

REAL-TIME ANALYSIS OF FINANCIAL DATA

Challenges for Financial Services

Nowadays financial enterprises are confronted with a plethora of demanding challenges, resulting from highly volatile markets, huge amounts of market data, and the growing number of financial derivatives. The crucial question in providing valuable and trustworthy financial services is typically not how to access the latest financial data, but **when** and **how** to analyze and react to the data.

A flexible software which analyzes massive data volumes in realtime by means of an easy-to-express application logic will become indispensable for decision-making in financial enterprises. If your strategic decisions can be based on sophisticated and well-founded realtime analysis results, you will get the competitive edge.

Realtime Analysis with RTM Analyzer

Our software platform RTM Analyzer is deemed adequate to meet the challenging requirements for analyzing high-speed market data in realtime. In order to keep pace with current market trends, RTM Analyzer provides an intuitive and standardized interface that facilitates the definition of complex application logic and its direct use to market data.

Besides a powerful processing engine, performance and scalability have been main design goals. Both properties are essential for coping with the rapid growth of market data. RTM Analyzer implements these design goals by means of innovative technologies, which result from years of our successful research.

Due to the Java-based implementation, RTM Analyzer can be seamlessly integrated at low cost into existing IT landscapes.

RTM Analyzer at a Glance

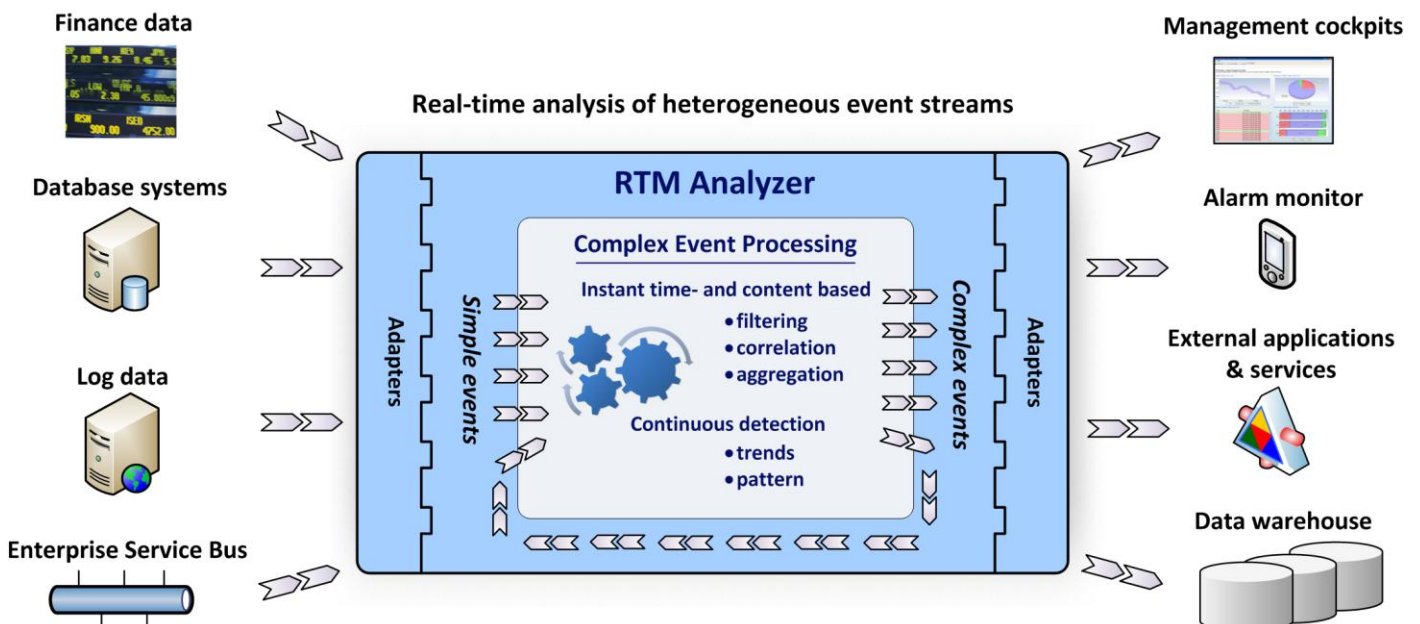
RTM Analyzer is a highly efficient, Java-based software platform for collecting, processing, and analyzing data, which continuously arrives from different sources, in realtime. For the sake of proactive reaction to current market trends, RTM Analyzer provides powerful tools for the easy definition and integration of sophisticated application logic at low cost.

RTM Analyzer in Financial Applications

Due to the generic and modular approach, RTM Analyzer enables users to express, alter, and apply complex analytical algorithms on-the-fly, without detailed programming skills. You can, for instance, exploit RTM Analyzer to tackle the typical tasks in financial services in a fast and cost-efficient manner:

- support a trader to find his/her position for option pricing and hedge coefficients,
- execute the global risk analysis and determine trade limits to assess and limit risks,
- develop and optimize automatic trading algorithms for electronic trading.

RTM Analyzer inherently follows a push-based processing paradigm, which means for the above tasks: the moment new market data arrives, RTM Analyzer immediately reacts by updating and propagating the new analysis results. Hence, RTM Analyzer is able to feed your financial services in realtime.



Integration of Data Sources

In order to support decision making in financial enterprises, a comprehensive data collection comprising up-to-date information about market trends, risk coefficients etc. is of utmost importance. On account of this necessity, RTM Analyzer provides a modular and well-approved framework for the integration of arbitrary data sources. Not only does this framework allow for the connection of active sources, which continuously deliver data, but also of passive sources, which provide historical data stored in databases, data warehouses, or files.

Formulation of Application Logic

Instead of using home-brewed or single-purpose data analysis solutions for decision making, RTM Analyzer offers easy-to-use but powerful interfaces for defining and modifying the required application logic on-the-fly: On the one hand, RTM Analyzer provides SQL to define application logic in a declarative manner. SQL is since decades the well-established standard in databases. On the other hand, RTM Analyzer provides a graphical interface to compose application logic in a visual manner, similar to workflow diagrams.

Performance and Scalability

As the speed at which financial enterprises can analyze new market data is a vital factor, RTM Analyzer provides innovative processing mechanisms with near-zero latency. For example, specified application logic is continuously optimized inside our system. Even though RTM Analyzer implements the entire set of processing facilities supported by common database systems, it does not need to manage the data persistently in databases. As a consequence, RTM Analyzer can process more than one million data items per second on a single desktop PC, an improvement by orders of magnitude towards comparable solutions based on conventional database technology.

Historical Data

Some applications require to maintain historical data. For this purpose, RTM Analyzer enables the user to access historical data stored in databases and to archive relevant data and analysis results.

Key Features of RTM Analyzer

- Low-cost development of user-defined application logic required for time-critical and data-intensive applications
- Easy modification of existing application logic and integration of new logic during runtime
- Integration of arbitrary data sources facilitated by modular source connection framework
- High performance and scalability ensured by innovative data processing engine
- Flexible interaction with databases for storage of relevant data and analysis results as well as access to historical data
- Low-effort training for users due to intuitive and standardized interfaces
- Low administration and maintenance costs
- Easy portability to novel application fields in the financial sector

RTM Analyzer in your Enterprise

RTM Analyzer gives you the realtime solution for extracting the relevant knowledge from nowadays floods of market data. We would like to assist you in tailoring RTM Analyzer to the specific needs of your enterprise.

“To monitor critical process steps within our easyCredit application in real-time, we decided to use a tailored CEP solution from RTM, as it combines flexibility and extensibility with a short time-to-market interval!”

Jens Pirnay, CIO, TeamBank AG

About RTM Realtime Monitoring

The development of RTM Analyzer originates from a research project supported by the German Research Foundation (DFG) under the direction of Prof. Dr. Bernhard Seeger, one of the leading experts in database and information systems. The aim of this project has been the development of unique processing and analysis techniques for data arriving continuously in vast amounts. RTM Analyzer unifies our research technologies and brings them into practice. If you are interested in RTM Analyzer and its rich functionality, please do not hesitate to contact us.

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