USE CASE
Healthcare: Big Data Analytics for Large-Scale eHealth Initiatives

Value: Analyze disparate healthcare data for improved quality of patient services and reduced costs.

PROBLEM
Hospital networks, independent practitioners, insurance providers and government agencies all contribute to the ever-increasing number of health information systems. Disparate data repositories and paper-based systems have resulted in slow and disconnected patient data that hinders decision-making, degrades the quality of patient care and contributes to rising healthcare costs. Both public and private sector institutions recognize the need for solutions that facilitate improved patient care while streamlining administrative processes. eHealth initiatives promise to use Information and Communication Technologies (ICTs) to overcome these challenges, however these initiatives have not been without their own difficulties stemming from the storage, management and use of big data.

INNOVATION:
eHealth initiatives target the complexity of disparate health information systems and paper-based processes to facilitate high-quality, cost-effective patient care.

CHALLENGE:
Aggregating and analyzing the enormous amount of data generated by electronic health records (EHRs) and e-prescriptions to achieve a single view of the patient.

SOLUTION:
Objectivity’s InfiniteGraph Technology is improving the success of eHealth programs with a solution that aggregates enormous amounts of patient information residing across disconnected healthcare systems. Unlike traditional relational database solutions, InfiniteGraph enables a complete view of the patient with the ability to analyze and identify valuable connections in the data, in real-time. The distributed graph database ensures high performance in a situation where a multitude of users are simultaneously accessing patient records, writing electronic prescriptions, updating information and more. Applications can employ business logic for functionality such as validating the authenticity of e-prescriptions.

SOLUTION:
InfiniteGraph quickly “connects the dots” across a vast amount of patient data, enabling healthcare professionals to provide better, safer and more efficient care and treatment.
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VALUE PROPOSITION

The ability for healthcare professionals, patients and government agencies to effectively share health information enhances patient care, saves lives and lowers costs. Using a graph database improves the speed and performance of querying a complex array of data sources for insights that assist decision-making, facilitate early detection, ensure patient safety, eliminate duplicate or unnecessary testing, and streamline time-consuming administrative processes. InfiniteGraph is uniquely able to scale with the data demands of eHealth to aid in the delivery of high quality, cost-effective healthcare.

InfiniteGraph quickly “connects the dots” in disparate healthcare data enabling increased patient services and decreased costs

ADVANTAGES

InfiniteGraph provides a solution for big data challenges that threaten the success of eHealth. Early initiatives leveraged technologies incapable of effectively dealing with the deluge of data residing in disparate health information systems. InfiniteGraph also lowers software licensing and hardware upgrade costs related to scaling SQL-based relational database solutions. In fact, InfiniteGraph has been proven to slash CPU cores by 60%. The distributed graph database not only enables organizations to better plan for and manage costs related to growing data volume, but also significantly eases adoption of new applications and their ongoing use. Advantages include reduced training costs, simplified application maintenance and the flexibility to test new functionality.

About Objectivity, Inc.

Since 1988 Objectivity, Inc. has been the Enterprise NoSQL leader, helping customers harness the power of Big Data.

Our leading edge technologies: InfiniteGraph, The Distributed Graph Database™ and Objectivity/DB, a distributed and scalable object management database, enable organizations to discover hidden relationships for improved Big Data analytics and develop applications with significant time-to-market advantages and technical cost savings, achieving greater return on data related investments.

Objectivity, Inc. is committed to our customers' success, with representatives worldwide. Our clients include: AWD Financial, CUNA Mutual, Draeger Medical, Ericsson, McKesson, IPL, Siemens and the US Department of Defense.