



## 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 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 Benefits

Implement SmartProduction's solutions and:

- 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
- Reduce operating costs

## SmartProduction Optimization Strategies

SmartProduction can detect a wide range of production inefficiencies (over 300) which, when resolved, can greatly reduce system resource utilization (e.g., I/O, CPU) and significantly cut job elapsed times.

**SmartProduction** applies the following six key strategies to improve the performance of the production batch workload:

- Eliminate unnecessary processing
- Optimize I/O
- Increase operational effectiveness
- Increase parallelism
- Increase online availability
- Improve application efficiency

## Eliminate Unnecessary Processing

Often there are certain tasks (jobs, steps, functions) executed which are actually not required. For example, a job continues to run each day even though the requirement for this job elapsed some time ago.

Eliminating such unnecessary tasks cuts down 100% of the system resource utilization and elapsed time consumed by these tasks.

Sample points: Data is created but not referenced afterwards; a job step can be eliminated; a sort is executed when the input data is already sorted.

## • Optimize I/O

Batch jobs makes use of certain processor resources (e.g., CPU, storage, I/O). When the elapsed time is broken into components, the bulk of the time is usually consumed performing I/O.

Many techniques and options, either hardware or software, are available in order to reduce the number of I/Os and to perform the remaining I/Os as efficient as possible.

Sample points: Non-optimal sequential data set block size; non-optimal VSAM buffering; data copied in a non-optimal manner.

## • Increase Operational Effectiveness

Batch tasks (jobs, steps or specific functions) which require certain physical or logical resources are frequently delayed or slowed.

Optimizing the use of resources and eliminating resource contention can significantly reduce elapsed time.

Sample points: A job allocates more tape drives than necessary; wait due to unavailable physical or logical resource (e.g., cassette drive, data set or initiator).

## • Increase Parallelism

The batch workload can be run much faster if tasks (jobs, steps or specific functions) can be overlapped (that is, executed in parallel rather sequentially).

## Sample Points:

Switching to more efficient utilities (which are present at the site) to copy and extract data via "smart" I/O operations (e.g., performing overlapping I/O).

Making optimal use of DB2 query, CPU and data-sharing parallelism.

Optimizing the use of resources and eliminating resource contention of specific jobs. This can significantly reduce the elapsed time of *other* jobs which, as a result, can be submitted and run at an earlier stage.

## • Increase Online Availability

Online availability requires not only that the online systems are up and active, but also that all data sets and databases used by these systems are as optimized and accessible as possible. Optimizing data sets and DB2 databases used under the online systems results in increased online availability and faster online response time.

## Sample Points:

Optimizing data set definitions and accesses. Solving actual and potential data set access conflicts (e.g., solving ENQ conflicts, eliminating unnecessary VSAM SHROPTIONS 4 specifications).



**Improve Application Efficiency**

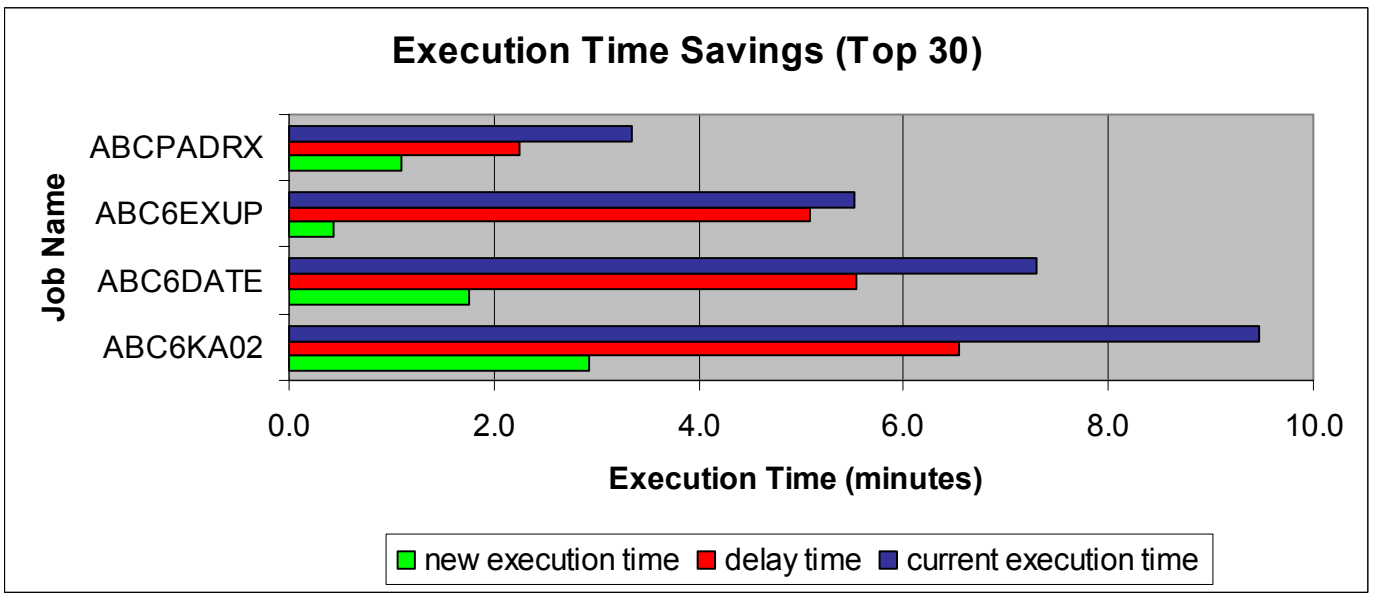
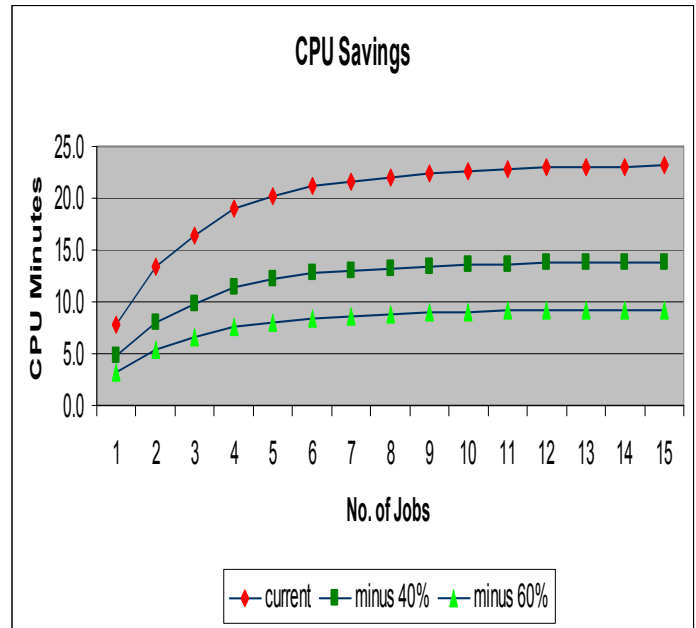
Many site-developed and vendor-provided programs and utilities are not as efficient as they could be. This causes a performance problem when the degree of inefficiency is significant.

**Sample points:**

A program opens a sequential data set an excessive number of times; a program performs non-optimal sorting; a job step executes a low-performance system utility.

**Hardware and Software requirements**

SmartProduction executes on all processors capable of running under supported versions of MVS/ESA, OS/390 and z/OS; ISPF V2 and above; TSO/E V1 Release 3 and above



Run your jobs more efficiently... reduce cpu, I/O and DASD consumption...increase user productivity...and extend the life of your current hardware in the process.

Time Machine Software, Ltd.  
 255 Dizengoff Street  
 Tel Aviv 63117  
 Israel  
 Fax: 011-972-3-5313644  
 Email: support@tmachine.com  
 Web: www.tmachine.com

EUROPEAN BUSINESS MANAGEMENT  
 55 Rue Sainte-Anne – PARIS 75002  
 tel : + 33 1 42 44 23 35  
 Fax : + 33 1 42 44 44 76  
 Email : ebmssoftware@ebm.fr  
 Web : ebm.fr