

# Quandl Tabular Data API: Interim Documentation

Effective August 2016. For additional support please contact [connect@quandl.com](mailto:connect@quandl.com).

This document contains interim documentation for Quandl's API for general tabular data. This is a different API from [Quandl's time series data API](#).

## Datatables

General tabular data is stored in **datatables**. A datatable simply a table of data; a collection of data structured as one or more columns and rows.

Every datatable on Quandl can be identified by its unique Quandl code via the :datatable API route. The Quandl code for a datatable is the combination of its vendor\_code and its datatable\_code.

*GET https://www.quandl.com/api/v3/datatables/:vendor\_code/:datatable\_code/*

Here is a simple API call:

```
curl "https://www.quandl.com/api/v3/datatables/ZACKS/FC.csv?api_key=YOURAPIKEY" -X GET
```

This call would return the "FC" datatable, in its entirety as a CSV document. (You can replace .csv with .json or .xml).

## Filtering Parameters

You can customize the datatable object being returned by adding various filter parameters to your query. Filter parameters are unique to each datatable. The available filter parameters can be found within each datatable's documentation webpage. For example, the filter parameters for [ZACKS/FC](#) are:

Parameter	Required	Description
per_end_date	false	Retrieve data for a specific date, by setting a period end date in your query. Set the period end date with: per_end_date=yyyy-mm-dd
ticker	false	Retrieve data for a specific stock ticker by including the ticker symbol in your query.

per_type	false	Retrieve data for a specific time period. To retrieve quarterly data pass per_type=Q, to retrieve annual data pass per_type=A.
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A table's filterable columns are available at its metadata route, for example:

[https://www.quandl.com/api/v3/datatables/ZACKS/FC/metadata.json?api\\_key=YOURAPIKEY](https://www.quandl.com/api/v3/datatables/ZACKS/FC/metadata.json?api_key=YOURAPIKEY)

### Multiple Values

If you want to select multiple values for the same parameter, you can pass an array to the API by including the parameter followed by comma for each query.

For example, if you want to query for the tickers AAPL and MSFT and return columns for total revenue and company name:

[https://www.quandl.com/api/v3/datatables/ZACKS/FC.json?api\\_key=YOURAPIKEY&ticker=AAPL,MSFT&qopts.columns=tot\\_revnu,comp\\_name](https://www.quandl.com/api/v3/datatables/ZACKS/FC.json?api_key=YOURAPIKEY&ticker=AAPL,MSFT&qopts.columns=tot_revnu,comp_name)

### Filter Modifiers

You can modify certain filters by appending a modifier to the parameter in your API call.

Parameter filters are tabulated below:

Filter	Required	Description
.gt	false	Modifies the parameter to return values greater than the requested value.
.lt	false	Modifies the parameter to return values less than the requested value.
.gte	false	Modifies the parameter to return values greater than or equal to the requested value.
.lte	false	Modifies the parameter to return values less than or equal to the requested value.

For example, to modify the parameter per\_end\_date to retrieve data from AAPL after Jan. 1, 2015, use the following API call:

[https://www.quandl.com/api/v3/datatables/ZACKS/FC.json?api\\_key=YOURAPIKEY&ticker=AAPL&per\\_end\\_date.gt=2015-01-01](https://www.quandl.com/api/v3/datatables/ZACKS/FC.json?api_key=YOURAPIKEY&ticker=AAPL&per_end_date.gt=2015-01-01)

### Complex Example Breakdown

[https://www.quandl.com/api/v3/datatables/ZACKS/FC.csv?api\\_key=YOURAPIKEY&ticker=AAPL,MSFT&per\\_end\\_date.gt=2012-01-01&per\\_end\\_date.lte=2014-12-31&per\\_type=A&qopts.columns=ticker,per\\_end\\_date,tot\\_revnu](https://www.quandl.com/api/v3/datatables/ZACKS/FC.csv?api_key=YOURAPIKEY&ticker=AAPL,MSFT&per_end_date.gt=2012-01-01&per_end_date.lte=2014-12-31&per_type=A&qopts.columns=ticker,per_end_date,tot_revnu)

<a href="https://www.quandl.com/api/v3/datatables/">https://www.quandl.com/api/v3/datatables/</a>	API endpoint
<a href="#">ZACKS/FC</a>	Quandl Code (Vendor 'ZACKS', table 'FC')
<a href="#">.csv</a>	Return csv format
<a href="#">api_key=YOURAPIKEY</a>	Authentication
<a href="#">&amp;ticker=AAPL,MSFT</a>	Select all rows with ticker 'AAPL' or 'MSFT'
<a href="#">&amp;per_end_date.gt=2012-01-01&amp;per_end_date.lte=2014-12-31</a>	Select all rows with per_end_date greater than '2012-01-01' and less than or equal to '2014-12-31'
<a href="#">&amp;per_type=A</a>	Select all rows with per_type equal to 'A'. In this case referring to all annual records
<a href="#">&amp;qopts.columns=ticker,per_end_date,tot_revnu</a>	Show only the columns ticker, per_end_date and tot_revnu

### Metadata

To download the metadata associated with a datatable, append /metadata to your API request.

(You can replace .json with .csv or .xml in this request).

`curl`

```
"https://www.quandl.com/api/v3/datatables/ZACKS/FC/metadata.xml?api_key=YOURAPIKEY"  
-X GET
```

Example response:

```
<quandl-response>
  <datatable>
    <vendor-code>ZACKS</vendor-code>
    <datatable-code>FC</datatable-code>
    <name>Zacks Fundamentals Condensed</name>
    <description nil="true"/>
    <columns type="array">...</columns>
    <filters type="array">
      <filter>ticker</filter>
      <filter>per_type</filter>
      <filter>per_end_date</filter>
    </filters>
    <primary-key type="array">
      <primary-key>m_ticker</primary-key>
      <primary-key>per_type</primary-key>
      <primary-key>per_end_date</primary-key>
    </primary-key>
    <premium type="boolean">>false</premium>
  </datatable>
</quandl-response>
```

### Other Parameters

There are four general parameters that are common to all datatables:

Parameter	Required	Description
qopts.per_page	false	The number of results per page that will be returned.
qopts.cursor_id	false	Each API call returns a unique cursor id that identifies the next page of the datatable. Including the cursor id in your API call will allow you to page through the datatable. A null cursor id means that the current page is the last page of the datatable.
qopts.columns	false	Request data from specific columns by passing the qopts.columns parameter. If you want to query for multiple columns, include the column names separated by a comma.
qopts.export	false	Good for large queries, the data requested is packaged into a zip folder ready for download. More information in the next section.

# Datatable Bulk Download

## Overview

The new bulk download API for Datatables provides Quandl users with a tool to generate custom CSV files from the data contained in a Datatable. The files are created on demand based on the provided API parameters and are delivered asynchronously.

## Quick Example

**Note:** *the below examples must also include a valid API key (append `&api_key=YOUR_API_KEY`) or an error will be returned.*

All data from Zacks Equity Prices Datatable for AAPL,FB MSFT and AMZN between 1995 and 2005 (requested via HTML)

<https://www.quandl.com/api/v3/datatables/ZACKS/P?ticker=MSFT,AAPL,AMZN,FB&date.gte=1995-01-01&date.lte=2015-12-31&qopts.export=true>

**Note:** *You will only get access to ZACKS/P if you are subscribed to the ZEP database with the Zacks/P datatable. If not, please substitute "ZACKS/P" with the "vendor/datatable" code that you are subscribed to.*

All data from Zacks Fundamentals Condensed Datatable (requested via JSON)

<https://www.quandl.com/api/v3/datatables/ZACKS/FC.json?qopts.export=true>

# Usage

## API Signature

To use the bulk download API for datatables, simply append the query parameter **qopts.export=true** to any Datatables API request. When this parameter is present, rather than returning data synchronously in pages, Quandl will generate a single file containing all of the requested data, and return metadata containing the location and status of this file.

The API can be used via HTML, JSON, XML or CSV. The following is an example response in JSON:

```
{
  "datatable_bulk_download":{
    "file":{
      "link":"https://duf9k3nptkna3.cloudfront.net",
      "status":"fresh",
      "data_snapshot_time":"2016-06-08 14:02:50 UTC"
    },
    "datatable":{
      "last_refreshed_time":"2016-06-07 22:53:19 UTC"
    }
  }
}
```

## Attribute Definitions

- **file**
  - **link** - The string URL where the file can be downloaded, or null, if it is not present.
  - **status** - The string status of the requested file. The possible values are:
    - *Fresh* - the file is available and up to date
    - *Creating* - the file is not available, but it is being created
    - *Regenerating* - the file is available, but it is out of date and a new one is being created.
  - **data\_snapshot\_time** - the DateTime when file creation started.
- **datatable**
  - **last\_refreshed\_time** - The DateTime when the Datatable was last updated.

The generated **link** download URL is valid for 2 minutes. If your link expires, repeat your request to the API to generate a new **link** download URL.

## Limits

- Users must be logged in to access the bulk download API.
- Users are limited to requesting 10 bulk download files every hour.
- The generated file will include only the data that the requesting user is entitled to. If you do not have a subscription to the data, your file will include only preview data.