MICRO FOCUS

# PlateSpin® Transformation Manager 2019.5

## Appliance Guide

**June 2019**

## Legal Notice

# Contents

# About This Book

The *Appliance Guide* provides information about the requirements, initial configuration, and maintenance for the PlateSpin Transformation Manager Appliance and the PTM Server application.



## Intended Audience

This document is intended for IT administrators who will deploy and maintain the PlateSpin Transformation Manager Appliance. A basic knowledge of virtual machine deployment is assumed.

## Additional Documentation

For the most recent version of this guide and other PlateSpin Transformation Manager documentation resources, visit the PlateSpin Transformation Manager 2019.5 Documentation website (https://www.microfocus.com/documentation/platespin/platespin-transformation-manager-2019-5/).

## Contact Information

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-transformation-manager/
- **Micro Focus Customer Center:** https://www.microfocus.com/customercenter/
- **Product Knowledge Base and Videos:** https://www.microfocus.com/support-and-services/
- **PlateSpin Idea Exchange:** https://community.softwaregrp.com/t5/PlateSpin-Idea-Exchange/idb-p/PlateSpin_Ideas/

# Deploy PlateSpin Transformation Manager Appliance

The PlateSpin Transformation Manager Appliance is a virtual machine that hosts the PlateSpin Transformation Manager Server software, PostgreSQL database software, and PTM database instance for your transformation projects. The Appliance also hosts an instance of PlateSpin Migrate Connector that is preconfigured to work with all projects on the PTM server.

PlateSpin Transformation Manager is deployed as an appliance on your VM host environment. Appliance deployment provides the following benefits:

- **Simple deployment.** The appliance is ready to configure and run on your VMware hypervisor. You do not need to install the operating system, set up prerequisite applications, or configure its database.
- **Better performance.** The appliance is built on a specific and tuned version of the SUSE Linux Enterprise Server (SLES) operating system. The appliance includes everything that PlateSpin Transformation Manager needs, and only what it needs. It omits the unneeded applications and services that can consume system resources.
- **Web-based appliance administration.** The appliance provides a web-based Appliance Management Console that allows you to easily manage the appliance in your environment. You do not need to understand the underlying operating system, software, or databases.

# 1 PTM Appliance Requirements

Ensure that your system meets the requirements before you begin the installation of the PlateSpin Transformation Manager Appliance.



## 1.1 Appliance Virtualization Host Environment

You deploy the OVF file for the PlateSpin Transformation Manager Appliance on your virtualization host server.



### 1.1.1 Virtualization Host Server

PlateSpin Transformation Manager supports the virtualization software described in Table 1-1.

***Table 1-1*** *Virtualization Host Server Requirements*

| Virtualization Host Server | Minimum Requirement | Remarks |
|---|---|---|
| VMware ESXi | 5.5 or higher | The ESXi host must have a VMware enterprise license. |
| VMware vSphere Client | 5.5 or higher | Use this tool to set up the hypervisor environment and resources for the PTM Appliance VM. |

## 1.1.2 Virtual Machine

In the VMware environment, create a folder where you will store the VM and its resources. The OVF file creates a virtual machine on the virtualization host server in this specified folder. The minimum requirements for the PTM Appliance VM are described in Table 1-2.

***Table 1-2*** *Virtual Machine Requirements*

| PTM Appliance VM | Minimum Requirement | Remarks |
|---|---|---|
| Memory | 4 GB RAM | This virtual memory size setting is the appliance default. |
| Processor | 2 vCPUs | This virtual CPU setting is the appliance default. |
| IP Address Information | ◆ Static IP address for the VM<br>◆ Network mask<br>◆ Gateway IP address<br>◆ DNS host name associated with the static IP address<br>◆ DNS server IP address<br>◆ NTP Server IP address or DNS name | Gather this information before you deploy the PTM Appliance. You must provide this information during the appliance installation. |

## 1.1.3 Virtual Storage

In the VMware environment, create a datastore where you will create the disks for the appliance. You must provide a boot disk and a data disk when you deploy the PTM Appliance. The minimum requirements for the PTM Appliance VM are described in Table 1-3.

***Table 1-3*** *Virtual Storage Requirements*

| Virtual Storage | Minimum Requirements | Remarks |
|---|---|---|
| Disk 1 Boot | 20 GB | The boot partition for the PTM Appliance stores the system files:<br>◆ guest operating system<br>◆ all appliance-specific software<br>◆ appliance system event logs that are stored in the `/var` directory<br>This boot disk size is the appliance default. |

| Virtual Storage | Minimum Requirements | Remarks |
|---|---|---|
| Disk 2 `/vastorage` | 20 GB or larger | The `/vastorage` disk stores the software and data:<br>◆ PlateSpin Transformation Manager Server software<br>◆ PlateSpin Migrate Connector software<br>◆ PostgreSQL database with a PTM database instance<br>◆ Appliance configuration information<br>You must create and add this virtual disk during the appliance installation. |

### 1.1.4 NTP Configuration for the VM and Host

Micro Focus recommends setting up NTP (Network Time Protocol) for the PTM Appliance VM and the virtualization host server in accordance with the *VMware Time Keeping Best Practices for Linux Guests (KB 1006427)* (https://kb.vmware.com/kb/1006427).

In a PlateSpin Migration Factory environment, consider using the same NTP server for all PlateSpin components to help avoid time drifts that might prohibit successful migration.

## 1.2 PTM Server

PlateSpin Transformation Manager Server software is automatically installed on the PlateSpin Transformation Manager Appliance when you deploy the appliance.

During the Appliance deployment, you will set up a System Administrator account for the PTM server and specify passwords for the local users of the Appliance. See Table 1-4 for information about these default users.

***Table 1-4*** *PTM Default Users*

| Default Users | Description |
|---|---|
| vaadmin user password | The vaadmin user is a default local Appliance administrator user with Linux root-level trans mgr.<br>Use the `vaadmin` credentials to log in to the Appliance Management Console. |

| Default Users | Description |
|---|---|
| `root` user password | The `root` user is the default Linux administrator user for the PTM virtual machine.<br><br>Use the `root` user credentials if you need to log in directly to the VM through the VMware vSphere VM console or through SSH to a Linux console.<br><br>Technical Support might instruct you to access the Linux console on the Appliance with the `root` credentials. |
| PTM System Administrator | The System Administrator user has global permissions throughout the PTM Web Interface. During the PTM configuration, specify a valid email address as the user name for this account, then specify a secure password.<br><br>Use the System Administrator credentials to log in to the PTM Web Interface after the Appliance is up and running. You add other PTM users by using the Users tab in the Web Interface. See "Users" in the *PTM 2019.5 Administrator Guide*. |

## 1.3 PTM Database

PlateSpin Transformation Manager automatically pre-installs the PostgreSQL database on the appliance. You can alternatively set up the PlateSpin Transformation Manager database as a database instance on an existing PostgreSQL database in your network. The minimum requirements for the PTM database are described in Table 1-5.

***Table 1-5*** *PostgreSQL Database Requirements*

| Parameter | Local (Default) | Remote |
|---|---|---|
| Database Host | localhost | Specify the DNS name or IP address of the host server for the remote PostgreSQL database. |
| Database Port | 5432 | 5432<br><br>(or your custom port) |
| Database administrator credentials | Automatically creates a PostgreSQL database administrator user and password | Specify the credentials of the database administrator user who has the schema rights necessary to create a new database instance for PTM and to create a new administrator user account for the new instance. |
| Create a New Database | Selected | Selected |

| Parameter | Local (Default) | Remote |
|---|---|---|
| Database Name | transmgr | transmgr<br><br>(or specify a custom name for the PTM database instance) |
| Database User Name | tmadmin | tmadmin<br><br>(or specify a custom user name and password for the database administrator user account that will be created for the new PTM database instance) |

## 1.4 PTM Appliance Management Console

Most of your management interaction with the PlateSpin Transformation Manager Appliance takes place through the browser-based PlateSpin Transformation Manager Appliance Management Console.


- Section 1.4.1, “Supported Web Browsers,” on page 15


### 1.4.1 Supported Web Browsers

PlateSpin Transformation Manager supports the following web browsers for the Appliance Management Console:

- Google Chrome (latest version)
- Microsoft Internet Explorer 11
- Mozilla Firefox (latest version)

**NOTE:** You must enable JavaScript (Active Scripting) and the TLS 1.2 protocol in your web browser.

## 1.5 PTM Web Interface

User interaction with the PlateSpin Transformation Manager Server takes place through the browser-based PlateSpin Transformation Manager Web Interface.


- Section 1.5.1, “Supported Web Browsers,” on page 15


### 1.5.1 Supported Web Browsers

PlateSpin Transformation Manager supports the following web browsers for the PlateSpin Server Web Interface:

- Google Chrome (latest version)

- Microsoft Internet Explorer 11
- Mozilla Firefox (latest version)

**NOTE:** JavaScript (Active Scripting) must be enabled in your web browser.

## 1.6 Event Messages

PlateSpin Transformation Manager publishes workload workflow state change messages for its registered listeners. Each PlateSpin Migrate Connector instance registers with its assigned Transformation Manager server or project and listens for events and performs the appropriate actions.

In a PlateSpin Migration Factory environment, each PlateSpin Migrate server publishes workload migration state change messages for its registered listeners. Each PlateSpin Migrate Connector instance registers with its assigned Migrate servers, then listens for messages and delivers them to the appropriate project and workload in Transformation Manager.

PlateSpin uses RabbitMQ for event messaging. The event message queues are pre-configured on the PTM Server and the PlateSpin Migrate Server. The messaging function starts, stops, and restarts automatically with its parent PTM service or Migrate service, respectively.

**NOTE:** Do not modify the PlateSpin default settings for the RabbitMQ message service.

The PlateSpin Migrate message queues are inactive unless you open the required STOMP port on the Migrate Server. When the port is open, one or more PlateSpin Migrate Connector instances can register as subscribers for the event messages.

## 1.7 PlateSpin Migrate Connector

A local instance of the PlateSpin Migrate Connector is automatically installed on the PlateSpin Transformation Manager Appliance. This Connector instance is preconfigured to work with all projects. It supports discovery and migration for source workloads in the same network where you deploy the appliance. You can use the configuration file on the Appliance to modify the default settings. See “Configuring PlateSpin Migrate Connector” on page 37.

You must deploy remote instances of Migrate Connector if source workloads are in a different network. See “Planning for PlateSpin Migrate Connector” in the *PTM 2019.5 Administrator Guide*.

You must provide a host server for each of the remote Connector instances you deploy. PTM supports two deployment alternatives:

- Typically, you host remote instances of PlateSpin Migrate Connector on your own servers. See *PlateSpin Migrate Connector 2019.5 Installation Quick Start*.
- You can alternatively use the PlateSpin Transformation Manager OVF file to deploy VMs and configure them as Connector Appliance to use as a remote host. The Connector Appliance additionally requires your own virtualization host. See “(Optional) Deploy PlateSpin Migrate Connector Appliance” on page 39.

**NOTE:** Either deployment alternative for remote Connector host servers will require an operating system license for SUSE Linux Enterprise Server (SLES) 15.

# 1.8 Network Access and Communications

Ensure that your network environment meets the PlateSpin Transformation Manager requirements for access, discovery, and migration.

For information about the network access requirements for PlateSpin Migrate, see "Access and Communication Requirements across Your Migration Network" in the *PlateSpin Migrate 2019.5 User Guide*.



## 1.8.1 Public Internet Access

If VPN or WAN access is not available to remote locations in your migration environment, PlateSpin Transformation Manager must be able to communicate across the public Internet from the source environment to the target platform environment.

To provide Internet access through a proxy server, you must configure the PTM Appliance as a proxy client for your proxy server after you deploy and complete the installation of the appliance. See "Configure Proxy Client Settings" on page 29.

## 1.8.2 Appliance Management Console: Ports and Firewalls

PlateSpin Transformation Manager Appliance communications use the following ports. Ports are opened by default for the PTM Appliance, as noted. Ensure that you open the following ports in all firewalls in your network between the PTM Appliance and the computers you use to access the appliance and software.

***Table 1-6*** *Communications Ports for Appliance Management*

| Component | Port | Description |
|---|---|---|
| Appliance Management Console | 9443<br>(HTTPS, secure SSL) | Use this port to securely manage the PTM Appliance. |

| Component | Port | Description |
|---|---|---|
| Transformation Manager Database (PostgreSQL) | 5432 | If you configure a remote PostgreSQL database for the PTM Appliance, this port is used by PTM to access to your remote database. PostgreSQL allows TCP traffic, incoming and outgoing. Secure traffic by enabling SSL in the `postgresql.conf`file on your remote PostgreSQL server.<br><br>This port is closed by default if the PostgreSQL is installed on the PTM Appliance. |
| SSH | 22 | You can use SSH to remotely access the PTM Appliance to start, stop, or restart it without using a VMware client.<br><br>SSH is disabled by default. See "Starting, Stopping, or Restarting System Services" on page 69. |

## 1.8.3 PTM Web Interface: Ports and Firewalls

PlateSpin Transformation Manager uses the following ports for PTM Server. Ensure that you open the following ports in all firewalls in your network between the PTM Appliance and the computers you use to access the appliance and the PTM-related services running on it.

***Table 1-7*** *Communications Ports for the Transformation Manager Web Interface*

| Component | Port | Description |
|---|---|---|
| Web Interface | 8183<br>(HTTPS, secure SSL; allow TCP traffic, incoming and outgoing)<br><br>8182<br>(HTTP, non-secure; allow TCP traffic, incoming and outgoing) | Port 8183 is enabled by default.<br><br>**NOTE:** Micro Focus recommends that you use the secure port and SSL options for accessing the Web Interface.<br><br>For security reasons, port 8182 is disabled by default. |

## 1.8.4 Event Messaging: Ports and Firewalls

Table 1-8 shows the protocol and port required for event messaging between the PTM Server and the PlateSpin Migrate Connector instances registered with PTM Server. Each Migrate Connector instance also handles event messages for its assigned PlateSpin Migrate servers.

**NOTE:** The messages reflect events and state changes and do not contain sensitive information.

***Table 1-8*** *Event Messaging Requirements for Network Protocols and Ports*

| Traffic | Network Protocol and Port | Other Requirements |
|---|---|---|
| Event Messaging | 61613 (Stomp, allow TCP, incoming)<br><br>(not secure) | This port is open by default on the PTM Appliance VM.<br><br>Open this port on all other Connector host servers, the PlateSpin Migrate servers configured for the project, and the firewalls between them. |

# 2 Deploying the PTM Appliance

PlateSpin Transformation Manager is distributed as an appliance that you deploy on your VMware virtualization host. The appliance includes the PlateSpin Transformation Manager Server software and the PostgreSQL database. It also includes an instance of PlateSpin Migrate Connector that can be used for discovery in the same network as the appliance.

**NOTE:** Before you begin, ensure that you understand the "PTM Appliance Requirements" on page 11.



## 2.1 Downloading the PTM Software

Installation files for PlateSpin Transformation Manager Appliance and PlateSpin Migrate Connector are available on the Micro Focus Downloads website (https://download.microfocus.com/). Select **PlateSpin Transformation Manager**, then follow the **Download** link for **PlateSpin Transformation Manager 2019.5** in the results. Use your Micro Focus Customer Center account credentials to log in to this site.

Table 2-1 describes the installation files needed for PlateSpin Transformation Manager and PlateSpin Migrate Connector.

***Table 2-1*** *PTM Download Files*

| Download File Name | Description |
|---|---|
| `PlateSpinTransformationManager-2019_5.xx.ovf.zip`<br><br>Where *xx* is the build number. | PlateSpin Transformation Manager 2019.5 Appliance<br><br>Contains the OVF file that you use to deploy the PlateSpin Transformation Manager Appliance in your virtualization environment.<br><br>You can also use the OVF file to deploy a replacement PTM Appliance for upgrades from version 2019.2 to version 2019.5. |

| Download File Name | Description |
|---|---|
| `platespin-migrate-connector-2019.5-xx.x.x86_64.rpm`<br><br>Where *xx.x* is the build number. | PlateSpin Migrate Connector 2019.5<br><br>Contains files to install PlateSpin Migrate Connector on Linux servers that you deploy in your migration environment. You can also use the RPM file to upgrade PlateSpin Migrate Connector from version 2019.2 to version 2019.5.<br><br>**NOTE:** The Connector host server must meet software prerequisites. See "Supported Connector Host OS and Dependent Software" in the *PTM 2019.5 Administrator Guide*.<br><br>An instance of the Migrate Connector is automatically installed on the Appliance when you deploy the Appliance VM. |
| `ptm_public-key.key` | Contains the public key used for signing the PlateSpin Migrate Connector for new installations.<br><br>**NOTE:** To install the Migrate Connector RPM without warnings, you must import the PTM Public Key file to your keyring on the intended Migrate Connector host before you install the Connector RPM.<br><br>The key is not required for Migrate Connector upgrades from version 2019.2 to version 2019.2 if you previously imported the key on the Connector host before you installed PlateSpin Migrate Connector 2. |

**To extract the OVF file:**

1. Extract the <*ptm-ovf-file-name*>.zip file on your management workstation so that the PlateSpinTM-*version* file folder appears.

   Extract the file by using a third-party extractor; do not use the default Windows extractor.
2. Continue with "Deploying the Appliance on Your Virtualization Host" on page 22.

# 2.2 Deploying the Appliance on Your Virtualization Host

Use the instructions in this section to deploy the PTM Appliance VM on your VMware host server and configure its virtual environment. Before you begin, ensure that you understand the "PTM Appliance Requirements" on page 11.

1. On the VMware host server, deploy the appliance:
   1a. In the vSphere client, click **File** > **Deploy OVF Template**.

   If the virtualization software you are using does not support .ovf, you must convert the .ovf file to .vmx using the VMware OVF Tool available on the VMware Website.

   1b. Browse to and select the .ovf file in the PlateSpinTM-*version* file folder, then click **Next**.

   1c. Review the settings, then click **Next**.

**1d** In the **Name** field, rename the appliance to a name of your choosing, then click **Next**.

**1e** Select the datastore (Hard Disk 1, the Boot partition) where you want to store the virtual machine files, then click **Next**.

**1f** Review the default disk format setting, then click **Next** to accept it.

**1g** Click **Finish**.

**2** In the vSphere client, create a separate VMware hard disk (Hard Disk 2) for the PTM Appliance.

This hard disk stores your PlateSpin Transformation Manager files. It also stores configuration files that are used for appliance upgrades.

**2a** In the vSphere client, select the virtualization host where you set up the virtual machine, then click the Virtual Machines tab.

**2b** Right-click the virtual machine that you just created and for which you want to create secondary storage, then click **Edit Settings**.

**2c** On the Virtual Machine Properties page, select the Hardware tab, then click **Add**.

**2d** In the Add Hardware wizard, configure the hard disk.

| Page | Action |
|---|---|
| Device Type | 1. Select **Hard Disk**, then click **Next**. |
| Select a Disk | 1. Select **Create a new virtual disk**, then click **Next**. |
| Create a Disk | 1. In the **Capacity** section, specify the amount of hard disk space that you want to allocate.<br>See Disk 2 /vastorage for information about minimum disk capacity requirements.<br>2. In the **Disk Provisioning** section, select either of the following disk formats, depending on the VMware version that you are running:<br>◆ **Thick Provision Eager Zeroed**<br>◆ **Support clustering features such as Fault Tolerance**<br>3. In the **Location** section, select **Specify a datastore or datastore cluster**, click **Browse**, select a datastore, then click **OK**.<br>4. Click **Next**. |
| Advanced Options | 1. In the **Virtual Device Node** section, select **SCSI (1:0)** from the drop-down list.<br>**NOTE:** Do not change the controller to VMware Paravirtual at this point of the installation process. You can optionally modify this setting as a post-installation task. See "Change the SCSI Controller to VMware Paravirtual SCSI for Hard Disk 2" on page 33.<br>2. In the **Mode** section, select **Independent** and **Persistent**.<br>These settings allow the appliance to be updated.<br>3. Click **Next**. |
| Summary | 1. Review the specifications you set for the new hard disk, then click **Finish**. |

3 Increase the amount of memory that VMware allocates for the PTM Appliance.

3a In the Virtual Machine Properties window, select **Memory**, then increase the setting to a suitable size for your environment.

3b Click **OK** to exit the Virtual Machine Properties window.

4 (Optional) Upgrade the virtual machine hardware version to the latest that your infrastructure can support. To do so, in the vSphere client, right-click the virtual machine that you just created, and for which you want to upgrade the hardware, then click **Upgrade Virtual Hardware**.

5 Power on the appliance (virtual machine).

6 (Optional) Install VMware Tools on the host server.

7 Continue with "Configuring the Appliance" on page 24.

## 2.3 Configuring the Appliance

After you have successfully deployed the virtual machine in the virtual environment, you are ready to configure the credentials, network, and storage settings for the appliance.

1 In the vSphere client, power on the appliance.

2 Click the **Console** tab.

3 After the appliance starts, select your preferred keyboard layout in the **Keyboard Language** drop-down, then accept the End User License Agreement.

4 On the Passwords and Time Zone page, specify the following appliance information:

| Option | Action |
|---|---|
| root password | Type the `root` user password that you want to set for the PTM Appliance, then type it again to confirm it. |
| vaadmin password | Type the `vaadmin` user password that you want to set for the PTM Appliance, then type it again to confirm it.<br><br>The `vaadmin` user is the preferred identity to use when you log in to the Appliance Management Console. The `vaadmin` user name is case sensitive and should use all lowercase letters. |
| NTP Server | Type the IP address or DNS name of a reliable external Network Time Protocol (NTP) server. For example, `time.example.com`.<br><br>For the best results, set up NTP in accordance with the VMware *Timekeeping Best Practices for Linux Guests* (http://kb.vmware.com/selfservice/microsites/search.do?language=en_US&cmd=displayKC&externalId=1006427). |
| Region | Specify your local region. |
| Time Zone | Specify your local time zone. |

5 Click **Next**.

6 On the Network Configuration page, specify the following network information:

| Option | Action |
|---|---|
| Hostname | Type the fully qualified DNS host name associated with the appliance IP address. For example, `ptm.example.com`. |
| IP address | Type the static IP address for the PTM Appliance. For example, `10.10.10.10`. |
| Network mask | Type the network mask associated with the appliance IP address. For example, `255.255.255.0`. |
| Gateway | Type the IP address of the gateway on the subnet where your appliance is located. For example, `10.10.10.254`. |
| DNS servers | Type the IP address of a primary DNS server for your network. For example, `10.10.10.1`. A secondary DNS server is optional. |
| Domain search | Type the domain that is associated with the **Hostname** setting. |

7 Click **Next**.

8 Select the Hard Drive for Hard Disk 2.

The Hard Disk 2 that you created for `/vastorage` is automatically detected and **sdb** is displayed as the hard drive. Accept the defaults for the other options on this page, then click **Next**.

9 Click **Configure**.

The appliance displays a message indicating that the installation was successful. Do not log in at the terminal prompt. Appliance administration requires the Appliance Management Console to configure the appliance settings. Using native Linux tools can result in service disruption or failure.

10 Continue with "Configuring PTM Server" on page 27.

# 3 Configuring PTM Server

After you deploy the PlateSpin Transformation Manager Appliance as described in "Deploying the PTM Appliance" on page 21, you are ready to configure the PlateSpin Transformation Manager Server application for the first time.

- Section 3.1, "Initial PTM Server Configuration," on page 27

After the initial configuration of PTM Server, you can modify some settings. Reconfiguration is also possible. See "Managing PTM Server" on page 53.

## 3.1 Initial PTM Server Configuration

The Server Configuration process uses a quick wizard that gets your system up and running.

**To configure the PlateSpin Transformation Manager Server application:**

1. In a web browser, navigate to the following URL:

   `https://ip_address_or_DNS_name:9443`

   Use the IP address or DNS name of the server that you specified during the appliance deployment.

2. Log in to the appliance using the `vaadmin` user and the password that you set.

   The Appliance takes you directly to the PlateSpin Transformation Manager Server Initial Server Configuration page if the PTM Server application has never been configured.

3. On the Initial Server Configuration page, complete the following information:

   **3a PostgreSQL Database Connection**

   Use one of the following options:

   - **Local database:** PlateSpin Transformation Manager automatically pre-installs the PostgreSQL database on the appliance. Select **Auto Setup Local Database** to automatically create a database instance, database administrator user, and a password for the user. Table 3-1 shows the default settings.

   ***Table 3-1*** *PostgreSQL Database Default Values*

| Parameter | Default Value |
|---|---|
| Database Host | localhost |
| Database Port | 5432 |
| Create a New Database | Selected |
| Database Name | transmgr |
| Database User Name | tmadmin |

- **Remote database:** You can alternatively set up the PlateSpin Transformation Manager database as a database instance on an existing PostgreSQL database in your network.
  1. Deselect **Auto Setup Local Database**.
  2. Replace `localhost` with the DNS name or IP address of the host server for the remote PostgreSQL database, and specify the PostgreSQL port.
  3. Specify the credentials of the database administrator user who has the schema rights necessary to create a new instance for the PlateSpin Transformation Manager database.
  4. Specify a name for the PlateSpin Transformation Manager database instance (default: `transmgr`).
  5. Specify the user name and password for the database administrator user account (default: `tmadmin`) that will be created for the newly created PlateSpin Transformation Manager database instance.

**3b Initial User Configuration**

The initial user for the PlateSpin Transformation Manager Server is the PTM System Administrator user. This user has global permissions for all organizations, projects, and features throughout the Web Interface.

Provide the full name, a valid email address that is unique to your PlateSpin Transformation Manager environment, and a password for this user.

You cannot delete the System Administrator user account. However, you can add another System Administrator user for the PlateSpin Transformation Manager Server if necessary. See “Administrative Users for the Web Interface”.

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**NOTE:** You create other PTM users from the Users page in the PlateSpin Transformation Manager Web Interface. You can grant Administrator privileges to trusted users by adding them to the Administrators group.

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**3c Web Server Configuration**

Micro Focus recommends that you use the secure port 8183 and SSL options for accessing the Web Interface. You can enable or disable the HTTP port 8182 to allow non-secure traffic.

Specify the DNS name for the PlateSpin Transformation Manager Server. It is populated automatically with the DNS address used as the subject of the SSL certificate on the appliance.

**3d** Click **Submit**.

# 4 Post-Installation Tasks for PTM Appliance

After you set up the PTM Appliance and configure PTM Server, you can perform the following post-installation tasks as needed:



## 4.1 Configure Proxy Client Settings

If you have a proxy server in your network, you can optionally configure the PlateSpin Transformation Manager Appliance VM as a proxy client. You should also configure each PlateSpin Migrate Connector host in the network as a proxy client. As proxy clients, the appliance VM and Connector hosts will use your proxy server for HTTP and HTTPS communications over the Internet.

The Proxy client informs applications of the Proxy Server URL and credentials to use (if you specify them). It does not affect how the applications communicate with the server.



### 4.1.1 Configuring Proxy Client Settings for the PTM Appliance

You can enable the PlateSpin Transformation Manager Appliance to work with the Proxy Server in your network environment. The PTM Server, PlateSpin Migrate Connector instance, PTM Web Interface, and Appliance Management Console running on the Appliance will use the proxy client settings you set for the Appliance VM.

To configure proxy client settings, log in to the Appliance VM through SSH, then use YaST to configure the Internet proxy client settings compatible with your proxy server.

**To configure proxy client settings on the PTM Appliance VM:**

1 Enable the SSH protocol on the Appliance VM.

SSH is disabled by default on the Appliance.

**1a** In a web browser, log in to the Appliance Management Console as the `vaadmin` user.

https://<*ptm-ipaddr-or-dns-name*>:9443

**1b** Click **System Services**  .

**1c** Select the SSH service.

**1d** Select **Action > Start**.

**1e** Click **Close** to exit System Services.

**1f** Log out of the Appliance Management Console, then close your web browser.

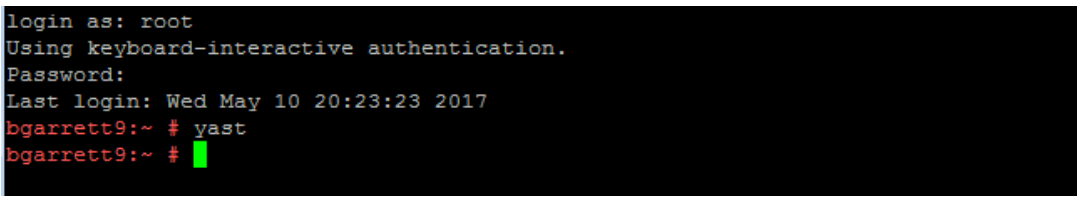
**2** Configure the Proxy client settings needed to access your Proxy Server:

**2a** From your computer, start an SSH session for *ptm-ipaddr-or-dns-name* on port 22, then log in as the `root` user to the Appliance.

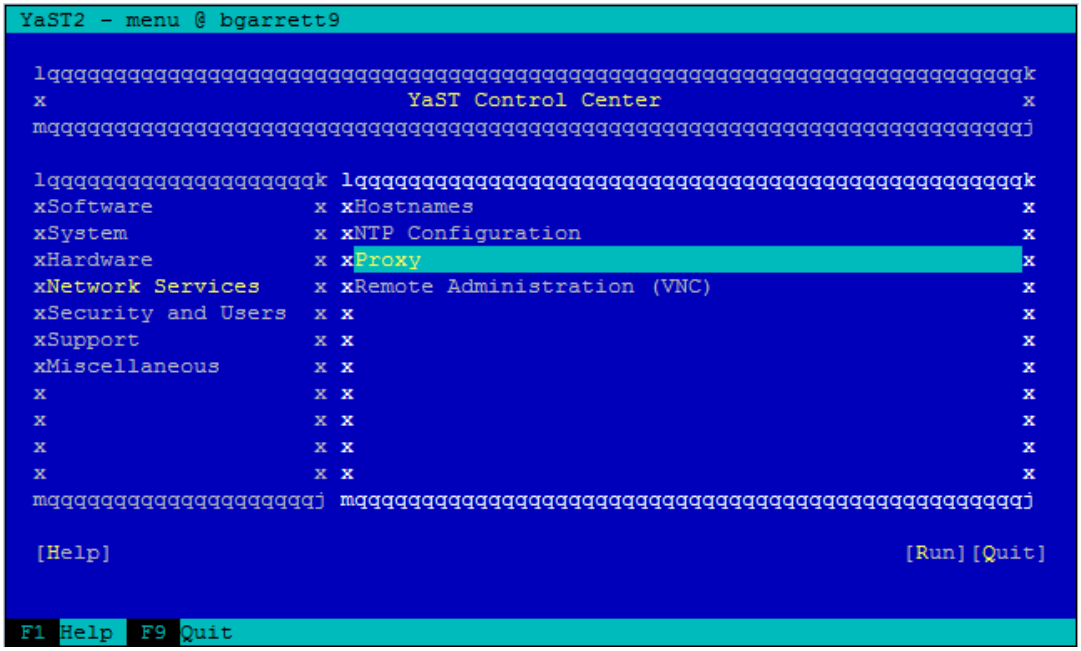
You can use any SSH tool, such as Putty (http://www.putty.org/).

**2b** At the terminal prompt, enter

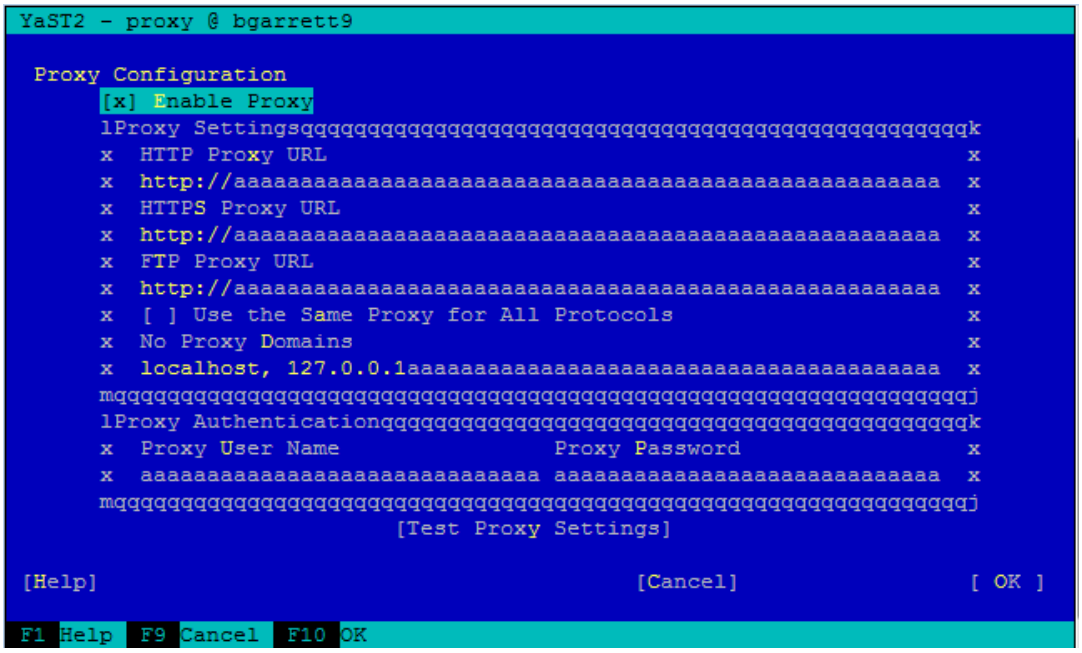
```
yast
```




**2c** In YaST, navigate to **Network Services,** select **Proxy**, then press Enter.



**2d** On the Proxy Configuration page, on **Enable Proxy**, press the Space bar to select the check box.




**2e** Tab to navigate to the fields and configure the Proxy settings by using the information for your Proxy Server. Provide the URL for the Proxy Server for HTTP or HTTPS (or both) communications, depending on what protocols you enabled for the Appliance.

**HTTP Proxy URL**

The URL (with host name and port number) of the Proxy Server used for non-secure access to the Internet. For example: http://proxy1.example.com:3126/

**HTTPS Proxy URL**

The URL (with host name and port number) of the Proxy Server used for secure access to the Internet. For example: https://proxy2.example.com:3128/

**FTP Proxy URL**

The URL (with host name and port number) of the Proxy Server used for access to the file transfer services (FTP). For example: https://ftp.proxy.example.com:2121/

**Use the Same Proxy for All Protocols**

Enable this option and provide a single URL in **HTTP Proxy URL** that will be used as the Proxy Server for HTTP, HTTPS, and FTP communications.

**No Proxy Domains**

Specify a comma-separated list of domains for which requests should be made directly without caching. The default is `localhost`.

**Proxy User Name and Proxy Password**

Provide the credentials for your Proxy Server if it requires authorization.

**2f** (Optional) Tab to **Test Proxy Settings**, then press Enter.

**2g** Tab to **OK**, then press Enter to save and apply the settings.

**2h** Tab to **Quit**, then press Enter to exit YaST.

**2i** At the terminal prompt, enter `exit` to close the SSH session.

**3** (Optional) Disable the SSH protocol on the Appliance.

**3a** In a web browser, log in to the Appliance Management Console as the `vaadmin` user.

https://<*ptm-ipaddr-or-dns-name*>:9443

**3b** Click **System Services**  .

**3c** Select the SSH service.

**3d** Select **Action > Stop**.

**3e** Click **Close** to exit System Services.

**3f** Log out of the Appliance Management Console, then close your web browser.

## 4.1.2 Configuring Proxy Client Settings for Migrate Connector Hosts

You can enable the PlateSpin Migrate Connector host servers to work with the Proxy Server in your environment. The Connector instance will use the proxy client settings you set for the Connector host.

**To configure proxy client settings on Migrate Connector host server:**

**1** Log in as the `root` user to the desktop on the Migrate Connector host server.

**2** Start the YaST Control Center from the main menu. Provide the `root` user password if you are prompted for it.

To start the YaST Control Center from the command line, open a terminal, then enter `yast2`.

**3** Select **Network Services,** then select **Proxy**.

**4** Configure the Proxy settings by using the information for your Proxy Server. Provide the URL for the Proxy Server for HTTP and HTTPS communications.

**HTTP Proxy URL**

The URL (with host name and port number) of the Proxy Server used for non-secure access to the Internet. For example: http://proxy1.example.com:3126/

**HTTPS Proxy URL**

The URL (with host name and port number) of the Proxy Server used for secure access to the Internet. For example: https://proxy2.example.com:3128/

**FTP Proxy URL**

The URL (with host name and port number) of the Proxy Server used for access to the file transfer services (FTP). For example: https://ftp.proxy.example.com:2121/

**Use the Same Proxy for All Protocols**

Enable this option and provide a single URL in **HTTP Proxy URL** that will be used as the Proxy Server for HTTP, HTTPS, and FTP communications.

**No Proxy Domains**

Specify a comma-separated list of domains for which requests should be made directly without caching. The default is `localhost`.

**Proxy User Name and Proxy Password**

Provide the credentials for your Proxy Server if it requires authorization.

5 Click **Test Proxy Settings**.

6 Click **Finish** to save and apply the settings.

7 Exit YaST.

8 Log out of the server.

## 4.2 Add a Signed Digital Certificate to the PTM Appliance

The appliance ships with a self-signed digital certificate. The certificate works for both the appliance (port 9443) and the PlateSpin Transformation Manager software (ports 8182 and 8183).

---

**NOTE:** This configuration task is optional. For higher security, Micro Focus recommends that you use a trusted server certificate that is signed by a trusted certificate authority (CA) such as VeriSign or Equifax.

---

You can use your own existing signed certificate, or you can use the Digital Certificate tool on the appliance to create a certificate, have it signed by a trusted certificate authority, and then add it to the appliance. See "Digital Certificates" on page 71.

## 4.3 Change the SCSI Controller to VMware Paravirtual SCSI for Hard Disk 2

For Hard Disk 2, you can optionally change the SCSI controller to **VMware Paravirtual** (PVSCSI) for Hard Disk 2.

---

**NOTE:** This configuration task is optional.

---

1 After the installation is complete, power on the appliance.

2 Ensure that the system is running. Log in as the appliance vaadmin user and verify the health of the appliance and services.

3 Shut down the appliance.

4 In VMware, change the SCSI controller for Hard Disk 2 to **VMware Paravirtual**.

5 Power on the appliance.

## 4.4 View or Modify Appliance Settings

After you configure the PTM Server for the first time, you can view or modify the PTM Appliance settings by using the Appliance Management Console to access the Appliance System Configuration page. See "Managing the Appliance" on page 65.

## 4.5 Get Started with PTM

The PTM System Administrator user performs administrative tasks through the PTM Web Interface to prepare PTM for project users.



### 4.5.1 Configure Global PTM Settings

Use the PlateSpin Transformation Manager Web Interface to configure and manage the software. See the following in the *PTM 2019.5 Administrator Guide*:

- “Accessing the Web Interface”
- “Configuring Operating Systems”
- “Configuring Global Settings for PlateSpin Migrate Connector”

### 4.5.2 Configure PTM Users

Use the PlateSpin Transformation Manager Web Interface to add users and assign PTM user roles to them. See “Users” in the *PTM 2019.5 Administrator Guide*.

### 4.5.3 Configure Transformation Projects

PTM automatically adds an initial project (MyProject), wave (MyWave), and batch (MyBatch). A user with PTM Administrator privileges can configure additional projects and assign users to roles for the project. Project Managers can define waves and batches for their projects.

After an Administrator user configures a project and assigns project roles, authorized users can use the PlateSpin Transformation Manager Web Interface to plan, manage, and execute transformation projects. See the following topics in the *PTM 2019.5 User Guide*:

- “Projects”
- “Target Platforms”
- “Workloads”
- “Resources” (Credentials, Migration Servers, and Environments)

## 4.6 Get Started with PlateSpin Migrate Connector

PlateSpin Migrate Connector is required for workload discovery, VMware target discovery, automated migration, and tracked migration. For complete information about configuring and monitoring Connectors, see “PlateSpin Migrate Connector” in the *PTM 2019.5 Administrator Guide*.

### 4.6.1 Configure the Local Connector

The instance of the PlateSpin Migrate Connector on the PlateSpin Transformation Manager Appliance is preconfigured to work the PTM Server on the appliance and with all projects for that PTM Server. You can customize the Connector settings and set it up for use in a project. See "Configuring PlateSpin Migrate Connector" on page 37.

### 4.6.2 Deploy Remote Connectors

If a source network or target VMware network is in a different network than the PTM Appliance, you must deploy an instance of PlateSpin Migrate Connector in that network. See "Planning for PlateSpin Migrate Connector" in the *PTM 2019.5 Administrator Guide*.

You must provide a host server for each of the remote Connector instances you deploy. PTM supports two deployment alternatives:

- Typically, you host remote instances of PlateSpin Migrate Connector on your own servers. See *PlateSpin Migrate Connector 2019.5 Installation Quick Start*.
- You can alternatively use the PlateSpin Transformation Manager OVF file to deploy VMs and configure them as Connector Appliance to use as a remote host. The Connector Appliance additionally requires your own virtualization host. See Part II, "(Optional) Deploy PlateSpin Migrate Connector Appliance," on page 39.

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**NOTE:** Either deployment alternative for remote Connector host servers will require an operating system license for SUSE Linux Enterprise Server (SLES) 15.

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# 5 Configuring PlateSpin Migrate Connector

The instance of the PlateSpin Migrate Connector on the PlateSpin Transformation Manager Appliance is preconfigured to work the PTM Server on the appliance and with all projects for that PTM Server. It supports discovery, migration, and tracking for source workloads in the same network where you deploy the appliance.

Use the information in this section to configure and use this instance of PlateSpin Migrate Connector.



## 5.1 Configuring the Connector on the PTM Appliance

The administrator for the PlateSpin Transformation Manager Appliance can customize settings for the PlateSpin Migrate Connector instance on the Appliance. See Table 5-1 for information about modifying the default settings for the Connector instance on the PTM Appliance.

***Table 5-1*** *Migrate Connector Configuration Checklist*

| Connector Configuration Tasks | Description |
|---|---|
| 1. (Optional) Configure the Connector instance to work with a specific project instead of with all projects. | After you create a project, you can use its Project ID to configure a Connector instance to work with a specific project.<br><br>See “Configuring a Dedicated Project for a Connector” in the *PTM 2019.5 Administrator Guide*. |

| Connector Configuration Tasks | Description |
| --- | --- |
| 2. (Optional, recommended) Create a special-purpose user for Migrate Connector. | The default instance of Migrate Connector on the PTM Appliance uses the credentials of the PTM System Administrator user to perform actions. We recommend that you create a unique user identity for the Connector instance instead. Having a unique Connector user for each Migrate Connector helps you more easily distinguish actions performed by the Connector instance in logs and transformation histories.<br><br>To create a unique user account for the Connector instance, see "Creating a User for Connector Login" in the *PTM 2019.5 Administrator Guide*.<br><br>To modify the username and password to use for the Connector, see "Configuring the PTM User Credentials Used by a Connector" in the *PTM 2019.5 Administrator Guide*. |
| 3. (Optional) Customize the Connector logging settings. | See "Setting the Logging Level for the Connector" in the *PTM 2019.5 Administrator Guide*. |

## 5.2 Associating the Connector with Migration Server Resources

In a PlateSpin Migration Factory environment, a Connector instance is required to automate migrations or to track migrations in PTM that are executed on your PlateSpin Migrate servers. Each Migrate server is associated to a single Connector. A Connector can be associated to multiple Migrate Servers.

Users with Project Manager or Project Architect permissions can assign a Connector by creating or editing a Migration Server resource. See "Connector" in "About Migration Server Resources" and "Associating a Connector with a Migration Server Resource" in the *PTM 2019.5 User Guide*.

Users with Administrator permissions can add one or more Migration Server resources to a Connector by editing a Connector in the Connectors list. See "Associating Migration Servers with a Connector" in the *PTM 2019.5 Administrator Guide*.

## 5.3 Monitoring the Connector in PTM

A user with PTM Administrator permissions can monitor the Connector status by using the PTM Web Interface. See "Monitoring Connectors" in the *PTM 2019.5 Administrator Guide*.

# II (Optional) Deploy PlateSpin Migrate Connector Appliance

Typically, you host additional instances of PlateSpin Migrate Connector on your own servers. As an alternative, you can use the PlateSpin Transformation Manager Appliance OVF file to deploy an appliance VM and configure it as a remote PlateSpin Migrate Connector host server. Instructions in this section will refer to this VM as a Connector Appliance.

---

**NOTE:** Each additional deployment of the PlateSpin Transformation Manager Appliance OVF file as a Connector Appliance requires a SUSE Linux Enterprise Server 15 operating system license.

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# 6 Connector Appliance Requirements

Ensure that your system meets the requirements in this section before you begin the installation of the PlateSpin Migrate Connector Appliance.

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**NOTE:** To install PlateSpin Migrate Connector on your own servers, see the *PlateSpin Migrate Connector 2019.5 Installation Quick Start*.

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## 6.1 Planning for a Connector Appliance

Before you deploy a Connector Appliance, review the requirements and guidelines for Connector host servers.



### 6.1.1 Deployment Guidelines for PlateSpin Migrate Connectors

Consider the following guidelines as you deploy PlateSpin Migrate Connectors in your migration environment:

- For source workload discovery, deploy at least one Migrate Connector server in each *source network* (the network where source workloads reside).
  - PlateSpin Transformation Manager Appliance includes a pre-installed instance of the PlateSpin Migrate Connector that is configured to work with the PTM Server. You can use this Connector instance to migrate source workloads that reside in the same network as the deployed PTM Appliance.
  - You can deploy multiple Connector instances in the same source network to increase performance of event processing for source workloads in that network. Each Connector instance services the workloads it discovers.
- For target platform discovery in VMware environments on premises or in VMware Cloud (VMC) on Amazon Web Services, deploy a Migrate Connector instance in each *target network* to enable discovery of VMware vCenter Server platforms and their platform resources.
- Configure each Migrate Connector server to work with your PTM Server.
  - There is no set limit to the number of Connectors you can register for a PTM Server.

- Each Migrate Connector instance can register with only one PTM Server.
- Each Migrate Connector instance can be available to all projects (the default), or it can be dedicated to a single project.

- Associate each PlateSpin Migrate Connector instance with one or more PlateSpin Migrate servers.
- Assign each Migration Server resource to only one Connector.

  It is not supported to assign a PlateSpin Migrate server to multiple Migrate Connectors in the same project or in different projects.

## 6.1.2 Configuration Guidelines for Connectors

Consider the following guidelines as you configure PlateSpin Migrate Connectors in your migration environment:

- Each project requires access to at least one Migrate Connector server.
  - A Migrate Connector provides services for all projects by default.
  - (Optional) You can configure a Migrate Connector to provide services to a single project.
- (Automation and tracking) Associate each PlateSpin Migrate server with one of the Connectors that is available in your project. Only the Connector associated with a Migration Server will process its migration events.
- (Automation and tracking) Associate one or more PlateSpin Migrate servers with each Migrate Connector instance.
  - For automated migrations, each Connector balances workload migrations across its assigned Migrate servers.
  - For tracked migrations, each Connector collects migration information across its assigned Migrate servers.

## 6.1.3 Dedicated Project Assignment

You can optionally configure a Migrate Connector instance to work with a specified project. Create the project in PlateSpin Transformation Manager, then use its Project ID to configure the appropriate Connector instance with the dedicated project assignment.

## 6.1.4 Dedicated User Account for Each Connector Instance

For each Connector instance, you must specify the credentials of a PTM Server user account. The account is required for communications with the PTM Server and to perform actions on it. We recommend that you create a unique user identity for the Connector instance instead of using the credentials of a PTM user. Having a unique Connector user for each Migrate Connector helps you more easily distinguish actions performed by the Connector instance in logs and transformation histories.

The default instance of Migrate Connector on the PTM Appliance uses the credentials of the PTM System Administrator user to perform actions. You can replace these credentials with the email address of a PTM System user account on your PTM Server that has been assigned at least a Project Architect role at the Project level. Create a dedicated user account for each Connector instance with permissions appropriate for its assigned project.

## 6.2 Operating System License

You must have a license for each remote Connector Appliance you deploy, as you would if you host the remote Connector instances on your own SUSE Linux Enterprise Server servers. The PlateSpin Transformation Manager Appliance OVF file contains a single license for the SUSE Linux Enterprise Server 15 operating system for the deployed PTM Appliance. This license does not cover additional deployments of the appliance as a remote Connector Appliance.

## 6.3 Connector Appliance Requirements

Before you deploy a Connector Appliance, review the "PTM Appliance Requirements" on page 11. You must configure the appliance as if it will be a PTM Appliance, even though you will later disable the PTM Server and database services.

Use the guidelines in Table 6-1 to deploy and configure each Connector Appliance.

***Table 6-1*** *Connector Appliance Configuration Guidelines*

| Requirements per Connector Appliance | Guidelines |
|---|---|
| **VM Requirements** | |
| VMware folder and datastore | In VMware, set up the VMware folder and datastore that you will use for the Connector Appliance VM and storage resources. |
| Disk 1 Boot | The `boot` disk contains the system files, appliance-specific software, and event logs. |
| Disk 2 (`/vastorage`) | Disk 2 will be used for the PTM Server and Connector software, configuration files, and log files.<br><br>The PTM database file will be created on this disk during deployment, but the database will not be used in practice for a Connector Appliance. After the PTM Server initial configuration is complete, you will disable the PTM Server service and PostgreSQL database service. |
| **Appliance Configuration Requirements** | |
| Passwords and Time Zone page | ◆ `vaadmin` user password<br><br>Set up the password to log in to the Appliance Management Console on this appliance.<br><br>◆ `root` user password<br><br>Set up the password to log in with `root` privileges to the appliance virtual machine.<br><br>◆ NTP Server IP address or DNS name<br><br>◆ Region<br><br>◆ Time zone |

| Requirements per Connector Appliance | Guidelines |
|---|---|
| Network Configuration page | The IP address and communications information will be set according to the network where you deploy the VM.<br>◆ Static IP address for the VM<br>◆ Network mask<br>◆ Gateway IP address<br>◆ DNS host name associated with the static IP address<br>◆ DNS server IP address<br>◆ Domain search |
| Disk 2 setup page | Select the Hard Disk 2 that you created for `/vastorage`, then accept the other defaults. |
| **Initial PTM Server Configuration Requirements** | |
| PostgreSQL Database Connection | Use the Local (Default) settings in "PTM Database" on page 14.<br>◆ **Database host:** localhost<br>◆ **Database port:** 5432<br>◆ **Create New Database:** Selected<br>◆ **Database name:** transmgr<br>◆ **Database user name:** tmadmin<br>You will disable the PostgreSQL service after the installation is complete. The PTM database will be created, but it will not be used for a Connector Appliance. |
| Initial User Configuration | Provide the full name, a valid email address, and a password for a trusted user who will be the System Administrator user of the PTM Server Web Interface.<br>You must create this user even though you will not use the PTM Web Interface for the Connector Appliance. |
| Web server Configuration | Recommended: secure port 8183 |

## 6.4 Network Connectivity and Access Requirements

Ensure that your network meets the requirements for discovery, migration, and event management defined in "Network Connectivity and Access Requirements" in the *PTM 2019.5 Administrator Guide*.

# 7 Deploying a Connector Appliance

The Connector Appliance installation follows the same initial setup process as a PlateSpin Transformation Manager Appliance. After you configure the Appliance, you must disable the PTM and PTM database features and configure the Connector instance to work with your PTM Server instead of its local instance of PTM Server.



## 7.1 Deploying a Connector Appliance

1. Before you deploy a Connector Appliance, ensure that you understand the configuration guidelines in Table 6-1, “Connector Appliance Configuration Guidelines,” on page 43.
2. Deploy the VM for the Appliance as described in “Deploying the Appliance on Your Virtualization Host” on page 22.
3. Configure settings for the Appliance. See “Configuring the Appliance” on page 24.

   Ensure that you use settings that are valid in the network where the Connector host VM is deployed.
4. Configure the initial settings for the PTM Server application on the Connector Appliance. See “Initial PTM Server Configuration” on page 27.
5. After a successful initial configuration, continue with “Disabling Unused Services on the Connector Appliance” on page 45.

## 7.2 Disabling Unused Services on the Connector Appliance

On the Connector Appliance, you must disable the PlateSpin Transformation Manager service and the PostgreSQL database service.

1. After setting up the Connector Appliance, access the Appliance Management Console.

   You can click the link presented after the initial setup, or connect later by logging in to the Appliance Management Console URL for this appliance as the `vaadmin` user:

   `https://ip_address_or_DNS_name:9443`
2. In the Appliance Management Console, click **System Services**  .
3. Disable the PTM Server service, which you should not use for a Connector Appliance. Stop the service gracefully and disable autostart.

   **3a** Select the **PlateSpin Transformation Manager** service, then select **Action** > **Stop**.

   Wait for the **Status** to change to `Stopped` before you continue.

   **3b** Select the **PlateSpin Transformation Manager** service, then click **Options** > **Manual**.

4 Disable the PostgreSQL service, which you should not use for a Connector Appliance. Stop the service gracefully and disable autostart.

   **4a** Select the **PostgreSQL** service, then select **Action** > **Stop**.

   Wait for the **Status** to change to `Stopped` before you continue.

   **4b** Select the **PostgreSQL** service, then click **Options** > **Manual**.

5 Click **Close** to exit **System Services**.

6 Continue with "Configuring the Connector to Work with Your PTM Server" on page 46.

## 7.3 Configuring the Connector to Work with Your PTM Server

By default, the PlateSpin Migrate Connector instance on the appliance is configured to work with the PTM Server running on the same appliance. When you deploy a Connector Appliance to use as a remote Connector host, you must re-configure the Connector instance to work with the actual PTM Server in your PlateSpin Migration Factory environment.

1 In the Appliance Management Console, enable the SSH service.

   **1a** Click **System Services**  .

   **1b** In the Available System Services list, select SSH, then click **Action** > **Start**.

   Wait for the **Status** to change to `Running` before you continue.

   **1c** Click **Close** to exit **System Services**.

2 On your management computer, launch an SSH session on port 22, and connect to the Connector Appliance VM as the `root` user.

3 Configure the Connector settings on the Connector Appliance as you do for other remote Connector instances.

   **3a** In a text editor, open the `/opt/microfocus/migrate_connector/config/settings.cfg` file.

   **3b** Use the following checklist to configure the Connector settings.

   See "About Migrate Connector Configuration Options" in the *PTM 2019.5 Administrator Guide*.

| Connector Configuration Tasks | Description |
|---|---|
| 1. Configure the Connector instance on the Connector Appliance to work with your PTM Server on the PTM Appliance. | See "Configuring PTM Server Settings for a Connector" *PTM 2019.5 Administrator Guide*. |
| 2. (Optional) Configure the Connector instance to work with a specific project on the PTM Server. | After you create a project on the PTM Server, you can use its Project ID to configure a Connector instance to work with a specific project.<br><br>See "Configuring a Dedicated Project for a Connector" in the *PTM 2019.5 Administrator Guide*. |

| Connector Configuration Tasks | Description |
|---|---|
| 3. (Optional, recommended) Create a special-purpose user account in PTM to use for this remote Migrate Connector instance, then modify the user credentials in the Connector configuration file. | The default instance of Migrate Connector on the PTM Appliance uses the credentials of the PTM System Administrator user to perform actions. We recommend that you create a unique user identity for the Connector instance instead. Having a unique Connector user for each Migrate Connector helps you more easily distinguish actions performed by the Connector instance in logs and transformation histories.<br><br>To create a unique user account for the Connector instance, see "Creating a User for Connector Login" in the *PTM 2019.5 Administrator Guide*.<br><br>To modify the username and password to use for the Connector, see "Configuring the PTM User Credentials Used by a Connector" in the *PTM 2019.5 Administrator Guide*. |
| 4. (Optional) Customize the Connector logging settings. | See "Setting the Logging Level for the Connector" in the *PTM 2019.5 Administrator Guide*. |

**3c** Save the file, then exit the text editor.

**3d** Restart the Connector service. Enter

```
systemctl restart ps_migrate_connector.service
```

**3e** Verify the Connector service. Enter

```
systemctl status ps_migrate_connector.service
```

**4** At the terminal prompt, enter `exit` to close the SSH session.

**5** (Optional) In the Appliance Management Console, disable the SSH protocol on the Appliance.

**5a** Click **System Services**  .

**5b** Select the SSH service.

**5c** Select **Action > Stop**.

**5d** Click **Close** to exit System Services.

**6** Log out of the Appliance Management Console and close the web browser.

**7** Continue with "Post-Installation Tasks for a Connector Appliance" on page 49.

# 8 Post-Installation Tasks for a Connector Appliance

After you set up a PlateSpin Migrate Connector Appliance, perform the following post-installation tasks as needed:



## 8.1 Configuring Proxy Client Settings for the Connector Appliance

If the Connector Appliance must use a proxy server for HTTP and HTTPS communications, configure the Proxy Client settings. Apply the same process as for setting up the proxy client for the PTM Appliance. See “Configuring Proxy Client Settings for the PTM Appliance” on page 29.

## 8.2 Add a Signed Digital Certificate to the Connector Appliance

The appliance ships with a self-signed digital certificate. For increased security, you can use your own existing signed certificate, or you can use the Digital Certificate tool on the appliance to create a certificate, have it signed by a trusted certificate authority, and then add it to the appliance. See “Digital Certificates” on page 71.

## 8.3 View or Modify Connector Appliance Settings

You can view or modify the Connector Appliance settings by using the Appliance Management Console to access the Appliance System Configuration page. For example, you might need to set the server time. See “Managing the Appliance” on page 65.

## 8.4 Associating the Connector with Migration Server Resources

In a PlateSpin Migration Factory environment, a Connector instance is required for automating migrations or tracking migrations performed on your PlateSpin Migrate servers. Each Migrate server is associated to a single Connector. A Connector can be associated to multiple Migrate Servers. Add one or more PlateSpin Migrate servers as Migration Server resources and associate them with a Connector instance.

Users with Project Manager or Project Architect permissions can assign a Connector by creating or editing a Migration Server resource. See “Connector” in “About Migration Server Resources” and “Associating a Connector with a Migration Server Resource” in the *PTM 2019.5 User Guide*.

Users with Administrator permissions can add one or more Migration Server resources to a Connector by editing a Connector in the Connectors list. See “Associating Migration Servers with a Connector” in the *PTM 2019.5 Administrator Guide*.

## 8.5 Monitoring the Connector in PTM

On the PTM Server, a user with PTM Administrator permissions can monitor the status of the remote Connector instance by using the PTM Web Interface. See “Monitoring Connectors” in the *PTM 2019.5 Administrator Guide*.

# III Manage PTM Server Application

PlateSpin Transformation Manager Appliance automatically installs the PlateSpin Transformation Manager Server application. It includes a tool to manage basic settings for the PTM server. You can also modify files on the Appliance that control the look and feel of the PTM Web Interface.

# 9 Managing PTM Server

The PlateSpin Transformation Manager Appliance provides additional tools to manage the PlateSpin Transformation Manager Server that it hosts.

**To access the PlateSpin Transformation Manager Tools:**

1. In a web browser, specify the DNS name or the IP address for the PTM Appliance with the port number 9443. For example:

   `https://10.10.10.1:9443`

   or

   `https://ptm.example.com:9443`

2. Specify the administrative username and password for the PTM Appliance, then click **Sign in**. The default users are `vaadmin` or `root`.

3. Under **PlateSpin Transformation Manager Tools**, click **Configuration**  .

4. (Conditional) The Appliance Management Console automatically opens the following PlateSpin Transformation Manager Tools if it detects the stated condition:

   - **Initial Configuration:** The Initial Configuration tool opens if the PlateSpin Transformation Manager Server has not been configured. You must complete the initial setup before you can manage the appliance or the PlateSpin Transformation Manager Server.
   - **Upgrade:** The Upgrade tool opens if the RPM files for PlateSpin Transformation Manager or for the guest operating system have been updated by applying patches, support packs, or new versions to your existing appliance. You must complete the upgrade before you can manage the appliance or the PTM Server.

5. Continue using the PlateSpin Transformation Manager Server Tools.

   - Administrative Users for the Web Interface
   - Web Server Configuration

Refer to the following sections to manage the PlateSpin Transformation Manager service:

# 9.1 Administrative Users for the Web Interface

During the initial configuration of PlateSpin Transformation Manager Server, you create a default System Administrator user account for the PTM Server Web Interface. The login credentials are the email address and password you assigned for this user. PTM assigns the user to the System Administrator role and adds it as a default member of the Administrators group. The user has global permissions for all organizations, projects, and features throughout the Web Interface. The user cannot be deleted.

Log in to the Web Interface as the System Administrator user to set up other user accounts, as well as organizations and groups. To grant Administrator privileges to a trusted user, add the user account to the Administrators group.

---

**NOTE:** Members of the Administrators group inherit the System Administrator role and will also have global permissions in the Web Interface. Members can manage membership in the Administrators group, but they cannot remove the System Administrator user as a member and cannot delete the group.

---

You might need to add a new System Administrator user to the PlateSpin Transformation Manager Server if you forget the username and password for the initial System Administrator, or if that initial user is no longer available to manage the PTM Server application. The new user has the same global privileges as the default System Administrator user.

**To add a System Administrator user for the PTM Web Interface:**

1. Log in to the Appliance Management Console as the `vaadmin` user.
2. Under **PlateSpin Transformation Manager Tools**, click **Configuration**  .
3. On the PlateSpin Transformation Manager Configuration page, select **Administrative Users**.
4. Provide the full name, a valid email address that is unique to your PlateSpin Transformation Manager environment, and a password for this user.
5. Click **Submit**.

# 9.2 Web Server Configuration

The administrative users of the PlateSpin Transformation Manager Appliance can reconfigure the Jetty Web Server HTTPS and HTTP ports for the Web Interface.

1. Log in to the Appliance Management Console as the `vaadmin` user.
2. Under **PlateSpin Transformation Manager Tools**, click **Configuration**  .
3. On the PlateSpin Transformation Manager Configuration page, select **Web Server Configuration**.
4. For the Web Console HTTPS Port, specify the port to use for secure SSL connections with the PlateSpin Transformation Manager Web Interface. The default port is 8183
5. (Optional, not recommended) Select Enable HTTP to allow users to access the PlateSpin Transformation Manager Web Interface over port 8182 for non-secure connections.
6. Click **Submit**.

## 9.3 Web Interface Session Timeout

A user session in the PlateSpin Transformation Manager Web Interface times out by default after 30 minutes of browser inactivity. The Web Interface Session Timeout interval is configurable with the `tm.session.timeout.minutes` property in the `/opt/microfocus/ps_transform_mgr/config/system.properties` file. If the property is not specified in this file, the session timeout defaults to 30 minutes.

1. Enable the SSH service on the Appliance VM.

   See "Enabling or Disabling the SSH Service" on page 70.
2. Start an SSH session with the Appliance VM, then log in as the `vaadmin` user or `root` user.
3. Navigate to the `/opt/microfocus/ps_transform_mgr/config/` directory.
4. Open the `system.properties` file in a text editor.
5. Add the `tm.session.timeout.minutes` property and specify the value in minutes to set the interval of browser inactivity to allow before a Web Interface session times out.
6. Save the file and close the text editor.
7. Restart the PlateSpin Transformation Manager service to allow the Web Interface Session Timeout value to take effect.

   In your SSH session, enter the following at a terminal console:

   ```
   rcps_transform_mgr restart
   ```
8. Exit your SSH session.
9. (Optional) Disable the SSH service on the Appliance VM.

   See "Enabling or Disabling the SSH Service" on page 70.

## 9.4 Stopping, Starting, or Restarting PTM Service

**System Services**

You can stop, start, or restart the PlateSpin Transformation Manager service on the Appliance by using System Services in the Appliance Management Console. See "Starting, Stopping, or Restarting System Services" on page 69.

**Command Line**

You can stop, start, or restart the PlateSpin Transformation Manager service on the Appliance by using the `/etc/init.d/ps_transform_mgr` or `rcps_transform_mgr` commands, with the options `stop`, `start`, or `restart`. Log in as `root` in an SSH session, the launch a terminal console.

## 9.5 Stopping, Starting, or Restarting Migrate Connector Service

**System Services**

You can stop, start, or restart the PlateSpin Migrate Connector service on the Appliance by using System Services in the Appliance Management Console. See "Starting, Stopping, or Restarting System Services" on page 69.

**Command Line**

You can stop, start, or restart the PlateSpin Migrate Connector service on the Appliance by using the `/etc/init.d/ps_migrate_connector` or `rcps_migrate_connector` commands, with the options `stop`, `start`, or `restart`. Log in as `root` in an SSH session, the launch a terminal console.

## 9.6 Reconfigure PTM Server

After the initial configuration, you can reconfigure the PlateSpin Transformation Manager Server settings. You should use the Administrative Users tool and the Web Server Configuration tool instead to modify the application settings without losing any data.

---

**WARNING:** A reconfiguration restores the PlateSpin Transformation Manager application and its PostgreSQL database to their initial state. All data is lost.

---

1 Log in to the Appliance Management Console as the `vaadmin` user.

2 Under **PlateSpin Transformation Manager Tools**, click **Configuration**  .

3 On the PlateSpin Transformation Manager Configuration page, select **Initial Configuration**.

4 Select **Overwrite Configuration**.

This option is available if the PlateSpin Transformation Manager application is already configured.

---

**NOTE:** Select this option only if you want to overwrite the existing configuration settings and delete all project data.

---

5 Complete the information for the reconfiguration of the PTM Server.

**5a PostgreSQL Database Connection**

Use one of the following options:

- **Local database:** PlateSpin Transformation Manager automatically pre-installs the PostgreSQL database on the appliance. Select **Auto Setup Local Database** to automatically create a database instance, database administrator user, and a password for the user. Table 9-1 shows the default settings.

***Table 9-1*** *PostgreSQL Database Default Values*

| Parameter | Default Value |
|---|---|
| Database Host | localhost |
| Database Port | 5432 |
| Create a New Database | Selected |
| Database Name | transmgr |
| Database User Name | tmadmin |

- **Remote database:** You can alternatively set up the PlateSpin Transformation Manager database as a database instance on an existing PostgreSQL database in your network.
  1. Deselect **Auto Setup Local Database**.
  2. Replace `localhost` with the DNS name or IP address of the host server for the remote PostgreSQL database, and specify the PostgreSQL port.
  3. Specify the credentials of the database administrator user who has the schema rights necessary to create a new instance for the PlateSpin Transformation Manager database.
  4. Specify a name for the PlateSpin Transformation Manager database instance (default: `transmgr`).
  5. Specify the user name and password for the database administrator user account (default: `tmadmin`) that will be created for the newly created PlateSpin Transformation Manager database instance.

**5b Initial User Configuration**

The initial user for the PlateSpin Transformation Manager Server is the PTM System Administrator user. This user has global permissions for all organizations, projects, and features throughout the Web Interface.

Provide the full name, a valid email address that is unique to your PlateSpin Transformation Manager environment, and a password for this user.

You cannot delete the System Administrator user account. However, you can add another System Administrator user for the PlateSpin Transformation Manager Server if necessary. See “Administrative Users for the Web Interface”.

---

**NOTE:** You create other PTM users from the Users page in the PlateSpin Transformation Manager Web Interface. You can grant Administrator privileges to trusted users by adding them to the Administrators group.

---

**5c Web Server Configuration**

Micro Focus recommends that you use the secure port 8183 and SSL options for accessing the Web Interface. You can enable or disable the HTTP port 8182 to allow non-secure traffic.

Specify the DNS name for the PlateSpin Transformation Manager Server. It is populated automatically with the DNS address used as the subject of the SSL certificate on the appliance.

**5d** Click **Submit**.

**6** Click **Submit**.

# 10 Configuring a Custom UI Theme for the Web Interface

PlateSpin Transformation Manager enables you to create a custom look-and-feel for the Web Interface to suit your business needs. You can specify preferences for the following aspects of the UI theme:

- Product name
- Icons for various objects in the Configuration, Dashboard, Resources, Projects, Users, and Workloads pages
- Color settings that affect text, titles, underscores, buttons, shadings, and so on throughout the interface

The configurable components reside on the PlateSpin Transformation Manager Appliance.

Use the information in this section to understand how to set up and implement your custom UI theme.



## 10.1 Configurable Theme Components

PlateSpin Transformation Manager allows you to create a custom look-and-feel for the Web Interface. You copy the default theme files to a new directory, customize the files as appropriate, and then point to the custom theme location in the Web Interface configuration file.

PlateSpin Transformation Manager provides two key configurable components for the Web Interface theme. The configurable components reside on the PlateSpin Transformation Manager Appliance.

- **Theme folder:** `/vastorage/ptm/themes/<your_theme_directory>/`
  - **Color variables:** A custom CSS file defines about 20 colors that, along with their derivative colors, affect about 80 percent of text, titles, underscores, buttons, shadings, and so on throughout the Web Interface. You can modify the color definitions to suit the color scheme for your business.
  - **Images:** You can replace any of the various images related to icons displayed for configuration, dashboard, resources, projects, users, and workloads.
- **Theme configuration file:** `/etc/opt/microfocus/ps_transform_mgr/config/transformationmanager-themes.cfg`
  - **Product Name:** You can specify the full and short product name that displays in the Web Interface.
  - **Theme:** You can specify the default `TransformationManager` theme directory, or specify your custom theme directory.

## 10.2 Setting Up Your Custom Theme

**To create a custom theme for the PTM Web Interface:**

1. Enable the SSH service on the appliance:
   - **1a** Log in to the Appliance Management Console as the `vaadmin` user.
   - **1b** Click **System Services**.
   - **1c** Select the SSH service.
   - **1d** Select **Action > Start**.
   - **1e** Click **Close** to exit System Services.
2. Start an SSH session and log in as the `vaadmin` user to the user appliance.
3. Set up your custom theme files:
   - **3a** Navigate to the `/vastorage/ptm/themes/` directory.
   - **3b** Create a subdirectory under `themes` for your custom theme, such as `MyCompanyTheme`.
   - **3c** Copy the contents of the `/vastorage/ptm/themes/TransformationManager` directory to your new theme directory (`/vastorage/ptm/themes/MyCompanyTheme`).
   - **3d** In your custom theme directory, update the custom CSS file for color variables;

     `/vastorage/ptm/themes/<your_theme_directory>/en/web/theme_variables.tmcss`
   - **3e** In your custom theme directory, change the image files as appropriate to define your custom theme for the PTM Web Interface.
4. Modify the `transformationmanager-themes.cfg` file with your custom settings:
   - **4a** Open the `/etc/opt/microfocus/ps_transform_mgr/config/transformationmanager-themes.cfg` file in a text editor.
   - **4b** Modify the `server.theme` directive to replace the `TransformationManager` theme with your custom theme `MyCompanyTheme`.

     For example, change this line:

     ```
     server.theme=TransformationManager
     ```

     to this:

     ```
     server.theme=MyCompanyTheme
     ```
   - **4c** (Optional) Modify the lines that specify the product name.

     ```
     server.productname=<span>PlateSpin</span> Transformation Manager
     server.shortproductname=Transformation Manager
     ```
   - **4d** Save your changes.
5. Restart the PlateSpin Transformation Manager service to allow the theme changes to take effect.

Do one of the following:

- In your SSH session, enter the following at a terminal console:

  ```
  rcps_transform_mgr restart
  ```

- Log in to the Appliance Management Console, click **System Services**, select PlateSpin Transformation Manager (`ps_transform_mgr`), then select **Action** > **Restart**.

6 Log in to the PTM Web Interface to verify your UI changes.

To make additional changes, return to the appliance to update your custom theme files as appropriate, then restart the service to apply the changes.

7 After your theme changes are complete, end your SSH session.

8 Disable the SSH service:

**8a** Log in to the Appliance Management Console as the `vaadmin` user, then click **System Services**.

**8b** Select the SSH service.

**8c** Select **Action > Stop**.

**8d** Click **Close** to exit System Services.

**8e** Log out of the Appliance Management Console, then close your web browser.

## 10.3 Resetting Your Custom Theme after an Upgrade

An appliance update ignores your custom theme directory, but updates files in the default theme location. After an upgrade or update, you must verify that your themes are still valid and manually update your theme files as necessary.

---

**NOTE:** If you edited the default theme, you must reapply the settings after upgrade. Go to the default theme location (`/vastorage/ptm/themes/` directory). Refer to the files you saved in "Save Customized Default Theme Files" on page 92.

---

**After a patch or online update, manually update your theme:**

1 Enable the SSH service on the appliance:

**1a** Log in to the Appliance Management Console as the `vaadmin` user, then click **System Services**.

**1b** Select the SSH service.

**1c** Select **Action > Start**.

**1d** Click **Close** to exit System Services.

2 Start an SSH session and log in as the `vaadmin` user to the appliance.

3 Navigate to the `/vastorage/ptm/themes/TransformationManager` directory.

4 Copy the latest version of the CSS and image files that you modified from the `TransformationManager` location to a working location.

5 Merge your custom settings to these new files.

6 Copy the updated files to your theme directory (`/vastorage/ptm/themes/MyCompanyTheme`).

7 If you are using a custom theme (not an edited default theme), edit the `/etc/opt/microfocus/ps_transform_mgr/config/transformationmanager-themes.cfg` file to point again to your custom theme.

8 Restart the PlateSpin Transformation Manager service to allow the theme changes to take effect.

Do one of the following:

- In your SSH session, enter the following at a terminal console:

```
rcps_transform_mgr restart
```

- Log in to the Appliance Management Console, click **System Services**, select PlateSpin Transformation Manager (`ps_transform_mgr`), then select **Action > Restart**.

9 Log in to the PTM Web Interface to verify your UI changes.

To make additional changes, return to the appliance to update your custom theme files as appropriate, then restart the service to apply the changes.

10 After the theme changes are complete, end your SSH session.

11 Disable the SSH service:

**11a** Log in to the Appliance Management Console as the `vaadmin` user, then click **System Services**.

**11b** Select the SSH service.

**11c** Select **Action > Stop**.

**11d** Click **Close** to exit System Services.

**11e** Log out of the Appliance Management Console, then close your web browser.

# IV Manage the Appliance

PlateSpin Transformation Manager provides an Appliance Management Console with various options for managing and updating the Appliance. It enables you to configure services for the server without working directly in the native Linux interface.

---

**NOTE:** If you contact Technical Support with a PlateSpin Transformation Manager support incident, you might be asked to access a Linux terminal console on the Appliance as the `root` user. Your support representative will provide guidance on any required actions.

---

# 11 Managing the Appliance

You can use the Appliance Management Console to change certain configuration settings for the PlateSpin Transformation Manager Appliance (or a Connector Appliance), such as administrative passwords for the `vaadmin` user and `root` user, network settings, and certificate settings. You should perform these tasks only from the Console, because native Linux tools are not aware of the configuration requirements and dependencies of the PlateSpin Transformation Manager and PlateSpin Migrate Connector services.

**To access the Appliance Management Console:**

1. In a web browser, specify the DNS name or the IP address for the PTM Appliance with the port number 9443.

   https://<*ptm-ipaddr-or-dns-name*>:9443

   For example:

   `https://10.10.10.1:9443`

   or

   `https://ptm.example.com:9443`
2. Specify the administrative username and password for the PTM Appliance, then click **Sign in**. The default users are `vaadmin` or `root`.
3. (Conditional) The Appliance Management Console automatically displays one the following PlateSpin Transformation Manager options if it detects the stated condition:
   - **Initial Configuration:** The Initial Configuration tool opens if the PlateSpin Transformation Manager Server has not yet been configured. You must complete the initial setup before you can manage the appliance or the PlateSpin Transformation Manager Server.
   - **Upgrade:** The Upgrade tool opens if the RPM files for PlateSpin Transformation Manager or for the guest operating system have been updated by applying patches, support packs, or new versions to your existing appliance. You must complete the upgrade before you can manage the appliance or the PTM Server.
4. Continue using the Appliance Configuration tools in the Appliance Management Console.

The Appliance Management Console provides web-based configuration tools for the PTM Appliance:

- Administrative Passwords
- Network
- Time
- System Services
- Digital Certificates
- Firewall
- Storage
- /var Mount Configuration

- Reboot or Shutdown
- Logout

See also the following topics in Chapter 12, “Patching the Appliance,” on page 77:

- Support
- Field Patch
- Online Update

## 11.1 Administrative Passwords

Use the Administrative Passwords tool to modify the passwords and SSH access permissions for the PTM Appliance administrators: the `vaadmin` user and the `root` user. You might need to modify passwords periodically in keeping with your password policy, or if you reassign responsibility for the PTM Appliance administration to another person.

The `vaadmin` user can use the Administrative Passwords page to perform the following task:

- Modify the `vaadmin` user password. To change a password, you must be able to provide the old password.
- The vaadmin user automatically has permissions necessary to remotely access the appliance with SSH instead of using a VMware client. The SSH service must be enabled and running to allow SSH access.

---

**NOTE:** The SSH service is disabled and is not running by default. For information about how to start SSH on the appliance, see “System Services” on page 68.

---

The `root` user can use the Administrative Passwords page to perform the following tasks:

- Modify the `root` user password. To change a password, you must be able to provide the old password.
- Enable or disable (default) `root` user SSH access to the appliance.

  When this option is selected, the root user is able to SSH to the appliance. If this option is deselected, only the `vaadmin` user can SSH to the appliance, and the root user cannot SSH even if the `sshd` service is running.

**To manage the administrative access as the `vaadmin` user:**

1. Log in to the Appliance Management Console as the `vaadmin` user.
2. Click **Administrative Passwords**  .

3 Specify a new password for the vaadmin administrator. You must also specify the current vaadmin password.

4 Click OK.

**To manage the administrative access as the root user:**

1 Log in to the Appliance Management Console as the root user.

2 Click Administrative Passwords.

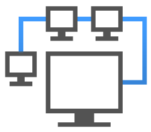
3 Specify a new password for the root administrator. You must also specify the current root password.

4 (Optional) Select or deselect Allow root access to SSH. It is deselected by default.

5 Click OK.

## 11.2 Network

Use the Network tool to configure settings for the DNS servers, search domains, gateway, and NICs for the PTM Appliance. You might need to modify these settings after the initial setup if you move the appliance VM to a new host server, or move the host server to a new domain in your network environment. You can also optionally restrict the networks that are allowed to access the appliance.



**To configure network settings for the PTM Appliance:**

1 Log in to the Appliance Management Console as the vaadmin user.

2 Click Network.

3 In the DNS Configuration section, you can modify the DNS name servers, search domains, and gateway settings for your appliance network.

If the Search Domains field is left blank, it is auto-populated with the domain of the appliance host name. For example, if the host name of the appliance is ptm.mycompany.com, the domain is auto-populated with mycompany.com.

4 In the NIC Configuration section, you can modify the IP address, host name, and network mask of any NIC associated with the appliance.

**4a** Click the ID of the NIC.

**4b** Edit the IP address, host name, or network mask for the selected NIC.

**4c** Click OK.

**4d** Repeat these steps for each NIC that you want to configure.

5 (Optional) In the **Appliance Administration UI (port 9443) Access Restrictions** section, do one of the following:

- Specify the IP address of each network for which you want to allow access to the appliance. Only the listed networks are allowed.
- Leave this section blank to allow any network to access the appliance.

**NOTE:** After you configure the appliance, changes to your appliance network environment can impact the appliance communications.

6 Click **OK**.

## 11.3 Time

Use the Time tool to configure the Network Time Protocol (NTP) server, the geographic region, and the time zone where you have deployed the appliance.

**To configure time parameters for the PTM Appliance:**

1 Log in to the Appliance Management Console as the `vaadmin` user.

2 Click **Time**  .

3 Change the following time configuration options as appropriate:

**NTP Server:** Specify the NTP server that you want to use for time synchronization.

**Region:** Select the geographic region where your appliance is located.

**Time Zone:** Select the time zone where your appliance is located.

4 Click **OK**.

## 11.4 System Services

Use the System Services tool to view the status of services running on the appliance, or performs on them. System services include the following:

- SSH
- Jetty
- PostgreSQL
- PlateSpin Transformation Manager
- PlateSpin Migrate Connector for PTM

**To access the System Services page:**

1. Log in to the Appliance Management Console as the `vaadmin` user.
2. Click **System Services** .

You can perform the following actions:

- Section 11.4.1, “Starting, Stopping, or Restarting System Services,” on page 69
- Section 11.4.2, “Making System Services Automatic or Manual,” on page 70
- Section 11.4.3, “Downloading Log Files for System Services,” on page 70
- Section 11.4.4, “Enabling or Disabling the SSH Service,” on page 70

## 11.4.1 Starting, Stopping, or Restarting System Services

You might want to start, stop, or restart the following services:

- SSH (disabled by default)
- Jetty
- PostgreSQL
- PlateSpin Transformation Manager
- PlateSpin Migrate Connector for PTM

For example, if you create a custom theme for the PTM Web Interface, you will enable and disable SSH and restart PlateSpin Transformation Manager as part of the setup process.

**To start, stop, or restart a service on the appliance:**

1. Click **System Services** .
2. Select the service that you want to start, stop, or restart.
   - SSH (disabled by default)
   - Jetty
   - PostgreSQL
   - PlateSpin Transformation Manager
   - PlateSpin Migrate Connector for PTM
3. Click **Action**, then select **Start**, **Stop**, or **Restart**.
4. Click **Close** to exit System Services.

## 11.4.2 Making System Services Automatic or Manual

1. Click **System Services**  .
2. Select the service that you want to make automatic or manual.
3. Click **Options**, then select either **Set as Automatic** or **Set as Manual**.
4. Click **Close** to exit System Services.

## 11.4.3 Downloading Log Files for System Services

If you experience an issue with the Web Interface, you might need to download the log files to send them to Technical Support.

1. Click **System Services**  .
2. In the **Log Files** column, click the **download** link for the appropriate service to download the log files to your management workstation:

   **SSH:** The SSH service that is running on the appliance has no relevant log files for download.

   **Jetty:** Downloads the `jetty.stderrout.log` file.

   **PostgreSQL:** The database for the PlateSpin Transformation Manager product has no relevant log files for download.

   **PlateSpin Transformation Manager:** Collects, zips, and downloads the following log files:

   - `tm_server.log`
   - `platespin-transformmgr.out`
   - `platespin_transformmgr_config.log`

   **PlateSpin Migrate Connector for PTM:** Collects, zips, and downloads the following log files:

   - `migrate_connector.log`
   - `platespin-migrate-connector.out`
3. Click **Close** to exit System Services.

## 11.4.4 Enabling or Disabling the SSH Service

**To enable the SSH service on the Appliance VM:**

1. Log in to the Appliance Management Console as the `vaadmin` user, then click **System Services**.
2. Select the SSH service.
3. Select **Action > Start**.
4. Click **Options**, then select either **Set as Automatic** or **Set as Manual**.
5. Click **Close** to exit System Services.
6. Log out of the Appliance Management Console, then close your web browser.
7. From your computer, start an SSH session and log in as the `vaadmin` user or `root` user to the user appliance.

**To disable the SSH service on the Appliance VM:**

1. Exit any open SSH sessions.
2. Log in to the Appliance Management Console as the `vaadmin` user, then click **System Services**.
3. Select the SSH service.
4. Select **Action > Stop**.
5. Click **Close** to exit System Services.
6. Log out of the Appliance Management Console, then close your web browser.

# 11.5 Digital Certificates

Use the Digital Certificates tool to add and activate certificates for the PTM Appliance. You can use the digital certificate tool to create your own certificate and then have it signed by a CA, or you can use an existing certificate and key pair if you have one that you want to use.

---

**NOTE:** The appliance ships with a self-signed digital certificate. Instead of using this self-signed certificate, Micro Focus recommends that you use a trusted server certificate that is signed by a trusted certificate authority (CA) such as VeriSign or Equifax.

---

The certificate works for both the appliance (port 9443) and the PlateSpin Transformation Manager Web Interface (ports 8182 and 8183). You do not need to update your certificate when you update the software.

Complete the following sections to change the digital certificate for your appliance:

- Section 11.5.1, “Using the Digital Certificate Tool,” on page 71
- Section 11.5.2, “Using an Existing Certificate and Key Pair,” on page 73
- Section 11.5.3, “Activating the Certificate,” on page 73

## 11.5.1 Using the Digital Certificate Tool



### Creating a New Self-Signed Certificate

1. Log in to the Appliance Management Console as the `vaadmin` user.
2. Click **Digital Certificates**  .
3. In the **Key Store** drop-down list, ensure that **Web Application Certificates** is selected.

4 Click File > New Certificate (Key Pair), then specify the following information:

4a General

**Alias:** Specify a name that you want to use to identify and manage this certificate.

**Validity (days):** Specify how long you want the certificate to remain valid.

4b Algorithm Details

**Key Algorithm:** Select either RSA or DSA.

**Key Size:** Select the desired key size.

**Signature Algorithm:** Select the desired signature algorithm.

4c Owner Information

**Common Name (CN):** This must match the server name in the URL in order for browsers to accept the certificate for SSL communication.

**Organizational Unit (OU):** (Optional) Small organization name, such as a department or division. For example, Purchasing.

**Organization (O):** (Optional) Large organization name. For example, Micro Focus.

**City or Locality (L):** (Optional) City name. For example, Provo.

**State or Province (ST):** (Optional) State or province name. For example, Utah.

**Two-letter Country Code (C):** (Optional) Two-letter country code. For example, US.

5 Click OK to create the certificate.

After the certificate is created, it is self-signed.

6 Make the certificate official, as described in "Getting Your Certificate Officially Signed" on page 72.

## Getting Your Certificate Officially Signed

1 On the Digital Certificates page, select the certificate that you just created, then click File > Certificate Requests > Generate CSR.

2 Complete the process of emailing your digital certificate to a certificate authority (CA), such as Verisign.

The CA takes your Certificate Signing Request (CSR) and generates an official certificate based on the information in the CSR. The CA then mails the new certificate and certificate chain back to you.

3 After you have received the official certificate and certificate chain from the CA:

3a Revisit the Digital Certificates page.

3b Click File > Import > Trusted Certificate. Browse to the trusted certificate chain that you received from the CA, then click OK.

3c Select the self-signed certificate, then click File > Certification Request > Import CA Reply.

3d Browse to and upload the official certificate to be used to update the certificate information.

On the Digital Certificates page, the name in the Issuer column for your certificate changes to the name of the CA that stamped your certificate.

4 Activate the certificate, as described in Section 11.5.3, "Activating the Certificate," on page 73.

### 11.5.2 Using an Existing Certificate and Key Pair

When you use an existing certificate and key pair, use a `.P12` key pair format.

1. Log in to the Appliance Management Console as the `vaadmin` user.
2. Click **Digital Certificates** .
3. In the **Key Store** drop-down menu, select **JVM Certificates**.
4. Click **File** > **Import** > **Trusted Certificate**. Browse to and select your existing certificate, then click **OK**.
5. Click **File** > **Import** > **Trusted Certificate**. Browse to and select your existing certificate chain for the certificate that you selected in Step 4, then click **OK**.
6. Click **File** > **Import** > **Key Pair**. Browse to and select your `.P12` key pair file, specify your password if needed, then click **OK**.
7. Continue with "Activating the Certificate" on page 73.

### 11.5.3 Activating the Certificate

1. On the Digital Certificates page, in the **Key Store** drop-down menu, select **Web Application Certificates**.
2. Select the certificate that you want to make active, click **Set as Active**, then click **Yes**.
3. Verify that the certificate and the certificate chain were created correctly by selecting the certificate and clicking **View Info**.
4. When you successfully activate the certificate, click **Close** to exit Digital Certificates.

## 11.6 Firewall

Use the Firewall tool to view your current firewall configuration directly from the appliance. By default, all ports are blocked except those needed by the appliance. For example, the Login page for the Appliance Management Console uses port 9443, so this port is open by default.

**NOTE:** To have a seamless experience with the appliance, ensure that you do not block the ports with your firewall settings. See "Appliance Management Console: Ports and Firewalls" on page 17.

**To view firewall settings for the PTM Appliance:**

1. Log in to the Appliance Management Console as the `vaadmin` user.

2 Click **Firewall** .

The Firewall page lists port numbers with the current status of each port number. The page is for informational purposes and is not editable.

3 Click **Close** to exit the Firewall page

## 11.7 Storage

Use the Storage tool to expand the storage space for the Boot partition (Hard Disk 1) and the `/vastorage` (virtual appliance storage) partition (Hard Disk 2) that you created when you deployed the appliance. You can also expand the `/var`partition if you created a separate disk for the log files.

**To expand the size of an appliance disk partitions:**

1 Log in to the Appliance Management Console as the `vaadmin` user.

2 Click **Storage** .

3 Use the tools provided by your virtualization platform vendor to expand the virtual disks that contain the partitions you are expanding.

4 In the virtual disks table, select the partitions to be expanded.

5 Click **Expand partitions**.

This action stops the appliance services, expands the selected partitions to the size of their respective disks, and restarts appliance services.

6 Restart the appliance so the operating system can detect the disks that have been expanded.

## 11.8 /var Mount Configuration

Use the `/var` Mount Configuration tool to configure the location of the `/var` directory if you move it to a separate hard disk on the appliance or to a remote NFS directory. By default, the appliance logs its system events in the `/var` directory on the Boot partition (Hard Disk 1). Because the `/var` directory can fill up with log files and cause the Boot partition to grow, you can locate the `/var` directory on a separate dedicated hard disk on the appliance, or on a dedicated remote NFS directory.

**To move the /var directory to a dedicated disk or to a remote NFS directory:**

1. Use the VMware vSphere client to create a virtual disk and assign it to the appliance's virtual machine.
2. Log in to the Appliance Management Console as the vaadmin user.
3. Click **/var Mount Configuration**  .
4. Specify the hard disk information for the /var directory:
   - **Select disk:** Select the hard disk where you want to place the /var directory.
   - **File system type:** Specify the type of file system.
5. Click **OK**.

## 11.9 Reboot or Shutdown

You might need to initiate a graceful shut down or to restart the appliance for maintenance. Using the Appliance Management Console options is preferred over using a Power Off/On option in the hypervisor's VM management tool.

1. Log in to the Appliance Management Console as the vaadmin user.
2. In the upper right corner of the Appliance Configuration pane, click **Reboot** or click **Shutdown**.

## 11.10 Logout

For security reasons, you should sign out to exit your management session with the appliance, then close your web browser. Your session terminates automatically when you close your web browser.

**To sign out of the Appliance Management Console:**

1. In the upper-right corner of the Appliance Management Console page, next to the user name, click **Logout**.
2. Close the web browser.

# 12 Patching the Appliance

PlateSpin Transformation Manager Appliance provides built-in tools to help you apply field patches and patches for the Appliance. You should perform these tasks only from the Appliance Management Console, because native Linux tools are not aware of the configuration requirements and dependencies of the PlateSpin Transformation Manager services.

**To access the Appliance Management Console:**

1. In a web browser, specify the DNS name or the IP address for the appliance with the port number 9443.

   https://<*ptm-ipaddr-or-dns-name*>:9443

   For example:

   `https://10.10.10.1:9443`

   or

   `https://ptm.example.com:9443`
2. Specify the administrative username and password for the appliance, then click **Sign in**. The default users are `vaadmin` or `root`.

The Appliance System Configuration page displays the following options to help you manage patches to the current release version:

- Support
- Field Patch
- Online Update
- Product Upgrade

## 12.1 Support

Use the Support tool to send configuration information to Technical Support (https://support.microfocus.com/contact/) by uploading files directly with FTP, or by downloading the files to your management workstation and sending them by an alternative method.

**To send configuration files to Technical Support:**

1. Log in to the Appliance Management Console as the `vaadmin` user.
2. Click **Support**  .

3 Use one of the following methods to send the appliance's configuration files to Technical Support (https://support.microfocus.com/contact/):

- Select **Automatically send the configuration to Micro Focus using FTP** to initiate the FTP transfer of configuration information.
- Select **Download and save the configuration file locally, then send it to Micro Focus manually** to download configuration information to your management workstation. You can then send the information to Technical Support (https://support.microfocus.com/contact/) using a method of your choice.

4 Click **OK** to complete the process.

## 12.2 Field Patch

Use the Field Patch option to manage patches for Transformation Manager Server software, patches for the PlateSpin Migrate Connector software for the installed instance, and security patches for the software and operating system. You can install new patches, view currently installed patches, and uninstall patches. You can download patches from the Micro Focus Patch Finder website (https://download.microfocus.com/patch/finder/).

**To manage patches:**

1 Log in to the Appliance Management Console as the `vaadmin` user.

2 Click **Field Patch**  .

3 (Conditional) Install a downloaded patch:

**3a** Download the PlateSpin Transformation Manager patch file from the Micro Focus Patch Finder website (https://download.microfocus.com/patch/finder/) to your management computer.

**3b** On the Field Patch page in the **Install a Downloaded Patch** section, click **Browse**.

**3c** Browse to and select the patch that you downloaded in Step 3a.

**3d** Click **Install**.

4 (Conditional) Uninstall a patch:

You might not be able to uninstall some patches.

**4a** In the **Patch Name** column of the Field Patch list, select the patch that you want to uninstall.

**4b** Click **Uninstall Latest Patch**.

5 (Conditional) Download a log file that includes details about the patch installation.

**5a** Click **Download Log File** for the appropriate patch.

6 Click Close to exit the Field Test Patch page.

## 12.3 Online Update

PlateSpin Transformation Manager 2019.5 does not support the Update Channel option.

## 12.4 Product Upgrade

PlateSpin Transformation Manager 2019.5 does not support the online Product Upgrade option.

For supported upgrade paths and instructions, see Part V, “Upgrade PlateSpin Transformation Manager,” on page 81.

# V Upgrade PlateSpin Transformation Manager

This section describes the requirements, preparation, and process for upgrading your PlateSpin Transformation Manager Appliance and all PlateSpin components in a PlateSpin Migration Factory Environment.

# 13 PTM Appliance Upgrade Requirements

Before you upgrade your PlateSpin Transformation Manager environment, ensure that you understand the requirements for upgrade.



## 13.1 Supported Upgrade Paths

All PlateSpin components in an existing PlateSpin Migration Factory deployment must be upgraded from version 2019.2 to version 2019.5.



### 13.1.1 PlateSpin Transformation Manager Appliance

PlateSpin Transformation Manager 2019.5 supports the replacement of an existing PTM 2019.2 Appliance with a PTM 2019.5 Appliance. Upgrades from other prior releases are not supported.

For this release, the database software version has changed from PostgreSQL 9.6 running on SUSE Linux Enterprise Server 12 SP3 to PostgreSQL 10 running on SUSE Linux Enterprise Server 15. Instead of copying Disk 2 and using the existing database file with the replacement VM, you will export data from the old PTM database and import it to the new PTM database on the replacement Appliance.

---

**NOTE:** PlateSpin Transformation Manager does not support an in-place version upgrade of PlateSpin Transformation Manager 2019.2 software on the existing appliance VM running SLES 12 SP3.

---

### 13.1.2 PlateSpin Migrate Connector

PlateSpin Migrate Connector 2019.5 is a component of PlateSpin Transformation Manager 2019.5. PlateSpin Migrate Connector 2019.5 runs on SUSE Linux Enterprise Server (SLES) 15. Direct upgrades are not supported.

---

**NOTE:** PlateSpin Migrate Connector does not support an in-place version upgrade of PlateSpin Migrate Connector 2019.2 software on an existing SLES 12 SP3 Connector host server.

---

PlateSpin Migrate Connector 2019.5 is included on the PlateSpin Transformation Manager 2019.5 Appliance. After you deploy the replacement Appliance, you will apply the old Connector settings to the Connector instance on the replacement Appliance.

You must upgrade the operating system to SUSE Linux Enterprise Server 15 on existing remote PlateSpin Migrate Connector 2019.2 host servers, or deploy a replacement host server. Configure the replacement Connector instances to use the same settings as the instances they replace.

### 13.1.3 PlateSpin Migrate

PlateSpin Transformation Manager 2019.5 and PlateSpin Migrate Connector 2019.5 are compatible with PlateSpin Migrate 2019.5. In a PlateSpin Migration Factory deployment, you must also upgrade PlateSpin Migrate servers.

PlateSpin Migrate supports upgrade from PlateSpin Migrate 2019.2 to PlateSpin Migrate 2019.5. Other direct upgrades are not supported.

## 13.2 Replacement PTM Appliance Requirements

Use the guidelines in Table 13-2 to deploy and configure the replacement PTM Appliance. You can use the upgrade as an opportunity to increase the sizes for the RAM, CPU, and disks for the Appliance VM.

***Table 13-1*** *PTM Appliance Configuration Guidelines*

| Requirements | Guidelines |
|---|---|
| **VM Requirements** | |
| VMware folder and datastore | In VMware, set up a new VMware folder and datastore that you will use for the replacement PTM Appliance VM and storage resources. |
| Disk 1 Boot | The `boot` disk contains the system files, appliance-specific software, and event logs. |
| Disk 2 (`/vastorage`) | Disk 2 will be used for the PTM Server and Connector software, PTM database, configuration files, and log files. |
| Disk 3 (`/vastorage_old`) | As part of the upgrade preparation, you export the data from the existing PTM database to a file on Disk 2 of your existing PTM 2019.2 Appliance. You will copy the old Disk 2 to the datastore for the replacement Appliance, and rename the disk as `/vastorage_old`. You will attach the disk as Disk 3 temporarily on the replacement Appliance when you import the exported data to the database on the replacement Appliance. |

| Requirements | Guidelines |
|---|---|
| **Appliance Configuration Requirements** | |
| Passwords and Time Zone page | ◆ `vaadmin` user password<br>Set up the password to log in to the Appliance Management Console on this appliance.<br>◆ `root` user password<br>Set up the password to log in with `root` privileges to the appliance virtual machine.<br>◆ NTP Server IP address or DNS name<br>◆ Region<br>◆ Time zone |
| Network Configuration page | The IP address and communications information will be set according to the network where you deploy the VM.<br>◆ Static IP address for the VM<br>◆ Network mask<br>◆ Gateway IP address<br>◆ DNS host name associated with the static IP address<br>◆ DNS server IP address<br>◆ Domain search |
| Disk 2 setup page | Select the Hard Disk 2 that you created for `/vastorage`, then accept the other defaults. |
| **Initial PTM Server Configuration Requirements** | |
| PostgreSQL Database Connection | Use the settings for the database that you used for the old PTM Appliance. Typical deployments use the following default settings. See "PTM Database" on page 14.<br>◆ **Database host:** localhost<br>◆ **Database port:** 5432<br>◆ **Database Administrator credentials:** The installation automatically creates a PostgreSQL database administrator user and password.<br>◆ **Create New Database:** Selected<br>◆ **Database name:** transmgr<br>◆ **Database user name:** tmadmin |
| Initial User Configuration | Provide the full name, a valid email address, and a password for a trusted user who will be the System Administrator user of the PTM Server Web Interface. This user has rights across all projects and organizations. |
| Web server Configuration | Recommended: secure port 8183 |

## 13.3 PTM Upgrade Process Overview

Table 13-2 provides an overview of the process for upgrading your PTM Appliance and other PlateSpin components in a PlateSpin Migration Factory environment. For best results, perform the upgrade in the recommended order.

***Table 13-2*** *Overview of PTM Upgrade Process*

| Task | Description |
|---|---|
| 1. Prepare for upgrade. | Perform the prerequisite tasks in Preparing for Upgrade in the order shown in Table 14-1, "Checklist for Preparing to Upgrade the PTM Appliance," on page 87. |
| 2. Upgrade the PTM Appliance from version 2019.2 to version 2019.5. | See "Replacing the PTM Appliance VM" on page 95.<br><br>PTM Server verifies the versions of the PlateSpin Migrate Connector and PlateSpin Migrate servers and accepts connections only from those servers that run the same release version. |
| 3. Upgrade remote PlateSpin Migrate Connector instances and configure them for the PTM Appliance. | See "Upgrade Remote PlateSpin Migrate Connectors" on page 103.<br><br>PlateSpin Migrate Connector verifies the version of the PTM Server and PlateSpin Migrate servers and connects only with those servers that run the same release version. |
| 4. If you have PlateSpin Migrate 2019.2 servers defined for the Project, you must upgrade them to PlateSpin Migrate 2019.5. | After you have updated a Connector for a project, you can begin to upgrade the PlateSpin Migrate servers assigned to that Connector.<br><br>See "Upgrading PlateSpin Migrate Servers" on page 105. |
| 5. After the upgrade is complete for all components in your PlateSpin Migration Factory environment, you can resume migration activities. | See "Post-Upgrade Tasks" on page 107. |

# 14 Preparing for Upgrade

Use the guidance in this section to prepare your existing PlateSpin Transformation Manager Appliance for upgrade from version 2019.2 to version 2019.5.



## 14.1 Prerequisite Tasks for Upgrade

To prepare for upgrading your PTM Appliance, complete the prerequisite tasks in Table 14-1 in the recommended order as shown.

***Table 14-1*** *Checklist for Preparing to Upgrade the PTM Appliance*

| Topic | Prerequisite Task | Notes |
|---|---|---|
| Requirements | 1. Before you begin, ensure that you meet the requirements for upgrade. | See “PTM Appliance Upgrade Requirements” on page 83. |
| Automation | 2. Ensure that no PTM-controlled automated migrations or replications are in progress. | For automated migrations controlled by PTM:<br>◆ Wait until in-progress migrations are complete.<br>-OR-<br>◆ In the PTM Web Interface, pause migration schedules by placing the workloads in an On Hold state. Wait for in-progress replications to complete, or abort them.<br>**IMPORTANT:** Workload migrations must remain in the On Hold state until after you have completed the upgrades for the PTM Appliance, all Migrate Connector instances, and all PlateSpin Migrate servers. |

| Topic | Prerequisite Task | Notes |
|---|---|---|
| Tracking | 3. For PlateSpin Migrate servers, ensure that no PTM-tracked migrations or replications are in progress. | For migrations being tracked by PTM:<br>◆ Wait until in-progress migrations are reported by the Migrate Servers as complete.<br>-OR-<br>◆ In the Migrate Web interface or Migrate Client, pause migration schedules by using **Pause Schedule** for the workloads. Wait for in-progress replications to complete, or abort them.<br>**IMPORTANT:** Workload migrations must remain in the Paused Schedule state until after you have completed the upgrades for the PTM Appliance, all Migrate Connector instances, and all PlateSpin Migrate servers. |
| Users | 4. Require all users to log out of the PTM Web Interface and close the web browser. | Users must not attempt to plan, configure, and execute migrations during the upgrade. This requirement applies to the PTM Web Interface as well as any custom clients that use the PTM REST API. |
| Connectors | 5. On each remote PlateSpin Migrate Connector host server, stop the Migrate Connector instance from running and save a copy of the Connector settings. | **On each Connector host server:**<br>1. Log in as the `root` user to the Connector host server.<br>2. Stop the Migrate Connector service. In a console, enter<br>`rcps_migrate_connector stop`<br>3. Navigate to the `/opt/microfocus/migrate_connector/config/` directory and save a copy of the `settings.cfg` file to a location you can access from a replacement Connector host server after the Appliance upgrade.<br>4. Exit the host server.<br>**IMPORTANT:** There should be no Connector communications with the replacement PTM Appliance until the Connector software has also been upgraded. |

| Topic | Prerequisite Task | Notes |
|---|---|---|
| Services | 6. Stop the Migrate Connector service and PlateSpin Server service running on the PTM Appliance. | 1. Log in to the PTM Appliance Management Console as the `vaadmin` user.<br>2. Click **System Services**  .<br>3. Select the **PlateSpin Migrate Connector for PTM** service, then select **Action** > **Stop**.<br>4. Wait until the Connector is reported as stopped before you continue.<br>5. Select the **PlateSpin Transformation Manager** service, then select **Action** > **Stop**.<br>6. Wait until the PTM service is reported as stopped before you continue. |
| SSH | 7. Enable SSH on the PTM Appliance VM. | SSH access to the PTM Appliance VM is required to perform subsequent prerequisite tasks.<br>1. Continuing in System Services the Appliance Management Console from Task: Services, select the SSH service.<br>2. Select **Action > Start**.<br>3. Click **Close** to exit System Services. |
| Admin | 8. Log out of the PTM Appliance Management Console and close the web browser. | Do not log in to the Appliance Management Console again except as directed to complete the upgrade. |
| Database | 9. Export the PTM Database from PostgreSQL 9.6 on your existing PTM 2019.2 Appliance. | See Section 14.2, “Back Up Data from the PTM Database,” on page 90. |
| Local Connector Settings | 10. Save a copy of the local Connector settings file on the Appliance. | See Section 14.3, “Save Local Connector Settings,” on page 91. |
| Jetty | 11. (Conditional) If you modified the Jetty settings on the PTM Appliance, save your custom Jetty settings. | See Section 14.4, “Save Jetty Settings,” on page 91. |
| Themes | 12. (Conditional) If you modified the default theme settings files without copying them to a custom location, save a copy of the customized default files. | See Section 14.5, “Save Customized Default Theme Files,” on page 92. |

| Topic | Prerequisite Task | Notes |
|---|---|---|
| Appliance Services | 13. Note settings you modified for the appliance. | Typically, you make changes to Linux services through the Appliance Management Console, which stores those settings on Disk 2 (`/vastorage`). Note settings you have made, such as for Time or Digital Certificate services. |
| Custom Linux Services or Ports | 14. (Conditional) If you used native Linux tools to customize the Linux services or ports on the PTM Appliance, make a note of the settings. | If you modify settings for Linux services by using native Linux tools, the configuration files are stored on the Appliance disk.<br><br>Make a note of settings you made using native Linux tools, such as if you configured Proxy Client Settings to use your proxy server for HTTP and HTTPS communications over the Internet. |
| Power-down | 15. Log in to VMware vSphere for the Appliance host, then power down the Appliance VM gracefully. | At shutdown, essential configuration files are copied to the `/vastorage/conf/` folder, including the configuration for the Migrate Connector instance installed on the Appliance.<br><br>**IMPORTANT:** Wait until the VM powers down gracefully before you continue.<br><br>For an example of saved files, see Section 14.6, “Archive Essential Configuration Files,” on page 93. |
| Prepare for New VM | 16. Prepare to deploy the replacement VM for the PTM Appliance. | See Section 15.1, “Before You Deploy a Replacement Appliance VM,” on page 95. |

## 14.2 Back Up Data from the PTM Database

The PTM database on your existing PlateSpin Migrate 2019.2 Appliance uses PostgreSQL version 9.6 on the SUSE Linux Enterprise Software (SLES) 12 SP3 operating system. For the PlateSpin Transformation Manager 2019.5 Appliance, the PTM database uses PostgreSQL version 10 on the SUSE Linux Enterprise Software (SLES) 15 operating system. For this upgrade, you will export the data from the existing PTM database, and then import it later on the replacement Appliance.

**To export the PTM database from PostgreSQL 9.6 on the old Appliance:**

1. Stop all PTM and Migrate Connector activities on the PTM Appliance by performing prerequisite Task: Requirements through Task: Admin in Table 14-1, “Checklist for Preparing to Upgrade the PTM Appliance,” on page 87.
2. Establish an SSH session with the PlateSpin Transformation Manager 2019.2 Appliance VM.
3. Log in as the `root` user.
4. Get the count of transformations in the current PlateSpin Database. In a console, enter

   ```
   su postgres -c "psql -d transmgr -c 'select count(*) from tm.trans'"
   ```

5. In a text editor, change the /product/version XML-node in `/etc/products.d/baseproduct` from `2019.2` to `12.3`.

The version 12.3 refers to SUSE Linux Enterprise Server 12 SP3, which is used by PostgreSQL 10 repo for platform versioning.

6 Back up the current PTM database by dumping the database to the `/vastorage/ptm` folder. Enter

```
su postgres -c "/usr/pgsql-10/bin/pg_dumpall" > /vastorage/ptm/
pg_backup.sql
```

7 Stop the PostgreSQL 9.6 server. Enter

```
rcpostgresql stop
```

8 Save a copy of the `pg_hba.conf` file.

9 Make a note of any configuration settings you might have made in the `postgresql.conf` file.

10 Continue preparing for upgrade with the next task in Table 14-1, “Checklist for Preparing to Upgrade the PTM Appliance,” on page 87.

## 14.3 Save Local Connector Settings

1 Enable SSH on the PTM Appliance.

See Section 11.4.4, “Enabling or Disabling the SSH Service,” on page 70

2 From your management computer, start an SSH session for *ptm-ipaddr-or-dns-name* on port 22, then log in as the `root` user to the Appliance.

You can use any SSH tool, such as Putty (http://www.putty.org/).

3 Save a copy of the Connector settings file.

`/opt/microfocus/migrate_connector/config/settings.cfg`

4 Continue preparing for upgrade with the next task in Table 14-1, “Checklist for Preparing to Upgrade the PTM Appliance,” on page 87.

## 14.4 Save Jetty Settings

If you ever modified the Jetty configuration settings on the existing PTM Appliance, your custom settings will be lost when you replace the Appliance during upgrade. Copy the settings to a location on Disk 2 (`/vastorage`), or make a note of the settings so you can re-configure them after the upgrade.

**To copy the Jetting configuration settings:**

1 Enable SSH on the PTM Appliance.

See “Enabling or Disabling the SSH Service” on page 70

2 From your management computer, start an SSH session for *ptm-ipaddr-or-dns-name* on port 22, then log in as the `root` user to the Appliance.

You can use any SSH tool, such as Putty (http://www.putty.org/).

3 Save a copy of the `/opt/microfocus/ps_transform_mgr/tm-jetty-base/start.d/ssl.ini` file, or make a note of the Jetty keystore settings for the following parameters. The default values for PTM are shown here. Your settings might be different if you have ever made

changes to the Jetty keystore using the appropriate keytool software. You will need to reset these keystore settings after the upgrade. `Changeit` is the actual password value in this example.

```
# Setup a keystore and truststore
jetty.keystore=certs/keystore
jetty.truststore=certs/keystore

# Set the passwords.
jetty.keystore.password=changeit
jetty.keymanager.password=changeit
jetty.truststore.password=changeit
```

4 Continue preparing for upgrade with the next task in Table 14-1, “Checklist for Preparing to Upgrade the PTM Appliance,” on page 87.

## 14.5 Save Customized Default Theme Files

If you customized the theme in PlateSpin Transformation Manager, you might need to save a copy of your files, depending on how you applied your theme.

**To make themes available for the replacement PTM Appliance:**

1 Do one of the following:

- **Custom theme in a separate folder:** If you created a new custom theme (copied default themes to new directory and edited), the custom theme is saved in that directory in `/vastorage` on Disk 2. This directory will be available in the same relative path on Disk 3 (`/vastorage_old`) on the replacement PTM Appliance.

  After the upgrade, you must copy the new default theme files to a folder on the replacement Disk 2 (`/vastorage`) and re-create your custom theme by manually applying your settings to the new theme files. See “Resetting Your Custom Theme after an Upgrade” on page 61.

- **Customized default theme files:** If you customized the default theme files in the default location (`/vastorage/ptm/themes/` directory), your modified theme will be available in that same relative path on Disk 3 (`/vastorage_old`) on the replacement PTM Appliance.

  After the upgrade, you can reapply your custom settings to the new default theme files on the replacement Disk 2 (`/vastorage`). See “Configurable Theme Components” on page 59.

  Alternatively, you can use the old theme files as a guide to create a custom theme in a separate directory on the replacement Disk 2 (`/vastorage`). See “Setting Up Your Custom Theme” on page 60.

2 Continue preparing for upgrade with the next task in the Table 14-1, “Checklist for Preparing to Upgrade the PTM Appliance,” on page 87.

## 14.6 Archive Essential Configuration Files

When you power down the PlateSpin Transformation Manager Appliance (see Task: Power-down), PTM automatically archives essential configuration files in the `vaconfig.zip` file in the `/vastorage/conf/` folder on Disk 2 (`/vastorage`). This folder will be available in the same relative path on Disk 3 (`/vastorage_old`) on the replacement PTM Appliance.

The list of files is similar to the following:

```
Archive:  vaconfig.zip
 extracting: etc/sysconfig/novell/NvlVAinit
 extracting: etc/Novell-VA-release
 extracting: usr/lib64/jvm/java/jre/lib/security/cacerts
 extracting: etc/sysconfig/SuSEfirewall2
 extracting: etc/sysconfig/scripts/SuSEfirewall2-custom
 extracting: etc/ssh/sshd_config
 extracting: etc/opt/microfocus/ps_transform_mgr/config/system.properties
 extracting: etc/opt/microfocus/ps_transform_mgr/config/quartz-scheduler.cfg
 extracting: etc/opt/microfocus/ps_transform_mgr/config/pgusr.in
 extracting: etc/opt/microfocus/ps_transform_mgr/config/connector.properties
 extracting: etc/opt/microfocus/ps_transform_mgr/config/war-tm-config.xml
 extracting: etc/opt/microfocus/ps_transform_mgr/config/com.netiq.tm.backend.auth.cfg
 extracting: etc/opt/microfocus/ps_transform_mgr/config/transformationmanager-themes.cfg
 extracting: etc/opt/microfocus/ps_transform_mgr/config/com.netiq.tm.backend.connpool.cfg
 extracting: etc/opt/microfocus/ps_transform_mgr/config/security/tm_cert.der
 extracting: etc/opt/microfocus/ps_transform_mgr/config/security/tmKeystore.jks
 extracting: etc/sysconfig/postgresql
 extracting: opt/microfocus/ps_transform_mgr/tm-jetty-base/start.d/webapp.ini
 extracting: opt/microfocus/ps_transform_mgr/tm-jetty-base/start.d/servlet.ini
 extracting: opt/microfocus/ps_transform_mgr/tm-jetty-base/start.d/https.ini
 extracting: opt/microfocus/ps_transform_mgr/tm-jetty-base/start.d/jaas.ini
 extracting: opt/microfocus/ps_transform_mgr/tm-jetty-base/start.d/ssl.ini.bak
 extracting: opt/microfocus/ps_transform_mgr/tm-jetty-base/start.d/servlets.ini
 extracting: opt/microfocus/ps_transform_mgr/tm-jetty-base/start.d/http.ini
 extracting: opt/microfocus/ps_transform_mgr/tm-jetty-base/start.d/annotations.ini
 extracting: opt/microfocus/ps_transform_mgr/tm-jetty-base/start.d/ssl.ini
 extracting: opt/microfocus/ps_transform_mgr/tm-jetty-base/start.d/logging.ini
 extracting: opt/microfocus/ps_transform_mgr/tm-jetty-base/start.d/gzip.ini
 extracting: opt/microfocus/ps_transform_mgr/tm-jetty-base/start.d/https.ini.bak
 extracting: opt/microfocus/ps_transform_mgr/tm-jetty-base/resources/logging.properties
 extracting: opt/microfocus/ps_transform_mgr/tm-jetty-base/resources/logback.xml
 extracting: opt/microfocus/ps_transform_mgr/tm-jetty-base/resources/jetty-
logging.properties
 extracting: opt/microfocus/migrate_connector/config/settings.cfg
 extracting: opt/microfocus/migrate_connector/custom_callouts/__init__.py
 extracting: opt/microfocus/migrate_connector/custom_callouts/
pre_cutover_testing_callout.py
 extracting: opt/microfocus/migrate_connector/custom_callouts/
submit_validation_callout.py
 extracting: opt/microfocus/migrate_connector/custom_callouts/
post_cutover_testing_callout.py
 extracting: opt/microfocus/migrate_connector/custom_callouts/custom_import_callout.py
```

# 15 Replacing the PTM Appliance VM

To upgrade from PlateSpin Transformation Manager 2019.2 to PlateSpin Transformation Manager 2019.5, you will deploy a replacement virtual machine image for the PTM Appliance, and import your old data to the new database on the replacement Disk 2 (`/vastorage`).

The PTM Appliance OVF file provides an new appliance template with the following changes:

- PlateSpin Transformation Manager Server and any software package dependencies
- PlateSpin Migrate Connector and any software package dependencies
- PTM database schema changes

  PostgreSQL 10 is included on the PTM Appliance.

The upgrade deployment opens the Appliance Management Console and prompts you to set passwords for the `vaadmin` user and `root` user for the new appliance, and then completes the upgrade.

You will copy the old Disk 2 to the new deployment location and attach it temporarily as Disk 3 to the replacement virtual machine while you import the old data to the new database.



## 15.1 Before You Deploy a Replacement Appliance VM

After you have performed the tasks in Chapter 14, “Preparing for Upgrade,” on page 87, the PTM database has been exported to a `/vastorage/ptm/pg_backup.sql` file on the old Disk 2, and the existing Appliance VM has been powered down gracefully.

Use the checklist in Table 15-1 to perform the deployment-related preparation for the replacement appliance.

***Table 15-1*** *Checklist for Deploying a Replacement Appliance*

| Prerequisite Task | Notes |
|---|---|
| 1. Ensure that the person who deploys the replacement appliance is a trusted user. | The upgrade requires the user to set a password for the `vaadmin` user and `root` user on the replacement appliance. |
| 2. In vSphere, create a VM folder where you will create the appliance VM for PTM 2019.5. | Name the folder something relevant (such as `ptm-2019-5-<ip-address>`). |

| Prerequisite Task | Notes |
|---|---|
| 3. In vSphere, remove all VMware snapshots for the old Disk 2. | Before you copy the old Disk 2 to the new location, ensure that you remove all VMware snapshots so that the `/vastorage` disk has the correct disk file and the latest configuration settings. |
| 4. In vSphere, copy the old Disk 2 `.vmdk` file (`/vastorage`) from the old VM folder to a datastore in the new VM folder, and rename it as `/vastorage_old`. | The old Disk 2 contains the exported data from the existing PTM database that you will use for the replacement PTM Appliance.<br>You will attach the /vastorage_old `.vmdk` file as Disk 3 until you perform the data import from the `/vastorage_old/ptm/pg_backup.sql` file. |
| 5. Download the PlateSpin Transformation Manager 2019.5 OVF file. | See Section 2.1, “Downloading the PTM Software,” on page 21.<br>1. Download the <*ptm-ovf-file-name*>`.zip` file to the management workstation where you are running the VMware vSphere Client or using the vSphere Web Client in a web browser.<br>2. Extract the ZIP file by using a third-party extractor; do not use the default Windows extractor. |
| 6. Deploy the replacement PTM appliance. | Continue with Section 15.2, “Deploying a Replacement Appliance VM,” on page 96. |

## 15.2 Deploying a Replacement Appliance VM

To upgrade the PlateSpin Transformation Manager 2019.2 to PlateSpin Transformation Manager 2019.5, you deploy the replacement virtual machine image for the PlateSpin Transformation Manager 2019.5 Appliance.



### 15.2.1 Deploy the PTM VM

1. In vSphere, copy the extracted OVF file to the new VMware VM folder you created for the replacement Appliance VM.
2. In vSphere, click **File** > **Deploy OVF Template**.
3. Click **Browse**, then navigate to and select the extracted OVF file.
4. Name the replacement Appliance VM with the same name as the new parent VM folder you created.
5. For storage, select the same Datastore folder where you copied the old Disk 2 `.vmdk` file.

6 Accept the default for the disk format for Disk 1.

7 Do not select **Power on After Deployment**.

8 Click **Finish**.

The VM is created in the VM folder with Disk 1 in the specified datastore.

9 Continue with "Edit the PTM VM Properties" on page 97.

## 15.2.2 Edit the PTM VM Properties

1 In vSphere, right-click the VM you just deployed and select **Edit Settings**.

The VM Properties dialog displays the VM properties.

2 Set the **Memory** and **CPU** settings to match the old PTM Appliance, or increase them as needed.

3 Configure a new Disk 2 (`/vastorage`).

**3a** On the Virtual Machine Properties page, select the Hardware tab, then click **Add**.

**3b** In the Add Hardware wizard, configure the hard disk.

| Page | Action |
|---|---|
| Device Type | 1. Select **Hard Disk**, then click **Next**. |
| Select a Disk | 1. Select **Create a new virtual disk**, then click **Next**. |
| Create a Disk | 1. In the **Capacity** section, specify the amount of hard disk space that you want to allocate.<br>See Disk 2 /vastorage for information about minimum disk capacity requirements.<br>2. In the **Disk Provisioning** section, select either of the following disk formats, depending on the VMware version that you are running:<br>◆ **Thick Provision Eager Zeroed**<br>◆ **Support clustering features such as Fault Tolerance**<br>3. In the **Location** section, select **Specify a datastore or datastore cluster**, click **Browse**, select a datastore, then click **OK**.<br>4. Click **Next**. |
| Advanced Options | 1. In the **Virtual Device Node** section, select **SCSI (1:0)** from the drop-down list.<br>**NOTE:** Do not change the controller to VMware Paravirtual at this point of the installation process. You can optionally modify this setting as a post-installation task. See "Change the SCSI Controller to VMware Paravirtual SCSI for Hard Disk 2" on page 33.<br>2. In the **Mode** section, select **Independent** and **Persistent**.<br>These settings allow the appliance to be updated.<br>3. Click **Next**. |
| Summary | 1. Review the specifications you set for the new hard disk, then click **Finish**. |

4 Configure a new Disk 3 that uses the old Disk2 (`/vastorage_old`) that contains the exported data from the old database:

**4a** Click **Add** > **Hardware**.

**4b** Select **Hard Disk** > **Next**.

**4c** Select **Use an existing Virtual disk**, then click **Next**.

**4d** Click Browse, then navigate to and select the copy of the old Disk 2 (`/vastorage_old`) that you made for the new PTM Appliance.

**4e** Click **Next** > **Next** > **Finish**.

5 Continue with "Configure PTM Appliance Credentials and Settings" on page 98.

## 15.2.3 Configure PTM Appliance Credentials and Settings

Configure the replacement PTM Appliance settings using the information you collected in Table 13-1, "PTM Appliance Configuration Guidelines," on page 84.

1 In vSphere, power on the VM.

You will be prompted to complete the configuration.

2 On the Passwords and Time Zones page, complete the following settings, then click **Next**.

- `vaadmin` user password
- `root` user password
- NTP Server IP address or DNS name
- Region
- Time zone

3 On the Network Configuration page, complete the following settings, then click **Next**.

- Static IP address for the VM
- Network mask
- Gateway IP address
- DNS host name associated with the static IP address
- DNS server IP address
- Domain search

4 Select the new Disk 2 (sdb) and accept the default formatting, then click **Next**.

5 Click **Configure**.

6 After the configuration completes, continue with "Configuring PTM Server" on page 27.

## 15.2.4 Configure PTM Server for the Replacement Appliance

Configure the replacement PTM Server settings using the information you collected in Table 13-1, "PTM Appliance Configuration Guidelines," on page 84.

1 In a web browser, navigate to the following URL:

`https://ip_address_or_DNS_name:9443`

Use the IP address or DNS name of the server that you specified during the appliance deployment.

2 Log in to the appliance using the `vaadmin` user and the password that you set.

3 On the Initial Server Configuration page, complete the following information:

**3a PostgreSQL Database Connection**

Select **Auto Setup Local Database** to automatically create a database instance, database administrator user, and a password for the user. Table 15-2 shows the default settings.

***Table 15-2*** *PostgreSQL Database Default Values*

| Parameter | Default Value |
|---|---|
| Database Host | localhost |
| Database Port | 5432 |
| Create a New Database | Selected |
| Database Name | transmgr |
| Database User Name | tmadmin |

**3b Initial User Configuration**

Provide the full name, email address, and a password for this user.

**3c Web Server Configuration**

We recommend secure port 8183 and SSL options for accessing the Web Interface. You can enable or disable the HTTP port 8182 to allow non-secure traffic.

4 Click **Submit**.

5 After the configuration completes successfully, continue with "Restore the Data and Settings" on page 99.

## 15.3 Restore the Data and Settings

After you have deployed a replacement PlateSpin Transformation Manager Appliance, you must import the data from the old PTM Appliance and re-apply your custom settings on the new PTM Appliance.

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**NOTE:** Ensure that no users are logged in to the PTM Web Interface on the replacement PTM Appliance during this process.

---

**To restore the data and settings from the old Appliance:**

1 In a web browser, go to the Appliance Management Console URL for the replacement PTM Appliance, then and log in as the `vaadmin` user.

`https://ip_address_or_DNS_name:9443`

2 In the Appliance Management Console, stop the PTM-related services in the order indicated:

   **2a** Click **System Services**  .

   **2b** Stop the local Connector service. Select the **PlateSpin Migrate Connector for PTM** service, then select **Action > Stop**.

   Wait for the **Status** to change to `Stopped` before you continue.

   **2c** Stop the PTM service. Select the **PlateSpin Transformation Manager** service, then select **Action > Stop**.

   Wait for the **Status** to change to `Stopped` before you continue.

   **2d** Stop the PostgreSQL service. Select the **PostgreSQL** service, then select **Action > Stop**.

   Wait for the **Status** to change to `Stopped` before you continue.

3 In the Appliance Management Console, enable the SSH service:

   **3a** In System Services, select the SSH service, then select **Action > Start**.

   **3b** Click **Close** to exit System Services.

4 Exit the Appliance Management Console and close the web browser.

5 On your management computer, establish an SSH session and log in as the `root` user to the replacement PTM Appliance.

6 Import the previously exported data to the PTM database on the replacement Appliance:

   **6a** Start the PostgreSQL 10 database server. Enter

   ```
   su postgres -c "/usr/pgsql-10/bin/postgres -D /vastorage/ptm/pgsql/
   data" &
   ```

   **6b** Restore the PTM database in PostgreSQL 10 by using the backup file you created in Section 14.2, “Back Up Data from the PTM Database,” on page 90. This file now resides on Disk 3 on the replacement Appliance, which you renamed as `/vastorage_old`. Enter

   ```
   su postgres -c "/usr/pgsql-10/bin/psql -d postgres -f /
   vastorage_old/ptm/backup.sql"
   ```

   Wait for the restore to complete before you continue.

   **6c** Get the count of transformations in the restored PTM database. Enter

   ```
   su postgres -c "/usr/pgsql-10/bin/psql -d transmgr -c 'select
   count(*) from tm.trans'"
   ```

   **6d** Compare the old database transformation counts (Step 4 in Section 14.2, “Back Up Data from the PTM Database,” on page 90) with the restored database transformation counts (Step 6c), and verify that the counts are the same.

   **6e** Overwrite the new `pg_hba.conf` file with the old `pg_hba.conf` file that you saved in Step 8 of Section 14.2, “Back Up Data from the PTM Database,” on page 90.

   **6f** In a text editor, modify the new `postgresql.conf` file to add the previous configuration settings that you noted in Step 9 of Section 14.2, “Back Up Data from the PTM Database,” on page 90.

7 Open the Connector configuration file in a text editor, reapply settings from the old Connector configuration file that you saved in “Save Local Connector Settings” on page 91, then save the file.

`/opt/microfocus/migrate_connector/config/settings.cfg`

8 Apply custom settings from the old PTM Appliance as appropriate:

**8a** (Optional) Apply the Jetty settings you saved in Section 14.4, “Save Jetty Settings,” on page 91.

**8b** (Optional) Apply the custom theme settings as described in Section 14.5, “Save Customized Default Theme Files,” on page 92.

**8c** (Conditional) Apply any custom settings that you made to the old PTM Appliance by using native Linux tools as the `root` user if they are still required in your network. This is not typical.

For example, if proxy settings are required in your network, see Section 4.1, “Configure Proxy Client Settings,” on page 29.

9 At the terminal prompt, enter `exit` to close the SSH session.

10 In a web browser, log in as the `vaadmin` user to the Appliance Management Console for the replacement PTM Appliance.

11 In the Appliance Management Console, start the PTM-related services on the replacement appliance in the order indicated:

**11a** Click **System Services**  .

**11b** If it is stopped, start the PostgreSQL service. Select the **PostgreSQL** service, then select **Action > Start**.

Wait for the **Status** to change to `Running` before you continue.

**11c** Start the PTM service. Select the **PlateSpin Transformation Manager** service, then select **Action > Start**.

Wait for the **Status** to change to `Running` before you continue.

**11d** If it is stopped, start the local Connector service. Select the **PlateSpin Migrate Connector for PTM** service, then select **Action > Start**.

Wait for the **Status** to change to `Running` before you continue.

**11e** Click **Close** to exit System Services.

12 (Optional) In the Appliance Management Console, disable the SSH protocol on the Appliance.

**12a** Click **System Services**  .

**12b** Select the SSH service.

**12c** Select **Action > Stop**.

**12d** Click **Close** to exit System Services.

13 Exit the Appliance Management Console and close the web browser.

14 Log in as the PTM System Administrator user to the PTM Web Interface, then verify that the old data is present and as expected.

`https://ip_address_or_DNS_name:8183`

15 (Optional) Remove Disk 3 (/vastorage_old) from the appliance VM.

See Section 15.4, “Remove Disk 3 from the PTM Appliance VM,” on page 102.

16 Continue with the next step in the upgrade process in Table 13-2, “Overview of PTM Upgrade Process,” on page 86.

## 15.4 Remove Disk 3 from the PTM Appliance VM

After you have successfully replaced the PTM Appliance, you can remove Disk 3 (`/vastorage_old`). You must stop the VM to remove the disk.

1. In a web browser, go to the Appliance Management Console URL for the replacement PTM Appliance, then and log in as the `vaadmin` user.

   `https://ip_address_or_DNS_name:9443`

2. In the Appliance Management Console, click **Shutdown**.

   Wait for the Appliance VM to shut down gracefully.

3. In the vSphere Client, remove Disk 3 (**/vastorage_old**).

   **3a** Right-click the replacement VM in the vSphere Client, and click **Edit Settings**.

   **3b** Select Disk 3 (`/vastorage_old`), then click **Remove**.

   **3c** Click **OK**.

4. (Optional) In the vSphere Client, delete the `.vmdk` file for Disk 3 (**/vastorage_old**) from the datastore.

5. In the vSphere Client, power on the replacement VM.

   The PTM services are started automatically.

# 16 Upgrade Remote PlateSpin Migrate Connectors

PlateSpin Migrate Connector 2019.5 is supported on SUSE Linux Enterprise Server (SLES) 15. After you successfully upgrade your PlateSpin Transformation Manager Appliance to version 2019.5, you must upgrade existing remote instances of PlateSpin Migrate Connector.

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**NOTE:** There is no in-place upgrade path for remote instances of Migrate Connector deployed on your SUSE Linux Enterprise Server 12 SP3 host servers.

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You can use either of the following methods to upgrade remote Connector instances:

- On the existing Connector host server, upgrade the operating system to SUSE Linux Enterprise Server 15 before you apply the new Connector software.
- You can deploy a replacement remote Connector host server, install the new Migrate Connector, and configure it for the PTM server by using the same settings used by the Connector instance it replaces.

  For installation requirements and instructions, see the *PlateSpin Migrate Connector 2019.5 Installation Quick Start*.

---

**IMPORTANT:** Ensure that you upgrade the PTM Appliance before you configure new remote Connector instances in your migration environment.

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# 17 Upgrading PlateSpin Migrate Servers

In a PlateSpin Migration Factory deployment, you must upgrade each of your PlateSpin Migrate Servers from version 2019.2 to version 2019.5. You can begin the upgrade for a Migrate server after you upgrade its associated PlateSpin Migrate Connector.

For requirements and instructions, see "Upgrading PlateSpin Migrate" in the *PlateSpin Migrate 2019.5 Installation and Upgrade Guide*.

# 18 Post-Upgrade Tasks

After the upgrade is complete for all components in your PlateSpin Migration Factory environment, you can resume the on hold and paused migration activities.

1. (Automated migrations) For automated migrations controlled by PTM, resume replications and migrations. In the PTM Web Interface, remove the On Hold state for workloads.
2. (Tracked migrations) For tracked migrations controlled by PlateSpin Migrate, resume replications and migrations. In the Migrate Web Interface or Migrate Client, un-pause schedules for workloads.
3. Allow PTM users to access the PTM Web Interface to resume project activities.