading Migrate to a New Host Platform,” on page 56](#)
 - ♦ [Section 3.5, “Post-Upgrade Tasks,” on page 59](#)
 - ♦ [Section 3.6, “Exporting or Importing PlateSpin Migration Data,” on page 60](#)

3.1 Prerequisites for Upgrade

Before you begin the upgrade, ensure that you meet these upgrade prerequisites and preparatory tasks in [Table 3-1](#).

Table 3-1 Checklist for Preparing to Upgrade PlateSpin Migrate

Status	Prerequisite Task	Notes
<input type="checkbox"/>	1. Ensure that your VM containers are running supported hypervisors and that the container credentials are valid throughout the upgrade process.	See “Supported Target Virtualization Platforms” and “Supported Target Cloud Platforms” in the <i>PlateSpin Migrate 2019.2 User Guide</i> . See “Ensuring Valid Credentials for Target Cloud Containers” on page 53.

Status	Prerequisite Task	Notes
<input type="checkbox"/>	2. Use Run Diagnostics to generate detailed diagnostic reports on jobs executed before the upgrade. After you upgrade, the diagnostics reports are not available for jobs that you executed prior to the upgrade.	See “Generating Diagnostic Reports” in the <i>PlateSpin Migrate 2019.2 User Guide</i> .
<input type="checkbox"/>	3. Back up your PlateSpin database files.	See “Backing Up Your Database Files Before Upgrade” on page 54.
<input type="checkbox"/>	4. Back up your custom Linux blkwatch drivers. You will need to upload these drivers again after the upgrade.	See “Backing Up Your Custom Linux blkwatch Drivers Before Upgrade” on page 54.
<input type="checkbox"/>	5. (Optional) Export workload migration data if you have migrations that you want to continue after upgrade.	See Section 3.2.4, “Exporting Your Migration Data Before Upgrade,” on page 55.
<input type="checkbox"/>	6. Make a record of any customized PlateSpin Configuration (.config) parameters that control the server’s default behavior. You will need to restore these settings after the upgrade.	
<input type="checkbox"/>	7. Ensure that all replication schedules are paused and that no replications are running. Wait for any replications that are underway to complete, or abort the running operations.	Use Pause Schedule in the migration configuration to ensure no replications run during the upgrade process.
<input type="checkbox"/>	8. Log out of Migrate Client and close the application.	You should not attempt to manage workloads and migrations during the upgrade.
<input type="checkbox"/>	9. Log out of the Web Interface and close the browser.	You should not attempt to manage workloads and migrations during the upgrade.
<input type="checkbox"/>	10. Ensure that your PlateSpin Server host meets the requirements for the upgrade version.	See Table 1-1, “Host Requirements for PlateSpin Server,” on page 7. NOTE: To upgrade from an existing installation of PlateSpin Migrate Server to a supported new host platform, “Upgrading Migrate to a New Host Platform” on page 56.
<input type="checkbox"/>	11. Install any newly required prerequisite software, such as Microsoft .NET Framework 4.7.1.	See “Prerequisite Software” on page 9. See .NET Framework 4.7.1 .
<input type="checkbox"/>	12. Disable the User Account Control (UAC) on the PlateSpin Server host.	See UAC guidelines .

Status	Prerequisite Task	Notes
<input type="checkbox"/>	13. Ensure that the person performing the upgrade has sufficient administrative rights for the PlateSpin Server host and the database server in order to update the software and the database schema.	See Credentials guidelines . NOTE <ul style="list-style-type: none"> ◆ When you upgrade or update PlateSpin Migrate running on a domain computer, you must log in to the PlateSpin Server as a domain user who is a member of the Domain Admin group and the local Admin group. ◆ If you use Windows Authentication for your database server, when you perform the PlateSpin Migrate Server upgrade, you must log in to the PlateSpin Server as the domain user with SQL Admin rights in order to perform the software upgrade and update the database schema. This user must have local administrator rights. In addition, the Service User you specify for SQL Server credentials must have local administrator rights. <p>When you select Windows Authentication during the upgrade, the credentials of the logged-in user are automatically populated for the Database Administrator.</p>
<input type="checkbox"/>	14. Download the PlateSpin Migrate Setup utility (PlateSpinMigrateSetup-2019.2.0.x.exe) file and copy it to the PlateSpin Server host.	See “Starting the PlateSpin Migrate Installation Launcher” on page 21.

3.2 Preparing for Upgrade

Before an upgrade, perform the following tasks to ensure that your data is available after upgrade.

- ◆ [Section 3.2.1, “Ensuring Valid Credentials for Target Cloud Containers,”](#) on page 53
- ◆ [Section 3.2.2, “Backing Up Your Database Files Before Upgrade,”](#) on page 54
- ◆ [Section 3.2.3, “Backing Up Your Custom Linux blkwatch Drivers Before Upgrade,”](#) on page 54
- ◆ [Section 3.2.4, “Exporting Your Migration Data Before Upgrade,”](#) on page 55

3.2.1 Ensuring Valid Credentials for Target Cloud Containers

The credentials in the Migrate database for target Cloud containers must be valid at export and import. Ensure that the password does not change or expire after export and until the import completes after upgrade. If your password is pending expiration, modify the password in the Cloud provider environment and update the credentials in Migrate before you begin an export.

WARNING: If credentials are invalid during import, the Cloud container is not imported and its associated workload configurations are corrupted in the imported database. To use the same Migrate server for migrations to the target Cloud container, you must re-install PlateSpin Server, which resets the database. You must re-configure all target containers and workloads.

3.2.2 Backing Up Your Database Files Before Upgrade

During the upgrade, the PlateSpin Migrate installation program transparently exports data from your existing database and re-imports it into a new database instance as required. However, as an additional measure of precaution, consider backing up your database files on the PlateSpin Server prior to the upgrade.

- 1 Log in to the PlateSpin Migrate Server host machine as the Administrator user.
- 2 On your server host, stop MS SQL services:
 - 2a On the Start menu, click **Run**, type `services.msc`, then click **OK**.
 - 2b In the Services window, right-click the **SQL Server** items, then select **Stop**.
- 3 Copy all `*.mdf` and `*.ldf` files to a location outside the product installation directory. The default location of these files is:
`\Program Files\PlateSpin Migrate Server\Database`
- 4 Restart MS SQL services that you stopped in [Step 2](#).

Continue with [“Backing Up Your Custom Linux blkwatch Drivers Before Upgrade”](#), or proceed with the upgrade as detailed in [“Upgrading Migrate” on page 55](#).

3.2.3 Backing Up Your Custom Linux blkwatch Drivers Before Upgrade

During the upgrade, the PlateSpin Migrate installation program will overwrite custom Linux blkwatch drivers that you previously added to PlateSpin Migrate. Consider saving a copy of your custom Linux blkwatch drivers prior to the upgrade.

- 1 Log in to the PlateSpin Migrate Server host machine as the Administrator user.
- 2 Navigate to the PlateSpin application's installation directory, such as `C:\Program Files\PlateSpin Migrate Server\`.
- 3 Open the `.\Packages\9D470BFF-E30F-4015-83D8-4D308A8C8B1B\` folder and copy the `1.package` file out of this folder to a temporary directory.
- 4 Rename `1.package` with the `.zip` file extension (`1.zip`), then extract the contents of the file to this temporary directory.
- 5 Save your `CustomKernel*` content to another temporary location.

Proceed with the upgrade, as detailed in [“Upgrading Migrate” on page 55](#).

After the upgrade, you should upload again any custom Linux blkwatch drivers you need for future migrations. See [KB Article 7005873 \(https://support.microfocus.com/kb/doc.php?id=7005873\)](https://support.microfocus.com/kb/doc.php?id=7005873).

3.2.4 Exporting Your Migration Data Before Upgrade

If you have workload migrations in progress that you want to continue after an upgrade, use the Import/Export utility (`ImportExportAll.bat`) to export the workload migration data. See [Section 3.6, “Exporting or Importing PlateSpin Migration Data,” on page 60](#). You can import the data if it is needed after an upgrade.

3.3 Upgrading Migrate

- 1 Before you attempt the upgrade, ensure that you meet prerequisites and have performed the preparatory tasks:
 - ♦ [“Prerequisites for Upgrade” on page 51](#)
 - ♦ [“Preparing for Upgrade” on page 53](#)
- 2 Log in to the PlateSpin Migrate Server host as an administrative user.

If the server is in a domain, you must log in as a domain user who is a member of the Domain Admin group and the local Admin group.

If you use Windows Authentication for the database server, you must log in as the domain user with SQL Admin rights. This user must have local administrator rights to the PlateSpin Server.
- 3 (Conditional) If PlateSpin Migrate Client is installed on the PlateSpin Server host, use the Windows Control Panel to uninstall your client application.
- 4 On your server host, start the Installation Launcher.

See [“Starting the PlateSpin Migrate Installation Launcher” on page 21](#).
- 5 Click **Install Migrate Server** and follow the on-screen instructions.
- 6 When you are prompted to specify a database instance, point the installation program to your existing database instance and provide the appropriate authentication type and credentials.
 - ♦ For Windows Authentication to the database server, ensure that the logged in user has local administrator rights and has system administrator rights in the database server in order to upgrade the schema of the database. The user you specify as the Service User must also have local administrator rights.
 - ♦ For SQL Authentication to the SQL Server Express Edition database server, the SQL system administrator (`sa`) user and the default generated password (created when you installed SQL Server Express) is automatically completed for database administrator Login ID and Password. If you previously set a custom password for the `sa` user, type the custom password before you click **Validate Credentials**.
- 7 (Optional) Install the current version of the PlateSpin Migrate Client on the PlateSpin Server host.

See [“Installing the PlateSpin Migrate Client” on page 30](#).
- 8 (Optional) After the upgrade, you should upload again any custom Linux blkwatch drivers you need for future migrations. See [KB Article 7005873 \(https://support.microfocus.com/kb/doc.php?id=7005873\)](https://support.microfocus.com/kb/doc.php?id=7005873).

See also [“Backing Up Your Custom Linux blkwatch Drivers Before Upgrade” on page 54](#).

3.4 Upgrading Migrate to a New Host Platform

You can upgrade your existing PlateSpin Migrate Server to a new host platform. For example, you can upgrade a PlateSpin Migrate server running on Windows Server 2012 R2 to Windows Server 2016 platform.

Use the information in this section to prepare the replacement PlateSpin Server host and re-install PlateSpin Migrate. You will export the database prior to the upgrade, and import it to a new database instance afterwards.

- ◆ [Section 3.4.1, “Preparing for Upgrade to a New Host Platform,” on page 56](#)
- ◆ [Section 3.4.2, “Upgrading the Platform on Your Current PlateSpin Server Host,” on page 56](#)
- ◆ [Section 3.4.3, “Upgrading to a Replacement PlateSpin Server Host,” on page 58](#)

3.4.1 Preparing for Upgrade to a New Host Platform

Before you upgrade, ensure that you meet the prerequisites for upgrade to a new platform:

- ◆ Contact Micro Focus Support to reset your activation code and licenses for your current PlateSpin Migrate server in preparation for moving them to the replacement server. Ensure that you are ready to move to the new platform when the licenses are reset.
- ◆ Use Run Diagnostics to generate detailed diagnostic reports on jobs executed before the upgrade. Post upgrading, the diagnostics reports are not available for jobs that you executed prior to the upgrade. See [“Generating Diagnostic Reports”](#) in the *PlateSpin Migrate 2019.2 User Guide*.
- ◆ Back up your custom blkwatch drivers that you will need for future migrations. See [“Backing Up Your Custom Linux blkwatch Drivers Before Upgrade”](#) on page 54.
- ◆ Export your migration data. See [Section 3.6.1, “Exporting Workload Migration Data,” on page 60](#).

Ensure that you copy the exported XML files to a location where they can be available for import after you have upgraded PlateSpin Server on a new platform.

3.4.2 Upgrading the Platform on Your Current PlateSpin Server Host

In this upgrade path, you upgrade the platform of the current PlateSpin Server host. It requires that you remove the installed PlateSpin components while you install and configure the upgraded prerequisite OS and software. After you [export your database](#), you are ready to upgrade the prerequisite software and operating system for the current PlateSpin Server host.

- 1 Log in to the current PlateSpin Server host as an administrative user.
If the server is in a domain, you must log in as a domain user who is a member of the Domain Admin group and the local Admin group.
- 2 Remove the installed PlateSpin Migrate components:
 - 2a Use Windows Control Panel to uninstall PlateSpin Migrate Client.
 - 2b Use Windows Control Panel to uninstall PlateSpin Migrate.
 - 2c (Conditional) If SQL Server Express Edition is installed on the PlateSpin Server host, use Windows Control Panel to uninstall it.

- 3 On your PlateSpin Server host, upgrade to a supported Windows Server operating system and configure the required features and settings for that platform.

See [Operating System](#) and [Installing Prerequisite Software](#).

- 4 Ensure that you install and reconfigure all prerequisite software for the PlateSpin Server host.

See [Prerequisite Software](#) and [Installing Prerequisite Software](#).

- 5 Prepare your database server to work with the reconfigured PlateSpin Server host.

See [Installing the Database Server](#).

If you are using SQL Server Express Edition, install the current version. After the upgrade is complete and the product license is re-activated, you should set a secure custom password for the re-installed SQL Server Express database server. See [“Modifying the Password for the SQL Server Express System Administrator User” on page 34](#).

If you are using your Microsoft SQL Server Standard Edition or Enterprise Edition, ensure that you create a new database instance and configure the settings to work with the upgraded platform. You will import the database to this new database instance after the upgrade is complete.

- 6 Log in to the PlateSpin Server host as a user with administrative rights.

If the server is a domain computer, you must log in as a domain user who is a member of the Domain Admin group and the local Admin group.

If you use Windows Authentication for your SQL Server Standard Edition or Enterprise Edition database server, you must log in as the domain user with SQL Admin rights. This user must also have local administrator rights. In addition, the Service User you specify for SQL Server credentials must have local administrator rights.

- 7 Install the current version of PlateSpin Migrate Server. See [Installing PlateSpin Server](#).

- 8 (Optional) Install the current version of PlateSpin Migrate Client. See [Installing the PlateSpin Migrate Client](#).

- 9 Activate the license for the PlateSpin Server host by using the reset activation code that you retrieved from Micro Focus Support before the upgrade.

See [“Activating Your Product License”](#) in the *PlateSpin Migrate 2019.2 User Guide*.

- 10 Import the exported database to the new database instance. See [“Importing Workload Migration Data” on page 61](#).

- 11 (Optional) Add other reset or re-activated licenses on the replacement server. See [“Managing License Keys for Workload Migrations”](#) in the *PlateSpin Migrate 2019.2 User Guide*.

- 12 (Optional) After the upgrade, you should upload again any custom Linux blkwatch drivers you need for future migrations. See [KB Article 7005873 \(https://support.microfocus.com/kb/doc.php?id=7005873\)](#).

See also [“Backing Up Your Custom Linux blkwatch Drivers Before Upgrade” on page 54](#).

- 13 (Conditional) If you used a Microsoft SQL Server Standard Edition or Enterprise Edition database server with the old PlateSpin Server host, remove the now unused database instance that was associated with the former PlateSpin Server host.

3.4.3 Upgrading to a Replacement PlateSpin Server Host

In this upgrade path, you set up a replacement PlateSpin Server host, then decommission the current PlateSpin Server host. It requires that you stop all migration services on the old host while you install and configure the upgraded prerequisite OS and software on a new machine. After you [export your database](#), you are ready to prepare a replacement PlateSpin Server host with the prerequisite software and operating system.

- 1 On the new intended PlateSpin Server host, install a supported Windows Server operating system and configure the required features and settings for that platform.
See [Operating System](#) and [Installing Prerequisite Software](#).
- 2 Ensure that you install and configure all prerequisite software. See [“Prerequisite Software” on page 9](#).
- 3 Prepare your database server to work with the new PlateSpin Server host. See [Installing the Database Server](#).

If you are using SQL Server Express Edition, install the current version. After the upgrade is complete and the product license is re-activated, you should set a secure custom password for the re-installed SQL Server Express database server. See [Section 1.7, “Modifying the Password for the SQL Server Express System Administrator User,” on page 34](#).

If you are using your Microsoft SQL Server Standard Edition or Enterprise Edition, ensure that you create a new database instance. You will import the database to this new database instance after the upgrade is complete.

- 4 Log in to the replacement PlateSpin Server host as a user with administrative rights.
If the server is a domain computer, you must log in as a domain user who is a member of the Domain Admin group and the local Admin group.
If you use Windows Authentication for your SQL Server Standard Edition or Enterprise Edition database server, you must log in as the domain user with SQL Admin rights. This user must also have local administrator rights. In addition, the Service User you specify for SQL Server credentials must have local administrator rights.
- 5 Install the current version of PlateSpin Migrate Server. See [Installing PlateSpin Server](#).
- 6 (Optional) Install the current version of PlateSpin Migrate Client. See [Installing the PlateSpin Migrate Client](#).
- 7 Activate the license for the replacement PlateSpin Server host by using the reset activation code that you retrieved from Micro Focus Support before the upgrade.
See [“Activating Your Product License” in the PlateSpin Migrate 2019.2 User Guide](#).
- 8 Import the exported database to the new database instance. See [Section 3.6.2, “Importing Workload Migration Data,” on page 61](#).
- 9 (Optional) Add other reset or re-activated licenses on the replacement server. See [“Managing License Keys for Workload Migrations” in the PlateSpin Migrate 2019.2 User Guide](#).
- 10 (Optional) After the upgrade, you should upload again any custom Linux blkwatch drivers you need for future migrations. See [KB Article 7005873 \(https://support.microfocus.com/kb/doc.php?id=7005873\)](#).
See also [“Backing Up Your Custom Linux blkwatch Drivers Before Upgrade” on page 54](#).

- 11 Remove PlateSpin Migrate components from the former PlateSpin Server host to decommission it as a PlateSpin server:
 - 11a Log in to the former PlateSpin Server host as an administrative user.
If the server is in a domain, you must log in as a domain user who is a member of the Domain Admin group and the local Admin group.
 - 11b Use Windows Control Panel to uninstall PlateSpin Migrate Client.
 - 11c Use Windows Control Panel to uninstall PlateSpin Migrate.
 - 11d (Conditional) If SQL Server Express Edition is installed on the old PlateSpin Server host, use Windows Control Panel to uninstall it.
- 12 (Conditional) If you used a Microsoft SQL Server Standard Edition or Enterprise Edition database server with the old PlateSpin Server host, remove the now unused database instance that was associated with the former PlateSpin Server host.

3.5 Post-Upgrade Tasks

After you upgrade the PlateSpin Migrate software, you must perform the following tasks to resume normal operations of the PlateSpin Server:

- 1 Reapply the required configuration settings in PlateSpin Configuration at https://Your_PlateSpin_Server/platespinconfiguration/
- 2 Verify that the upgraded PlateSpin Server has a pre-compiled `blkwatch` driver for your workloads. See “[Linux Distributions Supported by Migrate](#)” in your *User Guide*.
You should upload again any custom Linux `blkwatch` drivers you need for future migrations that you backed up before the upgrade in “[Backing Up Your Custom Linux blkwatch Drivers Before Upgrade](#)” on page 54.
If a pre-compiled driver is not available, you can create a custom `blkwatch` driver by following the steps found in the [Knowledgebase Article 7005873](https://support.microfocus.com/kb/doc.php?id=7005873) (<https://support.microfocus.com/kb/doc.php?id=7005873>).
- 3 Resume all scheduled or paused replications and migration jobs.
- 4 Verify that your PlateSpin Server and replications are working properly.
- 5 (Optional, recommended) If you have not previously set a custom password for the SQL system administrator user (`sa`), consider setting a secure password at this time.
See “[Modifying the Password for the SQL Server Express System Administrator User](#)” on page 34.
- 6 (Optional) Configure the Migrate Server and source workloads to connect using only the TLS 1.2 protocol. See
 - ◆ [Transport Layer Security \(TLS\) registry settings](https://docs.microsoft.com/en-us/windows-server/security/tls/tls-registry-settings) (<https://docs.microsoft.com/en-us/windows-server/security/tls/tls-registry-settings>).
 - ◆ “[Configuring Source Workloads to Connect Using TLS 1.2](#)” in the *PlateSpin Migrate 2019.2 User Guide*.

3.6 Exporting or Importing PlateSpin Migration Data

PlateSpin Migrate provides an Import/Export utility (`ImportExportAll.bat`) that you can use to export information in the workload migration database and import it to the same or different Migrate server.

For an in-place upgrade of your Migrate server, you can export the data as a precautionary measure before the upgrade. For upgrade to a different platform, you can export the migration data from the old platform, then import the data to the new platform. Continue the imported migrations on the new platform.

NOTE: On import, PlateSpin Migrate automatically encrypts Credential passwords for storage in the PlateSpin Database by using that server's encryption key. See “[Security of Credentials](#)” in the *PlateSpin Migrate 2019.2 User Guide*.

- ◆ [Section 3.6.1, “Exporting Workload Migration Data,” on page 60](#)
- ◆ [Section 3.6.2, “Importing Workload Migration Data,” on page 61](#)

3.6.1 Exporting Workload Migration Data

You can export the workload migration data by using the Import/Export utility (`ImportExportAll.bat`). By default, the Import/Export utility exports data with unencrypted Credential passwords stored in base64 encoding.

NOTE: The Import/Export utility for PlateSpin Migrate provides the `/pwd` option to specify an *encryption password* to use for encrypting Credential passwords on export and decrypting them on import. If you specify the password for export, the password is required for import.

To export the workload migration data:

- 1 Prepare for exporting the database:
 - 1a Use the Migrate Client and Migrate Web Interface to ensure that all replication schedules are paused and that no replications are running. Wait for any replications that are underway to complete, or abort the running operations.
 - 1b Log out of Migrate Client and close the application.
 - 1c Log out of Migrate Web Interface and close the browser.
- 2 Export the database:
 - 2a Log in to the PlateSpin Server host as an administrative user.

If the server is in a domain, you must log in as a domain user who is a member of the Domain Admin group and the local Admin group.
 - 2b Open a Command Prompt.

The process that runs the Import/Export utility (`ImportExportAll.bat`) must have elevated privileges. This is most easily accomplished by starting a command window using the **Run as administrator** context menu option.
 - 2c Navigate to the directory that contains the Import/Export utility (`ImportExportAll.bat`):

```
C:\Program Files\PlateSpin Migrate Server\PlateSpin
Forge\bin\ImportExport
```

2d Export the data to specified directory, such as C:\temp. Enter

```
ImportExportAll.bat /export /dir "C:\temp" [/pwd "<encryption-password>"]
```

When you export data from a Migrate server, you can specify the `/pwd` option to encrypt Credential passwords in the exported data. The password will be required for import.

If the export fails due to running jobs, and there are no running jobs because you stopped jobs and paused schedules as required in [Step 1a](#), reissue the command using the `/force` switch to force the export. Enter

```
ImportExportAll.bat /export /dir "C:\temp" [/pwd "<encryption-password>"] /
force
```

- 3** Copy the exported XML files to a location where they can be available for import after you have set up PlateSpin Server on a new platform.
- 4** Continue with either of the following paths to upgrade to a new replacement platform:
 - ◆ [“Upgrading the Platform on Your Current PlateSpin Server Host” on page 56](#)
 - ◆ [“Upgrading to a Replacement PlateSpin Server Host” on page 58](#)

3.6.2 Importing Workload Migration Data

You can import your previously exported workload migration data by using the Import/Export utility (`ImportExportAll.bat`). For example, after your upgraded PlateSpin Server host is ready, import the data to the new database instance that works with your upgraded PlateSpin Server.

NOTE: For data exported using the `/pwd` option in the Import/Export utility (`ImportExportAll.bat`) to encrypt Credential passwords in the exported data, you must provide the same encryption password to decrypt the Credential passwords on import.

To import the workload migration data:

- 1** Log in as an Administrator user to the PlateSpin Server host.

If the server is in a domain, you must log in as a domain user who is a member of the Domain Admin group and the local Admin group.
- 2** Copy the exported XML files to C:\temp on the PlateSpin Server host.
- 3** Open a Command Prompt.

The process that runs the Import/Export utility (`ImportExportAll.bat`) must have elevated privileges. This is most easily accomplished by starting a command window using the **Run as administrator** context menu option.
- 4** Navigate to the directory that contains the Import/Export utility (`ImportExportAll.bat`):

```
C:\Program Files\PlateSpin Migrate Server\PlateSpin
Forge\bin\ImportExport
```

5 Import the data from the specified directory. Enter

```
ImportExportAll.bat /import /dir "C:\temp" [/pwd "<encryption-
password>"]
```

If you encrypted the Credential passwords on export, you must specify the `/pwd` option with the same encryption password when you import the data.

- 6** After the import is complete, connect to the Migrate Web Interface and Migrate Client to confirm that the data is intact.
- 7** Resume the replications.

4 Troubleshooting Installation and Upgrade Problems

- ♦ [Section 4.1, “Installation Issues,” on page 63](#)
- ♦ [Section 4.2, “Upgrade Issues,” on page 65](#)

4.1 Installation Issues

Review the following sections for troubleshooting the PlateSpin Migrate installation issues:

- ♦ [Section 4.1.1, “Common Installation Issues and Solutions,” on page 63](#)
- ♦ [Section 4.1.2, “Knowledgebase Articles about Installation Troubleshooting,” on page 64](#)
- ♦ [Section 4.1.3, “Removing PlateSpin Software,” on page 64](#)

4.1.1 Common Installation Issues and Solutions

Problems or Messages	Solutions
An unexpected error occurs when trying to install the PlateSpin Server to a non-default location	When you install the PlateSpin Server in a non-default directory, you must also grant the ASP.NET user account full access to that directory. For example, if you want to install the server in <code>D:\PM_9</code> , you must make sure that the ASP.NET user account has full access to <code>D:\PM_9</code> .
HTTP 403 Error	PlateSpin Migrate uses ASP.NET for its Web services. If ASP.NET is not installed on the server, the Web services do not function correctly, and the installation fails with this error. ASP.NET is included as part of the .NET Framework. When you install the .NET Framework, IIS must already be installed on the server for ASP.NET to be configured. If the .NET Framework was installed prior to IIS, simply uninstall and reinstall the .NET Framework.

Problems or Messages	Solutions
Cannot connect to IIS with http or https...	<p>During installation, an error message appears indicating that PlateSpin Migrate cannot connect to IIS with HTTP or HTTPS, when Setup attempted to connect with the existing IIS Server. The cause of this error generally indicates a problem with the IIS Server.</p> <ul style="list-style-type: none"> ◆ Ensure that IIS and ASP.NET are installed properly. See KB Article 7920595 (https://support.microfocus.com/kb/doc.php?id=7920595). ◆ To ensure that ASP.NET is properly registered with IIS, run the following command: <pre>"C:\WINDOWS\Microsoft.NET\Framework\v2.0.50727\aspnet_regiis.exe" -i</pre> <p>If the above steps do not resolve the issue, refer to the detailed instructions for reinstalling IIS and configuring IIS for isolation mode in KB Article 7920710 (https://support.microfocus.com/kb/doc.php?id=7920710).</p>
Installing PlateSpin Migrate on a computer that has other applications running on IIS	This can cause problems during and after installation. If possible, avoid installing the product on a computer that has other applications running on IIS.

4.1.2 Knowledgebase Articles about Installation Troubleshooting

ID	Description
7920710	ERRMSG: Install Error: Cannot connect to IIS with http or https...
7920718	INFO: IIS and NTFS Permissions requirements for PlateSpin Migrate
7920595	INFO: Installing IIS and ASP.NET v2.0

4.1.3 Removing PlateSpin Software

The procedure below outlines the required steps for uninstalling the software components of PlateSpin Migrate and performing an optional manual cleanup. This might be necessary when upgrading or recovering from problems with a previous installation.

For information on a post-migration cleanup of source workloads, see “[Post-Migration Tasks](#)” in the *PlateSpin Migrate 2019.2 User Guide*.

NOTE: This procedure does not remove license information from the server.

- 1 Use the Windows Control Panel to uninstall the PlateSpin Migrate Client.
- 2 Use the Windows Control Panel to uninstall the PlateSpin Server.
- 3 (Optional) If you opted to install the local database server from within the PlateSpin Migrate installation program and if you no longer need it, use the Windows Control Panel to uninstall Microsoft SQL Server Express Edition.

- 4 Ensure that the program directories of PlateSpin Migrate components were removed:
 - 4a Make sure the PlateSpin Server home directory was removed:

```
..\PlateSpin Migrate Server
```
 - 4b Make sure the PlateSpin Migrate Client home directory was removed:

```
..\PlateSpin Migrate Client
```
 - 4c (Optional) If you installed a local Microsoft SQL Server Express Edition database server and if you chose to uninstall it, remove the directory:

```
..\Program Files\Microsoft SQL Server
```

WARNING: Do not delete the SQL directory if you have another SQL server installed on the PlateSpin Migrate server host.

- 5 Open IIS Manager and ensure that the `ofxweb` and `PlateSpinMigrate` virtual directories are deleted.
- 6 Reboot the host.

4.2 Upgrade Issues

Review the following sections for troubleshooting the issues encountered post upgrading PlateSpin Migrate:

- ♦ [Section 4.2.1, “After Upgrade, There Is an Extra Gray Color Workload Tag,” on page 65](#)

4.2.1 After Upgrade, There Is an Extra Gray Color Workload Tag

Issue: After you upgrade the Migrate server, the Web Interface shows an extra workload tag that is assigned the color gray. This extra tag is either named as **Default** or named after one of the networks found in the PlateSpin Migrate Client.

For example, if the PlateSpin Migrate Client has three networks: `Default`, `Network-test1`, and `Network-test2`, then the extra workload tag has the name of one of these networks. (Bug 1018730)

Fix: In the Web Interface, select **Settings > Workload Tags**, then manually delete the extra workload tag.

A

Documentation Updates

This section contains information on documentation content changes that were made in the *PlateSpin Migrate Installation and Upgrade Guide* since the General Availability of PlateSpin Migrate 2019.2.

May 2019

Location	Update
“Configuring the Number of Connection Attempts for a SSH Session from AWS Cloud-Based Migrate Server to Target VMs in PlateSpin Replication Environment” on page 48	This is new.
Section 2.6, “Deploying a Migrate Server Image in AWS,” on page 43	PlateSpin Migrate updates the AWS Quick Start support to help you quickly and easily deploy PlateSpin Migrate 2019.2 server on the AWS Cloud.

April 2019

Location	Update
Chapter 3, “Upgrading PlateSpin Migrate,” on page 51	IMPORTANT <ul style="list-style-type: none">♦ Migrate Server in the cloud: Upgrade is not supported for Migrate servers provisioned in Azure Cloud. Complete your in-progress migrations by using the currently provisioned PlateSpin Migrate 2018.11 server. Provision a PlateSpin Migrate 2019.2 server for new migrations. See Section 2.7, “Deploying a Migrate Server Image in Azure,” on page 43.

