Managing Database Complexities for the Healthcare Industry

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The demands for data management in the healthcare industry continue to increase and change at a rapid rate. Between the industry regulations and the sheer volume of data, healthcare data managers have their work cut out for them. It's more important than ever to know what data is being stored and what the data relationships are to correctly associate the patient's personal details with the right medications and treatments, and to protect all of the information securely. In order to control the plethora of incoming data, data managers need a tool suite that can provide a consistent structure and allow collaboration with the business process team. To address these needs, Embarcadero provides a comprehensive solution, with ER/Studio for data modeling and DBArtisan for database administration. Together, these tools improve how data is shared between applications, increase application and database performance, ensure database integrity with 24x7 availability, and facilitate team collaboration and knowledge sharing.

IMPROVE DATA INTEGRATION AND UNDERSTANDING OF DATA SOURCES

Delivering on a recent clinical initiative, electronic health record system (EHR), or health information exchange (HIE or RHIO), requires exchanging data from many different clinical systems and financial systems, which are often in silos and held to different standards. Further complicating the development of new initiatives are regulatory reporting requirements for documentation on how the data is sourced and from where. ER/Studio provides a complete set of tools to manage healthcare databases and improves the understanding of the data sources and how that data is shared and integrated. Detailed end-to-end documentation and reports of the data lifecycle are easily created to visually map where the data was sourced, the business logic applied and the lineage of integration. ER/Studio reduces data redundancy and improves data quality by creating standard data elements and data flow mappings.

The industry's only comprehensive data management tool suite for data architects and DBAs provides the broadest multi-platform coverage available across the languages, frameworks, databases, and technologies your team needs to run your healthcare information systems.

ER/Studio® is a powerful data modeling and architecture suite that combines data, business process, and application modeling into a multi-level design environment. With a server-side repository, metadata integration and strong reporting capabilities, ER/Studio helps data modelers and architects collaborate seamlessly to easily capture, consolidate and communicate metadata information across project teams.

CONNECT provides business context and consistency by enabling users to collaborate together on the organization's metadata. CONNECT integrates business definitions with data management tools, which enables you to create a single, searchable registry of all available data sources.

DBArtisan® delivers comprehensive database management, migration, and analytical capabilities for DBAs that maximizes database availability and performance across environments. DBArtisan boosts productivity, streamlines routine tasks, and reduces errors to manage larger, more complex databases. This database administration tool helps DBAs and organizations to standardize on one powerful, cost-effective solution.

DB Optimizer™ monitors and maximizes database and application performance, reliability, and availability by quickly discovering, diagnosing, and optimizing poor-performing SQL. DBAs and database developers can identify and eliminate performance bottlenecks by graphically profiling key database metrics, relating resource utilization to specific queries, and helping to visually tune complex SQL.

INCREASE VISIBILITY INTO DATA GROWTH PATTERNS

Healthcare organizations are facing extremely high data growth rates, not just from the core IT applications and associated databases in which they need to operate, but also from systems like electronic health records which can quickly spiral out of control. As many healthcare providers are finding, underestimating the space and capacity that these applications are built on can bring an EHR implementation to a standstill. DBArtisan includes cross-platform space and capacity analyst tools that provide you with a complete solution to easily understand, analyze, and trend your database usage and performance. With storage and object growth tracking facilities, you can proactively plan and prevent problems. Advanced space management facilities can simplify pinpointing critical space problems and remedy any storage bottlenecks affecting your system.

INCREASE PERFORMANCE

As more healthcare facilities, ambulatory care practices and physicians move from paper-based processes to electronic systems, the need for high-performance and scalable databases running these applications are critical. DBArtisan provides cross-platform performance and database administration tools that help to maximize availability, performance and security. Its superior diagnostics help ensure your DBA can proactively pinpoint and manage any database system vulnerabilities that can slow performance and cause downtime.

ENSURE 24X7 UPTIME

The IT initiatives and applications being implemented throughout healthcare are designed to reduce costs and improve the quality of care to patients. Medical personnel rely on these systems for up-to-date information when making decisions where lives are truly on the line. In an environment where no outage is tolerated, the IT organization must ensure 24x7 availability of the health IT applications and the databases they run on. Poorly performing SQL statements can bring a CPU to a halt and threaten the performance and availability of the systems physicians rely on. DB Optimizer, a companion product to DBArtisan, provides a cross-platform, fully-automated SQL profiling, tuning, and simulated load testing environment to rapidly diagnose & tune performance issues. Downtime and performance can be significantly reduced using this automated optimization solution.

COLLABORATE EFFECTIVELY AND SECURELY

Using Embarcadero database management tools, developers, data architects, and database administrators (DBAs) can capture and share knowledge, review work, control many moving parts, and achieve superior quality – regardless of an organization's size or processes. CONNECT, a companion product to ER/Studio, gives healthcare team members the ability to collaborate on the business definitions in an enterprise data glossary which is stored in a secure repository. With common data sets and terms identified, it is easier to manage and reuse data elements. IT staff can seamlessly work together by leveraging the integrated and interoperable tools for any mix of heterogeneous platforms, architectures, frameworks, databases, and methods, while expending less effort and improving productivity and accuracy for both database and business professionals.

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