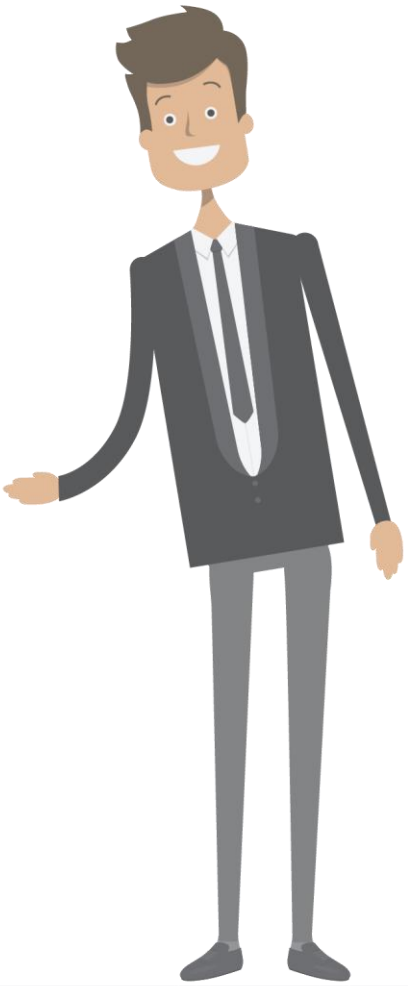
project portfolio office

PPO Business Intelligence API



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1 Introduction

To facilitate business intelligence (BI) requirements, PPO provides an API (Application Programming Interface) by means of an OData restful service.

OData is an open protocol which is widely supported by numerous vendors.

The data accessible by the API is prepared daily and staged for use.

2 OData API

PPO features an OData API (Application Programming Interface) that supports version 4.0 of the protocol. The API is strictly built for querying data for business intelligence (BI) purposes. The OData feed is supported by a wide range of BI client tools. The API is available at https://bi.ppolive.com/v1.0/odata/entities.

3 Authentication and Authorisation

The API supports basic authentication. A pair of access and secret keys created in PPO, is required for authentication.

No logical access control is applied when the data is retrieved. The configured access keys have access to all data available to the API. To revoke access, the key pair need to be deleted from PPO.

3.1 Generating API Keys

Access keys are managed in PPO by users with access to the "**Business Intelligence API**" function. To generate the keys, follow the following steps:

1. Log into PPO
2. Navigate to **Administration** menu and select **Business Intelligence API** sub-menu
3. Under "API Keys" table click "Add" button and follow the prompts.

To revoke the key pair, select it from the table click "Delete".

3.2 Using API Keys

The service supports basic authentication and therefore the keys must be passed in the **Authorization** request header. This is done transparently by most client tools and only of concern with programmatic access. After generating API keys, you can start making authenticated requests. If you try to access the API without being authenticated, it returns a 401 Unauthorized response.

Most BI client tools will have an option of Basic authentication whereby the access and secret keys can be used as username and password respectively.

4 Activating the API

To use the API, you are required to configure it first. In PPO, navigate to **Administration** menu and select **Business Intelligence API** sub-menu. Access to the submenu must be granted to your user group by your PPO Administrator.

Configure the following:

- Access keys.
- Enable the export schedule.
- Enable Usage data (if required)
- Select Entities which must exported.
- Apply a Global Filter for the relevant entities (if it is only active records that are required).

5 Datasets Export

The data available through the API is not served directly from PPO but rather prepared and staged for data analysis.

The data preparation and export are done daily between 01:00 and 04:00 AM GMT/UTC.

5.1 Dataset Structure

Each selected entity is exported as a separate data table. The entity's plural name is used as the table name (non-alphanumeric characters are removed). Field captions are used as column names, with the suffix "Id" added to project, resource, programme, and entity list field types.

Each table have the following columns:

- ID – entity's key
- Display Value – the display value as calculated in PPO
- Last Update – A date and time showing when the entity was last updated.
- Last Updated By ID – The resource key of the user that updated the entity

All the other data fields on the entity are added as columns as well except for free-text and URL fields.

For usage data there are three data sets:

- Usage
  - User ID
  - Resource / Employee ID
  - Date
  - Hits (the number of pages loads for that User ID and date)
- Reporting Usage
  - User ID
  - Resource / Employee ID
  - Report Type (report or dashboard)
  - Reporting Item Title (the name of the report or dashboard)
  - Date
  - Hirs
- Users
  - User ID
  - Username
  - Resource / Employee ID
  - User Group
  - Last Login (the date when last that user logged into PPO)

For the export log there is one data set:

- Export Log
  - Name - name of the entity exported
  - Timestamp – GMT/UTC time of entity export completion
  - Record Count – records successfully exported

6 Using the OData API

6.1 HTTP Methods

The service is read-only; hence the only allowed method is GET.

6.2 Versions

The API supports version 4.0 of the OData protocol.

6.3 Query Options

Only the $skip query option is supported.

6.4 Paging

The service limits the page size to 1000 records. If more records are available, then a link to the next page will be added at the end of the payload.

6.5 Response Format

The response format used by the API is JSON. Successful requests will return 200 OK HTTP status.

Some general information about responses:

- **Last Updated** fields use **GMT/UTC** time zone.
- Blank fields are generally included as *null*
- Entity Ids are returned as strings

Common error responses:

- 404 – Could indicate that the entity requested does not exist or sometimes it may indicate that data export has not happened yet.
- 401 – Unauthenticated request.
- 500 – Unexpected error.