



REST API Primer

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Introduction

The REST API for Plutora is a programmatic interface that enables creation, querying, modification and deletion of most Plutora objects such as Releases, Systems, and Environments. This functionality is useful for tool integrations, including:

1. Automating upload of data to Plutora from other tools.
2. Extracting data from Plutora to be supplied to other tools.
3. Triggering actions such as gate approvals.
4. Bulk object creation from spreadsheets or other data sources.

Before attempting to create automation around the Plutora REST API, it is advisable to understand the Plutora object model and the how the REST API interacts with the Plutora objects. This document sets out to provide that background through description and examples.

While automation is typically implemented with a programming or scripting language, this document uses the API testing tool, Postman to illustrate the use of the Plutora REST API. The use of Postman has advantages of being language agnostic, giving full access to the REST API, and will automatically generate source code for automation. Furthermore, the reader will be able to fully appreciate and understand the use of the Plutora REST API without being encumbered with the details of its implementation with any particular language. With that said, some basic familiarity with JSON and REST will be helpful.

Plutora REST API basics

For additional details, see the Integrations Documentation, [Setting up Plutora API](#) and for a full list of Plutora API functions, see the Plutora API help pages:

- <https://usapi.plutora.com/swagger>
- <https://ukapi.plutora.com/swagger>
- <https://auapi.plutora.com/swagger>

The Plutora REST API uses three HTTP verbs:

- POST – object creation
- PUT – object modification
- GET – object query
- DELETE – object deletion

Plutora objects are reference by globally unique identifiers (GUIDs), not name. For example, when creating an Environment with the POST verb, it is necessary to identify the System that the Environment is to be based on. That System has to be referenced by its GUID as illustrated in the JSON snippet below:

```
"linkedSystemId": "6d5ac322-33cc-44fe-9324-17a114e94c82"
```

When referring to specific objects with any of the HTTP verbs, the GUID will also appear in the URL. For example, to get the details about the System above, the following REST API call would be called:

```
GET https://<API_host>/systems/6d5ac322-33cc-44fe-9324-17a114e94c82
```

Where `<API_host>` is the FQDN of the REST API host, `usapi.plutora.com`, `ukapi.plutora.com`, or `auapi.plutora.com`, depending on your region.

GUIDs are generated by Plutora, so the REST API user does not create GUIDs. When creating a new object with POST, the `Id` field is not to be supplied, instead, the `Name` field and any other required fields. GUIDs can be obtained from the response body of a GET or POST request. For example, to find the GUIDs for all systems, use the following GET query:

```
GET https://<API_host>/systems
```

The response body will be of the JSON form below where the `id` can be found by searching for the desired System name:

```
[
  {
    "id": "6d5ac322-33cc-44fe-9324-17a114e94c82",
    "name": "My System"
  },
  {
    "id": "c5d3414f-6bab-4499-925f-26e71e41140d",
    "name": "Another System"
  }
]
```

There are also GUIDs for Organization, Users, and Customizations. These are found using the REST API calls:

- GET organizations
- GET users
- GET lookupfields/{type}

Where the *type* names are obtained using the GET `lookupfields` API. For example, to create an Environment, a `UsageWorkItemId` such as “Dev” is required. To find the GUID for “Dev” involves a two-step process:

1. Find the *type* corresponding to `UsageWorkItemId` in response to

```
GET lookupfields
```

Response:

```
[
  {
    "name": "ActionsByType",
    "description": "Actions - View By Type"
  },
  ***SNIP***
  {
    "name": "UsedForWorkItem",
    "description": "Used for WorkItemName"
  }
]
```

2. Look up "Dev" in the response to GET lookupfields/{type} to obtain the "Dev" UsedForWorkItem GUID:

GET lookupfields/UsedForWorkItem

Response:

```
[
  {
    "id": "fa69ee6d-7218-4002-9fbd-200eadc10e33",
    "value": "Dev",
    "sortOrder": 108,
    "type": "UsedForWorkItem"
  },
  ***SNIP***
  {
    "id": "538dbcf5-0bf5-40b5-8f40-8b0edf797a87",
    "value": "UAT",
    "sortOrder": 82,
    "type": "UsedForWorkItem"
  }
]
```

Currently, Customizations can only be queried with the Plutora REST API. They cannot be created or modified; this must be done through the UI or by the Plutora support team.

GET and DELETE only take a URL. On the other hand, when using PUT and POST a *body* is to be supplied.

The body provides the data necessary used in the modify or creation operation. In this primer, we will use JSON objects to represent this data. Other formats such as XML can be used as well. The data values supplied in the body of a Plutora REST API call can include one of the following data types:

Data Type	Sample JSON key-value snippet
String	"description": "Here is a free-form string"
Date	"implementationDate": "2017-12-01T18:00:00"
GUID	"id": "06381564-cc37-4db5-a81e-43a2f291e984"
Enum	"environmentStatus": "Active"
Array	<pre>"environmentIDs": ["ee8c881f-8b1b-450f-9108-2ab68ef34a55", "a6bbd5c3-e42a-414d-992f-b9f6d5dc565f", "fc893d66-2251-441d-b899-ed349a5529d6"]</pre>

When creating an object with the Plutora REST API, there is a minimum set of values that must be supplied and most of the time there will be dependencies on other objects. Thus, there is an order in which objects must be created. The UI or the [Plutora REST API documentation](#) can be used to identify the dependencies and minimum set of values. For example, when creating a Release from the UI, if you supply no entries and attempt to save the Release, you will get the following error message:

- Portfolio Association must be selected from the drop down
- Release ID cannot be blank
- Release Name cannot be blank
- Implementation Date must be set
- Release Type must be selected from the drop down
- Risk Level must be selected from the drop down

[hide](#)

Where the types of these fields can be found in the documentation for [POST releases](#):

Field	Type	Source	Look up REST API(s)
Portfolio Association	GUID	API look up from Organizations	GET organizations
Release ID	String	User supplied	N/A – user supplied value
Release Name	String	User supplied	N/A – user supplied value

Field	Type	Source	Look up REST API(s)
Implementation Date	Date	User supplied	N/A – user supplied value
Release Type	GUID	API look up, Customizations	GET lookupfields GET lookupfields/ReleaseType
Risk Level	GUID	API look up, Customizations	GET lookupfields GET lookupfields/ReleaseRiskLevel

Order of Object Creation

The outline below shows the creation dependency relationship between Plutora objects. Once objects such as Releases and System have been created, further associations can be made such as adding a System to a Release.

1. Organization, Users, and/or Customizations
 - a. Systems
 - i. Environments
 1. Hosts
 - a. Layers
 - b. Releases
 - i. Phases
 - ii. Gates
 - iii. Activities
 - iv. Criteria
 - c. TECRs
 - d. TEBRs
 - e. Changes
2. Environment Groups (Environment can be added after creation)

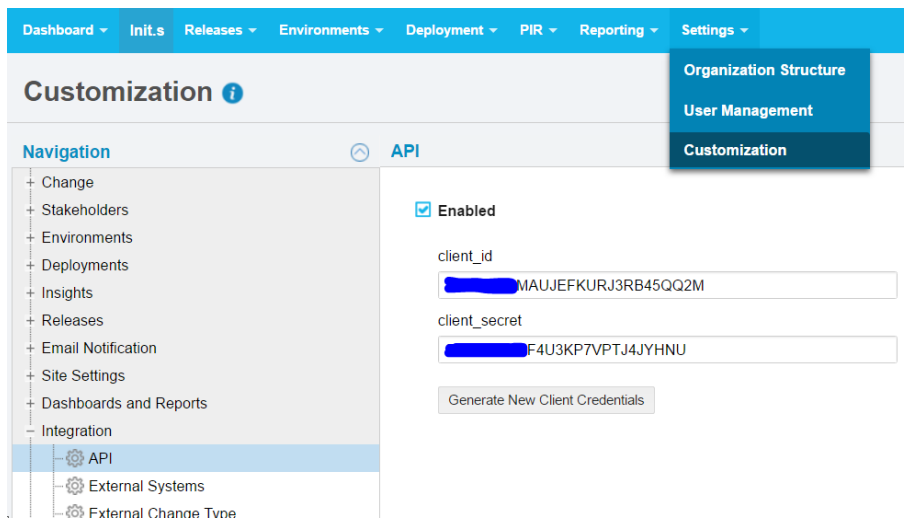
Plutora REST API Setup

To make Plutora REST API calls you will need:

1. A command or tool capable of issuing REST commands
2. User credentials to a Plutora system which has API access enabled
3. Plutora API keys

There are commands (curl), programming and scripting language bindings (Java, C#, perl, python), and tools (Postman) that can be used to issue REST commands. In this document we will be using Postman to illustrate the use of the Plutora REST API.

To enable Plutora REST API and access the API keys, navigate to Setting > Customizations > API:



Postman Setup

Postman can be installed from www.getpostman.com.

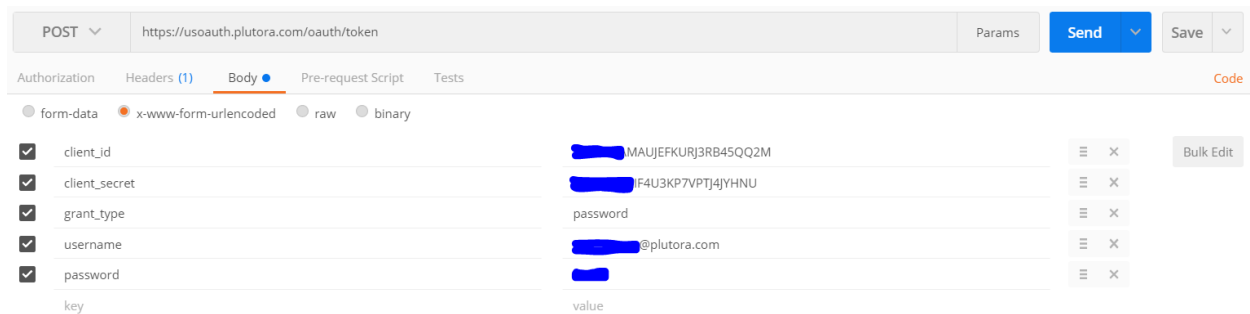
In addition to user credentials, an *access_token* is needed for each call to the Plutora REST API. This token can be generated using the `POST /oauth/token` API. To get the *access_token* in Postman, construct this request:



Make sure to select the POST verb. Your API host may be different than shown here depending on your region:

- US: <https://usapi.plutora.com>
- UK: <https://ukapi.plutora.com>
- AU: <https://auapi.plutora.com>

Add the Header keys "Content-Type" and set its value to "applications/x-www-form-urlencoded".



Select "x-www-form-urlencoded" for the Body format. Create the key-value pairs as shown above using your credentials and API keys. Press Send. The response you get back should look like this:

POST ▼ https://usoauth.plutora.com/oauth/token Params Send ▼ Save ▼

Authorization Headers (1) Body ● Pre-request Script Tests Code

☒ Content-Type application/x-www-form-urlencoded ≡ × Bulk Edit Presets ▼

key value

Body Cookies Headers (14) Tests Status: 200 OK Time: 391 ms

Pretty Raw Preview JSON ▼ ≡ Save Response

```

1 {
2   "access_token": "8BWEKNSTI_N5gotvW2IOxgJrMky_ifU80ZkSazt8QbrbwQgN7Cuxs3j7ATRuiZoAt7vrGRwiLTqLaOoccELPCvsfd0aVvyVI
MzY5MT1N346_gtu74Tc3uKsGLN5HwcL3mOVuc73EQvwUdTJVSLfmcuHqSqduBG-G1Cbe
-8MAAeyRRZmYel_uTcYujLu5qZtLVAVPdwEcr3S5IZb6_uZuJ4msc1z1BbZFy8CSVBRkeFEteA45MJQjJzqkysA8meF3UV_oiQTN6XxL6YuMX
SXeYmfSm30rYwwADmkQfQXDRDLy6bquQrb_1G94qEvaJ84b8dUHbxcnsZXnKXxyQqZwbUYwpQRLkLcWLZ8s4pY-ku88XtNG-uf_B98naC0
-8ET8SEsY_ZBvKNDTDV7M8q_gtBDu3wnQ0SjHTmmhBQn8-TzAwBYGi41brzJPKA0UyLIwFCYvy43HySgQSozfzGwV0180-Hq_kEzB9t
-12unq_o0y20MmK1_NmKxPQN3trKbC2xv_B50X6rUFHtcPki004x0Mc08Y",
3   "token_type": "bearer",
4   "expires_in": 1199,
5   "refresh_token": "gzHGk5zH28dTizmfyt4J3y
-SfgCe2IjTrxz03S4mFvKqz7pTF_9YmGS3bxxOSOPmvuxo7IwR67rNayWvi63A4_HSgopDKpQBaLTsuyiy9SpJ63LYZktm_gkhgjMZJk1wKQ
o8hfPEk7Ev7TivRd1I6Qw7N47_x9GcpCerZ19Qk0GG
-AHcZSJ4RTZNPiIU5vEAwQRpRZBUgTsIOovhoL193FpOoftqDhbFfqqSHm1NAaTIR_Wd9uT31-L4
-gcVXR5Rjt4offdIScPzeu28T3YidttG1Gd1ZyXrJQiDYbY3P1Gp15fCAN83iwwjdnC7qlm7gVwXN5HP-F0s--bg4A8HC-0PKhsYSDKNUH
-VbnJHXRvNMfDQ--u6od15D6CnziQ6cf-EKjY6
-jXf56ejV06HHgjOp9PTAzJT8_8TmYchj_C95r5Be_8hP2a4k1kM5VaRRsM15qPwN_UhxwbIWY4uC5iJY1AIjro0V31aY85AGu
-YwadiCtqyLvivyjum-Zvd-mJtLjUJe0vJxtjavalzjqzo"
6 }

```

It is the text in quotes after `"access_token"`: that we are interested. Copy this text. Also, you will want to save this POST query because you will be using it a lot; use the *Save* button which is located next to the *Send* button to do this. While you will be able to use your new `access_token` for multiple API calls, it will eventually expire, resulting in a response like:

Body Cookies Headers (15) Tests Status: 401 Unauthorized Time: 380 ms

Pretty Raw Preview JSON ▼ ≡ Save Response

```

1 {
2   "message": "Authorization has been denied for this request."
3 }

```

TIP: Take a look at the Environment Management functionality of Postman. With that, you can create a set of variables to store the API URLs, your credentials and a temporary `access_token`. These variables can be updated and referenced for easier multiple API calls:

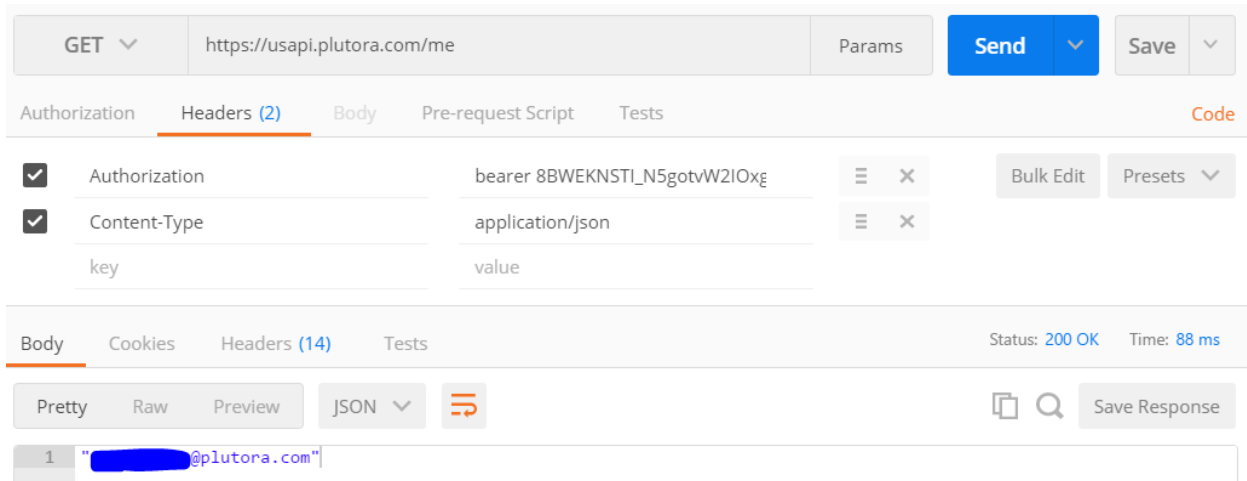
```

POST {{authUrl}}/oauth/token
  client_id:{{client_id}}
  client_secret:{{client_secret}}
  grant_type:password
  username:{{username}}

```

```
password:{{password}}
GET {{baseUrl}}/me
Authorization:bearer {{token}}
Content-Type:application/json
```

The simplest Plutora REST API call is `GET me` which will return the logged in user's email address. To make this call, set up Postman as follows:



Make sure to select the GET verb. Use the appropriate API host and append `/me`. Add the two keys, "Authorization" and "Content-Type". "Authorization" should be set to the value "bearer <access_token>" where <access_token> is the value copied from the `POST oauth/token` API call made above. When you press the *Send* button you should see your email address in the response. Save this query, we can use it as a template for future GET calls.

Examples

Environment Creation and Modification

In this example, we will create an Environment model including "Techs & Specs", that is, Hosts, and Layers. Referring to the Order of Object Creation diagram above, we will realize that before we can create the Environment model, we'll need a System model. And even before that we'll need to gather some Organization and Customization GUIDs.

Organization and Customization GUIDs

To identify all the Organization and Customization GUIDs needed, examine the [Plutora REST APIs](#) for each of the POST operation for each object we'll be creating:

POST API	Organization &	Object GUIDs	REST Calls
----------	----------------	--------------	------------

	Customization GUIDs		
Systems	OrganizationId		GET organizations
Environments	UsageWorkItemId EnvironmentStatusId	LinkedSystemId	GET lookupfields/UsedForWorkItem GET lookupfields/EnvironmentStatus GET systems
Hosts		EnvironmentID	GET environments
Layers	StackLayerID	HostID EnvironmentID	GET lookupfields/StackLayer GET hosts GET environments

Recall from above that to find the endpoints for UsageWorkItemId and EnvironmentStatusId we have to use the `GET lookupfields` API. At this point, none of the Object GUIDs exists, so let's get the four Organization & Customization GUIDs. Then we'll create each object in turn.

OrganizationId

Use Postman to issue the `GET organizations` API. The response will look something like this:

```
[
  {
    "id": "9d3879c9-bb43-4243-afd8-0f1ee6273663",
    "name": "ABC Group",
    "type": "Company"
  },
  {
    "id": "4cc6b70b-c075-4e50-b0b2-b9578144122c",
    "name": "Advice Systems",
    "type": "Department"
  },
  ***SNIP***
]
```

We can choose any organization, I will choose the root "ABC Group", in my Plutora instance.

UsageWorkItemId

Use Postman to issue the GET `lookupfields/UsedForWorkItem` API. The response will look something like this:

```
[
  {
    "id": "fa69ee6d-7218-4002-9fbd-200eadc10e33",
    "value": "Dev",
    "sortOrder": 108,
    "type": "UsedForWorkItem"
  },
  ***SNIP***
]
```

Your entries will likely be different. I will choose the "Dev" *UsedForWorkItem*.

EnvironmentStatusId

Use Postman to issue the GET `lookupfields/EnvironmentStatus` API. The response will look something like this:

```
[
  {
    "id": "b060ed8b-6e3b-454d-af0f-e90938eb7b47",
    "value": "Active",
    "sortOrder": 114,
    "type": "EnvironmentStatus"
  },
  {
    "id": "f738999c-152b-46d5-8375-e8cc96dfb85c",
    "value": "Decommisioned",
    "sortOrder": 113,
    "type": "EnvironmentStatus"
  },
  {
    "id": "24ea5c49-9aab-4307-a95e-5267bd6d7d73",
    "value": "Under Build/Config",
    "sortOrder": 88,
    "type": "EnvironmentStatus"
  }
]
```

I will choose "Active".

StackLayerID

Use Postman to issue the GET `lookupfields/StackLayer` API. The response will look something like this:

```
[
  {
    "id": "891f375c-58a8-4425-a8ec-5459ab04510b",
    "value": "Application",
    "sortOrder": 8490,
    "type": "StackLayer"
  },
  {
    "id": "8991fb6f-b7fa-43e2-812f-f0765c3f0f99",
    "value": "Database",
    "sortOrder": 8491,
    "type": "StackLayer"
  },
  {
    "id": "58ce5fa7-bfc4-4dcc-b014-08d2178d9ded",
    "value": "Middleware",
    "sortOrder": 8492,
    "type": "StackLayer"
  },
  {
    "id": "42b0329c-6e45-434d-8183-297de5909c92",
    "value": "Network",
    "sortOrder": 8493,
    "type": "StackLayer"
  },
  {
    "id": "e4524cf4-235b-4ba1-ac94-66f274dd3f9d",
    "value": "Operating System",
    "sortOrder": 8494,
    "type": "StackLayer"
  }
]
```

I will choose "Application".

In summary, here are my Organization and Customization GUIDs:

POST API	Organization & Customization GUIDs	GUIDs
Systems	OrganizationId	9d3879c9-bb43-4243-afd8-0f1ee6273663
Environments	UsageWorkItemId EnvironmentStatusId	fa69ee6d-7218-4002-9fbd-200eadc10e33 b060ed8b-6e3b-454d-af0f-e90938eb7b47
Layers	StackLayerID	891f375c-58a8-4425-a8ec-5459ab04510b

Create System

From the `POST systems` API documentation, we see that the following fields are required:

- Name
- Vendor
- Status
- OrganizationId

We'll need a JSON data structure these keys and our desired values. Here's what I'll use:

```
{
  "Name": "My System",
  "Vendor": "Plutora",
  "Status": "Active",
  "OrganizationId": "9d3879c9-bb43-4243-afd8-0f1ee6273663"
}
```

We'll be using the `POST systems` to create this new System. The POST will require the same header as the GET, so you can reuse your GET example from above. Select POST, choose "raw" data format and from the pull down select *JSON (application/json)*.

The screenshot shows a REST client interface with the following details:

- Method:** POST (selected from a dropdown)
- URL:** `https://usapi.plutora.com/systems`
- Params:** (empty)
- Buttons:** Send, Save
- Tabs:** Authorization, Headers (2), Body (selected), Pre-request Script, Tests
- Body Tab:**
 - Formatters: ☐ form-data, ☐ x-www-form-urlencoded, ☒ raw, ☐ binary
 - Content Type: *JSON (application/json)* (selected from a dropdown)
 - Body Content (line numbers 1-6):


```
1 {
2   "Name": "My System",
3   "Vendor": "Plutora",
4   "Status": "Active",
5   "OrganizationId": "9d3879c9-bb43-4243-afd8-0f1ee6273663"
6 }
```

Again, save this POST as a template for the next few POST calls we will be doing.

The response from this call:

```
{
  "id": "2a8ad43b-81be-4d1a-8fff-0cb85b9905dc",
  "name": "My System",
  "vendor": "Plutora",
  "status": "Active",
  "organizationId": "9d3879c9-bb43-4243-afd8-0f1ee6273663",
  "organization": "ABC Group",
  "description": null,
  "isAllowEdit": false,
  "inMyOrganization": false,
  "additionalInformation": [
    ***SNIP***
  ]
}
```

From this response, we now have a System GUID that we can use to create our Environment.

View/Edit System Details

Details

Additional Information

Dependencies

Approvers

Contact stakeholders

System Definition

System Name

My System

Alias(es):

Save Alias

Description

Vendor

Plutora

Status

☒ Active

☐ Inactive

Organization

Portfolio Association

ABC Group

Stakeholders

RACI Matrix

Expand to see RACI Definitions

Stakeholder	System Role	R	A	C	I
Stakeholders not added yet					

Add Stakeholder

Remove

Delete System

Save

Save & Close

Create Environment

From the `POST environments` API documentation, we see that the following fields are required:

- Name
- Vendor
- LinkedSystemId
- UsageWorkItemId
- EnvironmentStatusId
- Color
- IsSharedEnvironment

We'll need a JSON data structure these keys and our desired values. Here's what I'll use:

```
{
  "Name": "My Environment",
  "Vendor": "Plutora",
  "LinkedSystemId": "2a8ad43b-81be-4d1a-8fff-0cb85b9905dc ",
  "UsageWorkItemId": "fa69ee6d-7218-4002-9fbd-200eadc10e33",
  "EnvironmentStatusId": "b060ed8b-6e3b-454d-af0f-e90938eb7b47",
  "Color": "#ffffff",
  "IsSharedEnvironment": "true"
}
```

Here's the response:

```
{
  "id": "a99b8e84-bec3-4085-8df1-969ae176d119",
  "name": "My Environment",
  "description": null,
  "url": null,
  "vendor": "Plutora",
  "linkedSystemId": "2a8ad43b-81be-4d1a-8fff-0cb85b9905dc",
  "linkedSystem": null,
  "environmentMgr": null,
  "usageWorkItemId": "fa69ee6d-7218-4002-9fbd-200eadc10e33",
  "usageWorkItem": null,
  "environmentStatusId": "b060ed8b-6e3b-454d-af0f-e90938eb7b47",
  "environmentStatus": null,
  "color": "#ffffff",
  "isSharedEnvironment": true,
  "hosts": null
}
```


Now we have the GUID for our Environment.

Create Host

From the `POST hosts` API documentation, we see that the following fields are required:

- Name
- EnvironmentID

We'll need a JSON data structure these keys and our desired values. Here's what I'll use:

```
{
  "Name": "My Host",
  "EnvironmentID": "a99b8e84-bec3-4085-8df1-969ae176d119"
}
```

Here's the response:

```
{
  "id": "1dd98953-a4fd-40dd-a416-dd7469ea157f",
  "name": "My Host",
  "environmentID": "a99b8e84-bec3-4085-8df1-969ae176d119",
  "layers": null
}
```

Now we have the GUID for our Host.

Create Layer

From the `POST layers` API documentation, we see that the following fields are required:

- ComponentName
- HostID
- EnvironmentID
- StackLayerID

We'll need a JSON data structure these keys and our desired values. The Version field is not required, but I'll added it so that we can adjust it in the next section. Here's what I'll use:

```
{
  "ComponentName": "My Application",
  "HostID": "1dd98953-a4fd-40dd-a416-dd7469ea157f",
  "EnvironmentID": "a99b8e84-bec3-4085-8df1-969ae176d119",
  "StackLayerID": "891f375c-58a8-4425-a8ec-5459ab04510b",
  "Version": "1.0"
}
```

```
}
```

Here's the response:

```
{
  "id": "4c7f6709-7258-4f50-ae79-08597b4f1454",
  "componentName": "My Application",
  "version": "1.0",
  "hostID": "1dd98953-a4fd-40dd-a416-dd7469ea157f",
  "environmentID": "a99b8e84-bec3-4085-8df1-969ae176d119",
  "stackLayerID": "891f375c-58a8-4425-a8ec-5459ab04510b",
  "stackLayer": null,
  "stackLayerType": null
}
```

Edit Environment Details

Details | Additional Information | Stakeholders | Linked Items | Release Automation | [Contact stakeholders](#)

Environment Definition

Environment Name: My Environment

Description:

System: My System

Integrated with: Select Integrated Environment Group (if a) +

URL:

Used for Phase: Dev Scheduler Display: #ffff

Vendor: Plutora

This is a Shared Environment ☐ Status

Any booking will be automatically approved ☐

Technical Specs and Configuration

Import | Add Host | Add Layer | Add Component | Update On Build

Layer	Component Name	Version	Actions
Host:	My Host		-
	Application		-
	My Application	1.0	-

Environment Allocation Schedule [Click here to hide allocations](#)

Delete | Save | Save & Close

Modify Environment and Component Fields

Field values can be modified using the PUT verb. The steps to modifying fields are:

1. Use the GET <objectname> API to find the GUID of the object of interest
2. Use the GET <objectname>/{id} to f the object data structure
3. Copy the response to the *body* of POST <objectname>/{id}

4. Edit the desired values
5. *Send* the POST request

Modify Environment Fields

GET environments

```
[
***SNIP***
{
  "id": "a99b8e84-bec3-4085-8df1-969ae176d119",
  "name": "My Environment",
  "url": null,
  "linkedSystem": "My System",
  "usageWorkItem": "Dev",
  "status": "Active",
  "color": "#ffffff"
},
***SNIP***
]
```

GET environments/a99b8e84-bec3-4085-8df1-969ae176d119

```
{
  "id": "a99b8e84-bec3-4085-8df1-969ae176d119",
  "name": "My Environment",
  "description": null,
  "url": null,
  "vendor": "Plutora",
  "linkedSystemId": "2a8ad43b-81be-4d1a-8fff-0cb85b9905dc",
  "linkedSystem": "My System",
  "environmentMgr": null,
  "usageWorkItemId": "fa69ee6d-7218-4002-9fbd-200eadc10e33",
  "usageWorkItem": "Dev",
  "environmentStatusId": "b060ed8b-6e3b-454d-af0f-e90938eb7b47",
  "environmentStatus": "Active",
  "color": "#ffffff",
  "isSharedEnvironment": false,
  "hosts": [
    {
      "id": "1dd98953-a4fd-40dd-a416-dd7469ea157f",
      "name": "My Host",
      "environmentID": "a99b8e84-bec3-4085-8df1-969ae176d119",
      "layers": [
```

```

    {
      "id": "4c7f6709-7258-4f50-ae79-08597b4f1454",
      "componentName": "My Application",
      "version": "1.0",
      "hostID": "1dd98953-a4fd-40dd-a416-dd7469ea157f",
      "environmentID": "a99b8e84-bec3-4085-8df1-969ae176d119",
      "stackLayerID": "891f375c-58a8-4425-a8ec-5459ab04510b",
      "stackLayer": "Application",
      "stackLayerType": "StackLayer"
    }
  ]
}
]
}

```

Note that the Environment data structure includes details of the Hosts and Layers. The Host and Layers values cannot not be modified using the `PUT environments/{id}` API. Instead, the `PUT hosts/{id}` and the `PUT layers/{id}` API must be used.

Let's change a description and change the color of the Environment:

`PUT environments/a99b8e84-bec3-4085-8df1-969ae176d119`

Using the modified response from above as the body.

```

{
  "id": "a99b8e84-bec3-4085-8df1-969ae176d119",
  "name": "My Environment",
  "description": "Here is the description of My Environment",
  "url": null,
  "vendor": "Plutora",
  "linkedSystemId": "2a8ad43b-81be-4d1a-8fff-0cb85b9905dc",
  "linkedSystem": "My System",
  "environmentMgr": null,
  "usageWorkItemId": "fa69ee6d-7218-4002-9fbd-200eadc10e33",
  "usageWorkItem": "Dev",
  "environmentStatusId": "b060ed8b-6e3b-454d-af0f-e90938eb7b47",
  "environmentStatus": "Active",
  "color": "#ffff00",
  "isSharedEnvironment": false,
  "hosts": [
    {
      "id": "1dd98953-a4fd-40dd-a416-dd7469ea157f",

```

```

    "name": "My Host",
    "environmentID": "a99b8e84-bec3-4085-8df1-969ae176d119",
    "layers": [
      {
        "id": "4c7f6709-7258-4f50-ae79-08597b4f1454",
        "componentName": "My Application",
        "version": "1.0",
        "hostID": "1dd98953-a4fd-40dd-a416-dd7469ea157f",
        "environmentID": "a99b8e84-bec3-4085-8df1-969ae176d119",
        "stackLayerID": "891f375c-58a8-4425-a8ec-5459ab04510b",
        "stackLayer": "Application",
        "stackLayerType": "StackLayer"
      }
    ]
  }
}

```

Response

(None!)

Edit Environment Details

Details | Additional Information | Stakeholders | Linked Items | Release Automation

Environment Definition

Environment Name: My Environment

Description: Here is the description of My Environment

System: My System

Integrated with: Select Integrated Environment Group (if applicable)

URL:

Used for Phase: Dev | Scheduler Display: #ffff00

Vendor: Plutora

This is a Shared Environment: ☐ | Status: Active

Any booking will be automatically approved: ☐

Technical Specs and Configuration

Layer	Component Name	Version	Actions
Host	My Host		-
Application	Application		-
My Application	My Application	1.0	-

Environment Allocation Schedule

Delete | Save | Save & Close

Note that you can also use a stripped-down version of the body:

```

{
  "id": "a99b8e84-bec3-4085-8df1-969ae176d119",
  "name": "My Environment",

```

```

    "description": "Here is the description of My Environment, take two",
    "vendor": "Plutora",
    "linkedSystemId": "2a8ad43b-81be-4d1a-8fff-0cb85b9905dc",
    "usageWorkItemId": "fa69ee6d-7218-4002-9fbd-200eadc10e33",
    "environmentStatusId": "b060ed8b-6e3b-454d-af0f-e90938eb7b47",
    "environmentStatus": "Active",
    "color": "#00ff00",
    "isSharedEnvironment": false
  }

```

Edit Environment Details

Details
Additional Information
Stakeholders
Linked Items
Release Automation

Contact stakeholders

Environment Definition

Environment Name

My Environment

Description

Here is the description of My Environment, take two

System

My System

Integrated with

Select Integrated Environment Group (if applicable)

URL

Used for Phase

Dev

Scheduler Display

#00ff00

Vendor

Plutora

This is a Shared Environment

☐

Status

Active

Any booking will be automatically approved

☐

Technical Specs and Configuration

Import

Add Host

Add Layer

Add Component

Update On Build

View Stack

Layer	Component Name	Version	Actions
Host	My Host		
	Application		
	My Application	1.0	

Environment Allocation Schedule

Delete

Save

Save & Close

Modify Layer Fields

To modify the Version field of the Application Component in our Environment Layer, we will need the Layer GUID. This value was part of the response for the `GET environments/{id}` above, `4c7f6709-7258-4f50-ae79-08597b4f1454`.

`GET layers/4c7f6709-7258-4f50-ae79-08597b4f1454`

Response

```

{
  "id": "4c7f6709-7258-4f50-ae79-08597b4f1454",
  "componentName": "My Application",
  "version": "1.0",
  "hostID": "1dd98953-a4fd-40dd-a416-dd7469ea157f",
  "environmentID": "a99b8e84-bec3-4085-8df1-969ae176d119",
  "stackLayerID": "891f375c-58a8-4425-a8ec-5459ab04510b",
  "stackLayer": "Application",
  "stackLayerType": "StackLayer"
}

```

```
}
```

Use the `POST layers/4c7f6709-7258-4f50-ae79-08597b4f1454` with the modified response to change the *version* value.

`POST layers/4c7f6709-7258-4f50-ae79-08597b4f1454`

Body:

```
{
  "id": "4c7f6709-7258-4f50-ae79-08597b4f1454",
  "componentName": "My Application",
  "version": "2.0",
  "hostID": "1dd98953-a4fd-40dd-a416-dd7469ea157f",
  "environmentID": "a99b8e84-bec3-4085-8df1-969ae176d119",
  "stackLayerID": "891f375c-58a8-4425-a8ec-5459ab04510b",
  "stackLayer": "Application",
  "stackLayerType": "StackLayer"
}
```

Response:

(None!)

Edit Environment Details

Environment Definition

Environment Name: My Environment

Description: Here is the description of My Environment, take two

System: My System

Integrated with: Select Integrated Environment Group (if applicable)

URL:

Used for Phase: Dev Scheduler Display: #00R00

Vendor: Plutora

This is a Shared Environment ☐ Status: Active

Any booking will be automatically approved ☐

Technical Specs and Configuration

Layer	Component Name	Version	Actions
Host	My Host		-
	Application		-
	My Application	2.0	-

Environment Allocation Schedule

Click here to hide allocations

Delete Save Save & Close

Create an Environment Group with two connected Environments

Create a second System and Environment.

POST systems

```
{
  "name": "My second System",
  "vendor": "Plutora",
  "status": "Active",
  "organizationId": "9d3879c9-bb43-4243-afd8-0f1ee6273663"
}
```

Response

```
{
  "id": "2bf3e7ab-517c-45ca-b33e-6689775d25b8",
  "name": "My second System",
  "vendor": "Plutora",
  "status": "Active",
  "organizationId": "9d3879c9-bb43-4243-afd8-0f1ee6273663",
  "organization": "ABC Group",
  "description": null,
  "isAllowEdit": false,
  "inMyOrganization": false,
  ***SNIP***
}
```

POST environments

```
{
  "Name": "My second Environment",
  "Vendor": "Plutora",
  "LinkedSystemId": "2bf3e7ab-517c-45ca-b33e-6689775d25b8",
  "UsageWorkItemId": "fa69ee6d-7218-4002-9fbd-200eadc10e33",
  "EnvironmentStatusId": "b060ed8b-6e3b-454d-af0f-e90938eb7b47",
  "Color": "#ffffff",
  "IsSharedEnvironment": "true"
}
```

Response

```
{
  "id": "49a77309-2684-4ac6-a4e9-9f4bd8f1ec0a",
  "name": "My second Environment",
  "description": null,
}
```



```

"url": null,
"vendor": "Plutora",
"linkedSystemId": "2bf3e7ab-517c-45ca-b33e-6689775d25b8",
"linkedSystem": null,
"environmentMgr": null,
"usageWorkItemId": "fa69ee6d-7218-4002-9fbd-200eadc10e33",
"usageWorkItem": null,
"environmentStatusId": "b060ed8b-6e3b-454d-af0f-e90938eb7b47",
"environmentStatus": null,
"color": "#ffffff",
"isSharedEnvironment": true,
"hosts": null
}

```

Create and Environment Group

Currently, it is necessary to include the Environments when creating the Environment Groups.

POST environmentgroups

```

{
  "Name": "My Environment Group",
  "Description": "My Environment Group description",
  "Color": "#ffffff",
  "EnvironmentIDs": [
    "a99b8e84-bec3-4085-8df1-969ae176d119",
    "49a77309-2684-4ac6-a4e9-9f4bd8f1ec0a"
  ]
}

```

Response

```

{
  "id": "ea63d7e9-565f-47c7-ae38-d41dcbb334bd",
  "name": "My Environment Group",
  "description": "My Environment Group description",
  "color": "#ffffff",
  "environmentIDs": [
    "a99b8e84-bec3-4085-8df1-969ae176d119",
    "49a77309-2684-4ac6-a4e9-9f4bd8f1ec0a"
  ]
}

```

Connect the two Environments

The type of connections available are set up in Customizations. Let's find the GUID for *HTTPS*.

GET lookupfields

```
[
  ***SNIP***
  {
    "name": "EnvironmentMapConnectivityType",
    "description": "Connectivity Type"
  },
  ***SNIP***
]
```

GET lookupfields/EnvironmentMapConnectivityType

```
[
  {
    "id": "376810cf-898c-4afb-b438-15bc4f1a549e",
    "value": "File",
    "sortOrder": 14460,
    "type": "EnvironmentMapConnectivityType"
  },
  {
    "id": "3090441f-e2eb-43ba-aa4e-eaf22e0bac36",
    "value": "HTTPS",
    "sortOrder": 14462,
    "type": "EnvironmentMapConnectivityType"
  },
  {
    "id": "28cafa45-1352-4f5e-bcfc-b500583a951a",
    "value": "Web Services",
    "sortOrder": 14461,
    "type": "EnvironmentMapConnectivityType"
  }
]
```

POST connectivities

```
{
  "environmentGroupId": "ea63d7e9-565f-47c7-ae38-d41dcbb334bd",
  "sourceId": "a99b8e84-bec3-4085-8df1-969ae176d119",
  "targetId": "49a77309-2684-4ac6-a4e9-9f4bd8f1ec0a",
}
```

```
"connectivityTypeId": "3090441f-e2eb-43ba-aa4e-eaf22e0bac36",  
"direction": "InAndOut"  
}
```

Response

(None!)

Environment Groups

Manage Environment Groups

My

Click on Details button to view or edit

Details	Name	Description	Portfolio Association	Used for Phase	Display
Details	My Environment Group	My Environment Group description			#####

Manage Connectivity

Group Members

Connectivity

Environment Map Connectivity for My Environment Group

Source	Direction	Target	Type
<input type="checkbox"/> My Environment	↔	My second Environment	HTTPS

Save Save & Close