



it's about time

Kx for CAT

Nine years ago, our industry was confronted with a stark reality; our regulator's ability to comprehensively surveil the markets using OATS data was proven not up to task. A new paradigm was needed, and the Consolidated Audit Trail (CAT) was born. The Securities Exchange Commission's Regulation 613, the CAT NMS Plan, is the most significant regulatory reporting overhaul in years.

A New World Order

For the past decade, global regulatory reform has pre-occupied compliance, technology, and business leaders alike. Advances in the sophistication of execution venues and trading technologies, coupled with several high-profile market dislocating events, have combined to prompt our regulators to review their surveillance objectives and the means to achieve them. The net result is that many existing regulations have either been overhauled or replaced. Reg 613, or CAT, is the newest change. It requires that US broker-dealers present the CAT Plan Processor with **options data** in addition to equities data, and include **far more precise routing detail** than OATS. It further requires that broker-dealers affiliate order events with the **originating orders beneficial owner identity**; all changes contribute to the goal of helping the regulators achieve their desired level of oversight in this new world order.

Broker-dealers intent on knowing as much as the regulators about the trading activities of their clients will choose to **surveil off this new CAT data** as well. It's that simple.

Kx is Ready

Kx presents Kx for CAT, a comprehensive reporting ecosystem.



At a Glance

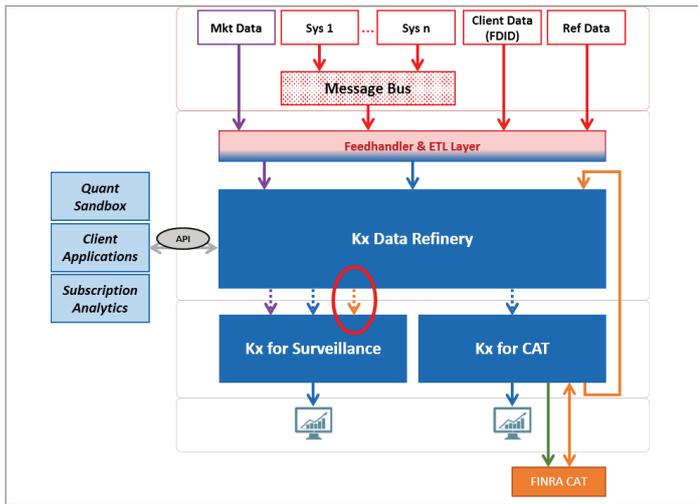


Kx for CAT is a fully auditable CAT reporting ecosystem that provides the Analyst with an elegant toolset for report preparation, batch error remediation, and business intelligence.

The Kx Advantage

Kx for CAT is designed to efficiently address the challenging realities of CAT data management. The Analyst will complete each day's report submission in **less time** and with **higher confidence** in its accuracy.

- It contains an extensible data model coupled with a CAT schema ETL engine to **custom fit each broker-dealer's unique trading scenarios** to the CAT format,
- A **pre-submission error detection engine (EDE)** so your report can be quickly corrected while your IT team fixes the upstream problem,
- Investigation tools and visualizations for **forensic root cause analysis**,
- Historical and real-time **batch error remediations**,
- **'Flow Templates'** to document and justify your reporting interpretations,
- Multiple **reconciliation checks, validation checks, and summary reports**, for better business intelligence,
- A **case management tool** and audit log for 'who did what, when' accountability,
- **Granular User entitlements to the field level**, fully compatible with enterprise-wide data permissioning protocols.



A Modular Solution Stack

Kx Data Refinery: the underpinning platform

A Kx for CAT Solution is built upon Kx Data Refinery, our highly performant data normalization and distribution platform. Refinery is able to ingest and process massive volumes of either batch files or streaming data at industry record speed thanks to our core time-series database, kdb+ (see STAC results @ <https://stacresearch.com/kx> for kdb+ performance benchmark results). It presents a solution-agnostic backbone that manages simultaneous access to real time data, historical data, and related streaming analytics. A full range of asset classes across a global set of OTC and exchange traded instruments are supported.

Kx Data Refinery is expert at managing the three capital markets datasets that matter: market data, order event data, and reference data. Centralized data cleansing and normalization means downstream solutions (such as Kx for CAT, Kx for Surveillance, and Client applications) can focus on the problems they are purposed to solve, without duplicating data or replicating the complex and expensive task of ongoing big data management.

Kx for Surveillance: a case example of data leverage

Kx for Surveillance operates both stand-alone and in tandem with Kx for CAT and can be easily configured to your operational model. First and second line defense analysts appreciate the improved accuracy and reduced false positives of our real time risk-based regulatory solution. Because Kx has the capability to look across vast amounts of data to find anomalies, business users benefit from a holistic yet thematic top-down approach, which provides a broader intelligence base for monitoring market abuse.

About Kx

The Kx technology is an established and trusted standard for complex analytics on massive-scale streaming data and has been a software leader in Capital Markets trading, surveillance and research for over two decades. Kx is now serving new verticals, scaling effortlessly to solve challenges presented by the 'Internet of Things' as the solution of choice in Pharma, Retail, Utilities and High-Tech Manufacturing industries.

Kx for CAT

CAT reporting will evolve over years as additional Phases are introduced, and error rates will ebb and flow in sync with each change. A proper approach will be designed and built with procedural governance in mind: a complete and auditable solution that manages the reporting complexities of your firms unique trading workflows.

Kx for CAT is that solution. As a comprehensive ecosystem, it provides Analysts with a set of tools to create CAT reports and receive exception files, conduct forensic investigations, batch error remediations and report re-submissions. All data manipulations are managed through a granular entitlements layer and case management tool which captures the audit log of who did what to the data, and when.

It's equally important that your solution reflect a foundational data governance model, a key design principle of Kx for CAT. Our regulatory audit response toolkit includes functionality to record your firm's complete set of trading workflows and error remediation processes. You'll justify your CAT reporting interpretations with 'Flow Templates' – a feature that allows your Analyst to identify a trading workflow and affiliate it with the appropriate section(s) of the 'Member Reporting Technical Specification', 'FAQ', and related 'Reporting Scenarios'. It's a critical part of your answer to the regulatory inquiry: "Why did you report this way?"

It's Your Solution

With Kx for CAT, we work in concert with your team to adapt your firm's data dictionary and trading flows to the CAT reportable schema. Our software solution provides a means for managing the multiple necessary rules engines that govern CAT transformations and linkages, data validation, error detection and error remediation, as well as various automations. During setup Kx staff will train your IT staff on the platform's ongoing operation, as well as train your Analysts on their daily use of our Kx for CAT rules engines and reporting solution.

Kx is Ready

CAT is a clear driver in the evolution of Capital Markets enterprise data management for reg reporting, and the level of detail in this data is a game changer. Your clients trading history with you is, at its essence, your unique and proprietary intelligence store. It can tell you how and when your clients value your execution services, and it can point the way to how you might better service them and earn a greater wallet share of their business. Whether your objective is to simply create a CAT report, or you instead view this one task with the longer lens of data leverage-ability and business intelligence, **Kx can help.**

Please contact us today

Adam E Dix
 Director, Regulatory Reporting - Kx
adamedix@kx.com



Head Office

3 Canal Quay,
 Newry,
 BT35 6BP
 N. Ireland
 +44 (0)283 025 2242

London

Cannon Green Building,
 27 Bush Lane,
 London EC4R 0AA
 United Kingdom
 +44 (0)207 337 1210

New York

45 Broadway,
 NY 10006
 USA
 +1 (212) 447-6700

Singapore

One Raffles Quay,
 North Tower
 #30-03
 Singapore
 +65 6592 1960

Sydney

22 Pitt Street,
 NSW 2000
 Australia
 +61 (02) 9236 5700

Toronto

31 Lakeshore Road
 East Mississauga, On,
 L5G 4V5
 Canada
 +1 289-329-0636

Tokyo

Sanno Park Tower,
 2-11-1 Nagata-cho,
 Chiyoda-ku,
 100-6162
 Japan
 +81 (0)36 205 3494