

## What are the production challenges faced by your IT department?

Are they associated with batch windows, online uptime, legacy batch system performance, or the development and deployment cycles of new business applications? Now you can meet these challenges, despite day-to-day setbacks or declining budgets. **SmartProduction® for DB2** is the tool that will make it happen.

**SmartProduction for DB2** is an innovative optional feature of **SmartProduction** that increases your system online time by reducing batch run time of DB2 production jobs and applications. It examines and analyzes job flow and application inefficiencies rather than DB2 system capacity and system performance. **SmartProduction for DB2** identifies jobs and applications that are the best candidates for improvement and provides you with immediate, concrete suggestions for tuning actions. The results are dramatic, yet easily achievable.

Unlike other DB2 tuning packages and optimizers that focus on DB2 system capacity and system performance, **SmartProduction for DB2** explains where, when and why production inefficiencies occur, and provides solutions that improve your batch applications and increase online availability. **SmartProduction for DB2** effectively shows you how to increase the efficiency of your existing production work. It analyzes the job flow and application resource consumption *after* the production flow has been completed, so there is no additional monitoring overhead during job run-time.

**SmartProduction for DB2** does not merely pinpoint DB2 application performance problems; it provides you with specific solutions that, when implemented, will make your jobs run smarter and more effectively.

## Identifying the Challenges

You know how important it is to deliver production and on-line services in a thorough, timely and cost-effective manner. The efficiency of your business applications has a huge impact on your company's success, especially as you try to sustain a strategic business edge in today's highly competitive marketplace. In order to maintain this edge, it is crucial to reduce the resource consumption and run time of business applications.

**SmartProduction for DB2** enables you to dramatically reduce the resource consumption and elapsed run-time of your batch DB2 applications. It utilized a comprehensive set of more than 50 separate tests that facilitate batch window reduction.

## How SmartProduction for DB2 Works

**SmartProduction for DB2** locates logical inefficiencies within your applications, job flow, and utilities. The best candidates for improvement are identified in simple, user-friendly reports. Users can then retrieve an analysis of the inefficiencies, including solutions that will deliver immediate, dramatic improvements in production performance without making any modifications to the source code.

## How to Use SmartProduction for DB2

**SmartProduction for DB2** requires minimal input by the user. The menu-driven, fill-in-the-blanks **SmartProduction** ISPF interface allows you to easily analyze your applications, in detail, from a number of different perspectives. This results in clear, comprehensive, and easy-to-use batch and online reports. Best of all, you can spend more time solving your performance problems rather than searching for and comparing the relevant information. The Case-Based Reasoning feature provides you with an explanation of each inefficiency, and provides specific solutions. This powerful feature contains an ever-increasing amount of tuning information to help ensure that your production environment is operating at peak performance.

## SmartProduction for DB2 Benefits

Implement **SmartProduction for DB2** solutions and:

- Increase user productivity and satisfaction by providing more online time
- Reduce your CPU and DASD consumption
- Save money by extending the life of current hardware investments and postponing the need for future upgrades
- Help mission-critical applications run faster
- Improve overall system utilization
- Reduce operating costs

## SmartProduction for DB2 Optimization Strategies

**SmartProduction for DB2** can detect a wide range of production inefficiencies (over 50) which, when resolved, can greatly reduce system resources utilization (e.g., CPU and I/O) and significantly cut job elapsed times.

**SmartProduction for DB2** applies the following four key strategies to improve the performance of the DB2 production batch workload:

- **Improve DB2 Application Efficiency**

Many site-developed DB2 applications are not as efficient as they could be. This causes a problem when the degree of inefficiency is significant.

Sample points: Large sorts could be eliminated via additional index; improper SQL commands performed under batch.

- **Increase DB2 Parallelism**

Many DB2 applications do not make use of the DB2 parallelism methods, which allow performing concurrent I/O and CPU. Using DB2 parallelism can significantly reduce elapsed time.

Sample points: A high-priority application does not make use of parallelism; parallelism has been requested, but is not honored by DB2 due to various problems.

- **Improve Efficiency of DB2 Housekeeping**

Many utility executions are performed in order to back up, restore, copy or reorganize the DB2 database. These utility executions often do not use all performance options available.

Sample points: Multiple utility executions could be combined into one utility execution; utility execution does not use proper Sort optimization techniques.

- **Eliminate DB2 Contentions**

Batch tasks are frequently delayed, or even aborted, due to DB2 contention problems.

Eliminating (or at least greatly reducing) the occurrences of contentions can significantly reduce elapsed time.

Sample points: Deadlocks, timeouts, lock suspensions, lock escalations, buffer shortages.

## Hardware and Software Requirements

**SmartProduction for DB2** requires **SmartProduction** as a prerequisite. **SmartProduction for DB2** is supported under the same environments as **SmartProduction**.