

# IBM Db2 AI for z/OS

Boost Db2 for z/OS efficiency, health and performance and protect it from unintentional disruptions



## Highlights

Gain greater resiliency and quickly identify database issues

Automate performance analysis for improved productivity

Reduce CPU consumption for greater cost efficiency

Businesses are continually called upon to drive revenue-generating and operational initiatives that improve productivity, performance, security, availability and much more. And today's IT environments require skillsets many times beyond the abilities of even the most accomplished database administrators. To address these challenges, organizations are looking to apply machine learning and AI in new ways to improve database operations.

Db2® AI for z/OS® simplifies database management efforts and enhances system performance by embedding AI into Db2 for z/OS. Using machine learning, it can learn patterns from your unique operating environment to improve Db2 for z/OS application performance and subsystem health. This helps ensure that Db2 for z/OS performs reliably, efficiently and cost effectively.





### **Gain greater resiliency and quickly identify issues to protect critical resources**

To protect Db2 for z/OS from unintentional disruptions and intrusions that may originate from remote applications, Db2 AI for z/OS includes the distributed connection control (DCC) feature. This capability leverages AI to learn distributed connection behavior that can help prevent connection and thread flooding using the Db2 profile function. It can automatically learn and visualize connection and thread behavior and generate warning and exception alerts so database issues can be detected early and quickly acted upon. Enterprise-level resiliency demands that critical resources be protected, which Db2 AI for z/OS supports through enhanced thread visibility and control.

### **Automate performance analysis for improved productivity**

Db2 AI for z/OS offers a system assessment capability that analyzes your Db2 subsystems to help reduce the need for costly application optimization and tuning and improves database performance. It uses AI to learn what is normal, performs exception-based analysis, and provides recommended actions and correlations for each exception to speed up analysis. It automatically collects and visualizes key performance information to facilitate analysis at the data sharing group, subsystem and application connection level. Years of subject matter expert experience, embedded as a part of this automated performance analysis, helps improve productivity by reducing analysis time and effort.

### **Reduce CPU consumption for greater cost effectiveness**

The SQL optimization capability in Db2 AI for z/OS enhances optimizer path selection by predicting likely SQL behavior, such as value of host variables or rows fetched, and applies additional runtime optimizations including better sort methods and parallelism. It can automatically stabilize dynamic queries and provides the ability to lock/unlock and automatically self-tune access paths. This more effective and efficient application performance and query management can result in significant DBA time savings, deliver elapsed-time improvements, and reduce CPU consumption and costs.

### **Conclusion**

With a simplified software stack to enhance efficiency and the speed of new installations, Db2 AI for z/OS helps organizations streamline database management efforts and enhance system performance. Using machine learning and AI, you can:

- Uncover the root causes of database performance issues and make recommendations for database performance improvements
- Determine the best query paths for increased efficiency and automation
- Optimize sort and SQL concurrency for reduced workload and better performance
- Lower CPU resources and maintain enterprise-level resiliency and availability

Db2 AI for z/OS helps ensure that Db2 for z/OS performs reliably, efficiently and cost effectively, even under the most demanding circumstances.

**Why IBM?**

IBM® is trusted to manage enterprise companies' most mission-critical data and applications. Our experience and innovation in enterprise data solutions includes market-leading database solutions and enterprise-ready AI. We enable our clients to run solutions in any cloud or on-premises environment and believe that our clients' data solely belongs to them.

**For more information**

To learn more about Db2 AI for z/OS, please contact your IBM representative or IBM Business Partner, or visit [ibm.com/products/db2-ai-for-zos](https://ibm.com/products/db2-ai-for-zos).

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Produced in the  
United States of America  
November 2023

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