FACTSET

FactSet ID Lookup API

Programmer's Manual and Reference

July 2021

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Document Organization and Audience

This document describes how to use FactSet ID Lookup API. You should be familiar with the JSON, API and Web Services. This document will describe the syntax needed for proper request formatting as well as the rules for processing responses.

Trademarks

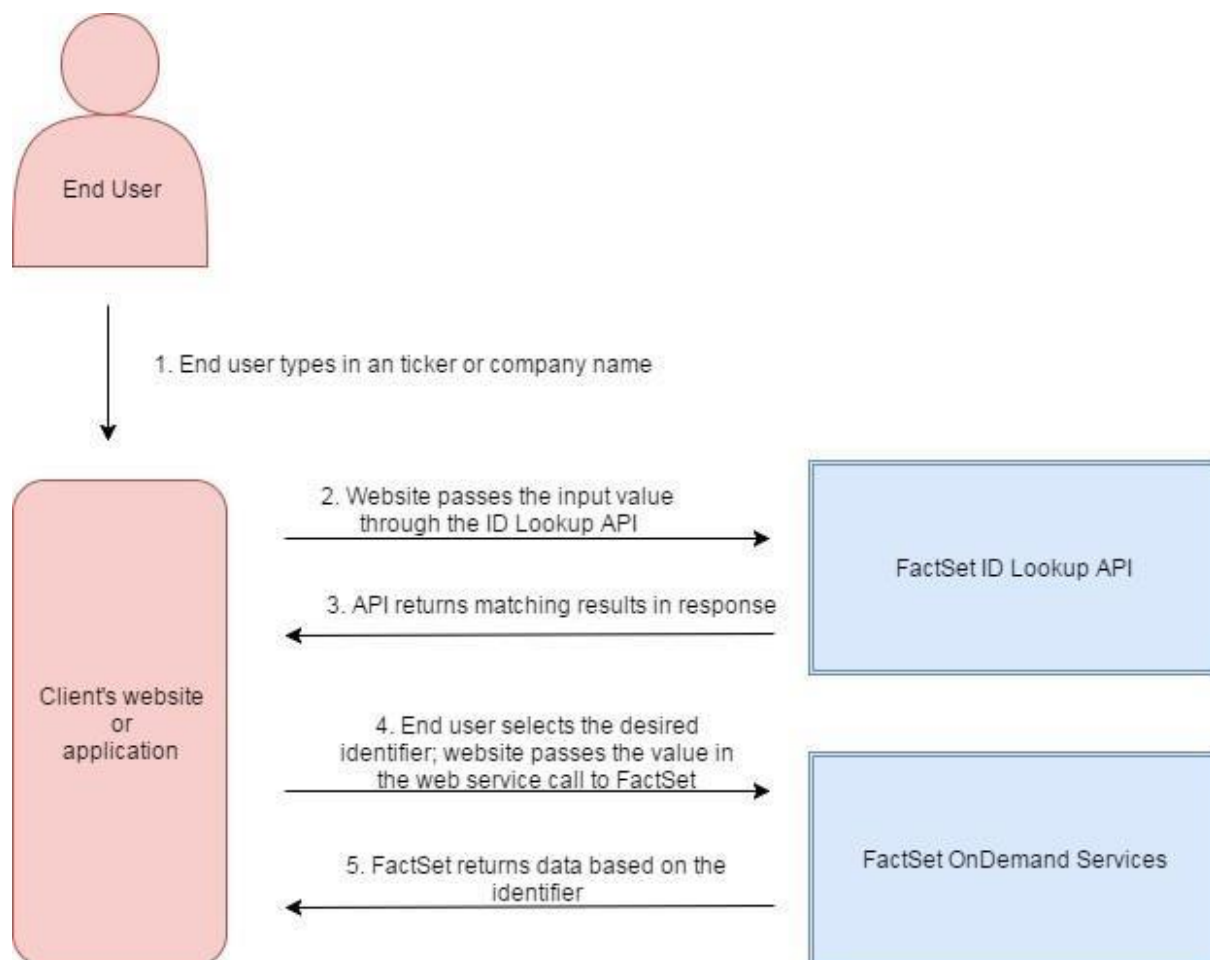FactSet is a registered trademark of FactSet Research Systems, Inc.

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1. Overview

1.1 Introduction to FactSet ID Lookup API

FactSet Identifier Lookup API exposes the service that powers the search functionality in FactSet WorkStation and FactSet Web. Clients can leverage this API for their search functionality to return tickers, entity names, and other identifiers that FactSet supports.

Sample Data Flow

1.2 Core Functionality and Benefits

- Leverages FactSet's powerful search functionality to return tickers, company names and unique identifiers for FactSet data
- Type-ahead functionality to display related results quickly
- Simple integration with your existing web applications

1.3 Authentication

The API authenticates using API keys.

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- Client would be provided with a FactSet login to Developer's Portal (https://developer.factset.com/).
- End user must generate an API key from the Developer portal.
- The key generated once and cannot be retrieved again. User needs to take a copy and store the API key.
  - The complete guide to authentication process to the service can be found here: https://developer.factset.com/authentication

Certificates and Certificate Chains

FactSet highly discourages hardcoding reliance on any particular certificate or advertised certificate chain into applications. FactSet expects clients to rely on Public Key Infrastructure verification and validity of the certificates:

- FactSet's Certificates will change over time as they are renewed and the complexity of the algorithms employed increases (i.e. SHA-2 rather than SHA-1 signatures). This is the constant evolution of security as old security algorithms are retired and new security algorithms are included. Often these certificates get updated on a rolling multi-year basis. Validating a certificate dynamically during TLS connect must be incorporated by the client as a necessary practice.

- FactSet's Certificate chains, including intermediate Certificate Authorities, may change over time, and it is important that clients dynamically validate FactSet's certs against a modern CA trusted root certificate store. FactSet's current root certificate is Thawte Primary Root CA.

Security Protocols

Clients should not hardcode dependencies on any specific security protocol as FactSet is continuously reviewing security policies and reserves the right to disable support for older security protocols with short notice. The current supported protocols are TLSv1.1 and TLSv1.2 but at a future date, these may be replaced with future versions. Clients should make sure that their software can handle ever changing Security Protocols.

1.4 Request Limits

There is a limit on how many requests each client can make within specific durations. This is to ensure the API is running optimally and mitigate any impact to other FactSet services.

The API offers three tiers of request limits. All clients who are using this API will get the default tier. Clients who are interested in tier B should discuss the commercials with their FactSet sales rep.

Tier	# of requests/sec	# of requests/minute	# of requests/hour
Default	20	100	2,000
Tier B	200	1,000	20,000

Sample Scenarios

Depending on the tier, the API would respond with a 429 code depending on which time duration limit they reach first. The limit starts at the time the first request is made. The cached time would reset after an hour, even if the client does not reach the limit.

- **[Client A: default tier]** At 15:22:15, client reaches the limit of 100 requests per minute. The API would respond with a 429 on subsequent requests until the restriction is lifted a minute later at 15:23:15

- If the same client reaches the 2,000 requests per hour limit at 15:44:00, then the limit would not be lifted until 16:44:00.

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2. API

FactSet ID Lookup API will accept POST requests in a JSON-formatted request body.

2.1 URL

FactSet provides production environment that can be used for production access. The following table shows the URL needed for each system.

Type	Host Name	Service	Example URL[1]
Production	api.factset.com	idsearch	https://api.factset.com/idsearch/v1/idsearch

2.2 Query

Query is an array containing search query objects with parameters to run concurrently. This is the request sent via the API to look for a specific set of identifiers.

Query

The query object contains the search term and filters defined by the end user. Each query object contains the following parts:

Names	Description	Examples and Notes
patterns	This is the string or keyword being searched on. Concurrent searches for multiple patterns is **NOT** supported	*FactSet Research Systems is treated as a single search term but not as **FactSet OR Research OR Systems***
entities	The asset class that is being search against	List of available asset classes are available in Section 2.2.4
filters	Helps narrow down the search results through including and/or excluding parameter. Filters are specific depending on the asset class	List of available filters are listed in Section 2.2.4
search_fields	Limit results to these symbology type: • Symbol • Entity name • CUSIP	This parameter is only available for these asset classes: • Equities • Private Companies • Bonds • ETFs • Futures • Mutual Funds

Filters

The **filters** object (if used) must contain one or both of the following:

---

[1] The example URLs demonstrate the different services assigned to production and beta. The URLs given above may not be valid. For example, the query string is missing in the above example.

- **Include** – Specifies criteria to selectively include specific datasets in the results. Each dataset has its own relevant fields, such as equityType, isPrimary, region, etc. For each field, provide an array of values you wish to filter on. For example, specifying ["US", "GB"] for the region field will include documents where the region is either the United States or Great Britain. The values in each array are combined using an OR operation, meaning any dataset matching one or more of these values will be included in the results.

- **Exclude** – Specifies criteria to exclude certain datasets from the results. Each dataset has its own relevant fields, such as equityType, isPrimary, region, etc. For each field, provide an array of values you wish to filter out. For example, specifying ["US", "GB"] for the region field will exclude documents where the region is either the United States or Great Britain. The values in each array are combined using an OR operation, meaning any dataset matching one or more of these values will be excluded from the results.

Clients must also have these settings for the **include** and **exclude** filters. The full list of acceptable field, entity and values is available in Section 2.2.4

- **field** – string containing the field name to filter on. Each asset class has its own set of field (i.e. "equity_type", "is_primary", "region", etc).

- **entity** – string containing the asset class for the filter to be applied on. If not included or left empty, it will apply the filter against all asset classes

- **values** – values you wish to filter on, as a comma-separated list. The values within this list are tied by an **OR** operation.
  - Example: an include filter with "values": ["US", "GB"] would include documents whose region values are **either** the United States or Great Britain.

    The possible values for regions are available in Appendix A

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Sample Request Format

```
{
   "query":{
      "pattern":"value",
      "entities":["value1","value2"],
      "filters":{
         "include":[ { Filter Block 1}, { Filter Block 2} ],
         "exclude":[ { Filter Block 3} ]
      }
   },
}
```

Acceptable Names and Values

Below is the list of supported names and values for each asset class and related filters:

Asset Class/"Entities" Description	Asset Class/"Entities" Values	Fields	Field Values	Field Values Description
Bank Loans	bank_loans			
Commodities	commodities			
Continuous Evaluated Pricing	cep_bonds			
Countries	countries			
Deals	deals			
Economic Reports	econ_reports			
Economic Series	economic_series			
Equities	equities	equity_type	EQ_Primary	Primary Market
			EQ_PREF	Preferred Equities
			EQ_RIGHTS	Rights
			EQ_WARR	Warrants
			EQ_DEPOS	Depository Receipts
			EQ_DR_ADR	ADR

			EQ_DR_GDR	GDR
			EQ_DR_NVDR	NVDR
			EQ_DR_ODR	Other DR
		is_primary	0 = false 1 = true	
		region	See Appendix A	
Equities Realtime	equities_realtime			
ETFs	etfs	regions	See Appendix A	
ETFs Realtime	etfs_realtime			
Exchange Rates Realtime	exchange_rates_realtime			
Fixed Income	bonds	coupon	arbitrary value	
		maturity_year	arbitrary year	
		144a	0 = false 1= true	
		reg_s	0 = false 1= true	
		real_time	0 = false 1= true	
		terms	0 = false 1= true	
Foreign Exchange	forex			
Futures (continuous)	futures			
Indices	Indices	is_primary	0 = false 1= true	
Indices Realtime	indices_realtime			
Industries	industries			
Markit Loans	markit_loans			
Mutual Funds	mutual_funds	mf_type	MUT	Mutual Funds
			MUT_OPEN	Open-end funds

			MUT_CLOSED	Closed-end funds
Mutual Funds Realtime	mutual_funds_realtime			
Ownership Holders	ownership_holders			
People	people			
Private Companies	private_companies			
Private Equity/Venture Capital Firms	pevc_firms	is_child	0 = false 1= true	
		is_shell	0 = false 1= true	
Private Equity/Venture Capital Funds	pevc_funds	is_child	0 = false 1= true	
		is_shell	0 = false 1= true	
Region	regions			
Yields	yields			

2.3 Settings

Allow users to adjust the behavior of the request and response.

Name	Value	Description
result_limit	Arbitrary value	Number of results to be returned by search. Max number of results = 25*; default is 10 if field is not used.

Sample query

This example requests that only the top 25 results be returned.

```
{
    "query":{
        "pattern":"A",
        "entities":["equities"]
    },
    "settings":{
        "result_limit":25
    }
}
```

2.4 Samples

Simple query

This simple query is requesting the top 10 matches in FactSet's People database with the name *Gates*:

```
{
    "query":{
        "pattern":"Gates",
        "entities":["people"]
    }
}
```

These are the top 10 results with *Gates* in the name. The value in s**ymbol** is associated with the name of the related entity. This could be a ticker symbol for equities or FactSet unique identifier for other asset class like private company.

Symbol is the only value that should be passed back to any FactSet services to retrieve data.

Example: if you want to retrieve the People Snapshot for Bill Gates, you should pass **00118X-E** (and not Bill Gates, III) in the parameter for the FactSet service you are using.

Results

By default, the API returns 10 results **per asset class** that closely matched the query. For example, if the query requests for two "entities", then the API would return 20 results. Below is the response for the sample query in section 2.3.1:

```
{
    "typeahead": {
        "result_count": {
            "people": 10
```

```
    },
    "error":  null,
    "is_success":  1, "results": [
        {
            "index": null,
            "symbol": "00118X-E",
            "name":  "Bill  Gates,  III"
        }, {
            "index": null,
            "symbol":  "05FDBX-E",
            "name": "John S. Gates, Jr."
        }, {
            "index": null,
            "symbol":  "0DR340-E",
            "name": "Anne Gates"
        }, {
            "index": null,
            "symbol":  "06XRPW-E",
            "name": "William Gary Gates, MBA"
        }, {
            "index": null,
            "symbol": "0019TK-E",
            "name":  "Craig  D.  Gates,  MBA"
        }, {
            "index": null,
            "symbol":  "0FV1HN-E",
            "name":  "Katherine  T.  Gates"
        }, {
            "index": null,
            "symbol": "05F5L2-E",
            "name": "Robert M. Gates, PhD"
```

```
                    }, {
                            "index": null,
                            "symbol":  "0BKPR1-E",
                            "name": "Charles M. Gates"
                    }, {
                            "index": null,
                            "symbol":  "05ZZZQ-E",
                            "name": "Richard John Gates"
                    }, {
                            "index": null,
                            "symbol":  "05HJRN-E",
                            "name": "Stephen F. Gates, MBA"
                    }
            ]
        }
}
```

Sample query using a filter

In this example, the query is looking for bonds that have "US" in its name. We are also setting a filter to return bonds that have a 2021 maturity date.

```
{
    "query":{
      "pattern":"US",
      "entities":["bonds"], "filters":{
          "include":[
            {
              "field":"maturity_year",
              "entity":"bonds",
              "values":[  "2021"  ]
            }
          ]
      }
    }
}
```

This is the response from the query:

```json
{
    "typeahead": {
        "result_count": {
            "bonds": 5
        },
        "error": null,
        "is_success": 1, "results": [
            {
                "index": "bonds",
                "symbol": "USJ6277PAD99",
                "name": "Oscar US Funding VI    A3 2.82% 10-JUN-2021"
            }, {
                "index": "bonds",
                "symbol": "687846AD",
                "name": "Oscar US Funding VI    A3 2.82% 10-JUN-2021"
            }, {
                "index": "bonds",
                "symbol": "687847AB",
                "name": "Oscar US Auto Loan Receivables 2014-1    A2 1% 15-SEP-2021"
            }, {
                "index": "bonds",
                "symbol": "687847AC",
                "name": "Oscar US Auto Loan Receivables 2014-1    A3 1.72% 15-SEP-2021"
            }, {
                "index": "bonds",
                "symbol": "687847AD",
                "name": "Oscar US Auto Loan Receivables 2014-1    A4 2.55% 15-SEP-2021"
            }
        ]
    }
}
```

Sample query using OR logic

The **OR** logic is set by setting multiple values within the same block, separated by a comma.

In this example, the query is searching for equities **OR** private companies that has the word *air* in its name. We are not setting any filters for this query.

```
{
    "query":{
        "pattern":"air",
        "entities":["equities","private_companies"]
    }
}
```

This is the response for the query above:

```json
{
    "typeahead": {
        "result_count": {
            "private_companies": 10,
            "equities": 10
        },
        "error": null,
        "is_success": 1, "results": [
            {
                "index": "equities",
                "symbol": "AIR",
                "name": "AAR CORP."
            }, {
                "index": "equities",
                "symbol": "APD",
                "name": "Air Products and Chemicals, Inc."
            }, {
                "index": "equities",
                "symbol": "AIR",
                "name": "Airbus SE"
            }, {
                "index": "equities",
                "symbol": "AL",
```

```
            "name": "Air Lease Corporation Class A"
        }
        ,

        {

            "index": "equities",
            "symbol": "AF",
            "name": "Air France-KLM SA"
        }
        ,

        {

            "index": "equities",
            "symbol": "AI",
            "name": "Air Liquide SA"
        }
        ,

        {

            "index": "equities",
            "symbol": "DAL",
            "name": "Delta Air Lines, Inc."
        }
        ,

        {

            "index": "equities",
            "symbol": "ALK",
            "name": "Alaska Air Group, Inc."
        }
        ,

        {
```

```json
            "index": "equities",
            "symbol": "SEE",
            "name": "Sealed Air Corporation"
        }
        ,

        {

            "index": "equities",
            "symbol": "WAB",
            "name": "Westinghouse Air Brake Technologies Corporation"
        }
        ,

        {

            "index": "private_companies",
            "symbol":  "000BN6-E",
            "name": "Air Methods Corp."
        },
         {
```

```
    "index": "private_companies",
    "symbol": "009RYP-E",
    "name": "Air Charter Service Group Ltd."
}, {
    "index": "private_companies",
    "symbol": "0CDZFC-E",
    "name": "Air Bank a.s."
}, {
    "index": "private_companies",
    "symbol": "00826L-E",
    "name": "Discovery Air, Inc."
}, {
    "index": "private_companies",
    "symbol": "007VPN-E",
    "name": "BigAir Group Ltd."
}, {
    "index": "private_companies",
    "symbol": "06GQS7-E",
    "name": "Air Medical Group Holdings, Inc."
}, {
    "index": "private_companies",
    "symbol": "05MXQB-E",
    "name": "Air Nostrum Líneas Aéreas del Mediterráneo SA"
}, {
    "index": "private_companies",
    "symbol": "096JVJ-E",
    "name": "Wamos Air SA"
}, {
    "index": "private_companies",
    "symbol": "05VS1F-E",
    "name": "TAP - Air Portugal SA"
```

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```
        }, {
                "index": "private_companies",
                "symbol":  "05X6WJ-E",
                "name": "Air Baltic Corp. AS"
        }
    ]
  }
}
```

If you are interested in searching for three or more values, your query should look like this:

```
{
    "query":{
        "pattern":"air",
        "entities":["equities","private_companies","bonds"]
    }
}
```

Sample query using AND logic

In this example, the query is searching for fixed income that has the word *life* in its name. We are also setting an **AND** filter to only return those bonds that are offered as Reg S and have a 2020 maturity date.

```
{
    "query":{
        "pattern":"life",
        "entities":["bonds"],
        "filters":{
            "include":[
                {
                    "field":"maturity_year",
                    "entity":"bonds",
                    "values":[ "2020" ]
                },
                {
                    "field":"reg_s",
                    "entity":"bonds",
                    "values":[ "1" ]
                }
            ],
```

```
            "exclude":[]
        }
    }
}
```

This is the response for the query:

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```
{
    "typeahead": {
        "result_count": {
            "bonds": 10
        },
        "error": null,
        "is_success": 1, "results": [
            {
                "index": "bonds",
                "symbol": "74368EAA",
                "name": "Protective Life Global Funding 2.7% 25-NOV-2020"
            }, {
                "index":  "bonds",
                "symbol": "USU7430CAB10",
                "name": "Protective Life Global Funding 2.262% 08-APR-2020"
            }, {
                "index": "bonds",
                "symbol": "74368EAJ",
                "name": "Protective Life Global Funding 2.161% 25-SEP-2020"
            }, {
                "index": "bonds",
                "symbol": "74368EAF",
                "name": "Protective Life Global Funding 2.262% 08-APR-2020"
            },
             {
                "index": "bonds",
                "symbol": "75951BAB",
                    "name": "Reliance Standard Life Global Funding II 2.5% 15-JAN-2020"
```

```
            },
            {
                "index": "bonds",
                "symbol": "75951BAC",
            "name": "Reliance Standard Life Global Funding II 2.375% 04-MAY-2020"
            },
            {
                "index": "bonds",
                "symbol": "59217HAR",
                "name": "Metropolitan Life Global Funding I 2% 14-APR-2020"
            },
            {
                "index": "bonds",
                "symbol": "59217HAT",
                "name": "MetLife Global Funding 2.5% 03-DEC-2020"
            },
            {
                "index": "bonds",
                "symbol": "59217HBF",
                "name": "Metropolitan Life Global Funding I 2.05% 12-JUN-2020"
            },
            {
                "index": "bonds",
                "symbol": "59217HBJ",
                "name": "Metropolitan Life Global Funding I FRN 12-JUN-2020"
            }
        ]
    }
}
```

Sample query using both OR & AND logic

In this example, the query is searching for equities that has the word *group* in its name. We are only interested in Global Depositary Receipts (GDR) that are in Great Britain or Germany.

```
{
    "query":{
        "pattern":"group",
        "entities":["equities"],
        "filters":{
```

```json
        "include":[
          {
            "field":"equity_type",
            "entity":"equities",
            "values":[ "EQ_DR_GDR" ]
          },
          {
            "field":"region",
            "values":[ "GB","DE" ]
          }
        ],
        "exclude":[]
    }
  }
}
```

This is the response for the query:

```json
{
    "typeahead": {
        "result_count": {
            "equities": 5
        },
        "error": null,
        "is_success": 1,
        "results": [
            {
                "index": "equities",
                "symbol": "PJP-DE",
                "name": "X5 Retail Group N.V. Sponsored GDR RegS"
            },
            {
                "index": "equities",
                "symbol": "8EN-DE",
                "name": "En+ Group Plc Sponsored GDR RegS"
            },
            {
                "index": "equities",
                "symbol": "RL9-DE",
```

```
                "name": "Mail.ru Group Ltd. Sponsored GDR 144A"
        },
        {
            "index": "equities",
            "symbol":  "61HE-GB",
            "name": "Mail.ru Group Ltd. Sponsored GDR 144A"
        },
        {
            "index": "equities",
            "symbol": "RL9A-DE",
            "name": "Mail.ru Group Ltd. Sponsored GDR RegS"
        },
    ]
  }
}
```

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Appendix

A1. Acceptable value for Region field

Below is the list of acceptable country codes for the Region field

Country Code	Country Name
AF	Afghanistan
AL	Albania
DZ	Algeria
AD	Andorra
AO	Angola
AI	Anguilla
AG	Antigua and Barbuda
AR	Argentina
AM	Armenia
AW	Aruba
AU	Australia
AT	Austria
AZ	Azerbaijan
BS	Bahamas
BH	Bahrain
BD	Bangladesh
BB	Barbados
BY	Belarus
BE	Belgium
BZ	Belize
BM	Bermuda
BT	Bhutan
BO	Bolivia
BA	Bosnia and Herzegovina
BW	Botswana
BR	Brazil
BG	Bulgaria
KH	Cambodia
CM	Cameroon
CA	Canada
CV	Cape Verde
KY	Cayman Islands
TD	Chad
CL	Chile
CN	China

CO	Colombia
CK	Cook Islands
CR	Costa Rica

HR	Croatia
CW	Curacao
CY	Cyprus
CZ	Czech Republic
DK	Denmark
DO	Dominican Republic
EC	Ecuador
EG	Egypt
SV	El Salvador
EE	Estonia
FO	Faroe Islands
FJ	Fiji
FI	Finland
FR	France
GE	Georgia
DE	Germany
GH	Ghana
GI	Gilbraltar
GR	Greece
GT	Guatemala
GG	Guernsey
GY	Guyana
HN	Honduras
HK	Hong Kong
HU	Hungary
IS	Iceland
IN	India
ID	Indonesia
IR	Iran
IQ	Iraq
IE	Ireland
IM	Isle of Man
IL	Israel
IT	Italy
CI	Ivory Coast
JM	Jamaica
JP	Japan
JE	Jersey

JO	Jordan
KZ	Kazahkstan
KE	Kenya
KR	Korea, South
KW	Kuwait
KG	Kyrgyzstan

LA	Laos
LV	Latvia
LB	Lebanon
LR	Liberia
LY	Libya
LI	Liechtenstein
LT	Lithuania
LU	Luxembourg
MO	Macao
MK	Macedonia
MG	Madagascar
MW	Malawi
MY	Malaysia
MV	Maldives
MT	Malta
MH	Marshall Islands
MU	Mauritius
MX	Mexico
MD	Moldova
MC	Monaco
MN	Mongolia
ME	Montenegro
MA	Morocco
MZ	Mozambique
MM	Myanmar
NA	Namibia
NP	Nepal
NC	New Caledonia
NZ	New Zealand
NI	Nicaragua
NG	Nigeria
NO	Norway
OM	Oman
PK	Pakistan
PS	Palestine

PA	Panama
PG	Papua New Guinea
PY	Paraguay
PE	Peru
PH	Philippine
PL	Poland
PT	Portugal
PR	Puerto Rico
QA	Qatar

RO	Romania
RU	Russia
RW	Rwanda
KN	Saint Kitts and Nevis
LC	Saint Lucia
VC	Saint Vincent and the Grenadines
SA	Saudi Arabia
RS	Serbia
SC	Seychelles
SG	Singapore
SK	Slovakia
SI	Slovenia
ZA	South Africa
ES	Spain
LK	Sri Lanka
SD	Sudan
SZ	Swaziland
SE	Sweden
CH	Switzerland
SY	Syria
TW	Taiwan
TJ	Tajikistan
TZ	Tanzania
TH	Thailand
NL	The Netherlands
TT	Trinidad and Tobago
TN	Tunisia
TR	Turkey
TC	Turks and Caicos Islands
UG	Uganda
UA	Ukraine
AE	United Arab Emirates

EU	United Kingdom
GB	United Kingdom
UM	United States Minor Outlying Islands (the)
US	United States of America
UY	Uruguay
UZ	Uzbekistan
VU	Vanuatu
VE	Venezuela
VN	Vietnam
VG	Virgin Islands (British)
VI	Virgin Islands (U.S.)
YE	Yemen
ZM	Zambia
ZW	Zimbabwe

A2. Response Codes

These are the response codes that the ID Lookup API returns:

429	Reached API limit as per section 1.4
500	Possible incorrect query format (e.g. missing comma, bracket pairs, etc.)

FAQ

1. What is the logic behind how results are ranked?

The ranking is based on several variables. Generally, string matching affects the ranking depending on how much the search term matches the results. In addition, each entity type has its own unique variables that can affect the ranking. For example, equities use market cap and primary listing.