



Research Quality Data, Delivered on Demand to Market Surveillance Applications

Driving Surveillance with TickAPI™

Tick Data's TickAPI™ solution allows financial market surveillance applications to summon Tick Data's institutional quality research data on demand with a straightforward, secure, web request. Global data is available for license on a per symbol basis eliminating the need to store terabytes of full market trade and quote data. Further, the product is priced as a "consume and drop" data service where data is always available on demand with no local storage requirements. In short, request data from your application via an https request, perform your analysis, save the results, drop the market data, and move to the next market event or execution to evaluate.

Pair With Our Symbol Map Solution To Take Corporate Action Headaches Out of Market Surveillance. *Is your OMS applying subsequent symbol changes to stored executions? Did you execute on symbol A but the company now trades as symbol B?* TickAPI™ is paired with Tick Data's symbol map solution to resolve and map symbol and identifier changes to get you to the correct security quickly.

The Symbol Map Solution features an API call or a web-based subscription service whereby you can pass the symbols/CUSIPS (or ISINS, where appropriate) traded and the dates of those trades and we will return the identifiers of that data today. We can convert any [identifier,date] pair into another identifier. For example:

[cusip,date] pair to get the symbol on that date.

[current symbol, date of execution] pair to get the old symbol trading on that date.

(C, 04/13/1996) → Chrysler (Tick Data ID #1208, Last CUSIP= 171196108, Last Symbol = C)

(C, 06/17/1999) → Citibank (Tick Data ID #1335, Last CUSIP= 172967424, Last Symbol = C)

What You Get As A Surveillance Solution

- **Access to Global, Multi-Asset Class Market Data on Demand.** Users are permissioned for our entire global data archive or trade, quote, and NBBO data. Access content and pay only for data you need on a per symbol basis. Mix and match securities from global exchanges and across asset classes.
- **Research-Ready Time Series Data or As-Traded Data by Day.**

- **Hosted Data Solution.** No need for you to host terabytes of data. Get the data you need when you need it with all recent corporate actions or contract rolls applied. Use and drop.
- **Speed.** TickAPI™ leverages the scalability of the AWS™ cloud to automatically scale our streaming data service based on demand.
- **Custom Format.** Specify fields, formats, and structures just as ascii or JSON.
- **Access to Tick Data's Symbol Map Product.**

Evaluation Process

I. Sandbox Access for Development

Start here with our sandbox: <https://sandbox-tickapi.tickdata.com/>

user_id: APIdemo
password: TickWriteAPI

** Data in the sandbox is limited to December, 2013, but includes global equities, futures, indices, and fx.*

II. Use Our Script Builder to Assist in Building API Calls with Data to Your Specification - Build request scripts right away by using our web-based Request Builder to construct callable requests:

<https://sandbox-tickapi.tickdata.com/?start=API%20Request%20Builder>

Or, build your own requests parameter-by-parameter:

<https://sandbox-tickapi.tickdata.com/?start=API%20Parameters>

III. Production

Move to our production site when ready: <https://tickapi.tickdata.com>

user_id: [your Tick Data username]
password: [your Tick Data password]

Architecture

TickAPI™ uses the same engine as our TickWrite™ software application. Virtually any data request you can make of TickWrite™, you can make of TickAPI™. You now have the power to allow us to build your time series and data manipulations (split adjustments, bar building, vwap, etc) and stream the result directly to you without you storing and managing market data locally.

All requests are RESTful HTTPS requests that return csv data. Simply put, this allows you to stream the result set directly in analytical tools, such as OneTick, R, Matlab, MongoDB, or pull the data directly into your own C, Python, or Java code. Code examples are available.



Programatically Request As-Traded or Time Series Data via our API

STREAM

For single instrument requests, stream requests can be fed directly into third party tools such as R, Matlab, Octave or other databases.

DOWNLOAD

For more complex requests, of multiple instruments, download requests complete as zip files on a Tick Data server and can be obtained via HTTP request.

SITE

RESTful access to Tick Data's Library

Simple csv output that can be streamed directly into R, Matlab, Octave or other tools.



```
...tickdata.com/stream?COLLECTION_TYPE=COLLECTION_TYPE.US_TED
&EXTRACT_TYPE=COLLECTOR_SUBTYPE_US_TRADES
&START_DATE=12/05/2013
&END_DATE=12/06/2013
&REQUESTED_DATA=MMM
```

Call our web service with the request you build on your own or via our Request Builder and you have access to our global equity, futures, forex, and index data. All calls are secured via HTTPS to protect your call and the data. After using the **Script Builder** a few times, you will be quickly able to fashion your own requests within your code base to get the data you need when you need it with no humans in the way.

TickAPI™ Requests

/stream

The core of our Hosted Data Solution and main gate to requesting streaming mapped time series data, the /stream call requires as few as four parameters: COLLECTION_TYPE, EXTRACT_TYPE, REQUESTED_DATA, Time Frame (either START_DATE & END_DATE or DAYS_BACK).

Example:

```
https://tickapi.tickdata.com/stream?COLLECTION_TYPE=COLLECTION_TYPE.US_TED
&EXTRACT_TYPE=COLLECTOR_SUBTYPE_US_TRADES
&START_DATE=12/05/2013
&END_DATE=12/06/2013
&REQUESTED_DATA=MMM
```

/

Sample TickAPI Scripts

I. 5 Days of trade data on IBM in the format Date, Time, Price, Volume, Exchange Code:

https://sandbox-tickapi.tickdata.com//stream?COLLECTION_TYPE=COLLECTION_TYPE.US_TED&EXTRACT_TYPE=COLLECTOR_SUBTYPE_US_TRADES&START_DATE=12/01/2013&END_DATE=12/5/2013&DATE_FORMAT=MM/dd/yy&TIME_FORMAT=HH:mm:ss.SSS&REQUESTED_DATA=3766|IBM&SELECTED_FIELDS=DATE_FIELD|TICK_TIME_FIELD|PRICE_FIELD|VOLUME_FIELD|EXCHANGE_CODE_FIELD

A typical implementation would be to parameterize **symbol** and **start/end date**, embed this code in an application, and iterate through a symbol list generated by another application.

Start/end date replaced with “Last n Days” for users interested in time series across symbols of a common length of time (10 days in this example):

https://sandbox-tickapi.tickdata.com//stream?COLLECTION_TYPE=COLLECTION_TYPE.US_TED&EXTRACT_TYPE=COLLECTOR_SUBTYPE_US_TRADES&DATE_FORMAT=MM/dd/yyyy&TIME_FORMAT=HH:mm:ss.SSS&REQUESTED_DATA=3766|IBM&SELECTED_FIELDS=DATE_FIELD|TICK_TIME_FIELD|PRICE_FIELD|VOLUME_FIELD|EXCHANGE_CODE_FIELD&DAYS_BACK=10

II. Quote Data – AAPL, Last 3 Days, No Split Adjustment.

Fields: Date, Time, Bid, Bid Size, Ask, Ask Size, Bid Exchange, Ask Exchange, NBBO Indicator, Quote Cancellation Code

https://sandbox-tickapi.tickdata.com//stream?COLLECTION_TYPE=COLLECTION_TYPE.US_TED&EXTRACT_TYPE=COLLECTOR_SUBTYPE_US_QUOTES&DATE_FORMAT=MM/dd/yyyy&TIME_FORMAT=HH:mm:ss.SSS&REQUESTED_DATA=24|AAPL&SELECTED_FIELDS=DATE_FIELD|TICK_TIME_FIELD|PRICE_FIELD|VOLUME_FIELD|EXCHANGE_CODE_FIELD|MINUTE_BAR_TIME_FIELD|OPEN_PRICE_FIELD|HIGH_PRICE_FIELD|LOW_PRICE_FIELD|CLOSE_PRICE_FIELD|BID_PRICE_FIELD|BID_SIZE_FIELD|ASK_PRICE_FIELD|ASK_SIZE_FIELD|BID_EXCHANGE_FIELD_US|ASK_EXCHANGE_FIELD_US|NBBO_INDICATOR_FIELD|QUOTE_CANCEL_CORRECTION_FIELD&DAYS_BACK=3&SPLIT_ADJUST=TRUE

This script drives the majority of our Surveillance and TCA customers where data is requested the day before, of, and after an execution. The data is not adjusted for splits. This script is usually parameterized for symbol (AAPL, in this example) and date and iterated through a listed of executions or market events to be evaluated.

For more information about of Surveillance Solutions contact Tick Data sales at:

Dorraine Burrel
dburrel@tickdata.com
(212) 653-0073

Neal Falkenberry
tnf@tickdata.com
(703) 757-1370