

OpenCorporates Reconciliation API documentation

Introduction

The Open Refine Reconciliation API allows [OpenRefine](#) users to match company names to legal corporate entities. This is especially useful when you have an existing spreadsheet or dataset featuring lots of companies. Matching (or reconciling) to legal entities allows you to get more information about the companies (for example the registered address or statutory filings), and makes it easier to match with other datasets or exchange with other organisations.

Licence

Access to the data via this API is free for open data projects under the same [share-alike attribution Open Database Licence](#) conditions as the rest of OpenCorporates. If you wish to use the database, or part of the database, without one or more of these restrictions, please contact us for a non-share-alike licence.

No API token is currently required to access the OpenCorporates Reconciliation API, however this may be subject to change in future.

API Endpoints

The main endpoint for use in OpenRefine is <https://opencorporates.com/reconcile>, and it's described in more detail below. Although the API endpoints have been primarily designed to work with the [OpenRefine](#) software, we've documented in full the REST endpoints that are part of this service in case you wish to access the data without using OpenRefine.

The OpenCorporates Reconciliation API is designed to support [OpenRefine Service definitions](#). We highlight below any aspect of these service definitions that are not currently supported.

OpenRefine

Setting up OpenRefine to match against companies

Start off with following [this webcast](#), which shows you how to install [OpenRefine](#) and start reconciling companies against the OpenCorporates database.

When reconciling data in OpenRefine, the main URL (endpoint) of the OpenCorporates reconciliation service is <https://opencorporates.com/reconcile>

The scoring system

OpenRefine expects the API to return a matching score with each possible result. This is computed by OpenCorporates in the following way: we search all the companies matching the name of the company, doing a certain amount of normalising of the company name, and restricting to jurisdiction if requested. We then compare the possible results against the given term, and calculate a score based on the similarity. We then adjust the score, adjusting it down if the company is inactive, and also if it's a foreign branch of a company. This ensures that home companies, and current companies score more highly.

Restricting to jurisdictions

Many company names are quite common across different locations, and there is the additional problem of foreign branches, which are usually named the same as the home company. To avoid false matches, it's a good idea to limit matches to a given jurisdiction. This is very easy to do with OpenCorporates, as we provide a specific reconciliation URL (or endpoints) for each jurisdiction. [This blog post](#) explains it fully, but basically you just add the jurisdiction_code for the jurisdiction to the end of the normal reconciliation URL, e.g. <https://opencorporates.com/reconcile/es> for Spain, instead of <https://opencorporates.com/reconcile>

Additional attributes

In OpenRefine, you can currently submit two additional parameters with each company – the jurisdiction code and an optional relevant date. The jurisdiction code allows the search to be restricted to a specific jurisdiction which may vary from company to company. A submitted date changes the scoring behaviour, meaning that a company will score higher if it was active at that date, and score significantly lower if it didn't yet exist, or was inactive at that date. This is useful if you are matching data from the past, so that you want to match the companies which were relevant to the date of the datapoint.

Detailed API description

GET reconcile

GET reconcile/:jurisdiction_code

Description

The main endpoint to match names to the OpenCorporates database. It supports querying on an entity basis.

Searches against multiple search terms are supported through this endpoint (as OpenRefine typically sends through reconciliation requests in batches of 100), however the parameters are slightly different.

A request to **/reconcile** without parameters returns the service metadata. This is typically used by OpenRefine to support usage of the various endpoints used by the reconciliation service.

Parameters (service metadata)

attribute	Description
	No parameters to be supplied

Example:

<https://opencorporates.com/reconcile>

Response:

```
{
  "name": "OpenCorporates Reconciliation Service",
  "identifierSpace": "http://rdf.freebase.com/ns/type.object.id",
  "schemaSpace": "http://rdf.freebase.com/ns/type.object.id",
  "view": {
    "url": "https://opencorporates.com/{id}"
  },
  "preview": {
    "url": "https://opencorporates.com/{id}/preview",
    "width": 430,
    "height": 300
  },
  "suggest": {
    "entity": {
      "service_url": "https://opencorporates.com",
      "service_path": "/reconcile/suggest",
      "flyout_service_path": "/reconcile/flyout"
    },
    "property": {
      "service_url": "https://opencorporates.com",
      "service_path": "/reconcile/suggest/properties",
      "flyout_service_path": "/reconcile/flyout/properties"
    }
  },
  "defaultTypes": [
    {
      "id": "/organization/organization",
      "name": "Organization"
    }
  ]
}
```

Parameters (single query)

attribute	Description
query	<p>Text string to match the term against names of entities in OpenCorporates.</p> <p>The reconciler will match against the company name, with a certain amount of normalization to help widen the range of match candidates</p> <p>Optional. If not supplied, then the reconciliation service metadata will be returned</p> <p>Alternatively this parameter can be provided as a URL encoded JSON object literal containing zero or more key/value pairs matching the supported attributes. For example:</p> <pre>query={"query":"foo", "limit":5, "jurisdiction_code":"dk"}</pre>
jurisdiction_code	<p>The ISO-3166 alpha-2 code for the jurisdiction in which the company is incorporated.</p> <p>For the US, Canada & UAE, the country code is followed by the ISO-3166-2 region/state code (e.g. us_ca for California)</p> <p>Lower case, with country & region codes separated by underscore ("_")</p>
date	<p>Date when the company was active/in existence.</p> <p>Some jurisdictions only allow one company to exist at any point in time with a particular name. This parameter helps the reconciler prioritise companies that were active on the specified date.</p> <p>Date in ISO 8601 format (YYYY-MM-DD)</p>
callback	JSONP callback parameter. The result is returned in a specified callback function identified by the callback parameter value

Examples

<https://opencorporates.com/reconcile/gb?query=opencorporates+limited>

https://opencorporates.com/reconcile?query=opencorporates+limited&jurisdiction_code=gb

https://opencorporates.com/reconcile/gb?query=opencorporates+limited&jurisdiction_code=gb&date=2019-04-25&callback=foo

https://opencorporates.com/reconcile?query=%22query%22:%22foo%22,%20%22limit%22:5,%20%22jurisdiction_code%22:%22dk%22}

Response

```
GET https://opencorporates.com/reconcile/gb?query=opencorporates+limited

{
  "result": [
    {
      "id": "/companies/gb/07444723",
      "name": "OPENCORPORATES LTD",
      "type": [
        {
          "id": "/organization/organization",
          "name": "Organization"
        }
      ],
      "score": 79,
      "match": false,
      "uri": "http://opencorporates.com/companies/gb/07444723"
    },
    {
      "id": "/companies/gb/11268479",
      "name": "OPENCORPORATES HOLDING LTD",
      "type": [
        {
          "id": "/organization/organization",
          "name": "Organization"
        }
      ],
      "score": 31,
      "match": false,
      "uri": "http://opencorporates.com/companies/gb/11268479"
    },
    {
      "id": "/companies/gb/11220648",
      "name": "OPENCORPORATES IP LTD",
      "type": [
        {
          "id": "/organization/organization",
          "name": "Organization"
        }
      ],
      "score": 31,
    }
  ]
}
```

```

    "match": false,
    "uri": "http://opencorporates.com/companies/gb/11220648"
},
{
  "id": "/companies/gb/11329152",
  "name": "OPENCORPORATES TRUST LIMITED",
  "type": [
    {
      "id": "/organization/organization",
      "name": "Organization"
    }
  ],
  "score": 31,
  "match": false,
  "uri": "http://opencorporates.com/companies/gb/11329152"
},
{
  "duration": 399.113383
}

```

Parameters (multiple queries)

queries	URL encoded JSON object matching the following pattern to allow multiple searches in one http request. The JSON object literal has zero or more key/value pairs with arbitrary keys where the value is in the same format as a single query. Those parameters available as part of single query can be included, for example:. <pre>{"q0": {"query": "foo", "limit": 5}, "q1": {"query": "bar", "jurisdiction_code": "dk"}}</pre> The reconciler will match each query against a company name, with a certain amount of normalization to help widen the range of match candidates. "q0" and "q1" in the above example can be arbitrary strings. They will be used to key the results returned.
limit	An integer to specify how many reconciliation match suggestions to return. Optional. Supported only when supplying JSON object to query or queries parameters, for example: <pre>/reconcile?query={"query": "bank", "jurisdiction_code": "gb", "limit": 5}</pre> Not supported in this form: <pre>/reconcile/gb/query=foo&limit=5</pre>

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Example

```
https://opencorporates.com/reconcile/us_de?callback=foo&queries={"q0":{"query":"goldman sachs group","limit":1},"q1":{"query":"bank of america","limit":1}}
```

Response

```
GET
https://opencorporates.com/reconcile/us_de?callback=foo&queries=%22q0%22:{%22query%22:%22goldman%20sachs%20group%22,%22limit%22:1},%22q1%22:{%22query%22:%22bank%20of%20america%22,%22limit%22:1}

foo (
{
  "q0": {
    "result": [
      {
        "id": "/companies/us_de/2923466",
        "name": "THE GOLDMAN SACHS GROUP, INC.",
        "type": [
          {
            "id": "/organization/organization",
            "name": "Organization"
          }
        ],
        "score": 68,
        "match": false,
        "uri": "http://opencorporates.com/companies/us_de/2923466"
      }
    ],
    "q1": {
      "result": [
        {
          "id": "/companies/us_de/2927442",
          "name": "BANK OF AMERICA CORPORATION",
          "type": [
            {
              "id": "/organization/organization",
              "name": "Organization"
            }
          ],
          "score": 68,
          "match": false,
          "uri": "http://opencorporates.com/companies/us_de/2927442"
        }
      ],
      "duration": 1286.510605
    }
  }
}
```

Support for http POST

As well as GET, the endpoints support POST. The parameters can be submitted as x-www-form-urlencoded or as multipart/form-data. Some examples:

```
POST /reconcile HTTP/1.1
Host: opencorporates.com
Content-Type: application/x-www-form-urlencoded
cache-control: no-cache
query=%7B%22query%22%3A%22foo%22%2C%22limit%22%3A5%2C%22jurisdiction_code%22%3A%2
2dk%22%7D

POST /reconcile HTTP/1.1
Host: opencorporates.com
Content-Type: multipart/form-data; charset=utf-8; boundary=--oc-query--
cache-control: no-cache

Content-Disposition: form-data; name="query"

{"query":"foo","limit":5,"jurisdiction_code":"dk"}
--oc-query--
```

GET reconcile/suggest/properties

The available properties for searching on can be discovered using the properties suggest endpoint. This is based on the OpenRefine Service definitions published here:

<https://github.com/OpenRefine/OpenRefine/wiki/Suggest-API>

Example

```
GET /reconcile/suggest/properties?prefix=juris&callback=json123

json123 (
{
  "code": "/api/status/ok",
  "cost": "0.380581 msec",
  "prefix": "juris",
  "result": [
    {
      "quid": "jurisdiction_code",
      "id": "jurisdiction_code",
      "n:type": {
        "id": "/properties/property",
        "name": "Property"
      },
      "name": "Jurisdiction Code",
      "r:score": 100
    }
  ]
}
```

```

    }
],
"start": 10,
"status": "200 OK",
"transaction_id": "2019-04-12T13:37:33;juris"
}
)

```

GET reconcile/suggest

Description

This can be used as part of an auto-complete service to translate what a user types into a ranked list of matching entities.

Query parameters

attribute	Description
prefix	Search term
start	An integer to specify the first result to return which allows for pagination of results. Optional. 10 results are shown commencing with the supplied start number.
callback	JSONP callback parameter. The result is returned in a specified callback function identified by the callback parameter value

[OpenRefine Suggest API parameters](#) not currently supported

type	optional, a single string, or an array of strings, specifying the types of result e.g., organization.
type.strict	a string, one of "any", "all", "should"
limit	An integer to specify how many results to return - currently preset to 10 results

Examples

<https://opencorporates.com/reconcile/suggest?prefix=GREEN%20ADVENTURE>
<https://opencorporates.com/reconcile/gb/suggest?prefix=OPENCORPORATES+LI>

Response

```
GET /reconcile/gb/suggest?prefix=OPENCORPORATES+LI

{
  "code": "/api/status/ok",
  "cost": "80.588301 msec",
  "prefix": "OPENCORPORATES LI",
  "result": [
    {
      "quid": 3864657,
      "id": "/companies/gb/07444723",
      "n:type": {
        "id": "/organization/organization",
        "name": "Organization"
      },
      "name": "OPENCORPORATES LTD",
      "r:score": null,
      "type": [
        "Private Limited Company"
      ]
    }
  ],
  "start": 10,
  "status": "200 OK",
  "transaction_id": "2019-05-30T09:26:58;OPENCORPORATES_LI"
}
```

GET reconcile/flyout

Description

A preview HTML snippet is provided to provide more information about a match returned from the reconcile end point. The ID from the reconciliation results is used (e.g. the response from [this query](#) includes "id": "/companies/dk/20339691" amongst the results)

The output is a JSON object literal with a single field: **html**, which provides a rendered view of summary information for the given entity

Query parameters

attribute	Description
id	Text string representing the unique identifier of the entity in OpenCorporates.

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	E.g. /companies/dk/20339691
callback	JSONP callback parameter. The result is returned in a specified callback function identified by the callback parameter value

Example

<https://opencorporates.com/reconcile/flyout?id=/companies/dk/20339691>

If an invalid ID is specified, then the text "No company found" will be returned.

Response

```
{
  "id": "/companies/dk/20339691",
  "html": "<style type=\"text/css\">\n  .oc-list, .oc-list-icons,\n  .oc-flyout-content, .oc-attribution, .oc-header {\n    background-color:#F5F5F5;\n  }\n  ul.oc-list, .oc-flyout-content, .oc-attribution, .oc-header {\n    border:1px solid #DAE3E9;\n  }\n  ul.oc-list, .oc-flyout-content, .oc-attribution,\n  div.oc-header {\n    font-size:62.5%;\n  }\n  .oc-flyout-content, .oc-attribution {\n    margin-bottom:0;\n  }\n  .oc-flyout-content, .oc-attribution {\n    padding:5px;\n  }\n  .oc-flyout-content:after {\n    clear:both;\n    content:'.';\n    display:block;\n    height:0;\n    visibility:hidden;\n  }\n  * html .oc-flyout-content:after {\n    height:1px;\n  }\n  h1#oc-flyout-title, li.oc-selected .oc-item-name {\n    color:#FF6600;\n  }\n  color:#8f735c;\n  #oc-flyout-title .oc-flyout-label {\n    color:#AAAAAA;\n  }\n  h1#oc-flyout-title {\n    font-size:1.2em;\n    font-weight:bold;\n    margin-bottom:0.5em;\n    margin-top:0.3em;\n  }\n  h1#oc-flyout-title .oc-flyout-template-label {\n    color:#999999;\n    font-size:0.8em;\n  }\n  #oc-flyout-title .oc-flyout-label {\n    font-weight:normal;\n  }\n  #oc-domain-flyout #oc-flyout-title {\n    margin-bottom:0.5em;\n  }\n  .oc-pane, .oc-flyout-pane, .oc-flyout-subtitle,\n  .oc-topic-properties strong {\n    color:#666666;\n  }\n  h3.oc-topic-properties,\n  .oc-flyout-pane p {\n    color:#444444;\n  }\n  h3.oc-topic-properties {\n    font-size:1.2em;\n    font-weight:bold;\n    margin-top:0.2em;\n    margin-bottom:0.2em;\n  }\n  .oc-topic-properties strong {\n    display:inline;\n    font-size:0.8em;\n  }\n  .oc-attribution {\n    border-top:0 none;\n  }\n  .oc-attribution {\n    margin-top:0;\n  }\n  .oc-attribution {\n    background-image:url(\"http://opencorporates.com/images/oc-odbl-attribution.png\");\n    background-position:right center;\n    background-repeat:no-repeat;\n    min-height:15px;\n    padding-right:72px;\n  }\n  .oc-flyout-types {\n    font-size:1.2em;\n    font-style:italic;\n    line-height:1;\n  }\n</style>\n<div class='oc-flyout-content' id='oc-topic-flyout'\>\n<h1 class='oc-flyout-image-false' id='oc-flyout-title'\>GREEN ADVENTURE V/STANLEY ANGELO SCHMUCKER</h1>\n<h3 class='oc-topic-properties oc-flyout-image-false'\>\n<strong>Status:</strong>\nAktiv\n</h3>\n<h3 class='oc-topic-properties oc-flyout-image-false'\>\n<strong>Company No:</strong>\n20339691\n</h3>\n<h3 class='oc-topic-properties oc-flyout-image-false'\>\n<strong>Registered:</strong>\n1997-10-01\n</h3>\n<h3 class='oc-topic-properties oc-flyout-image-false'\>\n<strong>Address:</strong>\nSkelvangsvej 29, Randers NV, 8920\n</h3>\n</div>\n<div class='oc-attribution'\>\n<span class='oc-flyout-types'\>Denmark - Enkeltmandsvirksomhed</span>\n</div>\n</div>\n"
}
```

Document Version History

v0.1 - 2019-04-29 Based on [existing API documentation](#) reworked to include detailed information about the reconcile endpoints.

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