

PermID APIs

USER GUIDE

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Chapter 1 Introduction to PermID

1.1 What is the PermID Service?

The Refinitiv PermID service allows you to access entity records from Refinitiv financial datasets, including:

- Organizations
- Equity Instruments
- Equity Quotes
- People

Each entity is assigned a Refinitiv permanent identifier or “permID”. PermIDs are unique IDs formatted as [Uniform Resource Identifiers](#), proprietary to Refinitiv. RefinitivPermIDs allow you to easily retrieve entities and to cross-reference them with other Refinitiv content.

1.2 Terms and Conditions

Please read the [PermID Terms and Conditions page](#) to learn about the terms of use for the PermID site, its APIs and the content sets.

1.3 PermID Entity and Code Datasets

The PermID Service provides access to the Refinitiv datasets described in the following table. Each entity in these datasets has a unique PermID value.

Note: Each entity type in these datasets has its own set of fields. Different subsets of fields are returned for different APIs and in the PermID site. See [PermID.org Entity Fields](#), [Lookup Response Fields](#) and [Search Response Fields](#) to learn more.

DATASET	DESCRIPTION
Organization	Contains companies and other organizations (e.g. government and non-profit organizations).
Instrument	Contains equity instruments.
Quote	Contains equity quotes. (Note that PermID provides only the Quote entity and metadata. You can obtain a quote's real-time value from a Refinitiv time series feed or other real-time source.)
People	Contains people who are officers and directors of organizations.
Currency	A list of all currencies.
Asset Class	Codes from the Asset Class branch of the proprietary RCS taxonomy. These codes describe instrument asset classes.
Industry Code	Codes from the proprietary TRBC industry sector codes. These codes describe organizations' industry sectors.
Position Metadata	PersonRole object that describes the positions (Officer and Director) of people in organizations. The position object also includes a Rank value that indicates the role's rank within the organization hierarchy.
Education Metadata	A person's academic credentials (degrees and majors).

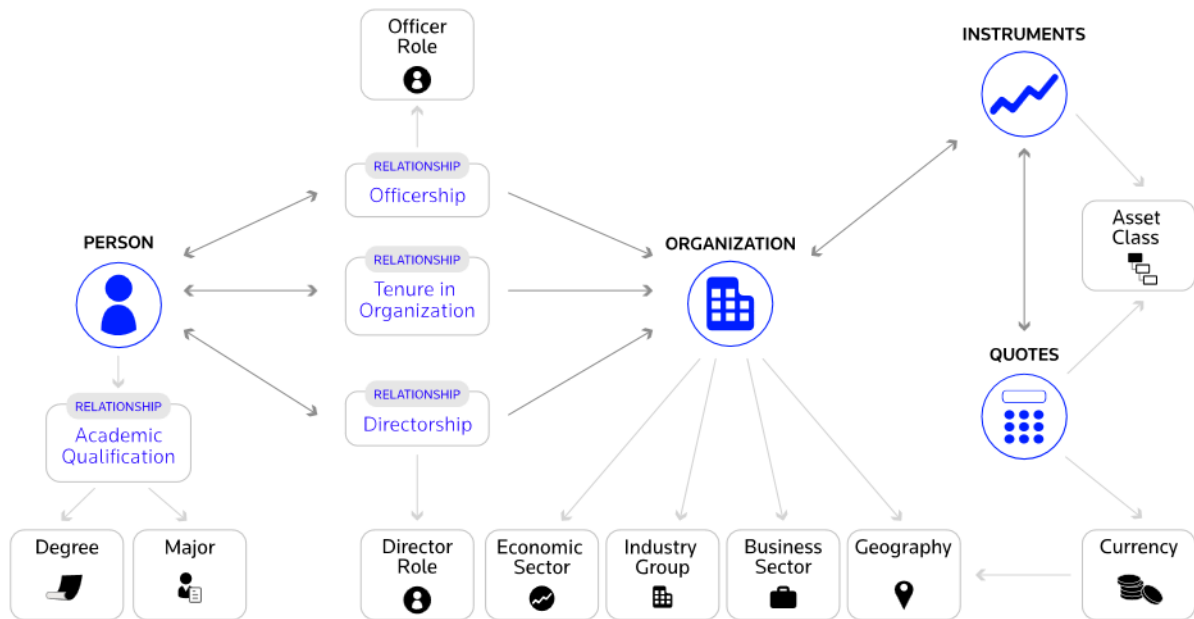


Figure 1. PermID Entity Graph

1.4 PermID APIs

You can call PermID's REST APIs from your own application. This suite of APIs allows you to search for and retrieve entities in the following ways:

API	DESCRIPTION
Entity Lookup	If you know an entity's PermID, you can retrieve the entity by calling PermID's Entity Lookup API. (See Chapter 2: Entity Lookup)
Entity Search	Search for an entity by calling PermID's Entity Search API, while providing the entity's name, ticker, RIC (Reuters Instrument Code) or LEI (Legal Entity Identifier). (See Chapter 3: Entity Search)

API	DESCRIPTION
Record Matching	If you have your own organization, instrument or quote dataset, you can use PermID's Record Matching API to map your entities to Refinitiv PermIDs. You can submit up to 1000 entity records at a time, formatted as a CSV (Comma-Separated Values) file. (See Chapter 4: Record Matching)
Bulk Download	Download datasets in bulk, as zip files. (See Chapter 5: Entity Bulk Download).
Atom Feed	Consume a PermID entity atom feed to obtain the latest versions of the entities. (See Chapter 6: Entity Atom Feeds)

1.5 Tagging API

In the PermID.org website, you will see that the Open Calais Tagging API is mentioned together with the PermID APIs. The Tagging API allows you to tag free-text documents with entity, event and relationship metadata. Although the Tagging API is an independent product, it's complementary to the PermID APIs, because it allows you to automatically tag entities with the same PermIDs values that the PermID APIs use. See [Calais Tagging](#) to learn more.

1.6 The PermID.org Web Site

The [PermID web site](#) allows you to access the PermID services through your browser, as described in the following table.

FEATURE	DESCRIPTION
Entity Lookup	Retrieve an entity by entering its URL in the browser's address bar. For example: https://permid.org/1-4295905573 is the URL of the "Apple Inc." entity, where 1-4295905573 is Apple's permID.
Entity Search	You can search for Organization, Instrument and Quote entities by entering their name, ticker, RIC code or LEI code in a search box.
Record Matching	Upload a CSV file containing your Organization, Instrument or Quote dataset, match the records to Refinitiv PermIDs, and download the mapping file.
Atom Feed	Access the PermID entity atom feeds via URL.

FEATURE	DESCRIPTION
Bulk Download	Download zip files of PermID entity datasets.
Calais Tagging	Paste free text into an edit box or upload a free text file and click Tag It to perform tagging of metadata such as entities, relations and topics.

1.7 Accessing PermID Services

You can access much of the PermID functionality and data on the PermID web site with no need for credentials. However, to call the PermID REST APIs and to access certain dataset fields, you will need to register as a PermID user. You can do this easily and for free at the [PermID Registration Page](#).

Once you register as a PermID user, you receive an access token (a unique string value). You will need to pass the access token as a parameter when calling PermID API functions. You will also need to login to the PermID site with your user and password, in order to access all entity fields and to use certain features such as atom feeds.

If you're viewing PermID.org website pages and you haven't logged in, you will see only the open-access entity field values. If you log into the site and view the same pages, all field values are displayed, including those that require login credentials.

Note: You can use the same access token for all PermID services (Lookup, Search, Record Matching and Tagging).

1.8 Contacting the PermID Team

You can contact the PermID team in the following ways:

- **The preferred option:** Post a question to the PermID Developers Community Forum. To do this, go to the **Questions and Answers** page and click on **Ask a Question**.
- Send us an email through the [PermID contact page](#).
- To enter feedback about the PermID site or API, click the **Feedback** tab on the right of any PermID site page.

Chapter 2 Entity Lookup

2.1 Overview

You can look up any PermID entity by accessing its URL, either in a browser or via API. The URL format is <https://permid.org/<permid code>>, where <permid code> is the specific entity's permID value.

You can look up all PermID entities by URL (see the list in [PermID Entity and Code Datasets](#)).

For example, the following image shows the “Refinitiv US Holdings Inc.” organization’s page on the PermID.org web site. This entity’s PermID is 1-5064690523, so its URL is <https://permid.org/1-5064690523>

The screenshot displays the PermID.org website interface for the entity 'Refinitiv US Holdings Inc.' The page includes a search bar at the top, navigation tabs, and two main sections: 'Organization Details' and 'Officers & Directors (Current)'.

Organization Details

Field	Value
PermID	5064690523
Public	No
Status	Active
Latest Date of Incorporation	16 Mar, 2018
LEI	549300NF240HXJO7N016
Primary Industry	☆ Professional & Commercial Services
Primary Business Sector	☆ Industrial & Commercial Services
Primary Economic Sector	☆ Industrials
Domiciled In	United Kingdom
Incorporated In	United States
Website	https://www.refinitiv.com
HQ Address	☆ 3 Times Sq NEW YORK NEW YORK 10036-6564

Officers & Directors (Current)

Name	Position	Title	Start Date
David William Ian Craig	Chief Executive Officer	N/A	N/A
Brian J. West	Chief Financial Officer	N/A	2018
	Primary Contact		
Steve Leith	Chief Financial Officer	N/A	2018
Emily DiMiceli	Chief Operating Officer	N/A	2018
Alex Fergus	Chief Human Resource Officer	N/A	2018
Eileen Lynch	Chief Marketing Officer	N/A	2018
Darren B. Pocsik	General Counsel	N/A	2018

Figure 2. PermID Company Page

The response to an entity lookup contains the entity's attributes, which depend on the entity type. For example, an Organization entity contains attributes such the company's public status, its IPO date if relevant, its business sector, its officers and directors, and so on.

Some entity fields are open to all users, while some require user registration (see [Accessing PermID Services](#) to learn more).

Different sets of fields are returned in the PermID.org page and in the API response. See [PermID.org Entity Fields](#) for the list of fields displayed in PermID.org pages, and [Lookup Response Fields](#) for the list of EntityAPI response fields.

2.2 Resource URL

Format: [https://permid.org/<permid code>](https://permid.org/<permid%20code>)

Example: <https://permid.org/1-4295904307>

2.3 API Request

HTTP verb: GET.

Request parameters:

PARAMETER	DESCRIPTION
accept / format	Mandatory. The response format. Supported options are Turtle and JSON-LD. Can be passed as: • The format URL parameter. ○ <code>format=turtle</code> ○ <code>format=json-ld</code> • The accept HTTP header. ○ <code>accept: text/turtle</code> ○ <code>accept: application/ld+json</code>

PARAMETER	DESCRIPTION
access-token	The unique access token allocated to a registered user. If passed, the response contains additional fields that are available only to registered users. Can be passed as: - The access-token URL parameter: <code>access-token=<token></code> - The x-ag-access-token HTTP header: <code>x-ag-access-token: <token></code>

2.4 API Response

The lookup response contains the following general parameters:

PARAMETER	DESCRIPTION
Content Type	The content type of the response. Values are: text/turtle ; application/ld+json .
Status	Numeric HTTP return code. (E.g. Success=200). See Error Responses for a list of possible error responses.

In addition, the response contains fields that depend on the entity type. See [Lookup Response Fields](#) for the complete list of EntityLookup API response fields by entity type.

2.5 Code Examples

2.5.1 Query without Token

Request:

```
GET https://permid.org/1-4295907168?format=turtle
```

Response:

```
@prefix tr-common: <http://permid.org/ontology/common/> .
@prefix CorporateControl: <http://www.omg.org/spec/EDMC-
  FIBO/BE/OwnershipAndControl/CorporateControl/> .
@prefix tr-fin: <http://permid.org/ontology/financial/> .
@prefix fibo-be-oac-cpty: <http://www.omg.org/spec/EDMC-
  FIBO/BE/OwnershipAndControl/ControlParties/> .
@prefix mdaas: <http://permid.org/ontology/mdaas/> .
@prefix fibo-be-le-fbo: <http://www.omg.org/spec/EDMC-
  FIBO/BE/LegalEntities/FormalBusinessOrganizations/> .
@prefix xsd: <http://www.w3.org/2001/XMLSchema#> .
@prefix tr-org: <http://permid.org/ontology/organization/> .
@prefix fibo-be-le-cb: <http://www.omg.org/spec/EDMC-FIBO/BE/LegalEntities/CorporateBodies/> .
@prefix vcard: <http://www.w3.org/2006/vcard/ns#> .

<https://permid.org/1-4295907168>
  a tr-org:Organization ;
  tr-org:hasActivityStatus tr-org:statusActive ;
  tr-org:hasHoldingClassification tr-org:publiclyHeld ;
  tr-org:hasIPODate "1986-03-13T05:00:00Z"^^xsd:dateTime ;
  tr-org:hasOrganizationFoundedDate "1993-09-22T00:00:00Z"^^xsd:dateTime ;
  tr-org:isIncorporatedIn <http://sws.geonames.org/6252001/> ;
  fibo-be-le-cb:isDomiciledIn <http://sws.geonames.org/6252001/> ;
  vcard:hasURL <http://www.microsoft.com/> ;
```

2.5.2 Token in URL with Turtle Output

Request:

```
GET https://permid.org/1-4295907168?format=turtle&access-token=<token>
```

Response:

```
@prefix tr-common: <http://permid.org/ontology/common/> .
@prefix CorporateControl: <http://www.omg.org/spec/EDMC-
  FIBO/BE/OwnershipAndControl/CorporateControl/> .
@prefix tr-fin: <http://permid.org/ontology/financial/> .
@prefix fibo-be-oac-cpty: <http://www.omg.org/spec/EDMC-
  FIBO/BE/OwnershipAndControl/ControlParties/> .
@prefix mdaas: <http://permid.org/ontology/mdaas/> .
@prefix fibo-be-le-fbo: <http://www.omg.org/spec/EDMC-
  FIBO/BE/LegalEntities/FormalBusinessOrganizations/> .
@prefix xsd: <http://www.w3.org/2001/XMLSchema#> .
@prefix tr-org: <http://permid.org/ontology/organization/> .
@prefix fibo-be-le-cb: <http://www.omg.org/spec/EDMC-FIBO/BE/LegalEntities/CorporateBodies/>
.
@prefix vcard: <http://www.w3.org/2006/vcard/ns#> .

<http://permid.org/1-4295907168>
  a tr-org:Organization ;
  mdaas:HeadquartersAddress "One Microsoft Way\nREDMOND\nWASHINGTON\nWA\n98052-
6399\nUnited States\n"^^xsd:string ;
  mdaas:RegisteredAddress "TUMWATER\nWASHINGTON\nWA\n98501\nUnited
States\n"^^xsd:string ;
  tr-fin:hasOrganizationPrimaryQuote
    <http://permid.org/1-55835377165> ;
  tr-fin:hasPrimaryInstrument <http://permid.org/1-8590921450> ;
  tr-org:hasActivityStatus tr-org:statusActive ;
  tr-org:hasHeadquartersPhoneNumber
    "14258828080"^^xsd:string ;
  tr-org:hasHoldingClassification
    tr-org:publiclyHeld ;
  tr-org:hasIPODate "1986-03-13T05:00:00Z"^^xsd:dateTime ;
  tr-org:hasOrganizationFoundedDate
```

```

"1993-09-22T00:00:00Z"^^xsd:dateTime ;
tr-org:isIncorporatedIn      <http://sws.geonames.org/6252001/> ;
fibo-be-le-cb:isDomiciledIn  <http://sws.geonames.org/6252001/> ;
vcard:hasURL                 <http://www.microsoft.com/> ;
vcard:organization-name      "Microsoft Corp"^^xsd:string .

```

2.5.3 Token in Header with JSON-LD Output

Request:

```

GET https://permid.org/1-4295907168

Header parameters:
  Accept: application/ld+json
  x-ag-access-token: <token>

```

Response:

```

{
  "@id" : "https://permid.org/1-4295899948",
  "@type" : "tr-org:Organization",
  "mdaas:HeadquartersAddress" : "1600 Amphitheatre Pkwy\nMOUNTAIN VIEW\CALIFORNIA\n94043-1351\nUnited States\n",
  "mdaas:RegisteredAddress" : "Corporation Trust Center\n1209 Orange Street\nNew Castle County\nWILMINGTON\ndeLAWARE\n19801\nUnited States\n",
  "hasOrganizationPrimaryQuote" : "https://permid.org/1-55835340529",
  "hasPrimaryInstrument" : "https://permid.org/1-8590925559",
  "hasActivityStatus" : "tr-org:statusActive",
  "tr-org:hasHeadquartersPhoneNumber" : "16506234000",
  "hasHoldingClassification" : "tr-org:publiclyHeld",
  "hasIPODate" : "2004-08-19T04:00:00Z",
  "hasOrganizationFoundedDate" : "2002-10-22T00:00:00Z",
  "tr-org:hasRegisteredFaxNumber" : "13026555049",
  "tr-org:hasRegisteredPhoneNumber" : "13026587581",
  "isIncorporatedIn" : "http://sws.geonames.org/6252001/",
  "isDomiciledIn" : "http://sws.geonames.org/6252001/",
  "hasURL" : "http://www.google.com/",
  "vcard:organization-name" : "Google Inc",

```



```
... (TRUNCATED)
}
```

2.5.4 Person Lookup with Turtle Output

Request:

```
GET https://permid.org/1-34415691107?format=turtle
```

Response:

```
@prefix tr-person: <http://permid.org/ontology/person/> .
@prefix tr-vcard: <http://permid.org/ontology/vcard/#> .
@prefix tr-common: <http://permid.org/ontology/common/> .
@prefix xsd: <http://www.w3.org/2001/XMLSchema#> .
@prefix vcard: <http://www.w3.org/2006/vcard/ns#> .

<https://permid.org/1-34415691107>
  a tr-person:Person ;
  tr-common:hasPermId "34415691107"^^xsd:string ;
  tr-common:hasPublicationStatus tr-common:publicationstatuspublished ;
  tr-person:hasQualification <https://permid.org/1-37636177654> ;
  tr-person:hasTenureInOrganization
    <https://permid.org/1-36436592411> , <https://permid.org/1-36436592412> ;
  tr-person:holdsPosition <https://permid.org/2-
267ae1458218d8f8c8c21bef9606cffd75ae28ed679d10d8f4818ccc70d7b6b> ,
<https://permid.org/2-
cfee9e326becf972aa7936d8889752b76e37ec750548c359f6130299b87c5dcf> ,
<https://permid.org/2-
b2ad85bb043939ec5b63ccaed207ae46869a3d644588be856dfe09f1bc51d7f9> ,
<https://permid.org/2-
1e41b0b4cb48c12bc1a2e0c5fa1d38261c45e8eb8f9f6a8cc8d58520db83769e> ,
<https://permid.org/2-
9b2f54feaa7b2b40b606016671aeaa5fc2ca2b4638186ca13a10f0904d5179d0> ;
  vcard:family-name "Zuckerberg"^^xsd:string ;
  vcard:given-name "Mark"^^xsd:string ;
  vcard:hasGender vcard:male ;
  vcard:honorific-prefix "Mr."^^xsd:string .
```

Chapter 3 Entity Search

3.1 Overview

If you don't know an entity's PermID value, you can search for it according to a string value that you provide. You can search for the string either within all of the entity's fields, or you can specify the field in which to search.

3.1.1 The Query Parameter

There are two ways to specify a query's search string:

- In the **q** parameter within the URL.
- In the **Q** HTTP header.

You can either specify just the search string value, or prefix it with "<fieldname>:" in order to constrain the search to a specific field.

For example:

- **Query parameter:** `q=tri`
This query returns any entity that contains the substring "tri" in *any* of its fields (e.g. " Thomson Reuters", "Triton Development SA", "Tri-Continental Corp", "Patrick Smith").
- **Query parameter:** `q=ticker:TRI`
This query returns organizations, instruments and quotes with an *exact match* of "TRI" as their **ticker** value. (In this case, "Tri-Continental Corp" is filtered out of the results, as its ticker is "TY" and not "TRI".)

3.1.1.1 Search Fields

The following table describes the different fields for which you can specify search strings, and the entity types that contain these fields.

Note: Do not add quotation marks around field values.

Searching for a name value performs a substring match. Searching for any other kind of ID performs an exact string match.

All search fields can also be used as input for Record Matching.

SEARCH FIELD	REFINITIV PROPRIETARY	DESCRIPTION	FOR ENTITY TYPES
cik	No	Central Index Key number assigned to an individual or company by the United States Securities and Exchange Commission.	Organization
datastream_mnemonic	Yes	An identifier used in the Refinitiv Datastream financial time series database.	Quote
ilx	No	ILX Ticker	Quote
lei	No	LEI (Legal Entity Identifier) code	Organization
mxid	No	Multex ID	Organization
name	No	The formal entity name	<i>All entities</i>
permid	Yes	Refinitiv PermID	<i>All entities</i>
rcpid	Yes	Reuters CounterParty ID	Organization
ric	Yes	Refinitiv Instrument Code	Quote
ticker	No	Ticker	Quote
veid	Yes	Venture Equity ID	Organization
worldscopecompanypermid	Yes	WorldScopeCompany PermID	Organization
worldscopeid	Yes	An ID from TR's WorldScope database.	Organization

3.1.1.2 Compound Queries by Ticker and MIC/Exchange

Sometimes it's useful to search for an organization by *both* ticker and MIC/exchange code, in order to produce globally unique results (as the same ticker can be used on different exchanges, usually in different countries).

To search for an organization by *both* ticker and MIC/exchange, use a query string formatted as follows:

- ticker: msft AND mic:XNGS
- OR -
- ticker: msft AND exchange:NSM

For example:

```
GET https://api-eit.refinitiv.com/permid/search?q=ticker:MSFT%20AND%20mic:XNGS&format=json
&access-token=<token>
```

This query returns only results that match both the ticker and the MIC/exchange values.

3.1.2 Lookup vs. Search

You can use the Lookup API to dereference a single, specific entity. When you call the Lookup API, you retrieve all the fields of the entity that maps to the PermID provided.

You can use the Search API to search for one or more entities that match the filter you provide. The search results are a list of matching entities, with only the basic information that enables you to identify the entity (such as its name). Once you've found the entity's PermID by using the Search API, you will need to call the Lookup API in order to retrieve all of the entity's fields.

3.1.3 Result Ranking

Search results are ranked in descending order of the string match results. The Search API applies certain heuristics to the ranking. For example: a result whose RIC value matches the search string is ranked higher than one whose entity name matches the search string.

3.2 Resource URL

Format: `https://api-eit.refinitiv.com/permid/search?q=<querystring>&access-token=<token>`

Example: `https://api-eit.refinitiv.com/permid/search?q=ticker:TRI&access-token=CGd5q9HxKCIHxD9D4AXgee3griho89AG`

3.3 API Request

HTTP verb: GET.

Request parameters:

PARAMETER	DESCRIPTION
access-token	The unique access token allocated to a registered user. If passed, the response contains additional fields that are available only to registered users. Can be passed as: • The access-token URL parameter: <code>access-token=<token></code> • The x-ag-access-token HTTP header: <code>x-ag-access-token: <token></code>
entitytype	The type of entity to search for. Possible values are: • entitytype=all (the default) • entitytype=organization • entitytype=instrument • entitytype=quote
format	Format of the response. Possible values are: • format=JSON (the default) • format=XML

PARAMETER	DESCRIPTION
num	The maximum number of results returned for each entity (separately). Possible values are: • num=5 (the default) • num=10 • num=20 • num=50 • num=100
order	The order of the search results. Possible values are: • order=rel – The default. Descending order of relevance, i.e. quality of string match. • order=az – Ascending alphabetical order of the entity name. • order=za – Descending alphabetical order of the entity name.
q	Mandatory. The query string. See The Query Parameter to learn about the supported syntax. Examples of search strings: • Search in all fields: ○ Microsoft ○ MSFT.O ○ 4295861160 • Search in specific field: ○ name:microsoft ○ ticker: msft ○ ric: MSFT.O ○ permid: 4295861160 ○ lei:INR2EJN1ERAN0W5ZP974
start	The index of the first result returned, in the list of results ordered according to the order parameter. The index is 1-based. For example, if start=7, num=10 and there are 100 available results, results 7 through 16 are returned.

3.4 API Response

The lookup response contains the following general parameters:

PARAMETER	DESCRIPTION
result	The search results. This element's format is determined by the format request parameter. Its fields depend on the entity type. See PermID.org Entity Fields for the complete list of EntitySearch API response fields by entity type.
status	Numeric HTTP return code. (E.g. Success=200). See Error Responses for a list of possible error responses.
total	The number of results returned.
errorcode	A specific error code that is returned when status!=200 .
errordescription	A textual description of the error that occurred.

3.5 Code Examples

3.5.1 Example 1: Token in URL

Request:

```
GET https://api-eit.refinitiv.com/permid/search?q=TRI&access-token=<token>
```

Response:

```
{
  "result": {
    "organizations": {
      "entityType": "organizations",
      "total": 5,
      "start": 1,
      "num": 5,
      "entities": [
        {
          "@id": "https://permid.org/1-4295907168",
          "organizationName": "Microsoft Corp",
          "primaryTicker": "MSFT",
          "orgSubtype": "Company",
          "hasHoldingClassification": "publiclyHeld",
          "hasURL": "https://www.microsoft.com/en-us/"
        },
        {
          "@id": "https://permid.org/1-4297648824",
          "organizationName": "Masafat for Specialised Transport PSC",
          "primaryTicker": "MSFT",
          "orgSubtype": "Company",
          "hasHoldingClassification": "publiclyHeld"
        },
        {
          "@id": "https://permid.org/1-4298307208",
          "organizationName": "Msft Software Para Microcomputadores Lda"
        },
        {
          "@id": "https://permid.org/1-5056435856",
```



```

    "organizationName": "MSFT Credit LLC",
    "orgSubtype": "Unknown"
  },
  {
    "@id": "https://permid.org/1-4297054840",
    "organizationName": "Salomon Elks Msft",
    "orgSubtype": "Company"
  }
]
},
"instruments": {
  "entityType": "instruments",
  "total": 2,
  "start": 1,
  "num": 2,
  "entities": [
    {
      "@id": "https://permid.org/1-8590921450",
      "hasName": "Microsoft Ord Shs",
      "assetClass": "Ordinary Shares",
      "isIssuedByName": "Microsoft Corp",
      "isIssuedBy": "https://permid.org/1-4295907168",
      "hasPrimaryQuote": "https://permid.org/1-55835377165",
      "primaryTicker": "MSFT"
    },
    {
      "@id": "https://permid.org/1-8589993387",
      "hasName": "Masafat For Specialized Transportation Ord Shs",
      "assetClass": "Ordinary Shares",
      "isIssuedByName": "Masafat for Specialised Transport PSC",
      "isIssuedBy": "https://permid.org/1-4297648824",
      "hasPrimaryQuote": "https://permid.org/1-55838836528",
      "primaryTicker": "MSFT"
    }
  ]
},
"quotes": {
  "entityType": "quotes",
  "total": 42,
  "start": 1,

```

```

"num": 5,
"entities": [
  {
    "@id": "https://permid.org/1-55835377165",
    "hasName": "MICROSOFT ORD",
    "assetClass": "Ordinary Shares",
    "isQuoteOfInstrumentName": "Microsoft Ord Shs",
    "hasRIC": "MSFT.OQ",
    "hasMic": "XNGS",
    "hasExchangeTicker": "MSFT",
    "isQuoteOf": "https://permid.org/1-8590921450"
  },
  {
    "@id": "https://permid.org/1-55838836528",
    "hasName": "MASAFAT TRNSPT ORD",
    "assetClass": "Ordinary Shares",
    "isQuoteOfInstrumentName": "Masafat For Specialized Transportation Ord Shs",
    "hasRIC": "MSFT.AM",
    "hasMic": "XAMM",
    "hasExchangeTicker": "MSFT",
    "isQuoteOf": "https://permid.org/1-8589993387"
  },
  {
    "@id": "https://permid.org/1-21475536028",
    "hasName": "MICROSOFT CORP ORD",
    "assetClass": "Ordinary Shares",
    "isQuoteOfInstrumentName": "Microsoft Ord Shs",
    "hasRIC": "MSFT.S^K08",
    "hasExchangeTicker": "MSFT",
    "isQuoteOf": "https://permid.org/1-8590921450"
  },
  {
    "@id": "https://permid.org/1-21475536016",
    "hasName": "MICROSOFT CP ORD",
    "assetClass": "Ordinary Shares",
    "isQuoteOfInstrumentName": "Microsoft Ord Shs",
    "hasRIC": "MSFT.A^E07",
    "hasExchangeTicker": "MSFT",
    "isQuoteOf": "https://permid.org/1-8590921450"
  },
]

```

```

    {
      "@id": "https://permid.org/1-21475536025",
      "hasName": "MICROSOFT CP ORD",
      "assetClass": "Ordinary Shares",
      "isQuoteOfInstrumentName": "Microsoft Ord Shs",
      "hasRIC": "MSFT.B^J07",
      "hasExchangeTicker": "MSFT",
      "isQuoteOf": "https://permid.org/1-8590921450"
    }
  ]
}
}
}
}

```

3.5.2 Example 2: Token in Header

Request:

```

GET https://api-eit.refinitiv.com/permid/search

Header parameters:
Q= "ticker:TRI"
X-AG-Access-Token: <token>

```

Response:

```

{
  "result": {
    "organizations": {
      "entityType": "organizations",
      "total": 5,
      "start": 1,
      "num": 5,
      "entities": [
        {
          "@id": "https://permid.org/1-4295907168",
          "organizationName": "Microsoft Corp",
          "primaryTicker": "MSFT",
          "orgSubtype": "Company",
          "hasHoldingClassification": "publiclyHeld",
          "hasURL": "https://www.microsoft.com/en-us/"
        },
        {
          "@id": "https://permid.org/1-4297648824",
          "organizationName": "Masafat for Specialised Transport PSC",
          "primaryTicker": "MSFT",
          "orgSubtype": "Company",
          "hasHoldingClassification": "publiclyHeld"
        },
        {
          "@id": "https://permid.org/1-4298307208",
          "organizationName": "Msft Software Para Microcomputadores Lda"
        },
        {
          "@id": "https://permid.org/1-5056435856",
          "organizationName": "MSFT Credit LLC",
          "orgSubtype": "Unknown"
        },
        {
          "@id": "https://permid.org/1-4297054840",
          "organizationName": "Salomon Elks Msft",
          "orgSubtype": "Company"
        }
      ]
    }
  },
  "instruments": {

```

```

    "entityType": "instruments",
    "total": 2,
    "start": 1,
    "num": 2,
    "entities": [
      {
        "@id": "https://permid.org/1-8590921450",
        "hasName": "Microsoft Ord Shs",
        "assetClass": "Ordinary Shares",
        "isIssuedByName": "Microsoft Corp",
        "isIssuedBy": "https://permid.org/1-4295907168",
        "hasPrimaryQuote": "https://permid.org/1-55835377165",
        "primaryTicker": "MSFT"
      },
      {
        "@id": "https://permid.org/1-8589993387",
        "hasName": "Masafat For Specialized Transportation Ord Shs",
        "assetClass": "Ordinary Shares",
        "isIssuedByName": "Masafat for Specialised Transport PSC",
        "isIssuedBy": "https://permid.org/1-4297648824",
        "hasPrimaryQuote": "https://permid.org/1-55838836528",
        "primaryTicker": "MSFT"
      }
    ]
  },
  "quotes": {
    "entityType": "quotes",
    "total": 42,
    "start": 1,
    "num": 5,
    "entities": [
      {
        "@id": "https://permid.org/1-55835377165",
        "hasName": "MICROSOFT ORD",
        "assetClass": "Ordinary Shares",
        "isQuoteOfInstrumentName": "Microsoft Ord Shs",
        "hasRIC": "MSFT.OQ",
        "hasMic": "XNGS",
        "hasExchangeTicker": "MSFT",
        "isQuoteOf": "https://permid.org/1-8590921450"
      }
    ]
  }
}

```

```

    },
    {
      "@id": "https://permid.org/1-55838836528",
      "hasName": "MASAFAT TRNSPT ORD",
      "assetClass": "Ordinary Shares",
      "isQuoteOfInstrumentName": "Masafat For Specialized Transportation Ord Shs",
      "hasRIC": "MSFT.AM",
      "hasMic": "XAMM",
      "hasExchangeTicker": "MSFT",
      "isQuoteOf": "https://permid.org/1-8589993387"
    },
    {
      "@id": "https://permid.org/1-21475536028",
      "hasName": "MICROSOFT CORP ORD",
      "assetClass": "Ordinary Shares",
      "isQuoteOfInstrumentName": "Microsoft Ord Shs",
      "hasRIC": "MSFT.S^K08",
      "hasExchangeTicker": "MSFT",
      "isQuoteOf": "https://permid.org/1-8590921450"
    },
    {
      "@id": "https://permid.org/1-21475536016",
      "hasName": "MICROSOFT CP ORD",
      "assetClass": "Ordinary Shares",
      "isQuoteOfInstrumentName": "Microsoft Ord Shs",
      "hasRIC": "MSFT.A^E07",
      "hasExchangeTicker": "MSFT",
      "isQuoteOf": "https://permid.org/1-8590921450"
    },
    {
      "@id": "https://permid.org/1-21475536025",
      "hasName": "MICROSOFT CP ORD",
      "assetClass": "Ordinary Shares",
      "isQuoteOfInstrumentName": "Microsoft Ord Shs",
      "hasRIC": "MSFT.B^J07",
      "hasExchangeTicker": "MSFT",
      "isQuoteOf": "https://permid.org/1-8590921450"
    }
  ]
}

```

```
}  
}
```

3.5.3 Example 3: Search by Identifier with Context

Request:

```
GET  
https://api-eit.refinitiv.com/permid/search?q=mxid:100087573&access-token=<token>
```

Returns a single organization:

URL	Organization	String Match
https://permid.org/1-4295905573	Apple Inc.	MXID = 100087573

3.5.4 Example 4: Search by Identifier Substring without Context

Request:

```
GET  
https://api-eit.refinitiv.com/permid/search?q=1234&access-token=<token>
```

Returns several results:

URL	Organization	String Match
https:// permid.org/1-4295904333	J Alexander's LLC	VEID = 1234
https:// permid.org/1-5000105944	China Lilang Ltd	ticker = 1234
https://permid.org/1-5040196023	Acquisition 1234 PLC	Organization name contains "1234".

Note: If you add a context (field name) to the query, the response will contain only entities with a match in the specified field, as in [*Example 3: Search by Identifier with Context*](#)

Chapter 4 Record Matching

4.1 Overview

The PermID Record Matching API allows you to match your own entity Person, Organization, Instrument, and Quote records with Refinitiv' PermIDs. Once you have the PermID for a specific entity, you can retrieve the entity using its PermID URL and enrich your database with the full extent of Refinitiv data.

The PermID Record Matching API is a REST API, which uses the POST verb. You can provide the entity records to match either as part of the REST call body, or in a CSV (Comma-Separated Values) file. See the following sections to learn how to format both types of requests.

Note: When matching the Person entity, you can submit up to 400 records to resolve in one request, and up to 1000 records for other entities.

4.2 Resource URLs

Match records in request body: <https://api-eit.refinitiv.com/permid/match>

Match records in file: <https://api-eit.refinitiv.com/permid/match/file>

4.3 API Request

HTTP verb: POST

Request parameters:

PARAMETER	DESCRIPTION
x-openmatch-dataType	Mandatory. The matched entity type (Values: Person , Organization , Instrument , Quote).
X-AG-Access-Token	Mandatory. Your PermID access token.
Content-Type	Mandatory. For the permid/match/file end point: multipart/form-data For the permid/match end point: text/plain
x-openmatch-numberOfMatchesPerRecord	Number of matches to output for each record. (The default is 1)

Table 1: Request Parameters

4.3.1 Input File

4.3.1.1 Input File Contents

The tables in this section describe the fields that can appear in matching input files for each type of entity.

The identifier types you can use in the Standard Identifier field are the same for matching as for searching. See [Search Fields](#) for the complete list.

We recommend entering as many details as possible about each entity, to ensure a high-quality match.

Note: Some fields are mandatory for matching (as specified in the field tables).
You can enter multiple values in all fields, by separating the values with the '|' character.

FIELD	DESCRIPTION
Standard Identifier	An identifier for the organization. See Search Fields for the complete list of identifiers. Specify the identifier type and value, delimited with a colon, for example: Ticker:IBM. Note: You can also use a special clause to specify both ticker and stock exchange values as follows: ticker:msft&&mic:XNGS. This searches for organizations that are listed by the specified ticker on the specified stock exchange. Note: It's mandatory to supply a value either for Standard Identifier or for Name.
LocalID	Your own internal ID for the entity.
Name	The organization's name. The more complete the name, the better are the chances of a good match. (For example: "International Business Machines" is better than "IBM".) Note: It's mandatory to supply a value either for Standard Identifier or for Name.
Street	The street address for the organization.
City	The city of the organization's address.
State	The state of the organization's address.
PostalCode	The postal code of the organization's address.
Country	The country of the organization's address.
Website	The organization's web site URL (preferably the home page address).

Table 2. Organization Input Fields

FIELD	DESCRIPTION
Standard Identifier	Mandatory. An identifier for the instrument or quote. See Search Fields for the complete list of identifiers. Specify the identifier type and value, delimited with a colon, for example: Ticker:IBM. Note: You can also use a special clause to specify both ticker and stock exchange values as follows: ticker:msft&&mic:XNGS. This searches for instruments or quotes that are listed by the specified ticker on the specified stock exchange.
LocalID	Your own internal ID for the entity.

Table 3. Instrument and Quote Input Fields

FIELD	DESCRIPTION
LocalID	Your own internal ID for the person.
FirstName	The person's first name.
MiddleName	The person's middle name.
PreferredName	The person's nickname or commonly-used name.
LastName	The person's last name.
CompanyPermID	The PermID of the company where the person is employed.
CompanyName	The name of the company where the person is employed.
NamePrefix	The person's title, e.g.: "Mr.", "Ms.", "Prof.", "Dr.".
NameSuffix	The person's name suffix, e.g. the numeral in "William Gates III".

Table 4. Person Input Fields

4.3.1.2 Input File Formatting

When calling the Record Matching API, if you provide your entity records in a file, you must format it as a Comma-Separated Values (CSV) file. A CSV file is a plain-text format for rendering tabular data, and has the following properties:

- Each line in the CSV file is a row of the table.
- Field names or values are separated by commas.
- Rows are separated by newline characters.
- The first line is the header row, containing field names.
- All subsequent lines are records, containing field values.

For example, the following text is the contents of a CSV file containing Organization records. Note the field names in the first line, and that some field values are empty.

```
LocalID,Standard Identifier,Name,Country,Street,City,PostalCode,State,Website
1,,Apple,US,"Apple Campus, 1 Infinite Loop",Cupertino,95014,California,
2,,Teva Pharmaceutical Industries Ltd,IL,,Petah Tikva,,,
3,,Tata Sky,IN,,,,,
4,RIC:IBM.N|Ticker:IBM,IBM,US,590 Madison Avenue,New York,10022,NY,
5,Ticker:MSFT,Microsoft,US, 2624 NE University Village St,Seattle,98105,WA,
```

Note: You can download CSV template files for each entity type at <https://permid.org/match>

4.4 API Response

Note: The response is returned in JSON format

PARAMETER	DESCRIPTION
outputContentResponse	A JSON section matching your input records to PermID URLs. See Match Fields in the Response for details.
errorCode	A numeric error code (only present if an error was encountered while processing the request).
errorCodeMessage	A textual description of the error.
headersIdentifiedSuccessfully	A list of the field headers in the input that are compliant with the input template and were successfully processed.
headersNotIdentified	A list of the field headers in the input that are not compliant with the input template and therefore not used for matching. This allows you to debug your input template and name the fields correctly.
headersSupportedWereNotSent	A list of supported fields headers that were not used in the input CSV file. This allows you to verify that the field names you sent are correct, and informs you of additional fields you can use to improve matching.
numReceivedRecords	The number of input records.
numProcessedRecords	The number of input records that were processed successfully.
numErrorRecords	The number of input records that were not processed due to an error.
Matched	The number of valid input records for which a match was found.
Unmatched	The number of valid input records for which no match was found.
requestTimeInMs	The time in milliseconds that the request took to process.
resolvingTimeInMs	The time in milliseconds that was spent only on the matching logic.
uploadedFileName	The name of the input file (if there was one).

Table 5: Response Parameters

4.4.1 Match Fields in the Response

For each entity sent for matching, the response contains at least 1 match record.

If the input record was successfully matched, there are one or more matching PermID entities in the response, depending on the **x-openmatch-numberOfMatchesPerRecord** value supplied in the request, and the number of matches found.

For each invalid input record there is an output record indicating the row of the invalid record, and the problem with the input. Here is an example of an error row:

```
ERROR: Row Num 4, Cause - At least one of the fields should not be null: [standard identifier, name]. Original Row: 3,,,IL,,Petah Tikva,,,
```

The following table describes the fields returned for each matching entity.

PARAMETER	DESCRIPTION
ProcessingStatus	OK or Error . An error means the input record was invalid, and in this case the reason for the error is included in the ProcessingStatus value
Match OpenPermID	The PermID of the matched entity.
Match OrgName	The matched organization, or the organization of the matched quote, instrument or person.
Match Score	A value between 0 and 1. This score indicates the probability that the match is correct. You can use this value to determine which matches might need manual review.
Match Level	Excellent / Good / Possible – a textual label indicating the quality of the match, provided for readability. (Excellent =>0.9, Good=> 0.6, Possible =>0.1).
Match Ordinal	The index of the matched entity. For example, if you requested up to 5 matches, you may receive response records numbered 1, 2, 3, 4 and 5.
Original Row	The row number of the original input record that produced this match.
Match First Name	For Person only. The first name of the matched person.
Match Last Name	For Person only. The last name of the matched person.
Match OrgOpenPermID	For Person only. The PermID of the organization that the matched person belongs to.

Table 6: Match Fields in the Response

4.5 Code Examples

4.5.1 File Input Request Example

```
curl -X POST https://api-eit.refinitiv.com/permid/match/file
-H "Content-Type: multipart/form-data" -H "x-openmatch-numberOfMatchesPerRecord: 1"
-H "x-openmatch-datatype: Organization"
-H "X-AG-Access-Token: <token>" -F file=@OrgRecords.csv
```

4.5.2 Plain Text Input Request Example

```
curl -X POST https://api-eit.refinitiv.com/permid/match -H "Content-Type: text/plain" ^
-H "x-openmatch-numberOfMatchesPerRecord: 1" -H "x-openmatch-datatype: Organization" ^
-H "X-AG-Access-Token: <token>" ^
-d "LocalID,Standard Identifier,Name,Country,Street,City,PostalCode,State,Website%0A ^
RIC:AAPL.O,Apple,US,1 Infinite Loop,Cupertino,95014,California,www.apple.com"
```

4.5.3 Output Example

```
{
  "ignore": " ",
  "unMatched": 0,
  "matched": {"total": 1, "excellent": 1},
  "numReceivedRecords": 1,
  "numProcessedRecords": 1,
  "numErrorRecords": 0,
  "headersIdentifiedSuccessfully": ["LocalID", "Standard Identifier",
    "Name", "Country", "Street", "City", "PostalCode", "State", "Website"],
  "headersNotIdentified": [],
  "headersSupportedWereNotSent": [],
  "errorCode": 0,
  "errorCodeMessage": "Success",
  "resolvingTimeInMs": 137913,
  "requestTimeInMs": 137913,
  "outputContentResponse": [
    {
      "ProcessingStatus": "OK",
      "Match OpenPermID": "https://permid.org/1-4295905573",
      "Match OrgName": "Apple Inc",
      "Match Score": "100%",
      "Match Level": "Excellent",
      "Match Ordinal": "1",
      "Original Row Number": "2",
      "Input_LocalID": "1",
      "Input_Name": "Apple",
      "Input_Country": "US",
      "Input_Street": "Apple Campus, 1 Infinite Loop",
      "Input_City": "Cupertino",
      "Input_PostalCode": "95014", "Input_State": "California"
    }
  ]
}
```




Chapter 5 Entity Bulk Download

5.1 Overview

You may want to create an initial repository from a complete list of PermID entities. PermID.org provides “bulk” files (one per entity type) containing the complete lists of the following entities:

- Organization
- Instrument
- Quote
- Asset Class
- Currency
- Industry Code
- Person

The bulk files are provided in both the Turtle and the NTriples zipped formats. These files are updated on a weekly basis. For each entity type, the bulk files contain the same fields as the Lookup response for the same entity type.

Note: The bulk file for the Person entity type also contains the auxiliary objects needed to create the entity graph, such as EducationMetadata and PositionMetadata.

ENTITY ATOM FEEDS

Note: to learn more.

You can download the files from <https://permid.org/download>. Please see our [terms of use](#) page before downloading the files.

Note: The Bulk Download feature is available only to registered users of PermID and Open Calais. Visit the [PermID Registration Page](#) to register.

5.2 Code Example: Organization Entry in the Turtle Bulk File

This is the entry for the “Capitol Trust I” organization (<https://permid.org/1-4296471038>) in the Turtle-formatted Organization bulk file:

```
@prefix tr-common: <http://permid.org/ontology/common/> .
@prefix CorporateControl: <http://www.omg.org/spec/EDMC-
FIBO/BE/OwnershipAndControl/CorporateControl/> .
@prefix tr-fin: <http://permid.org/ontology/financial/> .
@prefix fibo-be-oac-cpty: <http://www.omg.org/spec/EDMC-
FIBO/BE/OwnershipAndControl/ControlParties/> .
@prefix mdaas: <http://permid.org/ontology/mdaas/.
@prefix fibo-be-le-fbo: <http://www.omg.org/spec/EDMC-
FIBO/BE/LegalEntities/FormalBusinessOrganizations/> .
@prefix xsd: <http://www.w3.org/2001/XMLSchema#> .
@prefix tr-org: <http://permid.org/ontology/organization/> .
@prefix fibo-be-le-cb: <http://www.omg.org/spec/EDMC-FIBO/BE/LegalEntities/CorporateBodies/> .
@prefix vcard: <http://www.w3.org/2006/vcard/ns#> .

https://permid.org/1-4296471038
    a                                tr-org:Organization ;
    mdaas:HeadquartersAddress        "200 N Washington Sq\nLANSING\nMICHIGAN\n48933-
1320\nUnited States"^^xsd:string ;
    mdaas:RegisteredAddress          "301 Bellevue Parkway 3Rd Floor New Castle\n
WILMINGTON\nDELAWARE\n19809\nUnited States"^^xsd:string ;
    tr-fin:hasOrganizationPrimaryQuote <https://permid.org/1-55839011789> ;
    tr-fin:hasPrimaryInstrument       <https://permid.org/1-8589967317> ;
    tr-org:hasActivityStatus          tr-org:statusActive ;
    tr-org:hasHeadquartersPhoneNumber "15174876555"^^xsd:string ;
    tr-org:hasOrganizationFoundedDate "1997-11-25T00:00:00Z"^^xsd:dateTime ;
    tr-org:hasPrimaryIndustryGroup    <https://permid.org/1-4294952874> ;
    tr-org:isIncorporatedIn           <http://sws.geonames.org/6252001/> ;
    fibo-be-le-cb:isDomiciledIn       <http://sws.geonames.org/6252001/> ;
    vcard:organization-name           "Capitol Trust I"^^xsd:string .
```

Chapter 6 Entity Atom Feeds

6.1 Overview

The PermID Atom feeds are lists of the most recently updated entities. Each supported entity has its own Atom feed. These are the entities for which Atom feeds are supported:

- Person,
- Organization
- Instrument
- Quote
- Industry
- Currency

You can access the Atom feeds either through the PermID.org web site or via the Atom Feed API.

Entries in the Atom field contain the entity's name, URL and update time. To access the entire entity record, call the Entity Lookup API using the entity's PermID URL. PermID's data is updated every 15 minutes.

Note: Atom feeds contain only the latest updates. To create an initial repository containing the complete list of PermID entities, you can download bulk entity files (see [Entity Bulk Download](#)), then update your repository incrementally by consuming Atom feeds.

This is the typical, iterative workflow for consuming an Atom feed:

1. Retrieve the Atom feed every 15 minutes.
2. For each entity returned in the Atom feed, retrieve the entity entry by calling the Lookup API.
3. Update your entity record with the new entity data.
4. Repeat.

Note: The Atom Feed feature is available only to registered users of PermID and Open Calais. Visit the [PermID Registration Page](#) to register.

6.1.1 Atom Feeds with Data

By default, only entity URIs are retrieved in the atom feed. To retrieve the entities' fields as well, you can add the **format** flag to the request. This causes the feed to contain field values as well as infotons URI, in the format that you specify as the **format** value (**turtle** or **ntriples**).

Here is an example API call:

```
https://permid.org/atom/quote?access-token=<access-token>&format=turtle
```

Note: The records returned when using the **format** flag include only the same fields exposed by the Lookup API and Bulk Download.

You can also retrieve atom feeds with data when using the PermID UI. To do this, select the **Turtle** or **Ntriples** option on the top-right.

[Read our privacy policy.](#)
Updated: 2017-05-25T12:24:36Z
Author: [Open PermID](#)

Quote Feed View : [URI](#) | [Turtle](#) | [Ntriples](#)

From date(UTC) : 2017-05-20T14:36:20.000Z, To date(UTC) : 2017-05-25T14:36:19.000Z, Window : Offset = 0, Length = 50, out of 313 results.

ALFA FINANCIAL SOFTWARE HOLDINGS ORD WI
URL: <https://permid.org/1-21614235270>

Summary:

```
@prefix tr-fin: <http://permid.org/ontology/financial/> .
@prefix tr-common: <http://permid.org/ontology/common/> .
@prefix xsd: <http://www.w3.org/2001/XMLSchema#> .

<https://permid.org/1-21614235270>
  a
    tr-common:hasName      "ALFA FINANCIAL SOFTWARE HOLDINGS ORD WI"^^xsd:string ;
    tr-common:hasPermId    "21614235270"^^xsd:string ;
    tr-fin:hasExchangeCode "LSE"^^xsd:string ;
    tr-fin:hasExchangeTicker "ALFA"^^xsd:string ;
    tr-fin:hasRic          "ALFAAL.L"^^xsd:string ;
    tr-fin:isQuoteOf       <https://permid.org/1-21612973800> .
```

updated: 2017-05-25T12:24:36Z

AFP CAPITAL ORD
URL: <https://permid.org/1-21614221369>

Summary:

```
@prefix tr-fin: <http://permid.org/ontology/financial/> .
@prefix tr-common: <http://permid.org/ontology/common/> .
@prefix xsd: <http://www.w3.org/2001/XMLSchema#> .

<https://permid.org/1-21614221369>
  a
    tr-common:hasName      "AFP CAPITAL ORD"^^xsd:string ;
```



Figure 3. Atom Feed with Data on PermID.org

6.1.2 Accessing Atom Feeds on PermID.org

To access an Atom feed on the PermID.org site, enter its URL in your browser, together with your access token. When accessing an Atom feed through the PermID.org site, you can retrieve the 500 most recently updated entities.

The Atom feed's URL for a specific entity type is: <https://permid.org/atom/{entityType}>.

You can also click on one of the Atom feed links on the bottom of the PermID.org home page, as shown below.

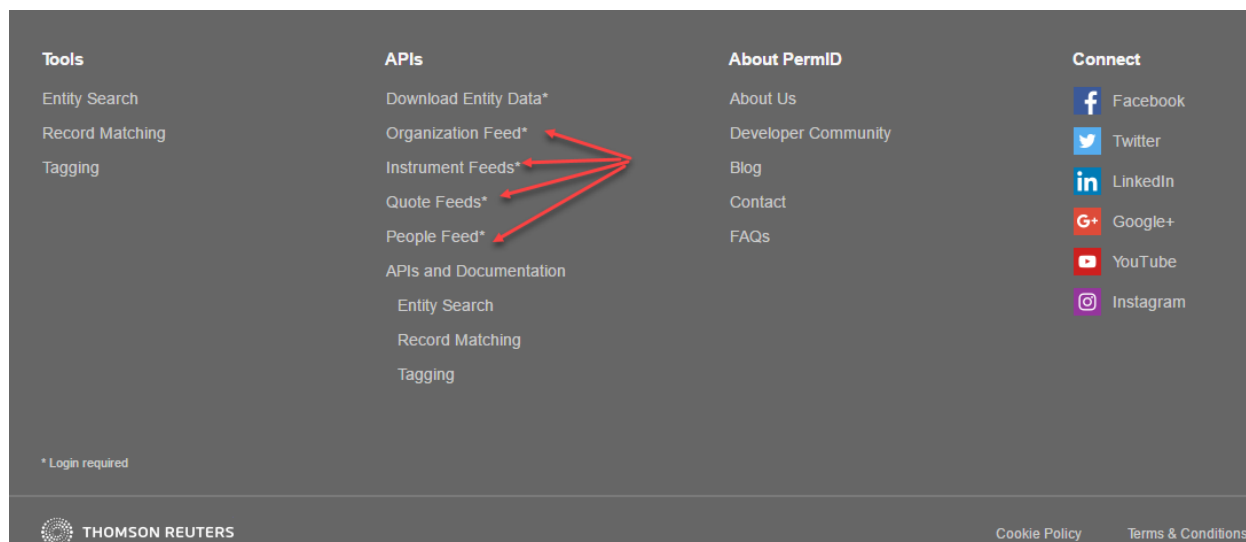


Figure 4. PermID.org Links to Entity Atom Feeds

When you access an Atom feed in the browser, the list of recently updated entities is displayed, as shown below. Clicking on an entity's link displays the entity PermID.org page.

Updated: 2016-12-28T21:11:38Z Author: Open PermID
Organization Feed
From date(UTC) : 2016-12-23T21:12:00.000Z, To date(UTC) : 2016-12-28T21:11:59.000Z, Window : Offset = 0, Length = 50, out of 500 results.
Media Analytics Corp URL: https://permid.org/1-5035085149 Updated: 2016-12-28T21:11:38Z
Nedsense Enterprises NV URL: https://permid.org/1-4295884876 Updated: 2016-12-28T21:11:38Z
PJT Partners Inc URL: https://permid.org/1-5045875373 Updated: 2016-12-28T21:11:35Z
Yatra Online Inc URL: https://permid.org/1-5037246873 Updated: 2016-12-28T21:11:24Z
Great Elm Capital Group Inc URL: https://permid.org/1-4295914547 Updated: 2016-12-28T21:11:15Z
ICAD Inc URL: https://permid.org/1-4295906727

6.2 Resource URL

Format: <https://permid.org/atom/{entityType}>

Example: <https://permid.org/atom/organization>

6.3 API Request

HTTP verb: GET

Request parameters:

PARAMETER	DESCRIPTION
access-token	The unique access token allocated to a registered user. If passed, the response contains additional fields that are available only to registered users. Can be passed as: - The access-token URL parameter: <code>access-token=<token></code> - The x-ag-access-token HTTP header: <code>x-ag-access-token: <token></code>
withdata	An optional flag. If added to the call, the atom feed will contain the entities' data as well as their URLs.

6.4 API Response

Note: Each Atom feed retrieves up to 1000 of the latest updated entities (up to 5 days back).

PARAMETER	DESCRIPTION
Content Type	The content type of the response. Always application/xml .
Status	Numeric HTTP return code. (E.g. Success=200). See Error Responses to learn more.

In addition, the following fields are returned for each entity in the Atom feed:

PARAMETER	DESCRIPTION
title	The entity's name.
link	A link to the PermID URL of the entity.
id	The PermID URL of the entity.
updated	The date and time the entity was last updated.

6.5 Code Example: Organization Atom Feed

6.5.1 Atom Feed without Data

Request:

```
GET https://permid.org/Atom/organization?access-token=<token>
```

Response:

```
<?xml version="1.0" encoding="UTF-8"?>
<?xml-stylesheet type="text/xsl" media="screen" href="/public/459/atom/atom.xsl"?>
<?xml-stylesheet type="text/css" media="screen" href="/public/459/atom/atom.css"?>
<feed xmlns="http://www.w3.org/2005/Atom" xmlns:opensearch="http://a9.com/-
/spec/opensearch/1.1/">
  <title>Organization Feed</title>
  <link rel="self" href="https://api-
    eit.refinitiv.com/permid/atom/organization&offset=0&length=50" />
  <link rel="first" href="https://api-
    eit.refinitiv.com/permid/atom/organization&offset=0&length=50" />
  <link rel="next" href="https://api-
    eit.refinitiv.com/permid/atom/organization&offset=50&length=50" />
  <link rel="last" href="https://api-
    eit.refinitiv.com/permid/atom/organization&offset=950&length=50" />
  <author>
    <name>Open PermID</name>
    <uri>http://permid.org</uri>
  </author>
  <subtitle>From date(UTC) : 2015-05-01T16:08:32.000Z, To date(UTC) : 2015-05-06T16:08:31.000Z,
    Window : Offset = 0, Length = 50, out of 1000 results.</subtitle>
  <id>https://api-eit.refinitiv.com/permid/atom/organization</id>
  <updated>2015-05-06T11:52:36Z</updated>
  <opensearch:totalResults>1000</opensearch:totalResults>
  <opensearch:startIndex>1</opensearch:startIndex>
  <entry>
    <title>Abc Leasing de Mexico 14-2 Abccb SA de CV</title>
    <link href="https://permid.org/1-5044253230" />
    <id>https://permid.org1-5044253230</id>
    <updated>2015-05-06T11:52:36Z</updated>
  </entry>

  [... Additional entries]

</feed>
```

6.5.2 Atom Feed with Data

Request:

```
GET https://permid.org/Atom/organization?access-token=<token>&withdata
```

Response:

```
<feed xmlns="http://www.w3.org/2005/Atom" xmlns:opensearch="http://a9.com/-
/spec/opensearch/1.1/">
  <title>Quote Feed</title>
  <link rel="next" href="https://api-
eit.refinitiv.com/permid/atom/quote&offset=3&length=3" />
  <link rel="self" href="https://api-
eit.refinitiv.com/permid/atom/quote&offset=0&length=3" />
  <link rel="first" href="https://api-
eit.refinitiv.com/permid/atom/quote&offset=0&length=2" />
  <link rel="last" href="https://api-
eit.refinitiv.com/permid/atom/quote&offset=42&length=2" />
  <author>
    <name>Open PermID</name>
    <uri>http://permid.org</uri>
  </author>
  <subtitle>From date(UTC) : 2017-05-20T14:52:47.000Z, To date(UTC) : 2017-05-25T14:52:46.000Z,
    Window : Offset = 0, Length = 3, out of 44 results.</subtitle>
  <id>https://api-eit.refinitiv.com/permid/atom/quote</id>
  <updated>2017-05-25T14:40:58Z</updated>
  <opensearch:totalResults>44</opensearch:totalResults>
  <opensearch:startIndex>1</opensearch:startIndex>
  <entry>
    <title>PETKIM PETROKIMYA HOLDING ORD</title>
    <link href="https://permid.org/1-55835429899" />
    <id>https://permid.org/1-55835429899</id>
    <updated>2017-05-25T14:40:58Z</updated>
    <summary>@prefix tr-fin: &lt;http://permid.org/ontology/financial/&gt; .
@prefix tr-common: &lt;http://permid.org/ontology/common/&gt; .
@prefix xsd: &lt;http://www.w3.org/2001/XMLSchema#&gt; .

&lt;https://permid.org/1-55835429899&gt;
      a tr-fin:Quote ;
      tr-common:hasName "PETKIM PETROKIMYA HOLDING ORD"^^xsd:string ;
      tr-common:hasPermId "55835429899"^^xsd:string ;
      tr-fin:hasExchangeCode "PNK"^^xsd:string ;
      tr-fin:hasExchangeTicker "PTKHF"^^xsd:string ;
      tr-fin:hasMic "OTCM"^^xsd:string ;
      tr-fin:hasRic "PTKHF.PK"^^xsd:string ;
      tr-fin:isQuoteOf &lt;https://permid.org/1-8590926007&gt; ;
      tr-fin:isQuotedIn &lt;https://permid.org/1-500110&gt; .</summary>
  </entry>
  <entry>
    <title>ALEKSA SANTIC ORD</title>
```

```

<link href="https://permid.org/1-55848688319" />
<id>https://permid.org/1-55848688319</id>
<updated>2017-05-25T14:40:58Z</updated>
<summary>@prefix tr-fin: <http://permid.org/ontology/financial/> .
@prefix tr-common: <http://permid.org/ontology/common/> .
@prefix xsd: <http://www.w3.org/2001/XMLSchema#> .

<https://permid.org/1-55848688319>;
  a tr-fin:Quote ;
  tr-common:hasName "ALEKSA SANTIC ORD"^^xsd:string ;
  tr-common:hasPermId "55848688319"^^xsd:string ;
  tr-fin:hasExchangeCode "BEL"^^xsd:string ;
  tr-fin:hasExchangeTicker "ALKS"^^xsd:string ;
  tr-fin:hasMic "XBEL"^^xsd:string ;
  tr-fin:hasRic "ALKS.BEL^E17"^^xsd:string ;
  tr-fin:isQuoteOf <https://permid.org/1-8591396092>;
  tr-fin:isQuotedIn <https://permid.org/1-500241>; .</summary>
</entry>
<entry>
  <title>SEROJA INVESTMENTS ORD</title>
  <link href="https://permid.org/1-21614160374" />
  <id>https://permid.org/1-21614160374</id>
  <updated>2017-05-25T14:40:20Z</updated>
  <summary>@prefix tr-fin: <http://permid.org/ontology/financial/> .
@prefix tr-common: <http://permid.org/ontology/common/> .
@prefix xsd: <http://www.w3.org/2001/XMLSchema#> .

<https://permid.org/1-21614160374>;
  a tr-fin:Quote ;
  tr-common:hasName "SEROJA INVESTMENTS ORD"^^xsd:string ;
  tr-common:hasPermId "21614160374"^^xsd:string ;
  tr-fin:hasExchangeCode "PNK"^^xsd:string ;
  tr-fin:hasExchangeTicker "SRJAF"^^xsd:string ;
  tr-fin:hasMic "OTCM"^^xsd:string ;
  tr-fin:hasRic "SRJAF.PK"^^xsd:string ;
  tr-fin:isQuoteOf <https://permid.org/1-8590931443>;
  tr-fin:isQuotedIn <https://permid.org/1-500110>; .</summary>
</entry>
</feed>

```

Appendix A PermID.org Entity Fields

The following sections show the PermID.org fields for each entity type.

Note: PrimaryRIC values are available only on PermID web pages, not in the PermID API.
Hyperlinks between entities are only available to logged-in users.

A.1 Organization Fields

CATEGORY	FIELD	ACCESS	EXAMPLE: ENTITY = MICROSOFT CORP
Organization Details	Organization name(Page title)	Open	Microsoft Corp
	PermID	Open	https://permid.org/1-4295907168
	Public	Open	Yes
	Status	Open	Active
	Inactive Date	Login Required	N/A
			Note: Data not available.
	IPO Date	Open	3 Jan, 1977
	Date of Incorporation	Open	22 Sept, 1993
	LEI	Open	INR2EJN1ERAN0W5ZP974
	Primary Industry	Login Required	Other Computer Hardware
	Primary Business Sector	Login Required	Software & IT Services
	Primary Economic Sector	Login Required	Technology
	Domiciled in	Open	UNITED STATES
	Incorporated in	Open	UNITED STATES
	Website	Open	http://www.microsoft.com/
	HQ address	Login Required	One Microsoft Way REDMOND WASHINGTON WA 98052-6399 United States
	HQ phone	Login Required	14258828080
	Registered address	Login Required	STE 304 300 Deschutes Way SW TUMWATER WASHINGTON WA 98501 United States
	Registered phone	Login Required	14258828080

CATEGORY	FIELD	ACCESS	EXAMPLE: ENTITY = MICROSOFT CORP
Primary Instrument Details	Name	Open	Microsoft Ord Shs (If the user is logged in, this is a link to the Instrument entity.)
	Instrument type	Open	ORD
Primary Quote Details	Primary RIC	Open	MSFT.O
	Primary Ticker	Open	MSFT
	MIC	Open	XNGS
	Primary Exchange	Open	NASDAQ
Officers & Directors (may have multiple entries)	Name	Open	Satya Nadella
	Position	Open	Chief Executive Officer
	Title	Open	Chief Executive Officer, Director
	Start Date	Open	2014

A.2 Instrument Fields

CATEGORY	FIELD	ACCESS	EXAMPLE: ENTITY = MICROSOFT ORD SHARES
Instrument Details	Instrument name (Page title)	Open	Microsoft Ordinary Shares
	PermID	Open	https://permid.org/1-8590921450
	RCS Asset class	Open	ORD
	Status	Open	Active
	Currency	Open	USD
	Issuer	Login Required	Microsoft corp
Quote Details	Primary RIC	Open	MSFT.OQ
	Primary Ticker	Open	MSFT
	Primary MIC	Open	XNGS
	Primary Exchange	Open	NSM

A.3 Quote Fields

CATEGORY	FIELD	ACCESS	EXAMPLE: ENTITY = MICROSOFT ORD
Quote Details	QuoteName (Page Title)	Open	Microsoft ORD
	PermID	Open	https://permid.org/1-5583537716
	Asset Class	Open	Ordinary Shares

CATEGORY	FIELD	ACCESS	EXAMPLE: ENTITY = MICROSOFT ORD
	RIC	Open	MSFT.OQ
	Ticker	Open	MSFT
	Exchange	Open	NSM
	MIC	Open	XNGS
	Currency	Open	USD
	Is Quote of	Login required	Microsoft Ordinary Shares

A.4 Person Fields

CATEGORY	FIELD	ACCESS	EXAMPLE: ENTITY = MICROSOFT ORD
Person Details	PermID	Open	34413262612
	Name Prefix	Open	Mr.
	First Name	Open	Satya
	Middle Name	Open	N/A
	Last Name	Open	Nadella
	Name Suffix	Open	N/A
	Gender	Open	Male
	Preferred Name	Open	N/A
	Year Of Birth	Open	1967
	Publication Status	Open	Published
Professional Details	Position	Open	Chief Executive Officer
	Title	Open	Chief Executive Officer, Director
	Organization	Open	Microsoft Corp
	Period	Open	2014 -Current
Education Details	Institution	Open	University of Chicago
	Degree	Open	Master of Business Administration
	Major	Open	Business Administration
	Period	Open	N/A

A.5 Position Metadata Fields

CATEGORY	FIELD	ACCESS	EXAMPLE: ENTITY = MICROSOFT ORD
Position Metadata Details	PermID	Open	10010134
	Type	Open	Possible Values: - Director Role - OfficerRole
	Rank (numeric). Indicates the specific position's rank relative to other positions in the organization hierarchy, where 1 is the highest possible rank	Open	82

A.6 Education Metadata Fields

CATEGORY	FIELD	ACCESS	EXAMPLE: ENTITY = MICROSOFT ORD
Education Metadata Details	PermID	Open	10010148
	Type	Open	Possible Values: - Academic Degree - Major

A.7 Officership Fields

FIELD	ACCESS	EXAMPLE
PermID	Open	"2-d7f559436ac66c86e8a610d9835df065ee23ef646b592ccc627450053db6814f"^^xsd:string ;
Title	Open	"Chairman of the Board, Founder"^^xsd:string ;
Position Type	Open	< https://permid.org/1-1000355594 > ;
Start Date	Open	"2011-04-01"^^xsd:date ;
End Date	Open	"2014"^^xsd:gYear ;
Person	Open	< https://permid.org/1-34413157709 >
Organization	Open	< https://permid.org/1-4296587836 >
Publication Status	Open	tr-common:publicationstatuspublished ; Possible values: - common:publicationStatusPublished - common:publicationStatusSuperseded - common:publicationStatusSuspended - common:publicationStatusObsolete

A.8 Directorship Fields

FIELD	ACCESS	EXAMPLE
PermID	Open	"2-3814876eb1bf56c08f48df6d390d4d586fa22f938fd51e86fec1305b1b5e838e"^^xsd:string ;
Title	Open	"Chief Executive Officer, Director"^^xsd:string ;
Position Type	Open	< https://permid.org/1-10010134 >;
Start Date	Open	"2014-02-04T00:00:00Z"^^xsd:dateTime ;
End Date	Open	
Person	Open	< https://permid.org/1-34413262612 >;
Organization	Open	< https://permid.org/1-4295907168 >.
Publication Status	Open	tr-common:publicationstatuspublished ; Possible values: • common:publicationStatusPublished • common:publicationStatusSuperseded • common:publicationStatusSuspended • common:publicationStatusObsolete

A.9 AcademicQualification Fields

FIELD	ACCESS	EXAMPLE
Publication Status	Open	Possible values: • common:publicationStatusPublished • common:publicationStatusSuperseded • common:publicationStatusSuspended • common:publicationStatusObsolete
Institution	Open	"University of Chicago"^^xsd:string ;
Major	Open	< https://permid.org/1-10010199 >
Degree	Open	< https://permid.org/1-10010161 >
Start Date	Open	The start date of the study period that led to the qualification (rarely maintained)
End Date	Open	The end date of the study period that led to the qualification (rarely maintained)

A.10 TenureInOrganization Fields

FIELD	ACCESS	EXAMPLE
PermID URI	Open	"36435860395"^^xsd:string ;
Start Date	Open	"2013-03-01T00:00:00Z"^^xsd:dateTime ;
End Date	Open	"2014-02-25T00:00:00Z"^^xsd:dateTime ;
Person	Open	< https://permid.org/1-34413262612 >
Organization	Open	< https://permid.org/1-4295905882 >

A.11 DirectorRole Fields

FIELD	ACCESS	EXAMPLE
PermID	Open	"10010137"^^xsd:string ;
Rank	Open	"5"^^xsd:string ;
Label	Open	"Non-Executive Chairman"^^xsd:string ;

A.12 OfficerRole Fields

FIELD	ACCESS	EXAMPLE
PermID	Open	"10010137"^^xsd:string ;
Rank	Open	"5"^^xsd:string ;
Label	Open	"Chief Executive Officer"^^xsd:string;

A.13 Degree Fields

FIELD	ACCESS	EXAMPLE
PermID	Open	"1-10010148"^^xsd:string ;
Label	Open	"Bachelor's Degree"^^xsd:string .:

A.14 Major Fields

FIELD	ACCESS	EXAMPLE
PermID	Open	"1-10010148"^^xsd:string ;
Label	Open	"Computer Science"^^xsd:string

Appendix B Lookup Response Fields

The fields returned in the PermID API responses are slightly different from the fields displayed in the PermID.org site pages (see [PermID.org Entity Fields](#)). The site pages may display fields that are not part of the viewed entity; for example, the Organization page displays some Instrument and Quote details, for the user's convenience.

The following sections shows the fields returned for each type of entity lookup.

B.1 Organization Lookup Response

B.1.1 Ontologies

- The following ontologies and prefixes are used in the Organization lookup response:
- @prefix tr-common: <<http://permid.org/ontology/common/>> .
- @prefix CorporateControl: <<http://www.omg.org/spec/EDMC-FIBO/BE/OwnershipAndControl/CorporateControl/>> .
- @prefix tr-fin: <<http://permid.org/ontology/financial/>> .
- @prefix fibo-be-oac-cpty: <<http://www.omg.org/spec/EDMC-FIBO/BE/OwnershipAndControl/ControlParties/>> .
- @prefix mdaas: <<http://permid.org/ontology/mdaas/>> .
- @prefix fibo-be-le-fbo: <<http://www.omg.org/spec/EDMC-FIBO/BE/LegalEntities/FormalBusinessOrganizations/>> .
- @prefix xsd: <<http://www.w3.org/2001/XMLSchema#>> .
- @prefix tr-org: <<http://permid.org/ontology/organization/>> .
- @prefix fibo-be-le-cb: <<http://www.omg.org/spec/EDMC-FIBO/BE/LegalEntities/CorporateBodies/>> .
- @prefix vcard: <<http://www.w3.org/2006/vcard/ns#>> .

B.1.2 Fields

FIELD	API FIELD NAME	VALUE DEFINITION / SUPPORTED VALUES	ACCESS	EXAMPLE: ENTITY = MICROSOFT	COMMENTS
Permid	(within the subject)	<https://permid.org/1-8472527>	Open	<https://permid.org/1-8590921450>	
Organization name	vc:organisation-name	name^^xsd:string	Open	"Microsoft Corp"^^xsd:string	Usually the official English name of the organization
Public	tr-org:hasHoldingClassification	tr-org:publiclyHeld	Open	tr-org:publiclyHeld	If the organization isn't public, this field does not appear in the response.
Status	tr-org:hasActivityStatus	tr-org:statusActive; tr-org:statusInactive	Open	tr-org:statusActive	
Inactive Date	tr-org:hasInactiveDate	2001-01-01^^xsd:dateTime	Token Required		Microsoft is still active, therefore the field isn't included in the response.
IPO date	tr-org:hasIPODate	2001-01-01^^xsd:dateTime	Open	"1986-03-13T05:00:00Z"^^xsd:dateTime	
LEI	tr-org:hasLEI	"BQ4BKCS1HDXDV9HN80Z93"^^xsd:string	Open	"BQ4BKCS1HDXDV9HN80Z93"^^xsd:string	
Date of Incorporation	tr-org:hasOrganizationFoundedDate	2001-01-01^^xsd:dateTime	Open	"1993-09-22T00:00:00Z"^^xsd:dateTime	Can also be the xsd:gYear type, if only the year is known .
Domiciled in	fibo-be-le-cb:isDomiciledIn	http://sws.geonames.org/2635167/	Open	<http://sws.geonames.org/6252001/>	See Ontologies
Incorporated in	tr-org:isIncorporatedIn	http://sws.geonames.org/2635167/	Open	<http://sws.geonames.org/6252001/>	See Ontologies
Website	vc:hasURL	<http://example.com/pany.com/homepage.html>	Open	<http://www.microsoft.com/>	
HQ address	tr-org:headquartersAddressCommon	abc^^xsd:string	Token Required	"One Microsoft Way\nREDMOND\nWASHINGTON\nWA\n98052-6399\nUnited States\n"^^xsd:string	

FIELD	API FIELD NAME	VALUE DEFINITION / SUPPORTED VALUES	ACCESS	EXAMPLE: ENTITY = MICROSOFT	COMMENTS
Registered address	tr-org:RegistrationAddressCommon	abc^xsd:string	Token Required	"TUMWATER\nWASHINGTON\nWA\n98501\nUnited States\n"^xsd:string	
HQ phone	tr-org:hasHeadquartersPhoneNumber	1234^xsd:string	Token Required	"14258828080"^xsd:string	
HQ Fax	tr-org:hasHeadquartersFaxNumber	1234^xsd:string	Token Required	"14258828080"^xsd:string	These fields are not available in our data for Microsoft.
Registered phone	tr-org:hasRegisteredPhoneNumber	1234^xsd:string	Token Required		
Registered Fax	tr-org:hasRegisteredFaxNumber	1234^xsd:string	Token Required		
Primary instrument	tr-fin:hasPrimaryInstrument	< https://permid.org/1-8472527 >	Token Required	https://permid.org/1-8590921450	Instrument permID
Primary Quote	tr-fin:hasOrganizationPrimaryQuote	< https://permid.org/1-8472527 >	Token Required	https://permid.org/1-55835377165 ;	Quote permID

B.2 Instrument Lookup Response

B.2.1 Ontologies

- The following ontologies and prefixes are used in the Instrument lookup response:
- @prefix CorporateControl: <<http://www.omg.org/spec/EDMC-FIBO/BE/OwnershipAndControl/CorporateControl/>>
- @prefix tr-fin: <<http://permid.org/ontology/financial/>>

B.2.2 Fields

FIELD	API FIELD NAME	VALUE DEFINITION / SUPPORTED VALUES	ACCESS	EXAMPLE: ENTITY = MICROSOFT ORD SHARES	COMMENTS
Permid	(within the subject)	https://permid.org/1-8590921450	Open	https://permid.org/1-8590921450	
Instrument Name	tr-common:hasName	name ^{^^xsd:string}	Open	"Microsoft Corp" ^{^^xsd:string}	Usually the official English name of the instrument
Asset Class	tr-fin:hasAssetClass	https://permid.org/1-987654	Open	https://permid.org/1-300281	A permID of the RCS Asset Class. A mapping to the asset name is available within the tr-fin ontology file.
Status	tr-fin:hasInstrumentStatus	tr-fin:instrumentStatusActive ; tr-fin:instrumentStatusInactive	Open	tr-fin:instrumentStatusActive	
Issuer	tr-fin:isIssuedBy	https://permid.org/1-8472527	Token Required	https://permid.org/1-55835377165	The permID of the issuing organization
Primary Quote	tr-fin:hasPrimaryQuote	https://permid.org/1-63850874	Token Required	https://permid.org/1-4295907168	Quote permID

B.3 Quote Lookup Response

B.3.1 Ontologies

The following ontologies and prefixes are used in the Quote lookup response:

- @prefix CorporateControl: <<http://www.omg.org/spec/EDMC-FIBO/BE/OwnershipAndControl/CorporateControl/>>
- @prefix tr-fin: <<http://permid.org/ontology/financial/>>

B.3.2 Fields

FIELD	API FIELD NAME	VALUE DEFINITION / SUPPORTED VALUES	ACCESS	EXAMPLE: ENTITY = MICROSOFT ORD	COMMENTS
Permid	(within the subject)	https://permid.org/1-558353	Open	https://permid.org/1-55835377165	
Quote Name	tr-common:hasName	"Example Quote"	Open	MICROSOFT ORD^^xsd:string	
Exchange	tr-fin:hasExchangeCode	"XXX123"	Open	NSM^^xsd:string	
Ticker	tr-fin:hasExchangeTicker	"EXMPL"	Open	"MSFT"^^xsd:string	
MIC	tr-fin:hasMic	"kjshdg"	Open	"XNGS"^^xsd:string	
RIC	tr-fin:hasRic	"FB.OQ"	Open	"FB.OQ"^^xsd:string	
Instrument	tr-fin:isQuoteOf	https://permid.org/1-456789	Token Required	https://permid.org/1-8590921450	Instrument permID

B.4 Industry Code (TRBC) Lookup Response

Note that the organization API response returns the industry's PermID URI. Its attributes can be retrieved by querying the returned PermID via the entity API.

FIELD	API FIELD NAME	VALUE DEFINITION / SUPPORTED VALUES	EXAMPLE: ENTITY = SOFTWARE & IT SERVICES	COMMENTS
Permid	(within the subject)	rdfs:Resource	https://permid.org/1-4294952829	
Type	rdfs: type	trbc:IndustryGroup; trbc:EconomicSector; trbc:BusinessSector	trbc:IndustryGroup	
Code	trbc:BusinessClassificationCode	xsd:string	572010	TRBC code

FIELD	API FIELD NAME	VALUE DEFINITION / SUPPORTED VALUES	EXAMPLE: ENTITY = SOFTWARE & IT SERVICES	COMMENTS
Description	rdfs:comment	rdf:langString	Developers and marketers of generic system and application software, as well as providers of consulting and IT services.	A textual description of the industry.
Label	rdfs: Label	rdf:langString	Software & IT Services	The textual industry name
Parent	skos: Broader	rdfs:Resource	<https://permid.org/1-4294952830>	The PermID of the "Parent" Entity in the TRBC hierarchy (in this example: the respective business sector).

B.5 Asset Class (RCS) Lookup Response

Note: The Instrument lookup response contains an Asset Class field, whose value is the PermID URI that points to the instrument's Asset Class. You can retrieve the Asset Class entity by looking up this URI.

FIELD	API FIELD NAME	VALUE DEFINITION / SUPPORTED VALUES	EXAMPLE: ENTITY = FX CORRELEATIONS	COMMENTS
PermId	(within the subject)	rdfs:Resource	https://permid.org/1-1000189408	
Type	rdfs: type	tr-fin:AssetClass	tr-fin:AssetClass	Asserts that this is an Asset class; this is the same for all entries
Description	rdfs:comment	xsd:string	Correlation between the FX spot rates of two currency pairs	A textual description of the asset class
Label	rdfs: Label	xsd:string	FX Correlations	A textual label for the asset class
Parent	skos: Broader	rdfs:Resource	https://permid.org/1-302009	The "parent" asset class (or classes) in the hierarchy.

Appendix C Search Response Fields

While the Lookup API response contains all of an entity's fields, the Search API response only contains basic information that enables you to identify the entity, and the entity's URI that enables you to look it up.

The following sections shows the fields returned for each type of entity search.

C.1 Organization Search Response

CATEGORY	FIELD	ACCESS	EXAMPLE: Q = IBM
Organization Details	@id	Open	https://permid.org/1-4295904307
	organizationName	Open	International Business Machines Corp
	primary Ticker	Open	MSFT
	hrgSubType	Open	Company
	hasHoldingClassification	Open	publiclyHeld
	hasURL	Open	https://www.ibm.com/homepage.html

C.2 Instrument Search Response

CATEGORY	FIELD	ACCESS	EXAMPLE: Q= IBM
Instrument Details	@id	Open	https://permid.org/1-8590927768
	hasName	Open	International Business Machines Ord Shs
	assetCalss	Open	Ordinary Share
	isIssuedBy	Login required, API only	https://permid.org/1-4295904307
	isIssuedByName	Open	International Business Machines Corp
	primaryTicker	Open	IBM
	hasPrimaryQuote	Token required, API only	https://permid.org/1-55838323096

C.3 Quote Search Response

CATEGORY	FIELD	ACCESS	EXAMPLE: Q=IBM
Quote Details	@id	Open	https://permid.org/1-4295904307
	hasName	Open	International Business Machines Ord
	asset Class	Open	Ordinary Shares
	hasRIC	Open	IBM
	hasMic	Open	
	hasExchangeTicker	Open	IBM
	isQuoteOf	Open	https://permid.org/1-8590927768
	isQouteOfInstrumentName	Token required, API only	International Business Machines Ord Shs

Appendix D Error Responses

The following table describes some error responses you may get when calling the PermID APIs.

PROBLEM WITH REQUEST	ERROR CODE	ERROR MESSAGE
A POST request was sent without a JSON body or with invalid JSON	400 - Bad Request	Error produced by the Jetty web server module.
Search sent with empty query	400 - Bad Request	Empty query is not supported
Query is not in UTF-8	400 - Bad Request	Failed to decode the query: + <query>
Invalid output format value.	400 - Bad Request	Invalid value is specified for outputFormat
Invalid order value	400 - Bad Request	Invalid value is specified for order
Invalid resultLimit value	400 - Bad Request	resultLimit can include one of the following values:[10,20,50,100]
Invalid start value	400 - Bad Request	start must be a positive numeric value
Invalid includeOrganizations value	400 - Bad Request	excludeOrganizations value must be "public" or "private"
Invalid entityType value	400 - Bad Request	Invalid value is specified for entity type
Query filter contains invalid field names	400 - Bad Request	Filter contains fields that don't exist
Request timeout	500 - Internal Server Error	Fiddler error: java.util.concurrent.TimeoutException
No connection to the server	502 - Bad Gateway	Fiddler error: "Connection Failed" or "Connection Refused."