

SmartProduction® and its DB2 Optional Feature

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** and its **DB2 optional feature** are the tools that will help make it happen.

SmartProduction is an innovative tool that will increase your system online time by reducing batch run time of your production jobs and applications. **SmartProduction** examines and analyzes job flow and application inefficiencies and identifies the best candidates for improvement. It provides you with immediate, concrete suggestions for tuning actions, JCL modifications and more. The results are dramatic and easy to achieve.

Unlike other tuning packages and optimizers that focus on system capacity and system performance, **SmartProduction** explains where, when and why production inefficiencies occur, and provides solutions that improve your batch applications and increase online availability. **SmartProduction** 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.

How SmartProduction Works

SmartProduction utilizes a comprehensive set of more than 250 separate test cases that locate logical inefficiencies within your application job flow, data sets, 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.

When implemented, solutions provided by **SmartProduction** will reduce the use of system resources such as CPU, I/O and DASD and show significant reductions in job elapsed run time. The reduced run time resulting from these changes will, in turn, increase the online time available to your end users and sales professionals. Every minute added to your online availability is an opportunity to generate additional revenue.



Axios

Benefits

By implementing **SmartProduction's** solutions you can:

- Reduce the batch window by as much as 30%
- Increase user productivity and satisfaction by providing more online time
- Reduce your CPU, I/O, 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 while reducing operating costs

How to Use SmartProduction

SmartProduction requires minimal input by the user. Its menu-driven, fill-in-the-blanks ISPF interface allows you to easily analyze your applications, in detail, from a number of different perspectives. This provides 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 relevant information.

SmartProduction's Case-Based Reasoning feature gives you an explanation for each inefficiency and provides specific solutions. This powerful feature contains an ever-increasing amount of tuning information to ensure that your production environment is operating at peak performance.

SmartProduction Global Reports allow your IT staff to sort and report on inefficiencies by type. Mask features in all Good Candidates and Global Reports allow for the filtering of jobs and data sets to narrow the scope of any report. Masks can filter based on job prefix or inefficiency type (i.e. DB2) for job reports, and data set high order qualifier or inefficiency type (i.e. tape issues) for data set reports. This allows specific task groups and performance teams to quickly and easily access the information that relates to their priorities.



SmartProduction's DB2 Optional Feature

The **DB2 optional feature** enables you to dramatically reduce the resource consumption and elapsed run-time of your batch DB2 applications. It processes the data in DB2 generated SMF records to provide a detailed analysis and targeted solutions to the DB2 issues that slow down the batch window. More than 50 specific cases are implemented to identify poor performance, inappropriate options and other inefficiencies in your DB2 batch processing environment. Your jobs will run smarter and more effectively.

DB2 Optimization Strategies

The **DB2 Optional Feature** applies the following key optimization strategies to improve the performance of the production batch workload:

- **Improve DB2 Application Efficiency**

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

Examples: elimination of large sorts via additional index; improper SQL commands performed under batch; non-optimal (or non-standard) COMMIT frequency.

- **Increase DB2 Parallelism**

Many applications do not make use of the DB2 parallelism methods that allow users to perform concurrent I/O. Using DB2 parallelism can significantly reduce elapsed time.

Examples: An application does not make use of parallelism; parallelism has been requested, but is not fully honored by DB2 due to some contentions or restrictions.

- **Improve Efficiency of DB2 Housekeeping**

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

Examples: Multiple utility executions can be combined into one utility execution; utility execution does not use all available 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.

Examples: Deadlocks, timeouts, lock suspensions, lock escalations, rid pool failures, buffer shortages.



Axios

Hardware and Software Requirements

SmartProduction's DB2 Optional Feature requires **SmartProduction** as a prerequisite.

Hardware: **SmartProduction** and its **DB2 Optional Feature** support all versions of MVS/ESA V5, OS/390 and z/OS.

Software: **SmartProduction** requires the MVS operating system with either JES2 or JES3. One of the following MVS versions is required:

- MVS/ESA V5
- OS/390
- z/OS

The following products are required:

- ISPF version 2 or above
- TSO/E Version 1 Release 3 or above

*Note: The **SmartProduction** Online facility requires about 1 MB of virtual storage.*



Celebrating 30 years of delivering software solutions and services to mainframe users worldwide.

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