

## IBM Informix NAG Financial DataBlade module



closing price—plus an equity's trading volume. An analyst studying equities, for instance, now wants a data set containing the price and volume for *each* and *every* trade for a particular stock over a number of years. The problem is that a data set containing ten years of tick history for global equities is about one terabyte in size, which is too large to move through a network and analyze on a workstation. As a result, analysts require a server-centric model.

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### Highlights

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- ***Utilizes powerful analytical capabilities for extracting a wealth of information from raw data***
- ***Effectively analyzes “tick,” or transactional, data directly in the database server***
- ***Takes advantage of fast, enhanced analysis—coupled with mathematical integrity***
- ***Alleviates the challenges of quantitative analysis.***

### The need for enhanced quantitative analysis

The newest trend among quantitative analysts today—who build models in order to predict how a security, a complex trade, or an entire market will perform in the future—is the need to analyze transactional, or “tick” data. Tick data is much more comprehensive than daily data, which consists of a “snapshot” of a day's activities for a financial asset. For example, the daily data collected for a specific equity is typically the open, high, low and

### The solution: IBM Informix NAG Financial DataBlade Module

Closely aligned with the IBM Informix® TimeSeries DataBlade® module, which efficiently stores and retrieves time-stamped data, the IBM Informix NAG Financial DataBlade module is uniquely positioned to provide analysts with a tick database. The IBM Informix NAG Financial DataBlade module features powerful analytical capabilities for extracting information from the mountain of raw data facing analysts today.

### **The challenges of daily data analysis**

Managing time series data—which incorporates years' worth of historical pricing data with a model—has posed unique problems to financial technologists: Relational models can be inefficient containers for time series, and provide neither high performance nor a useful programming interface; data sets containing daily data are typically several gigabytes in size. In a typical implementation, data sets are stored on a server and delivered to a client, where it is analyzed. Individual customers and consulting firms, meanwhile, have been left with the task of integrating various types of data.

Performing analysis in the database server also means that the identical analysis is available to disparate client processes—including C, ODBC or JDBC connect programs, and a Web browser—which can use the same server-implemented functions. Consider a simple example of calculating the variance-covariance matrix for 100 shares over one year using

the daily closing prices. The ratio of input data to output data is 5-to-1. If the variance-covariance matrix can be produced in the server, then only the *result* needs to be sent to the client. The client can be any program, and all client programs can now share the *same* analytical functions.

### **Enhanced performance, mathematical integrity**

With IBM Informix NAG Financial DataBlade module, numerical analysis is performed by functions from the standard NAG FORTRAN libraries, which are executed directly by the server process. This enables the best possible performance by the highest quality numerical functions—furnishing analysts with speed and mathematical integrity.

### **The rapid rise of data storage performance**

As data storage performance continues to increase dramatically, those who work with trend-style data are challenged with having to process ever-increasing amounts of raw material. Quantitative analysts and risk managers may have the toughest

job of all: quickly spotting patterns among millions of pieces of data on trading and bidding, and prices of commodities, equities and currencies on worldwide markets. Simple questions like “How much risk is there in a share portfolio?” don't have such simple answers as more and more data becomes available.

IBM Informix NAG Financial DataBlade module alleviates the challenges inherent with applying sophisticated quantitative analysis to a number of financial assets—including currencies, equities and bonds—helping analysts reach such goals as:

- *Identifying over- and under-valued assets*
- *Implementing automated trading strategies*
- *Pricing complex instruments such as derivatives*
- *Creating customized products for banks' corporate customers*



### **Taking advantage of extended analytical capabilities**

A unique solution, which takes advantage of the extensibility of IBM Informix Foundation,<sup>™</sup> the management of context-rich data via IBM Informix Text and IBM Informix TimeSeries DataBlade modules and analytical capabilities of the IBM Informix NAG Financial DataBlade module is TotalServer from Market Information Services (MIS). MIS is an IBM value-added reseller marketing a highly effective and

original management information system designed specifically for trading support and risk management. Technology and skills are now available to equip the next generation of market information systems for the challenges of global trading.

### **Solutions for today's businesses**

IBM Informix information management solutions are open, scalable, manageable, and extensible—providing the kind of flexibility that is essential for growing organizations. Whether utilized for data warehousing, analysis and decision support,

Web content delivery, or broadcasting mixed media, IBM Informix products are engineered to enable today's businesses to efficiently manage all kinds of information—anywhere, at any time.

### **IBM Global Services: Delivering real business results**

To help you optimize IBM Informix NAG Financial DataBlade module, IBM Global Services offers the broad experience and skills of more than 140,000 professionals in over 160 countries—industry experts, technology specialists and others who know how to deliver real business results. And you will benefit from *one point of contact* for accessing and deploying information management solutions from IBM and our worldwide team of Business Partners.

### **Find out more**

For more information, contact your local IBM representative or visit the following Web site:

**[ibm.com/software/data/informix/blades](http://ibm.com/software/data/informix/blades)**



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