

DATA

SPEAKERS

Extracting Analytics with BigQuery

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DataMine

Historical Data



Marketplace for discovering, purchasing, and receiving historical data along with ongoing subscriptions

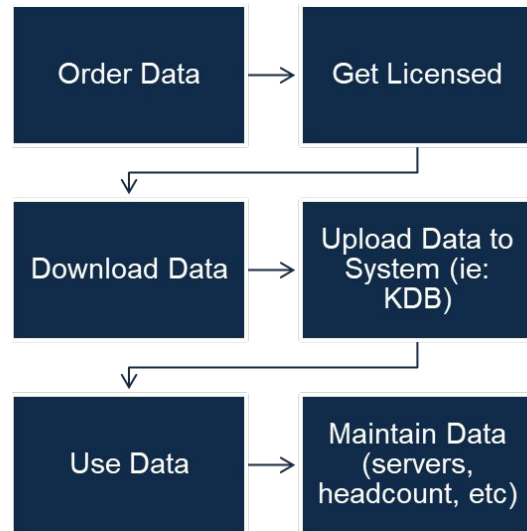
- 50+ datasets across diverse markets
- Flat files (CSV or JSON)
- Transparent pricing, payable by either credit card or invoice

Delivery options include:



- S3 transfer
- SFTP
- File Download API
- Website browser
- QueryAPI for order book data

Customer Experience



CME Market Data on Google Analytics Hub

Efficiently query and share data between teams in real time, reliably, and cost efficiently through Google Analytics Hub, a data exchange that uses cloud-based access and BigQuery data warehouse functionality to support business intelligence activities.



Google
Big Query

Find specific data quickly

- Get direct access to complete history of CME historical market depth data since 2014, without the burden of downloading, warehousing, transferring, or pre-processing data.

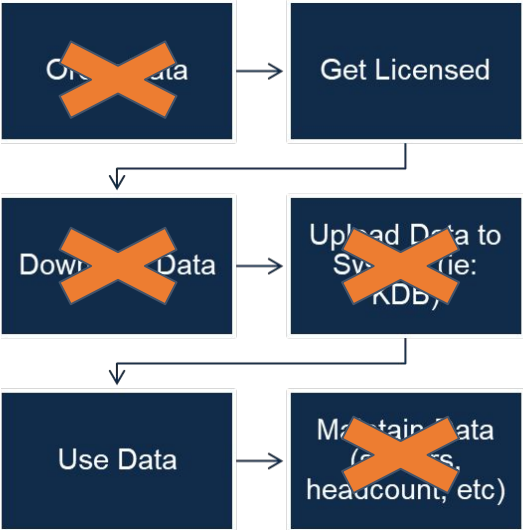
Run BigQuery analytics

- Apply built-in machine learning and advanced logic to analyze large, complex datasets interactively, back test strategies, or run SQL database queries and receive returns in seconds.

Save costs, share data efficiently

- Most efficient way to share large databases such as order order book content, directly to a customer's technology platform.
- Zero storage costs, only pay as you compute.

BigQuery Workflow



Datasets Available

Dataset (size)	Description	Common Use Case	Fees
Referential Data Warehouse	Product and instrument data for BrokerTec, EBS and CME Group- cleared markets	Analysis on product codes, min tick, and instrument life cycle dates	NA
Market Depth	Market data going back to 2014, ten levels deep for futures, five levels for options. Also includes- settlements and volume.	Order book recreation, Technical Analysis, Quantitative Analysis	DCM: \$3,500/pm All DCMS: \$10,000/pm
Block Trades	Time and sales for privately negotiated trades	Input for technical and quantitative analysis	DCM: \$1,200/pm All DCM: \$3,375/pm

The Quant Experience using CME Market Data on Google Analytics Hub and Google Cloud



Aaron Walters
Exchange & Ecosystem
Strategy

Recent Blogs



Scalable electronic trading on Google Cloud: A business case with BidFX (<https://tinyurl.com/yc4bhfp8>)



Digital exchanges achieving performance, scale, and resilience with Google Cloud (<https://tinyurl.com/499kfxhp>)



Google BigQuery

Google Cloud's **enterprise data warehouse** for analytics

Gigabyte to **petabyte scale** storage and SQL queries

Encrypted, durable,
And highly available

110 TB
processed

every second
(~3.5 zettabytes / year)

350 PB
shared

On an average week
across 6,000 organizations

BigQuery Studio

A collaborative data workspace for all data practitioners to accelerate data to AI workflows



Single unified workspace for data analyst, data scientists and data engineers to collaborate



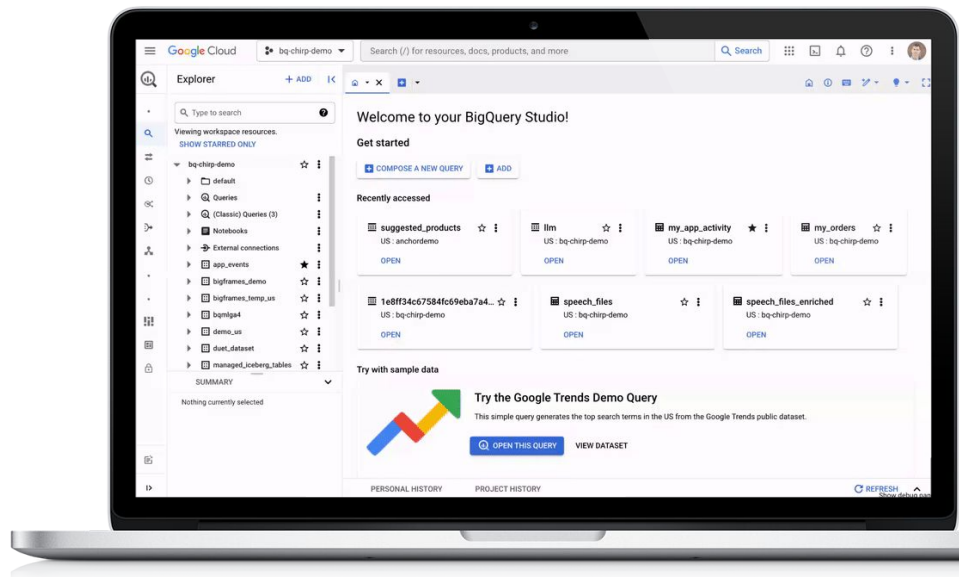
Use **SQL, Python, Spark, Javascript and natural language** for analytics regardless of data scale, format and location



Improved collaboration by extending software development best practices to data and code



Maximize productivity by collaborating with an AI-powered chat and code assistant

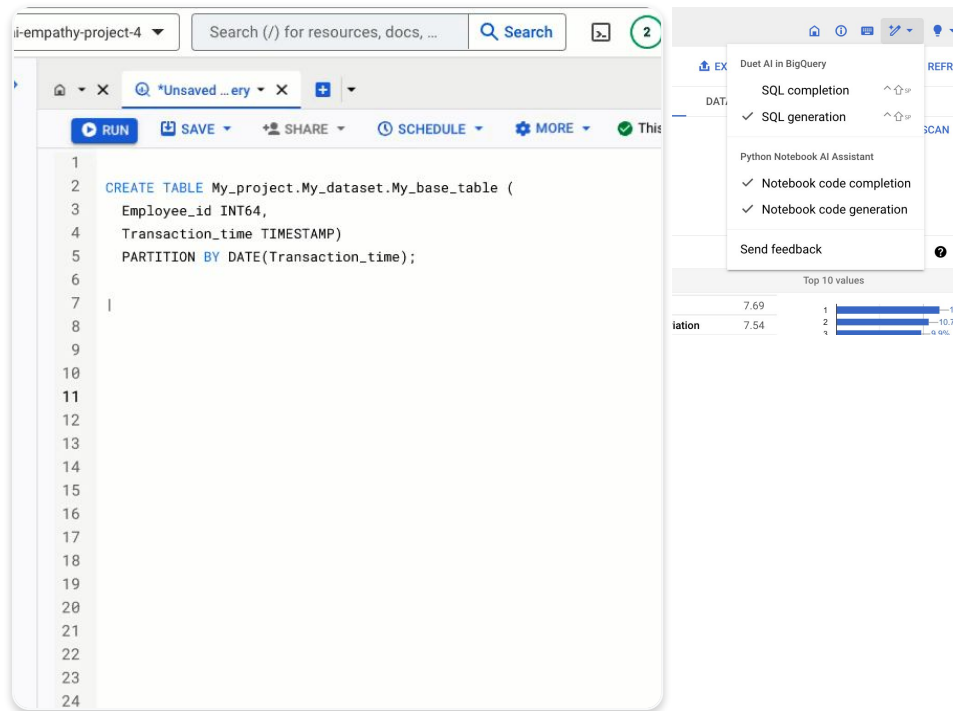


Gemini Business in BigQuery

Contextual developer assistance while writing code in the IDE

Example Use Cases:

- Real time code completions
- Code Auto Generation from Comments
- Code to text translations (Code summarization)
- Autofix suggestions within IDE



Thank you