



## Tool APIs

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## Introduction to Tool APIs

This section describes API calls that are not related to a specific model. The full URL would include the host name: *http://[hostname]*.

The calls described here all contain */tool/* in the URL.

Variables are enclosed in square brackets, e.g.:

- [hierarchy] is the hierarchy UUID
- [filename] refers to a file

Other parameters are described with the relevant API call.

## Search and Search Result Export

For an API call that carries out a search, a POST payload in JSON format is added.

Task	Call	URL	Parameters	Payload
Search	POST	/api/tool/Search/	format=json hierarchy=[hierarchy]	{"query":"[query]"}

The value of [query] follows Search syntax, for example:

```
{"query":"data/Countries with country_name contains King"}
```

The Request payload can also be a GET parameter, for example:

Task	Call	URL	Parameters	Response
Search	GET	/api/tool/Search/	format=json hierarchy=[hierarchy] query=[url_query]	JSON format of the search result.

The value of [url\_query] is URL encoded string, for example:

```
data/Countries%20with%20country_name%20contains%20King
```

Furthermore, the meta property of the schema in the response to /api/tool/Search/ contain action details for the export of search results. This includes the URL for the data export POST request:

```
/api/export/export_data/?url=/api/tool/Search/
```

as well as the URL:

```
/api/view/ExportData/add
```

which has a schema that lists the data export data type choices that will be used as a parameter to the POST call.

## Bulk Load API

Two API calls are required.

Task	Call	URL	Parameters	Response
Submit file	POST	/api/ uploadfiles/ This URL will be moved to tool/UploadFile in future.	hierarchy=[hierarchy] Content-Type: multipart/form-data  name='uploadedfile' filename=<filename> the file to upload	{"uploadedfiles": [{"id": "<file_id>", "name": "<filename>"}]}

The response is HTTP 202

Task	Call	URL	Parameters	Payload
Bulk Load	POST	/api/tool/ BulkLoad/	method= bulkload_spreadsheet hierarchy=[hierarchy]	Examples: <pre>{'bulkload_file':   '&lt;filename&gt;', 'execute_immediately':    true} or: {'bulkload_file':   '&lt;filename&gt;', 'execute_immediately':    false 'execute_date':   '2013-06-20', 'execute_time':   '12:00:00', 'execute_timezone':   '0'}</pre>

The following curl commands illustrate the two steps:

#### Step 1

```
curl -H 'Authorization: Basic <auth_key>'
      -F uploadedfile="@<file>.xlsx"
      'http://<hostname>/api/uploadfiles/'
```

#### Step 2

```
curl -H 'Authorization: Basic <auth_key>'
      -H 'Content-Type: application/json'
      -H 'accept: application/json'
      --data-binary '{"bulkload_file":"DEMO.xlsx","execute_immediately":true}'
      'http://<host>/api/tool/BulkLoad/?hierarchy=[hierarchy]&
        method=bulkload_spreadsheet&
        nowait=true&
        format=json'
```

The response to this call is for example as in the following table.

Response
<pre>{"href": "/api/tool/Transaction/0b340a6f-b658-48bb-ac8c-7562adc5572d", "success": true, "transaction_id": "0b340a6f-b658-48bb-ac8c-7562adc5572d"}</pre>

- If the Bulk Load is to be scheduled, the payload of the second task includes schedule details:
  - *execute\_immediately* is set to false
  - *execute\_date* is added in the format YYYY-MM-DD
  - *execute\_time* is added in the format HH:MM:SS
  - *execute\_timezone* is added in the format of a numeric value in minutes relative to UTC. For example, UTC is 0, UTC+2:00 is 120, UTC-1:00 is -60, and so on.
- An entry is also generated in the schedule; that is, an instance is added to the data/Schedule module.

- If the second task payload has *'execute\_immediately':true*, a POST is generated to `/api/data/Bulkload/`. The payload includes the uploaded filename and a generated name and time stamp as well as a description, for example:

```
{'filename': '<file>.xlsx', 'description': 'Generated by Bulk Loader
Administration Tools', 'name': 'AnyUser.xlsx -- 2013-05-21
16:47:11.801664 (UTC)'}
```

To inspect the detailed progress and status of the transaction, use the API call from the response above:

```
GET /api/tool/Transaction/[pkid]
```

with parameters:

- `hierarchy=[hierarchy]`
- `format=json`

The response to this GET call is a JSON object that provides details of the transaction, as for example in the truncated snippet:

```
...
  "href": "/api/tool/Transaction/[pkid]
  "log_id": "53a8053ea616540708141f44",
  "message": "data_Countries_bulkloadsheets.xlsx is a valid
  "severity": "info",
  "time": "2014-06-23T10:45:18.029000",
  "transaction_id": "[pkid]"
}
],
"pkid": "[pkid]",
"resource": {},
"rolled_back": "No",
"started_time": "2014-06-23T10:45:17.813000",
"status": "Success",
"sub_transactions": [
  {
    "action": "Execute Resource",
    "detail": "Execute : data_Countries_bulkloadsheets.xlsx -- ...
    "status": "Success",
    "submitted_time": "2014-06-23T10:45:19.567000",
    "transaction": "/api/tool/Transaction/[pkid1]    ..."
  },
  {
    "action": "Create Schedule",
    "detail": "Name:data_Countries_bulkloadsheets.xlsx -- 2014- ...
    "status": "Success",
    "submitted_time": "2014-06-23T10:45:18.912000",
    "transaction": "/api/tool/Transaction/[pkid2]    ..."
  },
  {
    "action": "Create Bulk Load",
    "detail": "Name:data_Countries_bulkloadsheets.xlsx -- 2014-06 ...
    "status": "Success",
    "submitted_time": "2014-06-23T10:45:18.419000",
    "transaction": "/api/tool/Transaction/[pkid3]    ..."
  }
],
"submitted_time": "2014-06-23T10:45:17.794000",
```

The same transaction displays on the GUI.

For long transactions, to retrieve a summary of the status of the transaction, the transaction can be polled, using `poll` in the URL, using the same parameters:

```
GET /api/tool/Transaction/poll/?transactions=[pkid]
```

In this case, there is a shortened response, for example:

```
{"[pkid]":
{"status": "Processing",
```

```
"href": "/api/tool/Transaction/0b340a6f-b658-48bb-ac8c-7562adc5572d",  
"description": null}  
}
```

