



PlateSpin® Transformation Manager 2019.2 REST API Reference

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About This Book and the Library

The *Reference* provides information about the REST API interfaces available for PlateSpin Transformation Manager.

The guide introduces the following minimal information you need to begin working with the APIs:

- ♦ Access information for `restapi`, `swaggerui`, and `swagger.io` web interfaces
- ♦ Login requirements (PTM username and password)
- ♦ Permissions (restricted and enforced as it is in the Web Interface based on roles)
- ♦ Links to Swagger UI and Swagger IO vendor documentation
- ♦ Usage options (API, URL, and command line)

Refer to the following sections for details:

- ♦ [Chapter 1, “Overview of the REST APIs,” on page 7](#)
- ♦ [Chapter 2, “Components,” on page 19](#)
- ♦ [Chapter 3, “States and Sub-States,” on page 21](#)
- ♦ [Chapter 4, “Types,” on page 25](#)

Intended Audience

This document is intended for users who want to use the PlateSpin Transformation Manager REST API to add, modify, or remove objects and data in the PTM Database, or to perform transactions through a custom client.

Additional Documentation

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

Contact Information

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

Additional technical information or advice is available from several sources:

- ♦ **Product information and resources:** <https://www.microfocus.com/products/platespin/transformation-manager/>
- ♦ **Micro Focus Customer Center:** <https://www.microfocus.com/customercenter/>
- ♦ **Product Knowledge Base and Videos:** <https://www.microfocus.com/support-and-services/>

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

1 Overview of the REST APIs

PlateSpin Transformation Manager acts as a central repository for a project's transformation plans and workloads data. Its REST (Representational State Transfer) interface provides programmatic access to read project data and to write transformation data.

- ♦ [“REST API Query Methods” on page 7](#)
- ♦ [“Accessing the REST API Documentation” on page 7](#)
- ♦ [“Navigating the API Documentation” on page 8](#)
- ♦ [“HTTP Status Codes” on page 15](#)
- ♦ [“Generating a REST Client for the APIs” on page 16](#)

REST API Query Methods

You can use the following query methods:

- ♦ HTTP request URL
- ♦ Curl command line requests
- ♦ API calls

The REST service returns the query response in JSON format.

Accessing the REST API Documentation

The PlateSpin Transformation Manager REST API is available to anyone with a user account in PlateSpin Transformation Manager. For full privileges, the user should be a member of the Administrators group. Use the Web Interface to create a user account for your software developer. See [PTM 2019.2 Administrator Guide](#).

NOTE: Permissions to view results of a trial command is restricted and enforced as it is in the Web Interface based on roles for the user account of the logged-in user.

- 1 Launch a [supported web browser](#), then go to either of the following URLs:

```
https://<platespin_server_ip_address_or_dns_name>:8183/restapi
```

```
https://<platespin_server_ip_address_or_dns_name>:8183/swaggerui
```

These web locations are also available using HTTP and port 8182, if you have enabled the HTTP protocol for your PTM Appliance.

- 2 When you are prompted for login credentials, enter your PlateSpin Transformation Manager user name and password.

For information about creating user accounts in PlateSpin Transformation Manager, see [“Creating a User”](#) in the *PTM 2019.2 Administrator Guide*.

Navigating the API Documentation

The PlateSpin Transformation Manager REST API interactive console uses the open source Swagger UI tool to provide documentation about its APIs. You can learn about the APIs and interact with the REST service to try them.

- ♦ [“Viewing API Categories”](#) on page 8
- ♦ [“Viewing Operations”](#) on page 9
- ♦ [“Trying Queries”](#) on page 14

Viewing API Categories

The REST APIs are grouped according to product components in the following categories:

- ♦ applications
- ♦ batches
- ♦ cloudlocations
- ♦ clusterhosts
- ♦ clusters
- ♦ connectors
- ♦ credentials
- ♦ dependencies
- ♦ environments
- ♦ migrationservers
- ♦ networks
- ♦ operatingsystems
- ♦ organizations
- ♦ platforms
- ♦ preimages
- ♦ processes
- ♦ projects
- ♦ repositories
- ♦ resourcegroups
- ♦ resourcelimits
- ♦ subnets
- ♦ system
- ♦ transformations

- ◆ types
- ◆ waves

Viewing Operations

In the interactive API console, select one of the following options to expand a category and view the operations available:

- ◆ **Show/Hide:** Expands the API category to show a list of member operations, or collapses the API category.
- ◆ **List Operations:** Expands the API category to show a list of member operations.
- ◆ **Expand Operations:** Expands the API category and each of the member operations.

The list view shows the operation type (Get, Post, Put, Delete), the command, and a brief definition for each operation.

transformations

Show/Hide | List Operations | Expand Operations

GET	/transformations	Gets an abbreviated list of all transformations
POST	/transformations	Create a new transformation
GET	/transformations/deleted	Gets an abbreviated list of all transformations that are in a pending delete state
GET	/transformations/withdrawn	Gets an abbreviated list of all transformations that are in a pending withdraw state
GET	/transformations/cancelled	Gets an abbreviated list of all transformations that are in a cancel pending state
DELETE	/transformations/{tmid}	Delete a transformation object
GET	/transformations/{tmid}	Retrieve a complete transformation
PUT	/transformations/{tmid}	Update an existing transformation
GET	/transformations/search-by-migrate-info/{migrate_id}	Retrieve a complete transformation using Migrate workload information
GET	/transformations/from-migrate-id/{migrate_id}	Retrieve a complete transformation using a migrate server workload id
GET	/transformations/{tmid}/sourcediscoverydata	Retrieve the discovery data from the source workload on a transformation
PUT	/transformations/{tmid}/sourcediscoverydata	Set a transformation's source discovery data
GET	/transformations/{tmid}/isprocessing	Retrieve the processing flag for a transformation
PUT	/transformations/{tmid}/setprocessing	Set a transformation's processing flag
PUT	/transformations/{tmid}/clearprocessing	Clear a transformation's processing flag
PUT	/transformations/{tmid}/clearcancel	Clear a transformation's cancel flag
PUT	/transformations/{tmid}/clearwithdrawn	Clear a transformation's withdrawn flag
PUT	/transformations/{tmid}/clearimmediateintegrationaction	Clear a transformation's immediate integration action
POST	/transformations/importissues	Get a list of import issues for a new transformation
PUT	/transformations/{tmid}/transformationsubphase	Update the transformation phase of an existing transformation
PUT	/transformations/{tmid}/ptmsubphase	Update the transformation PTM sub-phase of an existing transformation
PUT	/transformations/{tmid}/transformationphase	Update the transformation sub-phase of an existing transformation
PUT	/transformations/{tmid}/transformationsubphasedetails	Update the transformation sub-phase detail (additional information)
PUT	/transformations/{tmid}/integration-retry	Set the integration retry value
GET	/transformations/{tmid}/processes	Get all processes for a transformation
POST	/transformations/{tmid}/processes	Create a new process for a transformation
DELETE	/transformations/{tmid}/connectordiscoverystatus	Remove a connector discovery status object from a transformation
GET	/transformations/{tmid}/connectordiscoverystatus	Get discovery status of connectors for a transformation
PUT	/transformations/{tmid}/connectordiscoverystatus	Set the discovery status for a connector
POST	/transformations/{tmid}/runreachability	Notify other connectors to try to run reachability for a transformation
POST	/transformations/{tmid}/setreachability	Set the reachability for a connector to a workload
POST	/transformations/{tmid}/match	Notify other connectors to try to match a transformation

Expand an operation to view the following information about the operation:

- ◆ Query method (GET, POST, PUT)
- ◆ Model schema
- ◆ Query parameters (as appropriate)
- ◆ Request definition and limitations
- ◆ Response format
- ◆ Response language support (JSON)

projects Show/Hide List Operations Expand Operations

GET /projects Get a list of projects

POST /projects Create a new project

DELETE /projects/{projId} Delete a project object

GET /projects/{projId} Get a specific project by id

Response Class (Status 200) !
successful operation

Model | Example Value

```
{
  "creationDate": "2018-11-04T01:04:18.704Z",
  "id": 0,
  "name": "string",
  "description": "string",
  "closedDate": "2018-11-04T01:04:18.704Z",
  "lastDiscoveryDate": "2018-11-04T01:04:18.704Z",
  "customerField1Name": "string",
  "customerField2Name": "string",
  "customerField3Name": "string",
}
```

Response Content Type

Parameters

Parameter	Value	Description	Parameter Type	Data Type
projId	<input type="text" value="(required)"/>	the id of the project to fetch	path	long
permRequest	<input type="text" value="NO_PERMS (default)"/>	Indicate whether or not effective permissions should be returned with result objects	query	string
permFilter	<input type="text" value="Provide multiple values in new lines."/>	Indicate which effective permissions should be returned if effective perms are requested. Must be a valid permission name. Can be a comma delimited list of permission names	query	Array(string)
fieldFilter	<input type="text" value="Provide multiple values in new lines."/>	The name of the fields to return. May be specified multiple times or as a comma delimited list of field names	query	Array(string)

Most operations will have parameters that refine the query. An expanded operation view includes a list of parameters, the default values for them, and a brief description of the parameter. The following example shows the parameters for a `/project` query.

Parameters				
Parameter	Value	Description	Parameter Type	Data Type
offset	<input type="text"/>	The number of objects to skip at the beginning of the entire object set	query	integer
limit	<input type="text" value="250"/>	The maximum number of objects to return. This number cannot be greater than 250	query	integer
sortField	<input type="text"/>	name of the field to sort on	query	string
sortOrder	<input type="text" value="↓"/>	The sort order for the results	query	string
searchString	<input type="text"/>	Value to search for within the fields specified in searchField	query	string
searchField	<input type="text" value="Provide multiple values in new lines."/>	A field to search within for the search string. May be specified multiple times or as a comma delimited list of search field names	query	Array[string]
permRequest	<input type="text" value="NO_PERMS (default)"/>	Indicate whether or not effective permissions should be returned with result objects	query	string
permFilter	<input type="text" value="Provide multiple values in new lines."/>	Indicate which effective permissions should be returned if effective perms are requested. Must be a valid permission name. Can be a comma delimited list of permission names	query	Array[string]
fieldFilter	<input type="text" value="Provide multiple values in new lines."/>	The name of a the fields to return. May be specified multiple times or as a comma delimited list of field names	query	Array[string]

Trying Queries

You can try an API to generate the proper command. Specify values for any required parameters, then click **Try it out**.

The following example shows the `/types` operation that does not have parameters.

The screenshot shows an API documentation interface for the `types` endpoint. At the top left, the endpoint name `types` is displayed. To the right, there are links for `Show/Hide`, `List Operations`, and `Expand Operations`. Below this, the HTTP method `GET` and the path `/types` are shown, along with a link `Get a list of types`. The response class is identified as `(Status 200)` with the description `successful operation`. A table with two columns, `Model` and `Example Value`, is present. The `Example Value` column contains a JSON array:

```
[
  {
    "type": "string",
    "url": "string"
  }
]
```

 Below the table, the `Response Content Type` is set to `application/json` via a dropdown menu. At the bottom left, there is a `Try it out!` button.

Click **Try it out!** to generate the corresponding query as a Curl command and an HTTP request URL. It also includes the command response body, code, and headers.

Curl

```
curl -X GET --header 'Accept: application/json' 'https://151.155.187.71:8183/restapi/types'
```

Request URL

```
https://151.155.187.71:8183/restapi/types
```

Response Body

```
[
  {
    "type": "Architecture",
    "url": "https://151.155.187.71:8183/restapi/architectures"
  },
  {
    "type": "DiskCopyMethod",
    "url": "https://151.155.187.71:8183/restapi/diskcopymethods"
  },
  {
    "type": "Health",
    "url": "https://151.155.187.71:8183/restapi/healths"
  },
  {
    "type": "MigrationServerType",
    "url": "https://151.155.187.71:8183/restapi/migrationservertypes"
  },
  {
    "type": "OSFamily",
    "url": "https://151.155.187.71:8183/restapi/osfamilies"
  }
]
```

Response Code

```
200
```

Response Headers

```
{
  "content-length": "1819",
  "content-type": "application/json",
  "server": "Jetty(9.3.28.v20170531)",
  "strict-transport-security": "max-age=2592000; includeSubDomains",
  "vary": "Accept-Encoding, User-Agent",
  "x-content-type-options": "nosniff",
  "x-frame-options": "SAMEORIGIN",
  "x-xss-protection": "1"
}
```

HTTP Status Codes

PlateSpin Transformation Manager uses standard HTTP Status Codes to indicate the status of the executed operations. The available status codes are described by [RFC 7231](http://tools.ietf.org/html/rfc7231#section-6) (<http://tools.ietf.org/html/rfc7231#section-6>) and in the [IANA HTTP Status Code Registry](http://www.iana.org/assignments/http-status-codes/http-status-codes.xhtml) (<http://www.iana.org/assignments/http-status-codes/http-status-codes.xhtml>).

Generating a REST Client for the APIs

PlateSpin Transformation Manager is compliant with the [OpenAPI Specification \(http://swagger.io/specification/\)](http://swagger.io/specification/), formerly known as the *Swagger RESTful API Documentation Specification*. You can use the open source [Swagger Editor \(http://editor.swagger.io\)](http://editor.swagger.io) to generate a REST client in your language of choice.

- ♦ “PTM Client Used by PlateSpin Migrate Connector” on page 16
- ♦ “Generating a Custom PTM Client from the PTM REST API” on page 16

PTM Client Used by PlateSpin Migrate Connector

The PTM Client used by PlateSpin Migrate Connector is available in the `ptmclient.zip` file on the PlateSpin Transformation Manager Appliance in the `<connector-path>\resources\` folder.

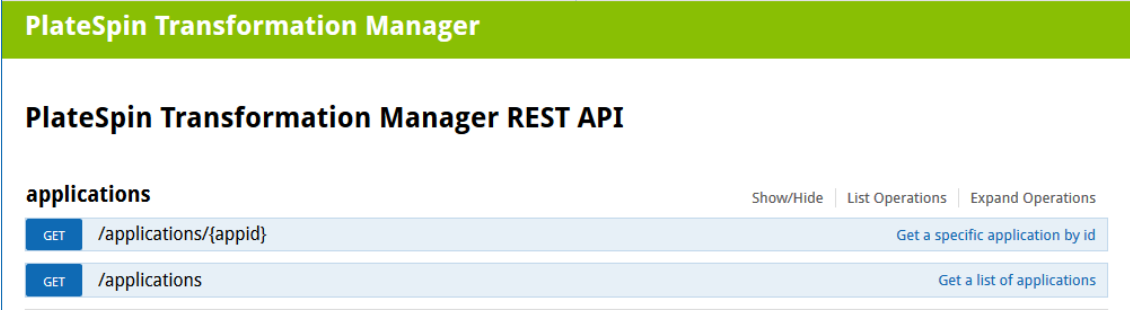
Generating a Custom PTM Client from the PTM REST API

The PTM REST API leverages the Swagger framework to present descriptions for its REST APIs. Swagger is built around the OpenAPI Specification (OAS). You can use Swagger tools to generate a client to “talk” to PTM. That is, your client sends a request to PTM and PTM responds with the requested information. Swagger supports a variety of programming languages.

The PTM RESTAPI interface is available on your PTM server at the following URL:

`http://<your-ptmserver-ip-address-or-fqdn>:8082/restapi`

For example: `http://10.10.10.10:8082/restapi`



PlateSpin Transformation Manager

PlateSpin Transformation Manager REST API

applications Show/Hide List Operations Expand Operations

GET	/applications/{appid}	Get a specific application by id
GET	/applications	Get a list of applications

The basic workflow for generating a PTM client:

- 1 In a web browser, go to `http://<your-ptmserver-ip-address-or-fqdn>:8082/restapi/swagger.json`
- 2 Click **Raw Data** to expand the code.


```

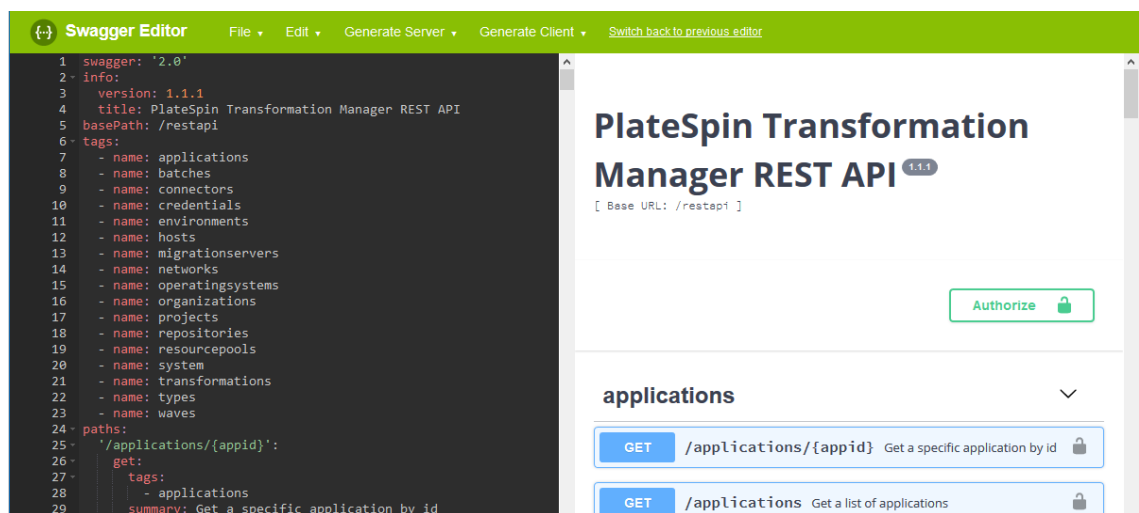
JSON  Raw Data  Headers
Save  Copy  Pretty Print

{
  "swagger": "2.0",
  "info": {
    "version": "1.1.1",
    "title": "PlateSpin Transformation Manager REST API"
  },
  "basePath": "/restapi",
  "tags": [
    {
      "name": "applications"
    },
    {
      "name": "batches"
    },
    {
      "name": "connectors"
    },
    {
      "name": "credentials"
    },
    {
      "name": "environments"
    }
  ],

```

- 3 Click **Copy** to save the information to your computer clipboard.
- 4 In a web browser, go to the Swagger Editor website at <http://editor.swagger.io>.
- 5 In the Swagger Editor toolbar, select **File > Clear editor**.
- 6 Right-click in the editing panel on the left, then click **Paste** to insert the information you copied.
- 7 Click **OK** to agree to convert the code from JSON to YAML.

The PlateSpin Transformation Manager REST API with REST commands and syntax display in the right panel.



This is the same type of information displayed when you visit the REST API location on your PlateSpin Transformation Manager server at `http://<your-ptmserver-ip-address-or-fqdn>:8082/restapi`.

- 8 In the Swagger Editor toolbar, select **Generate Client > Python** to download a client written in Python.

Our example code is written in Python. Swagger Editor supports over 50 other languages that you can use for the client interface you develop.

- 9 In the pop-up dialog, select **Save File** then click **OK** to save the a ZIP file that contains the generated Python client (`python-client-generated.zip`).

2 Components

The developer documentation presented in the /restapi location provides information about how to use the various product components. Refer to the product documentation for information about the concepts each represents.

Table 2-1 Conceptual Descriptions for Product Components

Component	For a conceptual description, see the following:
applications	“About Applications” in the <i>PTM User Guide</i> .
batches	“About Batches” in the <i>PTM User Guide</i> .
cloudlocations	“About Azure Cloud Locations” in the <i>PTM User Guide</i> .
clusterhosts	“About VMware Cluster Hosts” in the <i>PTM User Guide</i> .
clusters	“About VMware Clusters” in the <i>PTM User Guide</i> .
connectors	“PlateSpin Migrate Connector” in the <i>PTM Installation Guide</i> .
credentials	“About Waves” in the <i>PTM User Guide</i> .
credentials	“About Credentials Resources” in the <i>PTM User Guide</i> .
dependencies	Not available in the current release.
encryptionkeys	“About AWS Encryption Keys” in the <i>PTM User Guide</i> .
environments	“About Environment Resources” in the <i>PTM User Guide</i> .
iamroles	“About AWS IAM Roles” in the <i>PTM User Guide</i> .
keypairs	“About AWS Key Pairs” in the <i>PTM User Guide</i> .
migrationservers	“About Migration Server Resources” in the <i>PTM User Guide</i> .
networks	“About Network Resources” in the <i>PTM User Guide</i> .
operatingsystems	“About Operating System Types” in the <i>PTM Installation Guide</i> .
organizations	“About Organizations” in the <i>PTM Installation Guide</i> .
placementgroups	“About AWS Placement Groups” in the <i>PTM User Guide</i> .
platforms	“About Platforms” in the <i>PTM User Guide</i> .
preimages	Not available in the UI.
processes	Not available in the UI.
projects	“About Projects” in the <i>PTM User Guide</i> .
repositories	“About Datastore Resources” in the <i>PTM User Guide</i> .
resourcegroups	“About Resource Group Resources” in the <i>PTM User Guide</i> .

Component	For a conceptual description, see the following:
resourcelimits	Not available in the UI.
securitygroups	“About AWS Security Groups” in the <i>PTM User Guide</i> .
subnets	“About Subnet Resources” in the <i>PTM User Guide</i> .
system	Not available in the UI.
transformations	“About the Workload Dialog” in the <i>PTM User Guide</i> .
types	Chapter 4, “Types,” on page 25
waves	“About Waves” in the <i>PTM User Guide</i> .

3 States and Sub-States

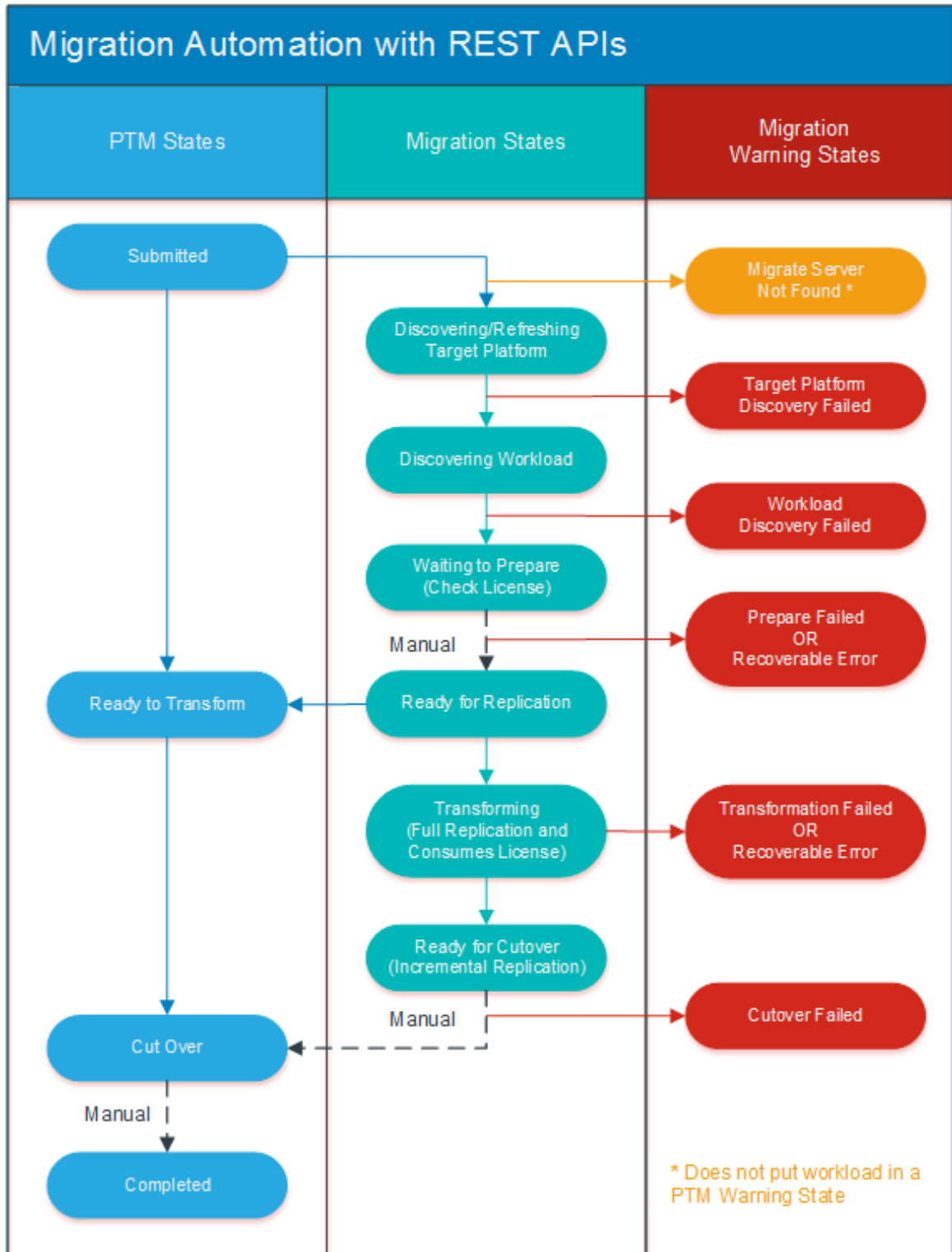
The Transformation Update API accepts sub-states from the PlateSpin Migrate Server, as shown in [Table 3-1](#). The reported sub-state appears in the Status column of the Workloads list. A Warning condition overrides the display of the sub-state.

Table 3-1 Sub-states Reported through the Transformation Update API from the PlateSpin Migrate Server

Transformation Sub-State	Description
MIGRATE_SERVER_NOT_CONFIGURED	The PlateSpin Migrate Server is not yet available on the replication network.
NOT_CONFIGURED	The PlateSpin Migrate Server does not know about the workload.
DISCOVERING_WL	The PlateSpin Migrate Server has been told to go discover one of our workloads (2 to 15 minutes).
WL_DISCOVERED	The PlateSpin Migrate Server has finished the workload discovery process.
DISCOVER_TARGET_HOST	The PlateSpin Migrate Server does not yet have the information for the target host. Discovery is in progress.
DISCOVER_WAIT	The target host is a physical machine. The user needs to insert the LRD CD and register the host with the PlateSpin Migrate Server.
TARGET_HOST_DISCOVERED	The PlateSpin Migrate Server has the necessary information for the target host.
MIGRATE_SERVER_INSUFFICIENT_LICENSES	The PlateSpin Migrate Server has no license available to configure this workload.
WL_NOT_CONFIGURED	The PlateSpin Migrate Server has discovered the workload, but the destination workload details have not yet been defined.
CONFIGURE_FAILED	Failure occurred while configuring the workload in the PlateSpin Migrate Server.
PREPARE_FAILED	Failure occurred while preparing the migration environment to begin replicating the workload.
READY_TO_REPLICATE	All discovery work for the workload is complete. The PlateSpin Migrate Server is waiting to perform the first full replication.
INITIAL_REPLICATION	The PlateSpin Migrate Server is performing the first, full replication of the workload. This might take many hours to complete.

Transformation Sub-State	Description
INCREMENTAL_REPLICATION	<p>The PlateSpin Migrate Server is performing a smaller, incremental replication of the workload. Incremental replications can occur only after a successful full replication.</p> <p>Incremental replications are fast for Block and Block with Driver disk copy methods. Incremental replications for the File disk copy method might take as long as a full replication.</p>
INCREMENTAL_REPLICATION_WAIT	The PlateSpin Migrate Server cannot perform incremental replications while the workload is in the Pre-Cutover Testing state.
CUTOVER_IN_PROGRESS	The cutover process has started. The process can take between 5 minutes and several hours.
CUTOVER_FAILED	The cutover process failed. This is a severe error.

Figure 3-1 Migration States that Trigger Warnings in PTM



4 Types

These APIs present information about the supported types for a variety of components.

Table 4-1

Type	Menu Location in the Web Interface or Bulk Import Spreadsheet
Architectures	Configuration > Operating Systems > Create > Architecture
	Configuration > Operating Systems > [Select OS] > Edit > Architecture
Disk Copy Methods	Planning > Workloads > Bulk Edit > Disk Copy Method
	Planning > Workloads > [Select workload] > Edit > Transformation Plan > Edit > Disk Copy Method
Healths	Planning > Workloads > Advanced Search > Health
Migration Server Type	Resources > Migration Servers > Create
	Resources > Migration Servers > Edit
OS Family	Configuration > Operating Systems > Create
	Configuration > Operating Systems > Edit
Transformation Method	Planning > Workloads > Bulk Edit > Transform Method
	Planning > Workloads > Edit > Transformation Plan > Edit > Transformation Method
Transformation Phase	Planning > Workloads > Bulk Status Change > Next Phase
	Planning > Workloads > [Select workload] > Edit > [Next Phase buttons]
Transformation SubPhase	Planning > Workloads > [Select workload] > Advanced Search > Sub Status
User Roles	Users > Create or Edit > Membership and Access
Volume Type	Planning > Workloads > [Select workload] > Edit > Storage > Edit > Volumes > [Select volume] > Volume Type

