PlateSpin® Transformation Manager
User Guide

April 2016

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About This Book and the Library

The *User Guide* provides information about using PlateSpin Transformation Manager to manage your large-scale data center transformation and migration projects. It includes conceptual information, an overview of the user interface, and step-by-step guidance for common tasks.

Intended Audience

This document is intended for IT staff, such as data center administrators and operators, who use the product to plan, execute, and monitor their large-scale data center transformation projects and workload migration projects.

Information in the Library

The library for this product is available in HTML and PDF formats on the PlateSpin Transformation Manager Documentation website (https://www.netiq.com/documentation/platespin-transformation-manager-1/).

The PlateSpin Transformation Manager library provides the following information resources:

Release Notes

Provides information about features in the release and any known issues.

Appliance Guide

Provides detailed planning, installation, and configuration information. It also provides step-by-step guidance for appliance maintenance.

User Guide

Provides conceptual information, an overview of the user interface, and step-by-step guidance for common tasks.

Help

Provides context-sensitive information and step-by-step guidance for common tasks as you work in the user interface.

Additional Resources

We encourage you to use the following additional resources online:

- User Community (https://www.netiq.com/communities/): A web-based community with a variety of discussion topics.
- Support Knowledgebase (https://www.netiq.com/support/kb/): A collection of in-depth technical articles.
- Support Forums (https://forums.netiq.com/forum.php): A web location where product users can discuss product functionality and advice with other product users.
- MyNetIQ (https://www.netiq.com/f/mynetiq/): A website offering product information and services, such as access to premium white papers, webcast registrations, and product trial downloads.

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1 Overview of PlateSpin Transformation Manager

PlateSpin Transformation Manager is a planning tool that helps you plan and monitor your large-scale workload transformation projects. It features various project roles, progress visualization with a dashboard, and support for all workload transformation methods. You can dramatically increase project predictability, transformation speed, and success ratios, which drives down the cost of your transformation projects.

- Section 1.1, "Inherent Problems for Workload Transformations," on page 11
- Section 1.2, "How PlateSpin Transformation Manager Solves Your Transformation Problems," on page 12
- Section 1.3, "Features and Benefits," on page 13
- Section 1.4, "Transformation Planning Workflow," on page 14
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- Section 1.6, "What's Next," on page 17

1.1 Inherent Problems for Workload Transformations

As your business evolves, the data center can expand unevenly, allowing legacy and new technologies to coexist. It might also grow in very dissimilar ways through mergers and acquisitions. As a result, your IT staff supports an heterogeneous mix of hardware architectures, operating systems, and applications. The workload diversity can increase the stress on your IT staff as well as the likelihood of human error. You want to move to more homogeneous workloads that can better meet your future business needs, simplify daily operations, reduce operational costs, and reduce risk in your IT environment.

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.
- Lift and shift equipment from location A to location B.
- Move virtual files to newer virtualization host servers, running the same or different virtualization hypervisors.
- 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.

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, network resources, 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.

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 repurposed 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.

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 How PlateSpin Transformation Manager Solves Your Transformation Problems

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

- Consistent
- Reliable
- Repeatable

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.

The planning features are flexible. You can create custom resources for each project, and add custom fields to track information important to you. 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.

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.

The PlateSpin Transformation Manager Web Interface and database are designed to manage up to about 500,000 transformations across multiple organizations and projects, while protecting the security and confidentiality of their data. The organizations can be the end customers of providers, or different departments in an enterprise. User roles and the related permissions control the actions and visibility of information for users.

Using PlateSpin Transformation Manager to plan and monitor your transformation projects:

- 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 cost

1.3 Features and Benefits

PlateSpin Transformation Manager provides an appliance-based installation that is simple to deploy and maintain, and a web interface for users that is easily accessible on standard web browsers and is easy to use.

- Section 1.3.1, "Appliance," on page 13
- Section 1.3.2, "Web Interface," on page 13

1.3.1 Appliance

The PlateSpin Transformation Manager Appliance hosts the Transformation Manager software and the database for your transformation projects.

- **The appliance is ready to deploy in your virtualization environment.** The virtual machine includes a fully tested software stack that PlateSpin Transformation Manager needs, and omits unneeded applications and services that can consume system resources.
- **Web-based administration tools simplify server setup and maintenance.** You do not need to understand the underlying operating system, software, or databases.

For more information, see the *PlateSpin Transformation Manager Appliance Guide*.

1.3.2 Web Interface

The PlateSpin Transformation Manager Web Interface allows 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.** Associate workloads with applications, credentials, hosts, networks, datastores, environments, migration servers, and resource pools.
- **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 selected workloads.
- **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.
- **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 performance.

1.4 Transformation Planning Workflow

Figure 1-1 shows the workflow for a transformation project as you track it using PlateSpin Transformation Manager. You begin by setting up components to represent different logical and physical aspects of your IT environment. Global components provide predefined resources.

Figure 1-1 *Transformation Workflow*
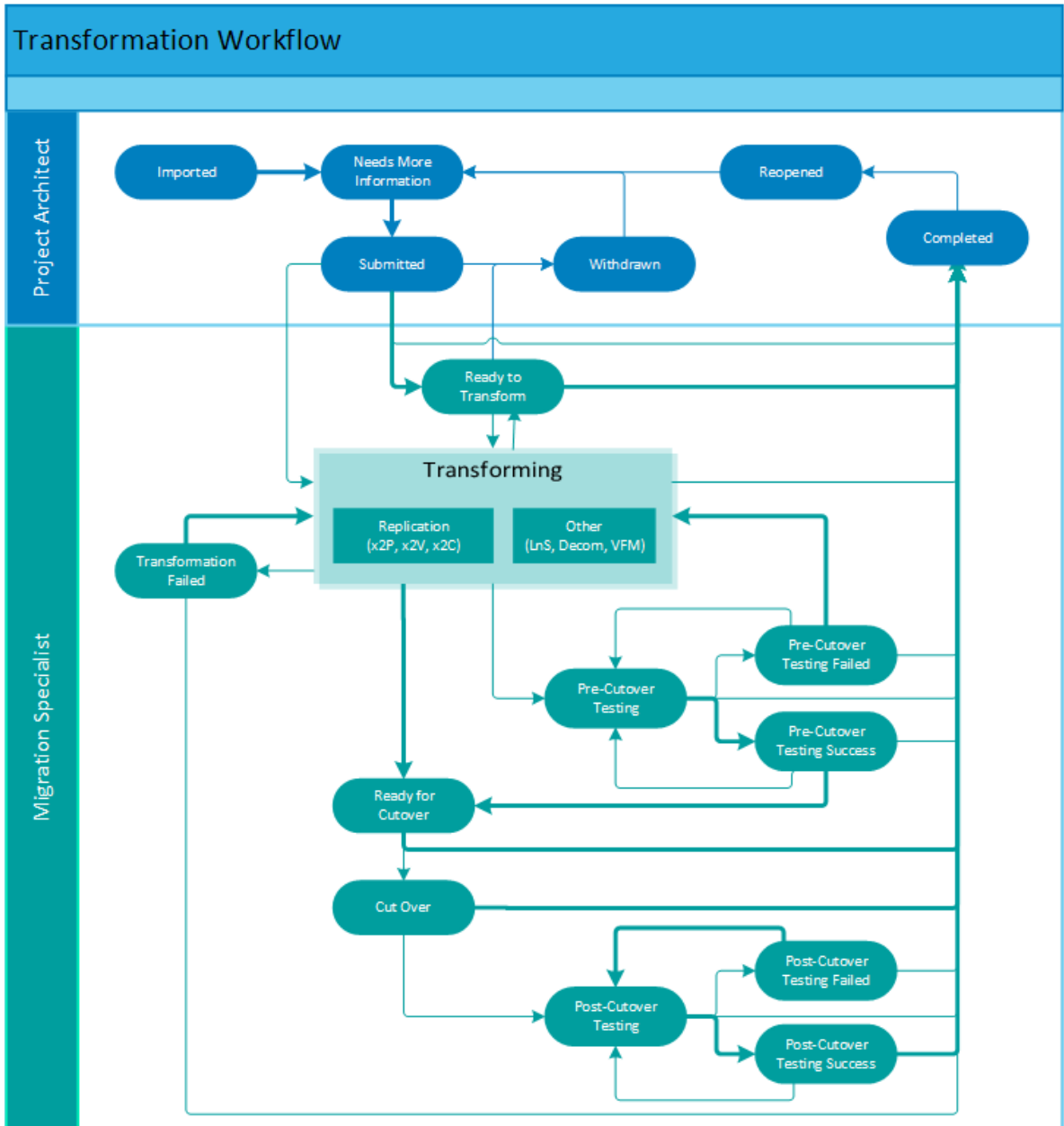
As the Project Manager or Project Architect, you import information about the source workloads for transformation. You can define details about the workload, including hardware, applications, NICs, and disks. You can import details incrementally to add information, evolve the information as the project matures, or fix errors.

The import process creates a target workload based on the settings for the original workload. When you re-import the source workload information, the updates 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 can track the transformation phases by entering different state information about the work in progress. See Table 11-1, "State Descriptions and Next States," on page 87.

Transformation Manager tracks the health of the project and provides progress metrics in the dashboard. As Dashboard Viewers, your project stakeholders can view metrics and related reports.

1.5 Web Interface Components

Most of your interaction with the PlateSpin Transformation Manager Server occurs through the Web Interface. This web-based tool allows access to project information from anywhere on a range of devices. You use the following key Web Interface components to efficiently manage your transformation projects for one or more organizations.

1.5.1 Dashboard

- Allow key stakeholders to view statistics by project, wave, and batch.
- Workload Status shows the total number of workloads and their current status as imported, defining, submitted, in progress, completed, and warning. Each category provides a link to a list of workloads in that category.
- Workload Breakdown shows core statistics by the transformation method and operating system.

For more information, see Section 6.2, "Using the Dashboard," on page 57.

1.5.2 Planning

- Create projects for one or more organizations.
- Plan large-scale transformation projects in manageable chunks by grouping the workload transformations in waves and batches.
- Set the start and end dates for projects, waves, and batches. Child objects automatically inherit dates from their parents. You can also set dates manually.
- Bulk import the source workload information for your project.
- Assign workloads to batches through individual or bulk edits.
- Define custom workload components to use for each project, such as applications, custom fields, disks, and NICs.
- Define the appropriate transformation configuration for each workload.

- Use powerful forms for advanced search and bulk edit to achieve fast and efficient workload manipulations of multiple workloads at a time.
- Migration Specialists use the workload information to execute their assigned workload transformations and to set the workflow status.
- Custom fields allow you to add project-specific details to all workloads, such as budget IDs, contact information, and tags to track logical or business associations among workloads.
- Global project selector allows you to automatically filter lists to a specific project. When it is enabled, the project's custom fields appear in the Advanced Search form and Bulk Edit form.

For more information, see Section 6.1, "Planning," on page 53. See also the following related topics:

- Chapter 7, "Managing Projects," on page 65
- Chapter 8, "Managing Waves," on page 71
- Chapter 9, "Managing Batches," on page 75
- Chapter 10, "Managing Applications," on page 79
- Chapter 11, "Managing Workloads," on page 83

1.5.3 Users

- Define organizations, users, and groups.
- Assign users to the System Administrator role for elevated privileges and responsibilities.
- Assign users to project roles:
  - Project Managers
  - Project Architects
  - Migration Specialists
  - Dashboard Viewers

For more information, see Section 5.1, "About PlateSpin User Management," on page 39. See also the following related topics:

- Section 5.2, "Organizations," on page 43
- Section 5.3, "Users," on page 47
- Section 5.4, "Groups," on page 49
- Appendix B, "Roles and Permissions," on page 141

1.5.4 Resources

Define custom workload components for each project:

- Credentials
- Hosts
- Networks
- Datastores
- Environments
- Migration servers
- Resource pools

For more information, see Chapter 12, "Managing Resources," on page 103.

1.5.5 Configuration

◆ View license block information, including the start date, expiration date, and the number of licenses remaining.

For more information, see Section 4.1, "Managing Licenses," on page 31.

◆ Configure operating system types used by all projects in your transformation environment.

For more information, see Section 4.2, "Configuring Operating System Types," on page 35.

1.6 What's Next

Use the Getting Started Checklist to learn more about the Web Interface, and to set up your first project.

2 Getting Started

After you install and configure your PlateSpin Transformation Manager Appliance, you can use this checklist to get acquainted with the Web Interface and set up a transformation project for your organization.

Table 2-1 *Getting Started Checklist*

Status	Task	For information, see
☐	1. Log in to the Web Interface using the System Administrator user account that you created during the appliance setup.	Accessing the Web Interface (page 22)
☐	2. Familiarize yourself with the Web Interface.	Web Interface Toolbar (page 23) Project Selector (page 24) Bulk Actions (page 25) Show Link for Navigation URLs (page 25) Custom Display and Filters for Lists (page 26) Multiple Item Selection in Lists (page 29)
☐	3. Create an organization.	About Organizations (page 44) Creating an Organization (page 45) (0ptional) Uploading an Organization Logo (page 46)
☐	4. Create a transformation project.	About Projects (page 65) Creating Projects (page 67)
☐	5. Create one or more Waves for the project.	About Waves (page 71) Creating Waves (page 72)
☐	6. For each Wave, create one or more batches.	About Batches (page 75) Creating Batches (page 76)
☐	7. Create user accounts for your project, and assign each user to one of the project roles.	Roles (page 40) Creating a User (page 48)
☐	8. Prepare one or more Bulk Import Spreadsheets for the project.	Bulk Import Spreadsheet (page 127)

Status	Task	For information, see
☐	9. Use Bulk Import to validate the spreadsheet and Import workloads to the project.	Importing Workloads for a Project (Bulk Import) (page 93)
☐	10. Create applications that are available to proposed workloads as you define transformations.	About Applications (page 79) Creating Applications (page 80)
☐	11. Create target resources that are available to proposed workloads as you define transformations.	Managing Resources (page 103) ◆ Credentials ◆ Hosts ◆ Networks ◆ Datastores ◆ Environments ◆ Migration Servers ◆ Resource Pools
☐	12. For each imported workload, use bulk edit or individual edit to define the transformation method and details for the proposed workload.	About Workloads (page 83) Editing a Proposed Workload (page 96) Bulk Editing Multiple Proposed Workloads (page 97)
☐	13. As a Project Architect, submit one or more workloads for transformation.	Status (page 86) Figure 11-1, "The Transformation Workflow," on page 87 Bulk Status Change for Multiple Proposed Workloads (page 101)
☐	14. As a Migration Specialist, execute the workload transformations, and update their transformation status in PTM.	Status (page 86) Figure 11-1, "The Transformation Workflow," on page 87 Bulk Status Change for Multiple Proposed Workloads (page 101)
☐	15. Monitor the project status by viewing core metrics and related reports in the real-time visual dashboard.	Using the Dashboard (page 57) Viewing Counts and Status for a Project, Wave, or Batch (page 60)

3 Using the Web Interface

Most of your interactions with PlateSpin Transformation Manager occur in the Web Interface.

3.1 Prerequisites for Using the Web Interface

The PlateSpin Transformation Manager server hosts the Web Interface, using Jetty web services. After you install the PlateSpin Transformation Manager Appliance, ensure that your network environment meets the requirements in this section for using the Web Interface.

3.1.1 Port Requirements

During the appliance installation, PlateSpin Transformation Manager automatically configures the default ports shown in Table 3-1 on the PlateSpin Server. 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 3-1 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.

Network Port	Security	Description
5432		PostgreSQL port for a remote PTM database. Allow TCP traffic, incoming and outgoing.
		This port is closed by default if the PostgreSQL database is installed on the appliance.

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

3.1.2 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: JavaScript (Active Scripting) must be enabled in your browser.

3.1.3 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 appliance and the software.

For higher security, Micro Focus recommends that you use a trusted server certificate that is signed by a trusted certificate authority (CA) such as VeriSign or Equifax. You can use your own existing signed certificate, or you can use the Digital Certificate tool on the appliance to create a certificate, have it signed by a trusted certificate authority, and then add it to the appliance. 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 *PlateSpin Transformation Manager Appliance Guide*.

3.2 Accessing the Web Interface

Most of your interaction with PlateSpin Transformation Manager takes place through the browser-based Web Interface. You use it to plan and manage your transformation projects, as well as to configure the product to meet your needs.

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. See Section 5.1, "About PlateSpin User Management," on page 39.

To log in to the Web Interface:

1 In a supported web browser, launch the PTM 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 user account, then click **Log In**.

3.3 Web Interface Toolbar

The PlateSpin Transformation Manager Web Interface toolbar gives you access to the key product features described in Table 3-2.

Figure 3-1 *PlateSpin Web Interface Toolbar*
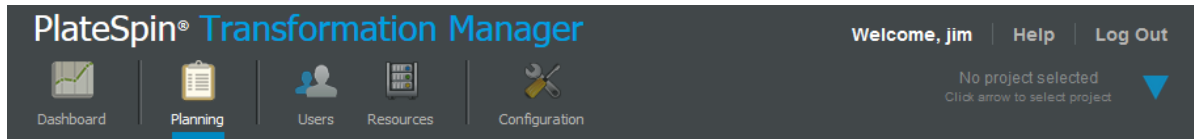
Table 3-2 *Toolbar Options*

Option	Description
Dashboard	The Dashboard tab provides status and health information about workload transformations. See Section 6.2, "Using the Dashboard," on page 57.
Planning	The Planning tab allows you to configure the following elements for your transformation project: ◆ Projects ◆ Waves ◆ Batches ◆ Applications ◆ Workloads See Chapter 6, "Planning and Monitoring," on page 53.
Users	The Users tab allows you to configure the following elements for your transformation project: ◆ Organizations ◆ Users ◆ Groups See Chapter 5, "Managing Users," on page 39.

Option	Description
Resources	The Resources tab allows you to configure the following elements for your transformation project: ◆ Credentials ◆ Hosts ◆ Networks ◆ Datastores ◆ Environments ◆ Migration Servers ◆ Resource Pools See Chapter 12, "Managing Resources," on page 103.
Configuration	The Configuration tab allows the System Administrator to perform the following tasks: ◆ Licenses ◆ Operating Systems See Chapter 4, "Configuring PlateSpin Server," on page 31.
Project Selector	The Project Selector narrows the scope globally to a single project for the information displayed and acted on. When it is enabled, the dialogs automatically complete fields for the project and its parent organization. See Section 3.4, "Project Selector," on page 24.
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.

3.4 Project Selector

You can use the Project Selector to set 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 filters 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 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 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 Project Selector area, then click the **X** to remove the project filter.

   The selected page refreshes the list to display objects for all projects.

3.5 Bulk Actions

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

3.5.1 Bulk Import

You import all source workload information by importing or re-importing the machine information using the Bulk Import spreadsheet. See Appendix A, "Bulk Import Spreadsheet," on page 127.

3.5.2 Bulk Edit

You can apply settings to multiple proposed workloads at a time by setting values in the Bulk Edit dialog. Use the 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. See Section 11.7, "Bulk Editing Multiple Proposed Workloads," on page 97.

3.5.3 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. See Section 11.8, "Bulk Status Change for Multiple Proposed Workloads," on page 101.

3.6 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 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 dialog and its contents, the user account must be assigned to a role that has permission to access the page and 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.

3.7 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.

- Section 3.7.1, "Refresh List Items," on page 26
- Section 3.7.2, "Number of Items in a List," on page 26
- Section 3.7.3, "Show More Data in a Cell," on page 26
- Section 3.7.4, "Sort Data," on page 26
- Section 3.7.5, "Show/Hide Columns in a List," on page 27
- Section 3.7.6, "Filter Data in a List," on page 27
- Section 3.7.7, "Advanced Search of Data," on page 28

3.7.1 Refresh List Items

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

3.7.2 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.

3.7.3 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.

3.7.4 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.

3.7.5 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 custom fields, IP addresses, MAC addresses, and workload type.

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.

3.7.6 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.

3.7.7 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:

Project	Workload Type	Total Storage	Application
Wave	Transform Method	Single Disk Size	Environment
Batch	Site	# of CPUs	Network
Hostname	Slot	Amount of Memory	VLAN ID
OS Type	Enclosure	On Hold	Status
Custom 1	Custom 2	Custom 3	Health
Custom 4	Custom 5	Custom 6	Custom 7

NOTE: The 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.

3.8 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.

3.9 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:

- Section 3.9.1, "Selecting Consecutive Items," on page 29
- Section 3.9.2, "Selecting Non-Consecutive Items," on page 29
- Section 3.9.3, "Selecting All Items," on page 30

3.9.1 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.

3.9.2 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.

3.9.3 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.

4 Configuring PlateSpin Server

PlateSpin Transformation Manager allows you to configure licenses and operating system types for the PlateSpin Server. Modifications to the settings in the Configuration tool apply to all transformation projects.

4.1 Managing Licenses

PlateSpin Transformation Manager provides full and evaluation license options. You must have a license for each workload transformation.

4.1.1 Understanding Licenses

Full License

A full license allows you to plan and execute a workload transformation for each license instance. You purchase workload licenses in blocks from the Customer Center (https://www.netiq.com/customercenter/). Each block has a fulfillment window with an activation date that you specify.

You can install the appliance and begin setting up the projects before you need to activate licenses. You do not need a workload license until you start planning a workload transformation. Because transformation planning for a workload consumes a license, you cannot edit imported workloads until you enter a valid license key and licenses are available in an active license block.

Evaluation License

An evaluation license allows you a trial period to work with the your own data in the product. Evaluation mode allows you to use the product with an Eval key and 100 workload licenses.

After the Eval license expires, any unused licenses cannot be used to begin new workload transformations. You can continue to work in the product with licensed workloads through their entire workflow until the transformations are completed.

You can preserve the data you enter during the evaluation period by entering a Full license key to your evaluation installation. Your existing licensed workloads are not impacted. Consumed licenses do not expire. However, after you add the full license key, all unused evaluation workload licenses are automatically removed.

4.1.2 How Workloads Consume Licenses

You purchase workload licenses for PlateSpin Transformation Manager in blocks, based on the number of workloads you plan to manage for all of your projects. A workload license is not required to configure users, projects, and resources. You can import and re-import workload data multiple times without consuming a license.

Each workload will consume an available license when you first modify its data after import. The edit can be an individual edit action or a bulk edit action. Acquiring the license can take several seconds, resulting in a delayed response for the first edit on a workload. If no license is available for the workload at that time, the save action fails. You cannot modify the transformation plan for an unlicensed workload.

For a bulk edit, each unlicensed workload in the pre-selected list consumes an available license in turn. If there are insufficient licenses available, the license and edit actions fail for any subsequent unlicensed workloads in the list.

NOTE: If licenses are not available, notify the System Administrator for PlateSpin Transformation Manager about the licenses you need.

When a license is consumed, the licenses remaining count decreases by one. If multiple license blocks are available, it modifies counts for the block with the next closest expiration date.

A consumed license never expires. Deleting a workload does not free the consumed license.

4.1.3 Adding a License Key

On the **Configuration** > **Licenses** page, the System Administrator can add the full license key or evaluation license key and view license status for current blocks of licenses for this PlateSpin Transformation Manager Server. The Licenses Blocks list shows each block with its purchase date, start date, expiration date, count for total licenses in the block, and count for remaining unused licenses. The list displays only license blocks with active fulfillment periods and unused licenses available. It does not include historical information about license blocks after the fulfillment period has expired or when the number of remaining unused licenses is zero (0).

1 (Optional) Log in to the Customer Center (https://www.netiq.com/customercenter) and acquire an evaluation license or full license key for PlateSpin Transformation Manager.

2 Log in to the Web Interface as a user with the System Administrator role:

   https://<*ptm-ip-address-or-dns-name*>:8183

3 Select **Configuration** > **Licenses**.

4 Complete the following information:

   License Key: The 14-character hexadecimal key provided by the Customer Center.

   License Type: Full or Eval

   Remaining Licenses: This value is automatically calculated from the license blocks that you purchase for this PlateSpin Server and that have active fulfillment periods.
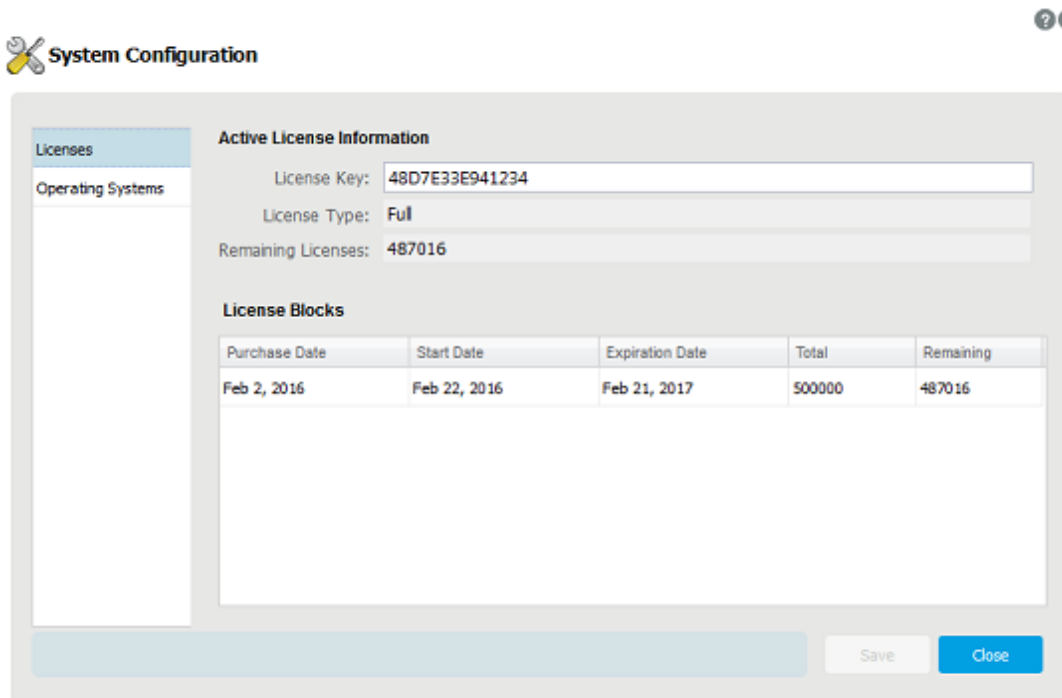
License Blocks: This list is automatically retrieved from the Customer Center. It displays the license blocks that you have purchased for this PlateSpin Server that have active fulfillment periods with unused licenses available or that have future fulfillment periods. It does not display expired blocks or empty blocks.

5 Click **Save**.

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

4.1.4 Adding a License Block

You can purchase license blocks for PlateSpin Transformation Manager in the Customer Center (https://www.netiq.com/customercenter). You do not manually enter the block license information. PTM automatically retrieves information about license blocks from the Customer Center and displays them in the License Blocks list on the Licenses page. In addition to updates for user actions that involve licenses, PTM refreshes the license information with the Customer Center daily at about 2:00 a.m. local time.

Figure 4-1 *License Management*

Each license block has an independent fulfillment period defined by the following dates:

◆ **Start Date:** The fulfillment date at which the block of licenses becomes active and you can begin to use its licenses.

◆ **Expiration Date:** The end of the fulfillment period. Any unused licenses in the block expire at that time.

A license block no longer displays in the list when either of the following conditions occurs:

◆ After the expiration date for the license block fulfillment period, even if unused licenses remain.

> **NOTE:** If unused licenses are due to expire soon, you can quickly consume multiple licenses by applying a Bulk Edit change to the next planned set of workloads for one or more projects. A consumed license never expires.

- After all licenses in the block are consumed, even if the block fulfillment period has not expired.

4.1.5 Viewing License Status for a Workload

The Workload dialog reports the license state for the currently selected workload in the lower right of the header area. See Table 4-1 for information about license states for workloads.

Table 4-1   *Workload License States*

Icon	License State	Description
	Not licensed	The workload has been imported, and you have not yet edited the transformation plan information for the workload.
	Licensed	You edited some information about the imported workload by using the Workload dialog or a Bulk Edit. A license is assigned permanently to this workload. Mouse over the icon to see the date the license was consumed. The license never expires.
	License is not available	You have not yet edited information for the imported workload. Because no workload licenses are currently available, any edits you attempt for the workload cannot be saved. **NOTE:** Notify the System Administrator that licenses are not available.

4.1.6 License Warnings

A license must be available to be consumed before you begin to plan a workload's transformation. A license is available if it is unused and its fulfillment period is active. License blocks with future start dates for their fulfillment periods are currently inactive, which makes them currently unavailable. The Web Interface notifies the user if licenses are unavailable, running low, or expiring soon.

PlateSpin Transformation Manager checks the count and expiration dates of currently available licenses when the following key actions occur in the workflow.

- At login
- When the Workload dialog opens or closes
- When the Bulk Edit dialog opens or closes
- When the Configuration dialog closes

The License Warning message displays in a banner immediately below the main header of the Web Interface for the following license conditions:

- The number of currently available licenses is 50 or fewer.
- The next set of currently available licenses will expire within 7 days.

If no licenses are available for a currently selected unlicensed workload, the Workload dialog displays the No License Is Available icon ![icon] in the header area, and edits cannot be saved.

NOTE: Notify the System Administrator for PlateSpin Transformation Manager about the reported license conditions.

If licenses are expiring soon, you can quickly consume multiple licenses by applying a Bulk Edit change to the next planned set of workloads for one or more projects. A consumed license never expires.

4.2 Configuring Operating System Types

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.

4.2.1 About Operating System Types

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
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)

4.2.2   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. This list contains the OS Type values that are available for 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.

4.2.3   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.

4.2.4   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.

4.2.5 Deleting an Operating System Type

The System Administrator can delete any operating system component, including the predefined OS Types. The deletion removes the OS Type throughout the product for all transformation projects.

NOTE: Deleting an OS Type can effect 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.

5 Managing 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.

5.1 About PlateSpin User Management

For PlateSpin Transformation Manager, a user is any individual who can access Transformation Manager to plan, monitor, or execute transformation projects. Transformation Manager creates a 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.

Transformation Manager stores user account information and authenticates the user to allow access. Access controls govern the information users can see and the actions they can perform.

5.1.1 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
  - Project Architect
  - Migration Specialist
  - Dashboard Viewer role
  - System groups

  You can also assign system groups to the roles, and then manage group membership to make management easier.

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

5.1.2 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, and Dashboard Viewer. Each role carries its own set of responsibilities in the PTM environment. For detailed information about the permissions for each role, see Appendix B, "Roles and Permissions," on page 141.

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 roles 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 5-1. For example, if you assign the system user account for John as the Project Manager for an organization, the organization's existing and new projects automatically inherit the setting.

Figure 5-1 *Scope of Permissions for Inherited Roles*
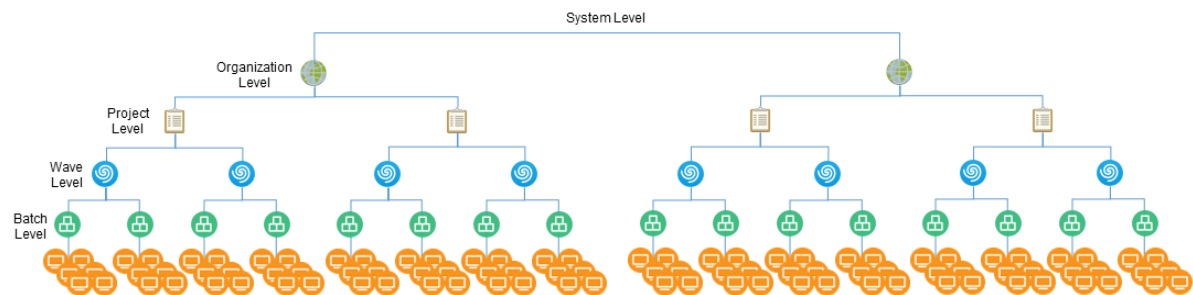
- "System Administrator Role" on page 40
- "Project Manager Role" on page 41
- "Project Architect Role" on page 41
- "Migration Specialist Role" on page 41
- "Dashboard Viewer Role" on page 42

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 PlateSpin Transformation Manager Server.
- Has all privileges throughout the product.
- Has exclusive privileges to perform the following tasks:
  - Create and delete organizations.
  - Create and delete projects.
  - Create and delete Operating System types.

- ◆ Assign users and groups to roles at the Organization level.
- ◆ Assign users and groups to the Project Manager role.
- ◆ Can perform all tasks for every role in any project.

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.
- ◆ Assigns users or groups to the Project Architect, Migration Specialist, and Dashboard Viewer roles.
- ◆ Tracks project progress and core statistics, using the dashboard.
- ◆ Performs any of the Project Architect tasks.
  - ◆ Creates and deletes waves, batches, and applications.
  - ◆ Bulk imports project workloads.
  - ◆ Creates and deletes resources.
  - ◆ Defines proposed workloads.
  - ◆ Submits workloads that are ready for transformation, or withdraws them if transformation changes are needed.

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:

- ◆ Views all information for the project.
- ◆ Creates and deletes waves, batches, and applications.
- ◆ Assigns users or groups to the Migration Specialist role for waves and batches.
- ◆ Bulk imports project workloads.
- ◆ Creates and deletes resources.
- ◆ Defines proposed workloads.
- ◆ Submits workloads that are ready for transformation, or withdraws them if transformation changes are needed.
- ◆ Tracks project progress and core statistics, using the dashboard.
- ◆ Can execute the individual migrations, according to the project plan.

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:

- ◆ Views information for the project's waves, batches, and workloads.
- ◆ Views information for the project's resources.

- Executes the individual migrations, according to the project plan.
- Tracks project progress and core statistics, using the dashboard.

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.

5.1.3 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 .:

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 5-2 *Assigning a Group to the Project Manager Role*
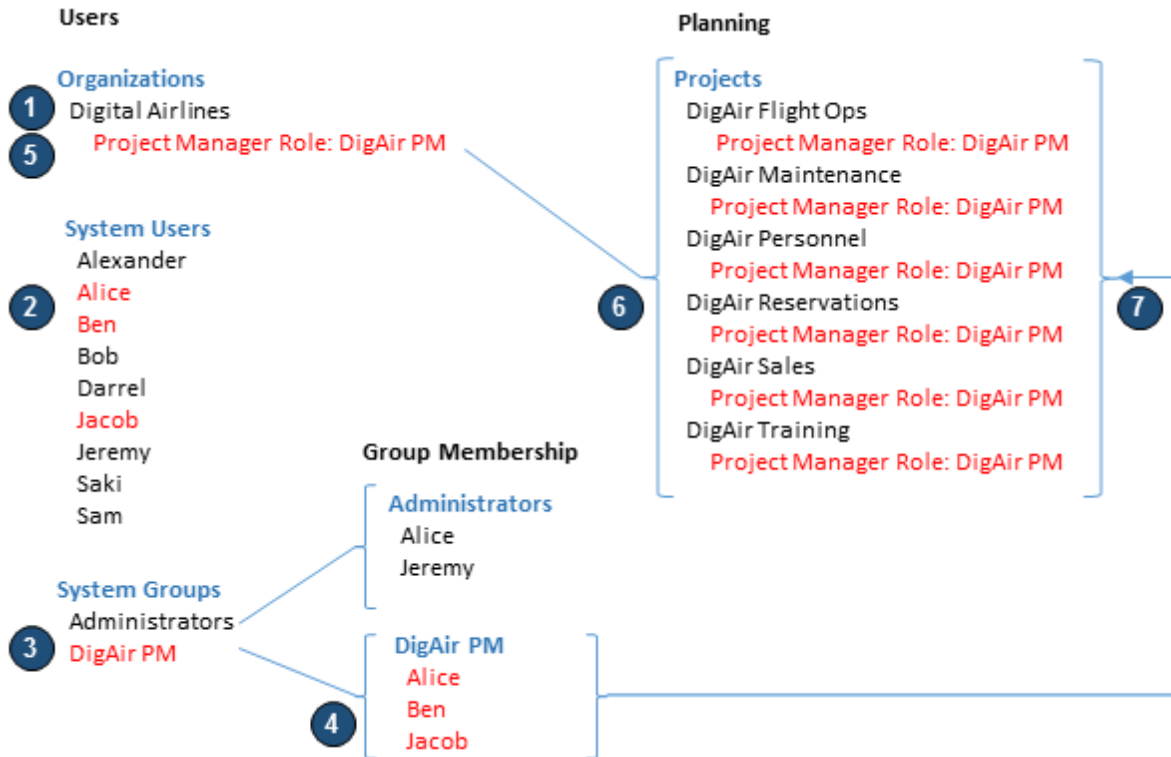
You can assign user permissions directly, or indirectly through group membership. If you assign a user to multiple roles, the user's permissions in the Web Interface are cumulative.

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 5-2.

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.

5.2 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 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

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5.2.1 About Organizations

Transformation Manager allows 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: The following tabs allow you to 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) - See Chapter 7, "Managing Projects," on page 65.
- **Resources**
  - ◆ Credentials (Create, Edit, View, Delete) - See Section 12.3, "Managing Credentials Resources," on page 103.
  - ◆ Hosts - See Section 12.4, "Managing Host Resources," on page 107.
    - ◆ Source (View)
    - ◆ Target (Create, Edit, View, Delete)
  - ◆ Networks - See Section 12.5, "Managing Network Resources," on page 111.
    - ◆ Source (View)
    - ◆ Target (Create, Edit, View, Delete)
  - ◆ Datastores - See Section 12.6, "Managing Datastore Resources," on page 114.
    - ◆ Source (View)
    - ◆ Target (Create, Edit, View, Delete)
  - ◆ Environments (Create, Edit, View, Delete) - See Section 12.7, "Managing Environment Resources," on page 117.
  - ◆ Applications (Create, Edit, View, Delete) - See Chapter 10, "Managing Applications," on page 79.
  - ◆ Migration Servers (Create, Edit, View, Delete) - See Section 12.8, "Managing Migration Server Resources," on page 120.
  - ◆ Resource Pools (Create, Edit, View, Delete) - See Section 12.9, "Managing Resource Pool Resources," on page 123.
- **Users**

  Project role assignments at the project level are automatically inherited by their child components.
  - ◆ Dashboard Viewer (View, Add, Remove) - See "Dashboard Viewer Role" on page 42.
  - ◆ Migration Specialist (View, Add, Remove) - See "Migration Specialist Role" on page 41.

- ◆ Project Architect (View, Add, Remove) - See "Project Architect Role" on page 41.
- ◆ Project Manager (View, Add, Remove) - See "Project Manager Role" on page 41.

5.2.2   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) - See Chapter 7, "Managing Projects," on page 65.

Resources

- ◆ Credentials (Create, Edit, View, Delete) - See Section 12.3, "Managing Credentials Resources," on page 103.
- ◆ Hosts - See Section 12.4, "Managing Host Resources," on page 107.
  - ◆ Source (View)
  - ◆ Target (Create, Edit, View, Delete)
- ◆ Networks - See Section 12.5, "Managing Network Resources," on page 111.
  - ◆ Source (View)
  - ◆ Target (Create, Edit, View, Delete)
- ◆ Datastores - See Section 12.6, "Managing Datastore Resources," on page 114.
  - ◆ Source (View)
  - ◆ Target (Create, Edit, View, Delete)
- ◆ Environments (Create, Edit, View, Delete) - See Section 12.7, "Managing Environment Resources," on page 117.
- ◆ Applications (Create, Edit, View, Delete) - See Chapter 10, "Managing Applications," on page 79.
- ◆ Migration Servers (Create, Edit, View, Delete) - See Section 12.8, "Managing Migration Server Resources," on page 120.
- ◆ Resource Pools (Create, Edit, View, Delete) - See Section 12.9, "Managing Resource Pool Resources," on page 123.

Users

- ◆ Dashboard Viewer (View, Add, Remove) - See "Dashboard Viewer Role" on page 42.
- ◆ Migration Specialist (View, Add, Remove) - See "Migration Specialist Role" on page 41.
- ◆ Project Architect (View, Add, Remove) - See "Project Architect Role" on page 41.
- ◆ Project Manager (View, Add, Remove) - See "Project Manager Role" on page 41.

9 Click **Save**.

10 Click **Close**.

5.2.3 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**.

5.2.4 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 - See Chapter 7, "Managing Projects," on page 65.

  ◆ Users

      ◆ Dashboard Viewer - See "Dashboard Viewer Role" on page 42.

      ◆ Migration Specialist - See "Migration Specialist Role" on page 41.

      ◆ Project Architect - See "Project Architect Role" on page 41.

      ◆ Project Manager - See "Project Manager Role" on page 41.

  ◆ Credentials - See Section 12.3, "Managing Credentials Resources," on page 103.

  ◆ Hosts - See Section 12.4, "Managing Host Resources," on page 107.

  ◆ Networks - See Section 12.5, "Managing Network Resources," on page 111.

  ◆ Datastores - See Section 12.6, "Managing Datastore Resources," on page 114.

  ◆ Environments - See Section 12.7, "Managing Environment Resources," on page 117.

  ◆ Applications - See Chapter 10, "Managing Applications," on page 79.

  ◆ Migration Servers - See Section 12.8, "Managing Migration Server Resources," on page 120.

  ◆ Resource Pools - See Section 12.9, "Managing Resource Pool Resources," on page 123.

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

8 Click **Close**.

5.2.5 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.

5.3 Users

Transformation Manager creates a user account during the installation process, and assigns this user to the System Administrator role. This default System Administrator initially creates user accounts, as well as organizations and groups. You cannot delete the default System Administrator user.

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

---

5.3.1 About Users

PlateSpin Transformation Manager allows 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: The following tabs allow you to 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)

5.3.2 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**.

5.3.3 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
   - Phone number (optional)
   - Password and Confirm Password
   - Scope (System or Organization)
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.
7 Click **Save**.
8 Click **Close**.

5.3.4 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**.

5.3.5 Changing a User Password

A System Administrator can change the password for any user account. A non-administrator user can change the password associated with the user account assigned to them.

The user logs in with the initial password sent to them by the System Administrator, and then sets a preferred password. The new password is stored, and takes effect the next time the user logs in for a session.

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**.

5.3.6 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.

5.4 Groups

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

5.4.1 About Groups

Transformation Manager allows 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. Organization scope is used only for groups in a Dashboard Viewer role for their organization's projects.

Membership and Access: The following tabs allow you to view or manage the group's access to information in the transformation environment. Some options might not be available, depending on the group's assigned role.

- All Roles
- System (Add, Remove)
- Organization
    - Migration Specialist (Add, Remove)
    - Project Architect (Add, Remove)
    - Project Manager (Add, Remove)
- Project
    - Migration Specialist (Add, Remove)
    - Project Architect (Add, Remove)
    - Project Manager (Add, Remove)
- Wave
    - Migration Specialist (Add, Remove)
    - Project Architect (Add, Remove)
- Batch
    - Migration Specialist (Add, Remove)
    - Project Architect (Add, Remove)
- Members (View, Add, Remove)

5.4.2 Viewing Groups

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 **View**.

4 In the View Group dialog, view the Group and the Membership and Access information.

5 Click **Close**.

5.4.3 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 or Organization)

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

6 In the **Membership and Access** pane, define the roles and member assignments for the group account.

7 Click **Save**.

8 Click **Close**.

5.4.4 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 and the Membership and Access information.

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

6 Click **Close**.

5.4.5 Removing a Group

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

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.

6 Planning and Monitoring

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

6.1 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.

6.1.1 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 6-1. 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 6-1 *Wave Planning*
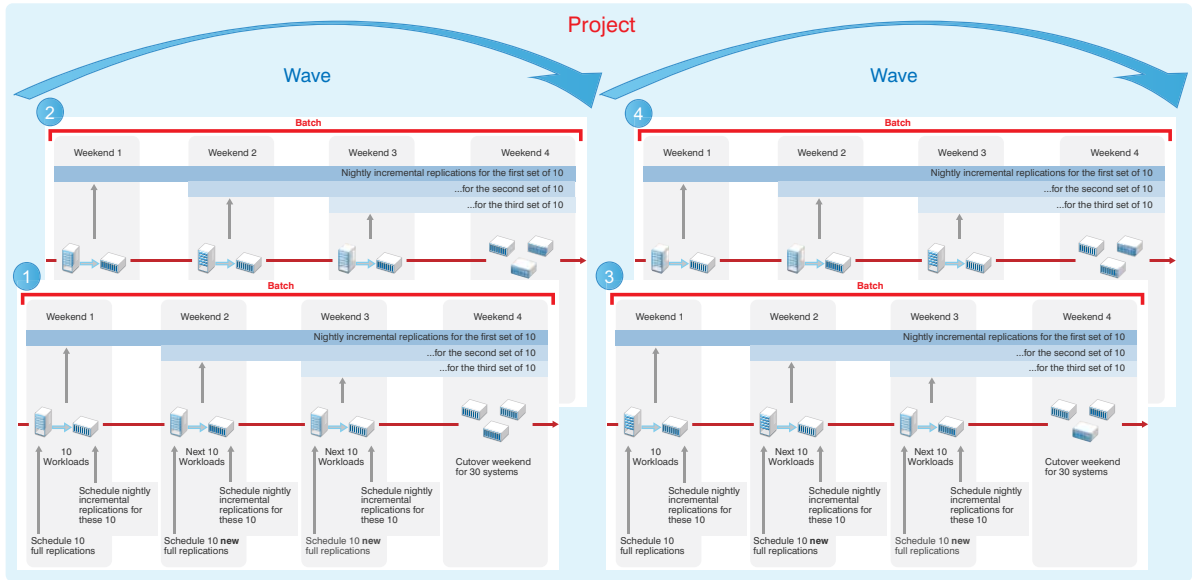
Within a wave, batches group like workloads that you want to transform together. Batches can be more easily scheduled during intervals when network resources are available. You can deliver valuable results in each batch and wave. Schedules are flexible. You can coordinate the start dates and cutover dates with stakeholders to work around planned events that are critical to the business.

Figure 6-2 *Batch Planning*
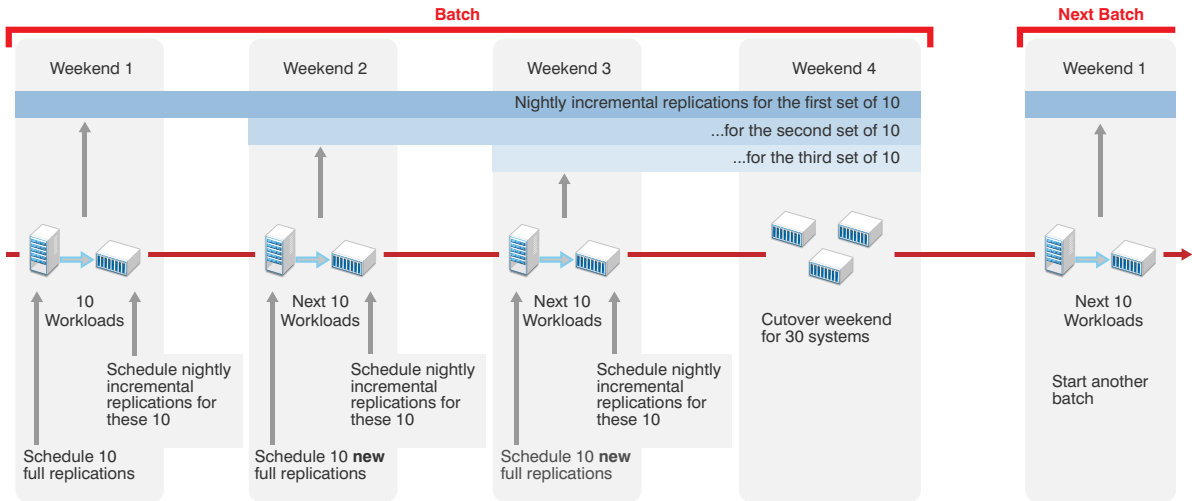
6.1.2 Transforming Workloads

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:

- Dependencies between workloads
- Data about each original workload and its proposed workload

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

Figure 6-3 shows the parent-child relationships between planning objects: Organizations, Projects, Waves, Batches, and Workloads.

Figure 6-3 *Parent-Child Relationships of Planning Objects*
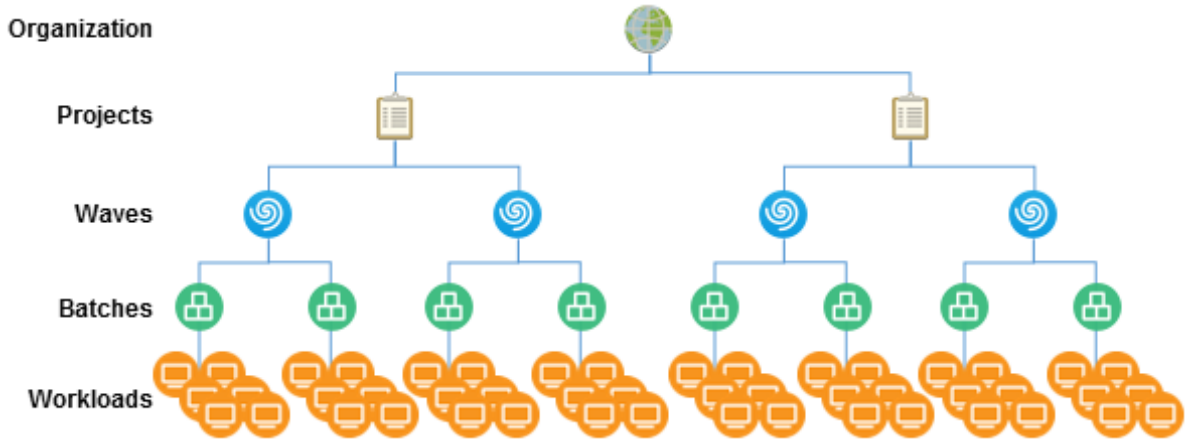
6.1.3 Granting Access

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.

6.1.4 Scheduling Dates

Project dates can be set according to your business and network needs. Business factors include your project priorities, task dependencies, 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 6-4 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 6-4 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 6-4 *Inherited Start Date and End Date*
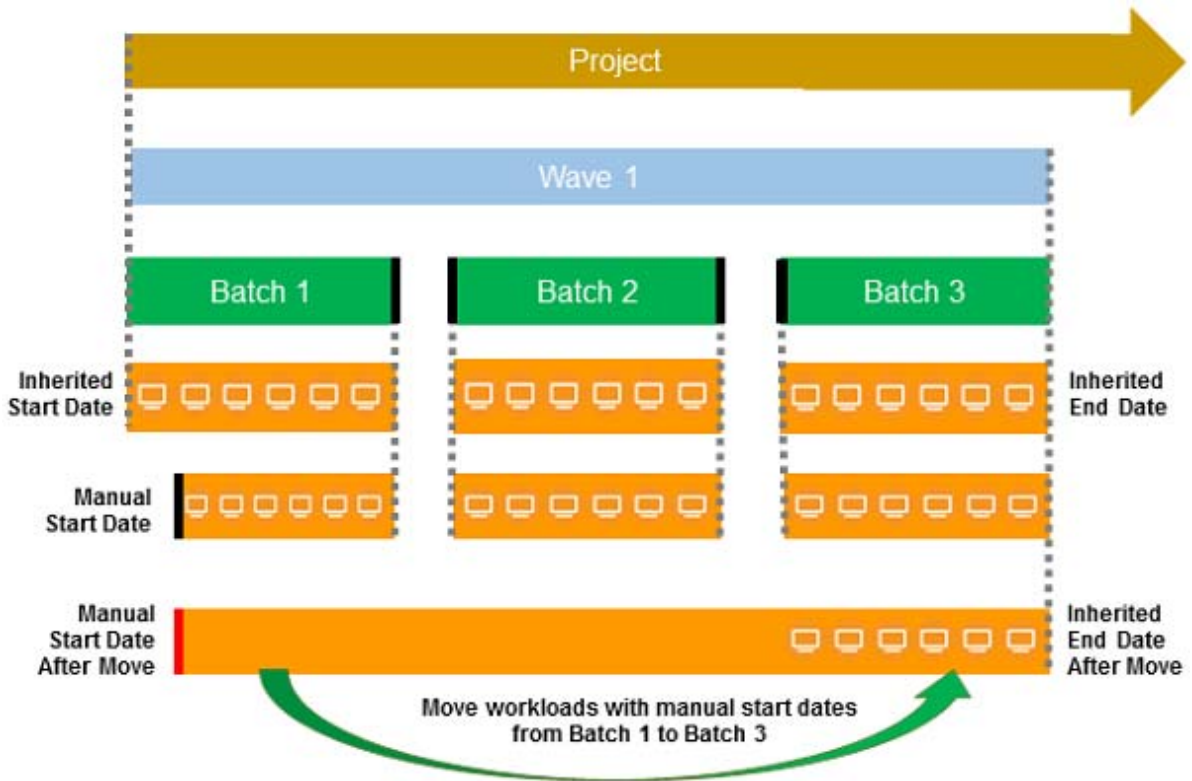
NOTE: Dates display in the format of your computer browser's Locale setting.

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.

6.1.5 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.

6.1.6 Additional Information

- Managing Users
- Managing Projects
- Managing Waves
- Managing Batches
- Managing Applications
- Managing Workloads
- Managing Resources
- Configuring Operating System Types

6.2 Using the Dashboard

PlateSpin Transformation Manager provides the ability to view summary metrics for your transformation project in the Dashboard.

- Shows users metrics only for their assigned projects, waves, or batches.
- Shows the progress of projects, waves, and batches.
- Shows metrics for workloads by state, operating system, and transformation method.
- Runs status and count calculation jobs every 5 minutes. Displays **Needs Update** if workload changes occur while the calculation jobs run.

6.2.1 About the Dashboard

The PlateSpin Transformation Manager Dashboard displays statistics about your assigned transformation projects, waves, or batches. The

Figure 6-5 *Project View of the Dashboard*
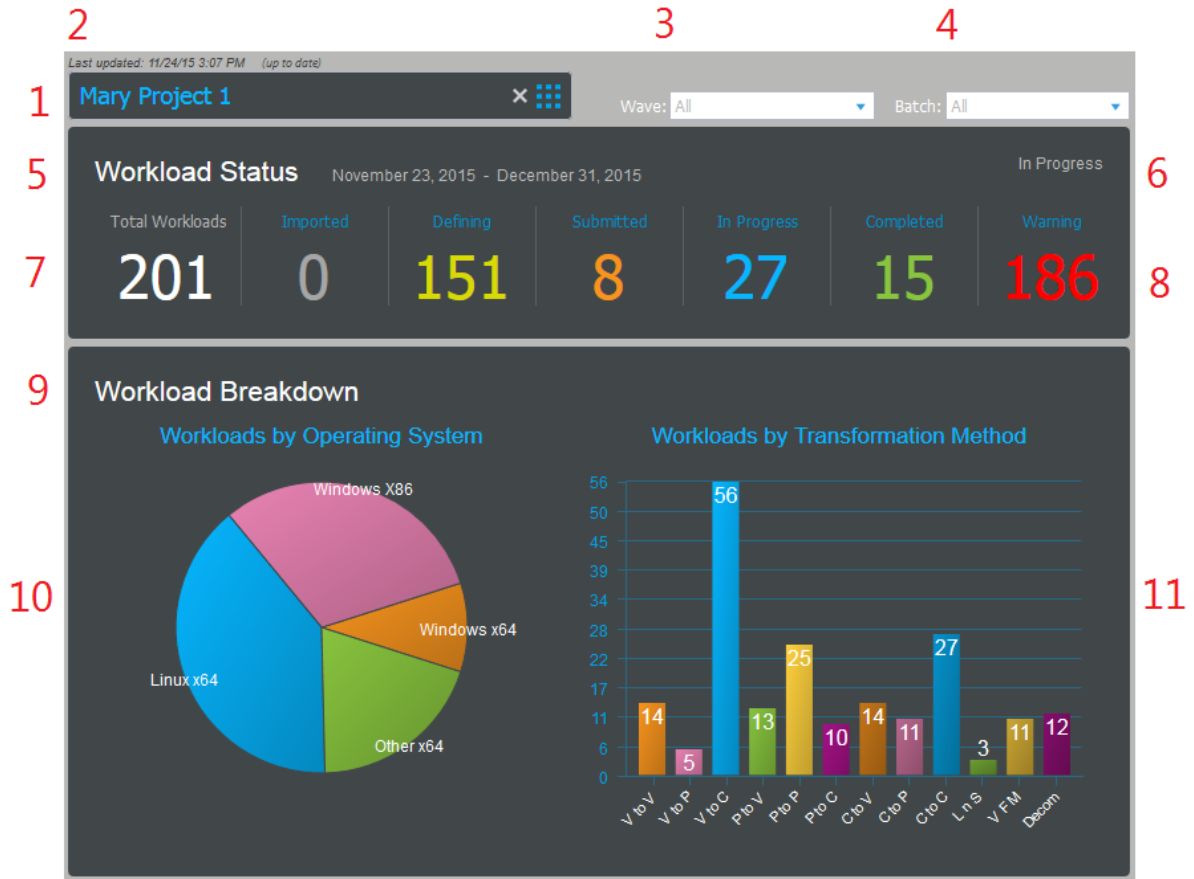
Table 6-1 *Dashboard Information*

Key	Metric	Description
1	Project	If you have roles on multiple projects, the Project field allows you select which project's information to display.
		If you have a role on a single project, the Project field and Project Selector settings are static.
2	Last Updated	The PTM Server compiles status and counts for each project every 5 minutes. This timestamp tells you how current are the displayed statistics. If changes occur while you view the dashboard, it also displays the `needs update` message.
		If no changes have occurred, it displays the `up to date` message.
3	Waves	If a project has multiple waves, the Waves field allows you to select which wave's information to display. The default is all waves.

Key	Metric	Description
4	Batches	If a project has multiple batches, the Batches field allows you to select which batch's information to display. The default is all batches.
5	Schedule	At the top of the Workload Status pane, PTM displays the start date and cutover date of the project, wave, or batch currently being displayed.
6	Project Status	The current state of the project. For example: In Progress, Closed
7	Transformation Status	The total number of workloads for the project, wave, or batch currently being displayed, and the counts for workloads by category: Total Workloads, Imported, Defining, Submitted, In Progress, Completed, Warning. Click the category title or value to open a Workloads list with the appropriate member items. You can alternatively use the **Health** > **All Warning State** option on the Workloads list Advanced Search function to see all workloads in the Warning state.
8	Warning	The count includes any workload transformation that has one or more of the following conditions: ◆ Transformation is in a failed state (TRANSFORMATION_FAILED, TESTING_FAILED, ERROR). ◆ Transformation is not in progress, but the transformation start date has passed. ◆ Transformation has not been competed, but the transformation cutover date has passed. ◆ Transformation start date is before its parent's start date (batch, wave, project). ◆ Transformation cutover date is after its parent's cutover date.
9	Workload Breakdown	The graphical presentation of workloads based on workload characteristics.
10	Workloads by Operating System	A pie chart showing the percentage of workloads for the project, wave, or batch currently being displayed in each of the operating system categories. This breakout depends on the mix of operating systems allocated in the parent schedule container.

Key	Metric	Description
11	Workloads by Transformation Method	A bar chart showing the count of workloads for the project, wave, or batch currently being displayed in the transformation method categories:

  ◆ Virtual to virtual (V to V)

  ◆ Virtual to physical (V to P)

  ◆ Virtual to cloud (V to C)

  ◆ Physical to virtual (P to V)

  ◆ Physical to physical (P to P)

  ◆ Physical to cloud (P to C)

  ◆ Cloud to virtual (C to V)

  ◆ Cloud to physical (C to P)

  ◆ Cloud to cloud (C to C)

  ◆ Lift and shift (LnS)

  ◆ Virtual file move (VFM)

  ◆ Decommission (Decom)

6.3 Viewing Counts and Status for a Project, Wave, or Batch

The Projects, Waves, and Batches lists include the following summary health and status counts in the **Counts** column:

  ◆ **Total:** Total number of workloads in the project

  ◆ **Def:** Total number of workloads currently in the defining state, typically with a status of Needs Additional Info or Ready to be Submitted

  ◆ **Submit:** Total number of workloads that have been defined and are waiting for transformation to start

  ◆ **InProg:** Total number of workloads currently in the transforming state

  ◆ **Done:** Total number of workload transformations currently in the Completed state

  ◆ **Warn:** Total number of workloads in the project that currently have one or more warning conditions

The Projects, Waves, Batches, and Workloads lists report the current status in the Status column.

6.4 Global Planning Objects

This section describes global planning objects that offer a fixed set of options in any projects.

6.4.1 User Roles

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

6.4.2 Workload Types

- Physical
- Virtual
- Cloud

6.4.3 Operating Systems

Most popular operating systems are predefined. A System Administrator can add or remove operating systems to the list. It supports the following operating system families:

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

See Section 4.2, "Configuring Operating System Types," on page 35.

6.4.4 Architectures

- x32 (32 bit)
- x64 (64 bit)

6.4.5 Workload Transformation Methods

- Cloud to cloud (C to C)
- Cloud to physical (C to P)
- Cloud to virtual (C to V)
- Physical to cloud (P to C)
- Physical to physical (P to P)
- Physical to virtual (P to V)
- Virtual to cloud (V to C)
- Virtual to physical (V to P)
- Virtual to virtual (V to V)
- Lift and shift (LnS)
- Virtual file move (VFM)
- Decommission (Decom)

6.4.6 Cloud Providers

- Amazon Web Services
- Microsoft Azure
- Rackspace
- vCloud
- Google
- None

6.4.7 Virtualization Technologies

- Citrix XenServer
- Linux KVM
- Microsoft Hyper-V
- SUSE Xen
- VMware

6.4.8 Volume Types

- Local
- NAS
- SAN
- System

6.4.9 Disk Copy Methods

- Block with Driver
- Block without Driver
- File

6.4.10 Migration Servers

- PlateSpin Migrate
- Other

6.4.11 Project Phases

- Planning
- Ready to Transform
- In Progress
- Completed

6.4.12 Transformation Phases

- Ready to be Imported
- Imported
- Needs Additional Info
- Ready to Submit
- Submitted, Waiting for Start Date
- Ready to Transform
- Transforming
- Transformation Failed
- Pre-Cutover Testing
- Pre-Cutover Testing Failed
- Pre-Cutover Testing Succeeded
- Ready to Cut Over, Waiting for Cutover Date
- Ready to Cut Over
- Cut Over
- Post-Cutover Testing
- Post-Cutover Testing Failed
- Post-Cutover Testing Succeeded
- Completed
- Reopened
- Withdrawn
- Error

6.4.13 Health

- All
- OK
- Error
- Warning
- Failure in Transformation Process
- Pre-Cutover Testing Failed
- Post-Cutover Testing Failed
- Start date is before batch start date
- Cutover date is after batch end date
- Invalid date range
- Not started, but start date has passed
- Not cut over, but cutover date has passed

7 Managing Projects

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

7.1 About Projects

The Project allows 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 7 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, username, 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) - See Chapter 8, "Managing Waves," on page 71.
  - Batches (Create, Edit, View, Move, Delete) - See Chapter 9, "Managing Batches," on page 75.

- Applications (Create, Edit, View, Delete) - See Chapter 10, "Managing Applications," on page 79.
- Workloads (Original, Proposed) - See Chapter 11, "Managing Workloads," on page 83.
- **Resources**
    - Credentials (Create, Edit, View, Delete) - See Section 12.3, "Managing Credentials Resources," on page 103.
    - Hosts - See Section 12.4, "Managing Host Resources," on page 107.
        - Source (View)
        - Target (Create, Edit, View, Delete)
    - Networks - See Section 12.5, "Managing Network Resources," on page 111.
        - Source (View)
        - Target (Create, Edit, View, Delete)
    - Datastores - See Section 12.6, "Managing Datastore Resources," on page 114.
        - Source (View)
        - Target (Create, Edit, View, Delete)
    - Environments (Create, Edit, View, Delete) - See Section 12.7, "Managing Environment Resources," on page 117.
    - Applications (Create, Edit, View, Delete) - See Chapter 10, "Managing Applications," on page 79.
    - Migration Servers (Create, Edit, View, Delete) - See Section 12.8, "Managing Migration Server Resources," on page 120.
    - Resource Pools (Create, Edit, View, Delete) - See Section 12.9, "Managing Resource Pool Resources," on page 123.
- **Users**

    Project role assignments at the project level are automatically inherited by their child components.
    - Dashboard Viewer (View, Add, Remove) - See "Dashboard Viewer Role" on page 42.
    - Migration Specialist (View, Add, Remove) - See "Migration Specialist Role" on page 41.
    - Project Architect (View, Add, Remove) - See "Project Architect Role" on page 41.
    - Project Manager (View, Add, Remove) - See "Project Manager Role" on page 41.

7.2 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.

7.3 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.

7.4 Creating Projects

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 7)

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. See Section 7.7, "Configuring Project Associations," on page 68.

7 (Optional) Click **Set to Completed**, or click **Reopen**.

8 Click **Save**.

9 Click **Close**.

7.5 Editing Projects

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 7)

5 (Optional) View or modify Associations. See Section 7.7, "Configuring Project Associations," on page 68.

6 (Optional) Click **Set to Completed**, or click **Reopen**.

7 Click **Save**.

8 Click **Close**.

7.6 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 7 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**.

7.7 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

- Wave - See Chapter 8, "Managing Waves," on page 71.
- Batches - See Chapter 9, "Managing Batches," on page 75.

- Applications - See Chapter 10, "Managing Applications," on page 79.
- Workloads - See Chapter 11, "Managing Workloads," on page 83.

Resources

- Credentials - See Section 12.3, "Managing Credentials Resources," on page 103.
- Hosts - See Section 12.4, "Managing Host Resources," on page 107.
- Networks - See Section 12.5, "Managing Network Resources," on page 111.
- Datastores - See Section 12.6, "Managing Datastore Resources," on page 114.
- Environments - See Section 12.7, "Managing Environment Resources," on page 117.
- Migration Servers - See Section 12.8, "Managing Migration Server Resources," on page 120.
- Resource Pools - See Section 12.9, "Managing Resource Pool Resources," on page 123.

Users

- Dashboard Viewer - See "Dashboard Viewer Role" on page 42.
- Migration Specialist - See "Migration Specialist Role" on page 41.
- Project Architect - See "Project Architect Role" on page 41.
- Project Manager - See "Project Manager Role" on page 41.

5 (Optional) Click **Set to Completed**, or click **Reopen**.

6 Click **Save**.

7 Click **Close**.

7.8 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.

8 Managing Waves

Waves represent a major effort for workload transformation.

8.1 About Waves

The Wave allows you to track the following information for your transformation activities:

Name: A friendly name for the wave that is unique in your transformation project. 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 wave.

Project: The name of the parent project for the wave.

Description: (Optional) A brief description of the wave.

Start Date: The date that the transformation of workloads is planned to begin. By default, the start date is inherited from its parent project's start date. Dates with a gray font indicate inherited values.

End Date: The date that the transformation of all workloads must be completed successfully. By default, the end date is inherited from its parent project's end date. Dates with a gray font indicate inherited values.

Associations: Associations define the relationship between a variety of component types and the wave.

- Batches (Create, Edit, View, Delete)
- Workloads
    - Original (Edit, View, Delete)
    - Proposed (Edit, View, Delete)
- Users
    - Dashboard Viewer (View)
    - Migration Specialist (View, Add, Remove)
    - Project Architect (View)
    - Project Manager (View)

8.2 Prerequisites for Waves

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

8.3 Viewing Waves

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

To view wave information:

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

2 Select the **Waves** tab.

3 In the **Waves** list, search for and locate the appropriate wave.

4 Select the wave, then click **View**.

5 Click **Close** when you are done.

8.4 Creating Waves

A System Administrator user and a Project Manager can create waves.

To create a wave:

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

2 Select the **Waves** tab.

3 Click **Create**.

4 In the **Waves** pane, specify the following information:
   - Name
   - Organization
   - Project
   - (Optional) Description
   - Start Date
   - End Date

5 Click **Save** to create the wave object and activate the **Associations** pane.

6 (Optional) In the **Associations** pane, click each tab to configure settings for the associated components. See Section 8.6, "Configuring Wave Associations," on page 73.

7 (Optional) Click **Set to Completed**.

8 Click **Save**.

9 Click **Close**.

8.5 Editing Waves

You might need to modify dates and associations for a wave as you configure the wave and as its parent project matures. The System Administrator and Project Manager can modify the wave.

To edit a wave:

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

2 Select the **Waves** tab.

3 Double-click the wave to open the Edit Wave dialog, then view the wave details.

You can alternatively select the wave, then click **Edit**.

4 Modify the values as appropriate.

5 (Optional) View or modify the Associations. See Section 8.6, "Configuring Wave Associations," on page 73.

6 (Optional) Click **Set to Completed**.

7 Click **Save**.

8 Click **Close**.

8.6 Configuring Wave Associations

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

Depending on the status of workloads, some actions might not be available at this time. You can save the wave and return later to complete information.

To associate components with a wave:

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

2 Select the **Waves** tab.

3 Double-click the wave to open the Edit Wave dialog, then view the wave details.

4 Under Associations, click each tab to view or modify settings for the associated components:

- Batches - See Chapter 9, "Managing Batches," on page 75.
- Workloads - See Chapter 11, "Managing Workloads," on page 83.
- Users
    - Dashboard Viewer - See "Dashboard Viewer Role" on page 42.
    - Migration Specialist - See "Migration Specialist Role" on page 41.
    - Project Architect - See "Project Architect Role" on page 41.
    - Project Manager - See "Project Manager Role" on page 41.

5 (Optional) Click **Set to Completed**.

6 Click **Save**.

7 Click **Close**.

8.7 Deleting a Wave

Only the System Administrator user and Project Manager can delete a wave. Deleting a wave deletes all data for the wave from the PTM database. It moves the member workloads to an Imported state, but it does not delete the associated workload information.

To delete a wave:

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

  2 Select the **Waves** tab.

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

9 Managing Batches

Batches are the component efforts for waves in the workload transformation.

9.1 About Batches

The Batch allows you to track the following information for your transformation activities:

Name: A friendly name for the batch that is unique in your transformation project. 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 batch.

Project: The name of the parent project for the batch.

Description: (Optional) A brief description of the batch.

Start Date: The date that the transformation of its member workloads is planned to begin. By default, the start date is inherited from its parent wave's start date. Dates with a gray font indicate inherited values.

End Date: The date that the transformation of all of its member workloads must be completed successfully. By default, the end date is inherited from its parent wave's end date. Dates with a gray font indicate inherited values.

Associations: Associations define the relationship between a variety of component types and the batch.

- Workloads
  - Original (Edit, View, Delete)
  - Proposed (Edit, View, Delete)
- Users
  - Dashboard Viewer (View, Add, Remove)
  - Migration Specialist (View, Add, Remove)
  - Project Architect (View)
  - Project Manager (View)

9.2 Prerequisites for Batches

When you create a batch, you must associate it with a specific organization, project, and wave. Before you can create a batch, you must create the parent organization, project, and wave to ensure that they are available when you create the batch.

9.3 Viewing a Batch

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

To view batch information:

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

2 Select the **Batches** tab.

3 In the **Batches** list, search for and locate the appropriate batch.

4 Select the batch, then click **View**.

5 Click **Close** when you are done.

9.4 Creating Batches

A System Administrator user and a Project Manager can create batches.

To create a batch:

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

2 Select the **Batches** tab.

3 Click **Create**.

4 In the **Batches** pane, specify the following information:

- Name
- Organization
- Project
- Wave
- (Optional) Description
- Start Date
- End Date

5 Click **Save** to create the batch object and activate the **Associations** pane.

6 (Optional) In the **Associations** pane, click each tab to configure settings for the associated components. See Section 9.7, "Configuring Batch Associations," on page 77

7 (Optional) Click **Set to Completed**.

8 Click **Save**.

9 Click **Close**.

9.5 Editing Batches

You might need to modify dates and associations for a batch as you configure the batch and as its parent project matures. The System Administrator and Project Manager can modify the batch.

To edit a batch:

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

2 Select the **Batches** tab.

3 Double-click the batch to open the Edit Batch dialog, then view the batch details.

 You can alternatively select the batch, then click **Edit**.

4 Modify the values as appropriate.

5 (Optional) View or modify Associations. See Section 9.7, "Configuring Batch Associations," on page 77

6 (Optional) Click **Set to Completed**.

7 Click **Save**.

8 Click **Close**.

9.6 Moving a Batch to a Different Wave

1 In the Web Interface, select **Planning** in the toolbar, then select the **Batches** tab.

2 Select one or more batches from the list that you want to move to a different wave. The batches can be in the same or different wave. Press Shift and click the appropriate batches to select multiple batches.

3 Click **Move**.

4 In the Move dialog, select the appropriate destination wave, then click **OK**.

5 If there are date conflicts between the dates set for the batches and their new parent wave, specify your preference for how you want to handle the dates.

 For example, you might choose to allow the batch dates to change to fit into the window scheduled for the new parent wave, or keep the existing dates and fix them later. Conflicted dates display in a red font.

 If the batches' dates are inherited, the batches automatically inherit the dates from the new parent wave.

6 Click **Save**.

7 Click **Close**.

8 For each batch that has dates in conflict, select the batch, click **Edit**, modify the dates, then click **Save**.

9.7 Configuring Batch Associations

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

Depending on the status of workloads, some actions might not be available at this time. You can save the batch and return later to complete information.

To associate components with a batch:

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

2 Select the **Batches** tab.

3 Double-click the batch to open the Edit Batch dialog, then view the batch details.

4 Under Associations, click each tab to view or modify settings for the associated components:

- Workloads - See Chapter 11, "Managing Workloads," on page 83.
- Users
  - Dashboard Viewer - See "Dashboard Viewer Role" on page 42.
  - Migration Specialist - See "Migration Specialist Role" on page 41.
  - Project Architect - See "Project Architect Role" on page 41.
  - Project Manager - See "Project Manager Role" on page 41.

5 (Optional) Click **Set to Completed**.

6 Click **Save**.

7 Click **Close**.

9.8 Deleting a Batch

Only the System Administrator user and Project Manager can delete a batch. Deleting a batch deletes all schedule data for the batch from the PTM database. It moves the member workloads to an Imported state, but it does not delete the associated workload information.

To delete a batch:

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

2 Select the **Batches** tab.

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

10 Managing Applications

PlateSpin Transformation Manager allows you to define the application types to track for workload transformations.

10.1 About Applications

The Application allows you to track the following information for your transformation activities:

Name: A friendly name for the application that is unique in your transformation project. 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.

Project: The name of the parent project for the application component.

Description: (Optional) A brief description of the application.

10.2 Prerequisites for Applications

When you create an application component, you must associate it with a specific organization and project. Before you can create an application, you must create the parent organization and project to ensure that they are available when you create the application.

10.3 Viewing Applications

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

To view application information:

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

2 Select the **Applications** tab.

3 In the **Applications** list, search for and locate the appropriate application.

4 Select the application, then click **View**.

5 Click **Close** when you are done.

10.4 Creating Applications

A System Administrator user and a Project Manager can create application components.

To create an application:

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

2 Select the **Applications** tab.

3 Click **Create**.

4 Specify the following information:

   ◆ Name

   ◆ Organization

   ◆ Project

   ◆ (Optional) Description

5 Click **Save** to create the batch object and activate the **Associations** pane.

6 Click **Close**.

10.5 Editing Applications

The System Administrator and Project Manager can modify the application.

To edit an application:

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

2 Select the **Applications** tab.

3 Double-click the application to open the Edit Application dialog, then view the application details.

   You can alternatively select the application, then click **Edit**.

4 Modify the values as appropriate.

5 Click **Save**.

6 Click **Close**.

10.6 Associating Applications and Workloads

The Applications panel in the Workload dialog shows all of the applications associated with the workload. The System Administrator user, Project Manager user, and Project Architect can associate an application with a workload.

To associate an application with a workload:

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

2 Select the **Workloads** tab.

3 Double-click the workload to open the Edit Workload dialog, then scroll down to the Applications panel to view the applications associated with the workload.

4 Click **Add** to add an application association.

5 Click **Remove** to remove an application association.

6 Click **Save**.

7 Click **Close**.

10.7 Deleting an Application

Only the System Administrator user and Project Manager can delete an application.

NOTE: If you delete an application, it automatically removes the associations for it, including those assigned to workloads that are in progress and completed. If the same associations apply, consider whether it is more appropriate to edit the application name and settings.

To delete an application:

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

2 Select the **Applications** tab.

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

11 Managing Workloads

PlateSpin Transformation Manager allows you to import information about the cloud, physical, virtual, machines for each transformation project. You can use each workload's original configuration to define its appropriate destination workload and target network.

11.1 About Workloads

Workloads are the cloud, physical, or virtual machines that you want to transform from their current mode of operation to a future mode of operation. You use a bulk import method to add information about a project's original workloads to the transformation database. You can modify the original workload information by re-importing the machine information.

For each original workload, PTM creates its matching proposed workload based on the original's configuration. You can use individual edit and bulk edit features to customize the proposed workload to define the appropriate destination workload.

11.1.1 Workloads List

The Workloads list allows you to track key settings and status for each workload.

- Set the Project Selector to the project of interest to list only workloads for that project.
- View the list based on details for the Original workload or for the Proposed workload.
- Use the Filter to perform a simple search on the list.
- Use the Advanced Search to search on a variety of workload settings, custom fields, status, and health.the title of the list

- Select a Health warning type to quickly list all workloads that are in a specific state. For example, `Not cut over, but cutover date has passed`.
- Double-click the on the tab title to force it to refresh immediately, regardless of its normal polling cycle.
- 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.

11.1.2 Workload Types

PlateSpin Transformation Manager supports the following workload types:

- **Cloud:** The workload is hosted in a cloud provider's infrastructure-as-a-service environment, such as Amazon Web Services, Google Cloud Platform, Microsoft Azure, RackSpace, or VMware vCloud.
- **Physical:** The workload is hosted on a physical machine, such as a tower, rack, or blade server.
- **Virtual:** The workload is a virtual machine hosted on a virtualization host server running a hypervisor, such as Citrix XenServer, Linux KVM, Microsoft Hyper-V, SUSE Xen, or VMware.

11.1.3 Workload Transformation Methods

PlateSpin Transformation Manager supports the following workload transformation methods:

- Cloud to cloud (C to C)
- Cloud to physical (C to P)
- Cloud to virtual (C to V)
- Physical to cloud (P to C)
- Physical to physical (P to P)
- Physical to virtual (P to V)
- Virtual to cloud (V to C)
- Virtual to physical (V to P)
- Virtual to virtual (V to V)
- Lift and shift (LnS)
- Virtual file move (VFM)
- Decommission (Decom)

NOTE: For Decommission, there is no proposed information for the decommission except for information about its parent wave and batch and the scheduled dates. You can move a workload in and out of a decommission state. Its settings for the proposed workload are in the database. The values are included in advanced search actions as well as Bulk Edit actions. Any edited values are displayed in an orange font if you change the transformation method for the workload.

11.1.4 Custom Fields

You can define custom fields for each project. The Workloads list can include custom field names as column headers if a project is selected in the Project Selector. PTM also adds the custom fields that you defined for the project to the Advanced Search form and the Bulk Edit form.

11.1.5   OS Types

The System Administrator manages a list of available Operating System Types for the product in the System Configuration settings.

Contact your Transformation Manager administrator if you need additional OS Types for your transformation projects.

11.1.6   Workload Dialog

The Workload dialog provides information about the original workload, the proposed workload, and the transformation status. This dialog allows you to modify the proposed workload and the transformation state for the workload.

In the Workload dialog, the font colors indicate states for the data:

   ◆ **Black:** The field is read only.

   ◆ **Gray:** The field can be modified.

   ◆ **Light Gray:** The field value is inherited from its parent batch, wave, or project value.

   ◆ **Blue italics:** The field value has been modified from its imported value.

   ◆ **Orange italics:** The information has been modified through a Bulk Edit action or a Bulk Status Change action.

   ◆ **Red:** Errors or warnings exist for a section or field. For example, required information is missing.

The dialog allows you to view or modify the following information for the workload transformation:

   ◆ Header

   ◆ Last Modified

   ◆ URL for the Workload Dialog

   ◆ Workload IDs

   ◆ License State

   ◆ Status

   ◆ Errors and Warnings

   ◆ Transformation Plan

   ◆ Replication Network

   ◆ Workload

   ◆ Location

   ◆ Network Interfaces

   ◆ Storage Volumes

   ◆ Applications

   ◆ Custom Fields

   ◆ Status Change History

Header

The Workload dialog header provides the following information about the workload:

   ◆ FQDN (fully qualified domain name)

- Project name
- Wave name or <wave not assigned>
- Batch name or <batch not assigned>

Last Modified

The Last Modified field shows the timestamp of the last modifications made directly in the Workload dialog, or indirectly by actions performed in the Bulk Edit dialog or Bulk Status Change dialog.

URL for the Workload Dialog

Click the Navigation URL icon ⧉ in the upper right corner of the Workload dialog to show the URL to the selected workload transformation. You can open the link in a new tab, or copy the URL to the clipboard. You can also email the copied URL to stakeholders to allow them to go directly to the selected page. Log in is required for those users to gain access.

Workload IDs

Mouse over any of the objects in the Workload dialog header area to view the following IDs for the selected workload:

- Transformation ID
- Original Workload ID
- Proposed Workload ID
- Migration Server Workload ID

  This value is known for matching workloads in the database of the specified PlateSpin Migrate Server.

License State

View the license state in the lower right corner of the header area of the Workload dialog. Mouse over the Licensed (green) icon to view the license date.

	Licensed
	Not licensed
	License is not available

Status

The Status indicates where the workload is in its transformation workflow. Figure 11-1 shows the user responsible for setting the status, the various workload states, and the workflow for the transformation process. The thick lines show the default next state available for each state. See Table 11-1 for a description of each workload state and its possible next states.

Some states are associated with the start date or cutover date for the workload's assigned batch. The state reports a Warning if that date has passed, but the expected action has not yet occurred.

Figure 11-1 *The Transformation Workflow*
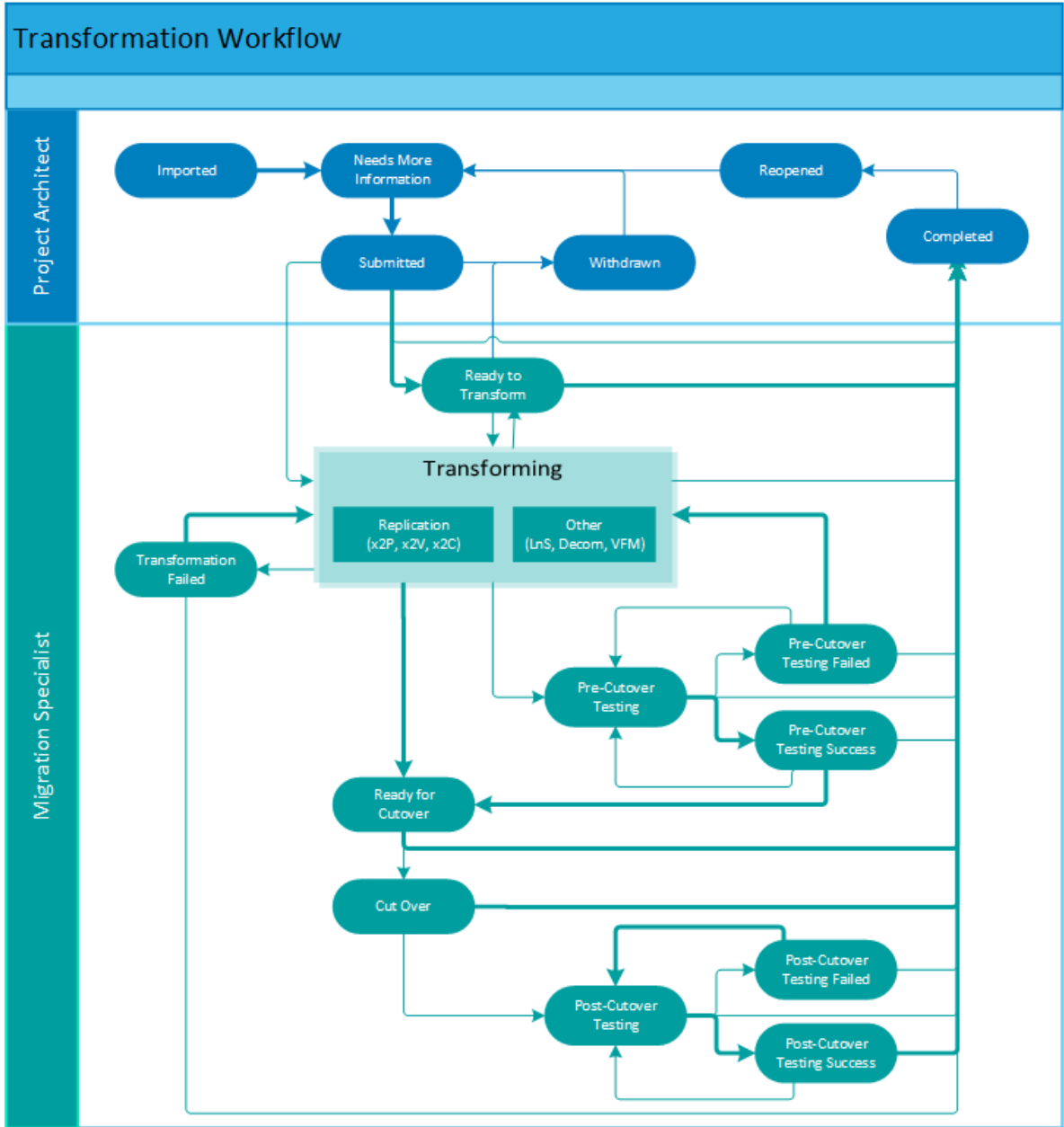
Table 11-1 *State Descriptions and Next States*

State	Description	Possible Next States
Imported	The workload information has been imported as an original workload and a proposed workload. You have not yet modified the imported information. The workload is unlicensed until you begin to edit the workload information.	Needs Additional Info (automatic on edit)

State	Description	Possible Next States
Needs Additional Info	You have modified the imported workload information directly in the Workload dialog or with a Batch Edit action. Some required values might be missing, or there might be errors to resolve. Edits include setting the schedule for the workload, modifying its proposed workload configuration, or adding required values.	Ready to Submit (automatic on no errors) Submitted, Waiting for Start Date
Ready to Submit	All required values are present and there are no errors to resolve. A red Warning notice appears in the Status column if the start date for its assigned batch has passed.	Submitted, Waiting for Start Date
Submitted, Waiting for Start Date	The workload has been submitted for transformation, and the start date for its assigned batch is a future date. When the start date occurs, the workload's status automatically changes to Ready to Transform. The Migration Specialist can manually change the workload's status from Submitted to Transforming before the start date.	Ready to Transform Transforming Completed Withdrawn
Ready to Transform	The workload is ready for transformation, and the start date for its assigned batch has passed.	Completed Transforming Withdrawn
Withdrawn	A submitted workload has been withdrawn because it needs changes for the planned transformation before the transformation process can continue.	Needs Additional Info
Transforming	The Migration Specialist has begun the transformation process for the workload, such as replication methods (x2P, x2V, or x2C) or other methods (LnS, Decom, and VFM).	Ready to Cutover Completed Pre-Cutover Testing Transformation Failed Ready to Transform
Transformation Failed	The transformation from original workload to proposed workload has been attempted and failed.	Transforming Completed
Ready to Cutover	The transformed workload is ready, waiting for the Cutover Date.	Completed Cut Over Post-Cutover Testing
Pre-Cutover Testing	The transformed workload tests are in progress.	Pre-Cutover Testing Succeeded Pre-Cutover Testing Failed Completed
Pre-Cutover Testing Succeeded	The transformed workload test succeeded, and the workload is ready for cutover.	Ready for Cutover Completed Pre-Cutover Testing
Pre-Cutover Testing Failed	The transformed workload test failed. Repeat the transformation or the re-test the workload.	Transforming Completed Pre-Cutover Testing

State	Description	Possible Next States
Cut Over	The workload has been cut over to its target network.	Completed Post-Cutover Testing
Post-Cutover Testing	After the cutover, tests on the cutover workload are in progress.	Post-Cutover Testing Succeeded Post-Cutover Testing Failed Completed
Post-Cutover Testing Succeeded	The tests on the cutover workload succeeded.	Completed Post-Cutover Testing
Post-Cutover Testing Failed	The tests on the cutover workload failed. Re-test the workload if needed.	Post-Cutover Testing Completed
Completed	The workload transformation process is completed.	Reopened
Reopened	A completed workload transformation has been reopened because it needs changes for the planned transformation before the transformation process can continue.	Needs Additional Info

Errors and Warnings

If errors or warnings exist, the Workload dialog reports the total number that are associated with the workload transformation. For sections that contain errors or warnings, the section title and the field values of missing or invalid information appear in a red font.

　　Errors exist

　　Warnings exist

Transformation Plan

The Transformation Plan section allows you to specify the following information for the workload transformation:

- **Project:** The parent project for the workload.
- **Wave:** The parent wave for the specified batch.
- **Batch:** The parent batch scheduled for this workload.
- **Start Date:** The planned start date for the workload transformation. The date must fall in the execution window for its parent batch, and occur before the cutover date.
- **Cutover Date:** The planned cutover date for the workload transformation. The date must fall in the execution window for its parent batch.
- **Transformation Method:** Valid transformation options depend on the workload type of the original workload.
- **Disk Copy Method:** The method used to transfer volume data from the source disk to the target disk. Options for the data transfer are:
    - **Block with Driver:** A disk copy method for Linux workloads that dynamically installs a special driver on the source workload to facilitate volume data transfer at the block level.

- ◆ **Block without Driver:** A disk copy method for Windows workloads that leverages Microsoft Volume Snapshot Service (VSS) on source workload to facilitate volume data transfer at the block level. When VSS is not present, the block-level transfer occurs using a driverless synchronization with an MD5-based replication.
    - ◆ **File:** A disk copy method that facilitates volume data transfer at the file level.
- ◆ **Migration Server:** The Migration Server resource that will be used to migrate the original workload to the proposed workload.

    When the logged in user clicks an active link for the Migration Server, one of the following actions occurs:

    - ◆ **PlateSpin Migrate:** The PTM Proxy Server opens the PlateSpin Migrate Web Interface in a new tab, and uses the server's stored credentials to automatically authenticate to the PlateSpin Migrate Web Interface. All subsequent PlateSpin Migrate Server requests are served securely by this proxy server. After a successful login, the page opens to the matching workload in the PlateSpin Migrate environment.
    - ◆ **Others:** The login screen for the migration server opens in a new tab.

    Migration Server resources can be saved in an incomplete state. The Migration Server field displays the value **Not Configured** in the Workload dialog. When you later deploy the server, you can update the Migration Server resource. The settings are automatically updated for all of its associated workloads.

- ◆ **On Hold:** Selected (True) or Deselected (False).

Replication Network

This panel is present in the Workload dialog when a PlateSpin Migrate Server is assigned to the workload. The replication network provides the network address information for the NIC reserved for workload replication.

- ◆ **Network:** Select the network resource assigned to the target host machine.
- ◆ **MTU:** The *Maximum Transmission Unit* setting in bytes that represents the largest packet size that can be used on the replication network. Valid values are 68 to 65535. For example, most Ethernet networks support an MTU setting of 1500 bytes. On a VPN, the MTU value is typically smaller than 1500 bytes.

    Specify an MTU setting that matches the smallest MTU setting on the replication network path between the source workload and the target workload. If a packet is larger than the MTU value of an interface, the packet might be split into smaller packets, or it might be dropped. Both packet fragmentation and retransmission introduce latency and congestion that can dramatically increase the replication time. Tuning a workload's MTU value for its replication network helps avoid these conditions, which optimizes the transmission performance and minimizes replication time.

- ◆ **Use DHCP to get network address details:** This setting is enabled by default. Disable this setting if you specify static IP addresses, then specify the network address settings for the replication network.
- ◆ **IP Address:** IPv4 format.
- ◆ **Subnet Mask:** IPv4 format.
- ◆ **Default Gateway:** IPv4 format.
- ◆ **DNS Servers:** IPv4 format. For multiple entries, specify one DNS server per line.

Workload

The Workload section displays the original workload configuration that was imported or re-imported using the Bulk Import feature. Initially, the proposed workload has the same configuration. You can edit the configuration of the proposed workload.

Workload Details

- ◆ **Host Name:** The simple hostname (or machine name) for the workload, not its FQDN. Example: `sqlserver10`
- ◆ **Domain Name:** The name of the domain that the proposed workload will join. Examples: `digitalair.com`, `paris.digitalair.com`
- ◆ **Admin Credentials:** (Optional) Select the Credentials resource to use to authenticate to this host server.
- ◆ **Workload Type:** Cloud, Physical, or Virtual. This value is inherited from the transformation method.
- ◆ **Operating System:** The specified value from the OS Types list.
- ◆ **Architecture:** This value is inherited from the specified operating system.
- ◆ **Description:** (Optional) A textual description of the workload, such as information about migration constraints or dependencies.

Workload Resources

- ◆ **Amount of RAM:** The amount of memory for the workload in MB, GB, TB, PB, EB, ZB, or YB.
- ◆ **# Processors:** The number of processors installed on the workload.
- ◆ **# Cores per Processor:** The number of cores in each processor. The total number of cores for the workload is the cores per processor times the number of processors.

Windows Settings

The Windows Settings area is available for Windows virtual workloads.

- ◆ **Domain or Workgroup:** Specify whether the Windows workload is a member of a domain or a workgroup. For a domain, specify its domain name, such as `PARIS` or `paris.digitalair.com`. For a workload, specify its workgroup name, such as `WORKGROUP`.
- ◆ **Domain Credentials:** Select the Credentials resource for the domain administrator account needed to join the workload to the existing domain.

Location

The Location section provides information about where the proposed workload resides in the network:

Host

- ◆ **Environment:** The environment resource assigned to the workload.
- ◆ **Cloud Provider:** (Type: Cloud) The cloud provider that hosts the workload:
  - ◆ Amazon Web Services
  - ◆ Microsoft Azure
  - ◆ Rackspace
  - ◆ vCloud
  - ◆ Google

- **Hypervisor:** (Type: Virtual) The type of hypervisor that hosts the workload's VM:
  - Citrix XenServer
  - Linux KVM
  - Microsoft Hyper-V
  - SUSE Xen
  - VMware
- **Host:** (Type: Virtual) The FQDN of the workload host server. This value is the same as the workload FQDN for physical servers.
- **Site:** The geographic location or facility where the workload network resides. Example: London
- **Hardware:** The vendor or model of hardware used by the workload. Example: Dell PowerEdge
- **Enclosure:** The location of the workload in the data center. Example: Rack A-31
- **Slot:** The slot number in the rack for the host machine. Example: 8

Virtual Machine Settings

- **VM Name:** The name of the VM used for the workload. The default value is the hostname of the workload.
- **Resource Pool:** (VMware) Select the Resource Pool resource where the target VM will be created on the VMware host server.
- **VM Config Datastore:** The Datastore resource that contains the VM configuration file.
- **Path on Datastore:** The path to the VM configuration file.

Network Interfaces

The Network Interfaces section defines information about each NIC on the workload. You cannot delete the source NIC information provided during the import, but you can add, edit, and delete other NICs for the workload.

- **Interface Name:** The name for the NIC. Example: eth0
- **Network:** The network resource assigned to the workload.
- **MAC Address:** MAC address of the NIC in the format of 00-00-00-00-00-0c.
- **VLAN ID:** The network VLAN that carries the workload traffic.
- **Use DHCP to get network address details:** Specify whether the network details are acquired from the DHCP server in the associated network. This option is enabled by default. If you use static IP addresses, deselect this option, then provide the following network details:
  - **IP Address:** IPv4 format.
  - **Subnet Mask:** IPv4 format.
  - **Default Gateway:** IPv4 format.
- **Use DHCP to get name servers:** Specify whether the DNS name is acquired from the DHCP server in the associated network. This option is enabled by default. If you use static IP addresses, deselect this option, then provide the following information:
  - **DNS Servers:** IPv4 format.
- **Search Domains:** FQDN of one or more search domains.

Storage Volumes

The Storage Volumes section defines information about each disk on the workload. You cannot delete the disk information provided during the import, but you can add, edit, and delete additional disks for the workload.

Details

- ◆ **Volume Name:** The name assigned to the volume.
- ◆ **Size:** The maximum size of the volume in MB, GB, TB, PB, EB, ZB, or YB.
- ◆ **Datastore:** The Datastore resource that contains one or more disks used by the virtual workload.
- ◆ **Volume Type:** Local, NAS, SAN, or System
- ◆ **Mount Point:** Example: `c:\`
- ◆ **Remote Path:** (Volume Type: SAN or NAS) Example: `\\vol1\mnt`
- ◆ **Datastore Folder:** The path on the specified datastore.

Disk Utilization

- ◆ **Used Space:** The amount of space used by data on this volume in units and percent.
- ◆ **Free Space:** The amount of free space on this volume in units and percent.
- ◆ **Number of Files:** The total number of files on this volume.
- ◆ **Fragmentation %:** The percent of fragmentation on the volume.

> **NOTE:** Fragmentation will be 0% for proposed volume if the transformation uses the File disk copy method.

Applications

The Applications section identifies the applications installed on the workload. You can add or remove applications for the proposed workload.

Custom Fields

The Custom Fields section allows you to specify values for the Custom Fields 1-7 that are defined for the project.

Status Change History

Transformation Manager saves a Status Change History log for the proposed workload. Each state change triggers an entry.

11.2 Importing Workloads for a Project (Bulk Import)

Large-scale transformation projects typically involve hundreds, or even thousands, of workloads. It is time-consuming to define each workload individually in your Transformation Manager system. You can use the Bulk Import dialog on the Workloads page to import information about the workloads for a single project from a specially formatted spreadsheet. For detailed information about preparing and validating the spreadsheet, see Appendix A, "Bulk Import Spreadsheet," on page 127.

To import workloads for a project:

1 In the Web Interface, select **Planning** in the toolbar, then select the **Workloads** tab.

2 Click **Bulk Import**.

3 From the **Project** list, select the project to use for the workloads in the spreadsheet.

If the global scope of operations is set to a project, the **Project** field is pre-populated with that value. To select a different project, exit the Bulk Import dialog, deselect the global scope or reassign the scope to the appropriate project, and then return to Step 2 and try again.

4 Click **Browse**, then locate and select the Bulk Import spreadsheet (`.xls` file) that contains the workload information that you want to add to the specified project.

5 Click **Validate**, then view the **Validation Results** to verify that all required information is present and in the appropriate format.

For example, it reports if an entry is missing required information, uses an unknown option in a field, or uses wrong the format for values.

6 If the spreadsheet contains errors:

    6a Click **Get Results** at the bottom of the dialog to generate an annotated spreadsheet, and save the file to your computer.

    6b Correct the errors in your Bulk Import spreadsheet, and save the file.

    6c Return to Step 5, and repeat the validation and correction process until there are no reported errors.

7 After the spreadsheet is validated, click **Import**.

8 After a successful import, click **Get Results** at the bottom of the dialog, then click **Save**.

PlateSpin Transformation Manager adds the assigned workload IDs to the spreadsheet, as well as the final status of `Imported`.

11.3 Using the Filter and Advanced Search

The Filter and Advanced Search tools allow you to locate one or more workloads that you want to perform actions on. It is an easy way to select multiple workloads to assign to batches or to modify transformation information.

1 (Optional) If you have permissions on multiple projects, click the **Global Project Selector**, then select the project of interest.

2 In the **Filter**, type characters to search for values in the searchable columns. The filter applies immediately to the list as you type the characters.

You can click the **Clear Filter** icon to clear the field and remove the filter.

3 Click the **Advanced Search** icon to narrow the search by specifying your desired search parameters and values.

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:

Project	Workload Type	Total Storage	Application
Wave	Transform Method	Single Disk Size	Environment
Batch	Site	# of CPUs	Network
Hostname	Slot	Amount of Memory	VLAN ID
OS Type	Enclosure	On Hold	Status
Custom 1	Custom 2	Custom 3	Health
Custom 4	Custom 5	Custom 6	Custom 7

NOTE: Each custom field that you define for a project appears in the form if the Global Project Selector is set to a specific project.

Click **Clear** to reset the Advanced Search and try again with different fields.

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

5 Mouse over the Workloads tab to see the number of total items in the list.

6 In the filtered Workloads list, view the workloads listed in the search results. Use the scroll bar to navigate up and down through the items. See Section 3.8, "Scrolling Up and Down in Lists," on page 28.

7 (Optional) Select multiple items in the list to perform Bulk Edit or Bulk Status Change actions on the selected workloads. See Section 3.9, "Multiple Item Selection in Lists," on page 29.

8 Mouse over the Workloads tab to see the number of total items in the list and the total number of selected items.

11.4 Viewing Workload Information

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

To view workload information:

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

2 Select the **Workloads** tab.

3 In the **Workloads** list, use the Filter and Advanced Search to locate the appropriate workload.

4 Select the workload, then click **View** to open the Workload dialog.

5 View the workload information.

6 Click **Close** when you are done.

11.5 Viewing a Workload NIC and Disk Summary

The Workload Summary allows you to view key original and proposed workload information without opening the Edit Workload dialog. The information pops up as a tool-tip when you mouse over the workload name.
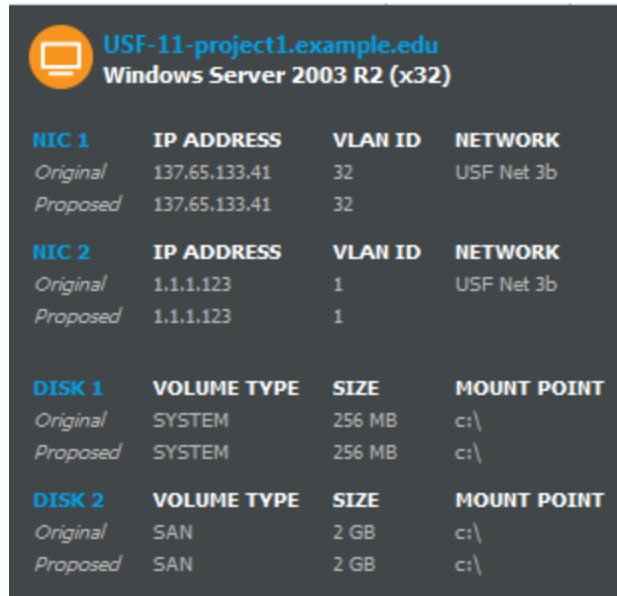
Users Who Can Perform These Tasks: System Administrator, Project Manager, Project Architect, Migration Specialist

To view the workload NIC and disk summary:

1 In the Web Interface, select **Planning** in the toolbar, then select the **Workloads** tab.

2 Use the **Filter** and **Advanced Search** options to locate the workload of interest.

3 (Optional) Mouse over a workload name to view a summary of its original workload and proposed workload configurations.

4 Move the mouse away from the workload name to exit the summary pop-up.

11.6 Editing a Proposed Workload

The initial workload import creates an original workload and a proposed workload. You must modify the proposed workload to set the appropriate configuration for its transformation. You can modify the proposed workload configuration by using the Workload dialog.

Users Who Can Perform These Tasks: System Administrator, Project Manager, Project Architect

For information about the various parameters for the workload, see Section 11.1.6, "Workload Dialog," on page 85.

To configure a single proposed workload:

1 In the Web Interface, select **Planning** in the toolbar, then select the **Workloads** tab.

2 Use the **Filter** and **Advanced Search** options to locate the workload of interest.

3 (Optional) Mouse over a workload **Name** to view a summary of its original workload and proposed workload configurations.

4 Double-click the workload you want to modify to open its Workload dialog. You can alternatively select the workload, and then click **Edit**.

5 Modify the workload information on the Workload dialog as appropriate:

   ◆ Status

   ◆ License

- Transformation Plan
- Replication Network
- Workload
- Location
- Network Interfaces
- Storage Volumes
- Applications
- Custom Fields
- Status Change History

6 Use the following to save your changes for now, to submit the workload as ready for execution, or to return to a submitted workload to make changes:

- Select **Mark In Progress** to keep the workload available for additional changes. This allows errors to exist until you return to make additional modifications.

- When you have resolved all errors and provided the appropriate transformation details, click **Submit** to indicate that the workload is ready for transformation.

11.7 Bulk Editing Multiple Proposed Workloads

The Bulk Edit function is a powerful editor that allows you to apply the same parameter setting to multiple selected workloads at a time. Each parameter is independent, and applies separately against a set of selected workloads. Bulk Edit validates each value against the type of workload and other characteristics to ensure that the change is made only if the setting is a valid option for that workload. This safeguard allows you to concurrently edit a set of diverse workloads that have a logical relationship that is meaningful to your network environment.

- Section 11.7.1, "About Bulk Edit," on page 97
- Section 11.7.2, "Selecting Workloads for Bulk Edit," on page 100
- Section 11.7.3, "Applying a Bulk Edit," on page 100

11.7.1 About Bulk Edit

The Bulk Edit dialog title area provides information about the number of workloads that you have preselected in the Workloads list before opening the Bulk Edit dialog. A System Administrator and users with Project Manager or Project Architect roles in multiple projects are able to select workloads across projects.

If a specified parameter value applies to one or more selected workloads, the confirmation dialog identifies the number of affected workloads, the number of skipped workloads, and the issues that resulted in skipped workloads.

NOTE: If you specify values for multiple parameters in the same bulk edit request, the confirmation dialog does not present all of the various matching conditions for the remainder of the parameters. It reports on only the first match it encounters. Thus, if you seek clear cause-and-effect reporting, you should edit only one parameter setting at a time in your bulk edit request.

Workloads might be skipped if the specified change or value is not valid for the workload type. For example, Host and Datastore changes apply only to target virtual workloads, or to workloads where the Transformation Method is unknown. Cloud Provider applies only to target cloud workloads, or to workloads where the Transformation Method is unknown.

Some actions cannot be performed against a selected workload based on the workload state:

- Values for workloads in a Submitted or later state are not editable. You must withdraw the workload to return it to an editable state.
- Values for workloads in a Completed state are not editable. You must reopen the workload to return it to an editable state. If the Completed state was initiated from a parent wave, batch, or project, you must reopen the parents first.

Table 11-2 describes wave, batch, and network parameters that apply for workloads in a single project at a time. When you select values, it narrows the action to workloads for a specific project. After you apply the change for one project, you can clear the Project field, and select different values to isolate a second Project, and so on until all appropriate changes are complete.

Table 11-2 *Bulk Edit Parameters for a Single Project at a Time*

Parameter	Description
Project	The Project value is informational if you preset the Project Selector. All selected workloads belong to that project.
	If you select any of the project-specific parameters, the Project value represents the project related to your selected value. All remaining project-related parameter values are restricted based on that choice.
Wave	This option reflects the parent wave of the target batch and sets the Project value if it is not set.
Batch	Set the target batch assignment for the selected workloads. It sets the parent wave and project if they are not set.
	Each workload inherits the dates from the newly assigned batch. Manual date settings override inheritance. If manual dates fall outside the new execution window, the affected dates display in a red font in the Workloads list and the Workload dialog.
Remove from Batch and Wave	Move workloads out of their current assigned batches and waves.
VLAN ID	For any network, change the VLAN ID: - From any value to the specified value. - From a specified value to a new specified value. For a specified network, change the VLAN ID: - From any value to the specified value. - From a specified value to a new specified value.

Parameter	Description
Network resource	For any NIC, change the Network resource: ♦ From any value to the specified value. ♦ From a specified value to a new specified value. For a specified NIC, change the network resource: ♦ From any value to the specified value. ♦ From a specified value to a new specified value.
Host resource	Change the Host resource: ♦ From any value to the new specified value. ♦ From a specified value to a new specified value. The Host resource setting applies only to virtual target workloads, or to workloads where the Transformation Method is not currently set.
Datastore resource	Change the Datastore resource: ♦ From any value to the new specified value. ♦ From a specified value to a new specified value. The Datastore resource setting applies to virtual workloads, or to workloads where the Transformation Method is not currently set.
Migration Server resource	Change the Migration Server resource: ♦ From any value to the new specified value. ♦ From a specified value to a new specified value.

Table 11-3 describes parameters that apply to all selected workloads that are in an editable state.

Table 11-3 *Bulk Edit Parameters for Single or Multiple Projects*

Parameter	Description
Number of workloads selected	The number of workloads that you have preselected in the Workloads list before opening the Bulk Edit dialog.
Number of projects represented	A System Administrator and users with Project Manager or Project Architect roles in multiple projects are able to select workloads across projects.
Transformation Method	Specify the transformation method. The setting applies only to workloads where the source workload type matches.
Disk Copy Method	Specify the disk copy method: block with driver, block without driver, and file.
Cloud Provider	Specify a cloud provider for the cloud workloads. **NOTE:** The Cloud Provider setting applies to cloud workloads, or to workloads where the Transformation Method is not currently set.
Start Date	Set the start date of the transformation execution.

Parameter	Description
Cutover Date	Set the cutover date for the workload.
On Hold	Pause the workload transformation workflow for the selected workloads.
System Disk Size	Specify the size of the target system disk.
Amount of Memory	Specify the size of the target memory.
Custom Fields	Each custom field that you define for a project appears in the form if the Global Project Selector is set to a specific project.

11.7.2 Selecting Workloads for Bulk Edit

Before you open the Bulk Edit dialog, use the Project Selector, Filter, Advanced Search, sort, and multiple select functions to refine the Workloads list and select the workloads for action. You can pre-select any number of workloads for concurrent bulk editing actions.

To select the workloads for a bulk edit action:

1 (Conditional) To work with workloads for a single project, click the **Project Selector**, then select the project of interest.

2 In the Web Interface, select **Planning** in the toolbar, then select the **Workloads** tab.

3 Use the Filter and Advanced Search options to refine the workloads list.

4 Use the multiple-select functions to select one or more workloads that you want to modify in the same way.

5 Mouse over the Workloads tab to view the number of workloads currently in the list, and the number of workloads that are selected.

6 Continue with Section 11.7.3, "Applying a Bulk Edit," on page 100.

11.7.3 Applying a Bulk Edit

After your selection is ready, use the Bulk Edit dialog to specify values for one or more parameters in the selected workloads.

To perform a bulk edit:

1 After you select the workloads for action, click **Bulk Edit**.

2 Specify the information you want to change for the selected workloads. See Section 11.7.1, "About Bulk Edit," on page 97.

The following fields apply to a single selected project:

- Project
- Wave
- Batch
- Remove from Batch and Wave
- VLAN ID (network, from VLAN ID, to VLAN ID)
- Network resource (NIC, from Network, to Network)
- Host resource (from Host, to Host)

- Datastore resource (from Datastore, to Datastore)
- Migration Server resource (from Migration Server, to Migration Server)

The following fields apply to all selected workloads:

- Transformation Method
- Disk Copy Method
- Cloud Provider
- Start Date
- Cutover Date
- On Hold
- System Disk Size
- Amount of Memory

3 Click **Apply**.

4 Review the confirmation message, then click **Proceed**.

   The modified information will appear in orange italics font in the individual Workload dialogs, with a information tip to indicate the values were set using Bulk Edit.

5 When you are done, click **Cancel** to exit the Bulk Edit dialog.

11.8 Bulk Status Change for Multiple Proposed Workloads

You can use the Bulk Status Change tool to modify the state value for proposed workloads for multiple workloads at a time. Use the Filter and Advanced Search options to locate and select the workloads of interest. See "Status" on page 86.

The Bulk Status Change dialog indicates the number of workloads selected and the number of projects you will affect with the Bulk Status Change. The change applies only to the selected items for which the next phase selected is a valid state change.

The modified information will appear in orange italics font in the individual Workload dialogs, with a note indicating the values were set using Bulk Status Change.

1 In the Web Interface, select **Planning** in the toolbar, then select the **Workloads** tab.

2 Select one or more workloads that you want to set to the same state.

3 Click **Bulk Status Change**.

4 Do any of the following actions for the selected workloads:

- If the **Submit** option is available, one or more of the selected workloads is eligible to move to a phase of readiness for transformation. Click **Submit** to change the workload status to Ready for Transformation.
- Specify the **Next Phase** you want to set for selected workloads, then click **Apply**.

5 When you are done, click **Cancel** to exit the dialog.

11.9 Deleting a Workload

The Delete option allows a user with Workload management permissions to delete the workload from the project. Deleting a licensed workload does not free the consumed license.

Before you execute a workload transformation or migration, you might want to delete a workload if the workload is no longer exits or is no longer a candidate for transformation or migration. For example, the workload is no longer available if the hardware fails or if you decommission the workload prior to the transformation project. The workload is no longer a candidate if you determine that some workloads will remain in the current facility.

However, if only the profile for the source workload has changed, you should re-import the source workload information instead of deleting it. You can use the same FQDN in the Bulk Import spreadsheet to re-import the source workload with the modified data. After you have edited a proposed workload, a re-import modifies only the source workload information. See Section A.6, "Re-Importing Workloads," on page 139.

To delete a workload from a project:

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

2 Select the **Workloads** tab.

3 In the **Workloads** list, use the Filter and Advanced Search to locate the appropriate workload.

4 Select the workload, then click **Delete**.

5 Click **Yes** to confirm the deletion.

12 Managing Resources

PlateSpin Transformation Manager allows you to define the resources to track for workload transformations. Resources include credentials, hosts, networks, datastores, environments, migration servers, and resource pools.

12.1 About Resources

Resources are elements of your IT infrastructure that are external to the workloads to be transformed. These resources form the operational and replication environment for the workload. Resource types include credentials, hosts, networks, datastores, environments, migration servers, and resource pools.

You can use the Resources feature to create, manage, and delete information about resources for the transformation target. You can define host, network, datastore, and environment resources for the source workloads in the machine information for a bulk import.

12.2 Prerequisites for Resources

When you create a resource, you must associate it with a specific transformation project. Before you can add resources for a project, you must create the parent organization and project to ensure that they are available when you create the resources for a project.

12.3 Managing Credentials Resources

Credentials resources allow you to track the authentication credentials that are needed to log in as administrator to the related location:

- Windows Domain
- Workload
- Target host
- Migration server

Credentials resources facilitate authentication for the associated components, but only top-level administrators who create them know the various user names and passwords. The passwords are stored securely in the PlateSpin Transformation Manager database.

You can use the Credentials page to create, manage, view, and delete the credentials resources for the target workloads in your transformation project. Credentials do not apply to source workloads.

12.3.1 About Credentials Resources

The Credentials resource allows you to track the following information for authentication credentials:

Name: Specify a name for the credentials resource that is unique to your transformation project. 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: Select the parent organization for the project.

Project: Select the parent project for the credential.

Description: (Optional) Specify a brief description of the credential. This text appears by default in the Credentials list.

Username: Specify a user name to use for the credential.

Password: Specify the password for the user name.

Confirm: Re-type the password.

NOTE: Credentials resource settings are not integrated with your directory password management system. If the password changes in your network environment, you must manually update the password stored for the resource.

12.3.2 Viewing Credentials

All roles for a project can view the credentials information. The password for the user name is always obscured.

1 In the Web Interface toolbar, select **Resources**, then select the **Credentials** tab.

   You can also view credentials for a single project in the **Associations** area of the Edit Project dialog. Select **Planning** > **Projects**, double-click the project. In the Edit Project dialog under **Associations**, select the **Resources** tab, then select **Credentials**.

2 On the **Credentials** tab, view the list of resources.

3 Select a credentials resource, then click **View** (or double-click the resource) to view the following settings for the resource:

   - Name

- Organization
- Project
- Description
- Username
- Password
- Confirm Password

4 (Optional) Filter entries in the Credentials list using the **Search** field to show only the resource pools of interest. Type a sequence of characters in the **Search** area to initiate filtering. The filter applies as you type. You can filter on information in any one of the columns at a time.

5 (Optional) Sort entries by the values in a column. Mouse over the column to expose the menu option, click it, then select **Sort Ascending** or **Sort Descending.**

12.3.3   Creating Credentials

You can use the Credentials page to create Credentials resources for the target transformation environment of a project.

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

2 Select the **Credentials** tab.

3 Click **Create** to open the Create Credential dialog.

4 Specify the following information for the Credentials resource:
- Name
- Organization
- Project
- Description
- Username
- Password
- Confirm Password

5 Click **Save** to create the Credentials resource.

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

12.3.4   Associating Credentials with Machines

After you create Credentials resources for a project, you can associate them with workloads, hosts, or migration servers, as appropriate.

- "Associating Credentials and Workloads" on page 105
- "Associating Credentials and Hosts" on page 106
- "Associating Credentials and Migration Servers" on page 106

Associating Credentials and Workloads

After you create credentials resources for a project, you can associate them with workloads.

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

2 Select the **Workloads** tab.

3 Select the workload, then click **Edit**. You can alternatively double-click the workload of interest.

4 On the Workload dialog in the **Workload** panel, click **Edit**.

5 From the **Admin Credentials** drop-down list, select the credentials resource that you want to assign to the target workload.

6 (Windows workloads) In a Domain, select **Domain** under **Windows Settings**, specify the domain name, then select the credential to use for the domain in the **Domain Credential** drop-down list.

7 (Optional) Modify other Workload information as appropriate.

8 Click **Save**, then click **Close**.

9 Click **Close** to exit the Workload dialog.

Associating Credentials and Hosts

After you create credentials resources for a project, you can associate them with host resources.

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

2 Select the **Hosts** tab.

3 Select the host, then click **Edit**. You can alternatively double-click the host of interest.

4 From the **Credential** drop-down list, select the credentials resource that you want to assign to the target host.

5 (Optional) Modify other Host information as appropriate.

6 Click **Save**.

7 Click **Close** to exit the dialog.

Associating Credentials and Migration Servers

After you create credentials resources for a project, you can associate them with migration servers.

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

2 Select the **Migration Servers** tab.

3 Select the migration server, then click **Edit**. You can alternatively double-click the migration server of interest.

4 From the **Credential** drop-down list, select the credentials resource that you want to assign to the target migration server.

5 (Optional) Modify other Migration Server information as appropriate.

6 Click **Save**.

7 Click **Close** to exit the dialog.

12.3.5 Editing Credentials

You can use the Credentials page to edit a Credentials resource for the target transformation environment of a project. For example, you might need to modify the user name and password assigned to the credential, or change the password for the existing user name.

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

2 Select the **Credentials** tab.

3 In the **Credentials** list, select the credential, then click **Edit** (or double-click the credential) to open the Edit Credential dialog.

4 Modify any of the following information for the Credentials resource:

- ◆ Name
- ◆ Organization
- ◆ Project
- ◆ Description
- ◆ Username
- ◆ Password
- ◆ Confirm Password

5 Click **Save** to update the Credentials resource.

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

12.3.6 Deleting Credentials

You can use the Credentials page to delete a credentials resource for the target transformation environment of a project.

NOTE: If you delete a resource, it automatically removes the associations for the resource, including those assigned to workloads that are in progress and completed. If the same associations apply, consider whether it is more appropriate to edit the resource name and its username and password.

---

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

2 Select the **Credentials** tab.

3 View the list of credentials resources.

4 Select the appropriate credential, click **Delete**, then click **Yes** to confirm the deletion.

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

12.4 Managing Host Resources

Host resources allow you to track information about the host machines for the workload VMs. You can use the Hosts page to create, edit, view, and delete hosts for the target workloads in your transformation project. You can define host resources for the source workloads when you import machine their machine data. A host resource can be used for source workloads or for target workloads, but not to both.

12.4.1 About Host Resources

The host resource allows you to track the following information for a server that hosts one physical workload, or that hosts the hypervisor for multiple virtual workloads:

Name: Specify a name for the server that is unique to your transformation project. 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: Select the parent organization for the project.

Project: Select the parent project for the virtualization host.

Description: (Optional) Specify a brief description of the host. This text appears by default in the Hosts list.

IP/DNS Name: (Optional) Specify an IP address in IPv4 format, or the DNS name of the host machine in the FQDN format.

Credential: (Optional) Specify the Credential resource to use for accessing the host machine.

Hypervisor: Select the hypervisor type used by the host. Options include:

```
Citrix XenServer
Linux KVM
Microsoft Hyper-V
None (for physical workloads)
SUSE Xen
VMware
```

Cluster: (Optional) The name of the vSphere Cluster.

Hardware: (Optional) Specify a textual description of the hardware architecture for the host server. If a match is not found, PTM adds a new Hardware type in the database. Options include: x32, x64.

Site: (Optional) Specify a textual description of the facility or location where the host server resides. If a match is not found, PTM adds a new Site type in the database. Examples: `HQ data center`, `West campus`, `Sydney`.

Enclosure: (Optional) Specify a textual description of the enclosure where the host server resides, such as the rack cabinet, blade server chassis, or tower cabinet. If a match is not found, PTM adds a new Enclosure type in the database. Examples: `RC-10`, `BS-2`, `TC-5`.

Slot: (Optional) Specify a textual description of the slot where the host server resides in the specified enclosure. If a match is not found, PTM adds a new Slot type in the database. Examples: `R3-2U`, `Bay-2`, `Sh-1`.

12.4.2 Viewing Hosts

You can view the host information for transformation workloads that you manage. For information about the parameters used to define the Host, see Section 12.4.1, "About Host Resources," on page 108.

1 In the Web Interface toolbar, select **Resources**, then select the **Hosts** tab.

   You can also view hosts for a single project in the **Associations** area of the Edit Project dialog. Select **Planning** > **Projects**, double-click the project, then under **Associations**, select the **Hosts** tab.

2 On the **Hosts** tab, do either of the following to view a list of resources:

   ◆ Click the **Source** link to view host information that you imported for original workloads using Bulk Import.

   ◆ Click the **Target** link to view host information for the target transformation environment.

3 Select a host resource, then click **View** (or double-click the resource) to view the following settings for the resource:

   ◆ Name

   ◆ Organization

   ◆ Project

   ◆ Description

   ◆ IP/DNS Name

   ◆ Credential

   ◆ Hypervisor

   ◆ Hardware

   ◆ Site

   ◆ Enclosure

   ◆ Slot

4 (Optional) Filter entries in the Hosts list using the Search field to show only the hosts of interest. Type a sequence of characters in the **Search** area to initiate filtering. The filter applies as you type. You can filter on information in any one of the columns at a time.

5 (Optional) Sort entries by the values in a column. Mouse over the column to expose the menu option, click it, then select **Sort Ascending** or **Sort Descending.**

12.4.3 Creating Source Hosts

You can create a host resource for a source workload by specifying the host information with the machine definition in the Bulk Import spreadsheet.

12.4.4 Creating Target Hosts

You can use the Hosts page to create host resources for the target transformation environment of a project. For information about the parameters used to define the Host, see Section 12.4.1, "About Host Resources," on page 108.

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

2 Select the **Hosts** tab, then click **Target**.

3 Click **Create** to open the Create Host dialog.

4 Specify the following information for the host resource:

   ◆ Name

   ◆ Organization

   ◆ Project

   ◆ Description

   ◆ IP/DNS Name

   ◆ Credential

- ◆ Hypervisor
- ◆ Hardware
- ◆ Site
- ◆ Enclosure
- ◆ Slot

5 Click **Save** to create the host resource.

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

12.4.5 Editing Target Hosts

You can use the Hosts page to edit a host resource for the target transformation environment of a project. For information about the parameters used to define the Host, see Section 12.4.1, "About Host Resources," on page 108.

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

2 Select the **Hosts** tab, then click **Target**.

3 In the **Hosts** list, select the host, then click **Edit** (or double-click the host) to open the Edit Host dialog.

4 Modify any information for the host resource:

- ◆ Name
- ◆ Organization
- ◆ Project
- ◆ Description
- ◆ IP/DNS Name
- ◆ Credential
- ◆ Hypervisor
- ◆ Hardware
- ◆ Site
- ◆ Enclosure
- ◆ Slot

5 Click **Save** to update the host resource.

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

12.4.6 Associating Hosts and Target Workloads

After you create target host resources for a project, you can associate them with workloads. For information about the parameters used to define the Host, see Section 12.4.1, "About Host Resources," on page 108.

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

2 Select the **Workloads** tab.

3 Select the workload that will be transformed to a virtual workload type, then click **Edit**. You can alternatively double-click the workload of interest.

4 Verify that the transformation target workload is a virtual machine.

    4a On the Workload dialog in the Transformation Plan panel, click **Edit**.

    4b In the Transformation Method drop-down list, select the appropriate method.

    4c Click **Save**, and then click **Close**.

5 On the Workload dialog in the **Location** panel, click **Edit**.

6 From the **Host** drop-down list, select the host resource that you want to assign to the target workload.

7 (Optional) Modify other Location information as appropriate.

8 Click **Save**, and then click **Close**.

9 Click **Close** to exit the Workload dialog.

12.4.7 Deleting Hosts

You can use the Hosts page to delete a host resource for the source or target transformation environment of a project. The deleted resource is automatically removed from each of its assigned workloads.

NOTE: If you delete a resource, it automatically removes the associations for the resource, including those assigned to workloads that are in progress and completed. If the same associations apply, consider whether it is more appropriate to edit the resource name and settings.

---

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

2 Select the **Hosts** tab.

3 (Optional) Delete a source host resource:

    3a On the **Hosts** tab, click **Source** to view the list of Source host resources.

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

4 (Optional) Delete a target host resource:

    4a On the **Hosts** tab, click **Target** to view the list of Target host resources.

    4b Select the appropriate host, click **Delete**, then click **Yes** to confirm the deletion.

12.5 Managing Network Resources

Network resources allow you to track information about the networks for the workloads. You can use the Networks page to create, manage, and delete networks for the target workloads in your transformation project. You can define network resources for the source workloads in the machine information for a bulk import. A network resource can apply to source workloads or to target workloads, but not to both.

12.5.1 About Network Resources

The network resource allows you to track the following information for a network used by the one or more workloads in your transformation project:

Name: Specify a name for the network that is unique to your transformation project. 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: Select the parent organization for the project.

Project: Select the parent project for the network.

Description: (Optional) Specify a brief description of the network. This text appears by default in the Networks list.

12.5.2 Viewing Networks

All roles for a project can view the network information.

1 In the Web Interface toolbar, select **Resources**, then select the **Networks** tab.

   You can also view networks for a single project in the **Associations** area of the Edit Project dialog. Select **Planning** > **Projects**, double-click the project, then under **Associations**, select the **Networks** tab.

2 On the **Networks** tab, do either of the following to view a list of resources:

   ◆ Click the **Source** link to view network information that you imported for original workloads using Bulk Import.

   ◆ Click the **Target** link to view network information for the target transformation environment.

3 Select a network resource, then click **View** (or double-click the resource) to view the following settings for the resource:

   ◆ Name

   ◆ Organization

   ◆ Project

   ◆ Description

4 (Optional) Filter entries in the Networks list using the **Search** field to show only the networks of interest. Type a sequence of characters in the **Search** area to initiate filtering. The filter applies as you type. You can filter on information in any one of the columns at a time.

5 (Optional) Sort entries by the values in a column. Mouse over the column to expose the menu option, click it, then select **Sort Ascending** or **Sort Descending.**

12.5.3 Creating Source Networks

You can create a network resource for a source workload by specifying the **NIC# Network Name** in the machine definition in the Bulk Import spreadsheet. The name is case sensitive. If no match is found, PTM creates a new source network resource for the project. On import, it automatically associates the network resource with the source workload.

12.5.4 Creating Target Networks

You can use the Networks page to create network resources for the target transformation environment of a project.

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

2 Select the **Networks** tab, then click **Target**.

3 Click **Create** to open the Create Network dialog.

4 Specify the following information for the network resource:

- Name
- Organization
- Project
- Description

5 Click **Save** to create the network resource.

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

12.5.5 Associating Networks and Target Workloads

After you create target network resources for a project, you can associate them with workloads.

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

2 Select the **Workloads** tab.

3 Select the workload, then click **Edit**. You can alternatively double-click the workload of interest.

4 On the Workload dialog in the **Network Interfaces** panel, click **Edit**.

5 From the **Network** drop-down list, select the network resource that you want to assign to the target workload.

6 (Optional) Modify other network interface information as appropriate.

7 Click **Save**, and then click **Close**.

8 Click **Close** to exit the Workload dialog.

12.5.6 Editing Target Networks

You can use the Networks page to edit a network resource for the target transformation environment of a project.

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

2 Select the **Networks** tab, then click **Target**.

3 In the **Networks** list, select the network, then click **Edit** (or double-click the network) to open the Edit Network dialog.

4 Modify any of the following information for the network resource:

- Name
- Organization
- Project
- Description

5 Click **Save** to update the network resource.

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

12.5.7 Deleting Target Networks

You can use the Networks page to delete a network resource for the source or target transformation environment of a project.

NOTE: If you delete a resource, it automatically removes the associations for the resource, including those assigned to workloads that are in progress and completed. If the same associations apply, consider whether it is more appropriate to edit the resource name and settings.

---

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

2 Select the **Networks** tab.

3 (Optional) Delete a source network resource:

    3a Click **Source** to view the list of source network resources.

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

4 (Optional) Delete a target network resource:

    4a Click **Target** to view the list of target network resources.

    4b Select the appropriate network, click **Delete**, then click **Yes** to confirm the deletion.

12.6 Managing Datastore Resources

Datastore resources allow you to track information about the datastores for virtual workloads. In a virtualization environment, the datastore represents a storage location for virtual machine files and virtual disk files.

You can use the Datastores page to create, manage, and delete datastores for the target workloads in your transformation project. You can define datastore resources for the source workloads in the machine information for a bulk import. A datastore resource can apply to source workloads or to target workloads, but not to both.

12.6.1 About Datastore Resources

The Datastore resource allows you to track the following information for a datastore used by the one or more workloads in your transformation project:

Name: Specify a name for the datastore that is unique to your transformation project. 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: Select the parent organization for the project.

Project: Select the parent project for the datastore.

Description: (Optional) Specify a brief description of the datastore. This text appears by default in the Datastores list.

12.6.2 Viewing Datastores

All roles for a project can view the datastore information.

1 In the Web Interface toolbar, select **Resources**, then select the **Datastores** tab.

You can also view datastores for a single project in the **Associations** area of the Edit Project dialog. Select **Planning** > **Projects**, double-click the project, then under **Associations**, select the **Datastores** tab.

2 On the **Datastores** tab, do either of the following to view a list of resources:

- ◆ Click the **Source** link to view datastore information that you imported for original workloads using Bulk Import.

- ◆ Click the **Target** link to view datastore information for the target transformation environment.

3 Select a datastore resource, then click **View** (or double-click the resource) to view the following settings for the resource:

- ◆ Name

- ◆ Organization

- ◆ Project

- ◆ Description

4 (Optional) Filter entries in the Datastores list using the **Search** field to show only the datastores of interest. Type a sequence of characters in the **Search** area to initiate filtering. The filter applies as you type. You can filter on information in any one of the columns at a time.

5 (Optional) Sort entries by the values in a column. Mouse over the column to expose the menu option, click it, then select **Sort Ascending** or **Sort Descending.**

12.6.3 Creating Source Datastores

You can create a datastore resource for a source workload by specifying the **Disk*x* Datastore Name** in the machine definition in the Bulk Import spreadsheet. The name is case sensitive. If no match is found, PTM creates a new source datastore resource for the project. On import, it automatically associates the datastore resource with the source workload.

12.6.4 Creating Target Datastores

You can use the Datastores page to create Datastore resources for the target transformation environment of a project.

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

2 Select the **Datastores** tab, then click **Target**.

3 Click **Create** to open the Create Datastore dialog.

4 Specify the following information for the Datastore resource:

- ◆ Name

- Organization
- Project
- Description

5 Click **Save** to create the Datastore resource.

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

12.6.5 Associating Datastores and Target Workloads

After you create target datastore resources for a project, you can associate them with virtual workloads. You can use the same datastore or different datastores for the system and data volumes and the VM Config Datastore.

To set the target datastore resource for a storage volume:

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

2 Select the **Workloads** tab.

3 Select the workload, then click **Edit**. You can alternatively double-click the workload of interest.

4 On the Workload dialog in the **Storage Volumes** panel, click **Edit**.

5 From the **Datastore** drop-down list, select the datastore resource that you want to assign to the target workload.

6 (Optional) Modify other disk and volume interface information as appropriate.

7 Click **Save**, and then click **Close**.

8 Click **Close** to exit the Workload dialog.

To set the datastore resource for a virtual workload's VM Config Datastore:

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

2 Select the **Workloads** tab.

3 Select the workload, then click **Edit**. You can alternatively double-click the workload of interest.

4 On the Workload dialog in the **Location** panel, click **Edit**.

5 From the **VM Config Datastore** drop-down list, select the datastore resource that you want to assign to the target workload.

6 Click **Save**, and then click **Close**.

7 Click **Close** to exit the Workload dialog.

12.6.6 Editing Target Datastores

You can use the Datastores page to edit a Datastore resource for the target transformation environment of a project.

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

2 Select the **Datastores** tab, then click **Target**.

3 In the **Datastores** list, select the datastore, then click **Edit** to open the Edit Datastore dialog. You can alternatively double-click the datastore of interest.

4 Modify any of the following information for the Datastore resource:

- Name
- Organization

- ◆ Project
- ◆ Description

5 Click **Save** to update the Datastore resource.

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

12.6.7 Deleting Target Datastores

You can use the Datastores page to delete a Datastore resource for the source or target transformation environment of a project.

NOTE: If you delete a resource, it automatically removes the associations for the resource, including those assigned to workloads that are in progress and completed. If the same associations apply, consider whether it is more appropriate to edit the resource name and settings.

---

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

2 Select the **Datastores** tab.

3 (Optional) Delete a source Datastore resource:

    3a Click **Source** to view the list of source datastore resources.

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

4 (Optional) Delete a target Datastore resource:

    4a Click **Target** to view the list of target datastore resources.

    4b Select the appropriate datastore, click **Delete**, then click **Yes** to confirm the deletion.

12.7 Managing Environment Resources

Environment resources allow you to track the logical environments for workloads in your network. Examples include staging, preproduction, and production. You can use the Environments page to create, manage, and delete environments for the target workloads in your transformation project. You can define environment resources for the source workloads in the machine information for a bulk import. Environment resources can apply to source and target workloads.

12.7.1 About Environment Resources

The Environment resource allows you to track the following information for a logical environment where one or more workloads reside in your transformation project:

Name: Specify a name for the environment that is unique to your transformation project. 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: Select the parent organization for the project.

Project: Select the parent project for the environment.

Description: (Optional) Specify a brief description of the environment. This text appears by default in the Environments list.

12.7.2 Viewing Environments

All roles for a project can view the environment information.

1 In the Web Interface toolbar, select **Resources**, then select the **Environments** tab.

   You can also view environments for a single project in the **Associations** area of the Edit Project dialog. Select **Planning** > **Projects**, double-click the project, then under **Associations**, select the **Environments** tab.

2 On the **Environments** tab, view the list of resources.

3 Select an environment resource, then click **View** (or double-click the resource) to view the following settings for the resource:

   ◆ Name

   ◆ Organization

   ◆ Project

   ◆ Description

4 (Optional) Filter entries in the Environments list using the **Search** field to show only the environments of interest. Type a sequence of characters in the **Search** area to initiate filtering. The filter applies as you type. You can filter on information in any one of the columns at a time.

5 (Optional) Sort entries by the values in a column. Mouse over the column to expose the menu option, click it, then select **Sort Ascending** or **Sort Descending.**

12.7.3 Creating Source Environments

You can create an environment resource for a source workload by specifying the **Environment** in the machine definition in the Bulk Import spreadsheet. The name is case sensitive. If no match is found, PTM creates a new environment resource for the project. On import, it automatically associates the environment resource with the source workload

12.7.4 Creating Target Environments

You can use the Environments page to create Environment resources for the target transformation environment of a project.

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

2 Select the **Environments** tab.

3 Click **Create** to open the Create Environment dialog.

4 Specify the following information for the Environment resource:

   ◆ Name

   ◆ Organization

   ◆ Project

   ◆ Description

5 Click **Save** to create the Environment resource.

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

12.7.5 Associating Environments and Target Workloads

After you create environment resources for a project, you can associate them with workloads.

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

2 Select the **Workloads** tab.

3 Select the workload, then click **Edit**. You can alternatively double-click the workload of interest.

4 On the Workload dialog in the **Location** panel, click **Edit**.

5 From the **Environment** drop-down list, select the environment resource that you want to assign to the target workload.

6 (Optional) Modify other Location information as appropriate.

7 Click **Save**, and then click **Close**.

8 Click **Close** to exit the Workload dialog.

12.7.6 Editing Target Environments

You can use the Environments page to edit an Environment resource for the target transformation environment of a project.

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

2 Select the **Environments** tab.

3 In the **Environments** list, select the environment, then click **Edit** (or double-click the environment) to open the Edit Environment dialog.

4 Modify any of the following information for the Environment resource:
   - Name
   - Organization
   - Project
   - Description

5 Click **Save** to update the Environment resource.

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

12.7.7 Deleting Environments

You can use the Environments page to delete an Environment resource for the source or target transformation environment of a project.

NOTE: If you delete a resource, it automatically removes the associations for the resource, including those assigned to workloads that are in progress and completed. If the same associations apply, consider whether it is more appropriate to edit the resource name and settings.

---

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

2 Select the **Environments** tab.

3 Click **Target** to view the list of environment resources.

4 Select the appropriate environment, click **Delete**, then click **Yes** to confirm the deletion.

12.8 Managing Migration Server Resources

Migration Server resources allow you to track the servers that host the migration tools used by migration specialists to transform workloads. For example, a migration server might host the migration tool PlateSpin Migrate (https://www.netiq.com/products/migrate/). You can use the Migration Servers page to create, manage, and delete the migration server resources for the target workloads in your transformation project. Migration Servers do not apply to source workloads.

12.8.1 About Migration Server Resources

The Migration Server resource allows you to track the following information for a migration server that resides in your transformation project:

Name: Specify a name for the migration server that is unique to your transformation project. 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: Select the parent organization for the project.

Project: Select the parent project for the migration server.

Description: (Optional) Specify a brief description of the migration server. This text appears by default in the Migration Servers list.

Migration Server Type: Select one of the following:

- **PlateSpin Migrate:** Select this option to identify the migration server as a PlateSpin Migrate Server, and to allow limited integration with your PlateSpin Migrate Server.
- **Others:** Select this option to identify that the migration server runs any other type of migration software. PTM does not provide integration.

Server URL: Specify the URL of the login page for the migration tool hosted on the migration server. The URL must conform to all syntax rules and can be up to 1024 characters. For example:

```
https://psmigrate.example.com/Migrate
```

Credential: Specify the credentials resource to use to log in to the migration server web-based management tool.

Migration Server resources can be saved in an incomplete state. The Migration Server field displays the value **Not Configured** in the Workload dialog. When you later deploy the server, you can update the Migration Server resource. The settings are updated automatically for all of its associated workloads.

12.8.2 Viewing Migration Servers

All roles for a project can view the migration server information.

1 In the Web Interface toolbar, select **Resources**, then select the **Migration Servers** tab.

You can also view migration servers for a single project in the **Associations** area of the Edit Project dialog. Select **Planning** > **Projects**, double-click the project. In the Edit Project dialog under **Associations**, select the **Resources** tab, then select **Migration Servers**.

2 On the **Migration Servers** tab, view the list of resources.

3 Select a migration server resource, then click **View** (or double-click the resource) to view the following settings for the resource:

  - Name
  - Organization
  - Project
  - Description
  - Migration Server Type
  - Server URL
  - Credential

4 (Optional) Filter entries in the Migration Servers list using the **Search** field to show only the migration servers of interest. Type a sequence of characters in the **Search** area to initiate filtering. The filter applies as you type. You can filter on information in any one of the columns at a time.

5 (Optional) Sort entries by the values in a column. Mouse over the column to expose the menu option, click it, then select **Sort Ascending** or **Sort Descending.**

12.8.3 Creating Migration Servers

You can use the Migration Servers page to create Migration Server resources for the target transformation environment of a project.

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

2 Select the **Migration Servers** tab.

3 Click **Create** to open the Create Migration Server dialog.

4 Specify the following information for the Migration Server resource:

  - Name
  - Organization
  - Project
  - Description
  - Migration Server Type
  - Server URL
  - Credential

5 Click **Save** to create the Migration Server resource.

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

12.8.4 Associating Migration Servers and Target Workloads

After you create migration server resources for a project, you can associate them with workloads.

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

2 Select the **Workloads** tab.

3 Select the workload, then click **Edit**. You can alternatively double-click the workload of interest.

4 On the Workload dialog in the **Transformation Plan** panel, click **Edit**.

5 From the **Migration Server** drop-down list, select the migration server resource that you want to assign to the target workload.

6 (Optional) Modify other Transformation Plan information as appropriate.

7 Click **Save**, and then click **Close**.

8 Click **Close** to exit the Workload dialog.

12.8.5 Editing Migration Servers

You can use the Migration Servers page to edit a Migration Server resource for the target transformation environment of a project.

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

2 Select the **Migration Servers** tab.

3 In the **Migration Servers** list, select the migration server, then click **Edit** (or double-click the migration server) to open the Edit Migration Server dialog.

4 Modify any of the following information for the Migration Server resource:

- ◆ Name
- ◆ Organization
- ◆ Project
- ◆ Description
- ◆ Migration Server Type
- ◆ Server URL
- ◆ Credential

5 Click **Save** to update the Migration Server resource.

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

12.8.6 Deleting Migration Servers

You can use the Migration Servers page to delete a Migration Server resource for the target transformation environment of a project.

NOTE: If you delete a resource, it automatically removes the associations for the resource, including those assigned to workloads that are in progress and completed. If the same associations apply, consider whether it is more appropriate to edit the resource name and settings.

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

2 Select the **Migration Servers** tab.

3 View the list of migration server resources.

4 Select the appropriate migration server, click **Delete**, then click **Yes** to confirm the deletion.

12.9 Managing Resource Pool Resources

Resource Pool resources allow you to track the resource pools that are used by VMs on a host server running a VMware hypervisor. You can use the Resource Pool page to create, manage, view, and delete the resource pool resources for the target workloads in your transformation project. Resource Pools do not apply to source workloads.

12.9.1 About Resource Pool Resources

The Resource Pool resource allows you to track the following information for a VMware resource pool where one or more virtual workloads reside in your transformation project:

Name: Specify a name for the resource pool that is unique to your transformation project. 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: Select the parent organization for the project.

Project: Select the parent project for the resource pool.

Description: (Optional) Specify a brief description of the resource pool. This text appears by default in the Resource Pools list.

12.9.2 Viewing Resource Pools

All roles for a project can view the resource pool information.

1 In the Web Interface toolbar, select **Resources**, then select the **Resource Pools** tab.

You can also view resource pools for a single project in the **Associations** area of the Edit Project dialog. Select **Planning** > **Projects**, double-click the project. In the Edit Project dialog under **Associations**, select the **Resources** tab, then select **Resource Pools**.

2 On the **Resource Pools** tab, view the list of resources.

3 Select a resource pool resource, then click **View** (or double-click the resource) to view the following settings for the resource:

- Name
- Organization
- Project
- Description

4 (Optional) Filter entries in the Resource Pools list using the **Search** field to show only the resource pools of interest. Type a sequence of characters in the **Search** area to initiate filtering. The filter applies as you type. You can filter on information in any one of the columns at a time.

5 (Optional) Sort entries by the values in a column. Mouse over the column to expose the menu option, click it, then select **Sort Ascending** or **Sort Descending.**

12.9.3   Creating Resource Pools

You can use the Resource Pools page to create Resource Pool resources for the target transformation environment of a project.

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

2 Select the **Resource Pools** tab.

3 Click **Create** to open the Create Resource Pool dialog.

4 Specify the following information for the Resource Pool resource:

- ◆ Name
- ◆ Organization
- ◆ Project
- ◆ Description

5 Click **Save** to create the Resource Pool resource.

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

12.9.4   Associating Resource Pools with Workloads

After you create Resource Pools resources for a project, you can associate them with virtual workloads on VMware virtualization host servers.

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

2 Select the **Workloads** tab.

3 Select the workload, then click **Edit**. You can alternatively double-click the workload of interest.

4 On the Workload dialog in the **Location** panel, click **Edit**.

5 From the **Resource Pool** drop-down list, select the resource pool resource that you want to assign to the target workload.

6 (Optional) Modify other Location information as appropriate.

7 Click **Save**, and then click **Close**.

8 Click **Close** to exit the Workload dialog.

12.9.5   Editing Resource Pools

You can use the Resource Pools page to edit a Resource Pool resource for the target transformation environment of a project.

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

2 Select the **Resource Pools** tab.

3 In the **Resource Pools** list, select the resource pool, then click **Edit** (or double-click the resource pool) to open the Edit Resource Pool dialog.

4 Modify any of the following information for the Resource Pool resource:

- ◆ Name
- ◆ Organization
- ◆ Project
- ◆ Description

5 Click **Save** to update the Resource Pool resource.

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

12.9.6   Deleting Resource Pools

You can use the Resource Pools page to delete a resource pool resource for the target transformation environment of a project.

NOTE: If you delete a resource, it automatically removes the associations for the resource, including those assigned to workloads that are in progress and completed. If the same associations apply, consider whether it is more appropriate to edit the resource name and settings.

---

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

2 Select the **Resource Pools** tab.

3 View the list of resource pool resources.

4 Select the appropriate resource pool, click **Delete**, then click **Yes** to confirm the deletion.

A Bulk Import Spreadsheet

A large-scale data center transformation or migration project can involve hundreds or thousands of workloads. The Bulk Import spreadsheet allows you to easily import data about the many machines you want to transform for a project in PlateSpin Transformation Manager. For each machine, the import automatically configures an original workload and an initial proposed workload. You can re-import the machine data multiple times.

This section describes the bulk import process, and how to prepare a specially formatted spreadsheet that contains data about the machines to import for a project.

A.1 About Bulk Import

PlateSpin Transformation Manager supports the bulk import of multiple machines at a time to your transformation project. *Bulk import* refers to loading data about the machines from a specially formatted Microsoft Excel 97-2003 (`.xls`) spreadsheet file to a previously defined project.

For each newly imported machine, the import automatically configures its original workload and an initial proposed workload. The workloads are then available in the Web Interface for further association with the project resources, users, and schedules. After you edit a proposed workload by using the Workload dialog or the Bulk Edit options, any re-imported workload information applies only to the original workload.

The Bulk Import spreadsheet allows you to import a variety of data about each machine. PlateSpin Transformation Manager requires only the FQDN (fully qualified domain name) and the type of machine (physical, virtual, or cloud). Predefined and custom parameters allow you to specify more details, depending on your needs.

You use your own spreadsheet software to collect the hardware and software data about the machines you want to transform for a project. You can leverage the data in your network inventory records by mapping and exporting data to one or more versions of the Bulk Import spreadsheet.

A.1.1 Bulk Import Tools

The Bulk Import function in the PlateSpin Transformation Manager Web Interface provides the following tools to help you validate the spreadsheet for import:

- **Validate:** The Validate tool checks the spreadsheet format to identify the types of data it contains, performs limited checks of values, and identifies errors.

  Transformation Manager restricts what values are possible for some parameters, and expects text or numbers for others. It also checks for dependencies among the parameters to ensure all expected values are present. Otherwise, it accepts the values you input for the parameters. It does not validate the values for a machine against the actual machine in your network environment.

  For re-imported machines, the Validate tool also check the current workflow state for the machine. It ignores rows for machines that have already been submitted for transformation. You can withdraw the machine from transformation to make it eligible again for re-import.

  You can re-submit the spreadsheet iteratively until all rows of data are valid, and the spreadsheet is ready for import.

- **Validation Results:** The Validation Results reporting tool provides the Validation Status for each machine in the spreadsheet. For each invalid row, it identifies the type and location of errors. It also identifies which rows are ignored. You can view results for all rows, valid rows, invalid rows, and ignored rows.

- **Get Results:** The Get Results tool allows you to download a Results spreadsheet in Microsoft Excel 97-2003 (`.xls`) format. In addition to the Validation Status for each machine, it adds the following information if the column is present:

  - Workload ID
  - NIC UUID
  - Disk UUID

A.1.2 Bulk Import Workflow

The Bulk Import workflow, shown in Figure A-1, includes the tasks you perform to prepare the data for import, as well as the tasks required to validate that data before you can import it to your PlateSpin Transformation Manager environment.

Figure A-1 *Bulk Import Workflow*
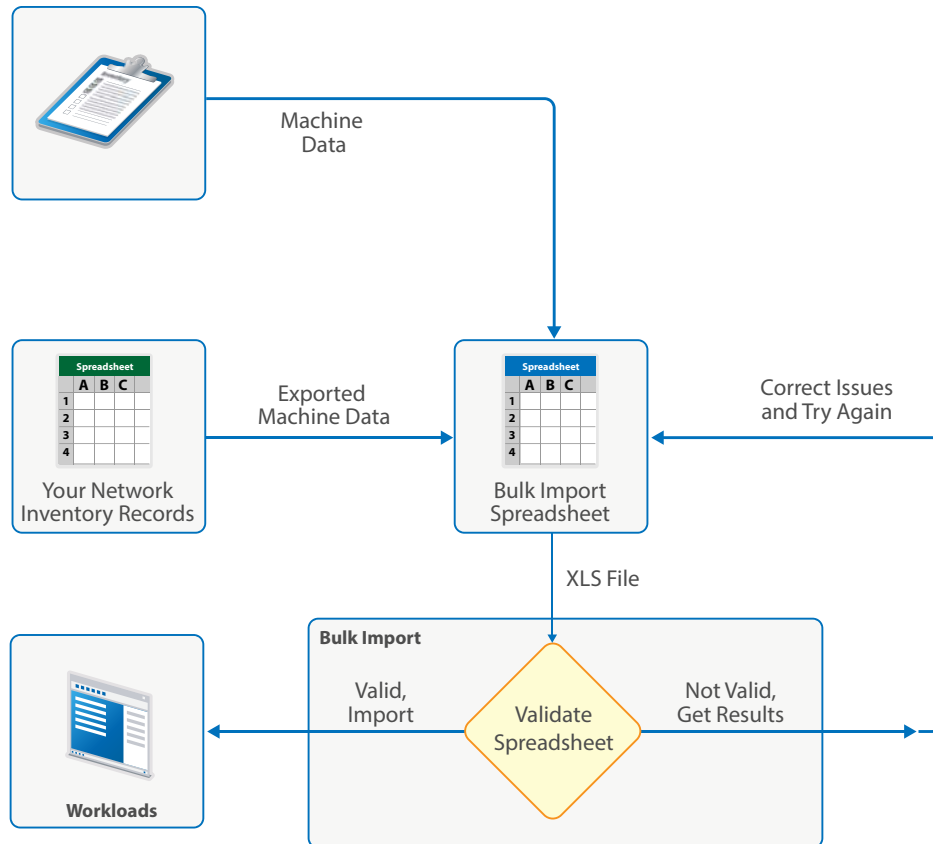
To import or update data for one or multiple machines in a project:

1. Collect data about the machines for a single transformation project in a spreadsheet, and save it in Microsoft Excel 97-2003 (`.xls`) format.

   A template for this specially formatted spreadsheet is available in the Bulk Import dialog.

2. Open the Bulk Import dialog.

3. Select the project, then browse and select the spreadsheet you prepared.

4. Validate the spreadsheet.

5. View the validation results by all rows, valid rows, invalid rows, or ignored rows.

6. If rows are invalid, get an annotated Results spreadsheet.

7. For each invalid row, correct the errors according to the various validation messages, then clear its Validation Status cell.

8. Repeat Step 2 to Step 7 iteratively until all rows are valid.

9. After all rows are valid, import the spreadsheet.

   For each machine with an empty Validation Status cell, PTM does the following:

   a. Creates or updates the original workload and the proposed workload (if it is unedited) for the machine.

   b. Generates the Results spreadsheet with the following information, as appropriate:

      ◆ Machine data

      ◆ Validation Status of Imported

      ◆ Workload ID of the original workload

      ◆ NIC UUID for each NIC instance

      ◆ Disk UUID for each disk instance

10. (Optional) Before you close the Bulk Import dialog, download the Results spreadsheet.

11. (Optional) Re-import data for a machine from the same or different Bulk Import spreadsheet. A re-import can add new data or modify previously submitted data.

A.2 Spreadsheet Parameters

The Bulk Import spreadsheet contains the following information for one or more workloads in your transformation project:

◆ Required workload data

◆ Custom fields

◆ Workload details

◆ Location

◆ NICs

◆ Disks

◆ Applications

You can download a sample spreadsheet from the Bulk Import dialog (**Planning** > **Workloads** > **Bulk Import**) in the Web Interface. Look for the word *Required* in a column heading to indicate which parameters are required for each type of data or in a data set. Mouse over the red triangle in a heading cell to display help about the purpose and format of the data in the column and whether it is required as part of the mapping process.

See the following tables for information about the expected values and format for each parameter in the Bulk Import spreadsheet:

Required Workload Parameters

Bulk Import requires only three columns in the spreadsheet to set up a workload: FQDN, Type, and Validation Status. See Table A-1. This flexibility requires that you provide a header row with proper column names. These three columns must be present in all re-imports for the workloads. If you also include the Workload ID column, PTM automatically populates the IDs in the Results spreadsheet.

NOTE: If you prepare a spreadsheet without column headings, all defined columns must be present in the expected order indicated in the sample spreadsheet.

Table A-1   *Required Workload Parameters*

Parameter	Required/Optional	Description
FQDN	Required for all imports.	Specify the fully qualified domain name for the workload. Example: `sqlserver5.paris.digitalair.com` An FQDN is universally unique. Thus, a workload can have only one instance in a transformation project.
Validation Status	Required for all imports. Values are provided by PTM.	Transformation Manager writes the status for each workload to the Results spreadsheet after validation or after successful import. Clear the field for import.
Workload ID	Optional; recommended for all imports. Values are provided by PTM.	If this column is present, PTM writes the original workload's unique workload ID to the Results spreadsheet after a workload is successfully imported to a project. Example: `1635326`
Type	Required for all imports.	Specify the workload type. Acceptable values are `CLOUD`, `PHYSICAL`, or `VIRTUAL`.

Custom Fields

Bulk Import expects the headings of the **Custom X** columns to match the custom field names you have previously defined for the project. Each project can have up to 7 user-defined fields that apply project-wide. See Table A-2.

You can associate logical names and purpose with the custom fields for each project. For example, if you want to identify the workload with its day-to-day IT administrator, you might define a **Field 1** name of **Contact** for the project. In the spreadsheet, you use **Contact** instead of **Custom 1** as the column heading. Specify values for the field as appropriate for your project, such as a contact person's name, username, or email address.

Table A-2   *Custom Field Parameters*

Parameters	Required/Optional	Description
Custom 1	Optional	Specify the project's Field 1 name as the column heading. For each workload, specify the value based on the project's Field 1 definition.
Custom 2	Optional	Specify the project's Field 2 name as the column heading. For each workload, specify the value based on the project's Field 2 definition.

Parameters	Required/Optional	Description
Custom 3	Optional	Specify the project's Field 3 name as the column heading. For each workload, specify the value based on the project's Field 3 definition.
Custom 4	Optional	Specify the project's Field 4 name as the column heading. For each workload, specify the value based on the project's Field 4 definition.
Custom 5	Optional	Specify the project's Field 5 name as the column heading. For each workload, specify the value based on the project's Field 5 definition.
Custom 6	Optional	Specify the project's Field 6 name as the column heading. For each workload, specify the value based on the project's Field 6 definition.
Custom 7	Optional	Specify the project's Field 7 name as the column heading. For each workload, specify the value based on the project's Field 7 definition.

Workload Details

Workload details define the operating system and hardware for the source workload. These details are automatically populated for the target workload. You can later modify the details for the target workload by using the Workload dialog or the Bulk Edit action in the Web Interface. See Table A-3.

You can create source resources for Hosts, Networks, and Datastores by including those columns in the spreadsheet. Include the Environment column to create a resource that can apply to a source workload or target workload.

NOTE: A source resource name must be unique among source resources of the same type. The Environment resource name must be unique among environment resources for the project.

The resource 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.

Table A-3 *Workload Details Parameters*

Parameters	Required/Optional	Description
Cloud Provider	Optional; recommended for Cloud workloads	Specify the cloud provider that will host a cloud workload. Acceptable values are: ◆ `Amazon Web Services` ◆ `Microsoft Azure` ◆ `Rackspace` ◆ `vCloud` ◆ `Google`

Parameters	Required/Optional	Description
Operating System	Optional	Specify an operating system from the Operating Systems list configured in PTM. If no matching value is found in the Operating Systems list, the spreadsheet will not validate. Names are case sensitive.
		Examples:
| | | ```
CentOS 6
Citrix XEN Server
Red Hat Enterprise Linux 7
Solaris 11
SUSE Linux Enterprise Server 12
Windows Server 2003 (x32)
Windows 2008
Windows Server 2012 R2
Windows Server 2016
VMware ESX
``` |
		PTM includes most operating system types and release versions in the default Operating Systems list. Contact your System Administrator to add custom operating system values to the list.
Memory (MB)	Optional	Specify the maximum memory available for the workload. Values default to MB if no unit is specified. Valid binary units are B, MB, GB, TB, PB, EB, ZB, and YB.
		Examples: `2 GB`, `512`, `8GB`
# of Processors	Optional	Specify the number of processors allocated to the workload.
		Example: `2`
# of Cores	Optional	Specify the number of cores per processor.
		Example: `8`

Location

Location information can describe the logical, virtual, physical locations of the workload. See Table A-4.

Table A-4 *Location Parameters*

Parameter	Required/Optional	Description
Environment	Optional	Specify the name of the Environment resource for this workload. Values are case sensitive. If no matching value is found, PTM creates a new Environment resource for the project.
		Examples: `staging`, `preproduction`, and `production`
		NOTE: The Environment resource name must be unique among environment resources for the project, but it can apply to multiple workloads.

Parameter	Required/Optional	Description
Host	Optional	For a virtual workload, specify the name of the source Host resource for the source workload. Values are case sensitive. If no matching value is found, PTM creates a new source Host resource for the project. Examples: `mailhost`, `hyperv-cluster`, `esx2`, `citrix5.digitalair.com` **NOTE:** The source Host resource name must be unique among source Host resources for the project, but it can apply to multiple workloads.
Hypervisor	Optional	For a virtual workload, specify the hypervisor type running on its source Host resource. Names are case sensitive. Acceptable values are: ◆ `Citrix XenServer` ◆ `Linux KVM` ◆ `Microsoft Hyper-V` ◆ `SUSE Xen` ◆ `VMware`
VM Name	Optional	For a virtual workload, specify the VM name known to its virtualization host server. Examples: `vm-erm2`, `vm-msx-mailbox`, `vm-msx-web`
Site	Optional	Specify the geographical or logical location of the host machine. Examples: `Paris`, `Metro General Hospital`, `South Campus`
Hardware Type	Optional	Specify the hardware for the workload's host machine (that is, the physical machine or a VM's virtualization host machine). Examples: `Dell PowerEdge`, `Levono X`, `IBM BladeCenter`
Enclosure	Optional	Specify the enclosure for the host machine. Examples: `AA-21`, `C205-R5`, `IL6-C5-R3`
Enclosure Slot	Optional	Specify the slot number in the specified enclosure. Examples: `U19`, `B07`
Is Domain?	Optional	(OS: Windows family) Boolean value must be either `TRUE` or `FALSE`. Specify `TRUE` if the Windows workload is a member of a domain. Specify `FALSE` if the Windows workload is a member of a workgroup.

Parameter	Required/Optional	Description
Domain/Workgroup Name	Optional	Specify the name of the domain or workgroup for the Windows workload, as appropriate.
		Domain name examples: `CORPDOM`, `PARIS`, or `paris.digitalair.com`
		Workgroup name example: `WORKGROUP`

NICs

You can identify one or more NICs for a workload. You can specify any one of the available NIC input parameters to set up a NIC. See Table A-5. If you also include the **NIC1 UUID** column, PTM automatically populates the UUIDs in the Results spreadsheet. You can set up multiple NICs by adding additional NIC# column instances.

Table A-5 *NIC Parameters*

Parameters	Required/Optional	Description
NIC1 UUID	Optional; recommended for NIC. Values are provided by PTM.	The UUID is a set of hexadecimal numbers that uniquely identify the NIC in the project. If this column is present, PTM writes a unique ID for each NIC to the Results spreadsheet after a workload is successfully imported to a project,
		On a re-import, PTM keeps the same ID, and replaces the NIC's configuration information for the original workload.
		Example: `b916afef-ccfc-4501-aa4c-a4658cd9845d`
NIC1 Interface Name	Optional	Specify a unique interface name on the workload.
		Examples: `eth0`, `eth1`
NIC1 IP DHCP	Optional	Specify whether a DHCP server provides IP addresses for the NIC.
		Boolean value must be either `TRUE` or `FALSE`.
NIC1 IP Address	Optional	Specify an address for the NIC in IPv4 format.
		Example: `10.10.10.40`
NIC1 MAC	Optional	Specify the MAC address for the NIC in the MM:MM:MM:SS:SS:SS format.
		Example: `01:23:45:67:89:ab`
NIC1 Network Name	Optional	Specify the name of the source Network resource for the source workload. Values are case sensitive. If no match is found, PTM creates a new source Network resource for the project.
		Examples: `OrgNet-DMZ`, `OrgNet-Isolated`, `Azure-VNet-01`, `VMnet-08`
		NOTE: The source Network resource name must be unique among source Network resources for the project, but it can apply to multiple NICs on the same or different workloads.

Parameters	Required/Optional	Description
NIC1 VLAN ID	Optional	Specify the assigned VLAN ID for this NIC. Providing the ID makes the validation and import functions run faster. Valid values are 1 to 4094.
NIC1 Network Mask	Optional	Specify the network mask in IPv4 format. Example: `255.255.252.0`
NIC1 Gateway	Optional	Specify the default gateway address in IPv4 format. Multiple entries are not supported.
NIC1 DNS DHCP	Optional	Specify whether DNS DHCP is available for the NIC. Boolean value must be either `TRUE` or `FALSE`.
NIC1 DNS Servers	Optional	Specify one or more addresses in IPv4 format. For multiple entries, place each value on a separate line.
NIC1 Search Domains	Optional	Specify one or more search domains. For multiple entries, place each value on a separate line.

Create additional NIC# sections as appropriate, then continue to the next component section.

A workload can have multiple network cards, each of which has a unique network configuration. The first defined network card is designated as NIC1, the second as NIC2, and so on.

Disks

You can identify one or more disks for a workload. See Table A-6. A disk requires only the **Disk1 Vol Type** and **Disk1 Size** columns. If you also include the **Disk1 UUID** column, PTM automatically populates the UUIDs in the Results spreadsheet. You can set up multiple disks by adding additional Disk# column instances with the minimum of **Disk# Vol Type** and **Disk# Size** columns.

Table A-6 *Disk Parameters*

Parameters	Required/Optional	Description
Disk1 UUID	Optional; recommended for Disks. Values are provided by PTM.	The UUID is a set of hexadecimal numbers that uniquely identify the disk in the project. If this column is present, PTM writes a unique ID for each disk to the Results spreadsheet after a workload is successfully imported to a project. On a re-import, PTM keeps the same ID, and replaces the disk's configuration information for the original workload. Example: `866b4209-4779-48f8-a81d-e8aa04c63d55`
Disk1 Datastore Name	Optional, applies to Virtual workloads	Specify the name of the source Datastore resource that contains the disk. Values are case sensitive. If no matching value is found, PTM creates a new source Datastore resource for the project. Example: `san-dc-east` **NOTE:** The datastore name must be unique among source Datastore resources for the project. A datastore can apply to multiple disks on the same virtual workload or on different virtual workloads.

Parameters	Required/Optional	Description
Disk1 Vol Name	Optional	Specify the unique volume name on the workload.
Disk1 Vol Type	Optional; required for Disk	Acceptable values are `System`, `Local`, `NAS`, or `SAN`.
Disk1 Mount Point	Optional	Specify the path from the root of the volume.
Disk1 Size	Optional; required for Disk	Specify the total size of the disk. Values default to MB if no unit is specified. Valid binary units are B, MB, GB, TB, PB, EB, ZB, and YB. Examples: `2TB`, `500 GB`, `102400`
Disk1 Used	Optional	Specify the space used on the disk. Values default to MB if no unit is specified. Valid binary units are B, MB, GB, TB, PB, EB, ZB, and YB. Examples: `1.22TB`, `162 GB`, `51200`
Disk1 Frag Percent	Optional	Specify the current percentage of fragmentation on the disk. Example: `3`
Disk1 # Files	Optional	Specify the current number of files on the disk. Example: `13151359`

Create additional Disk# sections as appropriate, then continue to the next component section.

A workload can have multiple disks, each of which has its own configuration. The first defined disk is designated as `Disk1`, the second as `Disk2`, and so on.

Applications

You can identify one or more applications for a workload. See Table A-7. Add an **Application#** column instance for each application you want to track for the workload.

Table A-7   Application Parameter

Parameter	Required	Description
Application1 Name	Optional	Only the name of the application is needed. The application must be available to the workload. Values are case sensitive. If no matching value is found, PTM creates a new Application resource for the project. Example: `Paris-Project2-Exchange` **NOTE:** An Application name must be unique among Applications for the project, but it can apply to multiple workloads.

Create additional Application# sections as appropriate.

A workload can have multiple applications or services associated with it.The first defined application is designated with a column heading of `Application1 Name`, the second column heading as `Application2 Name`, and so on.

A.3   Downloading a Sample Bulk Import Spreadsheet

To download a sample spreadsheet:

1 Log in to the Web Interface as the Project Manager user, or as any system user.

2 Select **Planning > Workloads > Bulk Import** to open the Bulk Import dialog.

3 Click **Get sample spreadsheet**, then save the file to your local machine.

   The spreadsheet is in `.xls` file format.

A.4   Validating a Spreadsheet

Before you submit the Bulk Import spreadsheet, clear the contents in the Validation Status cell for each machine that you want to validate for import (or re-import).

The Validate tool displays the following states for machines and adds the information to the Validation Status column of the Results spreadsheet:

 ◆ **Ready for Import:** The row contains valid information.

   The Validate tool found no errors in the data submitted for the machine. All values are valid options and in the expected format. All required and dependent values are present.

 ◆ **Invalid:** The row contains invalid information.

   The Validate tool found one or more errors in the data submitted for this machine. The cell also includes messages about the type and location of the errors.

 ◆ **Imported:** The row was successfully imported or re-imported.

   On import, PTM creates (or modifies) the original and proposed workloads for this machine in the specified project. If you have edited the proposed workload by using the Web Interface, a re-import modifies data only for the original workload.

 ◆ **Ignored:** The row was previously imported for a workload that has already been submitted for transformation.

   You can use the Workload dialog to withdraw the machine from transformation to make it eligible again for re-import.

A.5   Downloading the Results Spreadsheet

After you perform a validation or an import of the Bulk Import spreadsheet, the **Get Results** option becomes available on the Bulk Import dialog.

1 On the Bulk Import dialog, click **Get Results**, then save the file to your local machine.

   The spreadsheet is in `.xls` file format.

After a validation, the Results spreadsheet reports the import readiness of each workload.

After a successful import, the Results spreadsheet contains the exact results of the current state of the import process, including:

 ◆ The deletion of blank rows

 ◆ More verbose results of the validation status

 ◆ The Workload ID assigned to each workload (if the **Workload ID** column is present in the input Bulk Import spreadsheet)

- The UUID assigned to each NIC (if the **NIC# UUID** column is present in the input Bulk Import spreadsheet)
- The UUID assigned to each disk (if the **Disk# UUID** column is present in the input Bulk Import spreadsheet)

A.6 Re-Importing Workloads

You can re-import workloads multiple times to separately set up the various categories of data. This partial import capability allows you to import a workload's full details from multiple sources, each with its own import spreadsheet. Each re-import adds details for the original workload and for the proposed workload.

For example, you can import the minimal data to create the workload. Subsequent re-imports can use separate spreadsheets to add workload details, location, NICs, disks, applications, and custom fields. Alternatively, you can continue to work in the same spreadsheet, adding the appropriate columns for each re-import at the end of the spreadsheet.

NOTE: After you edit the proposed workload by using the Web Interface, the proposed workload is no longer updated by any subsequent re-imports.

If you attempt to re-import a workload that is in a workflow state of Submitted or a later phase, then the Validation Status returns a message:

```
Cannot re-import workload after transformation has been submitted.
```

The import ignores workloads in the Submitted or later state, and continues unless there are invalid rows. Rows that are in the ignored state appear in the Ignored Rows tab of the Validation Results.

B 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. Only system users can be assigned roles at the system level or to multiple organizations.

The roles and permissions matrixes identify the various actions and access control permissions that users and groups have based on their assigned roles.

User Roles

Table B-1 Legend for the Roles and Permissions Matrixes

Column Heading	User or Role	Description
NA	Network Administrator	An IT administrator who has sufficient permissions and authority in the data center to install and configure the PlateSpin Transformation Manager Appliance. After the initial setup, this user (or another designated IT member) monitors and manages the appliance by logging in to the Appliance Management tool with either of the following appliance user identities: vaadmin `root`
SA	System Administrator role	Any Transformation Manager system user who is a member of the `Administrators` group.
PM	Project Manager role	A Transformation Manager user who is assigned the Project Manager role.

Column Heading	User or Role	Description
PA	Project Architect role	A Transformation Manager user who is assigned to the Project Architect role.
MS	Migration Specialist role	A Transformation Manager user who is assigned to the Migration Specialist role.
DV	Dashboard Viewer role	A Transformation Manager user who is assigned to the Dashboard Viewer role.

Annotations

N No

Y Yes

Y^U Restricted to user's own user account.

Y^U Restricted to user's own user account.

Y^A Restricted to the projects assigned to the user.

Y^N Restricted to non-Administrator groups.

Roles and Permissions Matrixes

Table B-2   Roles and Permissions for the Appliance and Application

Tasks and Actions	NA	SA	PM	PA	MS	DV
Appliance Installation and Setup						
Download software	Y	N	N	N	N	N
Prepare VM Environment						
Hypervisor Host	Y	N	N	N	N	N
Network	Y	N	N	N	N	N
External Storage	Y	N	N	N	N	N
Install VM	Y	N	N	N	N	N
Configure VM (vaadmin or `root`)						
Modify VM Settings	Y	N	N	N	N	N
Monitor VM (Ganglia metrics and reports)	Y	N	N	N	N	N
Add System Administrator User	Y	N	N	N	N	N
Change Password for System Administrator User	Y	N	N	N	N	N
Upgrade VM	Y	N	N	N	N	N
License Key/Blocks (Customer Center account owner)	Y	N	N	N	N	N

Tasks and Actions	NA	SA	PM	PA	MS	DV
Web Interface Configuration						
Licenses						
Add license key	N	Y	N	N	N	N
Edit license key	N	Y	N	N	N	N
Remove license key	N	Y	N	N	N	N
View active license key and unused blocks	N	Y	N	N	N	N
Operating Systems						
Create	N	Y	N	N	N	N
Edit	N	Y	N	N	N	N
Delete	N	Y	N	N	N	N
View	N	Y	N	N	N	N

Table B-3 *Roles and Permissions for User Management*

Tasks and Actions	SA	PM	PA	MS	DV
Users					
Organizations					
Create	Y	N	N	N	N
Edit	Y	N	N	N	N
Delete	Y	N	N	N	N
View	Y	Y^U	Y^U	N	N
Users					
Create	Y	Y	N	N	N
Edit	Y	Y^U	Y^U	Y^U	Y^U
Delete (except the last member of the Administrators group)	Y	Y	N	N	N
View	Y	Y	Y	Y	N
Change password	Y	Y^U	Y^U	Y^U	Y^U
Groups					
Create	Y	Y^N	N	N	N
Edit	Y	Y^N	N	N	N
Delete (except the Administrators group)	Y	Y^N	N	N	N
View	Y	Y^N	Y^N	N	N

Tasks and Actions	SA	PM	PA	MS	DV
Role-Based Access Control (who can assign roles)					
System Administrator Role (Administrators Group)					
Add members	Y	N	N	N	N
Remove members (except the last member)	Y	N	N	N	N
View members	Y	N	N	N	N
Project Manager Role					
Add	Y	N	N	N	N
Remove	Y	N	N	N	N
Project Architect Role					
Add	Y	Y	N	N	N
Remove	Y	Y	N	N	N
Migration Specialist Role					
Add	Y	Y	Y	N	N
Remove	Y	Y	Y	N	N
Dashboard Viewer Role					
Add	Y	Y	N	N	N
Remove	Y	Y	N	N	N

Table B-4   Roles and Permissions for Transformation Management

Tasks and Actions	SA	PM	PA	MS	DV
Dashboard					
View Warning and Error Statistics	Y	N	N	N	N
View Transformation Statistics	Y	Y[A]	Y[A]	Y[A]	Y[A]
Planning					
Projects					
View	Y	Y[A]	Y[A]	Y[A]	Y[A]
Create	Y	Y[A]	N	N	N
Edit	Y	Y[A]	Y[A]	N	N
Delete	Y	Y[A]	N	N	N

Tasks and Actions	SA	PM	PA	MS	DV
Waves					
View	Y	Y[A]	Y[A]	Y[A]	Y[A]
Create	Y	Y[A]	Y[A]	N	N
Edit	Y	Y[A]	Y[A]	N	N
Delete	Y	Y[A]	Y[A]	N	N
Batches					
View	Y	Y[A]	Y[A]	Y[A]	Y[A]
Create	Y	Y[A]	Y[A]	N	N
Edit	Y	Y[A]	Y[A]	N	N
Delete	Y	Y[A]	Y[A]	N	N
Applications					
View	Y	Y[A]	Y[A]	Y[A]	N
Create	Y	Y[A]	Y[A]	N	N
Edit	Y	Y[A]	Y[A]	N	N
Delete	Y	Y[A]	Y[A]	N	N
Workloads					
View	Y	Y[A]	Y[A]	N	N
Bulk Import	Y	Y[A]	Y[A]	N	N
Bulk Edit	Y	Y[A]	Y[A]	N	N
Edit	Y	Y[A]	Y[A]	N	N
Bulk Status Change	Y	Y[A]	Y[A]	N	N
Delete	Y	Y[A]	Y[A]	N	N
Transformations					
View	Y	Y[A]	Y[A]	Y[A]	N
View Statistics	Y	Y[A]	Y[A]	Y[A]	Y[A]
Submit	Y	Y[A]	Y[A]	N	N
Withdraw	Y	Y[A]	Y[A]	N	N
Bulk Status Change	Y	Y[A]	Y[A]	Y[A]	N
Execute Transformation	Y	N	Y[A]	Y[A]	N

Tasks and Actions	SA	PM	PA	MS	DV
Resources					
Credentials					
View	Y	Y[A]	Y[A]	Y[A]	N
Create	Y	Y[A]	Y[A]	N	N
Edit	Y	Y[A]	Y[A]	N	N
Delete	Y	Y[A]	Y[A]	N	N
Hosts (Source)					
View	Y	Y[A]	Y[A]	Y[A]	N
Delete	Y	Y[A]	Y[A]	N	N
Hosts (Target)					
View	Y	Y[A]	Y[A]	Y[A]	N
Create	Y	Y[A]	Y[A]	N	N
Edit	Y	Y[A]	Y[A]	N	N
Delete	Y	Y[A]	Y[A]	N	N
Networks (Source)					
View	Y	Y[A]	Y[A]	Y[A]	N
Delete	Y	Y[A]	Y[A]	N	N
Networks (Target)					
View	Y	Y[A]	Y[A]	Y[A]	N
Create	Y	Y[A]	Y[A]	N	N
Edit	Y	Y[A]	Y[A]	N	N
Delete	Y	Y[A]	Y[A]	N	N
Datastores (Source)					
View	Y	Y[A]	Y[A]	Y[A]	N
Delete	Y	Y[A]	Y[A]	N	N
Datastores (Target)					
View	Y	Y[A]	Y[A]	Y[A]	N
Create	Y	Y[A]	Y[A]	N	N
Edit	Y	Y[A]	Y[A]	N	N
Delete	Y	Y[A]	Y[A]	N	N

Tasks and Actions	SA	PM	PA	MS	DV
Environments					
View	Y	Y^A	Y^A	Y^A	N
Create	Y	Y^A	Y^A	N	N
Edit	Y	Y^A	Y^A	N	N
Delete	Y	Y^A	Y^A	N	N
Migration Servers					
View	Y	Y^A	Y^A	Y^A	N
Create	Y	Y^A	Y^A	N	N
Edit	Y	Y^A	Y^A	N	N
Delete	Y	Y^A	Y^A	N	N
Resource Pools					
View	Y	Y^A	Y^A	Y^A	N
Create	Y	Y^A	Y^A	N	N
Edit	Y	Y^A	Y^A	N	N
Delete	Y	Y^A	Y^A	N	N