MICRO FOCUS

PlateSpin® Transformation Manager 2019.2

Administrator Guide

March 2019

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Contents

About This Book

The *PlateSpin Transformation Manager Administrator Guide* provides information about tasks that require PTM Administrator privileges. It includes conceptual information, an overview of the administrator-level options in the Web Interface, and step-by-step guidance for common administrative tasks.

The PTM System Administrator user automatically has the Administrator privileges required to perform administrative tasks. You can also grant Administrator privileges to trusted users by assigning them to the Administrators group in PTM.

IMPORTANT: PTM Administrators have global access to application options and data across all projects.

For information about using the product to plan and execute transformation projects, see the *PTM 2019.2 User Guide*.

Intended Audience

This document is intended for PTM application administrators who configure and maintain application features and user access.

Additional Documentation

For the most recent version of this guide and other PlateSpin Transformation Manager documentation resources, visit the PlateSpin Transformation Manager 2019.2 Documentation website (https://www.microfocus.com/documentation/platespin/platespin-transformation-manager-2019-2/).

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/

- **Micro Focus Communities:** https://www.microfocus.com/communities/
- **PlateSpin Idea Exchange:** https://community.softwaregrp.com/t5/PlateSpin-Idea-Exchange/idb-p/PlateSpin_Ideas/

Getting Started

As an Administrator user of PlateSpin Transformation Manager, you are responsible for configuring and maintaining the application and migration environment for project users. This section provides and overview of the product, administrative tasks, and the tools you use.

1 Overview of PlateSpin Transformation Manager

PlateSpin Transformation Manager is a planning, tracking, and automation solution for data center and enterprise transformation projects. It features familiar project roles and progress visualization with a dashboard. Planning tools help users organize, coordinate, and monitor migration activities. Discovery, migration, and tracking features help streamline the migration workflow:

- Import with automated discovery simplifies and standardizes the inventory of source workloads and target resources for transformation projects.
- Automated migration enables you to control the transformation workflow from planning to cutover from a single point of control across multiple PlateSpin Migrate servers.
- Tracking enables you to monitor the status of manual migrations performed using your PlateSpin Migrate servers for workloads imported to PTM.

Project teams can increase project predictability, transformation speed, and success ratios, which helps reduce overall project costs and time to completion.

PlateSpin Migrate Connector for PlateSpin Transformation Manager performs discovery of source workloads and target platforms, load-balances the assignment of migration jobs across PlateSpin Migrate servers, and manages communications for the execution and monitoring of transformation plans.

1.1 Inherent Challenges for Workload Transformation

As your business evolves, the data center can expand unevenly or in very dissimilar ways through mergers and acquisitions. Legacy and new technologies coexist. Your IT staff maintains a heterogeneous mix of hardware architectures, operating systems, and applications. This workload diversity increases the stress on your IT staff as well as the likelihood of human error. Older hardware typically has a larger facility footprint, consumes more power, and requires more cooling than does a consolidated solution using virtualization platforms.

Benefits of Transformation

You want to transform your workloads to achieve these benefits:

- Optimize workload diversity to better meet your current and future business needs
- Simplify daily operations
- Improve overall efficiency
- Reduce operational costs
- Reduce risks in the IT environment

Goals for Transformation

The purpose of any workload transformation or migration is to change workloads from their current modes of operation to appropriate future modes of operation. How you achieve the change depends on the types of workloads you manage and your business needs. Typical project objectives include the following:

- Migrate workloads between physical, virtual, and cloud infrastructures.
- Upgrade workloads to newer hardware, different hardware vendors, or hosted provider hardware.
- Consolidate workloads on virtualization host servers or to cloud infrastructures.
- Move virtual files to newer virtualization host servers, running the same or different virtualization hypervisors.
- Lift and shift equipment from location A to location B.
- Decommission old workloads as you retire software and services.

Your transformation or migration project might be a combination of any of these goals, or thousands of instances of the same one.

Challenges for Transformation

Migration planning is unwieldy. Migrating workloads from one place to another is easy to do if you have a few servers, or even 100 servers. Large-scale migration project might have thousands, or even hundreds of thousands of workloads. The information and planning requirements are not easily captured in a spreadsheet.

Business takes priority. Transformations require minimal downtime for mission critical applications and services. Each workload transformation has different priorities and windows of opportunity based on business demands. Schedules must consider the availability of target facilities, networks, equipment, and the IT staff needed to plan and execute the transformation. Management and organization stakeholders want to track the progress and status of your projects.

Assessment is tedious. Defining the original state of a workload can be tedious. You create a profile of the workload that includes information about its compute infrastructure, operating system, applications, data, and configuration. Because workloads might be upgraded or re-purposed over time, the profile might need to be augmented or updated before you execute the transformation. The related proposed workload profile might also need to change as appropriate to the revisions to the original workload.

The process seems never-ending. Large-scale IT transformation projects typically occur over an extended period in a production environment that might span multiple locations. Complex projects with massive numbers of workloads might take months or even years to complete. It might be possible to plan details only a few months in advance. Projects require multiple phases, not a one-time effort.

1.2 Benefits of Using Transformation Manager for Large-Scale Transformations

PlateSpin Transformation Manager brings together all aspects of planning into a transformation methodology that is:

- Consistent
- Reliable
- Repeatable

Plan and Track Events through the Full Transformation Life-Cycle

Each workload transformation plan identifies the current and future environment for each workload, including the hardware, applications, and other dependent resources that must be in place for a successful cutover to the target workload. You manage and track progress for each workload independently through all phases from import to completion. You can also track cumulative metrics for each batch, wave, and project.

Automate Migrations across Large Server Farms of PlateSpin Migrate Servers

In a PlateSpin Migration Factory environment, you can plan, execute, and monitor workload migrations through PlateSpin Transformation Manager. The PlateSpin Migrate Connector load-balances thousands of migration jobs across multiple PlateSpin Migrate servers. Transformation Manager automates each workload's migration, according to its transformation plan, through the Migrate Connector and using REST APIs.

Planning Features Are Flexible

With powerful forms for search and bulk actions, you can efficiently organize workloads into batches and waves, and apply the same settings on multiple workloads at a time.

Control Access and Visibility through Role-Based Permissions

Planning involves more than the IT staff who performs the technical work. You can assign permissions for key stakeholders to monitor the project status and reports. Keeping interested parties involved with data migrations helps minimize or eliminate potential conflicts for the execution of transformations.

Performance and Scalability Are Built-In

The Web Interface and database are designed to manage up to about 500,000 transformations in a single project.

Role-Based Multi-Tenancy Supports Multiple Customers and Projects

Role-based multitenancy enables you to manage multiple organizations and projects, while protecting the security and confidentiality of their data. Organizations can be the end customers of providers, or different departments in an enterprise. User roles and their related permissions control the actions and visibility of information for users.

Your Transformation Goals Are Achievable

Using PlateSpin Transformation Manager to plan and monitor your transformation projects enables you to achieve your transformation goals:

- Dramatically increases project predictability
- Increases transformation speed, reducing the time to completion
- Improves the success ratio and reduces the likelihood of human error
- Reduces the costs

1.3 PlateSpin Migration Factory

PlateSpin Migration Factory combines PlateSpin Transformation Manager and PlateSpin Migrate Connector with one or more PlateSpin Migrate servers to plan and execute automated migrations for supported source workloads and target platforms. You can also track the status in PTM for manual migrations performed on the Migrate servers.

PlateSpin Migrate Connector integrates activities between PTM and Migrate servers. It load-balances the migration jobs across multiple PlateSpin Migrate servers in the project. Migrate Connector listens for migration events from PTM and delivers them to the appropriate Migrate servers. Migrate Connector listens for migration status events from the various PlateSpin Migrate servers and delivers events only to the appropriate project and workload transformation plans.

For automated migrations, the transformation workflow and schedule determine when migration tasks are executed for each workload. PTM can pause automation to allow a Migration Specialist to manually perform some tasks. Migration Specialists can monitor the workload migration and respond to exceptions, which enables them to handle more migrations in less time.

For manual migrations with tracking, Migrate Connector identifies workloads on Migrate Servers that have also been imported for a project. PTM receives information and displays it in the workload's transformation plan. Migration Specialists can add notes about the workload migration using the Transformation History. Statistics are rolled up to the dashboard for project monitoring.

Figure 1-1 illustrates the deployment environment for automated PlateSpin migration. See Table 1-1 for a description of how automated migration works in a PlateSpin Migration Factory environment.

Figure 1-1 *PlateSpin Migration Factory Environment*

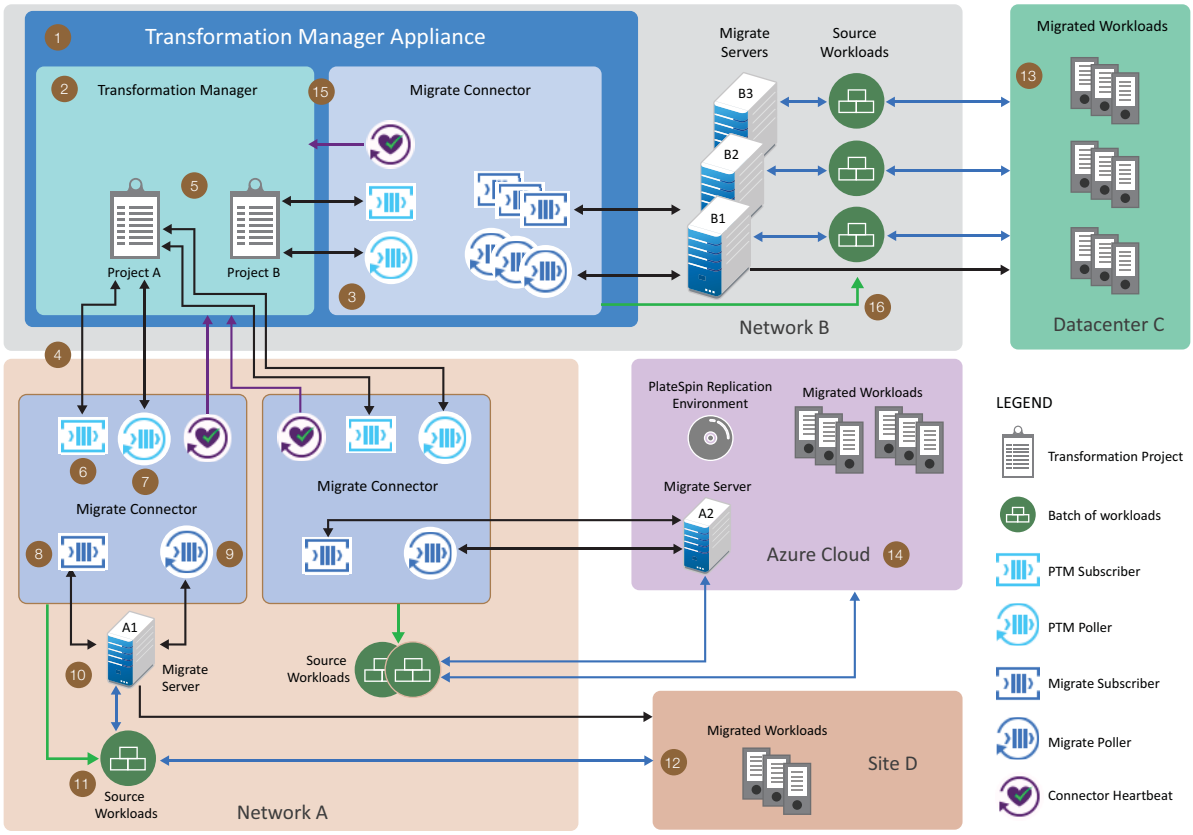


Table 1-1 *How Automated Migration Works in a PlateSpin Migration Factory Environment*

PlateSpin Migration Factory Environment	Description
1. PlateSpin Transformation Manager Appliance	The Appliance VM hosts the PTM Server and an instance of the Migrate Connector.
2. PlateSpin Transformation Manager Server (PTM Server)	Your PTM Server supports multitenancy. Projects are isolated from each other. Role-based privileges determine what actions users can perform and the data they can access. Multiple Migrate Connector instances connect with a single PTM Server.
3. PlateSpin Migrate Connector on the PTM Appliance	The Migrate Connector instance on the Appliance is preconfigured to work with the PTM Server. You can use this instance to discover source workloads in the same network as the PTM Appliance, and track migrations for them. By default, the Connector works with all projects. You can configure it to work with a specific project instead of all projects.

PlateSpin Migration Factory Environment	Description
4. PlateSpin Migrate Connector deployed in other networks	Deploy a Migrate Connector instance on a Linux server in the same network as the source workloads to be migrated. You might choose to deploy multiple Connector instances in the same network if you need to improve performance for handling migrations of large numbers of workloads in that network. Each Connector instance handles migrations for the source workloads it discovers. Migrate Connector is used to discover target VMware vCenter platforms and their resources. If the target vCenter platforms are not in the source network where you have already deployed a Migrate Connector, you must deploy a Migrate Connector instance in the target network.
5. Transformation projects	A user with Administrator privileges creates organizations and projects, then assigns appropriate users to the Project Manager role for each project. Each project can be served by one or multiple Connector instances. If a Connector supports all projects, it honors the privacy and security of each project's data.
6. PlateSpin Transformation Manager Subscriber	Each Connector instance has one PTM Subscriber. The subscriber listens for events pushed from its assigned PTM Server. If the Connector instance is assigned to a specific project, the subscriber forwards events only for its assigned project.
7. PlateSpin Transformation Manager Poller	Each Connector instance has one PTM Poller. The poller periodically polls its assigned PTM Server to check that it has received all events since the last poll. If the Connector instance is assigned to a specific project, the poller forwards events only for its assigned project.
8. PlateSpin Migrate Subscriber	Each Connector instance uses a separate Migrate Subscriber for each Migrate server assigned to the Connector. Each subscriber listens for relevant events pushed dynamically from its Migrate server. Relevant events include migration state changes for workloads known to the Connector for its assigned project. Each Migrate server is dedicated to a single Connector instance for a single project.

PlateSpin Migration Factory Environment	Description
9. PlateSpin Migrate Poller	Each Connector instance uses a separate Migrate Poller for each Migrate server assigned to the Connector. Each poller periodically polls its Migrate server to check that it has received all relevant events since the last poll. Each Migrate server is dedicated to a single Connector instance for a single project.
10. PlateSpin Migrate servers	For a project, you create a Migration Server resource for each PlateSpin Migrate server that you will use to execute workload migrations. You associate each Migration Server resource with a single appropriate Connector instance for a single project. A single Connector can be associated with multiple Migrate servers. When migration jobs begin, the Connector initiates a subscriber and poller for the specified Migrate server and starts listening and polling for migration state events. For automated migrations, you can manually assign a specific Migration Server resource to a source workload, or you can allow the Connector to automatically assign a Migration Server resource. Auto-assignment ensures that workload migrations are load-balanced across all of the assigned Migrate servers. After you submit a workload, the migration workflow progresses according to the workload's transformation plan through its assigned Migrate server.
11. Source workloads	For a project, you provide minimal connection information and logon credentials for the source workloads that you plan to migrate. An automated discovery process adds the details, or *inventory*, for each workload. Each workload's transformation plan defines the proposed workload, target workload, and target platform. You organize the workload migrations into waves and batches, and schedule them according to your business needs.
12. Target platforms in different sites	In this example, you plan to migrate workloads to multiple sites in the same or different network. Workloads in a batch might have the same destination site. The Migration Specialist at each site manages the migrations to the site.
13. Multiple target platforms in the same site	In this example, you plan to migrate workloads to different VMware clusters in a data center.

PlateSpin Migration Factory Environment	Description
14. Target platforms in the cloud	In this example, you plan to migrate workloads to the Microsoft Azure Cloud. You can migrate workloads to your accounts in the Azure Global Cloud or Azure sovereign clouds, such as Azure China, Azure Germany, and Azure U.S. Government.
15. Migrate Connector heartbeat	A lost connection to a Connector can impact discovery, automated migration, and migration tracking. Each Connector instance sends a heartbeat regularly to the PTM Server. PTM Server monitors the health of the connection and reports the status in a Connectors list for PTM Server users with Administrator privileges.
16. Source workload discovery	When you import source workloads to a project, a Connector instance in the source network connects to the workload, discovers details about it, and returns the information to the project. The Connector instance that discovers the source workload is responsible later for executing automated migration and tracking migration events for that workload.

1.4 PlateSpin Discovery

In a PlateSpin Discovery environment, PlateSpin Transformation Manager works with the PlateSpin Migrate Connector to provide automated discovery of details about source workloads and target platforms.

Source Workload Discovery

Import with automated discovery simplifies and standardizes the setup of workloads for planning. You provide minimal connection information and logon credentials. The discovery process retrieves details about the workload, populates properties for the related object in the planning database, and creates a proposed workload with the same configuration. Workload discovery is required before you can submit a workload for automated migration.

Transformation Manager provides the following methods of import and automated discovery of workloads:

- Single IPv4 address or FQDN
- Range of IPv4 addresses (0 to 255)
- Spreadsheet with any number of workloads, providing the IPv4 address or FQDN for each
- REST API by using your custom script

You can retry failed discoveries for one or multiple items at a time. You can also rediscover modified workloads if needed.

Target Platform Discovery

Target platform discovery standardizes information collected for the platform and helps set boundaries for target workloads that will be created there. You provide minimal connection information and logon credentials. The discovery process retrieves details about available resources for the platform. Platform discovery is required before you can configure automated migrations for a workload.

Transformation Manager provides automated discovery for supported target platforms, such as VMware vCenter clusters and Microsoft Azure global and sovereign clouds. The platform resources are rediscovered automatically about every 6 hours or on demand.

The resource information is specific to the target account and platform type:

- **VMware vCenter Server**
  - Clusters
  - Hosts
  - Networks
  - Datastores
  - Resource Pools
- **Microsoft Azure Cloud**
  - Associated locations based on the target cloud environment
  - Networks
  - Subnetworks
  - Datastores (storage accounts)
  - Resource groups

1.5 Transformation Methods

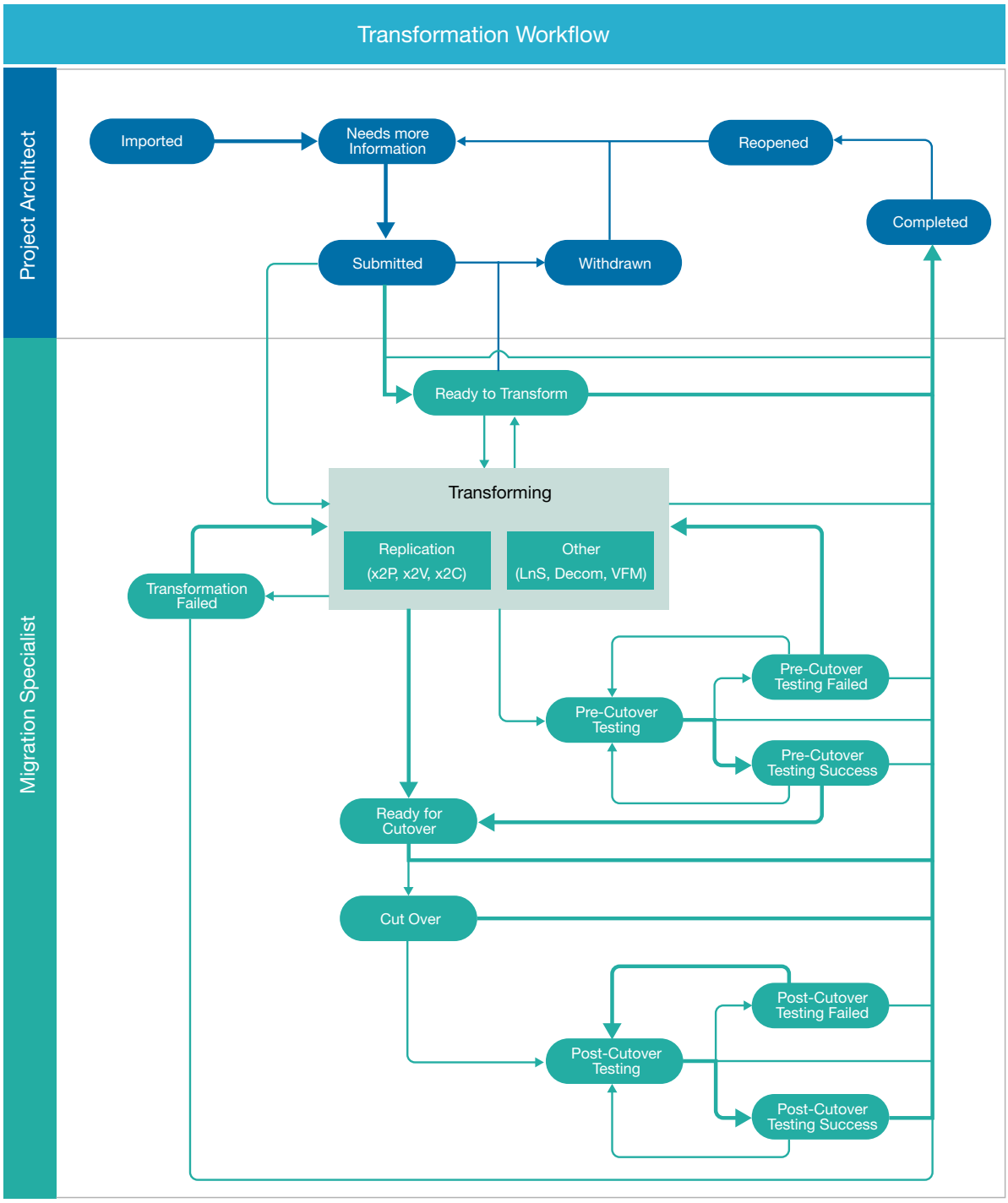
PlateSpin Transformation Manager supports the following transformation methods:

- Automated
- Manual (tracking)
- Manual
- Decommission

1.6 Transformation Planning Workflow

PlateSpin Transformation Manager supports transformation workflow planning that is compatible with any migration solution. Figure 1-2 shows the workflow for a transformation project as you track it using the Web Interface.

Figure 1-2 *Transformation Workflow*



You begin by setting up components to represent different logical and physical aspects of your IT environment. Global components provide predefined resources.

As the **Project Manager**, you set up components to represent different logical and physical aspects of your IT environment. Global components provide predefined resources.

As the **Project Manager** or **Project Architect**, you import information about the source workloads, and discover details about the workload, including hardware architecture, operating system, NICs, storage, and services.

The import process creates a proposed target workload based on the settings for the original workload. If you re-import or rediscover the source workload information, the new details apply to the target workload until you begin to plan the transformation.

As **Project Architect**, you define the future workload environments and refine details about the target workloads as they are known. You assign the workloads to scheduled waves and batches.

The **Migration Specialists** execute and monitor the workload transformation processes. For automated migrations, they monitor workloads as they progress through the automated transformation workflow, and intercede as needed. For external migrations on Migrate servers, Transformation Manager tracks the state information. For manual migrations, they can manually enter different state information about the work in progress.

As **Dashboard Viewers**, your project stakeholders can view progress metrics and related reports in the Dashboard.

1.7 Web Interface

The PlateSpin Transformation Manager Web Interface allows role-based access to project information from anywhere at any time on a range of devices.

- **Securely access project information from anywhere at any time.** Visibility and actions for both internal and external stakeholders are appropriate to their user role.
- **Prioritize, organize, and schedule tasks.** Break down transformation goals into manageable chunks by project, wave, and batch.
- **Plan and track workload transformations.** Capture details for source workloads and target workloads in physical, virtual, and cloud infrastructures, with any-to-any migration, lift and shift, virtual file move, and decommission.
- **Define custom components for each project.** Define workloads, host platforms, credentials, migration servers, and other resources that represent your environment.
- **Achieve fast and efficient workload manipulations of multiple workloads at a time.** Powerful forms for Advanced Search, Bulk Edit, and Bulk Status Change allow you to apply the same settings on multiple selected workloads. PTM applies changes only as appropriate for each workload based on its settings and state.
- **Monitor project status using the real-time visual dashboard and status reports.** Internal and external stakeholders can track progress by project, wave, and batch, and view warnings for missed deadlines and schedule deviations.
- **Securely manage multiple concurrent projects for different organizations.** Enterprises, managed service providers, and system integrators can leverage role-based access and multi-tenancy to keep end customer data secure and confidential.

- **Effectively handle massive planning efforts.** Projects can scale from thousands to tens of thousands of workloads with minimal impact on PTM performance.
- **Automate discovery for source workloads and host platforms.** Automated discovery captures details about workloads on import and about platform resources when you add the host platform.
- **Monitor discovery status for attempted workload imports.** Import Progress provides a role-based view of the discovery status for workload imports attempted during the past 24 hours. View workload import status by success, in progress, failed, and not found.
- **Automate execution and tracking for supported migration target platforms.** In a PlateSpin Migration Factory environment, you can automate the execution of migrations and track related transformation workflow events.
- **Automatically track your PlateSpin Migrate migration projects.** In a PlateSpin Migration Factory environment, you can track the status of migrations for imported workloads where migrations are executed on PlateSpin Migrate servers.

For more information, see "Key Administrative Tasks in the Web Interface" on page 24 and "Using the Web Interface" on page 39.

1.8 Key Administrative Tasks in the Web Interface

After you deploy the PlateSpin Transformation Manager Appliance, most of your administrative interaction with the PTM Server occurs through the Web Interface. This web-based planning tool allows access to configuration settings anywhere on a range of devices. You use the following key Web Interface components to set up system-level settings for projects.

1.8.1 Configuration

Configure global settings that apply across all projects:

- **Connectors:** View a list of PlateSpin Migrate Connector instances used in your PlateSpin Migrate Factory or PlateSpin Discovery environments. It displays the health of the Connector connection to PTM and its project assignment.

  For more information, see "Monitoring Connectors" on page 125.
- **Migrate Connector:** Configure default global settings for PlateSpin Migrate Connector instances used in your transformation environment. They govern interactions between each Connector and one or more PlateSpin Migrate servers assigned to it.

  For more information, see "Configuring PlateSpin Migrate Connector" on page 113.
- **Operating Systems:** Configure default global operating system types. OSes in this list are available to all projects.

  For more information, see "Configuring Operating Systems" on page 59.

1.8.2 Users

- Define organizations, users, and groups.
- Assign users to the Administrators group for elevated privileges and responsibilities normally associated with the default PTM System Administrator user you created during the installation of the PTM Appliance.

  For more information about the default PTM System Administrator user, see "Administrative Users for the Web Interface" in the *PTM 2019.2 Appliance Guide*.
- Assign users to project roles:
  - Project Managers
  - Project Architects
  - Migration Specialists
  - Dashboard Viewers

  The multi-tenant architecture controls access for each user account based on the assigned roles.

For more information, see the following related topics:

- "Managing Organizations" on page 71
- "Managing Users" on page 75
- "Managing Groups" on page 81

1.8.3 Planning

- **Project:** PlateSpin Transformation Manager creates a default project called My Project. Administrator user perform the following tasks:
  - Create one or more projects for each organization.
  - Define custom variables to use for each project.

    You can use custom fields to add project-specific details for each workloads, such as budget IDs, contact information, and tags to track logical or business associations among workloads. Custom fields are available in Advanced Search and Bulk Edit forms when the Global Project Selector is set.

    Project managers can also set custom fields.
  - Set the start and end dates for the project. Child objects automatically inherit dates from their parents. Dates can also be set explicitly on child objects.

    Project Managers can also set project dates.
  - Delete projects.

For more information, see "Managing Projects" on page 95.

After the project is configured, a user in the Project Manager role can configure waves, batches, and applications for the project.

1.8.4 Dashboard

The Dashboard provides summary information to show how much progress the team has made in completing work.

- **Custom metrics:** Key stakeholders can view progress metrics by project, wave, and batch, according to their assigned roles and needs.
- **Project progress:** Workload Status shows the total number of workloads and their current status as imported, on hold, defining, submitted, in progress, completed, and warning. Each category provides a link to a list of workloads in that category.

For users in project roles other than a Dashboard Viewer, the Dashboard provides tools to enhance a user's ability to see an do the important things today. All links honor the view and edit permissions of the user role.

- **What's Happening:** The What's Happening panel displays key events for the current week, a specified time period, or custom dates. Users quickly know what workloads to work on today, and what workloads to prepare for an upcoming date.
- **Bookmarks:** The Bookmarks panel displays the user's personal bookmarks. Bookmark URLs capture the state of the page or dialog visited. Users can easily revisit favorite pages or dialogs without performing repetitive and complex queries.
- **Recently Viewed:** The Recently Viewed panel displays links to pages and dialogs that the user recently accessed for view or edit actions. Users can quickly return to a location without repeating the navigation or complex search criteria.

1.9 What's Next

Use the requirements and guidelines in "Planning for PlateSpin Transformation Manager" on page 27 to ensure that PlateSpin Migration Factory components and network resources are properly configured for use by Project stakeholders.

Use the Getting Started Checklist to learn more about the Web Interface, to set up projects, and to assign a Project Manager to each project.

2 Planning for PlateSpin Transformation Manager

PlateSpin Transformation Manager works with PlateSpin Migrate Connector to discover workload details. In a PlateSpin Migration Factory deployment, PTM and Migrate Connector work with PlateSpin Migrate to automate migration of workloads to supported platforms and to track manual migrations that you initiate on Migrate servers.

For information about installation requirements for PlateSpin Transformation Manager, see "PTM Appliance Requirements" in the *PTM 2019.2 Appliance Guide*.

2.1 PlateSpin Migration Factory Requirements

In a PlateSpin Migration Factory environment, PlateSpin Transformation Manager and PlateSpin Migrate Connector work together to execute planned migrations or to track manual migrations on your PlateSpin Migrate servers

Ensure that your environment meets the deployment requirements for PlateSpin Migration Factory.

2.1.1 PlateSpin Transformation Manager Requirements

Network Connectivity and Access

Ensure that network communications are properly configured and operational.

Migrate Connector Settings

Configure the global migration settings that apply to all Migrate Connector instances.

Migration Server Resources

PlateSpin Migrate servers are represented in a project by Migration Server resources. Communications with the Migrate Server require that the resource have the Migrate Server URL and valid login credentials for Migrate.

Planning actions in PTM do not require access to the related PlateSpin Migrate server. Users can set up Migration Server resources with minimal information for planning purposes.

Automation and tracking actions require access to the Migrate server.

A Project Manager or Project Architect typically performs the following tasks for the project.

- Configure a Migration Server resource for each Migrate server that is available to the project.
- For each workload, use auto-assignment of Migration Server resources, or associate a specific Migration Server resource with the workload.

Credentials Resources

Ensure that associated Credential resources are valid before you submit the workload for automated execution:

- Source workload
- Target Platform resource
- Target Migration Server resource

Source Workload

- Ensure that the workload Transformation Plan is in Automated Mode.

  The **Mode** setting in the workload Transformation Plan must be set to **Automated**.
- Configure required information for the proposed workload.
- Automated workload discovery is required prior to submitting the workload for execution. Information added from the Import Spreadsheet is not sufficient for automation.
- Ensure that the workload is up and running.

Target Platform

Ensure that the target platform is up and running.

Target Migration Server

Ensure that the assigned PlateSpin Migrate Server is up and running.

2.1.2 Migrate Connector Requirements

- All Migrate Connectors use the global Migrate Connector settings that the Administrator user configures for the PTM application.
- Deploy a Migrate Connector instance in the same network as the source workloads.
- You need the Project ID to configure a dedicated Migrate Connector for a project.
- The Migrate Connector must be up and running.

2.1.3 Automated Migration Requirements

PlateSpin Transformation Manager supports automated migration in a PlateSpin Migration Factory deployment. Ensure that your migration environment meets the requirements for automation.

- “Supported Target Platforms for Automated Migration” on page 29
- “Automation Requirements for PlateSpin Migrate” on page 29
- “Automation Requirements for PTM” on page 29

Supported Target Platforms for Automated Migration

PlateSpin Transformation Manager supports automated migration to VMware vCenter and Microsoft Azure target platforms that meet the PlateSpin Migrate requirements. Ensure that the target platforms you create in PTM meet the PlateSpin Migrate requirements for migration to those platforms.

See the following resources in the *PlateSpin Migrate 2019.2 User Guide*:

Migration to Microsoft Azure

- "Microsoft Azure" in "Supported Target Cloud Platforms"
- "Prerequisites for Migration to Microsoft Azure"

Migration to VMware vCenter Clusters

- "VMware vCenter" in "Supported Target Virtualization Platforms"
- "Prerequisites for Migration to VMware"
- "Prerequisites for Migration to VMware Cloud on AWS"

Before you submit a workload for automated migration:

- Ensure that the Credentials resource associated with the target platform contains valid credentials for the target. Credentials are needed for the setup of the target VM on the platform.
- Ensure that the target platform is up and running.
- Ensure that the network connections are working between the assigned PlateSpin Migrate Server and the target platform.

Automation Requirements for PlateSpin Migrate

Before you begin to submit a workload for automated migration:

- Deploy PlateSpin Migrate servers in your environment.

  See the *PlateSpin Migrate 2019.2 Installation and Upgrade Guide*.
- PlateSpin Migrate servers must be accessible for network communications.

  See "Access and Communication Requirements across Your Migration Network" in the *PlateSpin Migrate 2019.2 User Guide*.
- Ensure that the Event Messaging port is open on each Migrate Server.

  See "Enabling Event Messaging for PlateSpin Migration Factory" in the *PlateSpin Migrate 2019.2 User Guide*.
- Ensure that the Migrate servers are up and running.

Automation Requirements for PTM

- In PTM, configure a Migration Server resource for each Migrate server that you plan to use for your project.

You can create Migration Server resources without the detailed information for initial planning. Select **Automated Migration** in the workload's Transformation Plan to allow the PlateSpin Migrate Connector to manage PlateSpin Migrate server assignments from among the Migration Server resources that you create for the project.

- Before you submit the workload for automated execution, ensure that associated Credential resource is valid for each Migrate server.

2.1.4 Requirements for Tracking External Migrations

PlateSpin Transformation Manager supports tracking for external migrations performed in a PlateSpin Migration Factory deployment. Ensure that your migration environment meets the requirements for tracking.

Supported Target Platforms for Tracking

PlateSpin Transformation Manager supports tracking the status of external migrations to any target platform supported by PlateSpin Migrate. *External migrations* refers to migrations that you configure and execute by using the native Migrate interfaces instead of the PTM interfaces.

For information supported migrations, see "Supported Configurations" in the *PlateSpin Migrate 2019.2 User Guide*.

Supported Target Platforms for Enhanced Tracking

PlateSpin Transformation Manager supports enhanced tracking of external migrations to the following supported target platforms that have matching platforms in PTM:

- VMware vCenter server (clusters)
- Microsoft Azure
- Amazon Web Services

Enhanced tracking refers to additional workload details and resource associations that you can monitor in PTM. In the Workload dialog, PTM displays richer details about the workload settings. In the Platform dialog, you can view information about the platform resources and their associations with tracked workloads.

Tracking Requirements for PlateSpin Migrate

Before you begin to submit a workload for automated migration:

- Deploy PlateSpin Migrate servers in your environment.

  See the *PlateSpin Migrate 2019.2 Installation and Upgrade Guide*.

- PlateSpin Migrate servers must be accessible for network communications.

  See "Access and Communication Requirements across Your Migration Network" in the *PlateSpin Migrate 2019.2 User Guide*.
- Ensure that the Event Messaging port is open on each Migrate Server.

  See "Enabling Event Messaging for PlateSpin Migration Factory" in the *PlateSpin Migrate 2019.2 User Guide*.
- Ensure that the Migrate servers are up and running.
- Configure and execute migrations by using the native PlateSpin Migrate interfaces.

Tracking Requirements for PTM

- Configure a Migration Server resource for each PlateSpin Migrate Server that you plan to use for your project.
- Deploy a PlateSpin Migrate Connector in each of the source networks for the project. For each Connector, assign one or more Migration Server resources that will be used to migrate workloads in the source network.
- Import workloads from the source network. PTM imports them and matches them with the migration workloads on the Migrate Server.
- Ensure that the assigned Connectors are up and running.

Enhanced Tracking Requirements for PTM

- Configure a target platform in PTM that contains one or more of the target platforms you have configured on your PlateSpin Migrate Servers.
  - VMware vCenter server
  - Microsoft Azure
  - Amazon Web Services

2.2 Network Connectivity and Access Requirements

Ensure that the network connections are working:

- Between the PlateSpin Migrate Connector and the source workloads
- Between the PlateSpin Migrate Connector and the PlateSpin Migrate servers
- Between the source network and target network

PlateSpin Migrate Connector requires network connectivity to the following resources, based on its assignment to the PTM Server or to a specific project:

- Its assigned PTM server
- Source workloads
- Target platforms (for automated migrations)
- PlateSpin Migrate servers

In addition, review the security guidelines in Section 2.3, "Security Guidelines," on page 34.

Your environment must meet the following requirements for network connectivity and access:

2.2.1 Event Messaging

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 message queues are inactive unless you open the required STOMP port to allow registration for the service and a PlateSpin Migrate Connector subscribes as a listener. A Connector instance subscribes automatically to the event service for its PTM Server and to the event services for its assigned PlateSpin Migrate servers.

Table 2-1 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 2-1 *Event Messaging Requirements for Network Protocols and Ports*

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

2.2.2 Workload Discovery

Workload discovery in PlateSpin Transformation Manager requires that you enable incoming ping (ICMP echo reply and ICMPv4-In echo request) traffic for source workloads and firewalls. PlateSpin supports only IPv4. For information about required software, network, and port settings for workload discovery, see Table 2-2.

Table 2-2 *Workload Discovery Requirements for Network Access and Communications*

Discovery Target	Network Protocols and Ports	Other Requirements
Windows workloads	◆ ICMP, incoming ◆ SMB (TCP 445 or 139)	◆ Microsoft .NET Framework 2.0 SP2, 3.5 SP1 or 4.0 ◆ Credentials with Domain Admin or built-in Administrator privileges
Linux workloads	◆ ICMP, incoming ◆ SSH (TCP 22, incoming)	Root-level access. For information on using an account other than `root`, see *How to use a non-root account with PlateSpin Migrate, Protect, or Forge (*KB Article 7920711) (https://support.microfocus.com/kb/doc.php?id=7920711).

2.2.3 Target Platform Resource Discovery

Platform resource discovery requires that you enable incoming ping (ICMP echo reply and ICMPv4-In echo request) traffic for platforms and firewalls. PlateSpin supports only IPv4. For information about required software, network, and port settings for platform discovery, see Table 2-3.

Table 2-3 *Target Platform Discovery Requirements for Network Access and Communications*

Discovery Target	Network Protocols and Ports	Other Requirements
VMware Cluster hosts	◆ ICMP, incoming ◆ SMB (TCP 445 or 139, incoming)	VMware account with an Administrator role
Physical hosts	◆ ICMP, incoming ◆ SMB (TCP 445 or 139, incoming)	Local Administrator or Domain credentials

Discovery Target	Network Protocols and Ports	Other Requirements
Microsoft Azure host	◆ HTTPS (TCP 443)	◆ Azure account and subscription ID ◆ PlateSpin Replication Environment enabled for the subscriber account ◆ PlateSpin Migrate server in Azure See "Prerequisites for Migration to Microsoft Azure" in the *PlateSpin Migrate 2019.2 User Guide*.

2.2.4 Requirements for Automated Workload Migration

PlateSpin Transformation Manager uses REST APIs to communicate automation requests to the Platespin Migrate servers in your PlateSpin Migration Factory environment.

Table 2-4 provides the ports to open in the firewall and on each of the Migrate servers.

Table 2-4 *REST API Requirements for Network Access and Communications*

REST API Traffic	Network Protocol and Port	Access
HTTPS (secure)	Port 443, TCP, incoming and outgoing	Administrator login credentials for the Migrate server
HTTP (non-secure)	Port 80, TCP, incoming and outgoing	Administrator login credentials for the Migrate server

Before the migration begins, ensure that you have properly prepared your environment:

- In PTM, provide valid credentials for the Migration Server resources.
- On each PlateSpin Migrate server, open the port required for event messaging. See "Event Messaging" on page 32.
- Ensure that your Migrate server setup meets the PlateSpin Migrate requirements for network communications between the Migrate server and the target platform. See "Requirements for Migration" in the *PlateSpin Migrate 2019.2 User Guide*:

2.3 Security Guidelines

PlateSpin Transformation Manager provides several key security options.

2.3.1 SSL (HTTPS) for Secure Communications

For secure connections between PlateSpin Migrate Connector and PlateSpin Transformation Manager, the Jetty SSL settings on the PlateSpin Transformation Manager Appliance VM are configured with the latest recommended security settings.

Ensure that you configure the Appliance to use port 8183 for secure communications.

2.3.2 SSL Certificate for Secure Communications

The installation of the PlateSpin Transformation Manager Appliance generates and installs a self-signed certificate for SSL (Secure Sockets Layer) communications. It uses the DNS name that you specify for the PlateSpin Transformation Manager Appliance. The certificate applies to the PTM Appliance and the software.

For higher security, Micro Focus recommends that you use a 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 PTM Appliance to create a certificate, have it signed by a trusted certificate authority, and then add it to the PTM Appliance.

NOTE: The DNS name of the server must match the subject of the security certificate.

To import your signed certificate, you must provide the certificate and key, as described in “Digital Certificates” in the *PTM 2019.2 Appliance Guide*.

2.3.3 Proxy Services

PTM Server is proxy aware. It can use the Proxy Client settings on the host Appliance for communications across the public Internet. You might need to configure proxy services in a highly restrictive networking environment.

See “Configure Proxy Client Settings” in the *Appliance Guide.*

2.3.4 Unique Login Credentials for Each Connector Instance

To distinguish actions initiated by the project’s Connector instance, we strongly recommend that you create a unique User object to use for the Connector login credentials instead of using a real User object. Create this special user as a System user, then assign it a Project Architect role at the Project level. Create a different User object for each Connector instance with permissions appropriate for its assigned project.

To add a dedicated user, see Section 9.4, “Creating a User for Connector Login,” on page 78.

2.3.5 Password Security for Credentials Resources

PlateSpin Transformation Manager uses industry-standard strong encryption to secure passwords in the PTM database for the Credentials resources used to access source machines and target hosts. The 16-digit key is randomly generated during the Appliance installation. The key is unique to each PTM Server. As new Credentials resources are created, their passwords will be encrypted with this key.

The encryption key is stored as the `tm.encrypt.key` property in the `system.properties` file:

`/opt/microfocus/ps_transform_mgr/config/system.properties`

PTM writes the `system.properties` file to a ZIP file and saves it in the `/vastorage/conf/` folder when the PTM Appliance shuts down.

The `system.properties` file is protected by the strength of the password you set for root and other system users on the Appliance as well as other security best practices in your data center.

2.3.6 Password Security for the Connector User Password

PlateSpin Migration Connector uses industry-standard strong encryption to securely store the Connector User password in the Connector configuration file.

3 Getting Started Checklist for Administrator Users

Administrator users can use this checklist to get acquainted with the tasks in the PlateSpin Transformation Manager Web Interface that require privileges for the System Administrator role. Administrator users include:

- System Administrator user account configured for the PTM Server application.

  This user has privileges for the System Administrator role. The account cannot be deleted. It is a default member of the Administrators group. See "Administrative Users for the Web Interface" in the *PTM 2019.2 Appliance Guide*.

- Members of the Administrators group, which is assigned the System Administrator role.

  The members of the Administrators group inherit privileges for the System Administrator role.

Table 3-1 *Getting Started Checklist for Administrator Users*

Status	Task	For information, see
❑	1. Log in to the Web Interface using the System Administrator user account that you created during the initial PTM Server setup. See "Initial PTM Server Configuration" in the *PTM 2019.2 Appliance Guide*.	Accessing the Web Interface (page 41) Changing a User Password (page 79)
❑	2. Familiarize yourself with the Web Interface.	Web Interface Toolbar (page 41) Global Project Selector (page 44) Bulk Actions (page 44) Show Link for Navigation URLs (page 45) Bookmarks (page 46) Custom Display and Filters for Lists (page 47) Multiple Item Selection in Lists (page 51)

Status	Task	For information, see
❑	3. (Optional) Create an account for a trusted user and add the user to the Administrators group. **NOTE:** Administrator users have global access to all features, options, and data throughout the Web Interface, including adding users to and removing users from the Administrators group. To ensure secure access, Administrator users should modify their passwords in PTM, and then log in using their custom passwords.	System Administrator Role (page 67) Creating a User (page 77) Changing a User Password (page 79)
❑	4. Create one or more organizations. PTM automatically creates one organization called My Organization.	About Organizations (page 71) Creating an Organization (page 72) (0ptional) Uploading an Organization Logo (page 73)
❑	5. Create one or more projects. PTM automatically creates one project called My Project.	About Projects (page 95) Creating a Project (page 97)
❑	6. (Optional, recommended) Create a user account to use for each PlateSpin Migrate Connector instance for the project, and assign it to the Project Architect role at the Project level. **NOTE:** We recommend that you dedicate this account to the Connector instance.	Creating a User for Connector Login (page 78)
❑	7. (Optional) Use the Project ID and User account username and password to configure a PlateSpin Migrate Connector dedicated to a Project.	Configuring a Connector Instance for PTM (page 113)
❑	8. Create user accounts for the Project, and assign each user to project roles as appropriate. A user assigned as the Project Manager can also assign roles to users at the Project level.	Roles (page 66) Creating a User (page 77) Creating a Group (page 84)

4 Using the Web Interface

Most of your interaction with PlateSpin Transformation Manager takes place through the browser-based Web Interface. A user with the System Administrator role can configure user accounts and customize some aspects of the product to suit your environment. Users plan and manage your transformation projects. Key stakeholders view project status in the Dashboard.

4.1 Prerequisites for Using the Web Interface

Ensure that your network environment meets the requirements in this section for accessing and using the PlateSpin Transformation Manager Web Interface.

4.1.1 User Account with Role-Based Access

Access to features is role-based. You must have a PTM user account and be assigned to a role with permissions for your project. A user with the PTM System Administrator role or a member of the Administrators group can create PTM users and assign roles to them. A Project Manager can also create users and assign them to roles in their project. For information about PTM roles, see Section 7.3, “Roles,” on page 66. For information about creating and managing PTM user accounts, see Chapter 9, “Managing Users,” on page 75.

4.1.2 Port Requirements

During the PlateSpin Transformation Manager Appliance installation, Transformation Manager automatically configures the default ports shown inn Table 4-1 on the PTM Appliance. Ensure that you open the ports in any firewalls in your network between the PlateSpin Server and the computers you use to access the Web Interface.

NOTE: For remote communications, Micro Focus recommends that you use the secure port and SSL options for accessing the Web Interface.

Table 4-1 *Default Network Ports*

Network Port	Security	Description
8183	Secure (SSL)	HTTPS port for the Web Interface. Allow TCP and UDP traffic, incoming and outgoing.
8182	Not secure	HTTP traffic for the Web Interface. This port is disabled by default. If you enable this port, allow TCP and UDP traffic, incoming and outgoing.
5432		PostgreSQL port for a remote PTM database. Allow TCP traffic, incoming and outgoing. This port is closed by default the PostgreSQL database is installed on the Appliance.
61613	Not secure	Used for event messaging through the PlateSpin Migrate Connector to track the status of migrations on PlateSpin Migrate servers. These messages reflect events and state changes and do not contain sensitive information. This port is open by default on the Transformation Manager Appliance. Allow TCP traffic, incoming. For automated migration, open this port on the PlateSpin Migrate servers assigned to the project.

For information about modifying the port setting for the Web Interface on the PlateSpin Server, see "Web Server Configuration" in the *PTM 2019.2 Appliance Guide*.

4.1.3 Supported Browsers for the Web Interface

You can access the PlateSpin Transformation Manager Web Interface using any of the following supported browsers:

- Mozilla Firefox, latest release
- Microsoft Internet Explorer 11
- Google Chrome, latest release

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

4.1.4 Session Timeout

The default session timeout occurs after 30 minutes of user inactivity. The timeout interval is configurable with a global setting on the PlateSpin Transformation Manager Appliance. Contact your System Administrator if you would like to specify a shorter or longer interval. See "Web Interface Session Timeout" in the *PTM 2019.2 Appliance Guide*.

4.2 Accessing the Web Interface

During the Appliance installation, you set up the default System Administrator user account for the Web Interface. This user has system-wide permissions. Log in as the System Administrator to create accounts for other users and assign roles to them. Access control and data visibility are role-based.

To log in to the Web Interface:

1. In a supported web browser, launch the PTM Server Web Interface:

   https://<*ptm-server-dns-name_or_ipaddress*>:8183 (secure, default)
   http://<*ptm-server-dns-name_or_ipaddress*>:8182 (not secure, disabled by default)

2. Specify the email address and password of your PTM user account, then click **Log In**.

4.3 Web Interface Toolbar

The PlateSpin Transformation Manager Web Interface toolbar gives you access to the key product features described in Table 4-2.

Figure 4-1 *PTM Web Interface Toolbar*

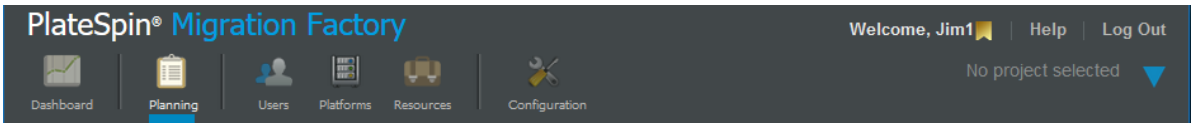


Table 4-2 *Toolbar Options*

Icon	Option	Description
	**Dashboard**	The Dashboard tab provides a summary view of status and health information about workload transformations. It also provides convenient access to planning events, bookmarks, and recently viewed pages. **NOTE:** Information is restricted based on the permissions associated with the user's assigned role.

Icon	Option	Description
	Workload Status	The Workload Status panel in the Dashboard provides the total number of workloads for the project, wave, or batch currently being displayed, and the counts for those workloads in each transformation state, on hold, and with health warnings. Click the category title or value to open a Workloads list with the related member items. ◆ Total Workloads ◆ Imported ◆ On Hold***** ◆ Defining ◆ Submitted ◆ In Progress ◆ Completed ◆ Warning***** ***** Workloads that are On Hold or have a Warning are counted in one of transformation categories, and are also tallied separately.
	What's Happening	The What's Happening panel in the Dashboard displays key planning events for workloads on the current date, a specified period, or a custom day or period. Users can easily see and do the important tasks for the day or an upcoming date, without performing navigation or complex queries.
	Bookmarks	The Bookmarks panel in the Dashboard lists the personal bookmarks for the logged-in user. Bookmarks retain the state of the page or dialog visited. You can easily revisit favorite pages or dialogs without performing repetitive and complex queries. You can also share bookmark URLs with colleagues and stakeholders. Transformation Manager honors the role-based permissions when it displays the page.
	Recently Viewed	The Recently Viewed panel in the Dashboard displays links to pages and dialogs that the logged-in user has recently accessed for View or Edit actions. Duplicate instances with the same URL are represented by a single entry. You can quickly return to a location without repeating the navigation or complex search criteria. You can share the URL with colleagues, or add the link to your bookmarks. Transformation Manager honors the role-based permissions when it displays the page.
	Planning	The Planning tab enables users to configure the following information for your transformation project: ◆ Projects The PTM System Administrator (or Administrator user) creates the project and assigns a user to the Project Manager role. ◆ Waves ◆ Batches ◆ Applications ◆ Workloads

Icon	Option	Description

	Users	The Users tab enables the PTM System Administrator (or member of the Administrators group) to configure and manage the following objects for transformation projects:
		◆ Organizations
		◆ Users
		  ◆ User accounts
		  ◆ User role assignments
		◆ Groups
		  ◆ Group accounts
		  ◆ Group role assignments
		Users can modify the password for their own PTM user account.

	Platforms	The Platforms tab enables users to add and manage platforms that a project will use as migration targets. PTM automatically discovers information about the platform and its associated resources. You can exclude a resource to hide it in planning menus.
	Resources	The Resources tab enables users to configure the following information for a transformation project: ◆ Credentials ◆ Migration Servers ◆ Environments
	Configuration	The Configuration tab enables the PTM System Administrator (or member of the Administrators group) to manage the following application features: ◆ Connectors ◆ Migrate Connector ◆ Operating Systems
	Global Project Selector	The Global Project Selector (GPS) enables users to narrow the scope globally to a single project for the information displayed and acted on. When GPS is enabled, the dialogs automatically complete fields for the project and its parent organization. Expand the menu to select from projects available to the logged-in user. The selected project name and its parent organization image (if available) displays in the GPS area.
	Bookmarks	The Bookmarks menu provides a list of bookmarks to pages, dialogs, and queries that the logged-in user has saved.
	Help	The Help menu provides links to help pages for your current location, help for common tasks, a link to online documentation, and information about the product.

4.4 Global Project Selector

If you have permissions to work with multiple projects, the Global Project Selector helps you focus on workloads and resources for a single project at a time. The Global Project Selector sets the global scope to a single project for the information displayed and acted on. When it is enabled, the dialogs throughout the product automatically complete fields for the project and its parent organization. It applies a filter to all tables to display only the components assigned to or associated with the selected project. It also adds the custom fields that are defined for the project to the Advanced Search form and the Bulk Edit form.

When a project is selected, the Global Project Selector displays the name of the project and the logo for the project's parent organization, if it is available.

To add the project-level filter:

1. Click the Global Project Selector arrow to open a list of projects.
2. Locate and select the appropriate project. You can scroll or filter the list to locate the project of interest.

   The selected page refreshes the list to display objects only for the selected project.

To remove the project-level filter:

1. Mouse over the displayed project name and logo in Global Project Selector area, then click the **X** to remove the project filter.

   The selected page refreshes the list to display objects for all projects the user has permissions to view.

4.5 Bulk Actions

PlateSpin Transformation Manager provides bulk actions to help you manipulate and perform actions on multiple objects at a time.

- "Spreadsheet Import" on page 44
- "Range Import" on page 45
- "Bulk Edit" on page 45
- "Bulk Status Change" on page 45

4.5.1 Spreadsheet Import

You can import source workload information by importing or re-importing the machine information using the Bulk Import spreadsheet.

In the PlateSpin Migration Factory environment, the PlateSpin Migrate Connector provides automated discovery of details for machines in the spreadsheet after a successful spreadsheet import.

4.5.2 Range Import

You can import a range of 256 IPv4 addresses using the Import option. The PlateSpin Migrate Connector provides automated discovery of details for any workloads discovered in a specified address range. It ignores devices that do not satisfy the supported processor architecture and profile for workloads.

4.5.3 Bulk Edit

You can apply settings to multiple proposed workloads at a time by setting values in the Bulk Edit dialog. Use the Global Project Selector, Filter, Advanced Search, sort, and multiple select functions to refine the workloads list and select the items for action. Use the Bulk Edit dialog to specify a value for one or more parameters in the selected workloads. Each specified value is set independently for a selected workload only if the value is a valid setting for it. Before you commit the changes, a pre-check reports information about the potential outcome and issues so that you can cancel the action if necessary.

4.5.4 Bulk Status Change

You can apply state change settings to multiple proposed workloads at a time by using the Bulk Status Change tool. Use the advanced search and sort options to refine the list and select the items for action. Use the Bulk Status Change form to specify the appropriate state for the selected workloads.

NOTE: The Bulk Status Change option is not available if the selected workloads include one or more workloads in Manual (tracking) mode. Their status is controlled by the PlateSpin Migrate Server that is exectuting the migrations. Deselect the Manual (tracking) workloads and try again.

4.6 Show Link for Navigation URLs

The **Show Link** icon for a dialog provides a navigation URL that takes you directly to the dialog for the selected object. You can paste the link in the Location bar of a supported web browser to return directly to the location in the Web Interface. You can also paste the link in other applications, such as email, Excel, and Word, to share with stakeholders.

Users who follow the link will be prompted to log in to the Web Interface. The user must have a PlateSpin Transformation Manager user account to log in. To see the target page and its contents, the user account must be assigned to a role that has permission to access the page and to view or edit the objects displayed on it.

To access a dialog's Navigation URL for a selected object:

1. On the dialog, click the **Show Link** icon in the upper right corner to show the URL to the dialog for the selected object.
2. (Optional) Click the link to open the dialog in a new tab, then log in again to the Web Interface to gain access.

3 (Optional) Copy the URL to the clipboard, then do any of the following. Users of the link must log in to access the dialog.

- Paste the link in the Location bar of any supported web browser to open the dialog in a different browser window.
- Paste the link in an email to share it with stakeholders.
- Paste the link in other applications to provide convenient access to the object's information.

4.7 Bookmarks

PlateSpin Transformation Manager Bookmarks enable you to save repetitive and complex queries, to quickly revisit pages or dialogs, and to share views into the workflow with your team. The bookmark URL includes state information for the page, including all Advanced Search settings and the Global Project Selector setting.

Bookmarks are personal for each user and are retained in the PlateSpin Transformation Manager database. Bookmarks persist across sessions, web browsers, and computers. You can access the same bookmarks from any computer and add bookmarks from anywhere, too.

Table 4-3 *Bookmark Actions*

Action	Description
Create	On the page or dialog of interest: • **Tab:** Click the **Add Bookmark** icon in the upper right corner of the page. • **Dialog:** Click the **Show Link** icon in the upper right corner to show the URL to the dialog for the selected object, then click **Add to Bookmarks**. • **Recently Viewed:** Select the entry for the recently viewed page or dialog, then click **Add to Bookmarks**. Ensure that you provide a robust description that reminds you about the content and usage of the target page or query. It should include relevant keywords and necessary information in a meaningful way. A good description will help you easily find the correct bookmark when you need it.
View	In the toolbar: • Click the **Bookmark** icon to display the quick-access Bookmarks list. -OR- • Click **Dashboard**, then scroll down to view the Bookmarks panel.
Edit	You cannot edit a bookmark.

Action	Description
Open	**To follow a bookmark from the Bookmarks quick access:** • Click the bookmark name to go to the bookmarked page. **To follow a bookmark from the Bookmarks panel in the Dashboard:** • In the Bookmarks list, select the bookmark, then click **Open** to go to the bookmarked page. The bookmarked page or dialog opens in the current web browser tab.
Search	Above the Bookmarks list, enter text in the **Search** field to filter the bookmarks to ones of interest. The search query applies to bookmark titles and descriptions.
Delete	On the Bookmarks panel, select one or multiple bookmarks, then click **Delete**.
Clear	On the Bookmarks panel, use **Clear** to delete all currently displayed bookmarks. You can delete a filtered list of bookmarks or all bookmarks.
URL	You can follow the URL for bookmarks that other users send to you. The data you see and actions you can perform on the target page are determined by the permissions associated with your user role. You can share bookmark URLs with others. Bookmarks honor the individual user's permissions based on the roles assigned to the user in one or more projects, as appropriate. Users who follow the link will be prompted to log in to the Web Interface. The user must have a PlateSpin Transformation Manager user account to log in. To see the target page and its contents, the user account must be assigned to a role that has permission to access the page and to view or edit the objects displayed on it.

4.8 Custom Display and Filters for Lists

In the Web Interface, you can personalize the display for lists by using display tools integrated throughout the product.

- "Refresh List Items" on page 47
- "Number of Items in a List" on page 48
- "Show More Data in a Cell" on page 48
- "Sort Data" on page 48
- "Show/Hide Columns in a List" on page 48

4.8.1 Refresh List Items

Lists poll to refresh the data about once per minute. Double-click the tab title to force any list to refresh immediately, regardless of its normal polling cycle.

4.8.2 Number of Items in a List

Mouse over the tab title to view the total number of items in the list and the total number of selected items currently selected in the list.

4.8.3 Show More Data in a Cell

If a list table cell contains more information than can be displayed, the text ends in an ellipsis (…). You can mouse over the cell to show the additional information in a pop-up infotip.

4.8.4 Sort Data

You can sort list data in ascending order (A to Z) or in descending order (Z to A), based on values in the selected column. The sort function treats numbers as text values and sorts them alphabetically, not numerically. When you sort data, an arrow icon in the column heading indicates the that column is the key for the sort. An Up arrow indicates an ascending sort order. A Down arrow indicates a descending sort order.

Most columns are available as data sort keys. If a column is not available as a sort key, the toggle sort does not work, and its Columns menu does not contain the sort options.

To sort data in a list:

1. Use either of the following methods to effect a sort:
   - **Toggle Sort:** Click a column heading to sort entries in ascending order based on values in that column. Click the column heading again to sort in descending order.
   - **Menu Sort:** Mouse over a column heading to activate its options, then click the arrow on the right column edge to access the menu for that column. Select **Sort Ascending** (A to Z) or **Sort Descending** (Z to A) to specify the preferred sort order.

4.8.5 Show/Hide Columns in a List

You can show or hide data in a list by specifying which parameters to display. Although the hidden data is not displayed, any filter or advanced search action considers the values. For example, in the Workloads list, hidden data includes location (site, enclosure, slot), custom fields, IP address, MAC address, workload type, and virtualization technology.

NOTE: Your column display preferences for each personalized list persists across your sessions.

To personalize the columns in a list:

1. Mouse over a column heading to activate its options, then click the arrow on the heading's right edge to access the menu for that column.
2. Select **Columns** to display the parameters available for the list.

   The menu lists parameters in the left-to-right display order in the list. Selected parameters show in the list. Deselected parameters are hidden.
3. Select the check box next to the parameter you want to show. The list updates to immediately add the column.

4 Deselect the check box next to the parameter you want to hide. The list updates immediately to remove the column.

5 When you are done, click anywhere on the page to exit the menu.

4.9 Custom Filter or Search for a Lists

In the Web Interface, you can personalize the display for lists by using filter, search, and advanced search tools integrated throughout the product.

- Section 4.9.1, “Filter Data in a List,” on page 49
- Section 4.9.2, “Advanced Search of Data,” on page 49

4.9.1 Filter Data in a List

Most lists in the Web Interface have a Filter option available to help you search the list and locate the information of interest. The filter applies to all searchable fields in the list, including any hidden columns. For example, on the Workloads list, the default hidden columns include custom fields, IP addresses, MAC addresses, and workload type.

NOTE: When you filter a list for a status condition, you must replace hyphens and spaces in the status name with underscores. Examples:

```
in_progress
pre_cutover_testing
```

To filter the objects in a list:

1 In the **Filter** field, begin typing a sequence of characters to display only the entries with values that match.

The search and filter apply to the list almost immediately as it matches entries.

2 Click the **Filter** icon to clear the **Filter** field.

4.9.2 Advanced Search of Data

The Advanced Search option for lists helps you to locate multiple objects that you want to perform the same action on. Advanced Search is not available for every list.

The Advanced Search dialog is a multiple-option form that allows you to search on any combination of the following parameters for Workloads that make sense for the target of your search:

Planning	Platform	Workload	Resources
Project Wave Batch Status Sub Status Health On Hold	Platform For AWS: Region For Azure: Location Resource Group For VMware: Cluster Cluster Hosts	Hostname Migrate Server OS Type Application Environment Transform Method For Azure: Azure Machine Size	For AWS: VPC Datastores For Azure: Network Subnet Storage Accounts For VMware: Network Datastores Total Storage Single Disk Size Total Number of Cores Amount of Memory
Custom Fields			
Field 1 Field 5	Field 2 Field 6	Field 3 Field 7	Field 4 Field 8

NOTE: The Global Project Selector limits the workloads in the Workloads list to the specified project. It also adds the custom fields you defined for the project to the Advanced Search form and Bulk Edit form.

You can use the **Health** > **All Warning State** option on the Workloads list Advanced Search function to see all workloads in the Warning state. For objects with warnings, you can mouse over the Status cell to view the condition that triggered the warning.

You can use the **Status** option to find all objects in a given transformation state, such as Imported, Ready to Submit, Transforming, Ready to Cutover, and so on.

To search:

1. (Optional) If you have permissions on multiple projects, click the **Global Project Selector**, then select the project of interest.
2. Click the **Advanced Search** icon ... to the right of the Filter field.
3. In the Advanced Search dialog, specify a value for any search parameter.

   The search filters the list to show matches to that setting.
4. (Optional) For combination searches, specify a value for additional parameters until you locate the objects of interest.
5. (Optional) Click **Clear** to reset the Advanced Search and try again with different fields.

6 After you have narrowed the list to the items of interest, click in the list to exit the Advanced Search dialog.

The Advanced Search icon is shaded blue when any option has been enabled with a search value.

7 When you are done, click the **Advanced Search** icon to the right of the Filter field, then click **Clear** to reset the Advanced Search.

The Advanced Search is cleared automatically if you navigate to a different tab.

4.10 Scrolling Up and Down in Lists

The Web Interface is optimized to navigate lists using the scroll bar. Lists have special handling to provide responsive display and scrolling of list items, even for lists containing thousands of items. A list can display up to 25 items at a time. It caches about 200 nearby items in the browser to accommodate scrolling up and down the list. As you scroll, the Web Interface loads nearby items to the cache and releases items further away from the currently displayed items.

NOTE: Ensure that you use the scroll bar to move up and down lists in the Web Interface. Do not use the Up Arrow or Down Arrow keys to navigate lists.

4.11 Multiple Item Selection in Lists

In the Web Interface, lists have special handling to provide responsive display and scrolling of list items, even for lists containing thousands of items. A list can display up to 25 items at a time. It caches about 200 nearby items in the browser to accommodate scrolling up and down the list. As you scroll, the Web Interface loads nearby items to the cache and releases items further away from the currently displayed items.

The Web interface supports the familiar keyboard shortcuts for item selection: Shift+Click (consecutive items), Ctrl+Click (non-consecutive items), and Ctrl+A (all items). When you select an item, the Web Interface adds its information to a separate Selected Items cache. Selected rows are shaded light blue. Actions performed on the list apply only to items in the Selected Items cache.

Before you select items, use the Filter and Advanced Search options to reduce the list to the items of interest. Use the Sort function to group like items in the list to accommodate consecutive selection.

You can mouse over the list's Tab title to show the following:

- **List Size:** The total number of items in the list
- **Selected:** The current number of selected items in the list

Use the following instructions to navigate the list and select items:

- "Selecting Consecutive Items" on page 52
- "Selecting Non-Consecutive Items" on page 52
- "Selecting All Items" on page 52

4.11.1 Selecting Consecutive Items

Use the Shift+Click action to select consecutive items in a list. Before you begin, use the sort option in column headers to group the items of interest and facilitate consecutive selection.

To select consecutive items in a list:

1. Click the first item of interest, press and hold the Shift key, and then click the last item of interest in the displayed list to add those consecutive items to the cached list of selected items.
2. (Optional) Scroll up or down to show the next set of deselected items, press and hold the Shift key, then make your next last item selection to extend the consecutive item selection. Repeat the scroll and selection process as needed.
3. (Optional) Mouse over the list's Tab title to view the current count for the number of selected items.

4.11.2 Selecting Non-Consecutive Items

Use the Ctrl+Click action to select non-consecutive items in a list.

To select non-consecutive items in a list:

1. Press and hold the Ctrl key, and then click each item in the displayed items that you want to add to the cached list of selected items.
2. (Optional) Scroll up or down to show the next set of deselected items, press and hold the Ctrl key, then make your next non-consecutive item selection. Repeat the scroll and selection process as needed.
3. (Optional) Mouse over the list's Tab title to view the current count for the number of selected items.

4.11.3 Selecting All Items

The Ctrl+A action selects all of the currently loaded items in the list cache instead of selecting only the currently displayed items. After you select the loaded items, you will scroll through 140 to 200 selected items before you see the next set of deselected items.

To select all items in a list:

1. Mouse over the list's Tab title to view the total number of items in the list.

   The item count gives you an idea of how much scrolling is needed to load and select items.
2. Press Ctrl+A to select the currently loaded set of items and add them to the cached list of selected items.
3. Scroll up or down until you see the next set of deselected items.
4. Press Ctrl-A to add the currently loaded items to the cached list of selected items.
5. Repeat Step 3 and Step 4 until all items are selected.
6. Mouse over the list's Tab title to see the total item count and total selected item count. If they are the same, then all items in the list are selected.

II Configuration

PlateSpin Transformation Manager enables a user with the System Administrator role to configure settings for PlateSpin Transformation Manager that apply to all transformation projects.

5 Configuring Global Settings for PlateSpin Migrate Connector

PlateSpin Transformation Manager works with one or more instances of PlateSpin Migrate Connector. PTM enables you to set preferences that apply globally to all Connectors that you register with the PTM Server.

NOTE: The Transformation Manager System Administrator and members of the Administrators group can modify the global settings for PlateSpin Migrate Connector.

5.1 About Global Options for Connectors

Migrate Connector settings in System Configuration controls the default workflow for automated migrations used by each PlateSpin Migrate Connector.

NOTE: You must restart each instance of PlateSpin Migrate Connector after you modify global options in order to apply the changes.

5.1.1 General Settings

Missed Event Poll Interval

Specify the number of seconds between polls for workload migration events.

The default value is 300 seconds (5 minutes). A lower value puts more stress on your PTM Server and Migrate servers.

Reconnect Retry Interval

Specify the number of seconds to wait after a connection fails to a PlateSpin Migrate server before the PTM Server tries to reconnect.

The default value is 1500 seconds (25 minutes).

Pause for Manual Pre-Cutover Testing

Specify whether to pause the Transformation Workflow in a Transforming / Incremental Replication state until the Migrate user manually triggers Pre-Cutover Testing.

The default is to disable manual pre-cutover testing.

Pause for Manual Post-Cutover Testing

Specify whether to pause the Transformation Workflow in a Cutover / Waiting for User state until the Migrate user manually triggers Post-Cutover Testing.

The default is to disable manual post-cutover testing.

5.1.2 Migrate Server Settings

Add Workload to Migrate

Specify the number of days before the start date to add the workload migration job to an auto-assigned PlateSpin Migrate server.

This option is disabled by default with a value of 0 (zero). When you submit a transformation plan, the Migrate Connector immediately auto-assigns a Migrate server, adds a workload migration job, then waits until the start date to execute the migration. The job consumes capacity and a Migrate license on the PlateSpin Migrate Server while it waits for start date. Consuming capacity before it is needed might block migration of workloads with earlier start dates.

Set a value of 1 or greater to enable automation control to wait until the specified pre-start-date interval to begin the preparation for migration. You can submit the workload transformation plans as they are ready without immediately consuming capacity or a Migrate license on a Migrate Server.

Maximum Workloads

Specify the maximum number of workloads to allow for a PlateSpin Migrate server at a time.

The default value is 100.

NOTE: Capacity to add more workloads can be regained by doing the following:

- Wait until a pre-start-date interval before the start date to add the workload to a Migrate server.
- Remove the workload information after a successful cutover.

Maximum Targets

Specify the maximum number of discovered targets for a PlateSpin Migrate server.

The default value is 27.

Pre-Cutover Testing Days

Specify the maximum number of before cutover to begin automated pre-cutover testing.

The default value is 3 days.

Verify SSL Certificate

Specify whether to enable the validation of SSL certificates for connections to the PlateSpin Migrate servers.

The default is to disable certificate validation. Select the check box to enable it.

Remove Workload After Cutover

Specify whether to clean up the workload information from the PlateSpin Migrate servers after a cutover completes.

The default is enabled. Deselect the check box to disable it.

Remove after (days)

Specify the number of days after a workload is cut over to clean up the workload information from the PlateSpin Migrate server.

The default value is 3 days.

5.1.3 Customer-Provided Scripts

Run Custom Import Script

Specify whether to automatically execute the Custom Import callout script after initial workload discovery.

The default is disabled.

Run Submit Validation Script

Specify whether to automatically execute the Submit Validation callout script before adding the workload to Migrate.

The default is disabled.

Run Pre-Cutover Testing Script

Specify whether to automatically execute the Pre-Cutover Testing callout script after workload replication.

The default is disabled.

Run Post-Cutover Testing Script

Specify whether to automatically execute the Post-Cutover Testing callout script after workload cutover.

The default is disabled.

Sample Custom Callout scripts are available on the PTM Appliance in the `/opt/microfocus/migrate_connector/custom_callouts/` folder.

When it first compiles Custom Callout scripts, PTM reports any discovered coding errors as sub-states for the workload in the Workloads list and Workload dialog. Pause over the error sub-state to view additional debugging information as a tooltip. Scripts that fail for coding or validation failure reasons can be retried. A script success must occur before the migration workflow can proceed. PTM forces a reload of Custom Scripts each time they are run to ensure the most recent code changes are applied.

5.2 Viewing Global Migrate Connector Settings

The System Administrator, Project Manager, and Project Architect can view the global settings for the PlateSpin Migrate Connector instance associated with the PTM Server.

To view the connector settings:

1. In the Web Interface toolbar, select **Configuration**.
2. In the System Configuration dialog, select **Migrate Connector**.
3. View the settings:
   - General Settings
   - Migrate Server Settings
   - Customer-Provided Scripts
4. When you are done, click **Close** to exit the System Configuration dialog.

5.3 Configuring Global Settings for Migrate Connector

The System Administrator or a user with the Administrator role can modify any of the global settings for the PlateSpin Migrate Connector instances that are assigned to the PTM Server. The changes apply throughout the product for all transformation projects.

To configure global settings for Migrate Connector:

1. In the Web Interface toolbar, select **Configuration**.
2. In the System Configuration dialog, select **Migrate Connector**.
3. In the Migrate Connector dialog, specify appropriate option settings for the following:
   - General Settings
   - Migrate Server Settings
   - Customer-Provided Scripts
4. Click **Save**.
5. Click **Close** to exit the System Configuration dialog.
6. For each PlateSpin Migrate Connector server that is connected to your PTM Server, log in to the Connector server as the `root` user and restart the Connector service. In a terminal console, enter

   ```
   rcps_migrate_connector restart
   ```

6 Configuring Operating Systems

The System Administrator manages a list of available Operating System Types (OS Types) for the product in the System Configuration settings. The OS Types are available for use by Project Managers and Project Architects as they import original workloads or configure the proposed workloads.

NOTE: Only the System Administrator can create, edit, and delete OS Types. If you need additional OS Types for your transformation projects, contact the System Administrator.

6.1 About Operating System Types

Each OS Type uniquely represents a distribution of an operating system. The OS objects you create can be as general or as specific as necessary to meet your needs.

Name

Specify a textual name for the operating system that is unique in your PlateSpin Transformation Manager environment.

Description

Specify a brief description of the operating system.

Family

Select the appropriate operating system family from the following available options:

CentOS
Citrix
Linux
NetWare/OES
Other
Red Hat Linux
Solaris
SUSE Linux
Ubuntu
Unknown
VMware ESX
Windows

Architecture

Select the appropriate processor architecture from the following available options:

x32 (32 bit)
x64 (64 bit)

6.2 Viewing the List of Operating System Types

The System Administrator, Project Manager, and Project Architect can view the master Operating Systems list for the product. The OS Type values are available for all transformation projects.

To view a list of OS Types:

1. In the Web Interface toolbar, select **Configuration**.
2. In the System Configuration dialog, select **Operating Systems**.
3. Scroll to view the list of OS Types.
4. When you are done, click **Close** to exit the System Configuration dialog.

6.3 Creating an Operating System Type

The System Administrator can create new operating system components to make them available for all transformation projects.

To create an OS Type:

1. In the Web Interface toolbar, select **Configuration**.
2. In the System Configuration dialog, select **Operating Systems**.
3. Click **Create**.
4. In the Create Operating System dialog, specify the following information:
   - Name
   - Description
   - Family
   - Architecture
5. Click **Save** to create the operating system component.
6. Click **Close** to exit the System Configuration dialog.

6.4 Editing an Operating System Type

The System Administrator can modify any operating system component, including the predefined OS Types. The changes apply throughout the product for all transformation projects.

To edit an OS Type:

1. In the Web Interface toolbar, select **Configuration**.
2. In the System Configuration dialog, select **Operating Systems**.

3 Click **Edit**.

4 In the Edit Operating System dialog, specify the following information:

- Name
- Description
- Family
- Architecture

5 Click **Save** to update the operating system component.

6 Click **Close** to exit the System Configuration dialog.

6.5 Deleting an Operating System Type

The System Administrator can delete any operating system from the list of available Operating Systems. The deletion removes the OS setting for all transformation projects.

NOTE: Deleting an OS can affect the readiness of planned workloads that have this OS Type assigned to them.

To delete an OS Type:

1 In the Web Interface toolbar, select **Configuration**.

2 In the System Configuration dialog, select **Operating Systems**.

3 Select the appropriate OS Type from the list of operating systems.

4 Click **Delete**, then click **Yes** to confirm the deletion.

5 Click **Close** to exit the System Configuration dialog.

III Users

Access to PlateSpin Transformation Manager requires a user account. Through the user account, a user receives permissions to perform tasks for one or more assigned transformation projects. The default System Administrator user and other users assigned to the System Administrator role have the permissions necessary to create, manage, and delete users, groups, and organizations. This section describes common user management tasks.

7 Overview of PlateSpin User Management

PlateSpin Transformation Manager provides a user management system for users of the PTM Server Web Interface. You must create user accounts and assign roles to them to grant permissions for access to the Web Interface features and project data. You can also create user accounts to functionally represent PlateSpin Migrate Connector as a user in order to uniquely identify activity of the Connector assigned to a project.

When users log in to the Web Interface, PTM authenticates them against the PTM user database. User authentication is not integrated with your enterprise directory. Role-based access controls govern the information users can see and the actions they can perform during the session.

7.1 Administrator Users

PlateSpin Transformation Manager creates a System Administrator user account during the installation process, and assigns the user to the System Administrator role. This default user is initially responsible for creating user accounts and assigning roles to them, as well as creating organizations and groups. The System Administrator user has global privileges throughout the PTM Server Web Interface.

A trusted user can be elevated to be an Administrator user by being assigned as a member of the Administrators group. Members inherit the System Administrator role. Administrator users can perform tasks normally associated with the PTM System Administrator, such as configuring system-level settings for the PTM application; adding and removing users, groups, and organizations; managing user role assignments; and initiating projects.

NOTE: Any user account assigned the System Administrator role can perform any task for organizations or projects throughout the Web Interface.

7.2 System Users and Organization Users

As the default System Administrator user, you must add user accounts and assign them to project roles to enable other users to manage or view project information. When you create a user or group, you can set the user’s scope at one of two levels:

- **System:** System users and groups have only the privileges associated with their assigned roles. You can assign system users to the following:
  - System Administrator role (members of the Administrators group)
  - Project Manager role

- Project Architect role
- Migration Specialist role
- Dashboard Viewer role
- System groups (as members)

You can also assign system groups to the various roles. Members of the group inherit the roles that you assign to the group.

- **Organization:** Organization users and groups have only the privileges associated with their assigned role. You can assign organization users to the following:
  - Dashboard Viewer role
  - Organization groups (as members)

  You can also assign organization groups to the Dashboard Viewer role. Members of the group inherit the role.

7.3 Roles

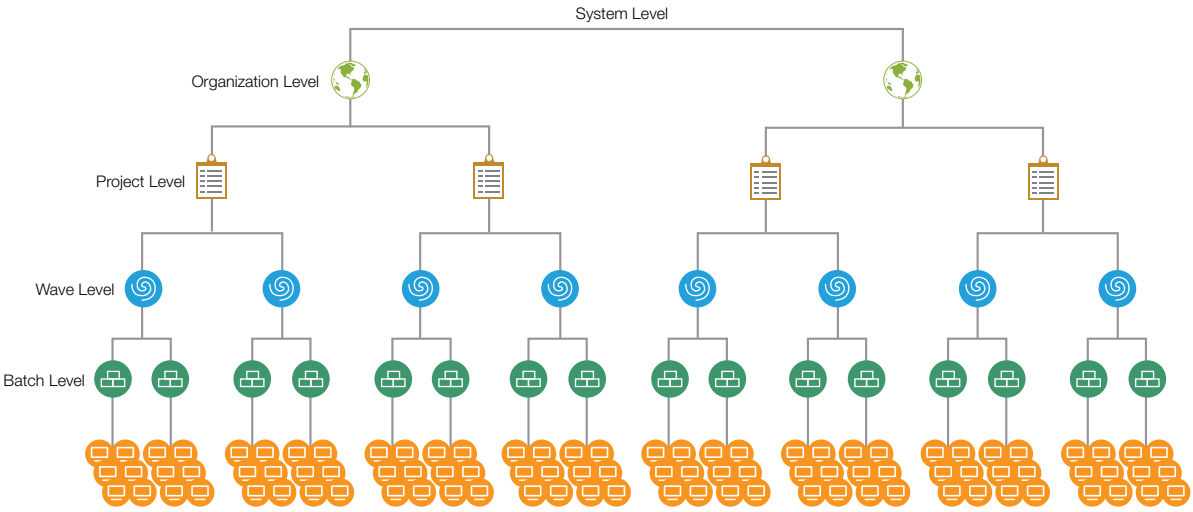
You can assign users or groups to roles that let them plan, monitor, and execute transformation projects. Transformation Manager provides five roles:

- System Administrator
- Project Manager
- Project Architect
- Migration Specialist
- Dashboard Viewer

Each role carries its own set of responsibilities in the PTM environment.

Roles can be assigned directly or inherited. Inherited roles can be set for system users or groups at the System, Organization, Project, Wave, or Batch level. Inherited Dashboard User role can be set for organization users or groups at the Organization, Project, Wave, or Batch level. The inherited roles apply across all components in that level for existing and new components, as illustrated in Figure 7-1. For example, if you assign the system user account for John as the Project Manager at the organization level, the organization's existing and new projects automatically inherit the setting.

Figure 7-1 *Scope of Permissions for Inherited Roles*



7.3.1 System Administrator Role

The System Administrator role has full privileges in Transformation Manager. The initial user account that you create during the installation automatically has this role. You can add system users or system groups to the Administrators group to assign this role. The System Administrator typically performs the following tasks:

- Configures, maintains, and monitors the health of the PTM Server.
- Has all privileges throughout the product.
- Has exclusive privileges to perform the following tasks:
  - Create and delete Operating System types.
  - Configure global settings for PlateSpin Migrate Connector instances registered with the PTM Server.
  - Monitor the connection status of all PlateSpin Migrate Connector instances registered with the PTM Server.
  - Add or remove users as members of the Administrators group.
  - Create and delete organizations.
  - Create and delete projects.
  - Assign users and groups to roles at the System level and Organization level.
  - Assign users and groups to the Project Manager role.
- Can perform all tasks for every role in any project.

7.3.2 Project Manager Role

The Project Manager role can be a user or group. For an assigned project, this role has the permissions necessary to perform the following tasks:

- Manages the project.
- Creates and deletes users.

- Creates and deletes non-administrator groups, and assigns members to them.
- Assign users or groups to the Project Architect, Migration Specialist, and Dashboard Viewer roles.
- Monitor project progress and core statistics, using the dashboard.
- Can perform any of the Project Architect tasks.

7.3.3 Project Architect Role

The Project Architect role can be user or group. For an assigned project, this role has the permissions necessary to perform the following tasks:

- View all information for the project.
- Create and delete waves, batches, and applications.
- Assign users or groups to the Migration Specialist role for waves and batches.
- Import project workloads.
- Create and delete target platforms.
- Create and delete resources, such as credentials, migration servers, and environments.
- Define target workloads.
- Submit workloads that are ready for transformation, or withdraw them if transformation changes are needed.
- Track external migrations for imported workloads that are performed on PlateSpin Migrate servers.
- Monitor project progress and core statistics, using the dashboard.
- Can execute the individual migrations, according to the project plan.

7.3.4 Migration Specialist Role

The Migration Specialist role can be a user or group. For an assigned project, wave or batch, this role has the permissions necessary to perform the following tasks:

- View information for the project's waves, batches, and workloads.
- View information for the project's target platforms.
- View information for the project's resources.
- Execute the individual migrations, according to the project plan.
- Track external migrations for imported workloads that are performed on PlateSpin Migrate servers.
- Monitor project progress and core statistics, using the dashboard.

7.3.5 Dashboard Viewer Role

The Dashboard Viewer role can be a user or group. The Dashboard Viewer role has the permissions necessary to view the dashboard information only for an assigned organization, project, wave, or batch. Inherited permissions apply to this role in the child containers if you assign this role at the system, organization, project, wave, or batch level.

7.4 Example: Digital Airlines Users

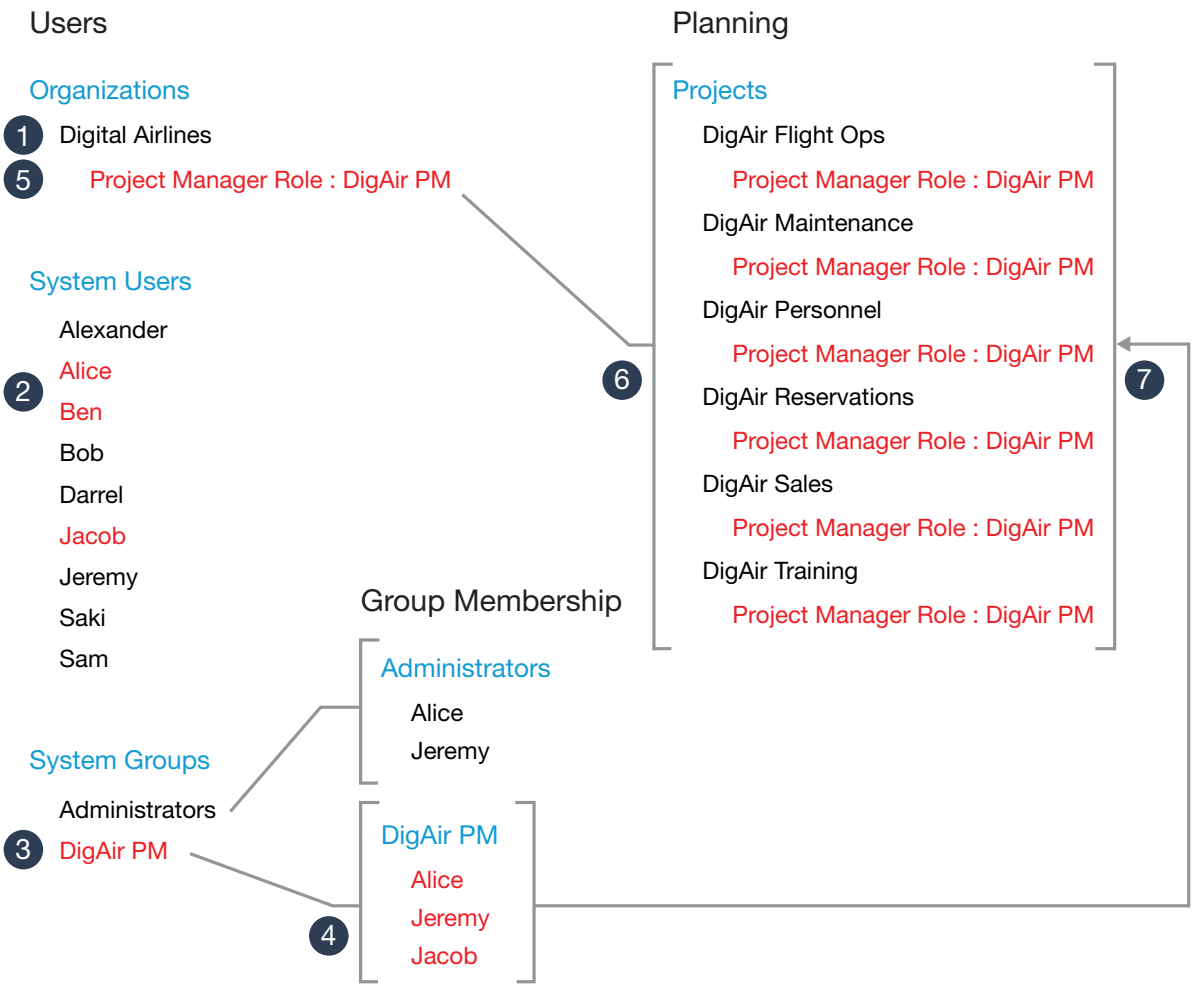
Each project typically has one manager. In this example, the Digital Airlines organization has multiple projects. They want three users to share the project manager role across all of their projects. You want to manage their role assignments in a group instead of individually. The group will receive access rights at the Organization level so that its members can manage any of the organization's projects.

As a System Administrator user (a member of the Administrators group), you perform the following tasks, as shown in Figure 7-2:

1. Create an organization account for Digital Airlines.
2. Create system user accounts for workers Alice, Ben, and Jacob.
3. Create a system group `DigAir PM`.
4. Assign the three system users to this group.
5. Assign the `DigAir PM` group to the role of Project Manager for the `Digital Airlines` organization at the Organization level.
6. Create projects for Digital Airlines.
7. Each project for the organization automatically inherits the group in the Project Manager role.

   With this configuration, any member of the `DigAir PM` group can manage any project for the `Digital Airlines` organization.

Figure 7-2 *Assigning a Group to the Project Manager Role*



You can assign user permissions directly, or indirectly through group membership. If you assign a user to multiple roles, the user's permissions in the Web Interface are cumulative.

For example, Alice is a system user who is currently assigned to the `DigAir PM` group. You also want her to perform the System Administrator role for the Web Interface. You can add Alice as a member of the `Administrators` group to grant her the associated permissions for the System Administrator role. See the `Administrators` group membership in Figure 7-2.

The Project Manager role provides a user the ability to create, modify, and delete users and groups, without granting the additional authority for tasks associated with the System Administrator role. For example, you can assign Alice the Project Manager role. After Alice creates users and groups, the project managers for the Digital Airlines projects (that is, member in the `DigAir PM` group) can assign subordinate project roles to them.

8 Managing Organizations

An organization represents the logical association to some organizational entity in your business environment. For example, if you are data center provider, each organization might represent a tenant company. If you are an enterprise IT department, an organization might represent a company site, a business unit or department, or a cost center within your company.

Users Who Can Perform These Tasks: System Administrator or System Administrator role

8.1 About Organizations

Transformation Manager enables you to track the following information for the organization accounts:

Name

Specify a name for the organization that is unique in the PTM system. The name must begin with a letter or number. It can contain only letters, numbers, and the following special characters: space, hyphen, underscore, apostrophe, percent, ampersand, comma, and period.

Description

(Optional) Specify a brief description of the organization. This text appears by default in the Organizations list.

Image

(Optional) Upload an image to represent the organization.

Associations

You can view or manage the components associated with the organization. Some options might not be available, depending on the user’s assigned role.

- **Planning**
  - Projects (Create, Edit, View, Delete)
- **Resources**
  - Credentials (Create, Edit, View, Delete)
  - Platforms (Create, Edit, View, Delete)

- Migration Servers (Create, Edit, View, Delete)
- Environments (Create, Edit, View, Delete)

- **Users**

  Project role assignments at the project level are automatically inherited by their child components.

  - Dashboard Viewer (View, Add, Remove)
  - Migration Specialist (View, Add, Remove)
  - Project Architect (View, Add, Remove)
  - Project Manager (View, Add, Remove)

8.2 Viewing an Organization

Users with view-only privileges can view information about the Organization in the View Organization dialog.

1. In the Web Interface toolbar, select **Users**.
2. Select the **Organizations** tab.
3. In the Organizations list, select the organization of interest.
4. Click **View**.
5. Click **Close** to exit the View Organization dialog.

8.3 Creating an Organization

1. In the Web Interface toolbar, select **Users**.
2. Select the **Organizations** tab.
3. Click **Create**.
4. In the Create Organization dialog, specify a name for the organization that is unique within the PTM system.
5. (Optional) Specify a brief textual description of the organization.
6. (Optional) Upload an image to represent the organization. Mouse-over the image pane, click **Upload New Image**, browse to locate and select the image that you want to use for the organization, then click **Open**.
7. Click **Save** to create the organization instance and enable the **Associations** pane.
8. (Optional) In the **Associations** pane, define the associations for the organization.

   Planning

   - Projects (Create, Edit, View, Delete)

   Resources

   - Credentials (Create, Edit, View, Delete)
   - Platforms

- Migration Servers (Create, Edit, View, Delete)
- Environments (Create, Edit, View, Delete)

Users

- Dashboard Viewer (View, Add, Remove)
- Migration Specialist (View, Add, Remove)
- Project Architect (View, Add, Remove)
- Project Manager (View, Add, Remove)

9 Click **Save**.

10 Click **Close**.

8.4 Uploading an Organization Logo

To add a logo for an organization:

1 In the Web Interface toolbar, select **Users**.

2 Select the **Organizations** tab.

3 Select the organization, then click **Edit**.

4 Upload an image to represent the organization. Mouse-over the image pane, click **Upload New Image**, browse to locate and select the image that you want to use for the organization, then click **Open**.

5 Click **Save**.

6 Click **Close**.

8.5 Editing an Organization

1 In the Web Interface toolbar, select **Users**.

2 Select the **Organizations** tab.

3 In the Organizations list, double-click the organization, or select the organization and click **Edit**.

4 (Optional) Specify a brief textual description of the organization.

5 (Optional) Upload an image to represent the organization. Mouse-over the image pane, click **Upload New Image**, browse to locate and select the image that you want to use for the organization, then click **Open**.

6 In the **Associations** pane, view or modify the Associations information.

- Projects
- Users
  - Dashboard Viewer
  - Migration Specialist
  - Project Architect
  - Project Manager
- Credentials (Create, Edit, View, Delete)

- Platforms
- Migration Servers (Create, Edit, View, Delete)
- Environments (Create, Edit, View, Delete)

7 If you modified information, click **Save**.

8 Click **Close**.

8.6 Removing an Organization

When you remove an organization, the associations set up for the organization are automatically deleted.

1 In the Web Interface toolbar, select **Users**.

2 Select the **Organizations** tab.

3 In the Organizations list, select the organization and click **Delete**.

4 Click **Yes** to confirm the deletion, or click **No** to keep the organization.

9 Managing Users

PlateSpin Transformation Manager provides role-based access to the PTM Server Web Interface. To access features and data in the Web Interface, a user must have a PlateSpin Transformation Manager user account and be assigned a role.

Users Who Can Perform These Tasks:

- System Administrator or users with the System Administrator role can perform any user management task.
- Users with the Project Manager role can create system users and assign project roles to them for the same Project and its child Wave and Batch levels.
- Non-administrator users can modify the password for their own account.

9.1 About Users

Users of the PlateSpin Transformation Manager Web Interface must have a PTM user account and be assigned an appropriate role. User access to features and data is controlled by permissions granted through the role assigned to the user:

- System Administrator
- Project Manager
- Project Architect
- Migration Specialist
- Dashboard Viewer

PlateSpin Transformation Manager creates a System Administrator user account during the configuration process for PTM Server on the PTM Appliance and assigns this user to the System Administrator role for the PTM Server Web Interface. This user has global permissions in the Web Interface. The default System Administrator user initially creates other user accounts, as well as organizations and groups.

NOTE: You cannot delete the default System Administrator user. You might need to create another default System Administrator user for the software if the user in that role is no longer available, or if you forget the password for the user. See "Administrative Users for the Web Interface" in the *PTM 2019.2 Appliance Guide*.

In the Web Interface, the default System Administrator can set up additional trusted users and assign them to the Administrators group. Members of the Administrators group inherit the System Administrator role and will also have global permissions in the Web Interface. They can perform tasks normally associated with the default PTM System Administrator user.

PlateSpin Transformation Manager enables you to track the following information for users:

Full Name

Specify a first and last name for the user. Names can contain only letters, numbers, and the following special characters: space, hyphen, underscore, apostrophe, percent, ampersand, comma, and period.

Email Address

Specify an email address for the user that is unique in the PTM system.

Phone Number

(Optional) Specify a contact phone number for the user.

Password

Specify a password for the user account in the PTM system. Type it again to confirm. The password length must be a minimum of 5 characters. After you set up a role for the user account, send the initial password to the user. The user logs in with the initial password, and then sets their preferred password.

NOTE: Passwords are local to the product. They are stored securely in the PTM database.

Scope

Specify whether the user's privileges apply at the system or organization level in the PTM system. After the user's scope is set, it cannot be modified. Organization scope is used only for users in a Dashboard Viewer role for their organization's projects.

Membership and Access

You can view or manage the user's access to information in the transformation environment. Some options might not be available, depending on the user's assigned role.

- All Roles
- System (Add, Remove)
- Organization (Add, Remove)
- Project (Add, Remove)
- Wave (Add, Remove)
- Batch (Add, Remove)
- Group Membership (View, Add, Remove)

9.2 Viewing Users

1. In the Web Interface toolbar, select **Users**.
2. Select the **Users** tab.
3. In the Users list, double-click the user, or select the user and click **View**.
4. In the View User dialog, view the User and the Membership and Access information.
5. Click **Close**.

9.3 Creating a User

1. In the Web Interface toolbar, select **Users**.
2. Select the **Users** tab.
3. Click **Create**.
4. In the User pane of the Create User dialog, specify the following information for the user account:
   - First and last name
   - Email address (used as the login user name)
   - Phone number (optional)
   - Password and Confirm Password
   - Scope
     - System (default)
     - Organization

       The Organization scope limits role options to only the Dashboard Viewer role.
5. Click **Save** to create the user account instance and enable the **Membership and Access** pane.
6. In the **Membership and Access** pane, define the permissions and roles assignments for the user account.

   The level determines the breadth of control the user has, and the role determines the permissions.

Level	Role-based permissions apply to...
System	All organizations on the PTM Server.
Organization	All projects in the specified organization
Project	The specified project
Wave	The specified wave
Batch	The specified batch

Roles

- Project Manager
- Project Architect

- Migration Specialist
- Dashboard Viewer

7 Click **Save**.

8 Click **Close**.

9.4 Creating a User for Connector Login

We recommend that you create a unique user login credential for each PlateSpin Migrate Connector instance. This user identity enables the Transformation History to clearly distinguish Connector actions from those performed by real users. Create this special user as a System user, then assign it a Project Architect role at the Project level. Create a different User object for each Connector instance with permissions appropriate for its assigned project.

1 In the Web Interface toolbar, select **Users**.

2 Select the **Users** tab.

3 Click **Create**.

4 In the User pane of the Create User dialog, specify the following information for the user account:

- First and last name
- Email address
- Phone number (optional)
- Password and Confirm Password
- Scope: System

5 Click **Save** to create the user account instance and enable the **Membership and Access** pane.

6 In the **Membership and Access** pane, define the permissions and role assignment for the user account appropriate for the PlateSpin Migrate Connector instance.

6a Select the Project tab.

6b In the Project tab toolbar, select the **Project Architect** role (minimum permissions required) or the Project Manager role.

6c Click **Add**, select the project that you will assign to the Migrate Connector instance, then click OK.

7 Click **Save**.

8 Click **Close**.

9 Configure the credentials for the user in the `ptm_username` and `ptm_password` settings in the configuration file for the Connector instance.

See Section 15.1, “Configuring a Connector Instance for PTM,” on page 113.

9.5 Editing a User

1 In the Web Interface toolbar, select **Users**.

2 Select the **Users** tab.

3 In the Users list, double-click the user, or select the user and click **Edit**.

4 In the Edit User dialog, view or modify the User information or the Membership and Access information.

5 If you modified information, click **Save**.

6 Click **Close**.

9.6 Changing a User Password

The initial password set for a new PlateSpin Transformation Manager user account is temporary. Users should modify the password after their first login to the Web Interface. The new password is stored, and takes effect the next time the user logs in for a session.

NOTE: For improved security, we recommend that users regularly modify their PTM user account passwords.

A System Administrator user or a user assigned the System Administrator role can change the password for any user account. Non-administrator users can change the password only for their own user account.

1 In the Web Interface toolbar, select **Users**.

2 Select the **Users** tab.

3 In the Users list, double-click the user name, or select the user name and click **Edit**.

4 In the Edit User dialog, type the preferred password, then type it again to confirm the change.

5 Click **Save**.

6 Click **Close**.

9.7 Removing a User

When you remove a user, the roles and permissions set up for the user are automatically removed.

1 In the Web Interface toolbar, select **Users**.

2 Select the **Users** tab.

3 In the Users list, select the user and click **Delete**.

4 Click **Yes** to confirm the deletion, or click **No** to keep the user.

10 Managing Groups

You can associate users with groups to more efficiently manage access and role assignments. Members of a group inherit the access controls assigned to the group.

Users Who Can Perform These Tasks: System Administrator or System Administrator role. Users with the Project Manager role can create system groups and assign project roles to them for the same Project and its child Wave and Batch levels.

10.1 About Groups

PlateSpin Transformation Manager provides the Administrators group to enable you to provide elevated privileges for trusted users. Members of the Administrators group have global permissions for all organizations, projects, and features throughout the PTM Server Web Interface. This group is permanent and cannot be removed. Only the PTM System Administrator user or members of the Administrator group can add and remove members for the Administrators group.

IMPORTANT: The initial System Administrator user that you created during installation of PTM is automatically assigned as a member of the Administrators group. Do not remove this user from the Administrators group.

Using groups to represent other logical or functional relationships is optional. You can create groups to help you manage access and make role assignments. Each member of the group inherits the role assignments from the group.

Common uses of custom groups include the following:

- Establish logical relationships between users, such as by organization or by project.
- Identify special purpose users, such as users you create for use with PlateSpin Migrate Connectors.
- Abstract role assignments by assigning appropriate roles to the group instead of to individual users. Group-based role assignments enable you to add and remove members without needing to reassign various roles for a new or replacement user. You can assign roles to a group at various levels as you can with an individual user:
  - System
  - Organization

- Project
- Wave
- Batch

Transformation Manager enables you to track the following information for groups:

Full Name

Specify a name for the group account that is unique in the PTM system. Names can contain only letters, numbers, and the following special characters: space, hyphen, underscore, apostrophe, percent, ampersand, comma, and period.

Email Address

(Optional) Specify an email address for the group that is unique in the PTM system.

Scope

Specify whether the user's privileges apply at the system or organization level in the PTM system. After the user's scope is set, it cannot be modified.

- System scope is the default setting. The group can be assigned to any PTM role in any organization or project.
- Organization scope is used only for groups that will be assigned a Dashboard Viewer role for their organization's projects.

Membership and Access

You can view or manage the group's access to information in the transformation environment. Select the level of the assignment by selecting the appropriate tab, then select the role and associate it with the items according to your needs. Some options might not be available, depending on the selected level. For information about the levels of role assignment, see Table 10-1.

Table 10-1 *Membership and Access Options for Groups*

Tabs	Description
All Roles	View a list of all roles assigned to the group.
System	Assign one or more roles across all organizations and projects: - System Administrator - Dashboard Viewer - Migration Specialist - Project Architect - Project Manager You can add or remove the system-level roles for the group.

Tabs	Description
Organization	Assign one or more organization relationships for a selected project role: ◆ Dashboard Viewer ◆ Migration Specialist ◆ Project Architect ◆ Project Manager You can add or remove an organization assigned to that role.
Project	Assign one or more project relationships for a selected project role: ◆ Dashboard Viewer ◆ Migration Specialist ◆ Project Architect ◆ Project Manager You can add or remove a project assigned to that role.
Wave	Assign one or more wave relationships for the Migration Specialist role only. You can add or remove a wave assigned to that role.
Batch	Assign one or more batch relationships for the Migration Specialist role only. You can add or remove a batch assigned to that role.
Members	Add, remove, or view the users assigned to the group.

10.2 Viewing Groups

1. In the Web Interface toolbar, select **Users**.
2. Select the **Group** tab.
3. View the list of available groups.
4. In the Group list, double-click the group, or select the group and click **View**.
5. In the View Group dialog, view the Group information and the Membership and Access information.
6. Click **Close**.

10.3 Viewing Group Membership for a User

1. In the Web Interface toolbar, select **Users**.
2. Select the **Users** tab.
3. In the Users list, double-click the user, or select the user and click **Edit** or **View**.
4. In the Edit User or View User dialog, click **Group Membership** under Membership and Access.
5. Click **Close**.

10.4 Creating a Group

1. In the Web Interface toolbar, select **Users**.
2. Select the **Groups** tab.
3. Click **Create**.
4. In the Group pane of the Create Group dialog, specify the following information for the group account:
   - Full Name
   - Email address
   - Scope (System (default) or Organization)
5. Click **Save** to create the group account instance and enable the **Membership and Access** pane.
6. Add members to the group.
   - **6a** In the **Membership and Access** pane, select the **Members** tab, then click **Add**.
   - **6b** In the Add Users to User Group dialog, select one or multiple users, then click **OK**.

     Type a character sequence in the Search field to filter the list, or scroll to locate the appropriate users. To select multiple adjacent users, press and hold Shift, then click the appropriate first user and last user. To select multiple individual users, press and hold Ctrl, then click each appropriate user.
   - **6c** View the Members list to verify the added members
7. Define one or more role assignments for the group.
   - **7a** Select the tab of the level where you want to set the role:
     - System
     - Organization
     - Project
     - Wave
     - Batch
   - **7b** In the tab's toolbar, select the appropriate role:
     - Dashboard Viewer
     - Migration Specialist
     - Project Architect
     - Project Manager
   - **7c** Click **Add**.
   - **7d** Depending on the level you selected, select one or more items from the list, then click **OK**.
   - **7e** View the list of items to verify the additions.
   - **7f** (Optional) Repeat the steps to assign another role and the associated items.
8. Select the All Roles tab, then verify the roles you assigned.
9. Click **Close**.

10.5 Editing a Group

1. In the Web Interface toolbar, select **Users**.
2. Select the **Group** tab.
3. In the Group list, double-click the group, or select the group and click **Edit**.
4. In the Edit Group dialog, view or modify the Group name or email address. If you modified information, click **Save**.
5. In the Membership and Access pane, view, add, or remove role assignments for the group.
6. If you remove an item or role, click **Yes** to confirm the removal from the group, or click **No** to keep it.
7. Click **Close**.

10.6 Removing a Group

When you remove a group, the roles and membership set up for the group are automatically removed.

NOTE: The Administrators group cannot be deleted.

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1. In the Web Interface toolbar, select **Users**.
2. Select the **Groups** tab.
3. In the Groups list, select the group and click **Delete**.
4. Click **Yes** to confirm the deletion, or click **No** to keep the group.

A Roles and Permissions

PlateSpin Transformation Manager provides role-based access control to restrict access in the Web Interface to authorized users. It associates permissions with roles rather than with individual users and groups. A role grants a user or group the authority to perform specific actions in the Web Interface. Permissions determine the various job functions that the role can perform. Roles in the Web Interface include the following:

- System Administrator
- Project Manager
- Project Architect
- Migration Specialist
- Dashboard Viewer

Users and groups have no permissions in Transformation Manager except those you grant through the roles you assign them. Because members of a group automatically inherit the role assignments for the group, you can assign appropriate roles to groups to simplify the management of user authorizations. You can easily move users in and out of various groups to assign roles to them.

The scope of responsibility for each project role depends on the level of the role assignment: system, organization, project, wave, or batch.

IV Projects

PlateSpin Transformation Manager provides the tools you need to create elements and organize them to define your transformation projects.

11 Overview of Project Planning

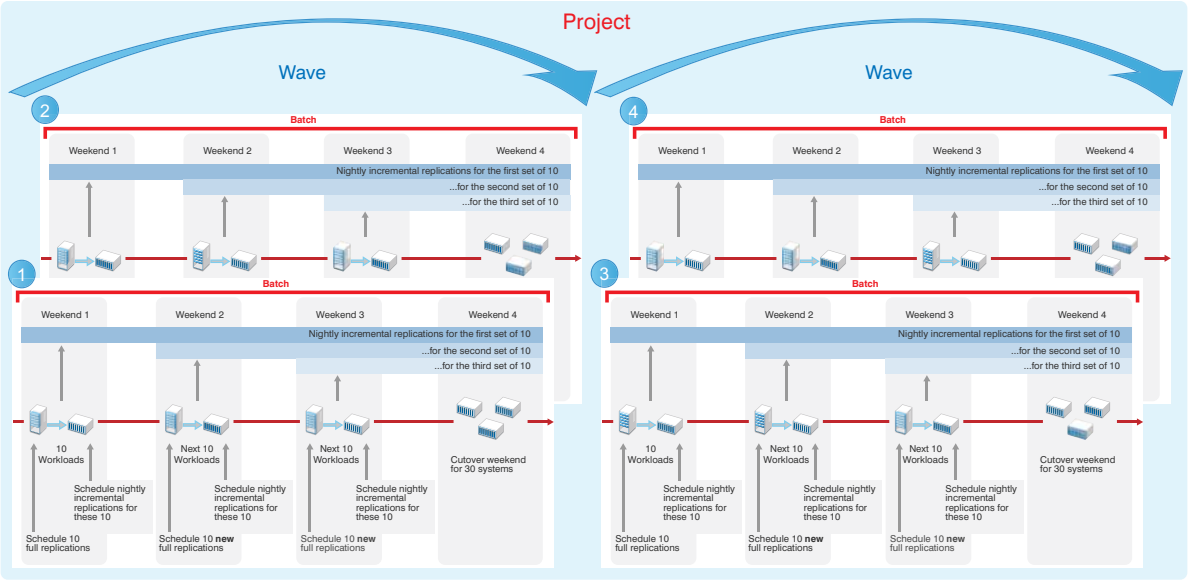
PlateSpin Transformation Manager provides planning tools that allow you to schedule the transformations for large projects with thousands to tens of thousands of workloads. You can schedule the transformations to occur in waves with smaller groupings of batches in each wave.

11.1 Planning Waves and Batches

Large-scale IT transformation projects typically occur over an extended period in a production environment that might span multiple locations. Future network activities and conditions can be difficult to predict and details are as yet unknown. Complex projects with massive numbers of workloads might take months or even years to complete. It might be possible to plan details only a few months in advance.

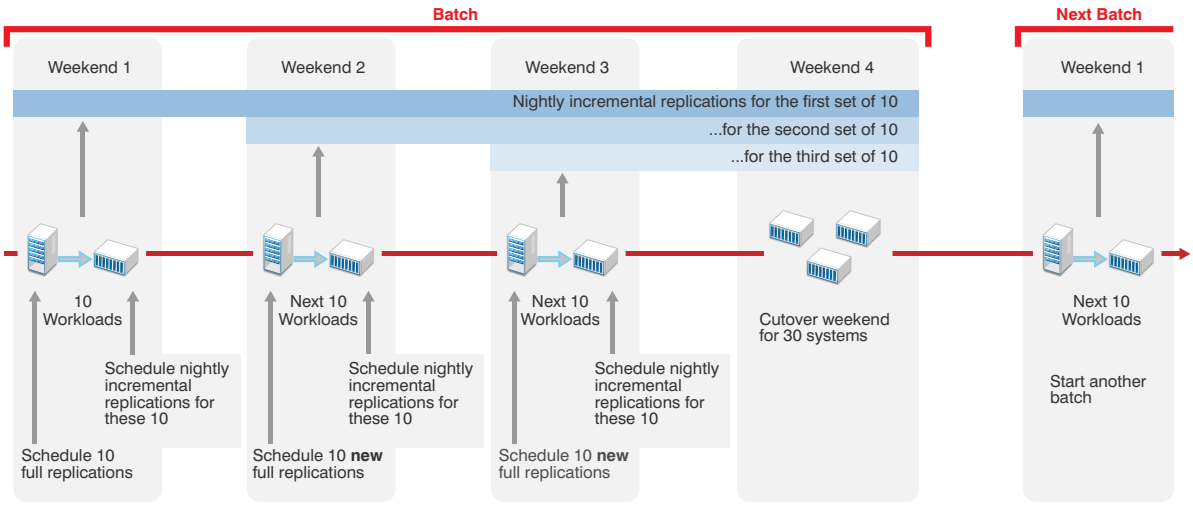
PlateSpin Transformation Manager supports rolling wave planning to accommodate the near-term and long-term planning of your transformation tasks. You can organize the project’s transformation tasks in waves, as shown in Figure 11-1. For near-term waves, you can plan the tasks in detail. You can refine the transformation plan for future waves as newer and better information becomes available.

Figure 11-1 *Wave Planning*



Within a wave, batches group like workloads that you want to transform together. Batches can be more easily scheduled during intervals when Network resources are available. You can deliver valuable results in each batch and wave. Schedules are flexible. You can coordinate the start dates and cutover dates with stakeholders to work around planned events that are critical to the business.

Figure 11-2 *Batch Planning*



11.2 Prerequisites for Planning

When you create a project, you must associate it with a specific organization. Before you can add a project, you must create the parent organization to ensure that it is available when you create its transformation projects. Waves, batches, applications, and workloads are all child containers of their parent project.

11.3 Granting Access

PlateSpin Transformation Manager provides the following roles for managing your project:

- **Project Manager:** The Project Manager is responsible for managing all aspects of the project.
- **Project Architect:** The Project Architect is responsible for configuring transformation plans for the workloads, scheduling the transformations, and monitoring the health of transformations.
- **Migration Specialists:** The Migration Specialists are responsible for executing the transformations.
- **Dashboard Viewer:** The Dashboard Viewers are stakeholders who want to observe the progress and metrics for projects.

11.4 Transforming Workloads

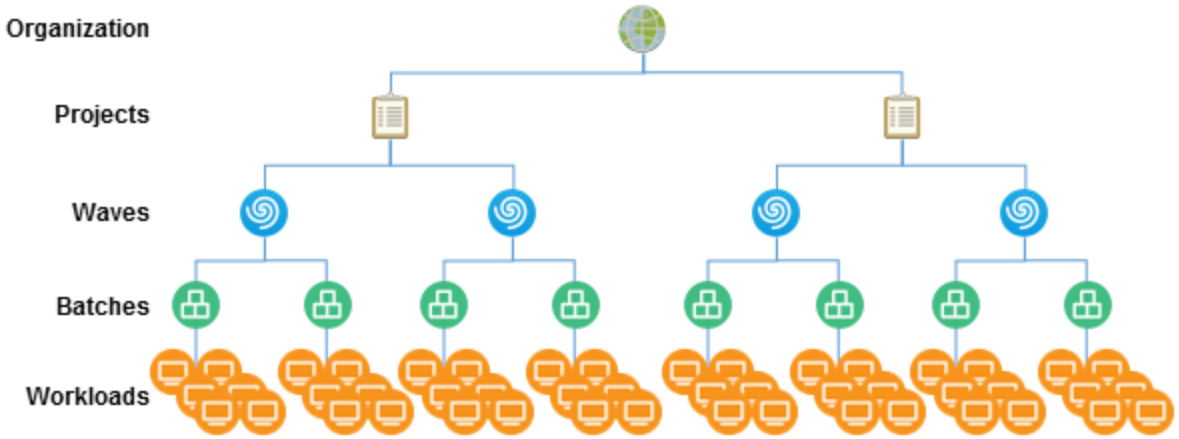
Transforming workloads from their current operational mode to a future operational mode is the fundamental management goal for your transformation project. A transformation plan includes the following information:

- Data about each original workload and its proposed workload

- The sequence for workload tasks
- When tasks need to be executed

Figure 11-3 shows the parent-child relationships between planning objects: Organizations, Projects, Waves, Batches, and Workloads.

Figure 11-3 *Parent-Child Relationships of Planning Objects*



11.5 Scheduling Dates

Project dates can be set according to your business and network needs. Business factors include your project priorities and the availability of resources. Network environmental factors include available bandwidth, connection speeds, and the amount of data being transformed.

You might have a specific cutover date in mind, or simply want to create a plan to get the work accomplished as efficiently and quickly as you can. External events might determine when certain tasks must be completed. IT and human resources availability also constrain your schedule.

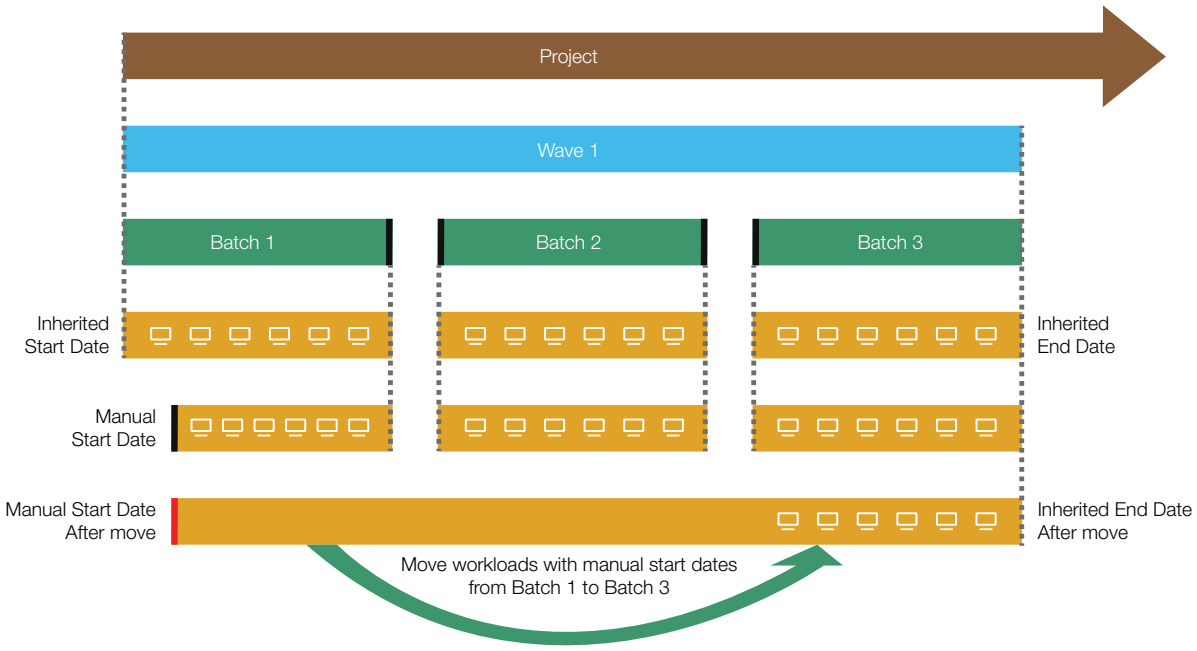
Dates for waves and batches can be set manually or inherited from their parent objects. Dates of child objects must fall within the execution window of its parent object.

Figure 11-4 demonstrates how the dates flow down from parent to child. Manually set dates appear in a black font in fields and tables. Inherited dates appear in a gray font in fields and tables.

If you set dates manually, the date setting overrides inheritance rules. If you move a workload with a manual date from one batch to another, the manual date setting does not change, but the inherited date setting changes automatically.

Figure 11-4 shows how the manual date remains the same after you move the workloads from Batch 1 to Batch 3. If the manual date falls outside the execution window for the new batch, the date appears in a red font in fields and tables. You must re-configure the dates for workloads if their execution windows extend outside their new parent window.

Figure 11-4 *Inherited Start Date and End Date*



NOTE: Dates display in the format of your computer browser's Locale setting.

PlateSpin Transformation Manager displays an object's dates in the following font colors, depending on how the object obtained the setting:

Font Color for Dates	Condition
Gray	The date is inherited from its parent object.
Black	The date has been set directly on the object. The new date is automatically inherited by child objects.
Red	The date does occurs before or after the execution window set on the parent object: ◆ The object's start date occurs before the parent's start date. ◆ The object's end or cutover date occurs after the parent's end or cutover date.

12 Managing Projects

PlateSpin Transformation Manager enables you to analyze and organize information about workload transformations into projects based on your business needs.

12.1 About Projects

The Project enables you to track the following information for your transformation project:

Name

A friendly name for the project that is unique in your organization. The name must begin with a letter or number. It can contain only letters, numbers, and the following special characters: space, hyphen, underscore, apostrophe, percent, ampersand, comma, and period.

Organization

The name of the parent organization for the project.

Description

(Optional) A brief description of the project.

Start Date

The date that the transformation of workloads is planned to begin.

End Date

The date that the transformation of all workloads must be completed successfully.

Custom Field Names

Additional information types that you want to track for a project. You can define 1 to 8 custom fields. Each custom field is independent, and can be used for any purpose. Uses might include a new attribute, a logical tag, a priority system, contact information, and so on.

For example, if you want to identify the workload with its day-to-day IT administrator, you might define the **Custom 1** field name to be **Contact** for the project. Values might be the contact person’s name, user name, or email address, as appropriate for your project. You specify a workload’s value for the Contact field in the Workload dialog.

Associations

Associations define the relationship between a variety of components and the project. You can also perform the same tasks on each tab that you can on their primary tab, with the exception of the Workloads tab. For workloads, you can view information about the original and proposed workloads associated with the project.

- **Planning**
  - Waves (Create, Edit, View, Delete)
  - Batches (Create, Edit, View, Move, Delete)
  - Applications (Create, Edit, View, Delete)
  - Workloads (Original, Proposed)
- **Resources**
  - Credentials (Create, Edit, View, Delete)
  - Platforms
    - VMware vCenter Server
      - Clusters
      - Hosts
      - Networks
      - Datastores
      - Resource Pools
      - Workloads
    - Microsoft Azure Cloud
      - Locations
      - Networks
      - Datastores
      - Resource Groups
      - Workloads
  - Migration Servers
  - Environments
- **Users**

  Project role assignments made at the system and organization levels are automatically inherited for the project.

  Project role assignments at the project level are automatically inherited by their child components.

  - Dashboard Viewer (View, Add, Remove)
  - Migration Specialist (View, Add, Remove)
  - Project Architect (View, Add, Remove)
  - Project Manager (View, Add, Remove)

12.2 Prerequisites for Projects

When you create a project, you must associate it with a specific organization. Before you can create a project, you must create the parent organization to ensure that it is available when you create the project.

12.3 Viewing a Project

The View option allows users with the View permissions to view the project information.

To view project information:

1. In the Web Interface toolbar, select **Planning**.
2. Select the **Projects** tab.
3. In the **Projects** list, search for and locate the appropriate project.
4. Select the project, then click **View**.
5. Click **Close** when you are done.

12.4 Creating a Project

Only the System Administrator user can create projects.

To create a project:

1. In the Web Interface toolbar, select **Planning**.
2. Select the **Projects** tab.
3. Click **Create**.
4. In the **Project** pane, specify the following information:
   - Name
   - Organization
   - (Optional) Description
   - Start Date
   - End Date
   - (Optional) Custom Field Names (Field 1 to Field 8)
5. Click **Save** to create the project object and activate the **Associations** pane.
6. In the **Associations** pane, click each tab to configure settings for the associated components.
7. (Optional) Click **Set to Completed**, or click **Reopen**.
8. Click **Save**.
9. Click **Close**.

12.5 Editing a Project

You might need to modify dates, custom fields, and associations for a project as you configure the project and as the project matures. The System Administrator and Project Manager can modify the project settings.

To edit a project:

1. In the Web Interface toolbar, select **Planning**.
2. Select the **Projects** tab.
3. Double-click the project to open the Edit Project dialog, then view the project details.

   You can alternatively select the project, then click **Edit**.
4. Modify the values as appropriate:
   - Name
   - Organization
   - (Optional) Description
   - Start Date
   - End Date
   - (Optional) Custom Field Names (Field 1 to Field 8)
5. (Optional) View or modify Associations.
6. (Optional) Click **Set to Completed**, or click **Reopen**.
7. Click **Save**.
8. Click **Close**.

12.6 Configuring Custom Field Names for a Project

The custom fields defines additional information that you want to track for a project. The custom fields apply project-wide. The System Administrator and Project Manager can configure 1 to 8 custom fields names for a project. Each field name must be unique in the project. Only defined custom fields are available in the Workload dialog. The Project Architect sets the values appropriate for the workload.

To define custom field names:

1. In the Web Interface toolbar, select **Planning**.
2. Select the **Projects** tab.
3. Do one of the following:
   - **3a** Click **Create** to open the Create Project dialog, then configure the required fields.
   - **3b** Double-click the project to open the Edit Project dialog, then view the project details.
4. Under **Custom Field Names**, specify a name for up to seven custom fields.
5. (Optional) Click **Set to Completed**, or click **Reopen**.
6. Click **Save**.
7. Click **Close**.

12.7 Configuring Project Associations

The Associations pane for a project shows all of the possible associations. The System Administrator user, Project Manager user, and Project Architect user can configure associations for a project.

Depending on your permissions, you can perform the same actions from the tabs under Associations as you can from the main tabs for these components. Some actions might not be available at this time. You can save the project and return later to complete information.

To associate components with a project:

1. In the Web Interface toolbar, select **Planning**.
2. Select the **Projects** tab.
3. Double-click the project to open the Edit Project dialog, then view the project details.
4. Under Associations, click each tab to view or modify settings for the associated components:

   Planning

   - Waves
   - Batches
   - Applications
   - Workloads

   Resources

   - Credentials
   - Containers
   - Migration Servers
   - Environments

   Users

   - Dashboard Viewer
   - Migration Specialist
   - Project Architect
   - Project Manager
5. (Optional) Click **Set to Completed**, or click **Reopen**.
6. Click **Save**.
7. Click **Close**.

12.8 Deleting a Project

Only the System Administrator user can delete a project.

NOTE: Deleting a project deletes all data for the project from the PTM database.

To delete a project:

1. In the Web Interface toolbar, select **Planning**.

2 Select the **Projects** tab.

3 Select the appropriate project, click **Delete**, then click **Yes** to confirm the deletion.

V PlateSpin Migrate Connector

PlateSpin Migrate Connector for PlateSpin Transformation Manager provides discovery services for source workloads and target platforms. The Connector also enables you to execute automated migrations and track manual migrations from PTM by using PlateSpin Migrate. It provides integration services between your PTM Server and one or more PlateSpin Migrate servers.

Use the information in this section to install and configure Connector instances in your migration environment.

13 Planning for PlateSpin Migrate Connector

PlateSpin Migrate Connector for PlateSpin Transformation Manager provides automated discovery services to PTM Server. For source workloads, the Connector discovers machine and operating system information. For target platforms, the Connector discovers resources available in the target platform, such as networks and datastores.

In a PlateSpin Migration Factory deployment, each PlateSpin Migrate Connector instance integrates your PTM Server with one or more PlateSpin Migrate servers to automate Windows and Linux workload migration to supported target platforms. The Connector load-balances automated workload migrations across the Migrate servers to help avoid congestion. Migrate Connector can also track status for manual migrations for imported workloads that you initiate on its associated PlateSpin Migrate servers.

Each Migrate Connector can support all projects, or you can configure it to be dedicated for a specific project. The Connector keeps data and events separate and secure for each project.

Each project must have at least one Connector. Projects can use multiple Connectors, with one or more Connector instances in each source network. If a project has multiple Connectors, each Connector automates and tracks migrations only for the source workload it discovers. It monitors their migration events on its associated Migrate servers, and reports the migration workflow status and events for the appropriate workload in Transformation Manager.

13.1 Key Features

PlateSpin Migrate Connector provides several advantages for planning, managing, and executing workload transformation projects:

- **Integrates PlateSpin Transformation Manager and PlateSpin Migrate servers.** Migrate Connector integrates Transformation Manager and your PlateSpin Migrate servers by using event messaging and secure REST API communications.
- **Run a centralized PTM across multiple environments.** You can securely manage migrations for multiple projects and organizations from a central management interface.
- **Allows multiple Connector instances.** You can have multiple Migrate Connector instances for a single Transformation Manager server.
  - Each Connector instance can serve all projects, or be dedicated to a single project.
  - Projects can use multiple Connectors, with one or more Connector instances in each source network.
  - The Connector keeps data and events separate and secure.
- **Provides automated discovery of details for source workloads.** Migrate Connector works with import options in Transformation Manager to discover details for source Windows and Linux workloads.

- **Provides automated discovery of resources for target platforms.** Migrate Connector discovers resources available to a target environment, such as networks and storage. The resources are rediscovered automatically about every 6 hours or on demand.

In a PlateSpin Migration Factory environment, Migrate Connector provides the following migration features:

- **Applies global settings for Migrate Connectors.** System-level Migrate Connector settings in PTM apply globally to all Connector instances registered with the PTM Server.
- **Drives the automated migration on Migrate servers.** When you submit workloads for automated migration, Migrate Connector uses their transformation plans to drive the automated execution of the migrations to supported target platforms. Global settings control when automated migration jobs are set up, if and when pre-cutover testing begins, and when the jobs are removed after cutover.
- **Monitors external migrations configured and managed on Migrate servers.** When you import workloads, PTM matches them with workloads managed in Migrate. As their migrations progress, PTM reports state changes in PTM.

  If you create matching target platforms in PTM, enhanced tracking provides additional details in the Workload dialog. The Platform dialog enables you to view associations between target platform resources and the workloads across your migration environment.
- **Load-balances migration jobs across available Migrate servers.** Migrate Connector uses round-robin load-balancing to distribute workload migration jobs evenly across multiple PlateSpin Migrate servers in your project.
- **Coordinates communications in the PlateSpin Migration Factory environment.** Migrate Connector supports polling and eventing types of communications.
  - Migrate Connector listens for migration events from Transformation Manager for its discovered workloads and delivers them to the appropriate Migrate servers.
  - Each Migrate Connector listens for migration status events from its associated PlateSpin Migrate servers and delivers them to the appropriate project and workloads.
  - Each Migrate Connector sends a heartbeat regularly to Transformation Manager, which displays health status for all registered Connector instances.
- **Supports user-provided callouts.** Migrate Connector supports user-provided callouts during the transformation workflow that integrate Transformation Manager with your internal systems.

13.2 Migrate Connector Requirements

Before you deploy a PlateSpin Migrate Connector server, ensure that your environment meets the following requirements and guidelines.

13.2.1 Supported PlateSpin Migration Factory Components

PlateSpin Migrate Connector 2019.2 supports the following components of PlateSpin Migration Factory:

- **PlateSpin Transformation Manager 2019.2**

  PlateSpin Migrate Connector 2019.2 is included with this version of PTM.

- **PlateSpin Migrate 2019.2**

  PlateSpin Transformation Manager and PlateSpin Migrate Connector require PlateSpin Migrate servers to execute automated migrations and to track external migrations performed on them. Other discovery and planning features do not require PlateSpin Migrate servers.

  IMPORTANT: If the Role service WebDAV Publishing is installed on the PlateSpin Migrate server, uninstall it from **Server Manager > Roles > Web Server (IIS) > Role Service > Common HTTP features > WebDAV Publishing**.

  For information about how to buy this product, see PlateSpin Migrate (https://www.microfocus.com/products/platespin/migrate/).

  For information about installing and using this product, see the PlateSpin Migrate Documentation website (https://www.microfocus.com/documentation/platespin/platespin-migrate-2019-2/).

PlateSpin Migrate Connector 2019.2 is not backwards compatible with previous release versions of PlateSpin Transformation Manager and PlateSpin Migrate.

13.2.2 Supported Connector Host OS and Dependent Software

PlateSpin Migrate Connector has been written and tested on SUSE Linux Enterprise Server (SLES) 12 Service Pack 3 (SLES 12 SP3) servers. The software is compatible with any version of SLES 12.

The PlateSpin Migrate Connector RPM file includes the dependent software packages listed in Table 13-1.

Table 13-1 *Dependent Software for the PlateSpin Migrate Connector Host Server*

Prerequisite Software Package	Version
certifi	2018.11.29
connexion	2.2.0
cryptography	2.4.2
idna	2.8
impacket	0.9.18
ldap3	2.5.1
lxml	4.3.0
mock	2.0.0

Prerequisite Software Package	Version
paramiko	2.4.2
pycrypto	2.6.1
pypsexec	0.1.0
python-dateutil	2.7.5
python-ntlm	1.1.0
pytz	2018.9
pyvmomi	6.7.1
requests	2.21.0
requests-ntlm	1.1.0
scp	0.13.0
six	1.12.0
smbprotocol	0.1.1
stomp.py	4.1.21
tzlocal	1.5.1
urllib3	1.24.1

The PlateSpin Migrate Connector 2019.2 installation RPM contains files to upgrade Migrate Connector software as well as its dependent software on your existing Migrate Connector host servers. After the upgrade, you can verify that software versions have been updated or added as described in Table 13-2.

Table 13-2 *Upgraded Dependent Software for the PlateSpin Migrate Connector*

Prerequisite Software Package	Version Required for PMC 2	Version Required for PMC 2019.2
certifi	2018.1.18	2018.11.29
connexion	1.3	2.2.0
cryptography	2.2	2.4.2
idna	Not used	2.8
impacket	0.9.15	0.9.18
ldap3	Not used	2.5.1
lxml	4.2.0	4.3.0
mock	2.0.0	2.0.0
paramiko	2.4.1	2.4.2
pycrypto	2.6.1	2.6.1

Prerequisite Software Package	Version Required for PMC 2	Version Required for PMC 2019.2
pypsexec	Not used	0.1.0
pysmb	1.1.22	Not used
python-dateutil	2.7.0	2.7.5
python-ntlm	1.1.0	1.1.0
pytz	2018.3	2018.9
pyvmomi	6.5	6.7.1
requests	2.18.4	2.21.0
requests-ntlm	1.1.0	1.1.0
scp	0.10.2	0.13.0
six	1.11.0	1.12.0
smbprotocol	Not used	0.1.1
stomp.py	4.1.20	4.1.21
tzlocal	1.5.1	1.5.1
urllib	3.1.22	Not used
urllib3	Not used	1.24.1

13.2.3 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.

13.2.4 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.

13.2.5 Dedicated Project Assignment

You can optionally configure a Migrate Connector 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. See “Configuring a Connector Instance for PTM” on page 113.

13.2.6 Network Connectivity and Access Requirements

Ensure that your network meets the requirements for discovery, migration, and event management defined in Section 2.2, “Network Connectivity and Access Requirements,” on page 31.

14 Deploying PlateSpin Migrate Connector

Use the information in this section to install, upgrade, or uninstall PlateSpin Migrate Connector.

NOTE: An IT administrator with `root` user privileges on the PlateSpin Migrate Connector host server can install, upgrade, or uninstall PlateSpin Migrate Connector software.

14.1 Downloading PlateSpin Migrate Connector Software

The installation files for PlateSpin Migrate Connector 2019.2 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 2019.2` in the results. Use your Micro Focus Customer Center account credentials to log in to this site.

NOTE: For upgrade, if you applied the public key prior to the installation of PlateSpin Migrate Connector 2 on the Connector host server, you do not need to download key file. The new 2019.2 RPM file will upgrade the Connector software without security warnings.

Table 14-1 describes the PlateSpin Migrate Connector 2019.2 installation files.

Table 14-1 *PlateSpin Migrate Connector Download File Description*

Download File Name	Description
`platespin-migrate-connector-2019.2-`*`xx.x`*`.x86_64.rpm` Where *`xx.x`* is the build number.	Contains files to install PlateSpin Migrate Connector 2019.2 on Linux servers that you deploy in your migration environment. You can also use the RPM file to upgrade PlateSpin Migrate Connector from version 2 to version 2019.2. An instance of the Migrate Connector is automatically installed on the Appliance when you deploy the Appliance VM.

Download File Name	Description
`ptm_public-key.key`	Contains the public key used for signing the PlateSpin Migrate Connector for new installations. **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.

14.2 Installing PlateSpin Migrate Connector

Before you install PlateSpin Migrate Connector, ensure that your host server meets the Connector requirements. See Section 13.2.2, “Supported Connector Host OS and Dependent Software,” on page 105.

To install PlateSpin Migrate Connector:

1. Log in to the Migrate Connector host as the `root` user.
2. Copy the RPM and KEY files that you downloaded to a location on the server.
3. Import the PTM Public Key to your keyring.

   Launch a terminal, then enter one of the following commands as the root user:

   ```
   gpg --import <ptm-public-key-filename>
   ```

   or

   ```
   rpm --import <ptm-public-key-filename>
   ```
4. Open a terminal console, then install the RPM:

   ```
   rpm -ih <ptm-connector-rpm-filename>
   ```

   Ensure that you replace *xx.x* with the actual build number.
5. Ensure that the required ports are open on the host server firewall.

   See Section 2.2, “Network Connectivity and Access Requirements,” on page 31.
6. Configure the Connector instance settings to register it with the PTM Server.

   See Section 15.1, “Configuring a Connector Instance for PTM,” on page 113.

14.3 Upgrading PlateSpin Migrate Connector

You can use the installation files for PlateSpin Migrate Connector 2019.2 to upgrade your existing remote instances of PlateSpin Migrate Connector 2. See Section 13.2.2, “Supported Connector Host OS and Dependent Software,” on page 105.

NOTE: PlateSpin Migrate Connector 2019.2 is not backwards compatible with prior releases of Platespin Transformation Manager or PlateSpin Migrate. Upgrade the PTM Appliance before you upgrade remote Migrate Connector instances. Then upgrade your Migrate servers.

To upgrade a remote instance of the Migrate Connector:

1. Log in to the Migrate Connector host as the `root` user.
2. Copy the RPM and KEY files that you downloaded to a location on the server.
3. Launch a console, then navigate to the location where you copied the RPM and KEY files.
4. (Optional) Import the PTM Public Key to your keyring.

   If you applied the public key prior to the installation of PlateSpin Migrate Connector 2 on the existing Connector host server, you do not need to re-import the key. The new 2019.2 RPM file will apply the upgrade without security warnings.

   Launch a terminal, then enter one of the following commands as the root user:

   ```
   gpg --import <ptm-public-key-filename>
   ```

   or

   ```
   rpm --import <ptm-public-key-filename>
   ```
5. Update PlateSpin Migrate Connector files. In a console, enter

   ```
   rpm -Uvh <ps-migrate-connector-rpm-filename>
   ```

   Ensure that you replace *xx.x* with the actual build number.
6. Restart the Migrate Connector Service. In a console, enter

   ```
   rcps_migrate_connector restart
   ```

14.4 Uninstalling PlateSpin Migrate Connector

You might need to uninstall the PlateSpin Migrate Connector after a transformation project is complete and you no longer need the Migrate Connector instance to run on its host server.

1. Log in to the Connector host server as the `root` user.
2. Open a terminal console, then combine the `rpm -qa` and `grep` commands to find the exact name of the installed PlateSpin Migrate Connector package:

   ```
   rpm -qa | grep -i platespin-migrate-connector
   ```

   The query reports the exact name of the package, such as

   `platespin-migrate-connector-2019.2-xx.x.x86_64.rpm`

   where *xx.x* represents the build number.
3. Uninstall the package:

   ```
   rpm -ev <exact-package-name>
   ```
4. Repeat the query to verify that the package is no longer installed:

   ```
   rpm -qa | grep -i platespin-migrate-connector
   ```

   The command should return the following message:

   ```
   package platespin-migrate-connector is not installed
   ```

5 (Optional) Delete the matching Connector instance in the Transformation Manager Connectors list.

See Section 16.7, “Deleting a Connector Instance from PTM,” on page 129. It can take up to 10 minutes for a deleted Connector to be dropped from the list.

15 Configuring PlateSpin Migrate Connector

PlateSpin Migrate Connectors are deployed in the networks where you have source workloads. The Connector processes events only for source workloads in that same network. You must register each Connector instance with a PTM Server. A Connector is available by default to all projects. You can alternatively configure the Connector instance to be assigned to process events for only a single project.

NOTE: An IT administrator with `root` user privileges on the PlateSpin Migrate Connector host server can modify the individual Connector settings and manage the service.

For information about global settings that apply to all Migrate Connector instances, see Chapter 15, “Configuring PlateSpin Migrate Connector,” on page 113.

15.1 Configuring a Connector Instance for PTM

The PlateSpin Transformation Manager Appliance includes an instance of the PlateSpin Migrate Connector that is automatically installed and configured to work with the PTM Server on the Appliance. It works with all projects by default. After you set up multiple projects in Transformation Manager, you can add a `ptm_project_id` to the `/opt/microfocus/migrate_connector/config/settings.cfg` file on the Appliance to assign the Connector instance to a specific project.

You must manually configure each PlateSpin Migrate Connector instance that you deploy on your own Linux server.

15.1.1 About Connector Configuration Options

You must configure local settings for each PlateSpin Migrate Connector instance to enable it to connect to your PTM Server. Settings are in the `/opt/microfocus/migrate_connector/config/settings.cfg` file on the Connector host server.

Table 15-1 describes the configurable parameters in the `PlateSpin Transformation Manager Server` section and their default values.

Table 15-1 *Configurable PTM Parameters for PlateSpin Migrate Connector*

Parameter	Description	Examples

`ptm_host`	Specify the host name or IPv4 address of the PTM Appliance.
	
	The Migrate Connector instance on the Appliance uses `localhost` for this setting.
		`ptm_host=localhost`
		
		`ptm_host=10.10.10.101`
		
		`ptm_host=myptm.example.com`

`ptm_port`	Specify the port to use for HTTPS (secure) or HTTP (not secure) communications with the PTM Server application on the PTM Appliance. The default ports are 8183 for HTTPS or 8182 for HTTP. **NOTE:** Ensure that you open this port in the firewall on the Connector host and on network firewalls between the Connector host and the PTM Server.	`ptm_port=8183`
`ptm_ssl`	Specify a value of `true` to use SSL to connect to the PTM Server. Valid values are `true` and `false`.	`ptm_ssl=true`
`verify_ptm_ssl_cert`	Specify whether you want to require the certificate to be validated for connections to the PTM Server. Valid values are `false` or `true`. The default is to disable validation (`false`). **NOTE:** We recommend that you enable verification of the PTM Server certificate for remote instances of the Connector. Certificate validation is not necessary for the Connector instance installed on the Appliance.	`verify_ptm_ssl_cert=true`

Parameter	Description	Examples
local_ptm_ssl_cert	Specify one of the following: ◆ The local PTM Server certificate store for authenticating the PTM Server certificate ◆ The directory location to use a local certificate authority for certificate validation ◆ If no value is set, the Connector will use Mozilla's root certificates.	`local_ptm_ssl_cert=`
`ptm_username`	Specify the email address of a valid System user account on your PTM Server that has been assigned a at least a Project Architect role at the Project level. The Transformation History can distinguish Connector-initiated actions by this User object. **NOTE:** We recommend that you create a dedicated user account in PTM for the Connector instance to use. Create this special User object as a System user, then assign it a Project Architect role at the Project level. Create a dedicated User object for each Connector instance with permissions appropriate for its assigned project.	`ptm_username=john.doe@example.com`
`ptm_password`	Specify the password for the user account. **NOTE:** When you save the `settings.cfg` file and restart the Connector service, the password is encrypted and the file is modified to store the encrypted password instead of plain text.	`ptm_password=yourpassword`

Table 15-2 describes the configurable parameters in the `Connector Settings` section and their default values.

Table 15-2 *Configurable Connector Parameters for PlateSpin Migrate Connector*

Parameter	Description	Examples
`log_level`	Valid options are CRITICAL, ERROR, WARNING, INFO, or DEBUG. The default is INFO.	`log_level=INFO` `log_level=DEBUG`
`log_file_path`	The path to the log file on the Connector host server, including the log file name.	`log_file_path=/var/opt/microfocus/migrate_connector/logs/migrate_connector.log`
`ptm_project_id`	(Optional) Specify the numeric project ID for the project in Transformation Manager to restrict the Connector to a single project instead of making it available for all projects. The Connector processes only events and actions within the assigned project. Comment out this parameter if the Migrate Connector should be available to all projects.	`ptm_project_id=1234`

15.1.2 Configuring PTM Server Settings for a Connector

To set up the Connector instance to work with PTM, or to modify settings:

1. Log in to the Connector host server with a `root` user account.
2. In a text editor, open the `/opt/microfocus/migrate_connector/config/settings.cfg` file.
3. Specify values for the parameters in the top section called `[PlateSpin Transformation Manager Server]`.

   See Table 15-1, “Configurable PTM Parameters for PlateSpin Migrate Connector,” on page 114.
4. Save the file, then exit the text editor.
5. Start or restart PlateSpin Migrate Connector. In a terminal console, enter

   ```
   rcps_migrate_connector restart
   ```

   For the Migrate Connector instance installed on the PlateSpin Transformation Manager Appliance, you can alternatively restart the Connector from the Appliance Management Console.

   See Section 15.5, “Starting, Restarting, or Stopping the Connector Service,” on page 119.

15.1.3 Configuring a Dedicated Project for a Connector

To discover the numeric ID associated with a project in PTM:

1. In the Web Interface, go to **Planning** > **Projects**.
2. Select the project, then click **Edit**.
3. In the Edit Project dialog, pause over the project name in the dialog title area. A tooltip displays the numeric ID of the project.

To configure the Connector instance for a specific project:

1. Log in to the Connector host server with a `root` user account.
2. In a text editor, open the `/opt/microfocus/migrate_connector/config/settings.cfg` file.
3. If you have not yet configured the connector, specify the values for parameters in the top section called `[PlateSpin Transformation Manager Server]`.

   See Table 15-1, “Configurable PTM Parameters for PlateSpin Migrate Connector,” on page 114.
4. Specify the Project ID value for the `ptm_project_id` parameter under the section called `[Connector Stings]`.

   See Table 15-2, “Configurable Connector Parameters for PlateSpin Migrate Connector,” on page 116.
5. Save the file, then exit the text editor.
6. Start or restart PlateSpin Migrate Connector. In a terminal console, enter

   ```
   rcps_migrate_connector restart
   ```

   For the Migrate Connector instance installed on the PlateSpin Transformation Manager Appliance, you can alternatively restart the Connector from the Appliance Management Console.

   See Section 15.5, “Starting, Restarting, or Stopping the Connector Service,” on page 119.

15.2 Setting the Logging Level for the Connector

PlateSpin Migrate Connector sends status messages about the Connector health to the log file. The types and verbosity of messages depends on the setting for the `log_level` parameter in the Connector `settings.cfg` file (`/opt/microfocus/migrate_connector/config/settings.cfg`). Valid logging levels are CRITICAL, ERROR, WARNING, INFO, and DEBUG. INFO is the default `log_level` setting.

Log files are written to the specified location for the `log_file_path` parameter. The default path is `/var/opt/microfocus/migrate_connector/logs/migrate_connector.log`.

To modify the logging level:

1. Log in to the Connector host server with a `root` user account.
2. In a text editor, open the `/opt/microfocus/migrate_connector/config/settings.cfg` file.

3 In the section called `[Connection Settings]`, specify the appropriate logging level using the `log_level` parameter.

   For example, change `log_leve=INFO` to `log_level=DEBUG` when you are troubleshooting Connector issues.

4 Save the file, then exit the text editor.

5 Start or restart PlateSpin Migrate Connector. In a terminal console, enter

   ```
   rcps_migrate_connector restart
   ```

   For the Migrate Connector instance installed on the PlateSpin Transformation Manager Appliance, you can alternatively restart the Connector from the Appliance Management Console. See Section 15.5, “Starting, Restarting, or Stopping the Connector Service,” on page 119.

15.3 Associating Migration Servers with a Connector

PlateSpin Migrate Connector works with one or more associated PlateSpin Migrate servers to automate or track workload migrations. You use the PTM Web Interface to associate Migration Server resources to Connectors.

- Each Migrate Connector instance can be associated with none, one, or many Migration Server resources.
- If the Connector serves all projects, its associated Migration Server resources can be from any combination of the projects, as appropriate for your migration environment.
- If the Connector serves a designated project, its associated Migration Server resources can be only from the designated project.
- Each Migration Server resource is associated with a single Migrate Connector instance.

NOTE: If the Connector serves all projects, a user with the Administrator role is required to associate the Connector with Migration Server resources in any of multiple projects. A user with the Project Manager or Project Architect role can associate the Connector with Migration Server resources for their own project.

To add one or more Migrate servers to a Connector:

1 In the toolbar, select **Configuration**.

2 In the Connectors panel, select the Connector, then click **Edit**.

3 Under Associations on the Migration Servers tab, click **Add**.

4 Select one or more of the available Migration Server resources, then click **OK**.

   If the Connector is assigned to a specific project, only the Migration Server resources for that project are available for selection.

5 Verify that the newly added Migration Server resources appear in the Migration Servers list.

6 Close the Edit Connector dialog.

7 Close the Configuration dialog.

To remove one or more Migrate servers from a Connector:

1. In the toolbar, select **Configuration**.
2. In the Connectors panel, select the Connector, then click **Edit**.
3. Under Associations on the Migration Servers tab, select one or more Migration Server resources, then click **Remove**.
4. Close the Edit Connector dialog.
5. Close the Configuration dialog.

15.4 Associating a Connector with a Migration Server Resource

A Migration Server can be associated with a single Migrate Connector. A Connector can be associated with multiple Migration Server resources from the same or different project.

To associate a Migrate Connector with a Migration Server:

1. Log in to the Web Interface as a user with Project Manager or Project Administrator permissions.
2. In the Web Interface toolbar, select **Resources**.
3. Select the **Migration Servers** tab.
4. In the Migration Servers list, do either of the following:
   - Click **Create** to create a new Migration Server resource, select the appropriate **Connector** as part of the resource configuration, then click **Save**. Close the Migration Server Create dialog.
   - Select an existing Migration Server resource and click **Edit** ((or double-click the resource), select the appropriate **Connector**, then click **Save**. Close the Migration Server Edit dialog.

15.5 Starting, Restarting, or Stopping the Connector Service

The PlateSpin Migrate Connector service starts automatically when you power on the Transformation Manager Appliance. You can start, restart, or stop the PlateSpin Migrate Connector service using the `rcps_migrate_connector` command on any Connector host server.

On the Appliance or on your Connector host server:

1. Log in to the Connector host server with a local `root` user account.

   On the Appliance, ensure that SSH is enabled. See "Enabling or Disabling the SSH Service" in the *PTM 2019.2 Appliance Guide*.
2. Launch a terminal console.
3. Enter the appropriate command to start, stop, or restart the process:

   ```
   rcps_migrate_connector [start | stop | restart]
   ```
4. (Optional) View the log file at `/var/opt/microfocus/migrate_connector/logs/migrate-connector.log`.

The Appliance Management Console supports these functions for the Connector service instance on the PlateSpin Transformation Manager Appliance.

On the PlateSpin Transformation Manager Appliance:

1. Log in to the PlateSpin Transformation Manager Appliance Management Console as the `vaadmin` user.
2. Click **System Services**.
3. In the list of Available System Services, select **PlateSpin Migrate Connector for PTM**.
4. Click **Action**, then select **Stop**, **Start**, or **Restart** as appropriate.
5. (Optional) To make the startup of the Connector service Automatic or Manual, click **Options**, then select either **Set as Automatic** or **Set as Manual**.
6. (Optional) In the Log Files column, click the **download** link for the Connector service, and download the files to your management machine.
7. Click **Close** to exit System Services.
8. Exit the Appliance Management Console.

15.6 Setting the Connector Service Startup as Automatic or Manual on the Appliance

On the PlateSpin Transformation Manager Appliance, PlateSpin Migrate Connector service is set to automatically start up on system restart. You can set the service startup as Automatic or Manual.

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. Click **System Services**  .
4. Select the Migrate Connector service.
5. Click **Options**, then select either **Set as Automatic** (the default) or **Set as Manual**.
6. Click **Close** to exit System Services.

15.7 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.

15.7.1 Configuring Proxy Client Settings for the PTM Appliance

You can enable the PlateSpin Transformation Manager Appliance to work with the Proxy Server in your 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.

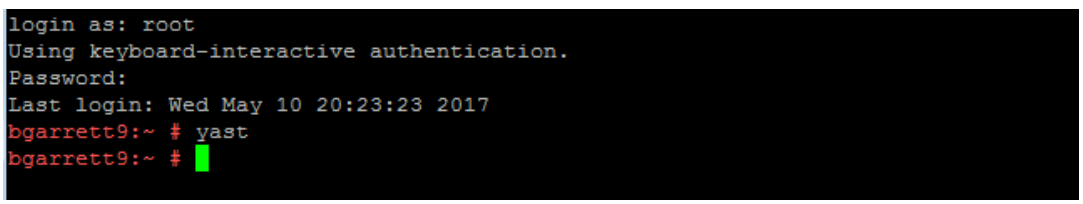
2. Configure the Proxy client settings needed to access your Proxy Server:

   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.

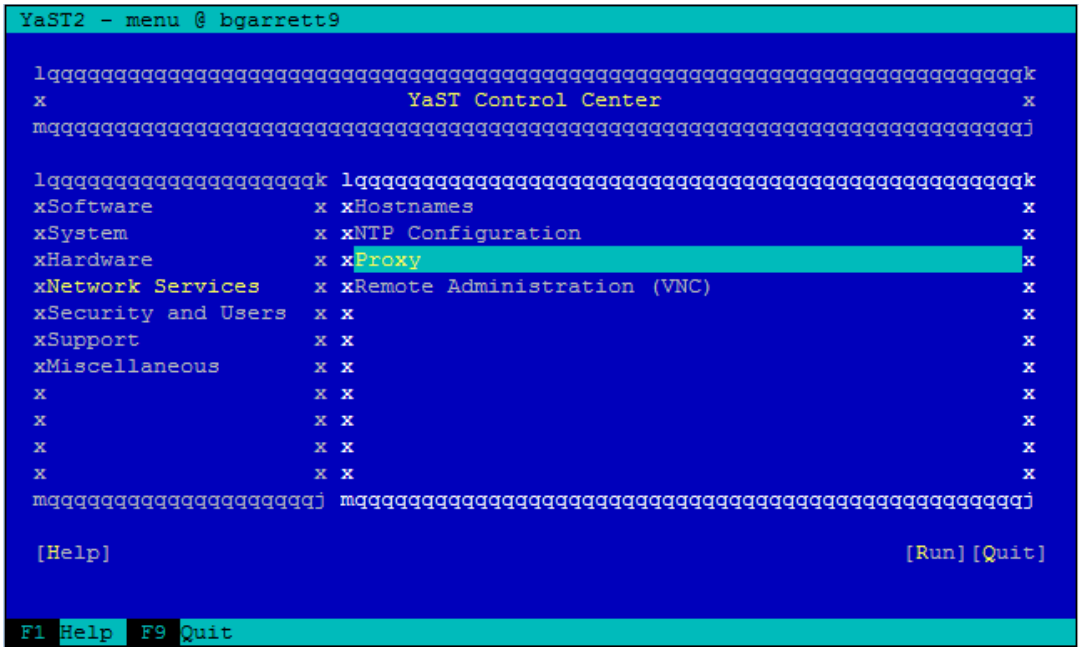
   You can use any SSH tool, such as Putty (http://www.putty.org/).

   2b. At the terminal prompt, enter

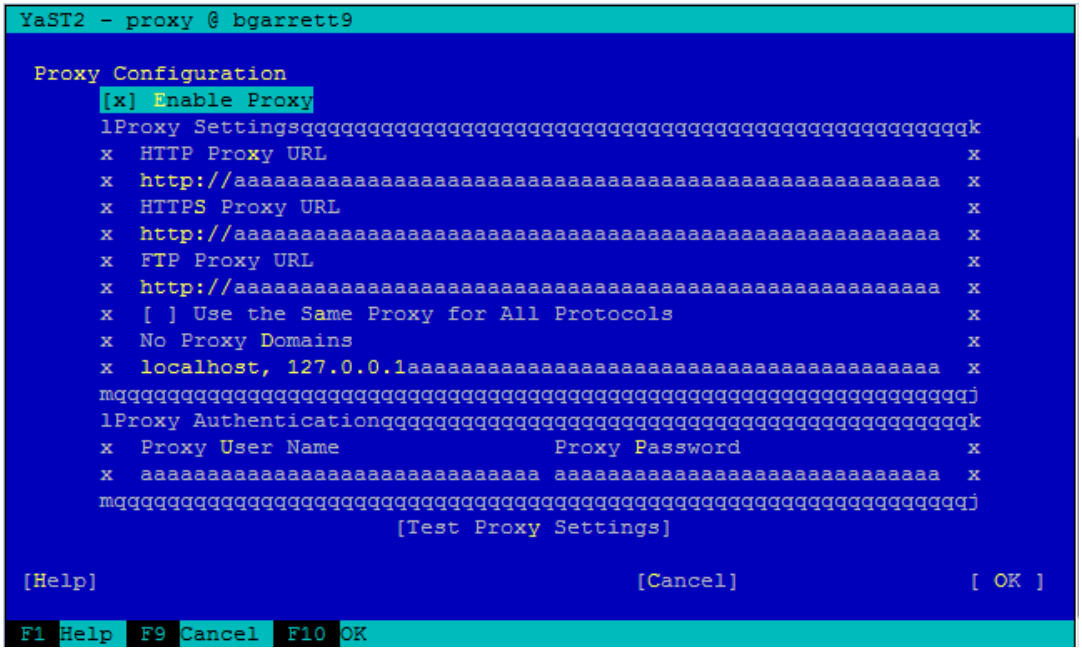
   ```
   yast
   ```



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.

15.7.2 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.

On SUSE Linux Enterprise Server (SLES) servers that host an instance of Migrate Connector, log in to the desktop and use YaST2 to configure the Internet proxy client settings compatible with your proxy server.

NOTE: YaST2 is a management tool for SUSE Linux Enterprise operating system. If your Connector host runs a different Linux operating system, use the OS management tool from your Linux vendor to apply the settings described in this procedure.

To configure proxy client settings on SLES servers that host a Migrate Connector instance:

1 Log in as the `root` user to the desktop on the SLES 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.proxy3.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.

16 Monitoring Connectors

The Connectors list in PlateSpin Transformation Manager enables you to view the connection status and project assignment for one or more PlateSpin Migrate Connector instances. It lists all of the Connector instances that are currently registered with the PTM Server.

16.1 About the Connectors List

On the **System Configuration** > **Connectors** page in PlateSpin Transformation Manager, you can view a list of Migrate Connector instances that are currently registered with the PTM Server. It reports the current health status of the connection between them.

Name

The host name of the PlateSpin Migrate Connector host server.

IP Address

The IP address and FQDN of the host server of this Connector instance. The IP address also appears in the FQDN position if the FQDN is unknown.

Project

The project assignment for the Migrate Connector instance. An instance can be assigned at the to a single project.

The second row displays the login name of the User object credentials configured for the Connector instance. This login name is used to connect to the PTM Server.

Status

The health of the connection between the PTM Server and the Connector.

The first row indicates whether the PTM Server can communicate with the Migrate Connector instance. Valid values are **OK** or **Warning**.

The Connector sends a heartbeat to PTM every 5 minutes. The second row displays the date and time of the last heartbeat received from the Connector.

Table 16-1 identifies typical warning messages and actions.

Table 16-1 *Common Connector Warnings*

Warning Status	Sub Status	Action
Needs Additional Info	No Migration Servers	Migration Server associations are required to submit automated migrations or to track external manual migrations on PlateSpin Migrate servers.
No Heartbeat	Last Contact: Month dd, yyyy, h:mm <AM|PM>	The Connector heartbeat signal is sent at 5-minute intervals. If the heartbeat signal is lost, verify that the PlateSpin Migrate Connector service is running on the Connector host server. Verify connectivity between the PTM Server and the Migrate Connector.
Unable to Connect		Verify connectivity between the PTM Server and the Migrate Connector.

NOTE: If an invalid Project ID is used in the Migrate Connector configuration file, PTM Server rejects the connection and the Connector does not appear in the list. When PTM rejects the connection, the Connector service writes a message to the Connector log and shuts down. If the Connector has previously checked in to the PTM Server with a valid Project ID (or was configured to serve all projects), the Connector might be listed with a heartbeat failure.

16.2 Viewing Migrate Connector Assignments

The System Administrator, Project Manager, and Project Architect can view the list of Migrate Connectors. The list identifies the Connector instances associated with Transformation Manager and whether they are available to all Projects or to a specific project.

NOTE: To add or remove a project assignment for a Connector instance, set the `ptm_project_id` parameter in the PlateSpin Migrate Connector configuration file.

To view a list of the Connectors:

1. In the Web Interface toolbar, select **Configuration**.
2. In the System Configuration dialog, select **Connectors**.
3. View the list of Connector instances associated with Transformation Manager.

4 View the **Projects** column to identify which Connector instance is associated with a specific project.

5 When you are done, click **Close** to exit the System Configuration dialog.

16.3 Editing the Connector Description

You can add a custom description for each PlateSpin Migrate Connector listed in the Connectors List.

To edit the Connector description:

1 In the Web Interface toolbar, select **Configuration**.

2 In the System Configuration dialog, select **Connectors**.

3 Select the Connector, then click **Edit**.

4 Type the custom description in the **Description** field, then click **Save**.

5 When you are done, click **Close** to exit the System Configuration dialog.

16.4 Adding or Removing Migration Server Associations with a Connector

You must assign at least one PlateSpin Migrate Server to each PlateSpin Migrate Connector to be able to automated migrations from PTM and to track external migrations performed on Migrate servers. Migrate Servers are represented in PTM as Migration Server resources for a project.

To add or remove Migration Server associations:

1 In the Web Interface toolbar, select **Configuration**.

2 In the System Configuration dialog, select **Connectors**.

3 In the Connectors list, select the Connector, then click **Edit** (or double-click the selected Connector).

4 (Optional) Add a Migration Server resource.

4a In the Edit Connector dialog under Associations, select the Migration Servers tab, then click **Add**.

4b In the Add Migration Servers dialog, select one or more available Migration Servers from the list, then click **OK**.

If the Connector is assigned to a specific project, only the Migration Server resources for that project are available for selection.

4c Verify that the newly added Migration Server resources appear in the Migration Servers list.

5 (Optional) Remove a Migration Server resource.

5a In the Edit Connector dialog under Associations, select the Migration Servers tab, then click **Remove**.

5b Confirm the removal.

5c Verify that the newly removed Migration Server resources no longer appear in the Migration Servers list.

6 Click **Close** to exit the Edit Connector dialog, then click **Close** to exit the System Configuration dialog.

16.5 Viewing or Deleting Workload Associations for a Connector

Connectors discover workloads based on the workload's reachability and negotiations with other Connectors for a project. After the Connector discovers the workload, it remains associated with that Connector.

You can use the Edit Connector dialog to get a role-based view a list of the currently associated workloads. You can delete a workload from this list to initiate the re-association of the workload to other available Connectors.

To view or delete Workload associations:

1 In the Web Interface toolbar, select **Configuration**.

2 In the System Configuration dialog, select **Connectors**.

3 In the Connectors list, select the Connector, then click **Edit** (or double-click the selected Connector).

4 Click the Workloads tab to view a list of workloads discovered by the Connector.

5 (Optional) Delete a workload association.

5a Select one or multiple workloads in the list, then click **Delete**.

5b Confirm the deletion.

5c Verify that the newly removed workloads no longer appear in the Workloads list for the Connector.

6 Click **Close** to exit the Edit Connector dialog, then click **Close** to exit the System Configuration dialog.

16.6 Viewing Migrate Connector Connection Status

The System Administrator, Project Manager, and Project Architect can view the list of Migrate Connectors. The Status column indicates the health of the connection between Transformation Manager and the Connector instance.

To view the status of the Migrate Connectors:

1 In the Web Interface toolbar, select **Configuration**.

2 In the System Configuration dialog, select **Connectors**.

3 View the **Status** column in the **Connectors** list.

4 For each Connector with a Warning status:

   4a View the date and time of the last heartbeat received from the Connector instance.

   4b Go to the host server for the Connector instance to restart the process.

5 When you are done, click **Close** to exit the System Configuration dialog.

16.7 Deleting a Connector Instance from PTM

Over time, you might have PlateSpin Migrate Connector instances that are no longer running. A System Administrator user can delete the instance from the Connectors list.

The Delete option removes the instance from the list, but it does not stop or uninstall the Connector instance. If the instance is still running, the Connector re-registers to Transformation Manager at its next heartbeat, and reappears in the list.

To delete a Migrate Connector instance from the Connectors list:

1 Stop the Connector process for each Migrate Connector instance that you want to remove from the Connectors list:

   1a Go to the host server for the Connector instance.

   1b Stop the Connector service.

2 In the Web Interface toolbar, select **Configuration**.

3 In the System Configuration dialog, select **Connectors**.

4 Select one or more Connector instances from the list that are no longer used.

5 Click **Delete**, then confirm the deletion.

6 When you are done, click **Close** to exit the System Configuration dialog.

7 (Optional) For each Connector instance that you deleted from the list, uninstall the Migrate Connector software from its Connector host:

   7a Log in as the `root` user to the host server for the Connector instance.

   7b Use the Linux `rpm` command to uninstall the PlateSpin Migrate Connector package from the Connector host server.

16.8 Troubleshooting Migrate Connector Connections

The following issues can cause connection errors for the PlateSpin Migrate Connector:

Table 16-2 *Connectivity Issues for PlateSpin Migrate Connector*

Issue	Action
A required port is not configured, is misconfigured, or is being blocked by the firewall or by antivirus software.	Verify port availability.
A network outage has occurred.	Resolve the network issues.

Issue	Action
PlateSpin Migrate Connector service has stopped running.	Log in to the Migrate Connector host server as the `root` user, and restart the Connector.
PlateSpin Migrate Connector host server is down.	Resolve the host server issues, then restart the PlateSpin Migrate Connector instance.
The Event Messaging port is not configured on the PlateSpin Migrate Server.	See "Requirements for Event Messaging" and "Enabling Event Messaging for PlateSpin Migration Factory" in the *PlateSpin Migrate 2019.2 User Guide*.
The PlateSpin Migrate server is down.	Resolve the Migrate Server issues.
The Migrate Connector service is slow.	Enable the debug logging level to help locate the underlying cause. See Section 15.2, "Setting the Logging Level for the Connector," on page 117.

B Troubleshooting the Connector

PlateSpin Migrate Connector must be running and network communications must be available in order to communicate with the PlateSpin Transformation Manager server and the PlateSpin Migrate servers. Use the information in this section to troubleshoot Connector issues.

B.1 Troubleshooting Transformation Workflow Errors

If a failure occurs at any step during the workload discovery workflow or migration workflow, an error message appears at the top of the workload’s Transformation Plan dialog in PlateSpin Transformation Manager. Mouse over the error message to view a tooltip with additional troubleshooting details.

For more information, see “Troubleshooting Discovery Failures”in the *PTM 2019.2 User Guide*.

B.2 Viewing Connector Logs

You can access logs for the PlateSpin Migrate Connector service on the Appliance or on your Connector host. Log in as the `root` user, then navigate to the following locations.

Migrate Connector Log File

```
/var/opt/microfocus/migrate_connector/logs/migrate_connector.log
```

PlateSpin Migrate Connector Out File

```
/var/opt/microfocus/migrate_connector/logs/platespin-migrate_connector.out
```

B.3 Downloading Connector Log Files on the Appliance

If you experience an issue with the PlateSpin Migrate Connector instance on the PlateSpin Transformation Manager Appliance, you might need to download the log files to send them to Technical Support.

1. In a web browser, specify the DNS name or the IP address for the 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 Click **System Services**  .

4 In the **Log Files** column, click the **download** link for the appropriate service to download the log files to your management workstation:

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`

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