



An Arena Solutions Guide

www.arenasolutions.com



Arena PLM

API Developer Guide

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Change Log

Date	Updates
January 15	<ul style="list-style-type: none"> Optimized JSON formatting in responses Added BOM editing endpoints
April 30, 2014	<ul style="list-style-type: none"> Added Monitoring & Licensing
June 22, 2014	<ul style="list-style-type: none"> Added Where Used endpoints
August 3, 2014	<ul style="list-style-type: none"> Added Supplier, Supplier Item, and Source Relationship endpoints
October 26, 2014	<ul style="list-style-type: none"> Added Supplier, Supplier Item, and Source Relationship EDIT and DELETE endpoints. Added Arena DataExtract endpoints.
November 2, 2014	<ul style="list-style-type: none"> Added some fixes around searchable attributes in GET calls
December 21, 2014	<ul style="list-style-type: none"> Added Supplier Item sourcing, compliance, and file endpoints
January 31, 2015	<ul style="list-style-type: none"> Added effectiveDateTime parameter to Get Items endpoint
February 15, 2015	<ul style="list-style-type: none"> Fixed ModifiedBom attribute to camelcase
May 17, 2015	<ul style="list-style-type: none"> Added Item Revision release endpoints
May 30, 2015	<ul style="list-style-type: none"> Updated endpoint formatting
June 21, 2015	<ul style="list-style-type: none"> Updated formatting; Modified title from API to REST API

Theory of Operation

Overview

The Arena PLM REST API (Application Programming Interface) allows you to programmatically exchange data with your workspaces. You can:

- search, create, read, update, and delete Item information from a workspace.
- search, create, read, update, and delete Supplier Item information from a workspace.
- search, create, read, update, and delete Supplier information from a workspace.
- browse Item Specs, BOM, Sourcing, Revisions, Files, Compliance, Where Used.
- browse Supplier Item Specs.
- browse Supplier Profile.
- edit the BOM (Bill of Materials) of an Item by adding, deleting, or editing BOM lines.
- edit sourcing for Item and Supplier Items by adding, editing, or deleting Source Relationships.
- edit the Files of an Item or Supplier Item by creating new files and file relationships.

This documentation includes details about requests and responses from Arena servers, and instructs developers in how to construct requests. This document assumes some familiarity with APIs in general.

API Format

The Arena PLM API is based on a [REST](#) architecture and transfers JSON content exclusively (except for file content operations, which are JSON and multipart/form-data.) The base URL is [https://api.arenasolutions.com/\[version\]](https://api.arenasolutions.com/[version]). The user constructs JSON requests to specific URL endpoints on the Arena API service. The API service responds with data, in the case of a GET request, or updates the workspace in the case of a POST request. You can also perform PUT and DELETE requests to specific URLs.

This document includes details about requests and responses from Arena servers, and instructs developers in how to construct requests. This document assumes some familiarity with APIs in general.

A Note on JSON inputs: When constructing Requests to the API service, please follow [best practices for JSON data types](#):

- Text values should be in quotes.
- Numeric values should not be in quotes.
- Null values should not be in quotes.
- Boolean values should be only true or false.
- Internal quotes in values (e.g. 18") should be escaped with the \ character.

Each Arena PLM object is represented by a GUID (Globally Unique Identifier). When you perform a GET, you receive object GUIDs in return, and use those GUIDs to specify objects on which you perform actions.

So, you might perform a GET to determine the GUID of a particular Item, and then perform a POST specifying that Item's GUID to update its specification data.

Arena's approach to a REST API distinguishes between two types of entities: an object itself (such as an item or file) and the relationship between two objects (such as a BOM line or file association.) This approach allows users to specify attributes both for the object and for the relationship.

For example, the attributes of an item might include, name, number, etc—but when that item is being added to a BOM, you need to specify attributes about the relationship between the item and its parent (which might include quantity, reference designators, etc.)

Connecting and Permissions

Connect to the Arena API service by providing your login credentials (username and password) in a [Log In](#) request. The API service returns an access token which must be included in the header of all subsequent requests for the session.

The privileges of a user logging into the API service are the same as when logging into Arena PLM. That is, a read-only user cannot write any information to a PLM workspace, so a read-only user cannot write any information to the workspace via the API service. All requests (except Healthcheck and Log Out) are subject to privilege verification.

Note: Only Employee and Partner users can access the Arena PLM REST API. Supplier users do not have access privileges.

Licensing

Each account is allowed a maximum number of requests to the API per 24 hour period, starting at midnight Pacific Time. After the total allowed number of requests is reached, the service will return an error. All API requests (except login, logout and health check), whether successful or not, are counted toward the total. The number of requests allowed varies per workspace. If you feel you need more API requests, contact your Account Executive.

Each response to the Log In request includes the total number of API requests for the period. The http headers of all API responses include the remaining number of API requests for the current period and the scheduled time for resetting of the count are included in the header. For example:

```
X-Arena-Next-Request-Limit-Reset: Fri, 02-May-2014 14:22:13 GMT-0700 (PDT)
X-Arena-Requests-Remaining: 2
```

Arena recommends setting up the calling program to read licensing information from response headers, and not make any additional calls when X-Arena-Requests-Remaining gets to 0 until after the Next Request Limit Reset.

API Requests

The Arena PLM REST API provides methods for accessing a resource, such as an Item or a category of Item, at a canonical URL. You can then perform an action upon that resource by specifying an endpoint URL, such as

```
https://api.arenasolutions.com/<version>/items/<item_GUID>/categories
```

which returns all categories for a given Item resource. Note that the version takes the format e.g. v1 (no decimal places). The API version does not necessarily change with Arena PLM releases.

The header of all requests must include:

- an access token "arena_session_id" for user authentication (except Log In, which grants a token)
- a content type declaration ("application/json", except for the healthcheck endpoint which expects and returns "text/plain", and add file endpoints with content, where the file metadata is JSON and the file payload itself is "multipart/form-data")
- an HTTP method declaration (GET, POST, PUT, DELETE)

Requests must be sent uncompressed. Responses may be returned uncompressed or compressed using gzip encoding.

Responses

For calls that return responses (and not arbitrary binary data), responses will look roughly like:

```
{
  "<object_field>": "<field_value>"
  ...
}
```

or, in the case of one or more errors:


```
{
  "errors": [
    {
      "code": <error_code>,
      "message": "<error_message>"
    }
  ],
  "status": <error_class>
}
```

To make responses more human-readable, the first level shows all attributes—attributes with no value will show a default empty value (e.g., "null", 0). Second-level objects are shown in a compact version. In the Get Item response example shown below, the second-level object "category" includes only the attribute "guid". (The exception to this rule is the File object, which includes the full version when shown in the second level of a fileAssociation GET.)

```
{
  "additionalAttributes": [],
  "category": {
    "guid": "5N6P8RAK3MY6UNTA"
  },
  "creationDateTime": "2011-08-09T22:19:25Z",
  "creator": {
    "fullName": "Heidi Walker"
  },
  "description": "Board Assembly...",
  "guid": "0I2LQGHQXGXGVRR5XND",
  "isAssembly": true,
  "lifecyclePhase": {
    "name": "In Design"
  },
  "name": "PCBA, EveryRoad, Model 500",
  "number": "830-00002",
  "offTheShelf": false,
  "owner": {
    "fullName": "Toshiro Makamuri"
  },
  "productionCost": 108.578,
  "prototypeCost": null,
  "revisionNumber": "3",
  "shared": true,
  "standardCost": 38.505,
  "uom": "each"
}
```

Successes and Errors

As much as possible, Arena attempts to use appropriate HTTP status codes to indicate the general class of problem, and this status code is repeated in the response. The following two tables give supported success status codes and their meanings, and supported error status codes and their meanings.

Success Code	Meaning
200 OK	default success message

Success Code	Meaning
201 Created	success and new entity created
204 No content	Success but no content in response (e.g. DELETE Item)

Error Code	Meaning
400 Bad request	returned if there is a syntax error in the request
403 Forbidden	returned if the user doesn't have proper privileges to perform them
401 Unauthorized	returned if the requests require valid access token, but no valid access token is specified in http headers
404 Resource not found	returned if the endpoint of a request is not supported
415 Unsupported media type	returned if no content-type/wrong content-type is specified in http headers
429 Too many requests	returned if the maximum API requests limit has been reached for 24-hour period

API Sample Code

You can download a set of API sample requests, along with instructions for installation, from the Downloads page in Arena PLM: https://app.bom.com/dashboard/detail-client_downloads. Use it to familiarize yourself with request and response formatting.

Note: Please use the Postman Rest Client (packaged app) when importing the sample API code. [Download](#)

BOM and Workspace Settings

When constructing requests to the Arena PLM REST API, it's important to understand how settings in the target Arena PLM workspace can affect how the request is handled. This is particularly true for requests to create or update BOM Lines.

BOM Settings are set per BOM in the BOM view of an Item in Arena PLM; workspace settings are workspace-wide and are set in the Account Administration tool of Arena PLM. If settings are not specified for a BOM, the BOM uses the workspace settings.

Setting	Type	
Reference Designator Checking	BOM Setting	<p>When this is set to ON for a BOM, Arena PLM enforces that:</p> <ol style="list-style-type: none"> 1. the quantity for a row must match the number of references designators specified. 2. duplicate reference designators are not allowed. When set to OFF for a BOM, no check is performed. <p>When set to OFF for a BOM, no check is performed.</p>
Automatic Line Number Generation	BOM Setting	<p>When this is set to ON for a BOM, Items added to the BOM are sorted by Item Number, and a line number is assigned</p>

Setting	Type	
		automatically. When set to OFF for a BOM, you can specify a persistent line number for each BOM Item.
Reference Designator Checking for New Assemblies	Workspace Setting	<p>When this is set to ON for a workspace, Arena PLM enforces the following when creating a new assembly:</p> <ol style="list-style-type: none"> 1. the quantity for a row must match the number of references designators specified. 2. duplicate reference designators are not allowed. <p>When set to OFF for a workspace, no check is performed when creating a new assembly.</p>
Negative Quantities Allowed	Workspace Setting	When this is set to YES for a workspace, you can specify a negative quantity for a BOM Line. When set to NO for a workspace, negative quantities will result in an error.

Endpoints

This section includes all functional endpoints for the Arena PLM API.

Resource	Actions	Resource	Actions
System	Healthcheck	Item Sourcing	Get Source Relationships for an Item Get Individual Source Relationship for an Item Create Item Source Relationship Update Item Source Relationship Delete Item Source Relationship
User	Log In Log Out	Suppliers	Get Suppliers Get Individual Supplier (Summary) Create Supplier Update Supplier Delete Supplier
Settings	Get Item Categories Get Individual Item Category Get All Attributes for Items Get All Item Lifecycle Phases Get Attributes for a Given Item Category Get Item Number Formats Get Individual Item Number Format Get File Categories Get Individual File Category	Supplier Items & Supplier Item Files	Get Supplier Items Get Individual Supplier Item (Specs) Create Supplier Item Update Supplier Item Delete Supplier Item Get Supplier Item File Associations Get Individual Supplier Item File Association Add File and Associate the File with a Supplier Item Remove File Association from Supplier Item Get File Content for File Associated with Supplier Item Update a File Associated with a Supplier Item Get Supplier Item Compliance Requirements

Resource	Actions	Resource	Actions
Items & Item Files	Get Items (Search Items)	BOMs	Get BOM
	Get Item (Specs)		Get Individual BOM Line
	Get Item Revisions		Get All Attributes for BOMs
	Get File Associations for an Item		Get Where Used
	Get Individual File Association for an Item		Get BOM Settings
	Get File Content for File Associated with Item		Create BOM Line
	Get Item Compliance Requirements		Update BOM Line
	Create Item		Update BOM Settings
	Update Item		Delete BOM Line
	Delete Item	Supplier Item Sourcing	Get Source Relationships for a Supplier Item
	Release Item Revision (Change Lifecycle Phase)		
	Add File and Associate the File with an Item	Data Extract	Get Data Extracts
	Update a File Associated with an Item		Get Individual Data Extract
	Remove File Association from Item		Get Extract Runs
			Get Individual Extract Run
			Get Run File Associations
			Get Individual Run File Association
			Get DataExtract File Content

GET: Healthcheck

`https://apihostname/api/v1/SYSTEM/dbtest`

This endpoint returns a system status.

Sample Responses

Success - 200

```
success
```

Failure - 400

```
failure
```

POST: Log In

`https://api.arenasolutions.com/v1/login`

This logs a valid user into the Arena System and returns a valid access token for subsequent requests. Once the authentication is successful, a JSON response with an access token is returned. The token should have the same expiration behavior for the cookie token in the Arena PLM Web Application. The token needs to be set in the headers of all subsequent requests for them to be processed successfully. The API client should add an HTTP header with name "arena_session_id", the same cookie name as in the Arena PLM Web Application. Note that if you do not specify a workspace_id value in the call, the API user will log in to its current workspace, or whichever it was last logged into.

The response to each Log In request includes the value "workspaceRequestLimit" which is the maximum number of API requests allowed for your workspace during a 24-hour period. For all responses in the session, the remaining number of API requests for the current period and the scheduled time for resetting of the count are included in the http headers.

Sample Request Body

```
{ "email": "user@customer.com", "password": "xxxx", "workspaceId": 123456789 }
```

Optional Field

workspaceId	This is optional. If a valid workspace ID is provided and the user has access to this workspace, the active workspace after successful login will be the one identified by this ID. Arena recommends using the workspace ID to ensure connection to the expected workspace.
-------------	---

Sample Responses

Success - 200

```
{
  "arena_session_id": "LABS-WMIglJmqV788DNaJl4sxtN7 ssES6fW6v|",
  "workspaceId": 19078535,
  "workspaceName": "API workspace",
  "workspaceRequestLimit": 4
}
```

Failure - 400

```
{
  "code": 4001,
  "message": "Username or password is not valid."
}
```

PUT: Log Out

`https://api.arenasolutions.com/v1/logout`

This invalidates the access token. Once this is processed successfully, the user cannot use this token to perform any further actions.

Sample Responses

Success - 200

N/A

Failure - 401

```
"code":401,  
"message":"There is no access token associated with this request or the access token  
is invalid."
```


GET: Get Item Categories

<https://api.arenasolutions.com/v1/items/categories>

This returns all item **category** objects.

Parameters

Path	This is used to filter out categories. The root of path for item is "item". If you want to get all the categories under the root category which start with A, you can send a request as <code>api.arenasolutions.com/items/categories?path=item\A*</code> , where "\" is the separator between parent category and child category. Note the wildcard trailing asterisk in the request.
------	--

Sample Responses

Success - 200

```
{
  "count": 70,
  "results": [
    {
      "activated": true,
      "assignable": null,
      "creationDateTime": "2008-03-04T20:04:47Z",
      "creator": {
        "fullName": "Mike Sullivan (Arena)"
      },
      "description": "Item is a system-defined category",
      "guid": "0I2LQGHQXGQ9S4C0TYC",
      "level": 1,
      "name": "Item",
      "objectType": "ITEM",
      "path": "Item",
      "systemDefined": true
    },
    {
      "activated": true,
      "assignable": null,
      "creationDateTime": "2008-03-05T13:26:37Z",
      "creator": {
        "fullName": "Mike Sullivan (Arena)"
      },
      "description": null,
      "guid": "DVFY3TUU3AT3M5HPD6CB",
      "level": 2,
      "name": "Document",
      "numberFormat": {
        "guid": "P7Q9SBU3M5LMFGCG"
      },
      "objectType": "ITEM",
      "path": "Item\\Document",
    }
  ]
}
```

```
"systemDefined": false
  },
...
```

Failure - 401

```
"code":401,
"message":"There is no access token associated with this request or the access token
is invalid."
```

GET: Get Individual Item Category

https://api.arenasolutions.com/v1/items/categories/<category_GUID>

This returns a [category](#) object with a given category GUID.

Sample Responses

Success - 200

```
{
  "activated": true,
  "assignable": null,
  "creationDateTime": "2008-03-04T22:56:04Z",
  "creator": {
    "fullName": "Mike Sullivan (Arena)"
  },
  "description": null,
  "guid": "UCWFKABBKRAK3MY6UNTU",
  "level": 4,
  "name": "Printed Circuit Board Assembly",
  "numberFormat": {
    "guid": "N507Q9S1K3JKDEAJ"
  },
  "objectType": "ITEM",
  "path": "Item\\Part\\Assembly\\Printed Circuit Board Assembly",
  "systemDefined": false
}
```

Failure - 400

Produces an error if the category GUID is not valid.

```
"code": 3011,
"message": "The guid \"CUB5FVEN6P8RAQI\" is not valid."
```

GET: Get Workspace Item Lifecycle Phases

<https://api.arenasolutions.com/v1/items/lifecyclephases>

This returns all Item lifecycle phases defined for the workspace.

Sample Responses

Success - 200

```
{
  "count": 10,
  "results": [
    ...
    {
      "active": true,
      "guid": "HZI1K3M3M5O7Q49H",
      "name": "In Design",
      "shortName": "In Des",
      "stage": "DESIGN",
      "used": true
    },
    {
      "active": true,
      "guid": "GYH0J2L2L4N6P38H",
      "name": "In Production",
      "shortName": "In Prod",
      "stage": "PRODUCTION",
      "used": true
    }
  ]
}
```

Failure - 401

```
"code": 401,
"message": "There is no access token associated with this request or the access token
is invalid."
```

GET: Get All Attributes for Items

<https://api.arenasolutions.com/v1/items/attributes>

An array of all [attribute](#) objects available for items. It returns all attributes for all item categories under Item, thus It is different from getting attributes for a given category.

Sample Responses

Success - 200

```
{
  "count": 38,
  "results": [
    {
      "apiName": "category.guid",
      "creatable": true,
      "custom": false,
      "defaultValue": null,
      "editable": true,
      "fieldType": "SINGLE_LINE_TEXT",
      "maxLength": 0,
      "maxValue": 0,
      "name": "category.guid",
      "objectType": "ITEM",
      "possibleValues": null,
      "required": true,
      "searchable": true
    },
    {
      "apiName": "creator",
      "creatable": false,
      "custom": false,
      "defaultValue": null,
      "editable": false,
      "fieldType": "SINGLE_LINE_TEXT",
      "maxLength": 50,
      "maxValue": 0,
      "name": "creator",
      "objectType": "ITEM",
      "possibleValues": null,
      "required": false,
      "searchable": true
    },
    ...
  ]
}
```

Failure - N/A

GET: Get Attributes for a Given Item Category

https://api.arenasolutions.com/v1/items/categories/<category_GUID>/attributes

This returns an array of [attribute](#) objects for a given category. The attributes are sorted by apiName. For custom attributes, the apiName is a compound word with "custom" and its internal id. There are two types of attributes:

- **System** attributes are included in every category.
- **Custom** attributes are defined by an Account Admin in a workspace.

Parameters

includePossibleValues	This is for attributes that are dropdown lists. If this is set to true, it returns all the possible values for the dropdown list. The default value is false.
creatableOnly	If this is set to true, it returns only creatable attributes, which are settable during creation of an item. The default value is false.
editableOnly	If this is set to true, it returns only editable attributes, which are settable during update of an item. The default value is false.
searchableOnly	If this is set to true, it returns only searchable attributes, which are searchable when getting items.

Sample Responses

Success - 200

```
{
  "count": 25,
  "results": [
    {
      "apiName": "category.guid",
      "creatable": true,
      "custom": false,
      "defaultValue": null,
      "editable": true,
      "fieldType": "SINGLE_LINE_TEXT",
      "maxLength": 0,
      "maxValue": 0,
      "name": "category.guid",
      "objectType": "ITEM",
      "possibleValues": null,
      "required": true,
      "searchable": true
    },
    {
      "apiName": "creator",
      "creatable": false,
      "custom": false,
      "defaultValue": null,
      "editable": false,
      "fieldType": "SINGLE_LINE_TEXT",

```

```
        "maxLength": 50,
        "maxValue": 0,
        "name": "creator",
        "objectType": "ITEM",
        "possibleValues": null,
        "required": false,
        "searchable": true
    },
    {
        "apiName": "custom269429796",
        "creatable": true,
        "custom": true,
        "defaultValue": null,
        "editable": true,
        "fieldType": "SINGLE_LINE_TEXT",
        "maxLength": null,
        "maxValue": null,
        "name": "Capacitance",
        "objectType": "ITEM",
        "possibleValues": null,
        "required": false,
        "searchable": true
    },
    ...
]
```

Failure - 400

Produces an error if the category GUID is not valid.

```
"code": 3011,
"message": "The guid \"J1ICM2LVEXGZIR4Y1\" is not valid."
```

GET: Get Item Number Formats

<https://api.arenasolutions.com/v1/items/numberformats>

This returns all [Item compact numberformat](#) objects.

Number formats in Arena PLM are constructed as multiple fields of the following types:

- Free Text (a specified number of characters)
- Delimiter (a character that acts as a separator)
- Pre-Defined Code List (a drop-down list that the user can pick from when creating a new Item Number. In the API, it is called VALUE_LIST)
- Auto-Generated Sequence (an incrementing number)

For more on Item Numbers in Arena PLM, see [Arena Help](#) or download the [Arena PLM User Manual](#).

Sample Responses

Success - 200

```
{
  "count": 6,
  "results": [
    {
      "creationDateTime": "2008-03-04T20:20:43Z",
      "exampleNumber": "900-00001",
      "guid": "CUEX2STT29S1K3JKDEA3",
      "name": "Assembly"
    },
    {
      "creationDateTime": "2008-03-04T20:04:47Z",
      "exampleNumber": null,
      "guid": "DVFY3TUU3AT2L4KLEFBE",
      "name": "Basic Item Number"
    },
    {
      "creationDateTime": "2008-03-04T20:29:35Z",
      "exampleNumber": "710-00001",
      "guid": "EWGZ4UVV4BU3M5LMFGCH",
      "name": "Document"
    },
    {
      "creationDateTime": "2008-03-04T20:22:41Z",
      "exampleNumber": "110-00001",
      "guid": "FXH05VWW5CV4N6MNGHDF",
      "name": "Electrical"
    },
    {
      "creationDateTime": "2008-03-04T20:25:40Z",
      "exampleNumber": "410-00001",
      "guid": "GYI16WXX6DW5O7NOHIEU",

```



```
    "name": "Mechanical"
  },
  {
    "creationDateTime": "2008-03-04T20:27:56Z",
    "exampleNumber": "510-00001",
    "guid": "HZJ27XYY7EX6P8OPIJF3",
    "name": "Software"
  }
]
```

Failure - 401

```
"code": 401,
"message": " There is no access token associated with this request or the access
token is invalid."
```

GET: Get Individual Item Number Format

https://api.arenasolutions.com/v1/items/numberformats/<numberformat_GUID>

Returns a [complete item number format](#) object with a given guid.

Sample Responses

Success - 200

```
{
  "creationDateTime": "2008-03-04T20:22:41Z",
  "exampleNumber": "110-00001",
  "fields": [
    {
      "apiName": "custom210479940",
      "name": "Code",
      "possibleValues": [
        {
          "description": "Battery/ Charger",
          "value": "110"
        },
        {
          "description": "Cable",
          "value": "115"
        },
        {
          "description": "Capacitor",
          "value": "120"
        },
        {
          "description": "Connector",
          "value": "125"
        },
        ...
        {
          "description": "Transistor",
          "value": "195"
        }
      ],
      "type": "VALUE_LIST",
      "value": null
    },
    {
      "apiName": "custom210479934",
      "name": null,
      "possibleValues": [],
      "type": "DELIMITER",
      "value": "-"
    },
    {
      "apiName": "custom210479935",
      "name": "Number",
      "possibleValues": [],

```

```
        "type": "AUTO_SEQUENCE",  
        "value": null  
      },  
    ],  
    "guid": "FXH05VWW5CV4N6MNGHDF",  
    "name": "Electrical"  
  }  
}
```

Failure - 401

It produces an error if the NumberFormat GUID is not valid.

```
"code": 3011,  
"message": "The guid \"CUB5FVEN6P8RAQI\" is not valid."
```

GET: Get File Categories

<https://api.arenasolutions.com/v1/files/categories>

This returns all [File Category](#) objects.

Parameters

Path	This is used to filter out categories. The root of path for files is "files". If you want to get all the categories under the root category which start with A, you can send a request as <code>api.arenasolutions.com/files/categories?path=item\A*</code> , where "\" is the separator between parent category and child category. Note the trailing asterisk wildcard in the request.
------	--

Sample Responses

Success - 200

```
{
  "count": 47,
  "results": [
    {
      "activated": true,
      "assignable": null,
      "creationDateTime": "2008-03-04T20:04:48Z",
      "creator": {
        "fullName": "Mike Sullivan (Arena)"
      },
      "description": "File is a system defined category",
      "guid": "0I2LQGHQXGQ9S4C0T0L",
      "level": 1,
      "name": "File",
      "objectType": "FILE",
      "path": "File",
      "systemDefined": true
    },
    {
      "activated": true,
      "assignable": null,
      "creationDateTime": "2008-03-05T13:55:30Z",
      "creator": {
        "fullName": "Mike Sullivan (Arena)"
      },
      "description": null,
      "guid": "608RWMNNW3MWFYAI6Z7X",
      "level": 2,
      "name": "Internal File",
      "objectType": "FILE",
      "path": "File\\Internal File",
      "systemDefined": false
    }
  ]
}
```

```
    },  
    ...  
  ],  
}
```

Failure - 401

```
"code":401,  
"message":"There is no access token associated with this request or the access token  
is invalid."
```

GET: Get Individual File Category

https://api.arenasolutions.com/v1/files/categories/<category_GUID>

This returns a [category](#) object with a given category GUID.

Sample Responses

Success - 200

```
{
  "activated": true,
  "assignable": null,
  "creationDateTime": "2008-03-05T13:56:22Z",
  "creator": {
    "fullName": "Mike Sullivan (Arena)"
  },
  "description": null,
  "guid": "9RBUZPQQZ6PZI1DL92A2",
  "level": 3,
  "name": "CAD Data",
  "objectType": "FILE",
  "path": "File\\Internal File\\CAD Data",
  "systemDefined": false
}
```

Failure - 400

It produces an error if the category guid is not valid.

```
"code": 3011,
"message": "The guid \"CUB5FVEN6P8RAQI\" is not valid."
```

GET: Search Items

`https://api.arenasolutions.com/v1/items`

Returns an array of [compact item](#) objects matching the given search criteria. By default, the max number of items returned is 20. Can return up to 400 compact items.

You can specify search criteria in the URL. Examples:

GET `<url>/items?number=830*&owner.fullName=James Deckard&category.guid=UCWFKABBKRAK3MY6UNTU`

returns items with number starting with 830 with owner "James Deckard" and in category with GUID UCWFKABBKRAK3MY6UNTU

GET
`<url>/items?effectiveDateTimeFrom=2013-02-11T16:00:00Z&effectiveDateTimeTo=2013-03-11T16:00:00Z`

Returns effective revisions of items where the revisions were made effective between 4pm February 11, 2013 and 4pm March 11, 2013.

You specify a limit and an offset. For example:

GET `<url>/items?limit=50&offset=25`

returns 50 results, starting at the 25th result.

Note: Search behavior in the Arena PLM REST API differs from search behavior in the Arena PLM application. In the API, a trailing asterisk (wildcard) is required to return results that start with a string; in the Arena PLM application, a trailing asterisk is always implied.

Parameters

Searchable Attributes	category.guid; name; number; revisionNumber; description; owner.fullName; effectiveDateTimeFrom; effectiveDateTimeTo
offset	Specifies the position in the list of all items where results should begin. All items before the offset in the search results are ignored. The default value is 0.
limit	Specifies the maximum number of returned results. The default value is 20, the maximum is 400

Sample Responses

Success - 200

```
{
  "count": 1,
  "results": [
    {
      "category": {
        "guid": "5N6P8RAK3MY6UNTA"
      }
    }
  ]
}
```

```
    },  
    "creationDateTime": "2011-06-02T19:23:31Z",  
    "guid": "VDXGLBCCLSBQMM0SJU",  
    "lifecyclePhase": {  
      "name": "In Production"  
    },  
    "name": "PCBA, EveryRoad, Model 300",  
    "number": "830-00001",  
    "revisionNumber": "D"  
  }  
]  
}
```

Failure - 400

Returns an error if a parameter is not a valid search attribute.

```
"code": 3019,  
"message": "The attribute \"a\" is not searchable."
```


GET: Get Item (Specs)

Returns an [item](#) object with a given GUID.

`https://api.arenasolutions.com/v1/items/<item_GUID>`

Parameters

includeEmpty AdditionalAttributes	If this is true, the response returns empty additional attributes. The default is false.
offset	Specifies the position in the list of all items where results should begin. All items before the offset in the search results are ignored. The default value is 0.
limit	Specifies the maximum number of returned results. The default value is 20, the maximum is 400

Sample Responses

Success - 200

```
{
  "additionalAttributes": [
    {
      "value": "some value",
      "name": "An 8397 too prime",
      "apiName": "custom4028292",
      "type": "SINGLE_LINE_TEXT"
    }
  ],
  "category": {
    "guid": "L3N6PX4Q6EX7Q9S9XWLB"
  },
  "creationDateTime": "2015-05-05T21:34:24Z",
  "creator": {
    "fullName": "REST API"
  },
  "description": "some desc",
  "deviated": false,
  "effectiveDateTime": null,
  "guid": "1J3M5DK6MUDUDRWCA9ZI",
  "isAssembly": false,
  "lifecyclePhase": {
    "guid": "R9SBUDVYH0J2LZ40",
    "name": "Unreleased"
  },
  "modifiedBom": false,
  "modifiedFiles": false,
  "modifiedSourcing": false,
  "modifiedSpecs": true,
  "name": "api-itemr1",
  "number": null,
  "offTheShelf": true,
```

```
{
  "owner": {
    "fullName": "Francisco Herrera"
  },
  "productionCost": 123456789,
  "prototypeCost": 345,
  "revisionNumber": null,
  "shared": false,
  "standardCost": 1,
  "status": 0,
  "supersededDateTime": null,
  "targetCost": null,
  "targetPrice": null,
  "uom": "bottle"
}
```

Failure - 400

Produces an error if the GUID is not valid.

```
{
  "code": 3011,
  "message": "The guid \"0I2LQGHHQXGXGVRR5XND \" is not valid."
}
```

GET: Get BOM

Returns an array of **BOMLine** objects, the immediate children of an assembly with a given GUID (with no filters.)

`https://api.arenasolutions.com/v1/items/<item_GUID>/bom`

Sample Responses

Success - 200

```
{
  "count": 40,
  "results": [
    {
      "creationDateTime": "2011-06-02 12:23:32",
      "guid": "P7RAF566FM5CVE8ZLBJ5",
      "item": {
        "guid": "ASCV0QRR07Q7Q511F8Z3"
      },
      "lineNumber": null,
      "notes": null,
      "quantity": 5,
      "refDes": "C15,C6,C10-12"
    },
    {
      "creationDateTime": "2011-06-02 12:23:33",
      "guid": "3L5OTJJKKT0JQ9SMDZP5Z",
      "item": {
        "guid": "Q8SBG677GN6N6LHHVP7Y"
      },
      "lineNumber": null,
      "notes": null,
      "quantity": 1,
      "refDes": "C3"
    },
    {
      "creationDateTime": "2011-06-02 12:23:38",
      "guid": "4M6PUKLLU1KRATNE0Q40",
      "item": {
        "guid": "VDXGLBCCLSBQMM0UZ1"
      },
      "lineNumber": null,
      "notes": null,
      "quantity": 3,
      "refDes": "C9,C13-14"
    },
    ...
  ]
}
```

Failure - 400

Produces an error if the GUID is not valid.

```
"code": 3011,  
"message": "The guid \"XFWQ0GZGZDJ015J12\" is not valid."
```

GET: Get Individual BOM Line

https://api.arenasolutions.com/v1/items/<item_GUID>/bom/<bom_GUID>

Returns a [BOMLine](#) object with a given GUID, the immediate child of an assembly with a given GUID (with no filters.)

Parameters

includeEmpty AdditionalAttributes	If this is true, the response returns empty additional attributes. The default is false.
--------------------------------------	--

Sample Responses

Success - 200

```
{
  "additionalAttributes": [
    {
      "value": "3",
      "name": "Pins",
      "apiName": "some name",
      "type": "NUMBER"
    }
  ],
  "guid": "P7RAF566FM5CVE8ZLBJ5",
  "item": {
    "guid": "ASCV0QRR07Q7Q511F8Z3"
  },
  "lineNumber": null,
  "notes": null,
  "quantity": 1,
  "refDes": "u1"
}
```

Failure - 400

Produces an error if the GUID is not valid.

```
"code": 3011,
"message": "The guid \" ASCV0QRR07Q7Q511F8Z3\" is not valid."
```

GET: Get All Attributes for BOMs

<https://api.arenasolutions.com/v1/items/bom/attributes>

An array of all [attribute](#) objects available for BOMs.

Parameters

includePossibleValues	This is for attributes that are dropdown lists. If this is set to true, it returns all the possible values for the dropdown list. The default value is false.
-----------------------	---

Sample Responses

Success - 200

```
{
  "count": 8,
  "results": [
    {
      "allowNegatives": false,
      "apiName": "custom102",
      "creatable": true,
      "custom": true,
      "decimalPlaces": 0,
      "defaultValue": null,
      "editable": true,
      "fieldType": "SINGLE_LINE_TEXT",
      "maxLength": null,
      "maxValue": null,
      "name": "Mfr Notes",
      "objectType": "BOM_LINE",
      "possibleValues": null,
      "required": false,
      "searchable": true
    },
    {
      "allowNegatives": false,
      "apiName": "custom104",
      "creatable": true,
      "custom": true,
      "decimalPlaces": 0,
      "defaultValue": null,
      "editable": true,
      "fieldType": "FIXED_DROP_DOWN",
      "maxLength": null,
      "maxValue": null,
      "name": "list2",
      "objectType": "BOM_LINE",
      "possibleValues": [
        "one",
        "two",
        "three",
        "four"
      ]
    }
  ]
}
```

```
        ],
        "required": false,
        "searchable": true
      },
      ...
    ],
    "statusCode": 0
  }
```

Failure - N/A

GET: Get Where Used

`https://api.arenasolutions.com/v1/items/<item_Guid>/whereused`

Returns an array of [item](#) objects in which the given Item appears as a BOM line, along with the line number and other attributes. Note that when "lineNumber" is null for an assembly line, (a) line number generation is set to manual but the user has not yet entered line numbers, or (b) line number generation is set to automatic.

Sample Responses

Success - 200

```
{
  "count": 2,
  "results": [
    {
      "guid": "I0K3MU1N3BU1K3MU8IT0",
      "item": {
        "guid": "M407QY5R7FYFYCILCQJX"
      },
      "lineNumber": 4,
      "notes": "paren 1 child 1",
      "quantity": 1,
      "refDes": "c3"
    },
    {
      "guid": "J1L4NV2O4CV2L4NV9JUI",
      "item": {
        "guid": "WEYH08F1HP8P8MSVM0T4"
      },
      "lineNumber": null,
      "notes": "paren 1 child 1",
      "quantity": 1,
      "refDes": "c3"
    }
  ]
}
```

Failure - 400

Produces an error if a GUID is not valid.

```
"code": 3011,
"message": "The guid \" I0K3MU1N3BU1K3MU8IT0\" is not valid."
```


GET: Get BOM Settings

https://api.arenasolutions.com/v1/items/<item_GUID>/bom/settings

Returns BOM Settings for the BOM of an Item with a given GUID. The two settings available for BOMs are:

- automaticallyGenerateLineNumbers
- checkReferenceDesignators

Sample Responses

Success - 200

```
{
  " automaticallyGenerateLineNumbers ": true,
  " checkReferenceDesignators ": true
}
```

Failure - 401

Produces an error if the GUID is not valid.

```
"code": 3011,
"message": "The guid \"CUB5FVEN6P8RAQI\" is not valid."
```

GET: Get Item Revisions

Returns all [revision](#) objects of an item with a given GUID. The revision type is specified by the value of the "status" attribute. 0 is working revision, 1 is effective revision, 2 is past revisions.

Sample Responses

Success - 200

```
{
  "count": 4,
  "results": [
    {
      "change": {
        "changeNumber": null,
        "creationDateTime": "2012-07-31T22:53:39Z",
        "deviated": false,
        "effectiveDateTime": null,
        "obsoleteDateTime": null
      },
      "creationDateTime": null,
      "guid": "ASCV0QRR07Q7Q511F7V0",
      "lifecyclePhase": {
        "name": "ITEM-IN_DESIGN"
      },
      "number": null,
      "status": 0
    },
    {
      "change": {
        "changeNumber": null,
        "creationDateTime": "2012-06-04T21:51:56Z",
        "deviated": false,
        "effectiveDateTime": "2012-07-31T22:53:39Z",
        "obsoleteDateTime": null
      },
      "creationDateTime": null,
      "guid": "0I2LQGHQXGXGVRR5XND",
      "lifecyclePhase": {
        "name": "ITEM-IN_DESIGN"
      },
      "number": "3",
      "status": 1
    },
    {
      "change": {
        "changeNumber": null,
        "creationDateTime": "2012-06-04T21:47:33Z",
        "deviated": false,
        "effectiveDateTime": "2012-06-04T21:51:56Z",
        "obsoleteDateTime": "2012-07-31T22:53:39Z"
      },
      "creationDateTime": null,
      "guid": "FXH05VWW5CVCVA66KC36",
    }
  ]
}
```

```
    "lifecyclePhase": {
      "name": "ITEM-IN_DESIGN"
    },
    "number": "2",
    "status": 2
  },
  {
    "change": {
      "changeNumber": null,
      "creationDateTime": "2011-08-09T22:19:25Z",
      "deviated": false,
      "effectiveDateTime": "2012-06-04T21:47:33Z",
      "obsoleteDateTime": "2012-06-04T21:51:56Z"
    },
    "creationDateTime": null,
    "guid": "0I2LQGHQXGXGVRR5X1R",
    "lifecyclePhase": {
      "name": "ITEM-IN_DESIGN"
    },
    "number": "1",
    "status": 2
  }
]
```

Failure - 400

Produces an error if the GUID is not valid.

```
"code": 3011,
"message": "The guid \"XFWQ0GZGZDJ015J12\" is not valid."
```

GET: Get File Associations for an Item

https://api.arenasolutions.com/v1/items/<item_GUID>/files

Returns an array of [file](#) objects belonging to an item with a given GUID.

Sample Responses

Success - 200

```
{
  "count": 4,
  "results": [
    {
      "creationDateTime": null,
      "file": {
        "author": {
          "fullName": "George Lewis"
        },
        "category": {
          "guid": "K2L4N6PZI1DL92AR"
        },
        "creationDateTime": "2011-06-02T19:30:28Z",
        "description": null,
        "edition": "1",
        "format": "DSN",
        "guid": "N5P8D344DK3J2LC3T0OM",
        "hasMarkup": false,
        "lastModifiedDateTime": "2011-06-02T19:30:28Z",
        "latest": true,
        "location": null,
        "mimeType": null,
        "name": "OrcadCapture.DSN",
        "number": "FILE-000825",
        "private": false,
        "size": 463360,
        "storageMethod": 0,
        "title": "OrCAD Schematic File"
      },
      "guid": "N5O7Q9SYH0W6I7OW",
      "primary": false
    },
    {
      "creationDateTime": null,
      "file": {
        "author": {
          "fullName": "George Lewis"
        },
        "category": {
          "guid": "K2L4N6PZI1DL92AR"
        },
        "creationDateTime": "2011-06-02T19:30:28Z",
        "description": null,
        "edition": "1",
```

```
        "format": "gbr",
        "guid": "0I2LQGHQXGWFYPG6D04",
        "hasMarkup": false,
        "lastModifiedDateTime": "2011-06-02T19:30:28Z",
        "latest": true,
        "location": null,
        "mimeType": null,
        "name": "drill.gbr",
        "number": "FILE-000878",
        "private": false,
        "size": 21859,
        "storageMethod": 0,
        "title": "Gerber Drill File"
    },
    "guid": "O6P8RATZI1X7J8PE",
    "primary": false
  ],
}
```

Failure - 400

Produces an error if the GUID is not valid.

```
"code": 3011,
"message": "The guid \"XFWQ0GZGZDJ015J12\" is not valid."
```

GET: Get Individual File Association for an Item

https://api.arenasolutions.com/v1/items/<item_GUID>/files/<file_GUID>

Returns a [file](#) object with a given GUID belonging to an item with a given GUID.

Sample Responses

Success - 200

```
{
  "creationDateTime": null,
  "file": {
    "author": {
      "fullName": "Alan Goodrich"
    },
    "category": {
      "guid": "BTCVEXGQ9S4C0T0Q"
    },
    "creationDateTime": "2014-02-13T22:50:13Z",
    "description": null,
    "edition": "1",
    "format": "txt",
    "guid": "EWGZ4UVV4BUATC3S55N1",
    "hasMarkup": false,
    "lastModifiedDateTime": "2014-02-13T22:50:13Z",
    "latest": true,
    "location": null,
    "mimeType": null,
    "name": "test file.txt",
    "number": "FILE-000972",
    "private": false,
    "size": 35,
    "storageMethod": 0,
    "title": "test file"
  },
  "guid": "N5O7Q9SYH0W5SPPV",
  "primary": false
}
```

Failure - 400

An error is returned if:

1. the GUID is not valid.

```
"code": 3011,
"message": "The guid \"XFWQ0GZGZDJ015J12\" is not valid."
```

2. the file does not exist.

```
"code": 3029,
"message": "The file association does not exist between object  
\"7P9SBJQCS0J0JX3FQYB1\" and object \"P7RAT18UAI1H0J2BCXIP\"."
```

GET: Get File Content for File Associated with Item

`https://api.arenasolutions.com/v1/items/<item_GUID>/files/<file_association_GUID>/content`

Returns file content belonging to a file with a given GUID, which is associated with an item with a given GUID.

Sample Responses

Success - 200

Returns the content of the File as an InputStream.

Failure - 400

An error is returned if:

1. the GUID is not valid.

```
"code": 3011,  
"message": "The guid \"XFWQ0GZGZDJ015J12\" is not valid."
```

2. An error is thrown by the file server

```
"code": 3017,  
"message": "The file with guid \"7P60AQ9P8RAS7F6J\" cannot be downloaded at this time."
```

*If the file server is inaccessible, it may return a 400 status with no message.

GET: Get Item Compliance Requirements

https://api.arenasolutions.com/v1/items/<item_GUID>/compliance

Returns all [compliance requirement](#) objects for an item with a given GUID.

Sample Responses

Success - 200

```
{
  "count": 1,
  "results": [
    {
      "lastModifiedBy": "Roy S",
      "lastModifiedDateTime": "2014-02-13T22:43:03Z",
      "mark": "Approved",
      "propagated": false,
      "rationale": "Complies with the requirement",
      "requirement": {
        "evidenceType": "AML_AND_FILES",
        "name": "2002/95/EC RoHS"
      },
      "status": "COMPLIANT"
    }
  ]
}
```

Failure - 400

Returns an error if the item GUID is not valid.

```
"code": 3011,
"message": "The guid \"XFWQ0GZGZDJ015J12\" is not valid."
```


POST: Create Item

<https://api.arenasolutions.com/v1/items>

Creates a new [item](#) object. You can specify no number format, the basic number format, or a valid number format for the workspace (with or without an auto-generating sequence), in which case you must specify valid values for each field type in the number format. Each case is shown below.

NOTES:

1. The values you specify for attributes must match the attribute types specified in the workspace. For example, when specifying a value for a predefined list, the value must be one of the allowed values.
2. Number values must appear in quotation marks.
3. Category and other IDs must exist in the workspace.
4. A category GUID is required.

Sample Request Body

- Create Item with No Number

```
{
  "name": "New Part",
  "uom": "each",
  "category": {
    "guid": "DVFY3TUU3AT3M5HPD6DC"
  },
  "productionCost": 1.10,
  "description": "New Part"
}
```

- Create Item with Basic Number Format

```
{
  "name": "New Part",
  "numberFormat": {
    "guid": "DVFY3TUU3AT2L4KLEFBE",
    "fields": [
      { "apiName": "custom210479932", "value": "100-04" }
    ]
  },
  "uom": "each",
  "category": { "guid": "1J3MRHIIRYHRAT5D1U08" },
  "productionCost": 1.10,
  "description": "New Part"
}

{
  "additionalAttributes": [],
  "category": {
    "guid": "CUDWIFYHRAT5D1U04"
  },
  "creationDateTime": "2014-02-13T23:07:27Z",
}
```

```

    "creator": {
      "fullName": "Roy S"
    },
    "description": "New Part",
    "guid": "ASCV0QRR07Q7Q502P292",
    "isAssembly": false,
    "lifecyclePhase": {
      "name": "Unreleased"
    },
    "name": "New Part",
    "number": "100-04",
    "offTheShelf": true,
    "owner": null,
    "productionCost": 1.1,
    "prototypeCost": null,
    "revisionNumber": null,
    "shared": false,
    "standardCost": null,
    "targetCost": null,
    "targetPrice": null,
    "uom": "Each"
  }

```

- Create Item with Autogenerating Number

```

{
  "name": "Capacitor",
  "numberFormat": {
    "guid": "FXH05VWW5CV4N6MNGHDF",
    "fields": [
      { "apiName": "custom210479940", "value": "120" }
    ]
  },
  "uom": "each",
  "category": { "guid": "1J3MRHIIRYHRAT5D1U08" },
  "productionCost": 1.10,
  "description": "New Capacitor"
}

```

- Create Item with Autogenerating Number and Additional Attributes

```

{
  "name": "Capacitor",
  "numberFormat": {
    "guid": "FXH05VWW5CV4N6MNGHDF",
    "fields": [
      { "apiName": "custom210479940", "value": "120" }
    ]
  },
  "uom": "each",
  "category": { "guid": "1J3MRHIIRYHRAT5D1U08" },
  "productionCost": 1.10,
  "description": "New Capacitor"
}
{

```

```

    "additionalAttributes": [],
    "category": {
      "guid": "CUDWIFYHRAT5D1U04"
    },
    "creationDateTime": "2014-02-13T23:05:42Z",
    "creator": {
      "fullName": "Roy S"
    },
    "description": "New Capacitor",
    "guid": "Q8SBG677GN6N6LGI5IPY",
    "isAssembly": false,
    "lifecyclePhase": {
      "name": "Unreleased"
    },
    "name": "Capacitor",
    "number": "120-00008",
    "offTheShelf": true,
    "owner": null,
    "productionCost": 1.1,
    "prototypeCost": null,
    "revisionNumber": null,
    "shared": false,
    "standardCost": null,
    "targetCost": null,
    "targetPrice": null,
    "uom": "Each"
  }
}

```

Sample Responses

Success - 200

```

{
  "id": 10159775128,
  "guid": "5N7QVLMMV2L2L0VE2D9L",
  "creationDateTime": "2013-10-14T23:56:51Z",
  "creatorId": null,
  "modifierId": null,
  "workspaceId": 896100132,
  "category": {
    "guid": "DVFY3TUU3AT3M5HPD6DC"
  },
  "additionalAttributes": [],
  "lifecyclePhase": "Unreleased",
  "number": null,
  "name": "New Part",
  "itemId": 1199302169,
  "revisionNumber": null,
  "description": "New Part",
  "uom": "Each",
  "owner": null,
  "creator": {
    "fullName": "Roy Arena"
  },
  "prototypeCost": null,
  "productionCost": 1.1,

```

```
"unitId": null,  
"numberFormat": null,  
"targetPrice": null,  
"targetCost": null,  
"standardCost": null,  
"costMethod": 0,  
"offTheShelf": true,  
"shared": false,  
"plmEntityType": "ITEM"  
}
```

Failure - 200

The request is validated to make sure it doesn't violate any business rules. Any violation will result in an error response:

1. An attribute included in the request is not recognizable.

```
"code": 4004,  
"message": "The attribute \"name1\" is not recognized."
```

2. The category GUID is not valid.

```
"code": 3011,  
"message": "The guid \"J1ICM2LVEXGZIR4\" is not valid."
```

3. An option is not valid value for a fixed (non-user-editable) dropdown list.

```
"code": 3006,  
"message": "The specified value \"ea\" is not a valid option for the attribute  
\"uom\"."
```

4. The value exceeds the maximum length for an attribute.

```
"code": 3005,  
"message": "The specified value \"1.234567891111111E20\" is too big for the attribute  
\"productionCost\"."
```

5. An improper type of value is given to an attribute. For example if a string value is given to a double attribute.

```
"code": 400,  
"message": "The format of the request is not valid. Please check the syntax."
```

6. One or more additional attributes are not recognized.

```
"code": 3004,  
"message": "The attribute \"custom1637239\" is not recognized."
```

7. A number format is invalid.

```
"code": 3011,  
"message": "The guid \"FXE8IYHQ9SBUDTLK1\" is not valid."
```

8. A required entry for a valid NumberFormat is not given.

```
"code": 3009,  
"message": "The field \"SM Analog Type Code\" is required for the number format  
\"410-SM Analog Voltage Regulator\"."
```

9. A required attribute is missing.

```
"code": 3001,  
"message": "The attribute \"uom\" is required."
```

10. A free text NumberFormat is used, and the given item number exceeds the maximum length.

```
"code": 3015,  
"message": "The given item number is too long. The max length of the free text  
number format \"FreeText\" is \"10\"."
```

11. The category is structural.

```
"code": 3007,  
"message": "This category is structural; objects may not be assigned to it."
```

12. The given item number exists in the workspace and the workspace does not allow item number duplication.

```
"code": 3025,  
"message": "A revision of an Item already exists (or has been reserved by an  
integration) with the item number you selected. Item numbers may not be duplicated  
in this workspace."
```

PUT: Update Item

https://api.arenasolutions.com/v1/items/<item_GUID>

Updates the metadata of an item with a given GUID.

Sample Request Body

```
{
  "standardCost": 50.12,
  "additionalAttributes": [
    {
      "value": "2000",
      "apiName": "custom269446988"
    }
  ]
}
```

Sample Responses

Success - 201

```
{
  "id": 10130033498,
  "guid": "ASCV0QRR07Q7Q511F7V0",
  "creationDateTime": "2011-08-09T22:19:25Z",
  "creatorId": null,
  "modifierId": null,
  "workspaceId": 896100132,
  "category": {
    "guid": "CUDWFYHRAT5D1U04"
  },
  "additionalAttributes": [
    {
      "id": 269446988,
      "value": "2000",
      "name": "Inventory On Hand",
      "apiName": "custom269446988"
    }
  ],
  "lifecyclePhase": "In Design",
  "number": "830-00002",
  "name": "PCBA, EveryRoad, Model 500",
  "itemId": 1197598478,
  "revisionNumber": null,
  "description": "Board Assembly. This is the primary PCB assembly that sits at the back of the EveryRoad GPS Car Navigation System Model 500. It will be used on both the US and EU versions of the product.",
  "uom": "Each",
  "owner": "Toshiro Makamuri",
  "creator": "Heidi Walker",
  "creatorFirstName": "Heidi",
  "creatorLastName": "Walker",
}
```

```
{
  "creatorEmail": "hwalker@everyroadgps.com",
  "prototypeCost": 80.43426,
  "productionCost": 56.368,
  "unitId": null,
  "numberFormat": null,
  "targetPrice": null,
  "targetCost": 40,
  "standardCost": 50.12,
  "costMethod": 2,
  "offTheShelf": false,
  "shared": true,
  "plmEntityType": "ITEM"
}
```

Failure - 400

The request is validated to make sure it doesn't violate any business rules. Any violation will result in an error response:

1. An attribute included in the request is not recognizable.

```
"code": 4004,
"message": "The attribute \"name1\" is not recognized."
```

2. The category GUID is not valid.

```
"code": 3011,
"message": "The guid \"J1ICM2LVEXGZIR4\" is not valid."
```

3. An option is not valid value for a fixed (non-user-editable) dropdown list.

```
"code": 3006,
"message": "The specified value \"ea\" is not a valid option for the attribute \"uom\"."
```

4. The value exceeds the maximum length for an attribute.

```
"code": 3005,
"message": "The specified value \"1.234567891111111E20\" is too big for the attribute \"productionCost\"."
```

5. An improper type of value is given to an attribute. For example if a string value is given to a double attribute.

```
"code": 400,
"message": "The format of the request is not valid. Please check the syntax."
```

6. One or more additional attributes are not recognized.

```
"code": 3004,
"message": "The attribute \"custom1637239\" is not recognized."
```

7. A number format is invalid.

```
"code": 3011,  
"message": "The guid \"FXE8IYHQ9SBUDTLK1\" is not valid."
```

8. A required entry for a valid NumberFormat is not given.

```
"code": 3009,  
"message": "The field \"SM Analog Type Code\" is required for the number format  
\"410-SM Analog Voltage Regulator\"."
```

9. A free text NumberFormat is used, and the given item number exceeds the maximum length.

```
"code": 3015,  
"message": "The given item number is too long. The max length of the free text  
number format \"FreeText\" is \"10\"."
```

10. The given item number exists in the workspace and the workspace does not allow item number duplication.

```
"code": 3025,  
"message": "A revision of an Item already exists (or has been reserved by an  
integration) with the item number you selected. Item numbers may not be duplicated  
in this workspace."
```


DELETE: Delete Item

`https://api.arenasolutions.com/v1/items/<item_GUID>`

Deletes an item with a given GUID.

Sample Responses

Success - 204

```
no response
```

Failure - 400

An error is returned if:

1. The GUID is not valid.

```
"code": 3011,  
"message": "The guid \"XFWQ0GZGZDJ015J12\" is not valid."
```

2. An error is returned if:

```
"code": 3012,  
"message": "The requested object with guid \"BTA4EUDUDRXE6AZN\" is not found."
```

POST: Release a New Item Revision (Change Lifecycle Phase)

<https://api.arenasolutions.com/v1/items/lifecyclephasechanges>

Releases a new revision of an Item with a given GUID.

The following phase transitions are allowed:

1. Release to Design (move an unreleased Item to a Design stage lifecycle phase.)
2. Make Effective in Design (make working modifications effective in a new revision while remaining in the same Design phase.)
3. Release to Production (move a Design stage Item to a Production stage lifecycle phase.)
4. Make Effective in Production (make working modifications effective in a new revision while remaining in the same Production phase.)

Of these phase transitions, Release to Design, Make Effective in Design, and Make Effective in Production require the working revision of the item because these endpoints operate on the working revision. Release to Production requires that the item guid be the effective revision.

Note: This API request can generate errors, warnings, and notices. The request will fail if there is at least one error or warning. If the value for "proceedOnNotice" is True, the request will continue if it generates notices.

Sample Request Body

```
{
  "item": {
    "guid": "Q8SBG677GN6N6LE4IPZ2"
  },
  "proceedOnNotice": true,
  "toLifecyclePhase": {
    "guid": "K2M5AO11AHZ2L4N6PIZ6"
  },
  "notes": "Ready for release"
  "revisionNumber": "3"
}
```

Optional Fields

proceedOnNotice	This field, when set to true, forces the operation to continue even if there are errors.
notes	This field enters a comment in the item record.
revisionNumber	This field specifies a target revision number for the transition. If this field is not included, and a revision sequence is defined for the target lifecycle stage (and if the current revision number appears in that sequence) the next revision in the sequence will be selected.)

Sample Responses

Success - 201

```
{
  "effectiveRevItem": {
    "guid": "M4O7QY5R7FYFYCHZ27X0"
  },
  "supersededRevItem": {
    "guid": "CUEXGOVHX5O5O27PSXND"
  },
  "workingRevItem": {
    "guid": "WEYH08F1HP8P8MR9CH77"
  }
}
```

Failure - 400

Returns an error if the item GUID is not valid

```
"code": 3011,
"message": "The guid \"XFWQ0GZGZDJ015J12\" is not valid."
```

POST: Create BOM Line

https://api.arenasolutions.com/v1/items/<item_GUID>/bom

Creates a new [BOMLine](#) for an item with a given GUID. A BOMLine consists of an item and the reference designator, quantity, and notes that appear on its line in a BOM.

Sample Request Body

```
{
  "additionalAttributes": [
    {
      "value": "3",
      "name": "Pins",
      "apiName": "some name",
      "type": "NUMBER"
    }
  ],
  "refDes": "u1",
  "quantity": 1,
  "notes": "some notes",
  "item": {
    "guid": "M407C228B7Q7Q50Y5C18"
  }
}
```

Sample Responses

Success - 201

```
{
  "additionalAttributes": [
    {
      "value": "3",
      "name": "Pins",
      "apiName": "some name",
      "type": "NUMBER"
    }
  ],
  "guid": "06Q9E44AD9SZI1U6RIAQ",
  "item": {
    "guid": "M407C228B7Q7Q50Y5C18"
  },
  "lineNumber": 1,
  "notes": "some notes",
  "quantity": 1,
  "refDes": "u1"
}
```

Failure - 400

An error is returned if:

1. The user does not have access to the Item they are trying to add to a BOM.

```
"code": 3024,  
"message": "Either you do not have privileges to access the requested data or it  
does not exist."
```

2. The BOM is locked to editing by inclusion on a locked Change/locked by a Change Admin.

```
"code": 3034,  
"message": "The item is locked."
```

3. User trying to add superseded revision to BOM (only effective revision can be added)

```
"code": XYZ,  
"message": "The version of the item \"608RAIPBRZIZIW2E80VT\" is invalid."
```

4. A reference designator is incorrectly formatted.

```
"code": 3036,  
"message": "Invalid BOM Line: Invalid reference descriptor: c."
```

5. A reference designator range is incorrectly formatted.

```
"code": 3036,  
"message": "Invalid BOM Line: Invalid reference designator  
range: c3-cl."
```

6. A reference designator is a duplicate (and reference designator checking is enabled in the workspace)

```
"code": 3036,  
"message": "Invalid BOM Line: Duplicated reference designators: [c3]."
```

7. Quantity does not match number of reference designators (and reference designator checking is enabled in the workspace)

```
"code": 3036,  
"message": "Invalid BOM Line: Quantity (2.0) doesn't match number of reference  
designators."
```

PUT: Update BOM Line

https://api.arenasolutions.com/v1/items/<item_GUID>/bom/<bomline_GUID>

Updates an existing [BOMLine](#) with a given GUID for an item with a given GUID.

Sample Request Body

```
{
  "refDes": "u1",
  "quantity": 1,
  "notes": "New chip"
}
```

Sample Responses

Success - 201

```
{
  "additionalAttributes": [
    {
      "value": "3",
      "name": "Pins",
      "apiName": "some name",
      "type": "NUMBER"
    }
  ],
  "guid": "06Q9E44AD9SZI1U6RIAQ",
  "item": {
    "guid": "M4O7C228B7Q7Q50Y5C18"
  },
  "lineNumber": 1,
  "notes": "New chip",
  "quantity": 1,
  "refDes": "u1"
}
```

Failure - 400

An error is returned if:

1. The user does not have access to the Item they are trying to add to a BOM.

```
"code": 3024,
"message": "Either you do not have privileges to access the requested data or it does not exist."
```

2. The BOM is locked to editing by inclusion on a locked Change/locked by a Change Admin.

```
"code": 3034,
"message": "The item is locked."
```

3. A reference designator is incorrectly formatted.

```
"code": 3036,
"message": "Invalid BOM Line: Invalid reference descriptor: c."
```

4. A reference designator range is incorrectly formatted.

```
"code": 3036,
"message": "Invalid BOM Line: Invalid reference designator range: c3-c1."
```

5. A reference designator is a duplicate (and reference designator checking is enabled in the workspace)

```
"code": 3036,
"message": "Invalid BOM Line: Duplicated reference designators: [c3]."
```

6. Quantity does not match number of reference designators (and reference designator checking is enabled in the workspace)

```
"code": 3036,
"message": "Invalid BOM Line: Quantity (2.0) doesn't match number of reference designators."
```

7. The BOM line does not exist.

```
"code": 3024,
"message": "Either you do not have privileges to access the requested data or it does not exist."
```

PUT: Update BOM Settings

https://api.arenasolutions.com/v1/items/<item_GUID>/bom/settings

Updates BOM Settings for the BOM of an Item with a given GUID. The two settings available for BOMs are:

- automaticallyGenerateLineNumbers
- checkReferenceDesignators

You can edit one or both settings with the same request.

Sample Request Body

```
{
  " automaticallyGenerateLineNumbers ": false,
}
```

Sample Responses

Success - 201

```
{
  " automaticallyGenerateLineNumbers ": false,
  " checkReferenceDesignators ": true
}
```

Failure - 401

```
"code": 3011,
"message": "The guid \"CUB5FVEN6P8RAQI\" is not valid."
```


DELETE: Delete BOM Line

`https://api.arenasolutions.com/v1/items/<item_GUID>/bom/<bom_GUID>`

Deletes a BOMLine with a given GUID from an Item with a given GUID.

Sample Responses

Success - 204

```
no response
```

Failure - 400

An error is returned if:

1. The user does not have access to the Item they are trying to add to a BOM.

```
"code": 3024,  
"message": "Either you do not have privileges to access the requested data or it  
does not exist."
```

2. The BOM is locked to editing by inclusion on a locked Change/locked by a Change Admin.

```
"code": 3034,  
"message": "The item is locked."
```

3. The BOM Line does not exist.

```
"code": 3024,  
"message": "Either you do not have privileges to access the requested data or it  
does not exist."
```

POST: Add File and Associate the File with an Item

`https://api.arenasolutions.com/v1/items/<item_GUID>/files`

Creates a new [file](#) object and associates it with an item with a given GUID.

If you wish to create a File record with no uploaded content, construct a JSON request with a `storageMethod` of -1 (place holder), 2 (ftp link), 3 (web link). When the `storageMethod` is 2 or 3, the `location` attribute should be the web or ftp address where the file resides.

If you wish to create File record and upload file content to the Arena servers, construct a request that is content type `multipart/form-data` and has a `storageMethod` of 0.

NOTES:

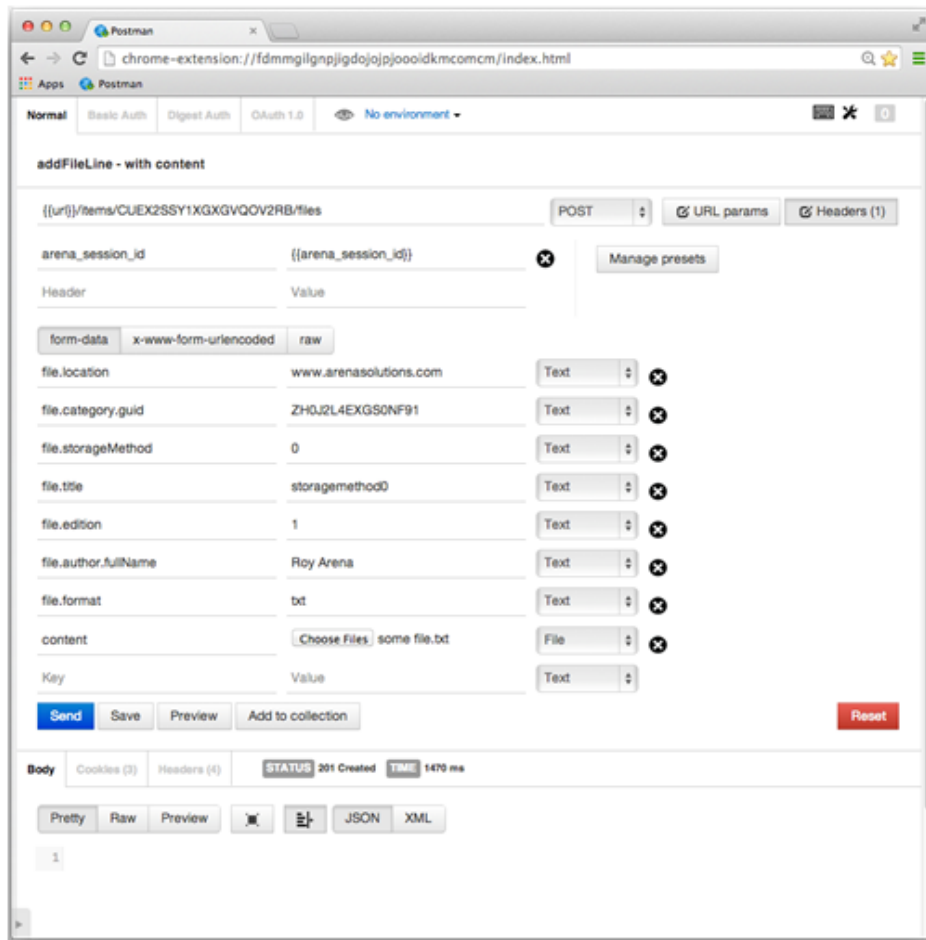
1. The file row in the form data must be specified last as shown in the example.
2. Only Item files are supported. Files associated with sourced Supplier Items are not supported.

Sample Request Body

- Creating a File with no uploaded content:

```
{
  "file": {
    "location": "www.arenasolutions.com",
    "category": {
      "guid": "ZH0J2L4EXGS0NF91"
    },
    "storageMethod": 3,
    "title": "some title",
    "edition": "1",
    "author": {
      "fullName": "Roy Arena"
    },
    "format": "txt"
  }
}
```

- Creating a File and uploading content to Arena servers (example form):



Sample Responses

Success - 200

When creating a file with no uploaded content:

```
{
  "creationDateTime": null,
  "file": {
    "author": {
      "fullName": "Roy Arena"
    },
    "category": {
      "guid": "ZH0J2L4EXGS0NF91"
    },
    "creationDateTime": "2014-02-24T22:41:19Z",
    "description": null,
    "edition": "1",
    "format": "txt",
    "guid": "GYI16WW251K0J2TITQ10",
    "hasMarkup": false,
    "lastModifiedDateTime": "2014-02-24T22:41:19Z",
    "latest": true,
  }
}
```

```
{
  "location": "www.arenasolutions.com",
  "mimeType": null,
  "name": null,
  "number": "FILE-000005",
  "private": false,
  "size": null,
  "storageMethod": 3,
  "title": "some title"
},
{
  "guid": "ASBUDWFRATPYJAGV",
  "primary": false
}
```

When creating a File object with uploaded content:

```
{
  "creationDateTime": null,
  "file": {
    "author": {
      "fullName": "Roy Arena"
    },
    "category": {
      "guid": "ZH0J2L4EXGS0NF91"
    },
    "creationDateTime": "2014-02-24T22:41:19Z",
    "description": null,
    "edition": "1",
    "format": "txt",
    "guid": "GYI16WW251K0J2TITQ10",
    "hasMarkup": false,
    "lastModifiedDateTime": "2014-02-24T22:41:19Z",
    "latest": true,
    "location": "www.arenasolutions.com",
    "mimeType": null,
    "name": null,
    "number": "FILE-000005",
    "private": false,
    "size": null,
    "storageMethod": 3,
    "title": "some title"
  },
  "guid": "ASBUDWFRATPYJAGV",
  "primary": false
}
```

Failure - 400

An error is returned if:

1. The GUID is not valid.

```
"code": 3011
"message": "The guid \"XFWQ0GZGZDJ015J12\" is not valid."
```

2. a required metadata attribute is missing.

```
"code": 3001  
"message": "The attribute \"edition\" is required."
```

POST: Update a File Associated with an Item

https://api.arenasolutions.com/v1/items/<item_GUID>/files/<file_association_GUID>/content

Updates file content for an existing File with a given GUID associated with an item with a given GUID. The file row in the form data must be specified last as shown in the example.

Sample Request Body

An example of submitting file content through a form:

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

- URL:** `{{uri}}/items/ASCV0QRR07Q7Q511F7V0/files/N5O7Q9SYH0W5SPPV/content`
- Method:** POST
- URL params:** Enabled
- Headers:** 1 header defined: `arena_session_id` with value `{{arena_session_id}}`
- Form Data:** Tabbed interface with 'form-data' selected. It shows a single entry: `fileContent` with a file selected (test file.txt).
- Buttons:** Send, Save, Preview, Tests, Add to collection, and a red Reset button.

Sample Responses

Success - 204

```
{
  "creationDateTime": null,
  "file": {
    "author": {
      "fullName": "Roy Arena"
    },
    "category": {
      "guid": "ZH0J2L4EXGS0NF91"
    },
    "creationDateTime": "2014-02-24T22:41:19Z",
    "description": null,
    "edition": "1",
    "format": "txt",
    "guid": "GYI16WW251K0J2TITQ10",
    "hasMarkup": false,
    "lastModifiedDateTime": "2014-02-24T22:41:19Z",
    "latest": true,
    "location": "www.arenasolutions.com",
    "mimeType": null,
    "name": null,
    "number": "FILE-000005",
    "private": false,
    "size": null,
    "storageMethod": 3,
    "title": "some title"
  }
}
```

```
    },  
    "guid": "ASBUDWFRATPYJAGV",  
    "primary": false  
  }  
}
```

Failure - 400

Returns an error if the GUID is not valid.

```
"code": 3011,  
"message": "The guid \"XFWQ0GZGZDJ015J12\" is not valid."
```

DELETE: Remove File Association from Item

`https://api.arenasolutions.com/v1/items/<item_GUID>/files/<file_association_GUID>`

Removes a File association from an Item with a given GUID.

Sample Responses

Success - 204

N/A

Failure - 400

Produces an error if the requested file association does not exist.

```
"code": 3029,  
"message": "The file association does not exist between object \"Q8SBG6CHGDWDB7W8EJG\"  
and object \"EWGZ4U0541K0J2TJSQGG\"."
```


GET: Get Source Relationships for an Item

`https://api.arenasolutions.com/v1/items/<item_GUID>/sourcing`

Returns an array of [source relationship](#) objects for an item with a given GUID.

You can specify a limit and an offset. For example:

GET <url>/sourcing?limit=10&offset=2

returns 10 results, starting at the 2nd result.

Parameters

offset	Specifies the position in the list of all suppliers where results should begin. All supplier items before the offset in the search results are ignored. The default value is 0.
limit	Specifies the maximum number of returned results. The default value (no specified limit) is 20, the maximum is 400.

Sample Responses

Success - 200

```
{
  "count": 2,
  "results": [
    {
      "activeProduction": false,
      "activePrototype": false,
      "amlRank": 2,
      "approved": true,
      "creationDateTime": null,
      "guid": "HZJ27XT2A5OSBUF52G81",
      "makeItem": false,
      "mfrItem": {
        "guid": "BTDW1RNW4ZIN6PPBP28X"
      },
      "notes": "api-sourcing-relationship1",
      "offTheShelf": false,
      "vendorItem": {
        "guid": "BTDW1RNW4ZIN6PPBP28X"
      },
      "vendorItemConversionFactor": 2
    },
    {
      "activeProduction": false,
      "activePrototype": false,
      "amlRank": null,
      "approved": false,
      "creationDateTime": null,
      "guid": "I0K38YU3B6PTCVG63H9A",
      "makeItem": false,
    }
  ]
}
```

```
    "mfrItem": {  
      "guid": "BTDW1RNW4ZIN6PPBP28X"  
    },  
    "notes": "api-sourcing-relationship1",  
    "offTheShelf": false,  
    "vendorItem": {  
      "guid": "BTDW1RNW4ZIN6PPBP28X"  
    },  
    "vendorItemConversionFactor": 2  
  }  
]  
}
```

Failure - 400

Returns an error if:

1. the format of the request is incorrect:

```
"code": 400,  
"message": "The format of the request is not valid. Please check the syntax."
```

2. a general error occurs:

```
"code": 4000,  
"message": "Sorry, a system error occurred, please try again."
```

GET: Get Individual Source Relationship for an Item

https://api.arenasolutions.com/v1/items/<item_GUID>/sourcing/<sourcerelationship_GUID>

Returns a [source relationship](#) object with a given GUID for an item with a given GUID.

Sample Responses

Success - 200

```
{
  "activeProduction": false,
  "activePrototype": false,
  "amlRank": 2,
  "approved": true,
  "creationDateTime": null,
  "guid": "HZJ27XT2A5OSBUF52G81",
  "makeItem": false,
  "mfrItem": {
    "guid": "BTDW1RNW4ZIN6PPBP28X"
  },
  "notes": "api-sourcing-relationship1",
  "offTheShelf": false,
  "vendorItem": {
    "guid": "BTDW1RNW4ZIN6PPBP28X"
  },
  "vendorItemConversionFactor": 2
}
```

Failure - 400

Returns an error if:

1. the format of the request is incorrect:

```
"code": 400,
"message": "The format of the request is not valid. Please check the syntax."
```

2. a general error occurs:

```
"code": 4000,
"message": "Sorry, a system error occurred, please try again."
```

POST: Create Item Source Relationship

https://api.arenasolutions.com/v1/items/<item_GUID>/sourcing

Creates a new [source relationship](#) for an item with a given GUID. Note that you can create two different types of source relationship:

- In a direct relationship, you get a manufacturer Item directly from the manufacturer. The manufacturer and vendor items are the same.
- In an indirect relationship, you buy a manufacturer item from a vendor. The manufacturer and vendor items are different. You can choose not to specify the manufacturer or vendor item in an indirect source relationship, to create an "any" relationship (source to any manufacturer or vendor.)

NOTES:

1. The suppliers and supplier items named in the source relationship must already exist in the workspace. Find their GUIDs with Get Supplier and Get Supplier Item requests.
2. The values you specify for attributes must match the attribute types specified in the workspace. For example, when specifying a value for a predefined list, the value must be one of the allowed values.
3. Number values must appear in quotation marks.

Sample Request Body

- Create Indirect Source Relationship

```
{
  "amlRank": 2,
  "approved": true,
  "mfrItem": {
    "guid": " FXH05VR083MRATTHJD8A "
  },
  "notes": "api-sourcing-relationship1",
  "vendorItem": {
    "guid": " BTDW1RNW4ZIN6PPBP28X"
  },
  "vendorItemConversionFactor": 2,
  "makeItem": false
}
```

- Create Direct Source Relationship (note that the mfrItem and vendorItem GUIDs are the same)

```
{
  "amlRank": 2,
  "approved": true,
  "mfrItem": {
    "guid": " FXH05VR083MRATTHJD8A "
  },
  "notes": "api-sourcing-relationship1",
  "vendorItem": {
    "guid": " FXH05VR083MRATTHJD8A "
  },
  "vendorItemConversionFactor": 2,
}
```

```
"makeItem": false
}
```

- Create Make-Item Source Relationship (where your company makes the Item)

```
{
  "amlRank": 2,
  "approved": true,
  "notes": "api-sourcing-relationship1",
  "vendorItemConversionFactor": 1,
  "makeItem": true
}
```

Sample Responses

Success - 200

```
{
  "activeProduction": false,
  "activePrototype": false,
  "amlRank": 2,
  "approved": true,
  "creationDateTime": null,
  "guid": "EWGZ4UQZ72LP8RC2ZDXS",
  "makeItem": false,
  "mfrItem": {
    "guid": "BTDW1RNW4ZIN6PPBP28X"
  },
  "notes": "api-sourcing-relationship1",
  "offTheShelf": false,
  "vendorItem": {
    "guid": "BTDW1RNW4ZIN6PPBP28X"
  },
  "vendorItemConversionFactor": 2
}
```

Failure - 400

Returns an error if:

1. the format of the request is incorrect:

```
"code": 400,
"message": "The format of the request is not valid. Please check the syntax."
```

2. a general error occurs:

```
"code": 4000,
"message": "Sorry, a system error occurred, please try again."
```

PUT: Update Item Source Relationship

https://api.arenasolutions.com/v1/items/<item_GUID>/sourcing/<sourcerelationship_GUID>

Updates a [source relationship](#) object with a given GUID for an item with a given GUID.

Sample Request Body

```
{
  "amlRank": 2
}
```

Sample Responses

Success - 200

```
{
  "activeProduction": false,
  "activePrototype": false,
  "amlRank": 2,
  "approved": true,
  "guid": "I0K38YU3B6PTCVG5OV8P",
  "makeItem": false,
  "mfrItem": {
    "guid": "ASCV0QMV3YHM500AA1AL"
  },
  "notes": "api-sourcing-relationship1",
  "vendorItem": {
    "guid": "3L50TJFOWRAFYHH33U59"
  },
  "vendorItemConversionFactor": 2
}
```

Failure - 400

Returns an error if:

1. the format of the request is incorrect:

```
"code": 400,
"message": "The format of the request is not valid. Please check the syntax."
```

2. a general error occurs:

```
"code": 4000,
"message": "Sorry, a system error occurred, please try again."
```

DELETE: Delete Item Source Relationship

`https://api.arenasolutions.com/v1/items/<item_GUID>/sourcing/<sourcerelationship_GUID>`

Deletes a source relationship with a given GUID for an item with a given GUID.

Sample Responses

Success - 204

```
no response
```

Failure - 400

Returns an error if the GUID is not valid

```
"code": 3011,  
"message": "The guid \"XFWQ0GZGZDJ015J12\" is not valid."
```

GET: Get Suppliers

`https://api.arenasolutions.com/v1/suppliers`

Returns an array of [supplier](#) objects matching the given search criteria. By default, the max number of items returned is 20. Can return up to 400 suppliers.

You can specify a search by supplier name in the URL. For example:

```
GET <url>/suppliers?name=f*
```

returns suppliers with name starting with *f*.

You can specify a limit and an offset. For example:

```
GET <url>/suppliers?limit=50&offset=25
```

returns 50 results, starting at the 25th result.

Note: Search behavior in the Arena API differs from search behavior in the Arena PLM application. In the API, a trailing asterisk (wildcard) is required to return results that start with a string; in the Arena PLM application, a trailing asterisk is always implied.

Parameters

name	Specifies search criteria for Supplier name.
offset	Specifies the position in the list of all suppliers where results should begin. All suppliers before the offset in the search results are ignored. The default value is 0.
limit	Specifies the maximum number of returned results. The default value (no specified limit) is 20, the maximum is 400.
Searchable attributes	name

Sample Responses

Success - 204

```
{
  "count": 1,
  "results": [
    {
      "accountNumber": "H0036866",
      "addresses": [
        {
          "address": {
            "address1": "2211 South 47th St",
            "address2": null,
            "city": "Phoenix",
            "country": "United States",
            "label": "main",
            "postalCode": "85034",
            "province": null,
```



```

        "state": "ARIZONA"
      },
      "primary": false
    },
    {
      "address": {
        "address1": "2105 Lundy Ave",
        "address2": null,
        "city": "San Jose",
        "country": "United States",
        "label": "Local",
        "postalCode": "95131",
        "province": null,
        "state": "CALIFORNIA"
      },
      "primary": true
    }
  ],
  "approvalStatus": "approved",
  "creationDateTime": "2011-06-02 12:23:32",
  "creator": {
    "fullName": "Gururaj (Arena) Pare"
  },
  "description": "Distributor of electronic components",
  "guid": "UCWFKABBKRAGZINDEEM1",
  "name": "Avnet",
  "phoneNumbers": [
    {
      "comment": null,
      "extension": null,
      "label": "fax",
      "number": "800-408-8353"
    },
    {
      "comment": "Call during business hours EST to get Darren",
      "extension": null,
      "label": "main",
      "number": "800-332-8638"
    }
  ],
  "website": "www.avnet.com"
}
]
}

```

Failure - 400

Returns an error if:

1. the format of the request is incorrect:

```

"code": 400,
"message": "The format of the request is not valid. Please check the syntax."

```

2. a general error occurs:

```
"code": 4000,  
"message": "Sorry, a system error occurred, please try again."
```

GET: Get Individual Supplier (Summary)

https://api.arenasolutions.com/v1/suppliers/<supplier_GUID>

Returns a [supplier](#) object with a given GUID.

Sample Responses

Success - 200

```
{
  "accountNumber": "#9003",
  "additionalAttributes": null,
  "addresses": [
    {
      "address": {
        "address1": "1 Main St",
        "address2": null,
        "city": "San Bruno",
        "country": "United States",
        "label": "hq",
        "postalCode": "94066",
        "province": null,
        "state": "CALIFORNIA"
      },
      "primary": false
    }
  ],
  "approvalStatus": null,
  "creationDateTime": "2014-07-22 10:40:47",
  "creator": {
    "fullName": "Heidi Walker"
  },
  "description": "Full service board house",
  "guid": "GYI16WS194NTCV0QJII7",
  "id": "1",
  "name": "Trilby Technology",
  "phoneNumbers": [
    {
      "comment": "Ask for Francisco",
      "extension": "100",
      "label": "Main",
      "number": "555-1212"
    }
  ],
  "website": "http://trilbytech.com"
}
```

Failure - 400

Returns an error if:

1. the format of the request is incorrect:

```
"code": 400,  
"message": "The format of the request is not valid. Please check the syntax."
```

2. a general error occurs:

```
"code": 4000,  
"message": "Sorry, a system error occurred, please try again."
```

POST: Create Supplier

<https://api.arenasolutions.com/v1/suppliers>

Creates a new [supplier](#) object.

NOTES:

1. The values you specify for attributes must match the attribute types specified in the workspace. For example, when specifying a value for a predefined list, the value must be one of the allowed values.
2. Number values must appear in quotation marks.

Sample Request Body

```
{
  "name": "Trilby Technology",
  "id": "1",
  "accountNumber": "#9003",
  "description": "Full service board house",
  "website": "http://trilbytech.com",
  "approvalStatus": "approved",
  "addresses": [
    {
      "primary": true,
      "address": {
        "label": "HQ",
        "address1": "1 Main St",
        "address2": "",
        "city": "San Bruno",
        "state": "California",
        "province": "",
        "postalCode": "94066",
        "country": "United States"
      }
    }
  ],
  "phoneNumbers": [
    {
      "label": "Main",
      "number": "555-1212",
      "extension": "100",
      "comment": "Ask for Francisco"
    }
  ]
}
```

Sample Responses

Success - 200

```
{
  "accountNumber": "#9003",
  "additionalAttributes": null,
```

```
"addresses": [
  {
    "address": {
      "address1": "1 Main St",
      "address2": null,
      "city": "San Bruno",
      "country": "United States",
      "label": "hq",
      "postalCode": "94066",
      "province": null,
      "state": "CALIFORNIA"
    },
    "primary": false
  },
],
"approvalStatus": null,
"creationDateTime": "2014-07-22 10:40:47",
"creator": {
  "fullName": "Heidi Walker"
},
"description": "Full service board house",
"guid": "GYI16WS194NTCV0QJII7",
"id": "1",
"name": "Trilby Technology",
"phoneNumbers": [
  {
    "comment": "Ask for Francisco",
    "extension": "100",
    "label": "Main",
    "number": "555-1212"
  }
],
"website": "http://trilbytech.com"
}
```

Failure - 400

Returns an error if:

1. the format of the request is incorrect:

```
"code": 400,
"message": "The format of the request is not valid. Please check the syntax."
```

2. a general error occurs:

```
"code": 4000,
"message": "Sorry, a system error occurred, please try again."
```

PUT: Update Supplier

https://api.arenasolutions.com/v1/suppliers/<supplier_GUID>

Updates the metadata of a [supplier](#) with a given GUID.

Sample Request Body

```
{
  "approvalStatus": "approved"
}
```

Sample Responses

Success - 201

```
{
  "name": "Trilby Technology",
  "id": "1 ",
  "accountNumber": "#9003",
  "description": "Full service board house",
  "website": "http://trilbytech.com",
  "approvalStatus": "approved"
}
```

Failure - 400

Returns an error if the GUID is not valid

```
"code": 3011,
"message": "The guid \"XFWQ0GZGZDJ015J12\" is not valid."
```

DELETE: Delete Supplier

`https://api.arenasolutions.com/v1/suppliers/<supplier_GUID>`

Deletes a supplier with a given GUID.

Sample Responses

Success - 201

```
no response
```

Failure - 400

Returns an error if the GUID is not valid

```
"code": 3011,  
"message": "The guid \"XFWQ0GZGZDJ015J12\" is not valid."
```


GET: Get Supplier Items

`https://api.arenasolutions.com/v1/supplieritems`

Returns an array of [supplier item](#) objects matching the given search criteria. By default, the max number of items returned is 20. Can return up to 400 supplier items.

You can specify search criteria in the URL. For example:

```
GET <url>/supplieritems?name=PCB*&supplier.name=trilby*
```

returns supplier items with name containing the string *PCB* and where the supplier contains the string *trilby*.

You can specify a limit and an offset. For example:

```
GET <url>/supplieritems?limit=50&offset=25
```

returns 50 results, starting at the 25th result.

Note: Search behavior in the Arena API differs from search behavior in the Arena PLM application. In the API, a trailing asterisk (wildcard) is required to return results that start with a string; in the Arena PLM application, a trailing asterisk is always implied.

Parameters

offset	Specifies the position in the list of all supplier items where results should begin. All suppliers before the offset in the search results are ignored. The default value is 0.
limit	Specifies the maximum number of returned results. The default value (no specified limit) is 20, the maximum is 400.
Searchable attributes	name; number; supplier.name; supplier.guid

Sample Responses

Success - 200

```
{
  "count": 2,
  "results": [
    {
      "additionalAttributes": null,
      "creationDateTime": "2011-06-02 12:23:56",
      "description": null,
      "guid": "FXH05VR083MRATHJD8A",
      "name": "Beryllium Copper Alloy; Tin Lead Finish",
      "number": null,
      "offTheShelf": null,
      "supplier": {
        "guid": "EWGZ4UQZ72LRATYOKT0V"
      },
      "type": null,
      "uom": "each"
    }
  ]
}
```

```
    },  
    {  
      "additionalAttributes": null,  
      "creationDateTime": "2011-06-02 12:23:38",  
      "description": null,  
      "guid": "0I2LQGCLTO7CVEE24YVH",  
      "name": "Capacitor; Tantalum",  
      "number": null,  
      "offTheShelf": null,  
      "supplier": {  
        "guid": "06Q9E409HCV1K38YU3BD"  
      },  
      "type": null,  
      "uom": "each"  
    }  
  ]  
}
```

Failure - 400

Returns an error if:

1. the format of the request is incorrect:

```
"code": 400,  
"message": "The format of the request is not valid. Please check the syntax."
```

2. a general error occurs:

```
"code": 4000,  
"message": "Sorry, a system error occurred, please try again."
```

GET: Get Individual Supplier Item

`https://api.arenasolutions.com/v1/supplieritems/<supplieritem_GUID>`

Returns a [supplier item](#) object with a given GUID.

Sample Responses

Success - 200

```
{
  "creationDateTime": "2014-07-16 15:08:25",
  "description": null,
  "guid": "BTDW1RNW4ZIN6PPBP28X",
  "name": "api-supplieritem1",
  "number": null,
  "offTheShelf": null,
  "supplier": {
    "guid": "UCWFK6FNI17Q9E4XWYE"
  },
  "type": null,
  "uom": "reel"
}
```

Failure - 400

Returns an error if:

1. the format of the request is incorrect:

```
"code": 400,
"message": "The format of the request is not valid. Please check the syntax."
```

2. a general error occurs:

```
"code": 4000,
"message": "Sorry, a system error occurred, please try again."
```

POST: Create Supplier Item

<https://api.arenasolutions.com/v1/supplieritems>

Creates a new [supplier item](#) object.

NOTES:

1. The values you specify for attributes must match the attribute types specified in the workspace. For example, when specifying a value for a predefined list, the value must be one of the allowed values.
2. Number values must appear in quotation marks.

Sample Request Body

```
{
  "name": "PCB, Everyroad 57",
  "number": "ERGPS-57",
  "description": "Blank PCB for the Everyroad 57",
  "type": "Part",
  "offTheShelf": false,
  "supplier": {
    "guid": "GYI16WS194NTCV0QJII7"
  },
  "uom": "each"
}
```

Sample Responses

Success - 200

```
{
  "creationDateTime": "2014-07-16 15:08:25",
  "description": null,
  "guid": "BTDW1RNW4ZIN6PPBP28X",
  "name": "api-supplieritem1",
  "number": null,
  "offTheShelf": null,
  "supplier": {
    "guid": "UCWFK6FNI17Q9E4XWYE"
  },
  "type": null,
  "uom": "reel"
}
```

Failure - 400

Returns an error if:

1. the format of the request is incorrect:

```
"code": 400,
"message": "The format of the request is not valid. Please check the syntax."
```

2. a general error occurs:

```
"code": 4000,  
"message": "Sorry, a system error occurred, please try again."
```

PUT: Update Supplier Item

https://api.arenasolutions.com/v1/supplieritems/<supplieritem_GUID>

Updates the metadata of a [supplier item](#) with a given GUID.

Sample Request Body

```
{
  "uom": "new value"
}
```

Sample Responses

Success - 201

```
{
  "description": null,
  "guid": "0I2LQGCLTO7CVEE24YVH",
  "name": "Capacitor; Tantalum",
  "number": null,
  "offTheShelf": null,
  "supplier": {
    "guid": "O6Q9E409HCV1K38YU3BD"
  },
  "type": null,
  "uom": "new value"
}
```

Failure - 400

Returns an error if the GUID is not valid.

```
"code": 3011,
"message": "The guid \"XFWQ0GZGZDJ015J12\" is not valid."
```

DELETE: Delete Supplier Item

`https://api.arenasolutions.com/v1/supplieritems/<supplieritem_GUID>`

Deletes a supplier item with a given GUID.

Sample Responses

Success - 201

```
no response
```

Failure - 400

Returns an error if the GUID is not valid.

```
"code": 3011,  
"message": "The guid \"XFWQ0GZGZDJ015J12\" is not valid."
```

GET: Get Supplier Item File Associations

https://api.arenasolutions.com/v1/supplieritems/<supplieritem_GUID>/files

Returns an array of [file](#) objects belonging to an item with a given GUID.

Sample Responses

Success - 201

```
{
  "count": 2,
  "results": [
    {
      "file": {
        "author": {
          "fullName": "Nathan Martin"
        },
        "category": {
          "guid": "I0K38YZZ8FY8RAMUIBIK"
        },
        "creationDateTime": "2011-06-02T19:30:28Z",
        "description": null,
        "edition": "1",
        "format": "doc",
        "guid": "BTDW1RSS18R7Q90RHOD5",
        "hasMarkup": false,
        "lastModifiedDateTime": "2011-06-02T19:30:28Z",
        "latest": true,
        "location": null,
        "mimeType": null,
        "name": "7011X1-5.doc",
        "number": "FILE-000814",
        "private": false,
        "size": 31232,
        "storageMethod": 0,
        "title": "7011X1-5"
      },
      "guid": "FXH05VWW5CUYH0W6I8ZD",
      "primary": true
    },
    {
      "file": {
        "author": {
          "fullName": "Bret D Lobree"
        },
        "category": {
          "guid": "R9TCH788HO7H0JV3RKSA"
        },
        "creationDateTime": "2011-06-02T19:30:28Z",
        "description": null,
        "edition": "1",
        "format": "pdf",
        "guid": "5N7QVLMMV2L1K3ULBI65",
```



```
        "hasMarkup": false,
        "lastModifiedDateTime": "2011-06-02T19:30:28Z",
        "latest": true,
        "location": null,
        "mimeType": null,
        "name": "7011X%20Series.pdf",
        "number": "FILE-000843",
        "private": false,
        "size": 28847,
        "storageMethod": 0,
        "title": "Chicago Miniature Lamp 7011X Series Bicolor SMT LEDs"
    },
    "guid": "I0K38YZZ8FX1K3Z9LB19",
    "primary": false
  }
]
```

Failure - 400

Returns an error if the GUID is not valid.

```
"code": 3011,
"message": "The guid \"XFWQ0GZGZDJ015J12\" is not valid."
```

GET: Get Individual Supplier Item File Association

https://api.arenasolutions.com/v1/supplieritems/<supplieritem_GUID>/files/<file_association_GUID>

Returns a [file](#) object with a given GUID belonging to a supplier item with a given GUID.

Sample Responses

Success - 200

```
{
  "file": {
    "author": {
      "fullName": "Bret D Lobree"
    },
    "category": {
      "guid": "R9TCH788HO7H0JV3RKSA"
    },
    "creationDateTime": "2011-06-02T19:30:28Z",
    "description": null,
    "edition": "1",
    "format": "pdf",
    "guid": "5N7QVLMMV2L1K3ULBI65",
    "hasMarkup": false,
    "lastModifiedDateTime": "2011-06-02T19:30:28Z",
    "latest": true,
    "location": null,
    "mimeType": null,
    "name": "7011X%20Series.pdf",
    "number": "FILE-000843",
    "private": false,
    "size": 28847,
    "storageMethod": 0,
    "title": "Chicago Miniature Lamp 7011X Series Bicolor SMT LEDs"
  },
  "guid": "I0K38YZZ8FX1K3Z9LB19",
  "primary": false
}
```

Fialure - 400

Returns an error if the GUID is not valid.

```
"code": 3011,
"message": "The guid \"XFWQ0GZGZDJ015J12\" is not valid."
```

POST: Add File and Associate the File with a Supplier Item

`https://api.arenasolutions.com/v1/supplieritems/<supplieritem_GUID>/files`

Creates a new [file](#) object and associates it with a supplier item with a given GUID.

If you wish to create a File record with no uploaded content, construct a JSON request with a `storageMethod` of -1 (place holder), 2 (ftp link), 3 (web link). When the `storageMethod` is 2 or 3, the `location` attribute should be the web or ftp address where the file resides.

If you wish to create File record and upload file content to the Arena servers, construct a request that is content type `multipart/form-data` and has a `storageMethod` of 0.

Note: The file row in the form data must be specified last as shown in the example.

Sample Request Body

- Creating a File with no uploaded content:

```
{
  "file": {
    "location": "www.arenasolutions.com",
    "category": {
      "guid": "{TBVEJ9AAJQ9J2LX5TMTB}"
    },
    "storageMethod": 0,
    "title": "xxx.txt",
    "edition": "1",
    "author": {
      "fullName": "Roy S"
    },
    "format": "txt"
  }
}
```

- Creating a File and uploading content to Arena servers (example form):

form-data	x-www-form-urlencoded	raw	binary
file.location	C:\Temp		Text
file.category.guid	TBVEJ9AAJQ9J2LX5TMTB		Text
file.storageMethod	0		Text
file.title	Test File		Text
file.edition	1		Text
file.author.fullName	Roy S		Text
file.format	txt		Text
file.name	xxx.txt		Text
fileContent	<input type="button" value="Choose Files"/> xxx.txt		File
Key	Value		Text

Sample Responses

Success - 200

- When creating a File object with no uploaded content:

```
{
  "file": {
    "author": { "fullName": "Roy S" },
    "category": { "guid": "TBVEJ9AAJQ9J2LX5TMTB" },
    "description": "Arena on the web",
    "edition": "1",
    "location": "http://www.arenasolutions.com",
    "mimeType": null,
    "name": "Arena",
    "private": false,
    "storageMethod": 3,
    "title": "Arena Web Site"
  }
}
```

- When creating a File object with uploaded content:

```
{
  "file": {
    "author": {
      "fullName": "Bret D Lobree"
    },
    "category": {
      "guid": "R9TCH788HO7H0JV3RKSA"
    },
    "creationDateTime": "2011-06-02T19:30:28Z",
  }
}
```

```
{
  "description": null,
  "edition": "1",
  "format": "txt",
  "guid": "5N7QVLMMV2L1K3ULBI65",
  "hasMarkup": false,
  "lastModifiedDateTime": "2011-06-02T19:30:28Z",
  "latest": true,
  "location": null,
  "mimeType": null,
  "name": "xxx.txt",
  "number": "FILE-000843",
  "private": false,
  "size": 28847,
  "storageMethod": 0,
  "title": "Chicago Miniature Lamp 7011X Series Bicolor SMT LEDs"
},
{
  "guid": "I0K38YZZ8FX1K3Z9LB19",
  "primary": false
}
```

Failure - 400

Returns an error if:

1. the GUID is not valid.

```
"code": 3011,
"message": "The guid \"XFWQ0GZGZDJ015J12\" is not valid."
```

2. A required metadata attribute is missing.

```
"code": 3001,
"message": "The attribute \"edition\" is required."
```

DELETE: Remove File Association from Supplier Item

`https://api.arenasolutions.com/v1/supplieritems/<supplieritem_GUID>/files/<file_association_GUID>`

Removes a File association with a given GUID from a Supplier Item with a given GUID.

Sample Responses

Success - 204

N/A

Failure - 400

Produces an error if the requested file association does not exist.

```
"code": 3029,  
"message": "The file association does not exist between object \"Q8SBG6CHGDWDWB7W8EJG\"  
and object \"EWGZ4U0541K0J2TJSQGG\"."
```

GET: Get File Content for File Associated with Supplier Item

`https://api.arenasolutions.com/v1/supplieritems/<supplieritem_GUID>/files/<file_association_GUID>/content`

Returns file content belonging to a file with a given GUID, which is associated with a supplier item with a given GUID.

Sample Responses

Success - 200

Returns the content of the File as an InputStream.

Failure - 400

An error is returned if:

1. the GUID is not valid.

```
"code": 3011,  
"message": "The guid \"XFWQ0GZGZDJ015J12\" is not valid."
```

2. An error is thrown by the file server

```
"code": 3017,  
"message": "The file with guid \"7P60AQ9P8RAS7F6J\" cannot be downloaded at this  
time."
```

*If the file server is inaccessible, it may return a 400 status with no message.


POST: Update a File Associated with Supplier Item

`https://api.arenasolutions.com/v1/supplieritems/<supplieritem_GUID>/files/<file_association_GUID>/content`

Updates file content for an existing [file](#) with a given GUID associated with a supplier item with a given GUID. The file row in the form data must be specified last as shown in the example.

Sample Request Body

An example of submitting file content through a form:

form-data	x-www-form-urlencoded	raw	binary
file.location	C:\Temp	Text	↕
file.category.guid	TBVEJ9AAJQ9J2LX5TMTB	Text	↕
file.storageMethod	0	Text	↕
file.title	Test File	Text	↕
file.edition	1	Text	↕
file.author.fullName	Roy S	Text	↕
file.format	txt	Text	↕
file.name	xxx.txt	Text	↕
fileContent	<input type="button" value="Choose Files"/> xxx.txt	File	↕
Key	Value	Text	↕ 

Sample Responses

Success - 204

```
{
  "creationDateTime": null,
  "file": {
    "author": {
      "fullName": "Roy Arena"
    },
    "category": {
      "guid": "ZH0J2L4EXGS0NF91"
    },
    "creationDateTime": "2014-02-24T22:41:19Z",
    "description": null,
    "edition": "1",
    "format": "txt",
    "guid": "GYI16WW251K0J2TITQ10",
```



```
{
  "hasMarkup": false,
  "lastModifiedDateTime": "2014-02-24T22:41:19Z",
  "latest": true,
  "location": "www.arenasolutions.com",
  "mimeType": null,
  "name": null,
  "number": "FILE-000005",
  "private": false,
  "size": null,
  "storageMethod": 0,
  "title": "some title"
},
{
  "guid": "ASBUDWFRATPYJAGV",
  "primary": false
}
```

Failure - 400

An error is returned if the GUID is not valid.

```
"code": 3011,
"message": "The guid \"XFWQ0GZGZDJ015J12\" is not valid."
```

GET: Get Supplier Item Compliance Requirements

https://api.arenasolutions.com/v1/supplieritems/<supplieritem_GUID>/compliance

Returns all [compliance requirement](#) objects for a supplier item with a given GUID.

Sample Responses

Success - 200

```
{
  "count": 1,
  "results": [
    {
      "lastModifiedBy": "Roy Stafford ",
      "lastModifiedDateTime": "2014-12-07T14:02:33Z",
      "mark": "Approved",
      "rationale": "Complies with RoHS",
      "requirement": {
        "evidenceType": "DIRECT_FILES",
        "name": "2002/95/EC RoHS",
        "propagated": false
      },
      "status": "COMPLIANT"
    }
  ]
}
```

Failure - 400

Returns an error if the GUID is not valid

```
"code": 3011,
"message": "The guid \"XFWQ0GZGZDJ015J12\" is not valid."
```

GET: Get Source Relationships for a Supplier Item

`https://api.arenasolutions.com/v1/supplieritems/<supplieritem_GUID>/sourcing`

Returns an array of [source relationship](#) objects for a supplier item with a given GUID.

You can specify a limit and an offset. For example:

GET <url>/sourcing?limit=10&offset=2

returns 10 results, starting at the 2nd result.

Parameters

offset	Specifies the position in the list of all suppliers where results should begin. All supplier items before the offset in the search results are ignored. The default value is 0.
limit	Specifies the maximum number of returned results. The default value (no specified limit) is 20, the maximum is 400.
Item.status	Specifies the revision types of items that can be included in returned results. The possible values are 0 (working), 1 (effective), 2 (superseded)

Sample Responses

Success - 200

```
{
  "count": 2,
  "results": [
    {
      "activeProduction": false,
      "activePrototype": false,
      "amlRank": null,
      "approved": true,
      "item": {
        "guid": "5N7QVLMV2L2L0WWA3PY",
        "status": 0
      },
      "makeItem": false,
      "mfrItem": {
        "guid": "I0K38YZZ8FY3M55VE92O"
      },
      "notes": "Reel",
      "vendorItem": {
        "guid": "HZJ27XYY7EX2L44UD816"
      },
      "vendorItemConversionFactor": 1
    },
    {
      "activeProduction": false,
      "activePrototype": false,
      "amlRank": null,
```

```
    "approved": true,
    "item": {
      "guid": "VDXGLBCCLSBQMM0UZ1",
      "status": 1
    },
    "makeItem": false,
    "mfrItem": {
      "guid": "I0K38YZZ8FY3M55VE92O"
    },
    "notes": "Reel",
    "vendorItem": {
      "guid": "HZJ27XYY7EX2L44UD816"
    },
    "vendorItemConversionFactor": 1
  }
]
```

Failure - 400

Returns an error if:

1. the format of the request is incorrect:

```
"code": 400,
"message": "The format of the request is not valid. Please check the syntax."
```

2. a general error occurs:

```
"code": 4000,
"message": "Sorry, a system error occurred, please try again."
```

GET: Get Data Extracts

`https://api.arenasolutions.com/v1/extracts`

Returns an array of [Extract](#) objects (but not the extract run content) matching the given search criteria.

You can specify search criteria in the URL. For example:

GET `<url>/extracts?name=E*&enabled=true&creator.fullName=Heidi Walker`

returns extracts with a name starting with *E*, created by *Heidi Walker*.

You can specify a limit and an offset. For example:

GET `<url>/extracts?limit=50&offset=25`

returns 50 results, starting at the 25th result.

Note: Search behavior in the Arena API differs from search behavior in the Arena PLM application. In the API, a trailing asterisk (wildcard) is required to return results that start with a string; in the Arena PLM application, a trailing asterisk is always implied.

Parameters

offset	Specifies the position in the list of all extracts where results should begin. All extracts before the offset in the search results are ignored. The default value is 0.
limit	Specifies the maximum number of returned results. The default value (no specified limit) is 20, the maximum is 400.
Searchable attributes	name; creator.fullName (The integration user which is specified in the Setup view for the Extract in the account administration tool in Arena PLM); enabled (true/false)

Sample Responses

Success - 200

```
{
  "count": 1,
  "results": [
    {
      "creationDateTime": null,
      "creator": {
        "fullName": "Heidi Walker"
      },
      "enabled": true,
      "guid": "N5P8RZ6S8GZRATCVEXEL",
      "name": "October Change Cycle Time"
    }
  ]
}
```

Failure - 400

Returns an error if the GUID is not valid.

```
"code": 3011,  
"message": "The guid \"XFWQ0GZGZDJ015J12\" is not valid."
```

GET: Get Individual Data Extract

`https://api.arenasolutions.com/v1/extracts/<extract_GUID>`

Returns a single [Extract](#) object (but not the extract run content) for an extract with a given GUID.

Sample Responses

Success - 200

```
{
  "creationDateTime": null,
  "creator": {
    "fullName": "Everyroad API"
  },
  "enabled": true,
  "guid": "N5P8RZ6S8GZRATCVEXEL",
  "name": "October Change Cycle Time"
}
```

Failure - 400

Returns an error if the GUID is not valid.

```
"code": 3011,
"message": "The guid \"XFWQ0GZGZDJ015J12\" is not valid."
```

GET: Get Extract Runs

`https://api.arenasolutions.com/v1/extracts/<extract_GUID>/runs`

Returns run content for an extract with a given GUID.

You can specify search criteria in the URL for dates on which the extracts ran. For example:

```
GET <url>/extracts/<extract_GUID>/runs?runDateFrom="2014-01-14
23:59:59"&runDateTo="2014-10-14 23:59:59"
```

returns run content for extracts which ran between *January 14th, 2014, 11:59pm and 59 seconds* to *October 14th, 2014, 11:59pm and 59 seconds* (inclusive).

You can specify a limit and an offset. For example:

```
GET <url>/runs?limit=50&offset=25
```

returns 50 results, starting at the 25th result.

Note: Search behavior in the Arena API differs from search behavior in the Arena PLM application. In the API, a trailing asterisk (wildcard) is required to return results that start with a string; in the Arena PLM application, a trailing asterisk is always implied.

Parameters

offset	Specifies the position in the list of all runs where results should begin. All runs before the offset in the search results are ignored. The default value is 0.
limit	Specifies the maximum number of returned results. The default value (no specified limit) is 20, the maximum is 400.
Searchable attributes	status (InProgress/Completed/Failed/Aborted); scheduledDateFrom; scheduledDateTo; runDateFrom; runDateTo; completionDateFrom; completionDateTo; files.downloadDateTimeFrom; files.downloadDateTimeTo; NOTE: (download date and time attributes refer to when the run was first downloaded, either by a user in the application or by the API)

Sample Responses

Success - 200

Returns the content of the File as an InputStream.

Failure - 400

An error is returned if:

1. the GUID is not valid.

```
"code": 3011,
"message": "The guid \"XFWQ0GZGZDJ015J12\" is not valid."
```


2. An error is thrown by the file server

```
"code": 3017,  
"message": "The file with guid \"7P60AQ9P8RAS7F6J\" cannot be downloaded at this  
time."
```

*If the file server is inaccessible, it may return a 400 status with no message.

GET: Get Individual Extract Run

`https://api.arenasolutions.com/v1/extracts/<extract_GUID>/runs/<run_GUID>`

Returns run content for a run with a given GUID for an extract with a given GUID.

Sample Responses

Success - 200

Returns the content of the File as an InputStream.

Failure - 400

An error is returned if:

1. the GUID is not valid.

```
"code": 3011,  
"message": "The guid \"XFWQ0GZGZDJ015J12\" is not valid."
```

2. An error is thrown by the file server

```
"code": 3017,  
"message": "The file with guid \"7P60AQ9P8RAS7F6J\" cannot be downloaded at this  
time."
```

*If the file server is inaccessible, it may return a 400 status with no message.

GET: Get Run File Associations

`https://api.arenasolutions.com/v1/extracts/<extract_GUID>/runs/<run_GUID>/files`

Returns [extract run file association](#) objects for a run with a given GUID of an extract with a given GUID.

You can specify a limit and an offset. For example:

GET <url>/files?limit=50&offset=25

returns 50 results, starting at the 25th result.

Parameters

offset	Specifies the position in the list of all file associations where results should begin. All file associations before the offset in the search results are ignored. The default value is 0.
limit	Specifies the maximum number of returned results. The default value (no specified limit) is 20, the maximum is 400.
Searchable attributes	downloadDateTimeFrom; downloadDateTimeTo NOTE: Download date and time attributes refer to when the run was first downloaded, either by a user in the application or by the API.

Sample Responses

Success - 200

```
{
  "count": 2,
  "results": [
    {
      "file": {
        "author": null,
        "category": {},
        "creationDateTime": "2014-09-29 14:59:51",
        "description": null,
        "edition": null,
        "format": "zip",
        "guid": "ASCVEMTFV3M2L4NWRBLL",
        "hasMarkup": false,
        "lastModifiedDateTime": "2014-09-29 14:59:51",
        "latest": false,
        "location": null,
        "mimeType": null,
        "name": "api-dataextract_20140929_215948Z_ 9RBUDLSEU2LDWIFYH0JU8.zip",
        "number": null,
        "private": false,
        "size": 6936,
        "storageMethod": 0,

```

```
        "title": null
      },
      "guid": "TBVEX5CYEM5VEXGZHS9Q",
      "DownloadDateTime": null
    },
    ...
  ]
}
```

Failure - 400

An error is returned if:

1. the GUID is not valid.

```
"code": 3011,
"message": "The guid \"XFWQ0GZGZDJ015J12\" is not valid."
```

2. an error is thrown by the file server

```
"code": 3017,
"message": "The file with guid \"7P60AQ9P8RAS7F6J\" cannot be downloaded at this time."
```

*If the file server is inaccessible, it may return a 400 status with no message.

GET: Get Individual Run File Association

`https://api.arenasolutions.com/v1/extracts/<GUID>/runs/<run_GUID>/files/<run_file_association_GUID>`

Returns an [extract run file association](#) object with a given GUID for a run with a given GUID of an extract with a given GUID.

Sample Responses

Success - 200

```
{
  "file": {
    "author": null,
    "category": {},
    "creationDateTime": "2014-09-29 14:59:51",
    "description": null,
    "edition": null,
    "format": "zip",
    "guid": "ASCVEMTFV3M2L4NWRBLL",
    "hasMarkup": false,
    "lastModifiedDateTime": "2014-09-29 14:59:51",
    "latest": false,
    "location": null,
    "mimeType": null,
    "name": "api-dataextract_20140929_215948Z_ 9RBUDLSEU2LDWFYH0JU8.zip",
    "number": null,
    "private": false,
    "size": 6936,
    "storageMethod": 0,
    "title": null
  },
  "guid": "TBVEX5CYEM5VEXGZHS9Q",
  "DownloadDateTime": null
}
```

Failure - 400

An error is returned if:

1. the GUID is not valid.

```
"code": 3011,
"message": "The guid \"XFWQ0GZGZDJ015J12\" is not valid."
```

2. an error is thrown by the file server

```
"code": 3017,
"message": "The file with guid \"7P60AQ9P8RAS7F6J\" cannot be downloaded at this time."
```

*If the file server is inaccessible, it may return a 400 status with no message.

GET: Get DataExtract File Content

`https://api.arenasolutions.com/v1/extracts/<extract_GUID>/runs/<run_GUID>/files/<run_file_association_GUID>/content`

Returns file content from a run file association with a given GUID.

Sample Responses

Success - 200

Returns the content of the File as an InputStream.

Failure - 400

An error is returned if:

1. the GUID is not valid.

```
"code": 3011,  
"message": "The guid \"XFWQ0GZGZDJ015J12\" is not valid."
```

2. An error is thrown by the file server

```
"code": 3017,  
"message": "The file with guid \"7P60AQ9P8RAS7F6J\" cannot be downloaded at this  
time."
```

*If the file server is inaccessible, it may return a 400 status with no message.

Objects

When you send requests to the API service, you receive object information in response. The following shows all the objects and their fields returned from API requests.

Note: Date and time fields conform to ISO 8601 (UTC/Zulu time YYYY-MM-DDTHH:MM:SSZ), the international standard for representation of dates and time. However, dates stored in the Arena database are in Pacific time. You may need to transform dates back to Pacific time to ensure your target system matches the Arena database time.

Item Category

Field	Data Type	Description
activated	Boolean	This indicates whether or not a category is activated for use in the workspace. The value should be true or false.
assignable	Boolean	This indicates that an Item can be assigned to this category. The value should be true or false.
creationDateTime	String	The date and time an object was created
creator	Reference	The creator of a category. Contains the attribute fullName.
description	String	The description of a category
guid	String	The unique identifier for an object
level	Integer	The depth in the category tree at which a category appears. For example: item\assembly has a level of 2, since the level of root category "item" is 1.
name	String	The name of a category. For the system-defined category (root category) for item, the name is "Item".
numberFormat	Reference	A reference to the number format associated with the category. Contains the attribute guid.
objectType	String	The type of object (limited to ITEM in the first release of the Arena Arena PLM REST API)
path	String	The path of a category, for example: item\assembly
systemDefined	Boolean	This indicates if a category is system-defined. The value should be true or false. Only "Item" is a system-defined category.

Item Attribute

Field	Data Type	Description
apiName	String	The name of an attribute used in a request.
creatable	Boolean	Indicates whether or not an attribute value can be specified when an item is created. The value can be true or false.
custom	Boolean	Indicates whether or not an attribute is a custom attribute (a non system-defined attribute defined by an Account Administrator). The value can be true or false.
defaultValue	String	The default value for an attribute
editable	Boolean	Indicates whether or not an attribute value can be specified when an item is edited. The value can be true or false.
fieldType	String	The type of attribute. This value can be SINGLE_LINE_TEXT, MULTI_LINE_TEXT, BOOLEAN, DROP_DOWN, POSITIVE_DOUBLE, FIXED_DROPDOWN
maxLength	Integer	The maximum length of a text field. This is used for validation.
maxValue	Double	The maximum value for an integer or double field. This is also used for validation.
name	String	The name of the attribute.
objectType	String	The type of object
required	Boolean	Indicates whether the attribute is required on creation.
possibleValues	Array of Strings	All possible values for a drop-down list. This field is used only for attributes of type drop-down list.
searchable	Boolean	Indicates whether or not an attribute can be used as a search filter. The value can be true or false.

Item Compact NumberFormat

Field	Data Type	Description
creationDateTime	String	The date and time a NumberFormat was created
exampleNumber	String	An example of a NumberFormat.
guid	String	The unique identifier for an object
name	String	The name of a NumberFormat

Item NumberFormat

In addition to all the fields from Compact NumberFormat, Complete NumberFormat has a "fields" field, which is an array of following fields:

Field	Data Type	Description
apiName	String	The unique name of a number format field

Field	Data Type	Description
name	String	The name of a number format field
possibleValues	Array of Strings	All possible values for a VALUE_LIST field. Each possible value includes value and description fields.
type	String	Indicates the field type of a number format field. This value can be VALUE_LIST, DELIMITER, FREE_TEXT, AUTO_SEQUENCE
value	String	The value of a number format field

File Category

Field	Data Type	Description
assigned	Boolean	This indicates whether or not a category is activated for use in the workspace. The value should be true or false.
assignable	Boolean	This indicates that an Item can be assigned to this category. The value should be true or false.
creationDateTime	String	The date and time an object was created
creator	Reference	The creator of a category. Contains the attribute fullName.
description	String	The description of a category
guid	String	The unique identifier for an object
level	Integer	The depth in the category tree at which a category appears. For example: item\assembly has a level of 2, since the level of root category "item" is 1.
name	String	The name of a category. For the system-defined category (root category) for item, the name is "Item".
objectType	String	The type of object
path	String	The path of a category, for example: File\\Internal File\\Board Stuffing Specification
systemDefined	Boolean	This indicates if a category is system-defined. The value should be true or false. Only "Item" is a system-defined category.

Compact Item

Field	Data Type	Description
category	Reference	The category to which the item is assigned. Contains guid and Name attributes
creationDateTime	String	The date and time an Item was created
guid	String	The unique identifier for an object
lifecyclePhase	Reference	The lifecycle phase of an item (e.g. In Design). Contains the name of the lifecycle phase.
name	String	The name of an item

Field	Data Type	Description
number	String	The number of an item
revisionNumber	String	The revision of an item

Item

Field	Data Type	Description
additionalAttributes	Array of additional Attributes	The additional attributes of an item. This is an array of additional attributes. Each additional attribute entry includes a value and apiName. The apiName is used to identify this additional attribute.
category	Reference	The category to which the item is assigned. Contains guid attribute.
creationDateTime	String	The date and time an item was created
creator	Reference	The creator of an item. Contains the attribute fullName.
description	String	The description of an item
effectiveDateTime	String	The date and time the effective revision of an item was made effective.
guid	String	The unique identifier for an object
isAssembly	Boolean	Indicates whether or not an item is an assembly. The value can be true or false.
lifecyclePhase	Reference	The lifecycle phase of an item (e.g. In Design). Contains the name of the lifecycle phase.
name	String	The name of an item
modifiedBom	Boolean	Indicates whether or not the BOM view of an item contains working modifications. The value can be true or false.
modifiedFiles	Boolean	Indicates whether or not the Files view of an item contains working modifications. The value can be true or false.
modifiedSourcing	Boolean	Indicates whether or not the Sourcing view of an item contains working modifications. The value can be true or false.
modifiedSpecs	Boolean	Indicates whether or not the Specs view of an item contains working modifications. The value can be true or false.
number	String	The number of an item
offTheShelf	Boolean	Indicates whether or not an item's Procurement Type is off the shelf. The value can be true or false.
owner	Reference	The owner of an item. Contains the attribute fullName.
productionCost	Double	The production cost of an item
prototypeCost	Double	The prototype cost of an item
revisionNumber	String	The revision of an item
shared	Boolean	Indicates whether or not an item is shared with suppliers. The value can be true or false.

Field	Data Type	Description
standardCost	Double	The standard cost of an item
targetCost	Double	The target cost of an item
targetPrice	Double	The target price of an item
uom	String	The unit of measure of an item

Item BOMLine

Field	Data Type	Description
additionalAttributes	Array of additional Attributes	The additional attributes of a BOM line. This is an array of additional attributes. Each additional attribute entry includes a value and apiName. The apiName is used to identify this additional attribute.
creationDateTime	String	The date and time a BOM Line was created
guid	Reference	The child item. Contains the attribute guid.
lineNumber	Integer	The BOM line number of a child item
notes	String	The BOM Notes of a child item
refDes	String	The reference designator values of a child item
quantity	Integer	The quantity of a child item

File

Field	Data Type	Description
author	Reference	The author of a file. Contains the attribute fullName.
category	Reference	The category to which the file is assigned Contains guid attribute
creationDateTime	String	The date and time a file was created
description	String	The description of a file
edition	String	The edition identifier of a file
format	String	The format of a file (e.g. PDF, docx)
guid	String	The unique identifier for a file
hasMarkup	Boolean	Indicates whether or not a file has a markup.
lastModification DateTime	String	The date and time a file was modified
latest	Boolean	Indicates whether or not a file is the latest edition. The value can be true or false.
location	String	The url of a file (www.arenasolutions.com when stored on Arena servers)
mimeType	String	The mime type of a file.
name	String	The name of a file

Field	Data Type	Description
number	String	The number of a file
size	Long	The size of a file
storageMethod	Integer	Indicates whether or not a file is stored on the Arena servers. The value can be -1 (place holder), 0 (uploaded), 2 (ftp link), 3 (web link).
title	String	The title of a file

File Association

Field	Data Type	Description
file	Reference	The associated file. See File object.
guid	String	The unique identifier for a file association.
primary	Boolean	Indicates whether or not a file is primary (primary files are linked from the main view of objects to which they are associated.)

Requirement

This object is only available through the Compliance Requirement object.

Field	Data Type	Description
evidenceType	String	The type of evidence that proves the compliance status of an item. The value can be any of these: NONE, DIRECT_FILES, AML_AND_FILES
name	String	The name of a compliance requirement
propagated	Boolean	Indicates whether or not a compliance requirement is propagated to children. This value can be true or false.

Compliance Requirement

Field	Data Type	Description
lastModifiedBy	String	The user who last modified a compliance requirement
lastModifiedDateTime	String	The date and time a compliance requirement was last modified
mark	String	The mark of a compliance requirement
rationale	String	The rationale of a compliance requirement
requirement	Reference	The requirement. See Requirement above.
status	String	The status of a compliance requirement. The value can be UNKNOWN, COMPLIANT, EXEMPT, NA, NON_COMPLIANT

Change

This object is only available through the Item Revision object.

Field	Data Type	Description
changeNumber	String	The change number of the change that released an item revision
creationDateTime	String	The date and time an item revision was created
deviated	Boolean	Indicates whether or not an item revision is deviated. This value can be true or false.
effectiveDateTime	String	The date and time when an item revision became effective
obsoleteDateTime	String	The date and time when a revision became obsolete

Item Revision

Field	Data Type	Description
change	Reference	The change that released the revision. See change object above.
guid	String	The unique id for an item revision
lifecyclePhase	Reference	The lifecycle phase of an item (e.g. In Design). Contains the name of the lifecycle phase
number	String	The revision number
status	Integer	The status of an item revision. This value can be 0 (working revision), 1 (latest released) or 2 (obsolete).

Supplier Item

Field	Data Type	Description
creationDateTime	String	The date and time a supplier item was created
Description	String	The description of a supplier item
guid	String	The unique id for a supplier item
name	String	The supplier item name
number	String	The supplier item number
offTheShelf	Boolean	Indicates whether or not the procurement type of the supplier item is off the shelf. This value can be true (off-the-shelf) or false (made-to-spec).
supplier	Reference	The supplier. Contains the guid of the supplier.
type	String	The type of supplier item (basic category). This value can be PART, PROCESS, or DOCUMENT.
uom	String	The unit of measure of the supplier item

Supplier

Field	Data Type	Description
accountNumber	Integer	The account number of the supplier
addresses	Array of addresses	The addresses associated with a supplier. Each address entry includes address1, address2, city, country, label, postalCode, province, and state. Each address also includes the primary attribute, which indicates whether or not an address is the primary one for this supplier.
approvalStatus	Boolean	Indicates whether or not a supplier is listed as approved. This value can be approved or disapproved.
creationDateTime	String	The date and time a supplier was created.
creator	Reference	The creator of the supplier record. Contains the full name of the creator.
description	String	The description of a supplier
guid	String	The unique identifier of a supplier
id	String	The unique identifier of a supplier in the Arena database
name	String	The name of a supplier
phoneNumbers	Array of phone numbers	The phone numbers associated with a supplier. Each entry includes comment, extension, label, and number.
website	String	The website of a supplier

Source Relationship

Field	Data Type	Description
activeProduction	Boolean	Indicates if a source relationship is the active production relationship. This value can be true or false.
activePrototype	Boolean	Indicates if a source relationship is the active prototype relationship. This value can be true or false.
amlRank	Integer	The AML rank. This value is numeric.
approved	Boolean	Indicates if a source relationship is approved. This value can be true or false.
creationDateTime	String	The date and time a source relationship was created
guid	String	The unique id for a source relationship
makeItem	Boolean	Indicates whether or not an item is made internally. This value can be true (made internally) or false (made by supplier)
mfrItem	Reference	The manufacturer Item. Contains a guid. See the supplier item object above.
notes	String	The notes for a source relationship

Field	Data Type	Description
offTheShelf	Boolean	Indicates whether or not the procurement type of the supplier item is off the shelf. This value can be true (off-the-shelf) or false (made-to-spec).
vendorItem	Reference	The vendor item. Contains a guid. See the supplier item object above.
vendorItem ConversionFactor	String	The conversion factor of the vendor item (how many used per one bought. e.g. for a roll of 100 resistors, when you use one at a time, the conversion factor is 100)

Extract

Field	Data Type	Description
creationDateTime	Boolean	The date and time an extract was created
creator	Reference	The creator of the extract. Contains the full name of the creator. This is the user under whose credential the Extract runs.
enabled	Boolean	Indicates if an extract is enabled for runs. This value can be true or false.
guid	String	The unique ID for an extract
name	String	The extract name

Extract Run

Field	Data Type	Description
completionDateTime	String	The date and time an extract run was completed
creationDateTime	Boolean	Indicates if a source relationship is the active production relationship. This value can be true or false.
enabled	Boolean	Indicates if an extract is enabled for runs. This value can be true or false.
guid	String	The unique ID for an extract run
name	String	The extract name
runDate	String	The date and time an extract run was started
scheduleDate	String	The date and time an extract run was scheduled
status	String	Indicates the status of an extract run. The value can be InProcess, Completed, Failed, or Aborted.

Extract Run File Association

Field	Data Type	Description
downloadDateTime	String	The date and time a run was first downloaded, either by a user in the application, or by the API.

Field	Data Type	Description
file	Reference	The associated file. See File object above.
guid	String	The unique identifier for a file association.