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</tbody>
</table>
Chapter 1  Service Description

The PermID Service lets you utilize the permanent ID of 3.5 million organizations, 240K equity instruments and 1.17 million equity quotes from the Thomson Reuters core entity data set. PermID Service provides access to Thomson Reuters permanent identifiers (permanent unique IDs formatted as Uniform Resource Identifiers) along with the associated descriptive fields that Thomson Reuters exposes to the public. The descriptive fields enable the user to verify that a consumed permID represents the entity of interest.

In the future, PermID Service will support additional entities such as People, Fixed Income Instruments, Fixed Income Quote, and more.

The Entity-Search API enables users to retrieve entities in the following two ways:

1. By including in the request the PermID service itself. See Chapter 2: PermID lookup.
2. By searching for an entity by name, ticker, RIC (Reuters Instrument Code). See Chapter 3: Search

The data is live; records are updated every 15 minutes. The incremental updates can be consumed via Atom feed. See Chapter 4: Atom feed
Chapter 2  PermlD Lookup

The permID format is [https://permid.org/<permid code>/](https://permid.org/<permid code>/).

Open PermlD enables permid dereferencing to all users. i.e. provides the basic entity’s payload by its URI to all users. All users can get the basic entity fields programmatically (by API) openly (i.e. Without a registration token). Although the registration token is optional, it provides additional fields that are limited to registered users only.

Users who already have the permID can access entity data by requesting the permID. (Users might have the permID as a result of using one or more of the PermlD services, including: Search, Matching & Calais, or from other Thomson Reuters products.)

The Entity Lookup response is modeled according to the linked data principles, and reflects the TR information model, and linkages between the supported entities.

For each entity, PermlD service provides a list of fields. Some fields are open to all users, and some require registration via the [permid.org](https://permid.org) site.

The full list of fields displayed within the permid.org Entity pages is available in [Appendix A](#).

The full list of fields returned via the EntityAPI response is available in [Appendix B](#).

2.1 Resource URL

Single page application: [https://permid.org/id/](https://permid.org/id/)
For example: [https://permid.org/1-4295904307](https://permid.org/1-4295904307).

2.2 Request Authentication

In order to use the PermlD service APIs you'll need to create an account via the site: [https://permid.org/](https://permid.org/). After signing up, a token will be provided by email. This token enables you to request the Entity Search, Record Matching, and Calais Tagging APIs.

The returned API response includes both open fields and login required fields.

The permid.org website displays within the entity pages the open fields values. Log-in with the email/password used for registration to reveal the fields available to logged-in users only.

**Note:** If you are using any of the other PermlD service APIs and have already registered, the same token should be used for the Entity Lookup.

If you haven’t seen our PermlD service site, Record Matching, and Calais services – please check them out!
2.3 Request

The request is an HTTP GET with the following query parameters:

<table>
<thead>
<tr>
<th>PARAMETER</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accept (mandatory)</td>
<td>Format of the returned result: text/turtle, application/ld+json if a request passed as HTTP parameters: format=turtle OR format=json-ld If a request passed as HTTP header: text/turtle OR accept: application/ld+json</td>
</tr>
<tr>
<td>Note:</td>
<td>Entity Lookup API: accept/format header/parameter (respectively) became mandatory as the registration token became optional. Omission of the accepting/format parameters will return the SPA objects (html)</td>
</tr>
</tbody>
</table>

| Access-Token (Optional) | If passed on HTTP parameters: "access-token=xyz" If passed (preferably) as HTTP header: "x-ag-access-token: xyz" Replace “xyz” with the provided registration token. |
| Note:                  | Submission of token is optional, and provide a basic set of fields. The token provides additional fields that are limited to registered users only. |

2.4 Response

<table>
<thead>
<tr>
<th>PARAMETER</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Content Type</td>
<td>The content type of the response: text/turtle, application/ld+json</td>
</tr>
<tr>
<td>Note:</td>
<td>The format of the response is temporary and is subject to change.</td>
</tr>
</tbody>
</table>

| Status | Numeric return code for the request. The value corresponds to the HTTP return codes. For example, "200" indicates that the request was successfully processed. "400" is the code for a bad request. |

2.5 Examples

1. Token through query parameters; output format: Turtle.

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

Output: Appendix D.1

2. Token through header; output format: Json-Ld.
HTTP REST
GET  https://permid.org/1-4295907168

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

Output: Appendix D.2

3. A query without a registration token

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

Output: Appendix D.3
Chapter 3   Search

The search solution is a string match based search. The results are ranked according to different matrices that push the results that are most likely searched to the top. For example: a result with a similarity to the RIC will be ranked higher than one with a similarity to the entity name.

The user can focus the results of the search on specific SDI fields by adding the type of search term (e.g ticker:TRI).

For example, let's review the following queries:

- q= “tri” query returns organizations, instruments and quotes having names or identifiers containing the “tri” or similar strings. (e.g. Thomson Reuters, Triton Development SA, Tri-Continental Corp)
- q= “ticker: TRI” returns organizations, instruments, and quotes having TRI (exact match) as their ticker. (e.g. “Tri-Continental Corp” is filtered out from the results, as its ticker is “TY” and not “TRI”.)

Naturally, the difference is reflected in the number of total available results.

<table>
<thead>
<tr>
<th></th>
<th>“tri”</th>
<th>“ticker: tri”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total organizations</td>
<td>1134</td>
<td>10</td>
</tr>
<tr>
<td>Total instruments</td>
<td>56</td>
<td>10</td>
</tr>
<tr>
<td>Quote:</td>
<td>407</td>
<td>63</td>
</tr>
</tbody>
</table>

For each entity result, the search response contains basic information to enable the users to disambiguate between the results, and to identify the entity of interest.

3.1 Resource URL

https://api.thomsonreuters.com/permid/search

3.2 Request Authentication

In order to use the PermID service APIs you’ll need to create an account via the site: https://permid.org/. After signing up, a token will be provided by email. This token enables you to request the Entity Search, Record Matching, and Calais Tagging APIs.

Note: If you are using any of the other PermID service APIs and have already registered, the same token should be used for the Entity Search.

If you haven’t seen our PermID service, Record Matching, and Calais services – please check them out!
### 3.3 Request

The request is an HTTP GET with the following query parameters:

<table>
<thead>
<tr>
<th>PARAMETER</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Q</strong> (Mandatory)</td>
<td>The query string. Supported syntax: You can focus the search on specific SDI fields by adding the type of search term (e.g. name/ticker/ric). For example: adding the ticker type (ticker:TRI) would limit the results to organizations with the TRI ticker. See the full list of supported identifiers</td>
</tr>
<tr>
<td><strong>Order</strong></td>
<td>Order of the search results by relevance order, or alphabetic order: a to a or z to a. order= rel, az, za (default is rel)</td>
</tr>
<tr>
<td><strong>Entitytype</strong></td>
<td>The type of entities returned by the search query. Entitytype=organization, instrument, quote, all (the default is all).</td>
</tr>
<tr>
<td><strong>Format</strong></td>
<td>Format of the returned result: &quot;JSON&quot; (default) &quot;XML&quot;</td>
</tr>
<tr>
<td><strong>Start</strong></td>
<td>The number of the first returned result (From which number of results to start counting the num of returned results). For example, if start=7 and there are 100 available results, the first outputted results would be the seventh result from the top, ranked according to the 'order' parameter</td>
</tr>
<tr>
<td><strong>Num</strong></td>
<td>The max number of results returned for each entity (separately). Num: 5, 10,20,50,100 (default is 5)</td>
</tr>
<tr>
<td><strong>Access-Token</strong></td>
<td>If passed on HTTP parameters: &quot;access-token=xyz&quot; If passed (preferably) as HTTP header: &quot;X-AG-Access-Token: xyz&quot;</td>
</tr>
</tbody>
</table>
3.4 Response

The format of the response is determined by the output format request parameter.

<table>
<thead>
<tr>
<th>PARAMETER</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Result</td>
<td>This element contains the search results. Its format is determined by request parameter Format.</td>
</tr>
<tr>
<td></td>
<td><strong>Note:</strong> The format of the response is temporary and is subject to change.</td>
</tr>
<tr>
<td>Status</td>
<td>Numeric return code for the request. The value corresponds to the HTTP return codes. For example, “200” indicates that the request was successfully processed. “400” is the code for a bad request.</td>
</tr>
<tr>
<td>Total</td>
<td>Number of available results for the query.</td>
</tr>
<tr>
<td>ErrorCode</td>
<td>Presented when an error was encountered when processing the request (i.e., status != 200). It is a short name for the error type.</td>
</tr>
<tr>
<td>ErrorDescription</td>
<td>Present when an error was encountered when processing the request (i.e., status != 200). It contains the descriptive cause of the encountered error.</td>
</tr>
</tbody>
</table>

3.5 Search by Identifiers

In most cases the identifiers are unique, and therefore the same results will be provided with and without context (see example 4 below). However, we do recommend performing the search with context for highest quality.

3.5.1 List of Supported Identifiers

<table>
<thead>
<tr>
<th>IDENTIFIER TYPE</th>
<th>Entity Type(S)</th>
<th>CONTEXT NAME (OPTIONAL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reuters Industry Code</td>
<td>Quote</td>
<td>Ric</td>
</tr>
<tr>
<td>Ticker</td>
<td>Quote</td>
<td>Ticker</td>
</tr>
<tr>
<td>Content market place permid</td>
<td>Organization, Instrument,Quote</td>
<td>Permid</td>
</tr>
<tr>
<td>VEID</td>
<td>Organization</td>
<td>Veid</td>
</tr>
<tr>
<td>CIDGEN</td>
<td>Organization</td>
<td>Cidgen</td>
</tr>
<tr>
<td>CIK</td>
<td>Organization</td>
<td>Cik</td>
</tr>
<tr>
<td>Data Stream Mnemonic</td>
<td>Quote</td>
<td>datastream_mnemonic</td>
</tr>
<tr>
<td>ILX Ticker</td>
<td>Quote</td>
<td>Ilx</td>
</tr>
<tr>
<td>MXID</td>
<td>Organization</td>
<td>mxid</td>
</tr>
<tr>
<td>RCP ID</td>
<td>Organization</td>
<td>Rpcid</td>
</tr>
<tr>
<td>SDC CUSIP</td>
<td>Organization</td>
<td>Sdc</td>
</tr>
<tr>
<td>WorldScopeCompanyID</td>
<td>Organization</td>
<td>Worldscopeid</td>
</tr>
<tr>
<td>IDENTIFIER TYPE</td>
<td>Entity Type(S)</td>
<td>CONTEXT NAME (OPTIONAL)</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>----------------</td>
<td>-------------------------</td>
</tr>
<tr>
<td>WorldScopeCompanyPermID</td>
<td>Organization</td>
<td>worldscopecompanypermid</td>
</tr>
</tbody>
</table>
3.6 Examples

3.6.1 Example 1: Token Through Query Parameters

HTTP REST
GET
https://api.thomsonreuters.com/permid/search?q=TRI&access-token=<token>

Output: Appendix D.4

3.6.2 Example 2: Token Through Header

HTTP REST
GET
https://api.thomsonreuters.com/permid/search

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

Output: Appendix D.5

3.6.3 Example 3: Search by Identifier Query

HTTP REST
GET
https://api.thomsonreuters.com/permid/search?q=100087573&access-token=<token>

Returned organization (a single organization):

<table>
<thead>
<tr>
<th>Returned PermID</th>
<th>Organization Name</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td><a href="https://permid.org/1-4295905573">https://permid.org/1-4295905573</a></td>
<td>Apple inc</td>
<td>Apple’s mxid is: 100087573;</td>
</tr>
</tbody>
</table>

Note: The query of “mxid: 100087573” provides the exact same results.

3.6.4 Example 4: Search by Identifier Query (ambiguous)

HTTP REST
GET
https://api.thomsonreuters.com/permid/search?q=1234&access-token=<token>

Returned organizations (top 3 organization results):

<table>
<thead>
<tr>
<th>Returned PermID</th>
<th>Organization Name</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td><a href="https://permid.org/1-4295904333">https://permid.org/1-4295904333</a></td>
<td>J Alexander’s LLC</td>
<td>Its VEID is 1234</td>
</tr>
<tr>
<td><a href="https://permid.org/1-5000105944">https://permid.org/1-5000105944</a></td>
<td>China Lilang Ltd</td>
<td>Its ticker is 1234</td>
</tr>
<tr>
<td><a href="https://permid.org/1-5040196023">https://permid.org/1-5040196023</a></td>
<td>Acquisition 1234 PLC</td>
<td>Organization name contains 1234</td>
</tr>
</tbody>
</table>
Chapter 4  Atom Feed

Open PermID’s data is updated every 15 minutes. The incremental updates can be consumed for each of the entities via the PermID website and API.

**Note:** The Atom feature is limited to Open PermID and Open Calas registered users only.

- To experience it via the Open PermID site – log in using your registration credentials.
- To use the API – use the token provided within the registration email.

Need an account? Register [here](#)
4.1 Atom Feed Content and Format

Each entity (organization, instruments and quotes) has its own Atom feed. Each atom feed enables to retrieve up to 1000 latest updated records (up to 5 days back).

In order to consume the Atom feed, the programmer should iterate the list of updated entities and do the following:

1. Retrieve the URI updated record by Entity Lookup API
2. Replace the current stored entity record with the updated record

Request Definition:

End point: https://permid.org/atom/{entityType}

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

The request is an HTTP GET with the following query parameters:

<table>
<thead>
<tr>
<th>PARAMETER</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access-Token</td>
<td>If passed on HTTP parameters: “access-token=xyz”</td>
</tr>
<tr>
<td></td>
<td>If passed (preferably) as HTTP header: “X-AG-Access-Token: xyz”</td>
</tr>
<tr>
<td></td>
<td>Replace “xyz” with the provided registration token.</td>
</tr>
</tbody>
</table>

Response:

<table>
<thead>
<tr>
<th>PARAMETER</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Content Type</td>
<td>The content type of the response: application/xml.</td>
</tr>
<tr>
<td>Status</td>
<td>Numeric return code for the request. The value corresponds to the HTTP return codes. For example, ”200” indicates that the request was successfully processed. ”400” is the code for a bad request.</td>
</tr>
</tbody>
</table>

Example:

Token through query parameters

HTTP REST GET  https://permid.org/atom/organization?access-token=token

Output example: Appendix E
Chapter 5  Entities Bulk Download

Bulk download enables retrieving TR entity data in gz files, one per entity (organization, instrument, quote).
The service is limited to registered users. Need an account? Register here.

5.1  Bulk Files  Content and Format

Supported Formats:  Turtle and NTriples (See Appendix F for an example in ttl format.)
Coverage:  The same records provided by the Entity Search API (see terms of use).
Frequency:  New bulk files will be published once a week.
Incremental Updates:  Once the bulk files are consumed, the subsequent incremental updates can be consumed via our Atom Feed.

The files are available for download via the Open PermiD website:
## Appendix A Displayed Fields via the Open PermID Site

### A.1 Organization Page

<table>
<thead>
<tr>
<th>TYPE OF DETAILS</th>
<th>DATA ELEMENT</th>
<th>OPENNESS</th>
<th>EXAMPLE: ENTITY = MICROSOFT CORP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organization Details</td>
<td>Organization name (Page title)</td>
<td>Open</td>
<td>Microsoft Corp</td>
</tr>
<tr>
<td></td>
<td>PermlD</td>
<td>Open</td>
<td><a href="https://permid.org/1-4295907168">https://permid.org/1-4295907168</a></td>
</tr>
<tr>
<td></td>
<td>Public</td>
<td>Open</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>Status</td>
<td>Open</td>
<td>Active</td>
</tr>
<tr>
<td></td>
<td>Inactive Date</td>
<td>Login Required</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td>Note:</td>
<td></td>
<td><em>info is not available in our data</em></td>
</tr>
<tr>
<td></td>
<td>IPO Date</td>
<td>Open</td>
<td>3 Jan, 1977</td>
</tr>
<tr>
<td></td>
<td>Date of Incorporation</td>
<td>Open</td>
<td>22 Sept, 1993</td>
</tr>
<tr>
<td></td>
<td>Primary Industry</td>
<td>Login Required</td>
<td>Other Computer Hardware</td>
</tr>
<tr>
<td></td>
<td>Primary Business Sector</td>
<td>Login Required</td>
<td>Software &amp; IT Services</td>
</tr>
<tr>
<td></td>
<td>Primary Economic Sector</td>
<td>Login Required</td>
<td>Technology</td>
</tr>
<tr>
<td></td>
<td>Domiciled in</td>
<td>Open</td>
<td>UNITED STATES</td>
</tr>
<tr>
<td></td>
<td>Incorporated in</td>
<td>Open</td>
<td>UNITED STATES</td>
</tr>
<tr>
<td></td>
<td>HQ address</td>
<td>Login Required</td>
<td>One Microsoft Way REDMOND WASHINGTON WA 98052-6399 United States</td>
</tr>
<tr>
<td></td>
<td>HQ phone</td>
<td>Login Required</td>
<td>14258828080</td>
</tr>
<tr>
<td></td>
<td>Registered address</td>
<td>Login Required</td>
<td>STE 304 300 Deschutes Way SW TUMWATER WASHINGTON WA 98501 United States</td>
</tr>
<tr>
<td></td>
<td>Registered phone</td>
<td>Login Required</td>
<td>14258828080</td>
</tr>
<tr>
<td>Primary Instrument</td>
<td>Name</td>
<td>Open</td>
<td>Microsoft Ord Shs</td>
</tr>
<tr>
<td>Details</td>
<td>Name</td>
<td>Login Required</td>
<td>Microsoft Ord Shs</td>
</tr>
<tr>
<td></td>
<td>Instrument type</td>
<td>Open</td>
<td>ORD</td>
</tr>
</tbody>
</table>

1 Hyperlinks between entities are available for logged-in users only. Name will be presented to all users.
### Appendix A. Displayed Fields via the Open PermID Site

#### A.2 Instrument Page

<table>
<thead>
<tr>
<th>TYPE OF DETAILS</th>
<th>DATA ELEMENT</th>
<th>OPENNESS</th>
<th>EXAMPLE: ENTITY = MICROSOFT CORP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instrument Details</td>
<td>Instrument name (Page title)</td>
<td>Open</td>
<td>Microsoft Ordinary Shares</td>
</tr>
<tr>
<td></td>
<td>PermID</td>
<td>Open</td>
<td><a href="https://permid.org/1-8590921450">https://permid.org/1-8590921450</a></td>
</tr>
<tr>
<td></td>
<td>TRCS Asset class</td>
<td>Open</td>
<td>ORD</td>
</tr>
<tr>
<td></td>
<td>Status</td>
<td>Open</td>
<td>Active</td>
</tr>
<tr>
<td></td>
<td>Currency</td>
<td>Open</td>
<td>USD</td>
</tr>
<tr>
<td></td>
<td>Issuer</td>
<td>Login Required³</td>
<td>Microsoft corp</td>
</tr>
<tr>
<td>Quote Details</td>
<td>Primary RIC²</td>
<td>Open</td>
<td>MSFT.O</td>
</tr>
<tr>
<td></td>
<td>Primary Ticker</td>
<td>Open</td>
<td>MSFT</td>
</tr>
<tr>
<td></td>
<td>Primary MIC</td>
<td>Open</td>
<td>XNGS</td>
</tr>
<tr>
<td></td>
<td>Primary Exchange</td>
<td>Open</td>
<td>NSM</td>
</tr>
</tbody>
</table>

#### A.3 Quote Page

<table>
<thead>
<tr>
<th>TYPE OF DETAILS</th>
<th>DATA ELEMENT</th>
<th>OPENNESS</th>
<th>EXAMPLE: ENTITY = MICROSOFT ORD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quote Details</td>
<td>QuoteName(Page Title)</td>
<td>Open</td>
<td>Microsoft ORD</td>
</tr>
<tr>
<td></td>
<td>PermID</td>
<td>Open</td>
<td><a href="https://permid.org/1-5583537716">https://permid.org/1-5583537716</a></td>
</tr>
<tr>
<td></td>
<td>Asset Class</td>
<td>Open</td>
<td>Ordinary Shares</td>
</tr>
<tr>
<td></td>
<td>RIC⁴</td>
<td>Open</td>
<td>MSFT.O</td>
</tr>
</tbody>
</table>

² Display only; not available via API; see terms and conditions.
³ Hyperlinks between entities are available for logged-in users only. Name will be presented to all users.
⁴ Display only; not available via API; see terms and conditions.
<table>
<thead>
<tr>
<th>TYPE OF DETAILS</th>
<th>DATA ELEMENT</th>
<th>OPENNESS</th>
<th>EXAMPLE: ENTITY = MICROSOFT ORD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ticker</td>
<td>Open</td>
<td>MSFT</td>
<td></td>
</tr>
<tr>
<td>Exchange</td>
<td>Open</td>
<td>NSM</td>
<td></td>
</tr>
<tr>
<td>MIC</td>
<td>Open</td>
<td>XNGS</td>
<td></td>
</tr>
<tr>
<td>Currency</td>
<td>Open</td>
<td>USD</td>
<td></td>
</tr>
<tr>
<td>Is Quote of</td>
<td>Login required$</td>
<td>Microsoft Ordinary Shares</td>
<td></td>
</tr>
</tbody>
</table>
Appendix B List of Fields Returned via the EntityAPI Response

Due to linked-data considerations the fields displayed within the permid.org site (see Appendix A) are slightly different than the fields returned within the API response.

For example, within the website, the organization page integrates organization fields as well as a few primary Instrument and primary Quote fields (see Appendix A). The Organization API response returns organization fields and the permIDs of the Primary instrument and primary quote. This way the developer can select which non organization fields, he'd like to incorporate into his application.

The API response returns both open fields and the fields restricted to logged-in users.

B.1 Organization API Response

Ontologies used within the 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 mdaas: <http://ont.thomsonreuters.com/mdaas/> .
@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#> .

<table>
<thead>
<tr>
<th>DATA ELEMENT</th>
<th>API FIELD NAME</th>
<th>VALUE DEFINITION/SUPPORTED VALUES</th>
<th>OPENNESS</th>
<th>EXAMPLE: ENTITY = MICROSOFT</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Permid</td>
<td>(within the subject)</td>
<td>&lt;<a href="https://permid.org/1-8472527">https://permid.org/1-8472527</a>&gt;</td>
<td>Open</td>
<td>&lt;<a href="https://permid.org/1-8590921450">https://permid.org/1-8590921450</a>&gt;</td>
<td></td>
</tr>
<tr>
<td>Organization name</td>
<td>vcard:organisation-name</td>
<td>name^^xsd:string</td>
<td>Open</td>
<td>&quot;Microsoft Corp&quot;^^xsd:string</td>
<td>Usually the official English name of the organization</td>
</tr>
<tr>
<td>Public</td>
<td>tr-org:hasHoldingClassification</td>
<td>tr-org:publiclyHeld</td>
<td>Open</td>
<td>tr-org:publiclyHeld</td>
<td>There is only one value: public, otherwise, the field will not be populated</td>
</tr>
<tr>
<td>DATA ELEMENT</td>
<td>API FIELD NAME</td>
<td>VALUE DEFINITION/ SUPPORTED VALUES</td>
<td>OPENNESS</td>
<td>EXAMPLE: ENTITY = MICROSOFT</td>
<td>COMMENTS</td>
</tr>
<tr>
<td>-------------------</td>
<td>---------------------------------</td>
<td>------------------------------------</td>
<td>----------</td>
<td>-----------------------------</td>
<td>--------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Status</td>
<td>tr-org:hasActivityStatus</td>
<td>tr-org:statusActive tr-org:statusInactive</td>
<td>Open</td>
<td>tr-org:statusActive</td>
<td></td>
</tr>
<tr>
<td>Inactive Date</td>
<td>tr-org:hasInactiveDate</td>
<td>2001-01-01^^xsd:dateTime</td>
<td>Registration token Required</td>
<td></td>
<td>Note: Microsoft is still active, therefore the fields is not available in our data. Field won’t be included in the MSFT response.</td>
</tr>
<tr>
<td>IPO date</td>
<td>tr-org:hasIPODate</td>
<td>2001-01-01^^xsd:dateTime</td>
<td>Open</td>
<td>&quot;1986-03-13T05:00:00Z&quot;^^xsd:dateTime</td>
<td></td>
</tr>
<tr>
<td>Date of Incorporation</td>
<td>tr-org:hasOrganizationFoundedDate</td>
<td>2001-01-01^^xsd:dateTime</td>
<td>Open</td>
<td>&quot;1993-09-22T00:00:00Z&quot;^^xsd:dateTime</td>
<td>Can also be xsd:gYear if only year is known ;</td>
</tr>
<tr>
<td>Website</td>
<td>vcard:hasURL</td>
<td><a href="http://example.company.com/homepage.html">http://example.company.com/homepage.html</a></td>
<td>Open</td>
<td><a href="http://www.microsoft.com/">http://www.microsoft.com/</a></td>
<td></td>
</tr>
<tr>
<td>HQ address</td>
<td>tr-org:headquartersAddress</td>
<td>abc^^xsd:string</td>
<td>Registration token Required</td>
<td>&quot;One Microsoft Way\nREDMOND\nWASHINGTON\nWA\n98052-6399\nUnited States\n&quot;^^xsd:string</td>
<td></td>
</tr>
<tr>
<td>Registered address</td>
<td>tr-org:RegistrationAddress</td>
<td>abc^^xsd:string</td>
<td>Registration token Required</td>
<td>&quot;TUMWATER\nWASHINGTON\nWA\n98501\nUnited States\n&quot;^^xsd:string</td>
<td></td>
</tr>
<tr>
<td>HQ phone</td>
<td>tr-org:hasHeadquarterPhoneNumber</td>
<td>1234^^xsd:string</td>
<td>Registration token Required</td>
<td>&quot;14258828080&quot;^^xsd:string</td>
<td></td>
</tr>
</tbody>
</table>
Appendix B List of Fields Returned via the EntityAPI Response

<table>
<thead>
<tr>
<th>DATA ELEMENT</th>
<th>API FIELD NAME</th>
<th>VALUE DEFINITION/ SUPPORTED VALUES</th>
<th>OPENNESS</th>
<th>EXAMPLE: ENTITY = MICROSOFT</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>HQ Fax</td>
<td>tr-org:hasHeadquartersFaxNumber</td>
<td>1234^^xsd:string</td>
<td>Registration token Required</td>
<td>^14258828080</td>
<td>Note: The fields are not available in our data. Field won’t be included in the MSFT response.</td>
</tr>
<tr>
<td>Registered phone</td>
<td>tr-org:hasRegisteredPhoneNumber</td>
<td>1234^^xsd:string</td>
<td>Registration token Required</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Registered Fax</td>
<td>tr-org:hasRegisteredFaxNumber</td>
<td>1234^^xsd:string</td>
<td>Registration token Required</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary instrument</td>
<td>tr-fin:hasPrimaryInstrument</td>
<td><a href="https://permid.org/1-8472527">https://permid.org/1-8472527</a></td>
<td>Registration token Required</td>
<td><a href="https://permid.org/1-8590921450">https://permid.org/1-8590921450</a></td>
<td>Instrument permID</td>
</tr>
<tr>
<td>Primary Quote</td>
<td>tr-fin:hasOrganizationPrimaryQuote</td>
<td><a href="https://permid.org/1-8472527">https://permid.org/1-8472527</a></td>
<td>Registration token Required</td>
<td><a href="https://permid.org/1-55835377165">https://permid.org/1-55835377165</a></td>
<td>Quote permID</td>
</tr>
</tbody>
</table>

B.1.1 Industry (TRBC) API response

Entity API supports Industry (TRBC) as a standalone entity. Note, that the organization API response returns the industry’s permid uri. Its attributes can be retrieved by querying the returned permit via the entity API.

<table>
<thead>
<tr>
<th>DATA ELEMENT</th>
<th>API FIELD NAME</th>
<th>VALUE DEFINITION/ SUPPORTED VALUES</th>
<th>EXAMPLE: ENTITY = SOFTWARE &amp; IT SERVICES</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Permid</td>
<td>(within the subject)</td>
<td>rdfs:Resource</td>
<td><a href="https://permid.org/1-4294952829">https://permid.org/1-4294952829</a></td>
<td></td>
</tr>
<tr>
<td>Type</td>
<td>rdfs: type</td>
<td>trbc:IndustryGroup; trbc:EconomicSector; trbc:BusinessSector</td>
<td>trbc:IndustryGroup</td>
<td></td>
</tr>
<tr>
<td>Code</td>
<td>trbc:BusinessClassificationCode</td>
<td>xsd:string</td>
<td>572010</td>
<td>TRBC code</td>
</tr>
<tr>
<td>Description</td>
<td>rdfs:comment</td>
<td>rdf:langString</td>
<td>Developers and marketers of generic system and application software, as well as providers of consulting and IT services</td>
<td>The English description</td>
</tr>
<tr>
<td>Label</td>
<td>rdfs: Label</td>
<td>rdf:langString</td>
<td>Software &amp; IT Services</td>
<td>The English long name</td>
</tr>
<tr>
<td>DATA ELEMENT</td>
<td>API FIELD NAME</td>
<td>VALUE DEFINITION/ SUPPORTED VALUES</td>
<td>EXAMPLE: ENTITY = SOFTWARE &amp; IT SERVICES</td>
<td>COMMENTS</td>
</tr>
<tr>
<td>--------------</td>
<td>----------------</td>
<td>-------------------------------------</td>
<td>------------------------------------------</td>
<td>----------</td>
</tr>
</tbody>
</table>
## B.2 Instrument API Response

Ontologies used within the response:

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

<table>
<thead>
<tr>
<th>DATA ELEMENT</th>
<th>API FIELD NAME</th>
<th>VALUE DEFINITION/ SUPPORTED VALUES</th>
<th>OPENNESS</th>
<th>EXAMPLE: ENTITY = MICROSOFT ORD SHARES</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Permid</td>
<td>(within the subject)</td>
<td></td>
<td>Open</td>
<td><a href="https://permid.org/1-8590921450">https://permid.org/1-8590921450</a></td>
<td></td>
</tr>
<tr>
<td>Instrument Name</td>
<td>tr-common:hasName</td>
<td>name^^xsd:string</td>
<td>Open</td>
<td>&quot;Microsoft Corp&quot;^^xsd:string</td>
<td>Usually the official English name</td>
</tr>
<tr>
<td>Asset Class *</td>
<td>tr-fin:hasAssetClass</td>
<td><a href="https://permid.org/1-987654">https://permid.org/1-987654</a></td>
<td>Open</td>
<td><a href="https://permid.org/1-300281">https://permid.org/1-300281</a></td>
<td>A permID of the TRCS Asset Class. A mapping to the asset name is available within the tr-fin ontology file. Supported as a stand-alone entity. Details available in section B.2.1.</td>
</tr>
<tr>
<td>Status</td>
<td>tr-fin:hasInstrumentStatus</td>
<td>tr-fin:instrumentStatusActive ; tr-fin:instrumentStatusInactive</td>
<td>Open</td>
<td>tr-fin:instrumentStatusActive</td>
<td></td>
</tr>
<tr>
<td>Issuer</td>
<td>tr-fin:isIssuedBy</td>
<td><a href="https://permid.org/1-8472527">https://permid.org/1-8472527</a></td>
<td>Registration token Required</td>
<td><a href="https://permid.org/1-55835377165">https://permid.org/1-55835377165</a></td>
<td>organization permID</td>
</tr>
<tr>
<td>Primary Quote</td>
<td>tr-fin:hasPrimaryQuote</td>
<td><a href="https://permid.org/1-63850874">https://permid.org/1-63850874</a></td>
<td>Registration token Required</td>
<td><a href="https://permid.org/1-4295907168">https://permid.org/1-4295907168</a></td>
<td>quote permid</td>
</tr>
</tbody>
</table>
B.2.1 TRCS Asset class API Response

Entity API supports Asset Class as a standalone entity.

Note, that the instrument API response returns asset Class as a permid uri. Its attributes can be retrieved by querying the returned permid via the entity API.

<table>
<thead>
<tr>
<th>DATA ELEMENT</th>
<th>API FIELD NAME</th>
<th>VALUE DEFINITION/ SUPPORTED VALUES</th>
<th>EXAMPLE: ENTITY = FX CORRELATIONS</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Permid</td>
<td>(within the subject)</td>
<td>rdfs:Resource</td>
<td><a href="https://permid.org/1-1000189408">https://permid.org/1-1000189408</a></td>
<td></td>
</tr>
<tr>
<td>Type</td>
<td>rdfs: type</td>
<td>tr-fin:AssetClass</td>
<td>tr-fin:AssetClass</td>
<td>Asserts that this is an Asset class; this is the same for all entries</td>
</tr>
<tr>
<td>Description</td>
<td>rdfs:comment</td>
<td>xsd:string</td>
<td>Correlation between the FX spot rates of two currency pairs</td>
<td>The English description</td>
</tr>
<tr>
<td>Label</td>
<td>rdfs: Label</td>
<td>xsd:string</td>
<td>FX Correlations</td>
<td>The English long name</td>
</tr>
<tr>
<td>Parent</td>
<td>skos: Broader</td>
<td>rdfs:Resource</td>
<td><a href="https://permid.org/1-302009">https://permid.org/1-302009</a></td>
<td>The &quot;parent&quot; asset class (or classes) in the hierarchy.</td>
</tr>
</tbody>
</table>

B.3 Quote API Response

Ontologies used within the response:

@prefix CorporateControl: <http://www.omg.org/spec/EDMC-FIBO/BE/OwnershipAndControl/CorporateControl/>.

@prefix tr-fin: <http://permid.org/ontology/financial/>.

<table>
<thead>
<tr>
<th>DATA ELEMENT</th>
<th>API FIELD NAME</th>
<th>VALUE DEFINITION/ SUPPORTED VALUES</th>
<th>OPENNESS</th>
<th>EXAMPLE: ENTITY = MICROSOFT ORD</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Permid</td>
<td>(within the subject)</td>
<td></td>
<td>Open</td>
<td><a href="https://permid.org/1-558353">https://permid.org/1-558353</a></td>
<td></td>
</tr>
<tr>
<td>Quote Name</td>
<td>tr-common:hasName</td>
<td>“Example Quote”</td>
<td>Open</td>
<td>MICROSOFT ORD&quot;^^xsd:string</td>
<td></td>
</tr>
<tr>
<td>Exchange</td>
<td>tr-fin:hasExchangeCode</td>
<td>“XXX123&quot;</td>
<td>Open</td>
<td>NSM&quot;^^xsd:string</td>
<td></td>
</tr>
<tr>
<td>Ticker</td>
<td>tr-fin:hasExchangeTicker</td>
<td>“EXMPL&quot;</td>
<td>Open</td>
<td>“MSFT&quot;^^xsd:string</td>
<td></td>
</tr>
<tr>
<td>MIC</td>
<td>tr-fin:hasMic</td>
<td>“kjshdg&quot;</td>
<td>Open</td>
<td>“XNGS&quot;^^xsd:string</td>
<td></td>
</tr>
<tr>
<td>Instrument</td>
<td>tr-fin:isQuoteOf</td>
<td></td>
<td></td>
<td>Instrument permID</td>
<td></td>
</tr>
</tbody>
</table>
## Appendix C Search Results – List of Fields

### C.1 Organization Entry

<table>
<thead>
<tr>
<th>TYPE OF DETAILS</th>
<th>DATA ELEMENT</th>
<th>OPENNESS</th>
<th>EXAMPLE: Q = IBM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organization Details</td>
<td>@id</td>
<td>Open</td>
<td><a href="https://permid.org/1-4295904307">https://permid.org/1-4295904307</a></td>
</tr>
<tr>
<td></td>
<td>organizationName</td>
<td>Open</td>
<td>International Business Machines Corp</td>
</tr>
<tr>
<td></td>
<td>primary Ticker</td>
<td>Open</td>
<td>MSFT</td>
</tr>
<tr>
<td></td>
<td>hrgSubType</td>
<td>Open</td>
<td>Company</td>
</tr>
<tr>
<td></td>
<td>hasHoldingClass</td>
<td>Open</td>
<td>publiclyHeld</td>
</tr>
<tr>
<td></td>
<td>hasURL</td>
<td>Open</td>
<td><a href="https://www.ibm.com/homepage.html">https://www.ibm.com/homepage.html</a></td>
</tr>
</tbody>
</table>

### C.2 Instrument Entry

<table>
<thead>
<tr>
<th>TYPE OF DETAILS</th>
<th>DATA ELEMENT</th>
<th>OPENNESS</th>
<th>EXAMPLE: Q = IBM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instrument Details</td>
<td>@id</td>
<td>Open</td>
<td><a href="https://permid.org/1-8590927768">https://permid.org/1-8590927768</a></td>
</tr>
<tr>
<td></td>
<td>hasName</td>
<td>Open</td>
<td>International Business Machines Ord Shs</td>
</tr>
<tr>
<td></td>
<td>assetClass</td>
<td>Open</td>
<td>Ordinary Share</td>
</tr>
<tr>
<td></td>
<td>isIssuedBy</td>
<td>Login required, API only[^5]</td>
<td><a href="https://permid.org/1-4295904307">https://permid.org/1-4295904307</a></td>
</tr>
<tr>
<td></td>
<td>isIssuedByName</td>
<td>Open</td>
<td>International Business Machines Corp</td>
</tr>
<tr>
<td></td>
<td>primaryTicker</td>
<td>Open</td>
<td>IBM</td>
</tr>
<tr>
<td></td>
<td>hasPrimaryQuote</td>
<td>Login required, API only[^5]</td>
<td><a href="https://permid.org/1-55838323096">https://permid.org/1-55838323096</a></td>
</tr>
</tbody>
</table>

### C.3 Quote Entry

<table>
<thead>
<tr>
<th>TYPE OF DETAILS</th>
<th>DATA ELEMENT</th>
<th>OPENNESS</th>
<th>EXAMPLE: Q = IBM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quote Details</td>
<td>@id</td>
<td>Open</td>
<td><a href="https://permid.org/1-4295904307">https://permid.org/1-4295904307</a></td>
</tr>
<tr>
<td></td>
<td>hasName</td>
<td>Open</td>
<td>International Business Machines Ord</td>
</tr>
<tr>
<td></td>
<td>assetClass</td>
<td>Open</td>
<td>Ordinary Shares</td>
</tr>
<tr>
<td></td>
<td>hasRIC</td>
<td>Open</td>
<td>IBM</td>
</tr>
</tbody>
</table>

[^5]: Will be added to the API response soon.
<table>
<thead>
<tr>
<th>TYPE OF DETAILS</th>
<th>DATA ELEMENT</th>
<th>OPENNESS</th>
<th>EXAMPLE: Q=IBM</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>hasMic</td>
<td>Open</td>
<td></td>
</tr>
<tr>
<td></td>
<td>hasExchangeTicker</td>
<td>Open</td>
<td>IBM</td>
</tr>
<tr>
<td></td>
<td>isQuoteOf</td>
<td>Open</td>
<td><a href="https://permid.org/1-8590927768">https://permid.org/1-8590927768</a></td>
</tr>
<tr>
<td></td>
<td>isQouteOfInstrument</td>
<td>Login required, API only</td>
<td>International Business Machines Ord Shs</td>
</tr>
</tbody>
</table>
Appendix D API Responses Samples

D.1 Entity Lookup API: Organization page; Turtle (ttl) Format

```
@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 mdaas: <http://ont.thomsonreuters.com/mdaas/> .
@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\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 .
```

D.2 Entity lookup; Organization Page; Json-ld Format

```
< {
  "@id" : "https://permid.org/1-429589948",
  "@type" : "tr-org:Organization",
  "mdaas:HeadquartersAddress" : "1600 Amphitheatre Pkwy\nMOUNTAIN VIEW\nCALIFORNIA\n94043-1351\nUnited States",
  "mdaas:RegisteredAddress" : "Corporation Trust Center\n1209 Orange Street\nNew Castle County\nWILMINGTON\nDELAWARE\n19801\nUnited States",
  "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",
"@context" : {
  "@id" : "http://permid.org/ontology/organization/hasIPODate",
  "@type" : "http://www.w3.org/2001/XMLSchema#dateTime"
},
"HeadquartersAddress" : {
  "@id" : "http://ont.thomsonreuters.com/maas/HeadquartersAddress",
  "@type" : "http://www.w3.org/2001/XMLSchema#string"
},
"hasRegisteredFaxNumber" : {
  "@id" : "http://permid.org/ontology/organization/hasRegisteredFaxNumber",
  "@type" : "http://www.w3.org/2001/XMLSchema#string"
},
"organization-name" : {
  "@id" : "http://www.w3.org/2006/vcard/ns#organization-name",
  "@type" : "http://www.w3.org/2001/XMLSchema#string"
},
"hasRegisteredPhoneNumber" : {
  "@id" : "http://permid.org/ontology/organization/hasRegisteredPhoneNumber",
  "@type" : "http://www.w3.org/2001/XMLSchema#string"
},
"isDomiciledIn" : {
  "@id" : "http://www.omg.org/spec/EDMC-FIBO/BE/LegalEntities/CorporateBodies/isDomiciledIn",
  "@type" : "@id"
},
"hasHoldingClassification" : {
  "@id" : "http://permid.org/ontology/organization/hasHoldingClassification",
  "@type" : "@id"
},
"RegisteredAddress" : {
  "@id" : "http://ont.thomsonreuters.com/maas/RegisterAddress",
  "@type" : "http://www.w3.org/2001/XMLSchema#string"
},
"isIncorporatedIn" : {
  "@id" : "http://permid.org/ontology/organization/isIncorporatedIn",
  "@type" : "@id"
},
"hasOrganizationPrimaryQuote" : {
  "@id" : "http://permid.org/ontology/financial/hasOrganizationPrimaryQuote",
  "@type" : "@id"
},
"hasActivityStatus" : {
  "@id" : "http://permid.org/ontology/organization/hasActivityStatus",
  "@type" : "@id"}
D.3 Entity Lookup without a token; organization page; ttl format

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 mdaas: <http://ont.thomsonreuters.com/mdaas/> .
@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 ;
D.4 Search Results Page for “TRI”

```json
{
  "result": {
    "organizations": {
      "entityType": "organizations",
      "total": 609,
      "start": 1,
      "num": 5,
      "entities": [
        {
          "@id": "http:\/\permid.org\1-4295861160",
          "organizationName": "Thomson Reuters Corp",
          "primaryTicker": "TRI",
          "orgSubtype": "Company",
          "hasHoldingClassification": "publiclyHeld",
          "hasURL": "http:\/\/thomsonreuters.com/"
        },
        {
          "@id": "http:\/\permid.org\1-4295886658",
          "organizationName": "Triton Development SA",
          "primaryTicker": "TRI",
          "orgSubtype": "Company",
          "hasHoldingClassification": "publiclyHeld",
          "hasURL": "http:\/\/www.tritondevelopment.pl/"
        },
        {
          "@id": "http:\/\permid.org\1-4295903234",
          "organizationName": "Tri-Continental Corp",
          "orgSubtype": "Close ended Fund",
          "hasHoldingClassification": "publiclyHeld",
          "hasURL": "https:\/\/www.columbiamanagement.com\web\columbia\products-performance\closed-end-fund-details\-/\fund-"
        },
        {
          "@id": "http:\/\permid.org\1-4296066152",
          "organizationName": "Tri Origin Exploration Ltd",
          "primaryTicker": "TOE",
          "orgSubtype": "Company",
          "hasHoldingClassification": "publiclyHeld",
          "hasURL": "http:\/\/www.triorigin.com/"
        },
        {
          "@id": "http:\/\permid.org\1-4295894546",
          "organizationName": "Trifast PLC",
          "primaryTicker": "TRI",
          "orgSubtype": "Company",
        }
      ]
    }
  }
}
```
"hasHoldingClassification": "publiclyHeld",
"hasURL": "http:\/\/www.trifast.com\""
]}
},
"instruments": [
  "entityType": "instruments",
  "total": 28,
  "start": 1,
  "num": 5,
  "entities": [
    {
      "@id": "http:\/\/permid.org\1-8590928696",
      "hasName": "Thomson Reuters Ord Shs",
      "assetClass": "Ordinary Shares",
      "isIssuedByName": "Thomson Reuters Corp",
      "primaryTicker": "TRI"
    },
    {
      "@id": "http:\/\/permid.org\1-8589967295",
      "hasName": "Triton Development Ord Shs",
      "assetClass": "Ordinary Shares",
      "isIssuedByName": "Triton Development SA",
      "primaryTicker": "TRI"
    },
    {
      "@id": "http:\/\/permid.org\1-8590921532",
      "hasName": "Tri Origin Ord Shs",
      "assetClass": "Ordinary Shares",
      "isIssuedByName": "Tri Origin Exploration Ltd",
      "primaryTicker": "TOE"
    },
    {
      "@id": "http:\/\/permid.org\1-8589953644",
      "hasName": "Tribona Ord Shs",
      "assetClass": "Ordinary Shares",
      "isIssuedByName": "Tribona ASA",
      "primaryTicker": "TRI"
    },
    {
      "@id": "http:\/\/permid.org\1-858994156",
      "hasName": "Trifast Ord Shs",
      "assetClass": "Ordinary Shares",
      "isIssuedByName": "Trifast PLC",
      "primaryTicker": "TRI"
    }
  ]}
},
"quotes": {
  "entityType": "quotes",
  "total": 76,
  "start": 1,
  "num": 5,
  "entities": [
    {
      "@id": "http:\/\/permid.org\1-55838860337",
      "hasName": "THOMSON REUTERS ORD",
      "assetClass": "Ordinary Shares",
      "isQuoteOfInstrumentName": "Thomson Reuters Ord Shs",
      "hasRIC": "TRI.TO",
      "hasMic": "XTSE",
      "hasExchangeTicker": "TRI"
Search Results Page for “ticker: TRI”

```json
{
    "result": {
        "organizations": {
            "entityType": "organizations",
            "total": 9,
            "start": 1,
            "num": 5,
            "entities": [
                {
                    "@id": "http:\/\permid.org\1-55838860343",
                    "hasName": "TRITON DEVELOPMENT ORD",
                    "assetClass": "Ordinary Shares",
                    "isQuoteOfInstrumentName": "Triton Development Ord Shs",
                    "hasRIC": "TRIP.WA",
                    "hasMic": "XWAR",
                    "hasExchangeTicker": "TRI"
                },
                {
                    "@id": "http:\/\permid.org\1-55838841658",
                    "hasName": "TRIBONA ORD",
                    "assetClass": "Ordinary Shares",
                    "isQuoteOfInstrumentName": "Tribona Ord Shs",
                    "hasRIC": "TRIBN.OL^E13",
                    "hasExchangeTicker": "TRI"
                },
                {
                    "@id": "http:\/\permid.org\1-55836049265",
                    "hasName": "TRIFAST ORD",
                    "assetClass": "Ordinary Shares",
                    "isQuoteOfInstrumentName": "Trifast Ord Shs",
                    "hasRIC": "TRFT.L",
                    "hasMic": "XLON",
                    "hasExchangeTicker": "TRI"
                },
                {
                    "@id": "http:\/\permid.org\1-21475334888",
                    "hasName": "TRIAD HOSPITALS ORD",
                    "assetClass": "Ordinary Shares",
                    "isQuoteOfInstrumentName": "Triad Hospitals Ord Shs",
                    "hasRIC": "TRI.N^G07",
                    "hasExchangeTicker": "TRI"
                }
            ]
        }
    }
}
```
Appendix D API Responses Samples

Entity Search API – User Guide

Document Version: 1.0
"isIssuedByName" : "Trifast PLC",
"primaryTicker" : "TRI"

],

"@id" : "http:\/\permid.org\1-8590926616",
"hasName" : "Triad Hospitals Ord Shs",
"assetClass" : "Ordinary Shares",
"isIssuedByName" : "Triad Hospitals LLC",
"primaryTicker" : "TRI"

}]

"quotes" : {
  "entityType" : "quotes",
  "total" : 58,
  "start" : 1,
  "num" : 5,
  "entities" : [
    {
      "@id" : "http:\/\permid.org\1-55838860337",
      "hasName" : "THOMSON REUTERS ORD",
      "assetClass" : "Ordinary Shares",
      "isQuoteOfInstrumentName" : "Thomson Reuters Ord Shs",
      "hasRIC" : "TRI.TO",
      "hasMic" : "XTSE",
      "hasExchangeTicker" : "TRI"
    },
    {
      "@id" : "http:\/\permid.org\1-55838860343",
      "hasName" : "TRITON DEVELOPMENT ORD",
      "assetClass" : "Ordinary Shares",
      "isQuoteOfInstrumentName" : "Triton Development Ord Shs",
      "hasRIC" : "TRIP.WA",
      "hasMic" : "XWAR",
      "hasExchangeTicker" : "TRI"
    },
    {
      "@id" : "http:\/\permid.org\1-55838841658",
      "hasName" : "TRIBONA ORD",
      "assetClass" : "Ordinary Shares",
      "isQuoteOfInstrumentName" : "Tribona Ord Shs",
      "hasRIC" : "TRIBN.OL^E13",
      "hasExchangeTicker" : "TRI"
    },
    {
      "@id" : "http:\/\permid.org\1-55836049265",
      "hasName" : "TRIFAST ORD",
      "assetClass" : "Ordinary Shares",
      "isQuoteOfInstrumentName" : "Trifast Ord Shs",
      "hasRIC" : "TRFT.L",
      "hasMic" : "XLON",
      "hasExchangeTicker" : "TRI"
    },
    {
      "@id" : "http:\/\permid.org\1-21475334888",
      "hasName" : "TRIAD HOSPITALS ORD",
      "assetClass" : "Ordinary Shares",
      "isQuoteOfInstrumentName" : "Triad Hospitals Ord Shs",
      "hasRIC" : "TRI.NAG07",
      "hasExchangeTicker" : "TRI"
    }
  ]
}
Appendix E  Atom Feed

Organization feed example:

```xml
<?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.thomsonreuters.com/permid/atom/organization+offset=0+length=50" />
  <link rel="first" href="https://api.thomsonreuters.com/permid/atom/organization+offset=0+length=50" />
  <link rel="next" href="https://api.thomsonreuters.com/permid/atom/organization+offset=50+length=50" />
  <link rel="last" href="https://api.thomsonreuters.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.thomsonreuters.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>
    <id>https://permid.org/1-5044253230</id>
    <updated>2015-05-06T11:52:36Z</updated>
  </entry>

  [... Additional entries]
</feed>
```
Appendix F Entities Bulk Download

Example for https://permid.org/1-4296471038 within the organization bulk file.

Format: ttl

@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 mdaas: <http://ont.thomsonreuters.com/mdaas/> .
@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\nWILMINGTON\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 .