Milliseconds Matter: Achieving Real-Time Intelligence

Today's intelligence systems are facing the demands of ever expanding flows of data. New and far more advanced generations of electronic data sources are enabling opportunities to discover information in ways never before possible. However, traditional, centralized data platforms are not natively capable of supporting the demands of modern intelligence systems that require high ingest, correlation, massively parallel processing, fusion and real-time decision support from distributed and complex data.

The Challenge: Find Terrorists, Where They Are, Now.

When it comes to unlocking the networks of crime and terrorist organizations hidden within your data, relationships are the single most important key. Advanced data and relationship analytics are the cornerstone of generating intelligence information from raw data.

Analytics requires a higher order of data mining than traditional methods and SQL queries. Identifying behavioural patterns and trends, finding hidden connections between suspects, and discovering centrality within networks all require a data platform capable of moving through information in a highly scalable, parallel environment.

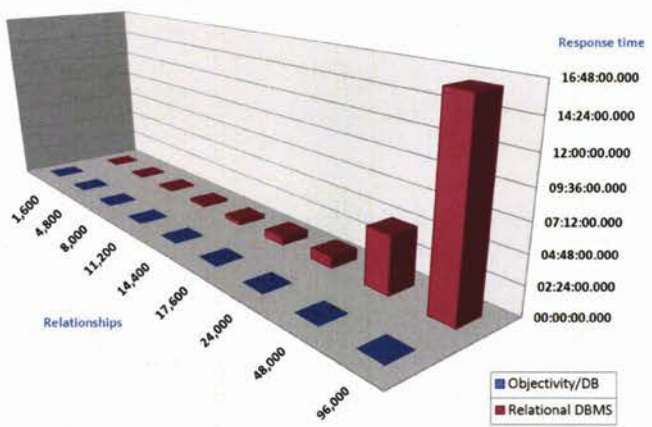
The Capabilities of Traditional, Relational Technologies Do Not Support Today's Requirements.

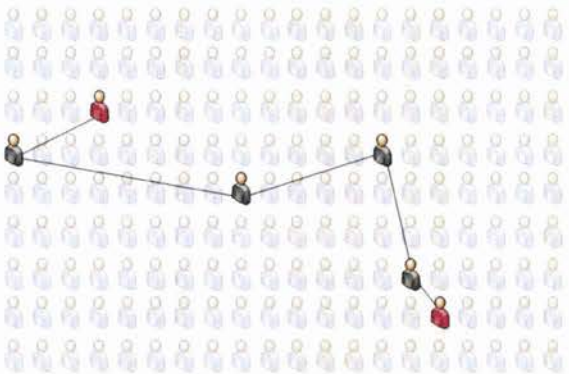
In a recent internal test, comparing Objectivity/DB to the world's most widely used commercial relational database management system, the objective was to traverse increasing numbers of relationships, to find connections between two objects separated by 5 degrees.

Objectivity/DB traversed 96,000 relationships to 5-degrees in 15 seconds, while the leading relational database required over 16 hours. In the 15 seconds it took Objectivity/DB to traverse nearly 100,000 relationships, the leading relational solution was only able to traverse 1,600.

Traversing Complex Relationships in Data

Leading Relational DBMS vs. Objectivity/DB





Objectivity/DB Enables Real-Time Intelligence

In a recent customer scenario, Objectivity/DB was demonstrated analysing 100 million phone call records, discovering 5 degree relationships between individuals within seconds, and on a standard laptop. The leading relational database based system was unable to return a single result even after running for several hours on high-end hardware.

This relationship analysis or "link hunting" system was also configured to utilize distributed computing or virtualized cloud computing environments with ease. Objectivity/DB is a completely distributed solution and actually gains processing power in almost linear relation to the available hardware and compute nodes. If you achieve a certain performance rate on some number of machines, and then distribute the same data across ten times the machines, the results will be returned to analysts roughly ten times faster.

When this system is deployed it will support hundreds of concurrent users, billions and billions of nodes and relationships, and will return results from queries against complex graph structures within a matter of seconds.

This Objectivity customer can determine where the bad guys are right now, rather than where they were two days ago.

Objectivity, Inc. is the leader in distributed, scalable data management technology, and is the enabling technology powering some of the most complex applications and mission critical systems used in government, business and science organizations today.

Objectivity
Innovate with Confidence

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