IBM Tools for DB2

Extending your capabilities to manage DB2 database and transaction processing workloads

IBM

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Introduction

It's a fact of life in today's always-on economy: the amount of data being collected and consumed on a daily basis is exploding. All this data is a valuable resource that is key to gaining an edge in a hyper-competitive global environment. Information on demand enables quick, accurate, well-informed business decisions and drives operational efficiency. The ability to bring new applications online faster makes businesses more nimble and able to adapt and respond to changes in market conditions or customer preferences at a moment's notice.

But getting to that level of performance entails tremendous challenges. Huge volumes of data must be intelligently managed, analyzed, delivered and archived in order to be truly useful. Data-intensive applications and services demand high-performance, cost-effective support systems. Meanwhile, service-level agreements (SLAs) for application performance and data availability have become more demanding—organizations simply cannot afford data downtime, whether planned or unplanned.

So how are you going to balance all of these information-driven demands with the need for a robust, dependable, flexible data infrastructure?

IBM® DB2® for Linux®, UNIX® and Windows® (LUW) is an ideal foundation for meeting those challenges. It's a scalable, reliable database platform that offers high performance for mixed workloads on distributed systems.

What's more, you can build on that platform with DB2 Tools that are tightly integrated with the database, take advantage of its latest features and extend and enhance your data management capabilities. Combining your IBM database with IBM tools helps your organization derive maximum value from your data by ensuring that internal and external users can access it reliably and rapidly.

In this e-book, we'll show how IBM tools take advantage of DB2 features and capabilities, creating a unified environment that enables you to cost-effectively manage data throughout its life cycle. Read on and see how you can use IBM tools to enable your organization to deliver applications faster, improve database and application performance, and support high levels of data availability.

Accelerate development

Improving your competitive position in an evolving market takes constant focus. Your organization must deliver enterprise-ready, data-centric applications fast, yet be able to adapt to changing customer demands or market fluctuations. But the need for greater collaboration between business, application and data groups makes that more difficult. Accelerating development projects requires working across roles, geographies and business units while remaining flexible and responsive. At the same time, you also need to adopt emerging programming methodologies, observe regulatory compliance standards and automate data discovery and design tasks.

Enhancing your DB2 foundation with tools from IBM—which leverage DB2 strengths more effectively than third-party tools—further extends the database's capabilities, offering additional functionality for:

- Improving collaboration and facilitating a development process that spans database, application and data access needs.
- Streamlining connections between design, development and deployment, improving alignment and communication.
- Providing common user interfaces; common components and services; and shared policies, models and metadata to promote enterprise consistency and help increase data quality.
- Creating right-sized test environments rather than production clones, helping to shorten testing cycles and manage costs.
- Masking customer-sensitive information in nonproduction environments to enhance security.
- Modeling data assets and automating and validating data design tasks, which can increase efficiency and reduce time to market.
- Supporting and automating DB2 LUW migration projects.
- Empowering developers to write optimal SQL from the start, rather than waiting for a problem to come up post-development when it is more expensive to fix.
- Optimizing code generated from frameworks to help developers write high-quality code faster.

IBM DB2 Tools for accelerating development

Tools in the IBM software family deliver additional capabilities for accelerating development projects. Combined with DB2, they can help increase your ROI by shortening development and testing cycles. And because they're created by DB2 experts at IBM, they enable applications to take full advantage of key DB2 features such as the self-tuning memory manager, the audit facility and compression and workload management capabilities.

IBM tools for DB2 offer proven, integrated capabilities to manage enterprise application data from requirements to retirement. Using tools in the IBM InfoSphere™ Optim™ family, for example, teams can share data artifacts (like models, policies and metadata) to align data management with business goals and help improve collaboration.

Organizations of all types can leverage InfoSphere Optim tools to help improve performance, streamline database administration, speed application development and enable effective governance.

"With IBM DB2 LUW 9.7 and the new IBM InfoSphere Optim Development Studio, we completed our recent data migration project from Oracle to DB2 in 80 percent less time than we originally estimated, saving about two and a half months."

—Gene Ostrovsky
Vice President of Research and Development, ExactCost

Manage performance

The combination of IBM DB2 LUW and IBM tools helps ensure that your organization receives the benefits of superior database and application performance. Why is that so critical? Because poor application and database performance have a negative impact on customer satisfaction, customer retention and sales revenue. Low staff productivity can reduce competitiveness and hurt the bottom line.

To address performance issues you may have with legacy applications, InfoSphere Optim performance management solutions help you implement a best-practice methodology with these steps:

Identify

- Generate customized email alerts based on thresholds
- Use web-based dashboards for visual quick scanning
- Automatically monitor your applications and network as well as the database

Diagnose

- Dig into problem detail and related context with drill-down screens
- Automatically analyze captured data to pinpoint source code and determine root causes
- Use built-in integration to leverage data from other IBM solutions you may already be using

Solve

- Receive expert advice for problem resolution
- Correct the problem whether it's in the SQL, database or other related system
- Minimize slowdowns that impact user productivity and revenue

Prevent

- Capture and analyze data trends for capacity planning and growth
- Easily generate and send reports to business and IT leaders
- Enable cross-role collaboration—bring DBAs and developers together

"Like many manufacturers, our SAP system is central to our business. InfoSphere Optim Query Workload Tuner optimizes our SAP system so we can meet our service-level agreements."

—Manager of IT at Baldor, an electric products manufacturer

IBM tools for enhanced performance

IBM tools can augment your ability to keep your business-critical databases and applications operating at peak performance levels. InfoSphere Optim Performance Manager Extended Edition helps you manage the performance of business-critical applications to boost customer satisfaction, maximize revenue and meet SLAs. It also enables proactive, comprehensive performance management to identify, diagnose, solve and prevent performance problems.

In addition, InfoSphere Optim tools allow different groups to get a single, unified view into the data environment and to quantify the costs of poor performance. Engineered to fit seamlessly with DB2 and deliver end-to-end database and application monitoring, InfoSphere Optim solutions are designed to deploy quickly and easily with out-of-the-box configurations for immediate benefit.

"Uncomplicate the complicated task of tuning and monitoring your DB2 systems, with very little effort. InfoSphere Optim Performance Manager simplifies our efforts so that we can now do in hours what used to take days."

—Mike Dent
Lead DBA, PacifiCorp

Increase availability

If your database goes down due to a hardware failure, program bug, natural disaster or other outage, executives can't make strategic decisions, revenue is at risk, productivity declines and you can't deliver the top-notch service your customers expect. Many companies don't have a solid backup and recovery strategy for such emergencies; others have a strategy, but the processes involved are complex and time-consuming. The result is that the time to recover often exceeds what the business finds acceptable.

Your organization needs a data availability strategy that enables you to:

- Ensure your environment is available in the face of exploding data volumes, pressure to meet SLAs, potential disasters and the need to do business 24x7.
- Solve the problem of longer and longer backup windows being required to back up an increasing volume of data. Your interim solution might be to stop short of making full backups and get back online more quickly—but that leaves you at risk for data loss in case of an outage.
- Continue meeting SLAs and, in the case of an outage, recover to the point of failure.
- Deal with human error as well as natural catastrophes.
- Archive data to comply with government regulations for data retention.

IBM DB2 data availability tools help reduce time-to-recover by aligning backup strategies with outage-related SLAs. They help you formulate backup strategies that have a low impact on production, yet provide the necessary recovery assets and the ability to recover faster than you could with traditional database recovery methods. The goal is to make sure your data environment is up 24x7, and ensure that if you have a problem, you can solve it quickly.

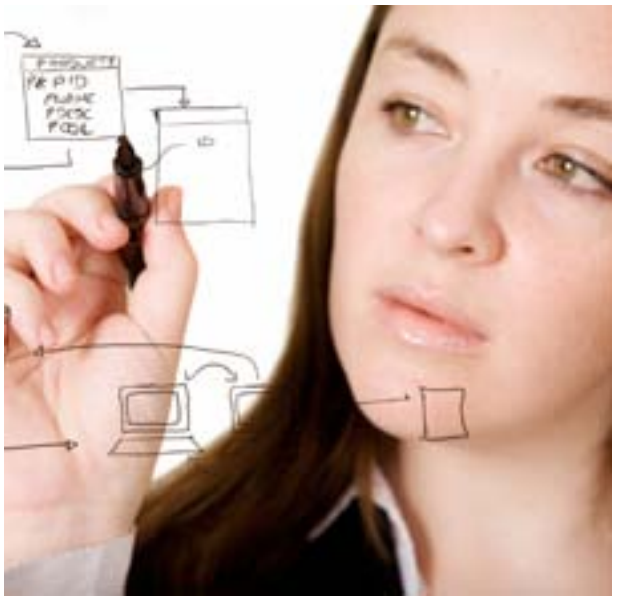
IBM tools for backup and recovery

IBM offers a suite of backup and recovery tools for DB2 that align backup strategies with SLAs and make it easier for IT staff to complete backups during the scheduled window. These DB2 Tools are integrated with DB2 and take advantage of its backup and recovery features to a degree not possible with third-party tools. IBM tools for DB2 help optimize operations by automating processes, provide comprehensive analysis of database assets to simplify database management tasks, enable backups without sacrificing rapid recovery times and help DBAs move a lot of data in a little time.

By helping to restore the database quickly and easily in the event of an unplanned service interruption, IBM backup and recovery technologies can boost IT staff efficiency to increase return on technology investments. The IBM tools are also designed to help IT staff take a more proactive role in identifying risks that could result in potential database failures and data loss.

Elements of the IBM solution include:

- *IBM InfoSphere Optim High Performance Unload* enables DBAs to move large volumes of data with speed and accuracy during recovery. The tool allows DBAs to choose the precise data to move to a target destination, which leads to lower risk of configuration mistakes and less demand on system resources.



Build a unified environment

IBM DB2 LUW is a reliable, scalable, high-performance platform that serves as a superior foundation for data management. DB2 Tools augment the database software's capabilities, creating a unified environment that enables you to cost-effectively manage data throughout its life cycle. Tightly integrated with the database, DB2 Tools can increase your organization's ability to deliver applications quickly, help improve database and application performance, and help ensure the highest levels of data availability. Doing so allows you to derive maximum value from your data and take full advantage of it to give your business a competitive edge.

Resources

To learn more about IBM DB2 and tools, please check out the following resources:

- **IBM DB2**
- **IBM Data Management**
- **IBM InfoSphere Optim Tools**

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