MOVING TICK HISTORY DATA TO THE CLOUD

Discover how your firm could reduce its total cost of ownership more than 90% and increase agility through shifting to the cloud.

Tick history on-premises data management costs add up. According to a recent Refinitiv survey, for every $1 spent on financial market data, a further $8 is spent on processing, storing and transforming that data before it can be analysed. Fundamental costs of on-premises data management for tick history include:

- Compute server footprint
- Storage hardware
- Off-premises storage backup
- Relational time series database technology fees
- Human capital

These expenses mount up quickly, and those costs are expected to grow over time, as the volume of data stored accumulates. In total, for firms that want to continue storing their tick history data on premises going forward, the cost is more than $110 per gigabyte of stored data. When working with Refinitiv® Tick History in Google Cloud Platform™, the cost can be as low as $4. These savings are made through:

- Data centre rationalisation
- Hardware decommissioning
- Resource and infrastructure reallocation
- Leveraging of new cloud capabilities for data science and analytics
- Migrating workflows to the cloud

To help financial organisations understand how much they could save by shifting to the cloud, the Refinitiv Tick History team is able to perform analysis on an individual firm that will uncover the scale of the existing costs associated with on-premises tick history data, versus adopting Refinitiv Tick History data in Google Cloud Platform.

REFINITIV ®

A new data management approach

Refinitiv Tick History is a historical archive of real-time pricing data, covering OTC and exchange-traded instruments, from more than 500 trading venues and third-party contributors. Over 8PB compressed of historical data, our tick history archives hold more than 70 million active and retired securities with data coverage that goes back to 1996.

The Refinitiv Tick History in Google Cloud Platform is a managed service database that contains the full depth and breadth of Refinitiv Tick History data. Firms no longer need to clean, normalise and manage the tick history data – Refinitiv does that for them.

In addition, firms can query this database directly using the Google® BigQuery™ engine, either via the Google-provided GUI or via API from the firm's preferred environment (e.g., Python, Java, SQL) and query language, taking advantage of the large data store and cloud computing. After running analytics, firms can leave the results in the cloud, move them to other clouds that the firm has or into a business intelligence system that they may use – query in the cloud, analyse in the cloud.

So, by using Google BigQuery engine, analytics that would normally take hours to compute now take seconds. See the table on this factsheet for examples.

See the difference in your firm

The Refinitiv Tick History team is able to provide firms with an in-depth analysis of the costs associated with their current on-premises data management approach, and also to provide a free trial to Refinitiv Tick History in Google Cloud Platform. Engaging with the data can help firms understand how they can apply it to their own use cases across the front, middle and back offices.

Contact the team for a free analysis and a free trial at: https://www.refinitiv.com/en/financial-data/market-data/tick-history

See the table for performance statistics:

Algorithm/test	Description	Result	Est. compute cost
VWAP	VWAP = (Σ(Price * Volume))/(Σ Volume) on NYSE, one day of tick data (microsecond updates) – 165 million rows computed	1.7 seconds	$0.00072
OHLC (bar)	Open-High-Low-Close interrogated all of NYSE for 15 days at 75-second intervals – four million+ rows of data computed	27 seconds	$0.02
Latency/ performance (VWAP/TWAP)	U.S. desktop queried EU tick data: 150 million rows; ran two concurrent algorithms on same data set; displayed results on iPhone® in U.S. over LTE	2.7 seconds to iPhone displaying 50,000+ rows of data	$0.0014
Local use	Two algorithms ran concurrently, three-year date range on 155 million rows in the EU, exporting 5,000 rows of results to local Microsoft® Excel® instance in the U.S.	5 seconds	$0.00062
Intraday summaries	LSE at 10-second intervals; single day of data – (Trades & Bid/Ask Quotes (difference)) + volume; 10 GB analysed and ordered in sequence; 1.8 million records produced	23 seconds	$0.02
	LSE at 10-second intervals – one month of data – (Trades & Bid/Ask Quotes (difference)) + volume; 255 GB analysed and ordered in sequence; 4.75 million records produced	59 seconds	$0.05
	LSE at 10-second intervals; one year of data – (Trades & Bid/Ask Quotes (difference)) + volume; 2 TB analysed and ordered in sequence; 475 million records produced	2 minutes 07 seconds	$10.00
Real time	Last hour VWAP on entire NYSE < 10-second delay vs. real time	1.9 seconds	$0.0025

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