LSEG Overview of low latency solutions

STAC Summit

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LSEG

LSEG Data & Analytics

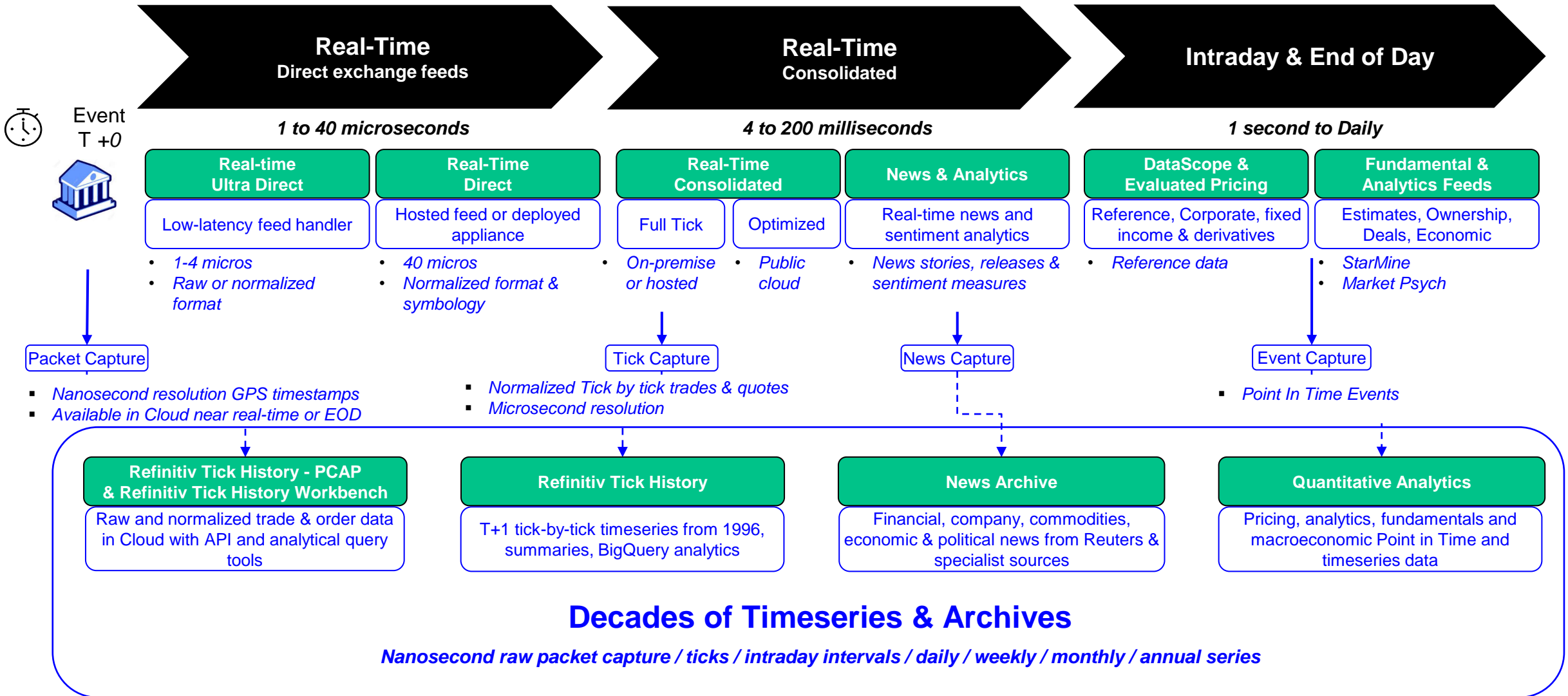| Data & Analytics	Capital Markets	Post Trade

London Stock Exchange Group (LSEG) <u>acquired MayStreet,</u>

a leading market data solutions provider in May 2022, now known as Low Latency Group.

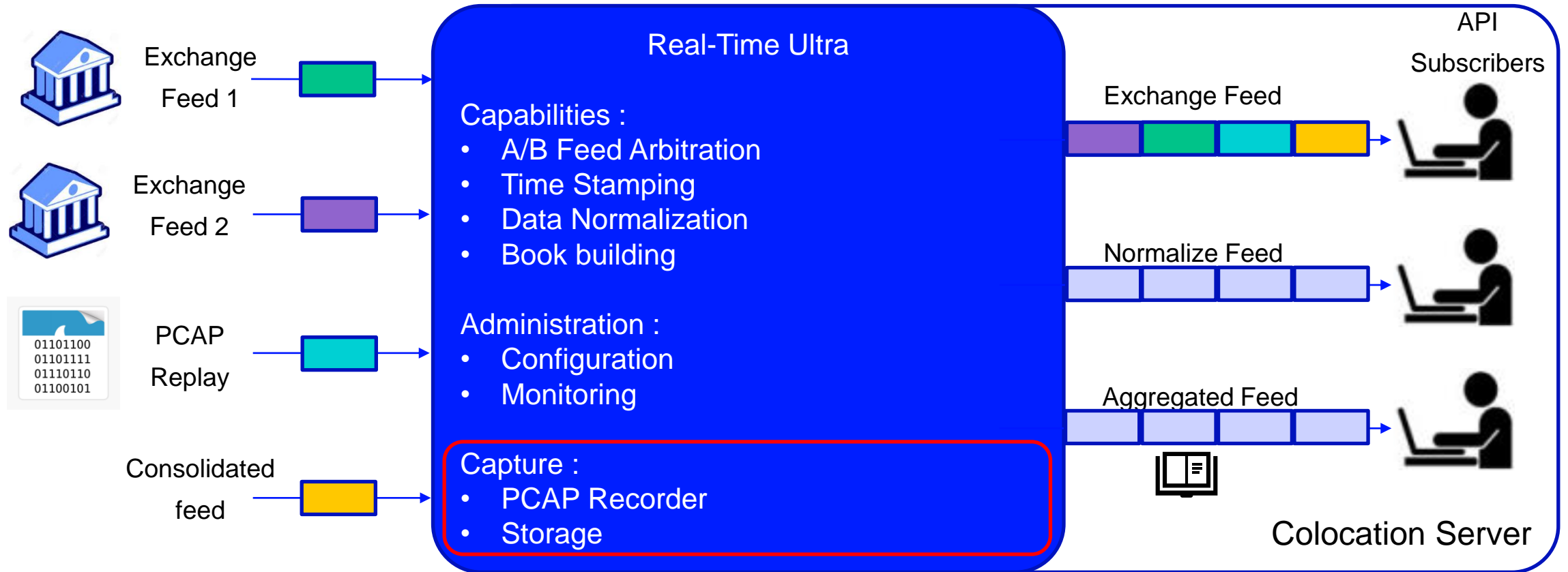**The MayStreet acquisition significantly expanded LSEGs low latency and historical data offerings.**

Customers can now benefit from a best-of-breed solution leveraging LSEGs global presence, local expertise and vast market coverage.
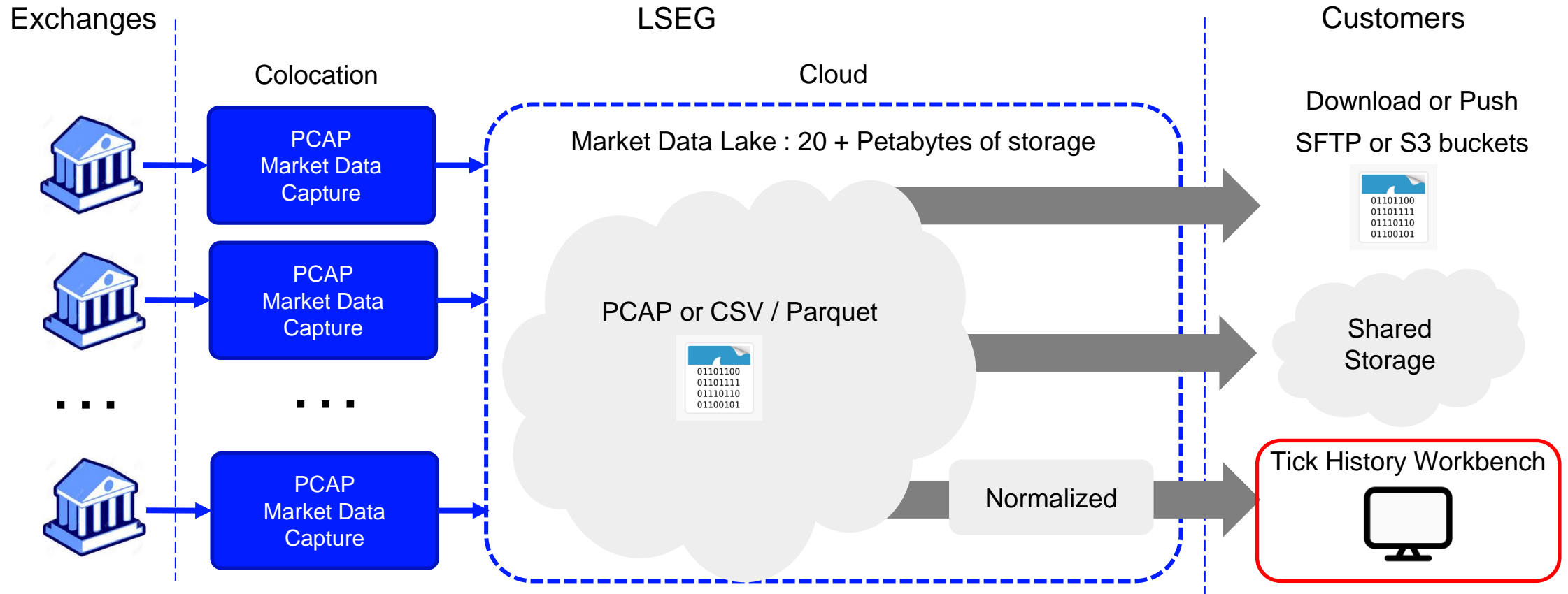
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LSEG Latency spectrum

Event
T +0

Real-Time
Direct exchange feeds

Real-Time
Consolidated

Intraday & End of Day

1 to 40 microseconds

4 to 200 milliseconds

1 second to Daily

Real-time Ultra Direct	Real-Time Direct	Real-Time Consolidated		News & Analytics	DataScope & Evaluated Pricing	Fundamental & Analytics Feeds
Low-latency feed handler	Hosted feed or deployed appliance	Full Tick	Optimized	Real-time news and sentiment analytics	Reference, Corporate, fixed income & derivatives	Estimates, Ownership, Deals, Economic

- *1-4 micros*
- *Raw or normalized format*

- *40 micros*
- *Normalized format & symbology*

- *On-premise or hosted*

- *Public cloud*

- *News stories, releases & sentiment measures*

- *Reference data*

- *StarMine*
- *Market Psych*

Packet Capture

Tick Capture

News Capture

Event Capture

- *Nanosecond resolution GPS timestamps*
- *Available in Cloud near real-time or EOD*

- *Normalized Tick by tick trades & quotes*
- *Microsecond resolution*

- *Point In Time Events*

Refinitiv Tick History - PCAP & Refinitiv Tick History Workbench	**Refinitiv Tick History**	**News Archive**	**Quantitative Analytics**
Raw and normalized trade & order data in Cloud with API and analytical query tools	T+1 tick-by-tick timeseries from 1996, summaries, BigQuery analytics	Financial, company, commodities, economic & political news from Reuters & specialist sources	Pricing, analytics, fundamentals and macroeconomic Point in Time and timeseries data

Decades of Timeseries & Archives

Nanosecond raw packet capture / ticks / intraday intervals / daily / weekly / monthly / annual series

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Not STAC benchmarks

Real Time Ultra Feed Handlers

Lowest latency software feed handler in the industry (single digit)

Exchange Feed 1

Exchange Feed 2

PCAP Replay

Consolidated feed

Real-Time Ultra

Capabilities :
- A/B Feed Arbitration
- Time Stamping
- Data Normalization
- Book building

Administration :
- Configuration
- Monitoring

Capture :
- PCAP Recorder
- Storage

API Subscribers

Exchange Feed

Normalize Feed

Aggregated Feed

Colocation Server

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PCAP Distribution and Analytics

Reduce the total cost of ownership to store market data PCAP

Tick History Workbench

In the cloud, analytics development environment, powered by historical market data.

Core :

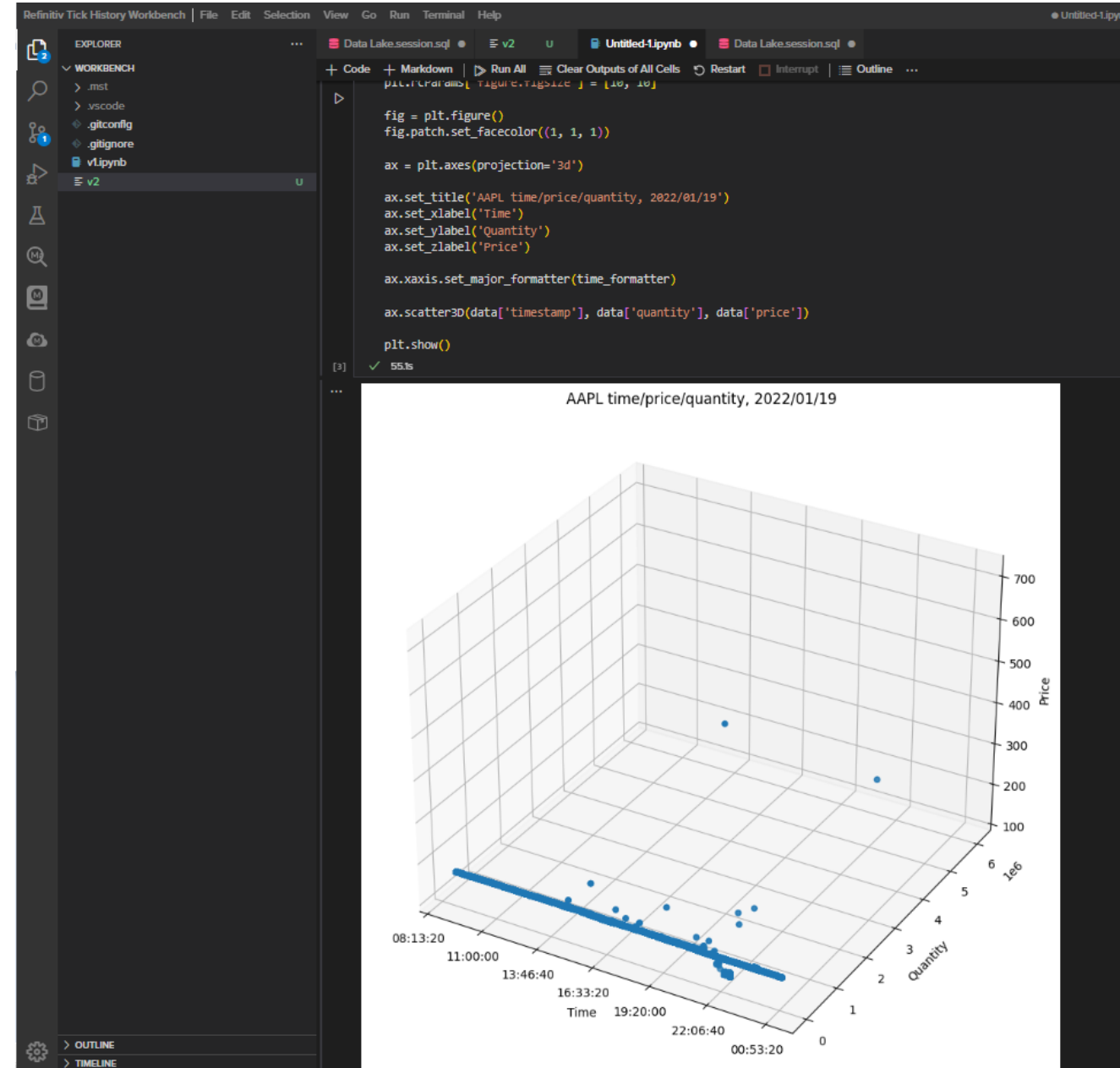- Direct Access to LSEG datasets using Python and SQL in an interactive IDE.

Performance :

- Achieve performance objectives with optimized cluster parallelization.

Time to Market :

- Same normalization for research and production : Ultra and Workbench.

Flexible :

- Python / Jupyter notebooks.
- GitHub compatible.
- Other data source compatible.

Summary :
- Low Latency Software Feed Handlers
- Raw PCAP, normalized Data
- Cloud based development Environment

Questions ?

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