How to use the Datastore API

Learn how to form Datastore version 3 API queries and return IATI data for further analysis.

IN THIS SECTION

Show pages in this section

This guide provides information on how to form Datastore version 3 API queries. A subset of the Datastore API's features and options is provided below. A full list of features that IATI is committed to maintain is outlined in the API contract. All features in the SOLR API documentation can be used as part of the Datastore v3 API, however those not in IATI's API contract may be changed and updated over time.

- Datastore v3 API contract - The contract contains the full list of search and filtering options IATI is committed to maintain in the Datastore v3 API. Key features are highlighted below.
- SOLR documentation - This contains all of the features available via SOLR. The list of SOLR features is larger than those IATI is committed to maintain in the Datastore v3 API.

The Datastore API can be accessed through the IATI's API Gateway. See the API Gateway guidance document for details.

Examples of complex API calls can be found here.

Each user is required to have a free account and include their subscription key when making queries. The details below show how to form the API query, as well as how to do so using the API Gateway's Query Field.

Please note, users of the IATI Datastore will need to have technical competency and understand the basic structure and elements of the IATI Standard. Please see Tools and resources for data use for other ways of accessing IATI data.

Available endpoints:

Return data formatted as either one activity, transaction or budget per row. Each endpoint returns all activity data related to that activity, transaction or budget.

- https://api.iatistandard.org/datastore/activity/select?
- https://api.iatistandard.org/datastore/transaction/select?
- https://api.iatistandard.org/datastore/budget/select?

In the Query Field use the collection parameter, choose a drop down option of activity, transaction or budget:

Parameter	Value
collection	activity

How to add activity filters

The first filter is added using the sequence `q=`, following this, further filters can be added using `AND`, `OR`, `NOT` and + (+ means AND/OR but cannot be expressed using text).

Attribute Code Searches

- Search for a specific attribute code: q=sector_code:11110
- Search for multiple attribute codes: q=recipient_country_code:(UG TZ)
- Search for one code OR another: q=sector_code:11110 OR transaction_sector_code:11110
- Search for one code AND another: q=recipient_country_code:UG AND sector_code:11110
- Search for one code AND/OR another: q=recipient_country_code:UG + sector_code:11110
- Search for one code but NOT another: q=recipient_country_code:UG NOT sector_code:11110

Narrative Searches

- Freetext search in a specific narrative: q=description_narrative:rabbit
- Freetext search in multiples narratives: q=title_narrative:rabbit OR description_narrative:rabbit OR iati_identifier:rabbit OR transaction_description_narrative:rabbit
- Freetext search for two words in a specific narrative: q=title_narrative:(rabbit AND production)
- Freetext search for a phrase in a specific narrative: q=title_narrative:"rabbit production"

Note, the iati-identifier is counted as a narrative field in the IATI Datastore. Use quotes to find a specific activity e.g. q=iati_identifier:"US-GOV-1-AID-OAA-TO-14-00001"

Further narrative search options

- * = wildcard, returns matches with zero or more letters

E.g. apple* returns apple, apples and appleseeds

- ? = single character, returns matches which include a single character

E.g. te?t returns test and text

Note: to use * and ? as wildcards in narrative searches, the search term MUST NOT be quoted. If quoted, * and ? symbols will be searched for in the narrative text.

How to search dates and financial values

The API allows users to select date and financial values within a certain range. This is added in the format [* TO *].

- q=transaction_value:[* TO 10000] finds all field values less than or equal to 10000.
- q=activity_date_iso_date:[2021-01-01T00:00:00Z TO *] finds all activities that have an activity date later 1st Jan 2021.

Note: The SOLR API cannot search for both the type and iso-date within a single activity-date element. This means you cannot select only start or end dates to search by; this needs to be done by the user or programme once the JSON/XML/CSV output has been retrieved.

In the Query Field use the q parameter, then add the combination of filters required using the guidance above e.g.

Parameter	Value
q	title_narrative:(rabbit AND production)

Return specific columns

- &fl=description__narrative,sector__code

In the Query Field use the fl parameter, then add the list of data fields to return e.g.

Parameter	Value
fl	description_narrative,sector_code

How to select the format:

- &wt=json

- &wt=xml

- &wt=csv

In the Query Field use the wt parameter, choose one of the three options: json, xml or csv

Parameter	Value
wt	json

How to select number of rows

If not used, a default of 10 results will be returned.

A maximum of 1000 rows can be returned per API call. Use the &start parameter to select which row to start from.

- &rows=50

- &start=0

In the Query Field use the rows and start parameter, then specify the number required e.g.

Parameter	Value
rows	50
start	0

Names of elements/attributes:

Names of elements and attributes are based upon the names and path provided in the IATI Schema. Each sequence of non-alpha characters is replaced with a '_'.

For example:

IATI Name	API Name
iati-identifier	iati_identifier
transaction/value	transaction_value
transaction/value/@currency	transaction_value_currency

transaction/description/narrative/@xml:lang	transaction_description_narrative_xml_lang

A full list of the names and paths, plus the data *type* of each element and attribute can be found in the Activity Summary Table.

Character encoding

The API will encode certain characters. Either the character or the encoding can be used when typing/pasting in an API. For example:

Character	Encoding
`"`	%22
` `	%20
':'	%3A
','	%2C
'['	%5B
']'	%5D

Example of complex API calls

Here are two examples of data queries to show how the Datastore API works:

Scenario 1: *"I would like to retrieve location and budget data for National NGOs currently working on development or humanitarian projects in the Philippines."*

In this scenario, the user would like to filter the data by organisation type (National NGOs) and recipient country (the Philippines). The user would like to have each budget returned separately, with all corresponding activity data. This can be achieved using the following URL (plus subscription key) or entering the details into the API Query Field:

GET https://api.iatistandard.org/datastore/budget/select?
q=reporting_org_type%3A22%20AND%20(recipient_country_code%3APH%20OR%20transaction_recipient_country_code%3APH)&rows=30

Parameter	Value	Description
collection	activity	Specifies that each row should contain one budget only
responsetype	select	This is the default API response
q	reporting_org_type:22 AND (recipient_country_code:PH OR transaction_recipient_country_code:PH)	Filters for activities with Organisation Type Code 22 (National NGO) AND Those activities must have the Country Code PH (The Philippines) at activity OR transaction level
rows	50	Specifies the number of responses to be returned
wt	json	Sets the output format to JSON

Scenario 2: "I would like to know which organisations worked on teacher training projects in Uganda and Kenya that have begun since 2021."

In this scenario, the user would like to filter the data by sector (Teacher Training), recipient country (Uganda and Kenya), that took place in 2021+ and would like to structure the output by returning participating organisations. This can be achieved using the following URL (plus subscription key) or entering the details into the API Query Field:

GET https://api.iatistandard.org/datastore/activity/select?q=
(sector_code%3A11130%20OR%20transaction_sector_code%3A11130)%20AND%20(recipient_country_code%3A(UG%20KE)%20OR%20transa
01-01T00%3A00%3A00Z%20TO%20*%5D&rows=300&wt=json&fl=participating_org_ref%2Cparticipating_org_narrative

Parameter	Value	Description
collection	budget	Specifies that each row should contain one activity

responsetype	select	This is the default API response
q	(sector_code:11130 OR transaction_sector_code:11130) AND (recipient_country_code:(UG KE) OR transaction_recipient_country_code:(UG KE)) AND activity_date_iso_date:[2021-01-01T00:00:00Z TO *]	Filters for activities with Sector Code 11130 at either activity OR transaction level AND Those activities must have the Country Code UG or KE at activity OR transaction level AND Those activities must have an activity date in 2021 onwards.
rows	300	Specifies the number of responses to be returned
wt	json	Sets the output format to JSON
fl	participating_org_ref,participating_org_narrative	Specifies that participating organisations data is returned for the resulting activities

USEFUL LINKS

Privacy policy

Translation FAQs

Data removal

NEWSLETTER

Sign up to our newsletter

Email address

First name

Surname

SUBSCRIBE