<u>(i)</u>

Socrata was acquired by Tyler Technologies in 2018 and is now the Data and Insights division of Tyler. The platform is still powered by the same software formerly known as Socrata but you will see references to Data & Insights going forward.

Learn more...

(https://www.tylertech.com/solutions/transformative-technology/data-insights)

## **Queries using SODA**

## Overview

API Endpoints (/docs/endpoints)

Row Identifiers (/docs/row-identifiers)

RESTful Verbs (/docs/verbs)

Application Tokens (/docs/app-tokens)

Authentication (/docs/authentication)

Response Codes & Headers (/docs/response-codes)

System Fields (/docs/system-fields)

CORS & JSONP (/docs/cors-and-jsonp)

Filtering & Querying

Simple Filters (/docs/filtering)

SoQL Queries (/docs/queries/)

Paging Through Data (/docs/paging)

SoQL Function and Keyword Listing (/docs/functions/)

Data Transform Functions (/docs/transforms/)

Data Formats (/docs/formats/)

JSON (/docs/formats/json)

GeoJSON (/docs/formats/geojson)

CSV (/docs/formats/csv)

RDF-XML (/docs/formats/rdf-xml)

Datatypes (/docs/datatypes/)

Checkbox (/docs/datatypes/checkbox)

Fixed Timestamp (/docs/datatypes/fixed\_timestamp)

Floating Timestamp (/docs/datatypes/floating\_timestamp)

Line (/docs/datatypes/line)

Location (/docs/datatypes/location)

MultiLine (/docs/datatypes/multiline)

MultiPoint (/docs/datatypes/multipoint)

MultiPolygon (/docs/datatypes/multipolygon)

Number (/docs/datatypes/number)

Point (/docs/datatypes/point)

Polygon (/docs/datatypes/polygon)

Text (/docs/datatypes/text)

URL (/docs/datatypes/url)

Other APIs (/docs/other/)

The Socrata APIs provide rich query functionality through a query language we call the "Socrata Query Language" or "SoQL". As its name might suggest, it borrows heavily from Structured Query Language (SQL) (https://en.wikipedia.org/wiki/Sql), used by many relational database systems. Its paradigms should be familiar to most developers who have previously worked with SQL, and are easy to learn for

those who are new to it.

## SoQL Clauses

SoQL statements are broken into "parameters" similar to clauses in SQL statements. Each clause can be expressed either directly as a URL parameter or as a SoQL statement. If a parameter is not specified, then the default is used. Click each parameter name for more details:

Parameter	Description	Default	In \$query
<pre>\$select (/docs/queries/select)</pre>	The set of columns to be returned, similar to a SELECT $$ in SQL $$	All columns, equivalent to \$select=*	SELECT
\$where (/docs/queries/where)	Filters the rows to be returned, similar to WHERE	No filter	WHERE
\$order (/docs/queries/order)	Column to order results on, similar to ORDER BY in SQL	Unspecified order	ORDER BY
\$group (/docs/queries/group)	Column to group results on, similar to GROUP BY in SQL	No grouping	GROUP BY
<pre>\$having (/docs/queries/having)</pre>	Filters the rows that result from an aggregation, similar to HAVING	No filter	HAVING
<pre>\$limit (/docs/queries/limit)</pre>	Maximum number of results to return	1000 (2.0 endpoints: maximum of 50,000; 2.1: unlimited » (/docs/endpoints))	LIMIT
<pre>\$offset (/docs/queries/offset)</pre>	Offset count into the results to start at, used for paging	0	OFFSET
\$q (/docs/queries/q)	Performs a full text search for a value.	No search	N/A
\$query (/docs/queries/query)	A full SoQL query string, all as one parameter	N/A	N/A
\$\$bom (/docs/queries/bom)	Prepends a UTF-8 Byte Order Mark to the beginning of CSV output	false	N/A

Note that for equality comparisons, the \$where clause can be replaced with using the column name as the query parameter. See filtering (/docs/filtering) for more details.

These parameters can then be directly added to the API endpoint. For example, here is how you would query the USGS Earthquakes datasets for quakes of greater than 3.0 on the Richter scale:

In examples, we will leave the parameters as is, but it is best to URL Encode (https://en.wikipedia.org/wiki/Url\_encode) your parameters to ensure they are parsed correctly.

(http://creativecommons.org/licenses/by-nc-sa/3.o/deed.en\_US). Licensed by Tyler Technologies (https://www.tylertech.com/solutions/transformative-technology/data-insights) under CC BY-NC-SA 3.0 (http://creativecommons.org/licenses/by-nc-sa/3.o/deed.en\_US). Learn how you can contribute! (/contributing)