

STATE-OF-THE-ART ARCHITECTURE FOR MARKET DATA

Telekurs Financial has redesigned its entire data processing chain. The main objectives of this redesign were to reduce latency in the light of growing data volumes and to achieve a more use-driven distribution of market data.

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Greater market liquidity, shorter transaction cycles and a host of new financial products have led to exponential growth in the volume of financial information in recent years. Availability also plays an increasingly important role, reinforced by the continuing automation of trading. Over the past six years, the amount of financial information has increased nearly tenfold, and experts are already expecting another such increase between now and 2010. By comparison, the CPU speed of an average PC has only quadrupled during the same period. The IT action plan for coping with this vast volume of data without compromising information quality no longer relies purely on the periodic doubling of system

processing power but requires more efficient processing and on use-driven distribution of data.

Decentralized data processing

Telekurs Financial began to upgrade its entire in-house processing chain for market data at the beginning of last year with the launch of the NMA project (New Market Data Architecture). The currently centralized processing will be divided into three interlinked centres in Stamford (USA), Zurich and Singapore. Specialized servers in each of the data processing centres will be responsible for consolidating the primary data sources, for checking data quality, for calculating and

forwarding key figures, and for supplying a variety of data services such as intraday, historical time series and news. By implementing a lean processing approach, this new market data architecture will offer a level of scalability that will meet our needs for the future.

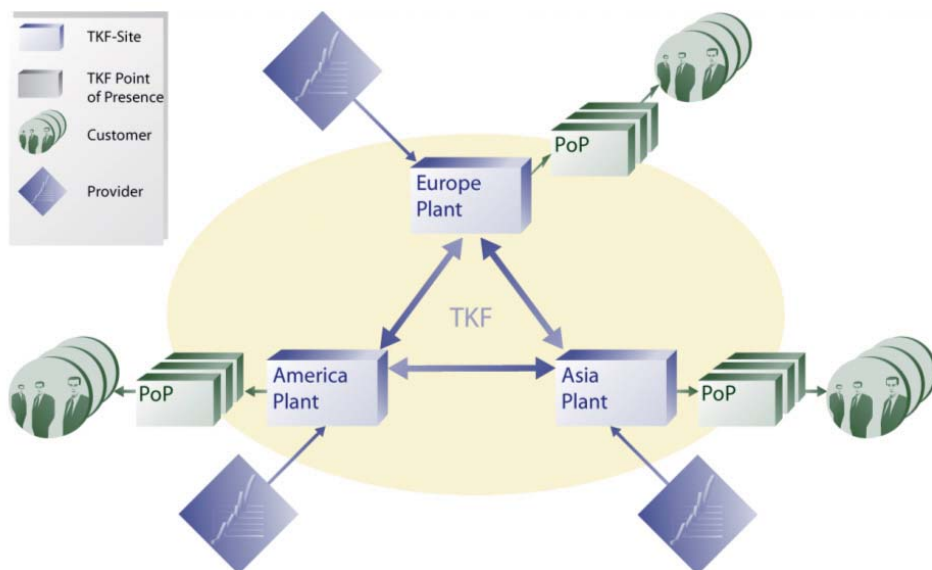
Reduced latency

With the reduction in transmission distances and outsourcing of data processing, latency – the time it takes for Telekurs Financial to process and incoming resend data – will be essentially reduced for local data. Moreover, it will be possible to process and distribute future increasing data volumes.

Data from the primary data sources is fed into three interlinked centres. Here the data is consolidated, and the original data is supplemented with additional information. Under this 3-site concept, the end product received by a customer in Europe, for instance, consists of a datafeed made up of direct feeds from the US market plus added-value feeds from the relevant EU markets.

Die primären Datenquellen werden in drei miteinander verbundenen Zentren eingespielen. Hier findet die Datenkonsolidierung statt. Ebenfalls werden lokal die Originaldaten mit zusätzlichen Werten angereichert. Mit diesem 3-Site-Konzept erhält beispielsweise ein Kunde in Europa als Endprodukt einen Datenfeed, der sich aus Directfeeds aus dem amerikanischen Markt und Added-Value-Feeds aus den erforderlichen EU-Märkten zusammensetzt.

Les sources de données primaires viennent alimenter trois centres reliés entre eux. C'est ici que s'effectuent la consolidation des informations et l'enrichissement des données originales avec des valeurs supplémentaires. La délocalisation sur trois sites permet ainsi au client européen de recevoir comme produit final un flux de données composé de flux directs en provenance du marché américain et de flux à valeur ajoutée issus des marchés de l'UE.



More flexible data retrieval

Data will still be retrieved via a standardized Telekurs Financial interface. Customers will have the option of using their own server or the customer server zone provided by Telekurs Financial. To make sure that the data supplied precisely matches their needs, customers can define different characteristics to specific data sets. These data sets are made up of a selected basic feed for each market together with the previously mentioned data components, and are supplied as consolidated data feeds. The improved flexibility of the information retrieval process has been designed to be much more responsive to customer needs. Here are a few applications to illustrate the usability of this new architecture:

- Direct feeds with lower latency, as needed in trading
- Complementary or backup feed to the existing infrastructure
- Feeds with added-value for use in display applications
- Selective access to real-time prices for portfolio management systems and for analyses of all types in accordance with the regulatory requirements
- Protection of customer systems against high data volumes

The use of a single interface ensures consistency of data across all customer departments. The NMA feeds are aimed equally at traditional financial service providers, medium to large non-institutionals, portal providers and media companies. ■

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