



IBM DB2 Estimator

Technical Summary

IBM DB2® Estimator is an easy-to-use, standalone tool for estimating the performance of applications for DB2 Universal Database™ for OS/390® Version 6. Run it on your desktop personal computer, or take it with you on your portable notebook computer. From simple table sizing to a detailed performance analysis of an entire DB2 application, DB2 Estimator saves time and lowers costs by allowing you to investigate the impact of new or modified applications to your production system before you implement them. DB2 Estimator works on IBM-compatible personal computer systems that support Microsoft® Windows® 3.1, Windows 95, Windows 98, Windows NT® or IBM WIN-OS/2® on OS/2®.



DB2 Estimator answers questions such as:

- *What is the elapsed time for an SQL statement that fetches N rows?*
- *How much processor resource is used during an N-way join?*
- *What is the impact of adding and dropping an index from a table?*
- *Can my system support an anticipated increase in workload?*
- *How will doubling processor resource affect transaction response time?*
- *How much storage do I need for the new table and its indexes?*
- *Are the predicates being modeled reflected well in the indexes?*
- *How will doubling my table size affect performance?*
- *Can my application complete within the batch window?*
- *How long will my utility job take?*
- *How will data compression affect these estimates?*
- *What about data sharing?*

- *What would be the effect of using triggers?*

DB2 Estimator helps you learn the impact of these changes before you make them.

Major benefits

- Provides optimal estimates of DB2 application capacity requirements
- Displays costs online instantly, and prints or exports files to spreadsheet programs
- Provides an easy-to-use graphical user interface and online help
- Runs independently of a DB2 system
- Can import table and SQL definitions from DB2 Universal Database Server for OS/390
- Supports both DB2 for OS/390 Version 5 and DB2 Universal Database Server for OS/390 Version 6.

How to use DB2 Estimator

DB2 Estimator can be used during all phases of the life cycle of a relational database application.

During the initial design phase

In the initial design phase, the detailed specifications of the tables, indexes and SQL statements used by your application might not be available. Using DB2 Estimator, you can quickly and easily determine whether your design is feasible and optimal. For example, when you define a table in DB2 Estimator, you need only specify the column names and significant attributes of the table, then create an index by choosing from the columns you have defined. From these table and index definitions, you can immediately view the DASD space requirements.

By defining SQL statements that approximate those you intend to use in your application, you can view the cost and performance of running those statements in terms of processor and I/O capacity. You can group the SQL statements to model DB2 transactions and view the costs at the transaction level.

Finally, you can model DB2 applications by grouping the transactions and specifying a rate for each transaction type. DB2 Estimator then estimates the amount of processor and I/O capacity needed to run the application in your environment and the average elapsed time for each transaction type. You can also select from several predefined utilities and determine the costs of running them.

Version 6 of DB2 Estimator expands support for utilities and SQL statements to help you approximate your working environment more closely.

DB2 Estimator lets you change your definitions easily to help you evaluate alternative designs. By comparing the cost and performance of these designs, you can determine which design provides the optimum cost/performance ratio before you invest valuable time and resources coding your application or creating a real database.



While developing your application and database objects

When you are ready to create real database objects, use the models you specified in DB2 Estimator as a guide for naming columns and specifying attribute values. DB2 Estimator helps you build more efficient databases by building a model of your system, based on your data knowledge, with reasonable access paths for your SQL statements. If actual DB2 information is available through DB2 Explain and/or DB2 Performance Monitor, you can tune the model by overriding the model assumptions. In addition, you can also import table, index and SQL statements from your DB2 database to DB2 Estimator, and then modify them to suit your modeling requirements.

As you design and code application modules or individual programs, use DB2 Estimator to estimate the expected performance quickly without creating real database objects. These estimates alert you to problems that are easily fixed at this early stage. As you complete the application code and database design, use DB2 Estimator to ensure that performance remains optimal.

When your application is in production

Performance monitoring tools such as DB2 Performance Monitor are commonly used to detect application performance problems during production. Common solutions to these performance problems include changes in index and SQL design. By using DB2 Estimator, you can easily evaluate alternative SQL designs as well as the resultant effects on system performance before modifying any production database objects.

DB2 Estimator also helps you determine the impact of hardware or workload changes.

Summary of features

- Environmental scope: DBMS, DDL, SQL statements
- Analytical approach: analytic and queuing models based on DB2 internals

- User interface: graphical, multiple levels of detail and "What if?" analysis
- Performance estimates: processor and I/O capacity, elapsed time and DASD space
- Reporting levels: processor, device, SQL, DB2 transaction, utility and overall
- DB2 application outputs: graphical analysis, text reports and files
- Hardware modeled: predefined and user-defined processors and devices
- Databases supported: DB2 for OS/390 Version 5 and DB2 Universal Database for OS/390 Version 6
- Operating environments: Windows 3.1, Windows 95, Windows 98, Windows NT or WIN-OS/2 on OS/2

Hardware requirements

- An IBM or compatible personal computer with an 80386SX or upward-compatible processor
- At least 8 MB of memory
- A 3.5-inch diskette drive (720 KB, 1.44 MB, or 2.88 MB), CD or download capability from the Web
- A hard disk with 15 MB unused space available
- A VGA or VGA-compatible display
- An IBM PS/2 or Microsoft-compatible mouse.

Obtaining DB2 Estimator

DB2 Estimator is one of several features and tools offered with DB2 Universal Database Server for OS/390 Version 6:

- [DB2 Administration Tool](#)
- [DB2 Buffer Pool Tool](#)
- [DB2 DataPropagator™](#)
- [DB2 Extenders™](#)
- DB2 Management Tools Package
 - [DB2 Control Center](#)
 - DB2 Estimator
 - [DB2 Installer](#)
 - [DB2 Visual Explain](#)
- [DB2 Performance Monitor](#)
- [DB2 Utilities](#)
- [Net.Data®](#)
- [QMF Family](#)
- [QMF for Windows](#)
- [QMF High Performance Option](#)

Connecting to DB2

[IBM DB2 Connect™](#) enables remote access to data stored in DB2 Universal Database for OS/390 from UNIX®, Windows and OS/2 applications.

To find out more

If you'd like to learn more about DB2 Estimator, contact your IBM marketing representative or visit our Web site at www.ibm.com/software/db2os390/.

To download DB2 Estimator, visit www.ibm.com/software/db2os390/estimate/



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