



Using **SmartProduction**® as Part of Your Total Tuning Solution

The **SmartProduction**® batch analysis and tuning software identifies the inefficient use of time and resources by the jobs, job flow, data sets and applications of the batch production workload. It allows you to locate, prioritize, and fix your most significant batch inefficiencies, and evaluate the effectiveness of the tuning process in order to increase online time availability.

There are several popular and sophisticated performance-measuring application tools that analyze the application code and measure the activity of both batch and online applications. Their reports detail data such as where and how time is being spent during an application's execution, and where and how most I/O's are executed.

The difference: Application tools look at specific applications by request and report on how and where resources were spent based on **how the application code was written**. **SmartProduction** examines **the execution of the entire batch production workload** in order to identify where and when time and resources were used inefficiently. **SmartProduction** then uses case based logic to determine the most effective tuning solution.

SmartProduction executes its analysis as a post-production batch job, so it will not add additional overhead to your already stressed batch window. In addition, **SmartProduction** uses key strategies, including eliminating unnecessary job steps/processing and utilizing more efficient utilities, in its batch performance analysis. By addressing these issues, **SmartProduction** also reduces the overall resource consumption of the batch processing in areas such as DASD and tape resources, and optimizes CPU utilization.

By evaluating execution statistics, **SmartProduction** focuses on how the workload ran in the production environment and provides simple solutions such as changes to JCL, dataset attributes, or scheduling, and rarely requires changes to application source code.

The best opportunity to use application tools is **during application development** – when a new application is being written, or when an existing application is being significantly modified due to changed business requirements. These tools can be used to identify application inefficiencies, which can be resolved by optimizing the way in which the code was written.

The difference: It can be very difficult to tune and modify applications once they are in production. It not only costs more to optimize an application during this stage, but new bugs may be introduced into the application, jeopardizing the production work. **SmartProduction** may complement application performance tools by helping to identify those production applications with coding issues that may not have come to the attention of the programming staff.

SmartProduction

When properly implemented, products that offer run-time or “on-the-fly” solutions can benefit many processing environments. Their goal often is to reduce the elapsed run time of the batch production workload to allow extended time for online processing. Establishing an accurate base line for processing standards is the key to their successful implementation.

The difference: **SmartProduction** provides information and solutions that allow you to address underlying issues relating to how jobs and applications run when executed in the production environment, as well as the manner in which data is accessed by that workload. **SmartProduction’s** detailed information about issues such as buffering and index levels can be used to create accurate, effective base line standards for automated tools.

Piping tools are another popular solution for addressing batch elapse run time, and can make optimal use of parallelism in a number of protocols. However, it is important to note that running multiple job steps in parallel will increase the CPU utilization while those steps are processed. In many cases, the CPU resources are already spread thin, and the capacity to take advantage of parallelism is simply not available.

The difference: **SmartProduction** focuses on eliminating unnecessary job steps, reducing I/O and optimizing the CPU utilization for the necessary steps that often can provide the cushion needed to make effective use of a piping solution. Again, a clean base line for the batch processing is necessary in order to make the best possible use of this type of solution.

SmartProduction utilizes key optimization strategies to address logical inefficiencies in the execution of your batch production workload, providing detailed analysis and tuning solutions. As a result, your team can achieve fast and effective reductions in both resource consumption and run time.

Application tools provide analysis that is comprehensive but labor-intensive. Analyzing even a few major applications may require significant effort and time. They may be useful for tuning user-written applications, but not so for vendor-provided applications whose source code is unavailable. Application tools, in most cases, do not identify issues that cause unnecessary work, operational bottlenecks, logical inefficiencies in the workflow, or inefficient JCL. To address these issues, you need **SmartProduction**.

The complete tuning picture: Application tools can be a vital part of the application development process and can provide valuable insight when coding changes are introduced into the production environment. **SmartProduction** provides a complete analysis of the batch production workload, its day-to-day inefficiencies, and the most appropriate tuning solutions. By combining clean code with efficient execution, you can effectively tune your system. **SmartProduction** is the tool you need to help you achieve the Complete Tuning Picture.



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