ICE DataVault
Enterprise Integration of Historical Data

A large North American investment bank wanted to streamline their historical data from fragmented, department based data repositories to a centralized data warehouse that supports their core business needs globally. This industry leading financial institution selected ICE to provide a robust, global architecture including both normalized and raw historical data to enable the diverse needs of a global investment bank, all via a cloud-based architecture.

About the Client

A top American bank engaged with ICE for an enterprise solution for historical tick data covering various departments, including Electronic Trading, Futures Trading, Prime Brokerage and Execution Services. Working with the Managing Director of Electronic Trading Solutions and the Electronic Product teams, ICE identified multiple critical users, including quantitative traders, who required high-quality, historical tick-by-tick data across a broad range of markets.
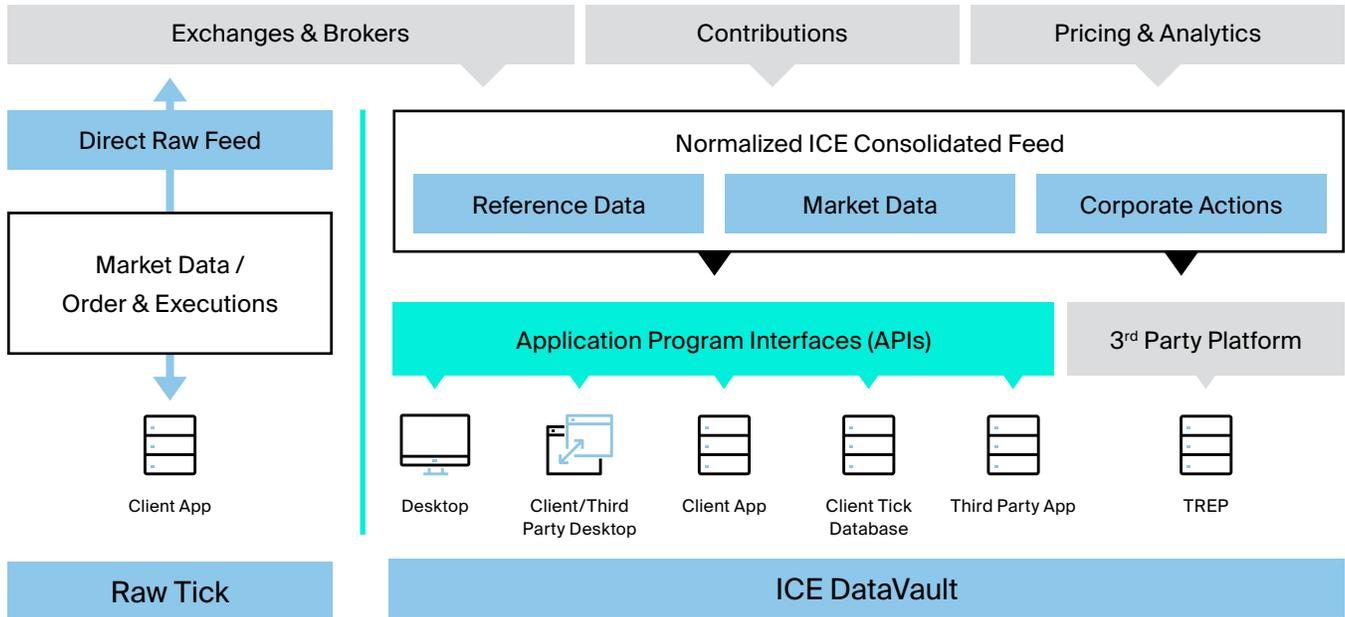
The Challenge

The bank's Global Markets division managed many disparate historical data repositories which could not be shared between departments. This fragmented approach led to data and cost duplication and caused significant development and maintenance overhead in having to support multiple services, interfaces and data formats from various vendors. Instead of sending indications of interest and request for quotes directly to the market, the bank aimed to identify existing liquidity from other departments, which proved difficult with the existing set-up. Additionally, the bank did not have a cloud strategy around data warehousing and providing Data as a Service (DaaS), leading to significant and growing operational costs.

The ICE Solution

- A comprehensive, cloud-based, cross-asset tick data solution, including Raw Tick History data captured and timestamped in co-location for select venues, in combination with broad, normalized historical data through ICEDataVault

- Backfill history for 200+ global venues across listed equities, futures, options and indices going back 10+ years was provided for the majority of markets

- Access to full depth of book history made accessible via the cloud, enabling subscribers to access directly from their applications, data science tools and business intelligence tools without the need to deploy their own tick infrastructure

- Significant pre-signature testing of market data allowed the client to validate the quality of service to ensure it met the standard required for Electronic Trading of Equites and Futures (e.g. inclusion of high-precision timestamps, presence of critical data fields, level of normalization provided, etc.)

- Client gained knowledge through the ICE DataVault service, improving their understanding of the correlation between requirements across listed assets (spread, auto-hedging), with content breadth and enrichment of data, including Market-by-Order and Market-by-Price fields (high demand from front office users)

- ICE offered a multi-year partnership, with a flexible and transparent commercial model, allowing the client to scale up as needed with full cost predictability in mind

- A coordinated pre-sales and post-sales development effort between ICE, the bank and their existing relationship with a third-party tech analytic platform provider ensured a smoother transition from old to new

Solution Architecture

Exchanges & Brokers	Contributions	Pricing & Analytics

Direct Raw Feed

Market Data /
Order & Executions

Client App

Normalized ICE Consolidated Feed

Reference Data	Market Data	Corporate Actions

Application Program Interfaces (APIs)

3rd Party Platform

Desktop	Client/Third Party Desktop	Client App	Client Tick Database	Third Party App	TREP

Raw Tick

ICE DataVault

The Results

- **A firm-wide global solution —** The cloud-based deployment allows multiple departments across the globe to use consistent, high-quality historical and on-going tick data serving multiple asset classes and applications

- **Improved functionality —** An optimized combination of deep, raw and highly normalized back histories, covering both level 1 and level 2 (market depth) data now available to users across the organization

- **Reduced TCO —** All customer's existing tick data use cases are better catered for through a single interface and normalized content represented by a single data model; the overhead of supporting various vendor relationships and commercials, interfaces and data models has disappeared

- **Cost Transparency —** A significantly simplified commercial model allows for full cost transparency and ensures future cost predictability as usage increases over time

- **Direct Cloud to Cloud Transfers —** Large amounts of historical can be transferred at high speed because the customer downloads the data directly from the ICE cloud buckets using cloud native APIs