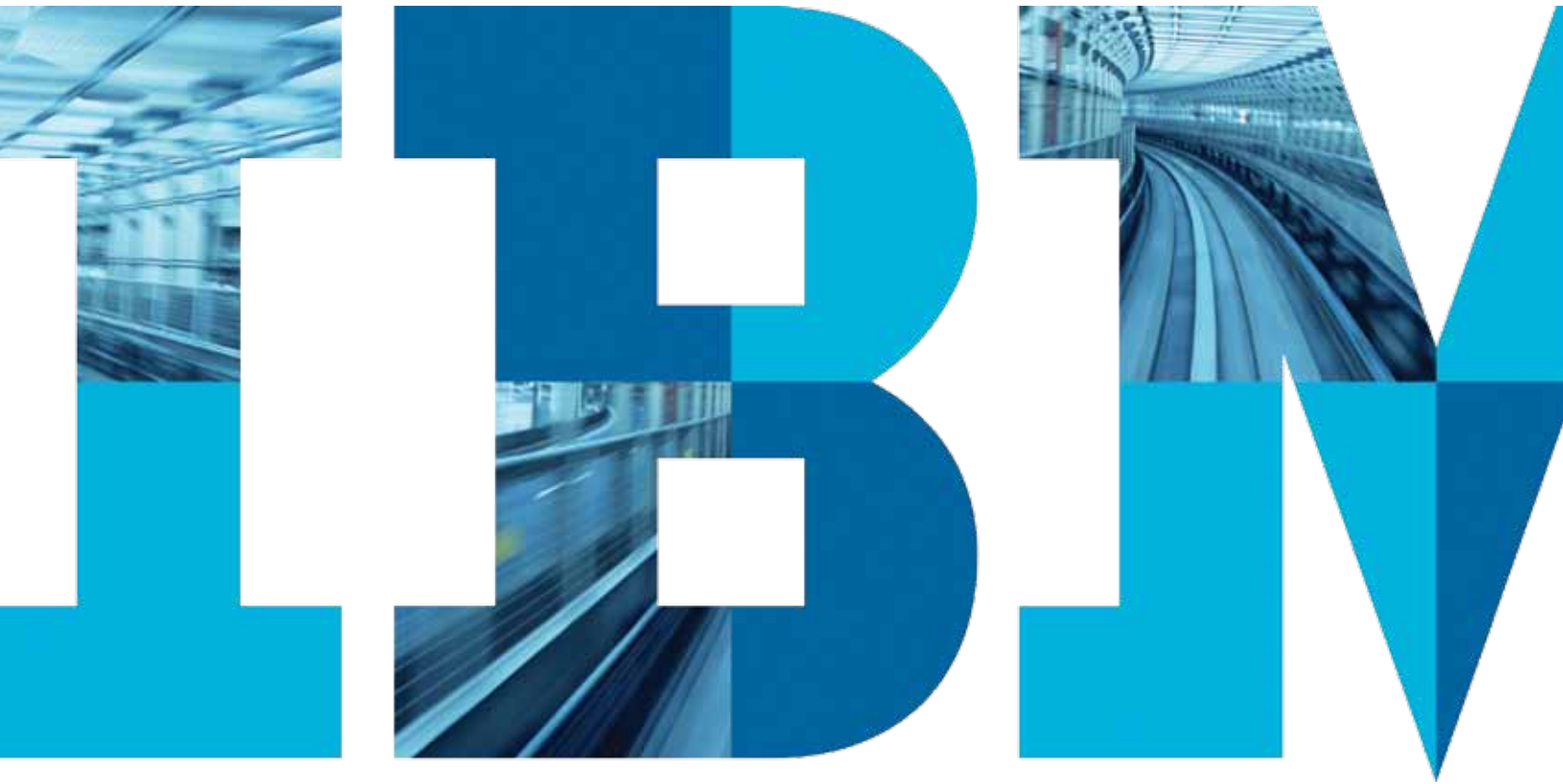


**Is your database ready for
your company's future?**





No matter what industry or market you are in, data has become more than just details of recorded transactions, events and customer records—it's the lifeblood of your business, as vital as cash.

That makes your database a critical part of your business. Can it stay a step ahead of the demands that your customers, employees and partners place upon it?

“We chose DB2 because it was a better value than Oracle. With administrative and other costs figured into the total cost of ownership, DB2 is 25 percent less expensive than Oracle.”

—Gustav Elias, Database Administrator and System Programmer for DB2, Austrian Railways

Managers throughout your organization need to be able to analyze business data in real time, and the data volumes are skyrocketing. Can your database scale up and out? How much will that cost?

Your primary database is the foundation for analytics that deliver high-value business insight. If the database is fast and well-tuned, you get accurate data to support fast decision making and customer service that's informed and responsive. If it is slow and overwhelmed, you get inefficient systems and processes—and frustrated customers. Can your database safeguard your data, make it constantly available and distribute it as needed?

Choosing a database is a strategic decision. For decades, IBM has invested in hardware and software that can help you prepare for your future, creating reliable, intelligent database technology and power for the day you need it.

“Our database is now 43 percent smaller than before and some of the largest tables have been reduced by up to 70 percent. Despite the compression, there has been no impact on batch performance, and our most important online transactions are actually 20 percent faster with the new version of DB2 for SAP.”

—Roland Heim, SAP Basis Administrator, INTER Versicherungen

IBM DB2: Future-ready performance

IBM® DB2® provides performance that is future-ready, today. It leads in the field, as evidenced by recent customer testimonials,¹ as well as on industry benchmarks.² And IBM is working to ensure that DB2 continues to gain in processing, memory utilization, security and scalability, as well as driving ahead on both efficiency and innovation measures.

Cost efficiency—the database matters

Enterprises need an optimized IT infrastructure to handle growing data volumes and analytic processing without breaking budgets. In fact, CIOs must be relentless cost cutters: according to the 2009 IBM Global CIO study, “CIOs spend 14 percent of their time removing costs from the technology environment.”³

IT costs boil down to two elements: power and people. Processing power depends on everything in the data center: hardware, software, air conditioning and energy, all of which require people to install, operate and maintain them. Plus, costs for servers, data storage, floor space, cooling and electricity tend to go up in rough proportion to processing capacity. How efficiently your database delivers and manages processing power is, therefore, a fundamental issue in cost control.

People are the other part of the IT cost equation. IT systems must be programmed, maintained and occasionally fixed. You want your senior IT people pushing the business forward, rather than handling trouble tickets. With a database that’s designed to be easily maintained with well-integrated tools, you need fewer staff to accomplish maintenance, and their skill sets can be applied to higher-value tasks.

IBM DB2 helps your IT organization to make the most of its people and processing power. With DB2, you get outstanding performance. On key benchmark comparison tests, recent versions of DB2 have advanced beyond competitors and put DB2 solidly ahead. Time and again, critical benchmarks show that DB2 delivers high overall performance and performance per core across multiple industry-standard benchmarks.⁴

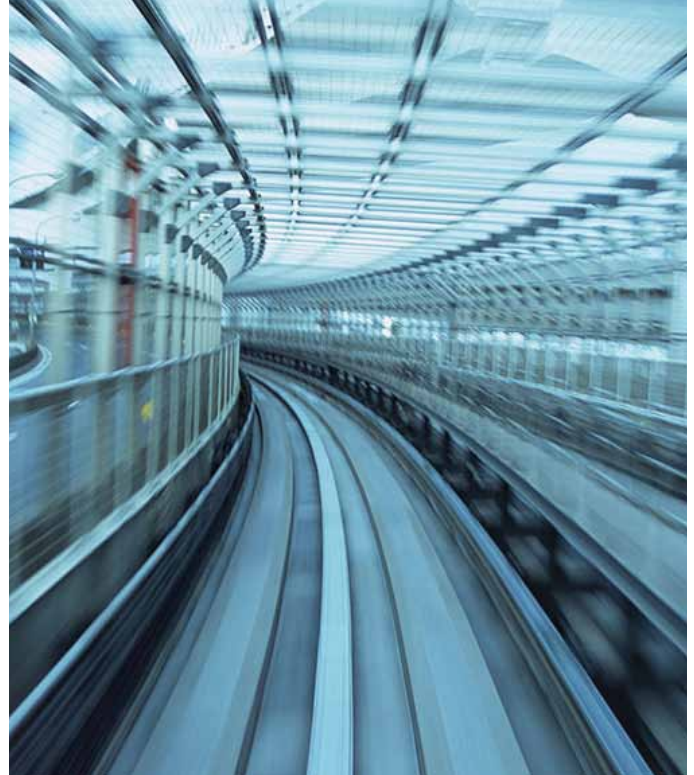
Database performance depends heavily on storage, and DB2 also delivers a competitive advantage in storage efficiency that helps lower costs. It applies real-time compression and other storage-saving techniques to help minimize the hardware storage needs for a given set of workloads—all without hurting performance. For example, DB2 row compression can reduce storage requirements dramatically and speed up disk I/O. That storage reduction translates into lower hardware and storage costs, as well as lower related costs such as energy consumption.

A study by the research firm Solitaire Interglobal showed that DB2 requires 35 percent fewer people than competing products to obtain the same level of performance.

On the people side of the IT budget, DB2 intelligent administration features make it relatively easy to set up and maintain. For example, DB2 can automatically perform high-skill tasks such as memory tuning and optimization for faster processing. This frees up IT staff to work on innovative and new initiatives. A study by the research firm Solitaire Interglobal showed that DB2 requires 35 percent fewer people than competing products to obtain the same level of performance.⁵

Enterprise data: A vital asset to leverage and protect

Leveraging data assets is necessary for business growth, but we live and work in the new, unforgiving era of data governance, with strict standards for data protection and heavy penalties for failure. IBM DB2 helps the IT group strike a balance between security and availability—protecting your data from external and internal threats, while keeping it accessible at all appropriate times.



The essential security measures in DB2 start with reliable authentication, authorization and multilevel access control. DB2 Label-Based Access Control (LBAC), for example, provides tight control over exactly who can access certain data—or even confirm its existence. DB2 also provides granular encryption to protect specific fields in the event someone accidentally releases your data or accesses it without authorization. This includes masking a column total number if a line item that figures into it is confidential.

“Thanks to DB2, we are saving around 25 percent on software licensing and maintenance fees—which means we have more money in the IT budget to spend on solutions that deliver additional competitive advantage for our business.”

—Ozcan Soke, IT Manager, Borçelik, a large Turkish steel maker

A database that has fewer outages reduces the number of urgent “fix it” calls to administrators, which is a major boon to human resources utilization.

Safeguarding data is just half of the challenge; maintaining availability is the other half. To help make sure your data remains accessible at all times, IBM DB2 provides a number of important features for high availability and disaster recovery. Redundancy options, including immediate cutover to a backup system with seamless recovery, help your IT team eliminate both unplanned outages and planned downtime. Your business can continue without delay.

A people-efficient database

Great effort and testing has gone into DB2 autonomic features and self-healing capabilities for common database issues.

A DB2 feature called Health Center continually monitors the database, searching for potential problems. If it discovers an issue, such as the database running low on memory, it automatically notifies administrators via email, pager or PDA. The database will also suggest solutions for the problem, helping to cut down the time needed to source a fix.

Another feature, Configuration Advisor, can save database administrators time by automatically configuring a database for use—setting the processor speed, the amount of memory that needs to be allocated and the number of users on the system. A related capability, the self-tuning memory manager (STMM), also helps avoid slowdowns in performance that would negatively impact business operations.

According to third-party independent studies, compared to its leading competitor, IBM DB2 had significantly fewer outages, and its average outage was of shorter duration.⁶



A database that has fewer outages reduces the number of urgent “fix it” calls to administrators, which is a major boon to human resources utilization.

Innovation drives efficiency

IT must always examine new technology, adapt it (or adapt to it) and use it to support the business. The more your IT team analyzes the overall cost of database software, the stronger DB2 will emerge as an excellent strategic choice. Highly versatile, DB2 spans the cloud, virtual servers and mainframes. It is compatible with Java™, JavaScript™ and open-source languages, supporting your business in whatever form it takes.

IBM helps you reach the future without the risk usually associated with adopting breakthrough technologies. IBM is able to borrow tested technologies from its deep portfolio, and apply them in innovative ways to its other products. One example is DB2 pureScale™ software, based on the gold-standard technology in IBM DB2 for z/OS®, which IBM has now extended to distributed computing with DB2.

Leveraging the IBM technology portfolio

Scalability is one of the driving imperatives for IT. DB2 pureScale software provides transparent scalability for distributed servers, so you can grow system capacity with minimal inconvenience—almost without it being noticed. You can add and manage multiple database servers, which share data and workload in a clustered system, without changing either your applications or how data is distributed.

If your company depends on a multi-server system, rather than a mainframe, this can help significantly reduce the risk and cost associated with expanding IT capacity. DB2 pureScale software is designed for continuous availability—in business terms, it helps keep business running through situations where a component fails, or a server is turned off for routine maintenance.

There are other examples where the broad IBM portfolio lends innovative capabilities to DB2—technologies you can feel confident using because they are proven in other IBM products. Those innovations allow DB2 to reliably and consistently enable new opportunities for your operations and sales efforts.

Future-ready, today

The ability to effectively manage data and information is critical to business success. Given that, the performance of your database is a leading indicator of the performance of your enterprise.

DB2 is high-performance, cost-efficient and ready for your company's future. Drawing on field-proven technologies from across the IBM portfolio, it delivers innovation with reliability. DB2 provides flexibility and is extremely scalable on the mainframe and across distributed environments. It has features that free administrators from low-level database monitoring duties, and can solve many common database problems by itself. It has a long history of successful implementations due to the wide range, strong integration and robust quality of available development and maintenance tools. And DB2 is fully enabled for deployment in private or public clouds, in exactly the same way as it is deployed on-premises, thus enabling delivery of Data as a Service (DaaS).

Make sure your database and IT resources are prepared for the future before your company arrives there. IBM and DB2 are ready today.

For more information

For more information about improving database performance and IBM DB2, please contact your IBM representative or IBM Business Partner, or visit:

- ibm.com/db2
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¹ ibm.com/software/data/db2/lowerdatabasecosts/testimonials.html#Performance

² "DB2 Performance: Industry-leading performance across all workloads." ibm.com/software/data/db2/performance.html

³ 2009 IBM Global CIO Study: The New Voice of the CIO, p. 24. ibm.com/ciostudy

⁴ "DB2 Performance: Industry-leading performance across all workloads." ibm.com/software/data/db2/performance.html

⁵ Solitaire Interglobal. Whitepaper: IBM DB2 Performance on IBM System p and System x. 2009.

⁶ Ibid.



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