



PlateSpin Migrate 2019.8 API Getting Started Reference

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About This Book

The *PlateSpin Migrate API Getting Started Reference* provides information about how to access and use the REST APIs for Migrate. The engineering documentation for the APIs is available through a Swagger toolset on your PlateSpin Migrate server.

- ♦ [Chapter 1, “Overview of Migrate API,” on page 7](#)
- ♦ [Chapter 2, “Using the Migrate API Reference Documentation,” on page 11](#)
- ♦ [Part I, “Getting Started Tutorial,” on page 19](#)
- ♦ [Appendix A, “Documentation Updates,” on page 51](#)

Audience

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

Additional Documentation

This guide is part of the PlateSpin Migrate documentation set. For a complete list of publications supporting this release, visit the [PlateSpin Migrate Documentation website \(https://www.microfocus.com/documentation/platespin/platespin-migrate-2019-8\)](https://www.microfocus.com/documentation/platespin/platespin-migrate-2019-8).

Documentation Updates

The most recent version of this guide can be found at the [PlateSpin Migrate Documentation website \(https://www.microfocus.com/documentation/platespin/platespin-migrate-2019-8\)](https://www.microfocus.com/documentation/platespin/platespin-migrate-2019-8).

Contacting Micro Focus

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

Additional technical information or advice is available from several sources:

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

1 Overview of Migrate API

Micro Focus supports the PlateSpin Migrate API for internal and external users of PlateSpin Migrate 2019.8. The legacy Protection Services API interface is intended only for internal use.

- ♦ [Section 1.1, “Supported Migrations,” on page 7](#)
- ♦ [Section 1.2, “Terminology Changes in Migrate API,” on page 7](#)
- ♦ [Section 1.3, “Prerequisites for Using Migrate API,” on page 8](#)
- ♦ [Section 1.4, “About Migrate API,” on page 8](#)

1.1 Supported Migrations

For PlateSpin Migrate 2019.8, Migrate API supports end-to-end headless migrations to the following target platforms:

- ♦ Amazon Web Services
- ♦ Microsoft Azure
- ♦ VMware
- ♦ VMware vCloud Director

Migrate API implements all necessary platform configuration settings, workload configuration settings, and workflow actions for migrations for these targets. You can also use PlateSpin Migrate Web Interface to configure the platforms and configure sources for migration to these platforms, then use Migrate API to drive the migration workflow.

For migration planning information, see [“Planning Your Workload Migrations”](#) in the *PlateSpin Migrate 2019.8 User Guide*.

1.2 Terminology Changes in Migrate API

[Table 1-1](#) compares terms used in the legacy Protection Services API with the term used in Migrate API for the same object or action.

Table 1-1 Terminology Changes in Migrate API

Protection Services API	Migrate API
Target, Container	Platform
Workload, Contract	Transformation
Discovered machine	Source
Replicate, Replication	Migrate, Migration

1.3 Prerequisites for Using Migrate API

In addition to the prerequisites for PlateSpin Migrate Server, Migrate API requires the Microsoft .NET Core Hosting Bundle (version 2.2 or greater) to be installed on the Migrate Server. The PlateSpin Migrate Prerequisites script installs and configures other prerequisite software, and then downloads and installs v2.2.3 of the .NET Core Hosting Bundle.

NOTE: If you install Microsoft .NET Framework when you install prerequisite software on the Migrate Server host, you must reboot the server to complete the .NET Framework installation before you install the .NET Core Hosting Bundle.

For information, see “[System Requirements for PlateSpin Server](#)” and “[Installing Prerequisite Software](#)” in the *PlateSpin Migrate 2019.8 Installation and Upgrade Guide*.

1.4 About Migrate API

The PlateSpin Migrate API is available to anyone with a user account in PlateSpin Migrate 2019.8.

- ◆ [Section 1.4.1, “Design,” on page 8](#)
- ◆ [Section 1.4.2, “Authentication,” on page 9](#)
- ◆ [Section 1.4.3, “Endpoints,” on page 9](#)

1.4.1 Design

Migrate API design follows common REST principles:

- ◆ **JSON:** Migrate API passes and receives data by using JSON.
- ◆ **HTTP Status Codes:** Migrate API uses standard HTTP status codes to indicate success or failure of operations:
 - ◆ 2xx are success codes.
 - ◆ 4xx are bad or unauthorized request codes.
 - ◆ 5xx are error codes.

- ◆ **REST Terminology:**

- Resource**

- Information returned by an API request.

- Endpoint**

- How you access the resource.

- Method**

- Allowed interaction with the resource, such as GET, POST, PUT, or DELETE.

- Parameter**

- Option you can pass with the endpoint to influence the response.

- Path Parameter**

- Variable part of a URL path, typically used to point to a specific resource, such as an object identified by its Object ID.

Request Example

Sample request that uses the endpoint with some parameters having example values.

Response Example

Sample response from the request example.

Response Schema

Defines all possible elements in the response example.

1.4.2 Authentication

Migrate API uses NTLM authentication, which is also used for access to PlateSpin Migrate Web Interface. Use the same username and password for API authentication that you use for logging in to the Web Interface.

1.4.3 Endpoints

Migrate API root endpoint is:

`https://%Server%/MigrateApi/2019.8`

Migrate API is meant to be self-documenting. You can use the API to discover and understand the capabilities of the service without access to source code, documentation, or through network traffic inspection. Starting with the root endpoint, you can discover endpoints and interact with resources. To find more endpoints, follow the links from the root response and links from subsequent requests.

For example, [Figure 1-1](#) shows the response for the root endpoint, where 10.10.10.143 represents the Migrate Server IP address. You can follow the links in the response to get information about platforms, sources, and transformations that are currently configured for the Migrate Server.

Figure 1-1 Migrate API Root Endpoint Response

```
{
  "links": [
    {
      "href": "https://10.10.10.143/MigrateApi/2019.8/platforms",
      "rel": "platforms",
      "methods": [
        "GET"
      ]
    },
    {
      "href": "https://10.10.10.143/MigrateApi/2019.8/sources",
      "rel": "sources",
      "methods": [
        "GET"
      ]
    },
    {
      "href": "https://10.10.10.143/MigrateApi/2019.8/transformations",
      "rel": "transformations",
      "methods": [
        "GET"
      ]
    }
  ]
}
```

2 Using the Migrate API Reference Documentation

Migrate API provides API reference documentation through the Swagger toolset. You can view information about the API, experiment with requests, and view responses.

- ♦ [Section 2.1, “Accessing the API Reference,” on page 11](#)
- ♦ [Section 2.2, “Overview of the API Reference,” on page 11](#)
- ♦ [Section 2.3, “Exploring Migrate Resources,” on page 13](#)
- ♦ [Section 2.4, “Exploring Schemas,” on page 18](#)

2.1 Accessing the API Reference

Users with an account for the PlateSpin Migrate Web Interface can access the API reference at the following URL:

```
https://%Server%/MigrateApi/swagger/
```

Replace %Server% with the IP address of the PlateSpin Migrate Server.

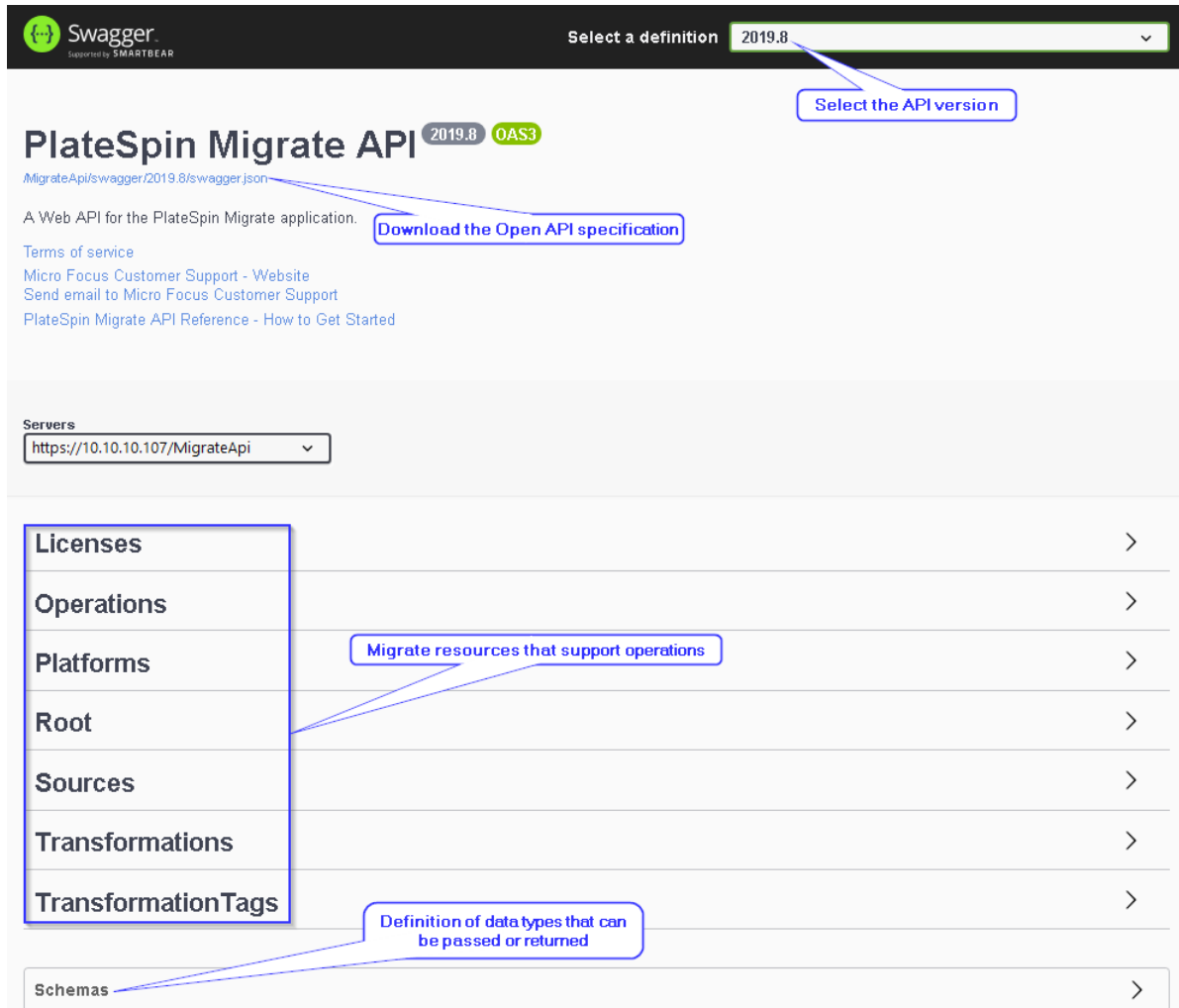
Log in by using your PlateSpin Migrate username and password.

2.2 Overview of the API Reference

[Figure 2-1](#) identifies key areas of the Migrate API reference documentation. Each area is described below.

- ♦ [API Version](#)
- ♦ [Open API Specification](#)
- ♦ [Migrate Resources](#)
- ♦ [Schemas](#)

Figure 2-1 Layout of PlateSpin Migrate API Reference Documentation



2.2.1 API Version

Version 2019.8 is the latest release version of PlateSpin Migrate API. As development continues, we expect breaking changes to require a new release version. When a new version is released, we currently plan to support the prior version for up to one year from that date.

2.2.2 Open API Specification

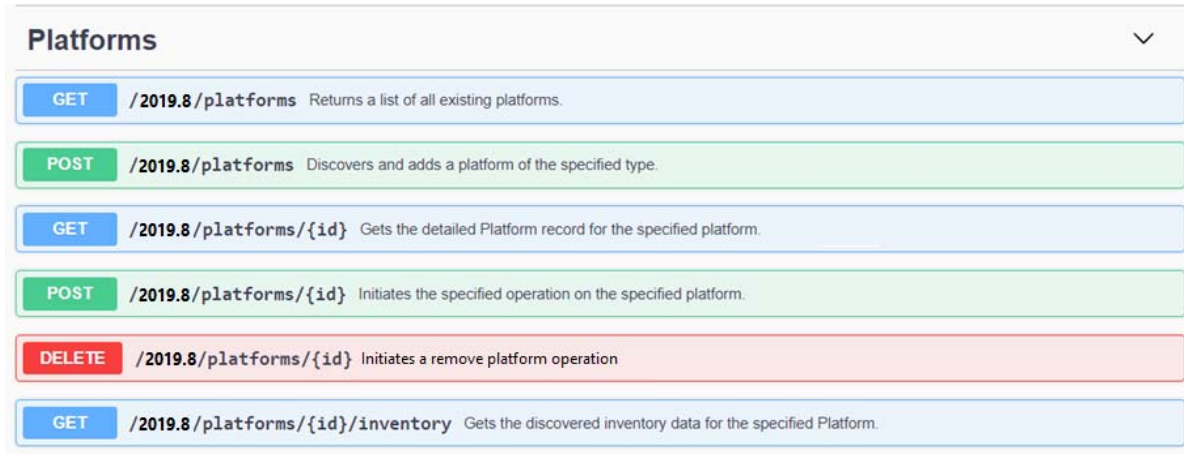
The Migrate API is based on the specified Open API Specification. You can download the Open API Specification and use it to generate client libraries through the Swagger toolset. We have not tested this capability of the Swagger toolset.

2.2.3 Migrate Resources

Migrate Resources represent paths that can be called to support operations. Expand a section to see the methods of interaction that are allowed with the resource, such as GET, POST, PUT, or DELETE.

For example, you can expand the **Platforms** resource to show valid operations. See [Figure 2-2](#).

Figure 2-2 Methods of Interaction Allowed for Platforms Resources



Platforms	
GET	/2019.8/platforms Returns a list of all existing platforms.
POST	/2019.8/platforms Discovers and adds a platform of the specified type.
GET	/2019.8/platforms/{id} Gets the detailed Platform record for the specified platform.
POST	/2019.8/platforms/{id} Initiates the specified operation on the specified platform.
DELETE	/2019.8/platforms/{id} Initiates a remove platform operation
GET	/2019.8/platforms/{id}/inventory Gets the discovered inventory data for the specified Platform.

To learn more about how to navigate the API reference to understand the resources, methods, operations, and relationships, continue with [Section 2.3, “Exploring Migrate Resources,” on page 13](#).

2.2.4 Schemas

The Schemas option at the bottom of the Migrate API landing page provides definitions of data types that can be passed or returned. See [Section 2.4, “Exploring Schemas,” on page 18](#).

2.3 Exploring Migrate Resources

The list of resources on the Migrate API landing page is only the beginning. You can navigate the interface to learn more information about the resources, available methods to perform on them, and operations and relationships for them.

- ◆ [Section 2.3.1, “Method Details for a Simple Request,” on page 14](#)
- ◆ [Section 2.3.2, “Method Details If a Request Body Can Accept Multiple Data Types,” on page 15](#)
- ◆ [Section 2.3.3, “Method Details If a Request Can Return Multiple Types,” on page 17](#)

2.3.1 Method Details for a Simple Request

Click a method to expand the reference and view more details about it.

For example, [Figure 2-3](#) shows details for **Platforms > GET**.

Figure 2-3 Details for Platforms > GET Method

GET /2019.8/platforms Returns a list of all existing platforms.

Parameters

No parameters

Responses

Code	Description	Links
200	<p>A list of all existing platforms represented as Platform objects.</p> <p>application/json</p> <p>Controls Accept header:</p> <p>Example Value Schema</p> <pre>[{ "regionName": "string", "subscriptionId": "string", "clientId": "string", "azureCloudName": "string", "azureApiEndpoint": "string", "azureAuthenticationEndpoint": "string", "azureStorageEndpointSuffix": "string", "networks": [{ "id": "string", "name": "string", "resourceGroup": "string", "subnets": [{ "name": "string", "addressSpace": "string", "resourceGroup": "string", "isGatewaySubnet": true }] }] }]</pre>	No links

In the Responses panel, you can click the following options to get more information:

Example Value

Click **Example Value** to view example data as it might appear in the code.

Schema

Click **Schema** to view the schema for the object model.

2.3.2 Method Details If a Request Body Can Accept Multiple Data Types

If a method accepts multiple data types in a request body, the Request Body panel displays acceptable schema definitions. If you click **Example Value**, no information displays.

For example, [Figure 2-4](#) displays details for **Platforms > POST**. It identifies fields and values that you can use in the request body. The Example Value panel is empty. A superscripted key word in red font next to the Request Body title indicates if the request body content is *required* or *optional*.

Figure 2-4 Details for Platforms > POST Method

The screenshot shows the API documentation for the **POST /2019.8/platforms** method. The method description is "Discovers and adds a platform of the specified type." An example request body is provided: `{ "type": "AddPlatformVCenter", "host": "10.10.10.30", "clusterName": "cluster60", "Username": "john.doe@my.company.com", "Password": "Password1" }`. The **Parameters** section is empty. The **Request body** section is marked as **Required** and shows a dropdown menu set to `application/json`. Below this, a text block explains that the request body must contain the JSON representation of one of the following data types: `AddPlatformAmazonCloud`, `AddPlatformAzureCloud`, `AddTargetEsxHost`, `AddPlatformVCenter`, `AddPlatformVCloud`. It also mentions that the request must contain a `Type` field and a `Type` field. Below the text, there are two tabs: **Example Value** and **Schema**. The **Example Value** tab is selected, and a blue callout box with the text "Example value is empty" points to the empty content area. The **Responses** section shows a table with one entry: **Code** 200, **Description** "An OperationStatus object with Links that can be used to track the status of the asynchronous operation.", and **Links** "No links". Below the table, there is a dropdown menu set to `application/json` and a "Controls Accept header" label.

You can click **Schema** to get information about what data the method accepts. You can expand a platform type to view the model for fields and values to include in the request body. A red asterisk (*) next to the field indicates that it is required.

For example, [Figure 2-5](#) shows the platform type with information about its fields and values to specify in a request body.

Figure 2-5 Details for Platforms > POST > Schema

The screenshot displays the Swagger UI for the 'Platforms' endpoint. It shows the schema for the 'AddPlatform' operation. The schema is a JSON object with the following structure:

```

{
  "username": string (required, min length 2),
  "password": string (required, min length 2),
  "type": string (required, anyOf: AddPlatformAmazonCloud, AddPlatformAzureCloud, AddPlatformEsxHost, AddPlatformVCenter, AddPlatformVCloud),
  "AddPlatformAzureCloud": {
    "azureCloudName": string (required, min length 2),
    "locationName": string (required, min length 2),
    "subscriptionId": string (required, min length 2),
    "applicationId": string (required, min length 2),
    "apiEndpoint": string (nullable, true),
    "authenticationEndpoint": string (nullable, true),
    "storageEndpointSuffix": string (nullable, true)
  }
}

```

The schema definition for `AddPlatformAzureCloud` indicates what information is needed to add a new Azure location to the Migrate Server. The POST request body would be similar to the following:

```

{
  "username": "username@accountname.onmicrosoft.com",
  "password": "Azure password goes here",
  "type": "AddPlatformAzureCloud",
  "azureCloudName": "AzureCloud",
  "locationName": "centralus",
  "subscriptionId": "Subscription id goes here",
  "applicationId": "Application id goes here"
}

```

NOTE: The `apiEndpoint`, `authenticationEndpoint`, and `storageEndpointSuffix` fields are optional (nullable). They correspond to an `AzureCustom` value for `azureCloudName`. They are intentionally excluded in this example because custom Azure clouds are currently not supported in the PlateSpin Migrate Web Interface.

2.3.3 Method Details If a Request Can Return Multiple Types

If a method can return multiple types, the Example Data panel and the Schema panel are not included with the API reference documentation.

For example, [Figure 2-6](#) shows the documentation for request to get information about a specified platform.

Figure 2-6 Details for Platforms > GET > Platform ID

The screenshot displays the API documentation for the endpoint `GET /2019.8/platforms/{id}`. The page title is "GET /2019.8/platforms/{id} Gets the detailed Platform record for the specified platform." and includes a "Try it out" button.

Parameters

Name	Description
<code>id</code> * required string (path)	The platform's GUID.

Responses

Code	Description	Links
200	The detailed platform record for the specified platform. <code>application/json</code> (Accept header)	No links

2.4 Exploring Schemas

When no details are exposed in the method documentation, you can use the **Schemas** header at the bottom of the Migrate API landing page, then search for the resource type to view its details.

For example, [Figure 2-7](#) shows the definitions for the Platform resource type.

Figure 2-7 Details for Schemas > Platform

```
Platform v {
  description: A generic representation of a platform containing fields common to all platform types

  links > [...]
  id string
  nullable: true
  Gets or sets the platform's GUID.
  name string
  nullable: true
  Gets or sets the name of the platform
  status string
  nullable: true
  Gets or sets the platform's status.
  userName string
  nullable: true
  Gets or sets the username used when the platform was added.
  processorDescription string
  nullable: true
  Gets or sets a description of the processor of the machine where the platform is hosted.
  errorMessage string
  nullable: true
  Gets or sets the last error message associated with the platform.
  lastUpdated string
  nullable: true
  Gets or sets the last time the platform was refreshed.
  version string
  nullable: true
  Gets or sets a string indicating the current vendor version of the platform.
  transformationData string
  nullable: true
  Gets or sets generic transformation data that is associated with this platform. This field is not used by PlateSpin Migrate, but can be used by transformation manager products to associate data with a platform.
  type* string
  anyOf ->
  > [...]
  > [...]
  > [...]
  > [...]
  > [...]
  > [...]
  > [...]
}
```

NOTE: The missing Example Values or Schema data in a resource description is a shortcoming in the Swagger toolset. The Open API 3 Specification, which is relatively new, implemented support for polymorphism. Migrate API uses polymorphism. However, the Swagger toolset does not yet support it. We anticipate that the toolset will implement this ability in the future.

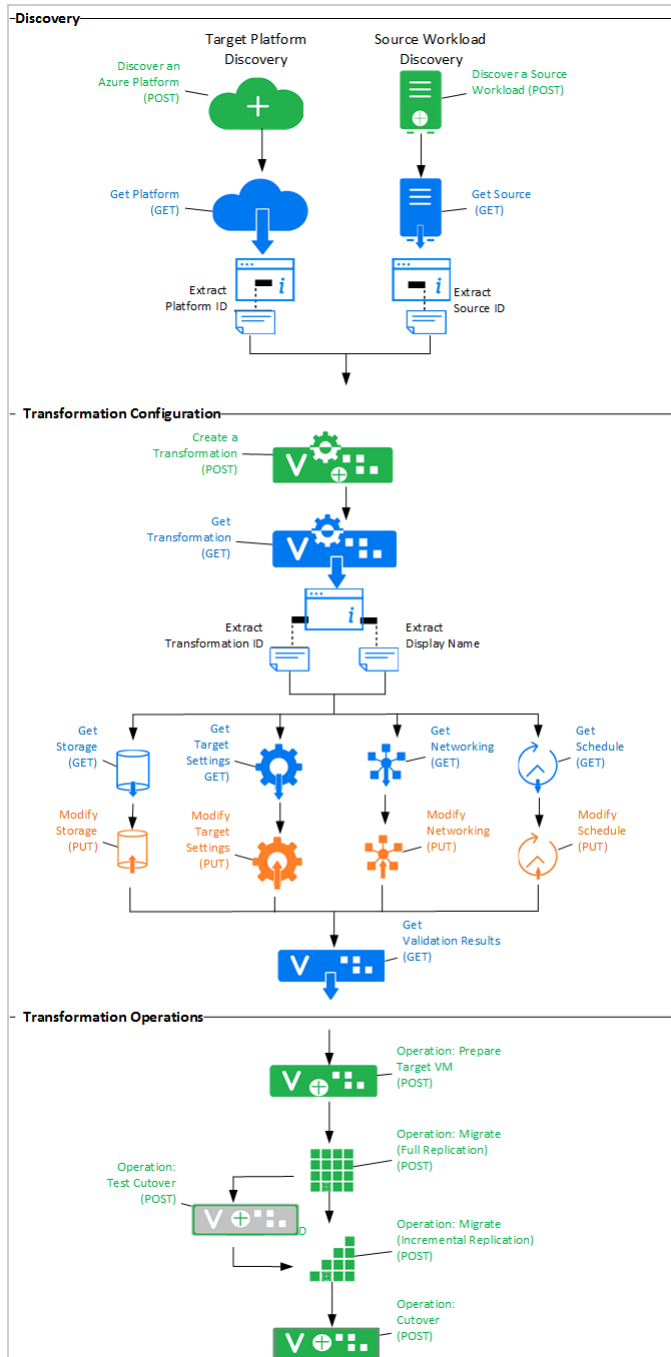
Getting Started Tutorial

The Getting Started Tutorial provides examples of how to define and execute migrations through the PlateSpin Migrate API.

- ◆ [Migration Workflow](#)
- ◆ [Step 1: Add an Azure Platform](#)
- ◆ [Step 2: Get Platforms](#)
- ◆ [Step 3: Discover a Windows Source](#)
- ◆ [Step 4: Create a Transformation](#)
- ◆ [Step 5: Get Transformation](#)
- ◆ [Step 6: Configure Networking](#)
- ◆ [Step 7: Validate](#)
- ◆ [Step 8: Prepare Transformation](#)
- ◆ [Step 9: Execute a Transformation](#)
- ◆ [Step 10: Remove a Transformation](#)
- ◆ [Documentation Updates](#)

3 Migration Workflow

The following diagram represents steps to configure and execute headless migrations to Microsoft Azure Cloud by using PlateSpin Migrate API.



4 Step 1: Add an Azure Platform

This example shows how to create a platform for an Azure location. Look at the API reference documentation under **Platforms > POST** to understand what parameters to include with the request body.

Method: POST

`https://10.10.10.143/MigrateApi/2019.8/platforms`

```
{
  "username": "username@accountname.onmicrosoft.com",
  "password": "Azure password goes here",
  "type": "AddPlatformAzureCloud",
  "azureCloudName": "AzureCloud",
  "locationName": "centralus",
  "subscriptionId": "Subscription id goes here",
  "applicationId": "Application id goes here"
}
```

Here is the data that the POST method returned. The response provides a link to an operations resource that you can query to see when the operation finishes.

Response: Data returned from POST

```
{
  "completedSynchronously": false,
  "operation": {
    "href": "https://10.10.10.143/MigrateApi/2019.8/operations/ff7a4b13-0ae8-4172-b6be-aa6400e2b87e",
    "rel": "self",
    "methods": [
      "GET"
    ]
  },
  "resource": {
    "href": "https://10.10.10.143/MigrateApi/2019.8/platforms/82bf9b3f-075d-4513-8124-aa6400e2b870",
    "rel": "resource",
    "methods": [
      "GET"
    ]
  }
}
```

If you click the operations resource link that is provided, you can get the state of the operation. This first example shows the operation is in progress.

Method: GET

`https://10.10.10.143/MigrateApi/2019.8/operations/ff7a4b13-0ae8-4172-b6be-aa6400e2b87e`

The following response shows what the operation looks like when the POST operation is still in progress. The "status" field at the top level is "running".

Response: Data returned from GET

```
{
  "operationType": "PreDiscovery",
  "subOperations": [
    {
      "name": "DiscoveringWorkloadTarget",
      "progress": 0,
      "subOperations": [
        {
          "name": "Operations.Cloud.DiscoverRegion",
          "progress": 1,
          "subOperations": null,
          "startedAt": "2019-06-06T19:45:37.71",
          "finishedAt": "0001-01-01T00:00:00",
          "status": "running",
          "links": []
        }
      ],
      "startedAt": "2019-06-06T19:45:27",
      "finishedAt": null,
      "status": "running",
      "links": []
    }
  ],
  "operationResults": [],
  "volumesTransferStatistic": null,
  "startedAt": "2019-06-06T19:45:27",
  "finishedAt": null,
  "status": "running",
  "links": [
    {
      "href": "https://10.10.10.143/MigrateApi/2019.8/operations/ff7a4b13-0ae8-4172-b6be-aa6400e2b87e",
      "rel": "self",
      "methods": [
        "GET"
      ]
    },
    {
      "href": "https://10.10.10.143/MigrateApi/2019.8/platforms/82bf9b3f-075d-4513-8124-aa6400e2b870?operation=abort",
      "rel": "operation-abort",
      "methods": [
        "POST"
      ]
    }
  ]
}
```


If you click the operations resource link that is provided again to get an updated status for the Azure platform that is being created. The following response shows what the operation looks like after the add Azure platform request has completed. The "status" field at the top level is "success".

Method: GET

<https://10.10.10.143/MigrateApi/2019.8/operations/ff7a4b13-0ae8-4172-b6be-aa6400e2b87e>

Response: Data returned from GET

```
{
  "operationType": "PreDiscovery",
  "subOperations": [
    {
      "name": "DiscoveringWorkloadTarget",
      "progress": 100,
      "subOperations": [
        {
          "name": "Operations.Cloud.DiscoverRegion",
          "progress": 100,
          "subOperations": null,
          "startedAt": "2019-06-06T19:45:37.71",
          "finishedAt": "2019-06-06T19:45:58.07",
          "status": "success",
          "links": []
        }
      ],
      "startedAt": "2019-06-06T19:45:27",
      "finishedAt": "2019-06-06T19:46:02",
      "status": "success",
      "links": []
    }
  ],
  "operationResults": [],
  "volumesTransferStatistic": null,
  "startedAt": "2019-06-06T19:45:27",
  "finishedAt": "2019-06-06T19:46:07",
  "status": "success",
  "links": [
    {
      "href": "https://10.10.10.143/MigrateApi/2019.8/operations/ff7a4b13-0ae8-4172-b6be-aa6400e2b87e",
      "rel": "self",
      "methods": [
        "GET"
      ]
    }
  ]
}
```


5 Step 2: Get Platforms

After you add one or more locations, you can query to get a list of platforms. This example shows what the results look like after you add the Azure location in [“Step 1: Add an Azure Platform” on page 23](#).

Method: GET

`https://10.10.10.143/MigrateApi/2019.8/platforms`

Response: Data returned from GET

```
[
  {
    "id": "82bf9b3f-075d-4513-8124-aa6400e2b870",
    "name": "centralus",
    "status": "Ready",
    "userName": "username@accountname.onmicrosoft.com",
    "processorDescription": "Azure",
    "errorMessage": null,
    "lastUpdated": "6/6/2019",
    "version": null,
    "transformationData": null,
    "links": [
      {
        "href": "https://10.10.10.143/MigrateApi/2019.8/platforms/82bf9b3f-075d-4513-8124-aa6400e2b870",
        "rel": "self",
        "methods": [
          "GET"
        ]
      },
      {
        "href": "https://10.10.10.143/MigrateApi/2019.8/platforms/82bf9b3f-075d-4513-8124-aa6400e2b870?operation=Refresh",
        "rel": "operation-Refresh",
        "methods": [
          "POST"
        ]
      },
      {
        "href": "https://10.10.10.143/MigrateApi/2019.8/platforms/82bf9b3f-075d-4513-8124-aa6400e2b870",
        "rel": "operation-Remove",
        "methods": [
          "DEL"
        ]
      },
      {
        "href": "https://10.10.10.143/MigrateApi/2019.8/operations/ff7a4b13-0ae8-4172-b6be-aa6400e2b87e",

```

```
        "rel": "lastOperation",
        "methods": [
            "GET"
        ]
    },
    {
        "href": "https://10.10.10.143/MigrateApi/2019.8/platforms/82bf9b3f-075d-4513-8124-aa6400e2b870/inventory",
        "rel": "inventory",
        "methods": [
            "GET"
        ]
    }
],
"type": "AzureCloudPlatform"
}
]
```

6 Step 3: Discover a Windows Source

This example shows how to discover a Windows source. Look at the API reference documentation under **Sources** > **POST** to understand what parameters to include with the request body.

Method: POST

```
https://10.10.10.143/MigrateApi/2019.8/sources
{
  "host": "10.10.11.12",
  "domain": "c",
  "username": "Administrator",
  "password": "Password1",
  "type": "AddWindowsSource",
}
```

Here is the data that the POST method returned. The response provides a link to an operations resource that you can query to see when the operation finishes.

Response: Data returned from POST

```
{
  "completedSynchronously": false,
  "operation": {
    "href": "https://10.10.10.143/MigrateApi/2019.8/operations/8bf13a70-91d1-48b6-b498-aa6400e504e8",
    "rel": "self",
    "methods": [
      "GET"
    ]
  },
  "resource": null
}
```

If you click the provided operations resource link, the following response shows the operation data that is returned after the discovery is complete. The "status" field at the top level is "success".

Method: GET

```
https://10.10.10.143/MigrateApi/2019.8/operations/8bf13a70-91d1-48b6-b498-aa6400e504e8
```

Response: Data returned from GET

```
{
  "operationType": "RunningDiscovery",
  "subOperations": [
    {
      "name": "DiscoverSourceMachine",
      "progress": 100,
      "subOperations": [
        {
          "name": "DiscoverServerDetails",
          "progress": 100,
          "subOperations": [
            {
              "name": "GatherMachineOrContainerData",
              "progress": 100,
              "subOperations": null,
              "startedAt": "2019-06-06T19:54:36.45",
              "finishedAt": "2019-06-06T19:56:01.263",
              "status": "success",
              "links": []
            }
          ],
          "startedAt": "2019-06-06T19:54:14.56",
          "finishedAt": "2019-06-06T19:56:24",
          "status": "success",
          "links": []
        }
      ],
      "startedAt": "2019-06-06T19:53:50",
      "finishedAt": "2019-06-06T19:56:29",
      "status": "success",
      "links": []
    }
  ],
  "operationResults": [],
  "volumesTransferStatistic": null,
  "startedAt": "2019-06-06T19:53:49",
  "finishedAt": "2019-06-06T19:56:44",
  "status": "success",
  "links": [
    {
      "href": "https://10.10.10.143/MigrateApi/2019.8/operations/8bf13a70-91d1-48b6-b498-aa6400e504e8",
      "rel": "self",
      "methods": [
        "GET"
      ]
    }
  ]
}
```

7 Step 4: Create a Transformation

This example shows how to create a transformation by linking a platform and a source. The request body includes the ID for the platform and the ID for the source, which you have from the responses of prior actions to [Add an Azure Platform](#) and [Discover a Windows Source](#). The transformation contains default settings. Look at the API reference documentation under [Transformations > POST](#) to understand what parameters to include with the request body.

Method: POST

```
https://10.10.10.143/MigrateApi/2019.8/transformations
```

```
{
  "platformId": "82bf9b3f-075d-4513-8124-aa6400e2b870",
  "sourceId": "676a5aa3-91fa-400d-abef-cb8fc77ed83a",
  "storageLayout": "sameAsSource"
}
```

Here is the data that the POST method returned. The current state is "Configured". The response provides links for operations that can be performed on the transformation as well as links to configuration settings options.

Response: Data returned from POST

```
{
  "id": "50023e0d-91e3-4aef-b847-aa6400e4ffa2",
  "displayName": "SB-W2012-R2-STD",
  "sourceId": "676a5aa3-91fa-400d-abef-cb8fc77ed83a",
  "platformId": "82bf9b3f-075d-4513-8124-aa6400e2b870",
  "currentState": "Configured",
  "tags": null,
  "links": [
    {
      "href": "https://10.10.10.143/MigrateApi/2019.8/transformations/50023e0d-91e3-4aef-b847-aa6400e4ffa2",
      "rel": "self",
      "methods": [
        "GET"
      ]
    },
    {
      "href": "https://10.10.10.143/MigrateApi/2019.8/operations/8bf13a70-91d1-48b6-b498-aa6400e504e8",
      "rel": "lastOperation",
      "methods": [
        "GET"
      ]
    },
    {
      "href": "https://10.10.10.143/MigrateApi/2019.8/transformations/50023e0d-91e3-4aef-b847-aa6400e4ffa2?operation=Prepare",

```

```

        "rel": "operation-Prepare",
        "methods": [
            "POST"
        ]
    },
    {
        "href": "https://10.10.10.143/MigrateApi/2019.8/transformations/50023e0d-91e3-4aef-b847-aa6400e4ffa2",
        "rel": "operation-Remove",
        "methods": [
            "DEL"
        ]
    },
    {
        "href": "https://10.10.10.143/MigrateApi/2019.8/transformations/50023e0d-91e3-4aef-b847-aa6400e4ffa2/storage",
        "rel": "Storage",
        "methods": [
            "GET",
            "PUT"
        ]
    },
    {
        "href": "https://10.10.10.143/MigrateApi/2019.8/transformations/50023e0d-91e3-4aef-b847-aa6400e4ffa2/networking",
        "rel": "Networking",
        "methods": [
            "GET",
            "PUT"
        ]
    },
    {
        "href": "https://10.10.10.143/MigrateApi/2019.8/transformations/50023e0d-91e3-4aef-b847-aa6400e4ffa2/schedule",
        "rel": "Schedule",
        "methods": [
            "GET",
            "PUT"
        ]
    },
    {
        "href": "https://10.10.10.143/MigrateApi/2019.8/transformations/50023e0d-91e3-4aef-b847-aa6400e4ffa2/targetSettings",
        "rel": "TargetSettings",
        "methods": [
            "GET",
            "PUT"
        ]
    },
    {
        "href": "https://10.10.10.143/MigrateApi/2019.8/transformations/50023e0d-91e3-4aef-b847-aa6400e4ffa2/replicationSettings",
        "rel": "ReplicationSettings",
        "methods": [

```



```
        "GET",
        "PUT"
    ]
},
{
    "href": "https://10.10.10.143/MigrateApi/2019.8/
transformations/50023e0d-91e3-4aef-b847-aa6400e4ffa2/validationResults",
    "rel": "ValidationResults",
    "methods": [
        "GET"
    ]
}
]
}
```


8 Step 5: Get Transformation

This example shows how to get information about a transformation that you created to see what settings are stored. Transformation data is separated in logical setting groups: `Storage`, `Networking`, `Schedule`, `TargetSettings`, `ReplicationSettings`, and `ValidationResults`. You can retrieve and modify settings for each group independently by using its link. Operations that you can perform on the transformation are identified by a relationship link starting with the string "operation-".

The POST method for creating a transformation returns the relationship links and operations links in the response data. See [“Step 4: Create a Transformation” on page 31](#). If you know the transformation ID, you can also retrieve the same information by using the GET method.

Method: GET

`https://10.10.10.143/MigrateApi/2019.8/transformations/50023e0d-91e3-4aef-b847-aa6400e4ffa2`

Response: Data returned from POST or GET methods

```
{
  "id": "50023e0d-91e3-4aef-b847-aa6400e4ffa2",
  "displayName": "SB-W2012-R2-STD",
  "sourceId": "2ab96271-3960-4865-8938-8fdf2520611c",
  "platformId": "82bf9b3f-075d-4513-8124-aa6400e2b870",
  "currentState": "Configured",
  "tags": null,
  "links": [
    {
      "href": "https://10.10.10.143/MigrateApi/2019.8/transformations/50023e0d-91e3-4aef-b847-aa6400e4ffa2",
      "rel": "self",
      "methods": [
        "GET"
      ]
    },
    {
      "href": "https://10.10.10.143/MigrateApi/2019.8/operations/8bf13a70-91d1-48b6-b498-aa6400e504e8",
      "rel": "lastOperation",
      "methods": [
        "GET"
      ]
    },
    {
      "href": "https://10.10.10.143/MigrateApi/2019.8/transformations/50023e0d-91e3-4aef-b847-aa6400e4ffa2?operation=Prepare",
      "rel": "operation-Prepare",
      "methods": [
        "POST"
      ]
    }
  ]
}
```

```

    },
    {
      "href": "https://10.10.10.143/MigrateApi/2019.8/transformations/50023e0d-91e3-4aef-b847-aa6400e4ffa2",
      "rel": "operation-Remove",
      "methods": [
        "DEL"
      ]
    },
    {
      "href": "https://10.10.10.143/MigrateApi/2019.8/transformations/50023e0d-91e3-4aef-b847-aa6400e4ffa2/storage",
      "rel": "Storage",
      "methods": [
        "GET",
        "PUT"
      ]
    },
    {
      "href": "https://10.10.10.143/MigrateApi/2019.8/transformations/50023e0d-91e3-4aef-b847-aa6400e4ffa2/networking",
      "rel": "Networking",
      "methods": [
        "GET",
        "PUT"
      ]
    },
    {
      "href": "https://10.10.10.143/MigrateApi/2019.8/transformations/50023e0d-91e3-4aef-b847-aa6400e4ffa2/schedule",
      "rel": "Schedule",
      "methods": [
        "GET",
        "PUT"
      ]
    },
    {
      "href": "https://10.10.10.143/MigrateApi/2019.8/transformations/50023e0d-91e3-4aef-b847-aa6400e4ffa2/targetSettings",
      "rel": "TargetSettings",
      "methods": [
        "GET",
        "PUT"
      ]
    },
    {
      "href": "https://10.10.10.143/MigrateApi/2019.8/transformations/50023e0d-91e3-4aef-b847-aa6400e4ffa2/replicationSettings",
      "rel": "ReplicationSettings",
      "methods": [

```

```
        "GET",
        "PUT"
    ]
},
{
    "href": "https://10.10.10.143/MigrateApi/2019.8/
transformations/50023e0d-91e3-4aef-b847-aa6400e4ffa2/validationResults",
    "rel": "ValidationResults",
    "methods": [
        "GET"
    ]
}
]
}
```


9 Step 6: Configure Networking

This example shows how to retrieve the current networking settings, and then modifying them. The GET method returns information for the network, test network, and replication network. It also provides information about the allowed NIC for the source.

Method: GET

`https://10.10.10.143/MigrateApi/2019.8/transformations/72a53b12-31eb-4111-af3d-aa6400f1cb6c/networking`

Response: Data returned from GET

```
{
  "networkConnections": [
    {
      "subnet": "default",
      "resourceGroup": "SB-W2012-R2-STD-VM-Resources",
      "includePublicIp": false,
      "isPrimary": true,
      "sourceConnectionName": "Ethernet",
      "includeInTarget": true,
      "tcpIpSettings": {
        "addressAllocationMethod": "dhcp",
        "ipAddressSettings": [],
        "defaultGateways": [],
        "dnsServers": [],
        "mtu": null,
        "type": "TcpIpSettings"
      },
      "virtualNetworkName": "1112a-WASATCH-RG-vnet",
      "type": "AzureNetworkConnection"
    }
  ],
  "testNetworkConnections": [
    {
      "subnet": "default",
      "resourceGroup": "SB-W2012-R2-STD-VM-Resources",
      "includePublicIp": false,
      "isPrimary": true,
      "sourceConnectionName": "Ethernet",
      "includeInTarget": true,
      "tcpIpSettings": {
        "addressAllocationMethod": "dhcp",
        "ipAddressSettings": [],
        "defaultGateways": [],
        "dnsServers": [],
        "mtu": null,
        "type": "TcpIpSettings"
      },
      "virtualNetworkName": "1112a-WASATCH-RG-vnet",
    }
  ]
}
```

```

        "type": "AzureNetworkConnection"
    }
],
"replicationNetwork": {
    "subnet": "default",
    "resourceGroup": "SB-W2012-R2-STD-VM-Resources",
    "includePublicIp": false,
    "isPrimary": true,
    "sourceConnectionName": "",
    "includeInTarget": true,
    "tcpIpSettings": {
        "addressAllocationMethod": "dhcp",
        "ipAddressSettings": [],
        "defaultGateways": [],
        "dnsServers": [],
        "mtu": null,
        "type": "TcpIpSettings"
    },
    "virtualNetworkName": "1112a-WASATCH-RG-vnet",
    "type": "AzureNetworkConnection"
},
"allowedSourceNetworkAdapters": [
    {
        "name": "Ethernet",
        "ipAddresses": [
            "10.10.11.12",
            "fe80::2c32:d2f3:7ba4:a0a4"
        ],
        "dhcpEnabled": true,
        "allowedForReplication": true,
        "type": "SourceNetworkAdapter"
    }
],
"type": "NetworkingTransformation"
}

```

You use a PUT method to modify networking settings. The following example modifies the `subnet` and `virtualNetworkName` settings for the network, test network, and replication network. The `subnet` setting will change from "default" to "Subnet2". The `virtualNetworkName` will change

from "1112a-WASATCH-RG-vnet" to "PlateSpinTest". The remaining settings are unchanged. If the PUT is successful, the call returns the new networking data, which should match the submitted data.

Method: PUT

<https://10.10.10.143/MigrateApi/2019.8/transformations/72a53b12-31eb-4111-af3d-aa6400f1cb6c/networking>

```
{
  "networkConnections": [
    {
      "subnet": "Subnet2",
      "resourceGroup": "SB-W2012-R2-STD-VM-Resources",
      "includePublicIp": false,
      "isPrimary": true,
      "sourceConnectionName": "Ethernet",
      "includeInTarget": true,
      "tcpIpSettings": {
        "addressAllocationMethod": "dhcp",
        "ipAddressSettings": [],
        "defaultGateways": [],
        "dnsServers": [],
        "mtu": null,
        "type": "TcpIpSettings"
      },
      "virtualNetworkName": "PlateSpinTest",
      "type": "AzureNetworkConnection"
    }
  ],
  "testNetworkConnections": [
    {
      "subnet": "Subnet2",
      "resourceGroup": "SB-W2012-R2-STD-VM-Resources",
      "includePublicIp": false,
      "isPrimary": true,
      "sourceConnectionName": "Ethernet",
      "includeInTarget": true,
      "tcpIpSettings": {
        "addressAllocationMethod": "dhcp",
        "ipAddressSettings": [],
        "defaultGateways": [],
        "dnsServers": [],
        "mtu": null,
        "type": "TcpIpSettings"
      },
      "virtualNetworkName": "PlateSpinTest",
      "type": "AzureNetworkConnection"
    }
  ],
  "replicationNetwork": {
    "subnet": "Subnet2",
    "resourceGroup": "SB-W2012-R2-STD-VM-Resources",
    "includePublicIp": false,
    "isPrimary": true,
```

```

    "sourceConnectionName": "",
    "includeInTarget": true,
    "tcpIpSettings": {
      "addressAllocationMethod": "dhcp",
      "ipAddressSettings": [],
      "defaultGateways": [],
      "dnsServers": [],
      "mtu": null,
      "type": "TcpIpSettings"
    },
    "virtualNetworkName": "PlateSpinTest",
    "type": "AzureNetworkConnection"
  },
  "allowedSourceNetworkAdapters": [
    {
      "name": "Ethernet",
      "ipAddresses": [
        "10.10.11.12",
        "fe80::2c32:d2f3:7ba4:a0a4"
      ],
      "dhcpEnabled": true,
      "allowedForReplication": true,
      "type": "SourceNetworkAdapter"
    }
  ],
  "type": "NetworkingTransformation"
}

```

10 Step 7: Validate

After you configure the transformation, you should verify that the configuration is valid. The following example shows how to request validation of the configuration for a specified transformation.

This query returned a warning about the host name of the target being the same as the source. This warning message can safely be ignored if the source will be in a shut down state after cutover, or if the source and target will be in different networks after cutover.

Method: GET

`https://10.10.10.143/MigrateApi/2019.8/transformations/50023e0d-91e3-4aef-b847-aa6400e4ffa2/validationResults`

Response: Data returned from GET

```
{
  "errors": [],
  "warnings": [
    {
      "validationMessage": "The hostname SB-W2012-R2-STD is
currently in use by the source machine",
      "severity": "warning"
    }
  ],
  "infos": []
}
```


11 Step 8: Prepare Transformation

After you have successfully validated the transformation settings, you are ready to prepare the transformation for replication and cutover by using one of the "operation-*" links. The Prepare operation requires the following request body. Look at the API reference documentation under [Transformations > POST > Request body > Schema](#) to understand that the operation requires the following request body:

Method: POST

```
POST https://{serverIP}/MigrateApi/2019.8/transformations/  
${Transformation Id}?operation=Prepare  
{  
  "type": "MigrateOptions",  
  "migrationType": "full"  
}
```

Example:

```
POST https://10.10.10.143/MigrateApi/2019.8/transformations/50023e0d-91e3-  
4aef-b847-aa6400e4ffa2?operation=Prepare  
{  
  "type": "MigrateOptions",  
  "migrationType": "full"  
}
```

NOTE: The Prepare operation is one of the operation links in the POST response when you create a transformation or in the GET response when you get a transformation. See also [“Step 4: Create a Transformation” on page 31](#) and [“Step 5: Get Transformation” on page 35](#).

Response: Data returned from POST

```
{
  "completedSynchronously": false,
  "operation": {
    "href": "https://10.10.10.143/MigrateApi/2019.8/operations/
ea6d6ce8-1b15-4e62-a540-aa6400ec16cb",
    "rel": "self",
    "methods": [
      "GET"
    ]
  },
  "resource": {
    "href": "https://10.10.10.143/MigrateApi/2019.8/transformations/
50023e0d-91e3-4aef-b847-aa6400e4ffa2",
    "rel": "resource",
    "methods": [
      "GET"
    ]
  }
}
```

12 Step 9: Execute a Transformation

After you have successfully prepared the target VM, you can use other "operation-*" links to replicate the source workload, execute test cutover, and execute cutover actions. The following transformation operations take a request body: `Migrate`, `Cutover`, `TestCutover`, and `EndTestCutover`. The process of starting these operations is the same as for preparing the target VM for migration.

Migrate Operations

The replication begins with full replication. Subsequent replications use incremental replication.

To start a full replication:

Method: POST

```
POST https://{serverIP}/MigrateApi/2019.8/transformations/
${Transformation Id}?operation=Migrate
{
  "type": "MigrateOptions",
  "migrationType": "full"
}
```

To start an incremental replication:

Method: POST

```
POST https://{serverIP}/MigrateApi/2019.8/transformations/
${Transformation Id}?operation=Migrate
{
  "type": "MigrateOptions",
  "migrationType": "incremental"
}
```

Test Cutover Operation

To start a test cutover operation:

Method: POST

```
POST https://{serverIP}/MigrateApi/2019.8/transformations/
${Transformation Id}?operation=TestCutover
{
  "type": "TestCutoverOptions",
  "shutdownTarget": "false",
  "performIncremental": "false"
}
```

Cutover Operation

To start a cutover operation:

Method: POST

```
POST https://{serverIP}/MigrateApi/2019.8/transformations/  
${Transformation Id}?operation=Cutover
```

```
{  
  "type": "CutoverOptions",  
  "shutdownTarget": "false",  
  "shutdownSource": "false",  
  "performIncremental": "true"  
}
```


13 Step 10: Remove a Transformation

After you prepare a transformation for replication or cutover operations, you might need to remove the transformation in certain conditions to abort the transformation workflow. The `Delete` operation takes an optional request body. Look at the API reference documentation under [Transformations > DELETE > Request body > Schema](#) to understand that the `Delete` operation has an optional request body.

The DELETE method returns standard operation information that you can use to track the delete operation.

Method: DELETE

`https://151.155.185.143/MigrateApi/2019.8/transformations/50023e0d-91e3-4aef-b847-aa6400e4ffa2`

```
{
  "preserveSource": false,
  "cleanupSource": true,
  "removeTarget": true
}
```


A

Documentation Updates

This section contains information on documentation content changes that were made in the *PlateSpin Migrate API Getting Started Reference* since the General Availability of PlateSpin Migrate 2019.8.

March 2020

Location	Update
"Step 8: Prepare Transformation" on page 45	Updated the section to add a request body because the <code>Prepare</code> operation requires a request body.

