

QUARTZ



Quartz Surveillance



Challenge:

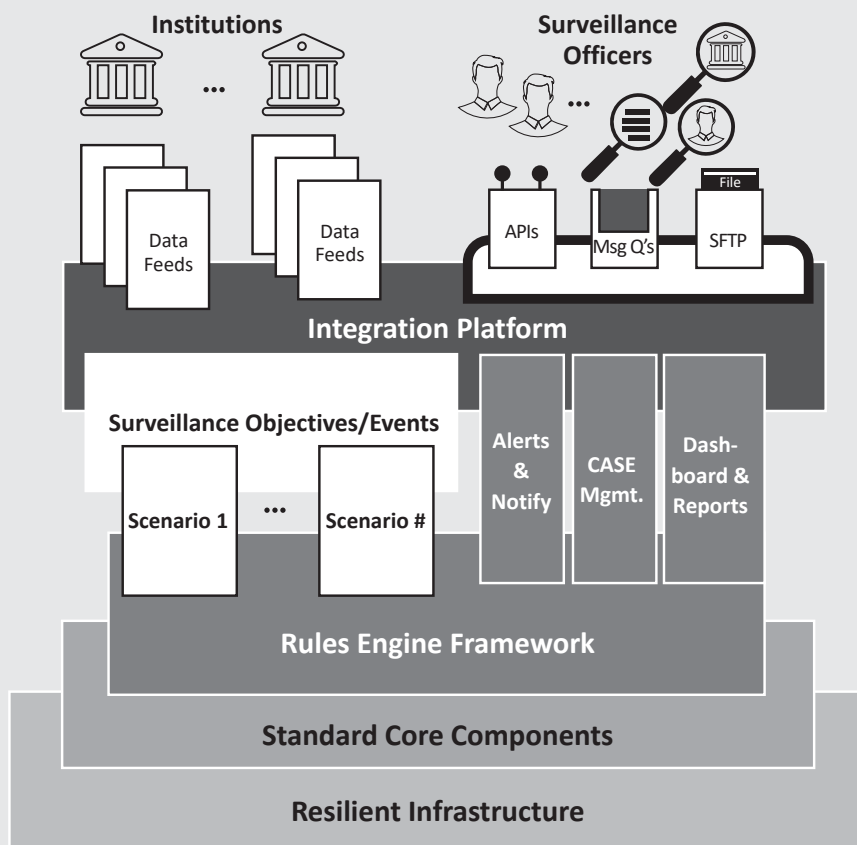
Market abuse and manipulation have become rampant along with the growing trading volumes, making trade surveillance a daunting task for financial institutions. Additionally, these institutions face several challenges such as high market volatility, use of digitized trading channels and frequently changing regulations. Therefore, this necessitates a cutting-edge solution involving next-gen technology to stay ahead of competition, protect investors, and preserve transparency, trustworthiness and market integrity.

Solution

The Quartz Smart Solution for Surveillance helps Regulators, Exchanges etc to spot objectionable and detrimental situations in their business operations, leading to appropriate preventive and corrective actions against manipulative or illegal trading practices. The solution monitors the trading behaviour and holding patterns based on certain defined parameters or thresholds and alerts the surveillance department to potential market abuse, aiding to promptly and accurately identify suspicious behaviour. The solution provides multi-asset, and multi-market support, with data flowing in from various financial ecosystem on a real-time or periodic basis via Quartz Gateway. Leveraging AI/ML, the solution efficiently detects anomalies and uses labelled alert data for creating and training models to prevent false positives. It also uses natural language processing (NLP) for extracting and interpreting unstructured news.

Quartz for Surveillance supports 50+ rule-based alerts and 30+ pattern-based alerts based on statistical/ behavioral patterns, covering a wide spectrum of market manipulation scenarios including standard market abuse patterns such as:

- Wash Trades
- Mark the close
- Front Running
- Collusion Detection
- Circular Trading
- Spoofing
- Synchronized trading
- Pump and Dump
- Trash and Cash
- Flashing of trading intent
- Aggressive Buyer/ Seller
- Cross Market Analysis



Benefits

- Seamless integration with data providers and newswires for the receipt of transactions, reference data, price, benchmark data and news
- Support for multi-market such as Equity/ Fixed Income/ Forex/ Derivatives
- Provides end-to-end workflow for alert investigation and case management by combining more than one alert
- Support for watchlists, workflow delegation and subscription
- Integrated dashboards and report capabilities to support investigations
- Comprehensive Market Replay feature to study the market activity for a given period

Quartz Advantage

- Leverages a modern technology stack such as angular UI, Kafka for low latency queuing, Apache Ignite for caching, microservices architecture and containerized deployment
- Configurable and parameter driven rule-based engine
- Online and offline alerts over On-Exchange and OTC transactions
- Interactive dashboard providing market trends through heat maps, charts etc and drilldown facilities
- Integration with Multiple Data Sources using Quartz Gateway
- AI/ML to identify specific anomalies and Recalibration of Thresholds for rules
- Integration with standard News Providers and processing news using NLP techniques
- Ability to create dynamic reports, summarization of unstructured data through Gen-AI capabilities

About Quartz

Quartz provides foundational technology, tools and business components that harness the power of next-gen technologies including DLT, AI/ML for organizations across varied industries. Quartz caters to organizations across Industry segments including Financial Services, Banking, Supply Chain, Energy & Utilities and eGovernance. Backed by awards from Juniper Research (Gold Winner for Digital Identity Innovation 2024), the Asian Banker (Best Fraud Prevention Technology Implementation 2023), Financial Technology Forum (Best New Post Trade Solution of the Year 2022), Asset Servicing Times (Outstanding Innovation Award 2022) and recognition from Analysts (ranked #1 Best Performing Fraud Management Solution by IBS Intelligence 2022) Quartz can help organizations operate at the forefront of technology innovation.

To know more about Quartz, please write to us at tcs.quartz@tcs.com or visit our website <https://www.tcs.com/quartz>

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A part of the Tata group, India's largest multinational business group, TCS has over 601,000 of the world's best-trained consultants in 55 countries. The company generated consolidated revenues of US \$29 billion in the fiscal year ended March 31, 2024, and is listed on the BSE and the NSE in India. TCS' proactive stance on climate change and award-winning work with communities across the world have earned it a place in leading sustainability indices such as the MSCI Global Sustainability Index and the FTSE4Good Emerging Index. For more information, visit www.tcs.com

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