

# Information management software solutions

Maximize the value of your data by implementing analytics, improving data management efficiency and facilitating integration



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## Introduction

# Get more value from data without adding complexity and cost

The role of IT is changing. No longer a cost center whose primary function is to support existing business processes, IT is now making key contributions that move the enterprise forward and generate new revenues.

CIOs are rapidly adopting analytics solutions to discover new insights from transactional systems, social media and a range of other internal and external sources. Analyzing data is the key to better understanding your customers, improving your business performance and identifying new opportunities.

Yet the tremendous volume and variety of data available today can pose significant obstacles for deriving value from that data. IT groups need new ways to efficiently manage, integrate and analyze data to maximize its potential for the business.

Dell™ information management solutions can help you better manage your enterprise data, facilitate data integration and amplify the benefits that data analysis can deliver for your organization. Dell solutions for business intelligence (BI) and big data analytics can help you generate new insights for improving efficiencies and gaining a competitive advantage. Database development and management solutions enable you to draw on industry-leading expertise to accelerate the creation of new capabilities, reduce the costs of administration and proactively monitor your databases for performance, while high-availability solutions

help you sustain uptime for vital databases. Application and data integration solutions help bring together data from disparate sources to enhance efficiencies and improve data consistency across the enterprise.

Designed to streamline data analysis, management and integration tasks, these solutions enable you to obtain more value from data without adding complexity and cost. Rather than introducing yet another platform, Dell information management solutions help simplify the software framework over your organization's existing systems and technologies.

# Challenges



## Capitalizing on data

Organizations today are experiencing tremendous data growth, with data volumes increasing anywhere from 40 to 60 percent every year<sup>1</sup>. At the same time, they are also collecting a wider variety of data than ever before. Across a range of fields, organizations today capture text, images, scanner data and relational (structured) data produced by online transactions, mobile communications, electronic tracking, social media and more.

Several organizations have existing BI systems built for transactional data, but these systems cannot deal with the new types of unstructured and semi-structured data that organizations are collecting today. In many cases, these systems do not perform optimally even for transactional data because the analyst does not have easy access to the data. The use of proprietary software and data types by certain BI systems limits integration with other solutions. Organizations need new solutions that can incorporate a variety of data sources, provide easy accessibility and work with existing systems offered by different vendors.

Organizations need solutions that can help them bridge the skills gap and make it easier to manage, use and analyze data. They need data visualization and analytics tools that are easier for line-of-business employees to use. They must provide technical teams with powerful tools for keeping information flowing smoothly behind the scenes. And many organizations also require assistance creating data warehouses that can help the business capitalize on the power of analytics.

For organizations that succeed in accommodating the flood of big data, the potential benefits are significant. Effectively analyzing unstructured data, along with structured and semi-structured data, can generate powerful new insights needed to make informed decisions.

## Improving the efficiency of data management

For many organizations, databases are the heart of the business. Databases store customer data, enable processing of online transactions and provide the foundation for big data analytics. Unfortunately, the costs of

<sup>1</sup>IDC, "Worldwide Data Protection and Recovery Software 2011–2015 Forecast," July 2011, [www.idc.com/getdoc.jsp?containerId=229395#UPIIoKWwNVs](http://www.idc.com/getdoc.jsp?containerId=229395#UPIIoKWwNVs).

developing, administering and monitoring databases — and sustaining high availability — can easily sap IT budgets.

Organizations need ways to streamline database administration and reduce costs by automating key tasks, from maintenance and performance tuning to backup and disaster recovery. To help improve business agility, organizations also need ways to accelerate database development, which increases productivity and the accuracy of work.

## Overcoming integration complexity

The integration of data from across the enterprise presents another challenge for many organizations. Multiple departments and business groups often acquire systems at different times; plus, mergers and acquisitions can add disparate technologies. The result can be a complex and siloed assortment of relational databases, text-based systems, unstructured data systems, cloud environments and monolithic BI platforms.

Managing disconnected data and disparate systems is costly, complex and inefficient. Meanwhile, users find it difficult to gain a full and accurate view of enterprise information.

IT groups need ways to integrate data across the enterprise. Integration is essential for improving data consistency, facilitating accurate and timely insights, and reducing the costs and complexity of data management.



# Solutions



Dell has adopted an information management lifecycle approach to solving data management challenges. Dell solutions can help you manage databases, integrate disparate data stores (on-site or in the cloud) and analyze different types of data from a wide range of sources.

### Business intelligence and big data analytics

Dell solutions for BI and big data analytics make it easier for you to capitalize on the power of data to improve decision making. With Dell solutions, you can rapidly and cost-effectively transform data into actionable insights. Support for structured, semi-structured and unstructured content enables you to explore and analyze virtually any type of data, generated by sources ranging from online transaction systems to social media, without having to toggle between different tools.

“To deliver big data analysis, Dell combines information modeling and visualization capabilities with natural language processing, machine learning and sentiment analysis.”

Solutions from Dell are designed to open the world of BI and big data analytics to both technical and nontechnical business users. Data analysts, data provisioners and other technical users can integrate data across a variety of data systems, including relational databases, cloud environments, BI systems and other data stores. They can employ drag-and-drop functionality to create an analytics workbench for designing and tuning an analytics portal for nontechnical employees.

Meanwhile, business users can capitalize on search and visualization capabilities to quickly gain rich insights from data. They can create graphical representations of the data and produce reports to share with casual users.

To deliver big data analysis, Dell combines information modeling and visualization capabilities with natural language processing, machine

learning and sentiment analysis. The result is a fully integrated, configurable software platform.

Dell also offers solutions to help streamline the deployment of data warehouses and big data analytics environments. A data warehouse appliance provides all the hardware, software and implementation services you need for a deployment.

Related products:

- Kitenga™
- Toad™ Business Intelligence Suite
- Toad Data Point
- Toad Decision Point
- Dell Quickstart Data Warehouse

### Database development, management and high availability

Dell solutions for database management can help you improve the efficiency of the entire database management lifecycle — from database development to administration, monitoring, replication and backup. These solutions work across a variety of databases, including Oracle, Microsoft® SQL Server®, IBM® DB2® Sybase and MySQL. Database performance monitoring and management solutions help you establish consistent visibility across a single database or a heterogeneous database environment while providing deep insight into transaction analysis. With Dell solutions, you can simplify tasks by automating maintenance, helping to ensure optimal performance and mitigating the risk of change.

Dell solutions for multi-platform database management are geared toward increasing productivity, speed and accuracy by offering capabilities that enable automation, improve visibility and facilitate team collaboration. Dell offers a large online user community ([www.toadworld.com](http://www.toadworld.com)) to support you in your database efforts.. This user community also offers support from industry-leading experts and evangelists.

Data modeling solutions allow you to create high-quality logical and physical data models, compare and synchronize models, and reverse- and forward-engineer databases and data warehouse systems. You can easily deploy accurate changes with a cross-platform modeling solution that is a cost-effective alternative to other available products.

The management and modeling solutions provide a consistent and familiar user experience across different database platforms. You can cross-train your staff and simplify tasks.

Solutions for high availability enable you to reduce downtime and help ensure business continuity. Dell solutions designed for Oracle Database and SQL Server use deduplication and compression technologies to accelerate backup and recovery while conserving storage capacity. A disaster recovery solution for Oracle Database protects mission-critical data while maintaining performance, controlling complexity and containing costs.

Database performance monitoring and management solutions can help you monitor environmental health, accelerate problem resolution, simplify workload trend analysis and produce targeted custom reports. Dell solutions allow you to establish consistent visibility across your single or heterogeneous database environments, and deliver deep insight into transaction analysis.

Related products:

- Toad for Oracle
- SharePlex™ for Oracle
- Foglight™ Performance Suite for Oracle
- Toad for SQL Server
- Spotlight on SQL Server Enterprise
- Foglight Performance Suite for SQL Server
- Toad for IBM DB2 LUW
- Toad for Cloud Databases
- Toad Multi-DB Suites
- Foglight for Cross-Platform Databases
- Benchmark Factory for Databases
- Toad Data Modeler

## Application and data integration

Integrating applications and data across enterprise systems is essential for ensuring the consistency of data, improving efficiencies and maximizing the value of data analytics. For example, data from your accounting system

must be available through your customer relationship management (CRM) application so that a CRM user can quickly check and update a customer's account status. Dell solutions for application and data integration can help you bring together applications and data from a full range of sources, enabling you to increase data accuracy, prepare data for analytics and drive down costs.

With Dell solutions, you can integrate any application with ease. Connect cloud-to-cloud, cloud-to-on-site and on-site-to-on-site sources in a fraction of the time, and at a far lower cost than conventional integration solutions. There is no additional hardware or software to install, and no need for expensive and time-consuming coding. Dell solutions let you complete the integration in hours or days, not months.

Solutions for master data management (MDM) allow you to create a single version of the truth across the entire enterprise. Next-generation MDM functionality, combined with the efficiencies of data integration and data management from a single vendor, enable you to meet today's evolving data management requirements. With the economics and accelerated time to value of a 100 percent cloud solution and crowd-sourced domain modeling, you can rapidly realize the benefits of MDM with little to no risk.

Dell also offers solutions to help you protect mission-critical data residing in databases. A high-performance, high-availability solution for Oracle Database cost-effectively replicates data and enables zero-downtime migrations and platform upgrades. Administrators can replicate the database, keeping the original version live as the production solution, and designate the replicated version as the reporting solution — all without interrupting production processes.

The Dell solution for Oracle Database also supports near real-time data integration to help improve data warehousing, BI and analytics processes. Administrators can capture and deliver Oracle-changed data to a variety of leading structured and unstructured databases, including SQL Server, IBM DB2, Sybase, Hadoop, Greenplum, Netezza, Teradata and more.

Related products:

- Dell Boomi™ AtomSphere®
- Dell Boomi MDM
- SharePlex for Oracle

# Case studies



# Analyzing a large volume and variety of data with Kitenga

## Challenge

A manufacturing and facility operations company needed better ways to store, analyze and act on a flood of data from customer sites, including support records, system logs, maintenance reports and failure/event information. In particular, the company needed effective ways to improve visibility into unstructured product logs.

## Solution

The company implemented the Kitenga Analytics Suite.

## Results

- Gained the ability to automatically review product logs for oddities or error conditions using the solution's natural language processing capabilities and visualization tools
- Shortened the pipeline from data ingestion to effective decision making with seamless integration of data analysis, visualization and search on the same data set

# Reducing risk and doubling productivity with Toad

## Challenge

The University of Massachusetts Medical School (UMMS) — a top medical education institution and world-class research center — needed to

simplify Oracle Database and Microsoft SQL Server development and administration. The university's IT group maintains more than 1,000 SQL Server databases and more than 100 Oracle databases that support critical enterprise and workgroup applications. The IT staff must also ensure compliance with Health Insurance Portability and Accountability Act (HIPAA) and Statement on Auditing Standards #70 (SAS 70) regulations, which requires extensive tracking and auditing.

## Solutions

UMMS adopted Toad software, including Toad for Oracle Xpert Edition and Toad for SQL Server Professional Edition.

“[Toad helped UMMS to enhance] developer and DBA productivity, enabling the school to cut IT staffing needs in half.”

## Results

- Streamlined the effort of bringing applications into the environment and maintaining a consistent look and feel between the platforms
- Enhanced developer and DBA productivity, enabling the school to cut IT staffing needs in half
- Reduced risk by increasing the accuracy of changes to stored procedures
- Improved efficiency while keeping pace with ever-increasing database and IT support demands

# Integrating applications and cutting costs with Boomi

## Challenge

California-based GoPro, the world's leading activity image-capture company, wanted to enhance its cloud-based infrastructure model to help maintain sales and revenue growth. GoPro needed a more efficient and scalable way to integrate its enterprise resource planning (ERP), CRM, logistics and value-added network (VAN) applications and data.

"[GoPro saved] 30 percent of what it would cost to implement a competitive EDI solution."

Specifically, the company wanted to replace manual processes with a more automated solution that would minimize errors and costs. At the same time, the company wanted to find a solution provider with a high level of familiarity with NetSuite, electronic data interchange (EDI) and application integration in the cloud.

## Solution

GoPro reviewed several integration solutions, and selected Boomi software. Using the pre-built NetSuite connector, Boomi helped GoPro quickly implement EDI and demonstrate that it could meet the requirements of retailers.

## Results

- Saved 30 percent of what it would cost to implement a competitive EDI solution with only a fraction of the functionality needed
- Kept 80 percent of the GoPro IT organization focused on innovation and building efficiencies instead of having to conduct problem assessment and maintenance



## Conclusion

# Deriving more value from data while simplifying IT

Dell information management solutions span the entire breadth of the information lifecycle, enabling you to better manage data, improve data integration and amplify the benefits that data analysis can deliver for your organization. By streamlining database development, administration, monitoring and high-availability efforts, you can reduce the costs of data management while accelerating new projects that will push the business forward. Effective data integration will help you improve the consistency and accuracy of data, and improve the efficiency of internal workflows. Implementing BI and big data analytics solutions will enable you to generate the insights you need to better understand your customers, improve business performance and discover new opportunities.

Dell solutions allow you to manage, integrate and analyze all types of data in all locations, from your on-site data center to the cloud. Unlike proprietary solutions, Dell solutions are based on industry-standard technologies that let you leverage your existing investments and provide rapid time to value. With Dell information management solutions, you can find the capabilities you need in one vendor, use one tool chain and make the most of all of your data.

For more information about Dell software solutions, contact your Dell sales representative or visit: [www.software.dell.com/solutions/information-management/](http://www.software.dell.com/solutions/information-management/)

