API for Analytics

Overview

API for Analytics allows you to access a snapshot of data (in CSV format) suitable for use with 3rd party analytics tools. This API is an optional feature activated with the [license](#).

API General Info

Response Content Type

The API only supports the `json` and `csv` response types.

Successful Responses

Response Codes

- **200** - The request was executed successfully and the server returned some data. The return content type is specified inside a response header called `content-type`. Example content types are `application/xml`, `application/json`, `application/zip` and `text/plain`.
- **204** - The request was executed successfully and the server returned no data. If the `Location` header was present then the server responded with a redirect.

Error Responses

If the API call resulted in an error then the error code will be returned along with the error object in the response body. The error object contains the attributes listed below:

- **type** - type of the error
- **cause** - the root cause of the error
- **message** - message containing details of the related error
- **uuid** - a unique identifier of the error which also may appear in the exception logs
- **timestamp** - the time of the error

Note: For chunked responses, the socket will be closed prematurely if an error occurs after the initial chunk containing the status code has been sent.

Response Codes

- **400** - The request contains invalid parameters or there are invalid settings. Consult the error message and/or check Administration for invalid settings.
- **401** - The user is not authenticated.
- **403** - The user is not authorized access to the specified endpoint.
- **404** - The specified endpoint does not exist or a request parameter is invalid. Consult the error message.
- **405** - The specified endpoint does not support the requested operation. Consult the error message.
- **409** - The specified endpoint is in a state incompatible with the requested operation. Consult the error message.
- **500** - Unknown error occurred while processing the request. Consult the CPQ logs for more information.
- **504** - The specified concurrent calls limit was exceeded and the server was not able to serve the response in a specified timeout limit. That error is always served with the xml body containing the description.

API Versions

This API is versioned using format `/analytics-api-v1.2/` . If the version is omitted it will by default use the first version.

Version	Changes
/analytics-api-v1.2/	Use HTTP chunking. This generally improves the performance of the system and is strongly recommended.
/analytics-api-v1.1/	BoM Money type attributes changed into Price type attributes.
/analytics-api/	Original version of the API.

Authentication

Authentication is done by passing an HTTP header "x-token" with a value that can be retrieved from Administration.

The token is created from the Analytics API setting on an environment at *Setup > Environments*. See [Connected Environments](#) for more information.

Describe

Setting	Description	Default
Method	GET	

Setting	Description	Default
Address	/analytics-api/describe	
Required Parameters		
Other Parameters	`enable-chunked-response` : If set to "true", enables API v1.2 behavior, if set to "false" disables it. Support for the parameter ends with API v1.1.	Environment specific
Return	Retrieves a description of all available data tables in JSON format.	

Example Format ▼

```
{
"<table name>" : {
"columns" : [
{
"name": "<column name>",
"type": "String|Reference|Revision|DateTime|PickList|Email|U
"referencedType": "<another table name>", // Only if type =
"options": ["<option1>", "<option2>"] //Only if type = "Picl
}
]
}
}
```

Data

Setting	Description	Default
Method	GET	
Address	/analytics-api/data/[type]	
Required Parameters	`type` : The data object type	

Setting	Description	Default
Other Parameters	`enable-chunked-response` : If set to "true", enables API v1.2 behavior, if set to "false" disables it. Support for the parameter ends with API v1.1.	Environment specific
Return	Retrieves the data of the given type in CSV format with a header row.	

> **Example Format** ▼
>
> ```
> "header 1","header 2","header 3"
> "data 1-1","data 1-2","data 1-3"
> "data 2-1","data 2-2","data 2-3"
> ```

Time Restrictions

For most objects you will only be able to retrieve data modified in the latest 30 days.

You can further restrict the retrieved time by passing the following query parameters:

Parameter	Example	Meaning
from	2019-09-30T10:15:30.00Z	Only retrieve records modified after the given time.
to	2019-09-30T10:15:30.00Z	Only retrieve records modified before the given time.
startday	1	Only retrieve records modified between 00:00 - 24:00 GMT on the previous *n* days. E.g. *yesterday* for *1*; *Day before yesterday or yesterday* for *2* and *so on*.Can not be combined with the other parameters above.

For types marked as Master Data objects in Administration there is an additional endpoint **GET /analytics-api/data/[MD type]/all** which does not have any time restriction at all.

Special Columns

There are a number of special columns which are always present for any type.

- #id, which will always contain a unique id within the table which will remain the same on later requests as the item is updated.
  The #id of BoM items is a composite id dictated by the part of ID settings on BoM attributes. See [Part of ID in BoM](#).
- #revid, short for revision id, which will remain the same only as long as the underlying data is the same.

Special Data Tables

In addition to the normal data tables for CPQ object types there are a few additional special tables.

- __BomItem contains one row for each BoM item.
- __ConfigurationParameters contains one row for each parameter from the configured products.
- __Organization contains one row for each Organization in your organization tree.

Notably the first two are closely related to the ConfiguredProduct table, and will always have the same revision id and modified date as the ConfiguredProduct they are part of, even if the configuration or bom has not actually changed.

Optional Query Parameters

Currency Conversion

It is possible to enable currency conversion for the data returned by the API (including the [__BomItem data table](#)). This can be enabled by adding optional `currency-converted=true` query parameter, e.g. `GET /analytics-api/data/[type]?currency-converted=true`.

> ⚠️ **Warning**
>
> Using currency conversion in API for Analytics calls can significantly decrease its performance.

Currency Formatting

It is possible to disable currency formatting by setting query parameter `no-currency-formatting=true`, e.g. `GET /analytics-api/data/[type]?no-currency-formatting=true`.