reduce resource consumption (SmartProduction)

Reduce Batch I/O & Runtime

Improve Disk Space Utilisation

Reduce DASD Consumption

Postpone Hardware Upgrades

Improve System Utilisation

Reduce Operating Costs

Help Mission-Critical Applications Run Faster & Cleaner

Every IT organisation faces a myriad of production challenges. These challenges include shrinking batch windows, increasing expectations for online response times, maintenance of legacy systems, and ever-accelerating development and deployment cycles of new business applications.

Meeting these challenges requires lower processing fees, across-the-board performance boosts, and long-term protection of investment. In short it requires SmartProduction.

SmartProduction is a unique product, enabling a dramatic, yet easily achievable reduction in resource consumption and elapsed run-time of production jobs and applications.

Using expert knowledge accumulated from numerous high-ranking production managers and site surveys, SmartProduction enables you to dramatically reduce the resource consumption and elapsed runtime of your production jobs and applications.

By utilising a comprehensive set of more than 300 separate tests which facilitate batch window reduction, onsite studies indicate a **reduction in Batch Window of up to 30%.**

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Identifying the Challenges

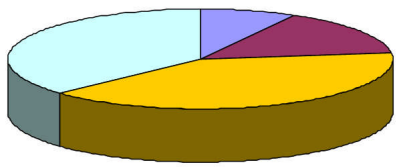
As an IT professional you know how important it is to deliver production and online services in a through, timely and cost effective manner.

The efficiency of your business applications has a huge impact on your organisation'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 time of business applications.

A recent datacentre tuning survey revealed that just 37% of an organisation's batch performs correctly. On average:

- 8% of batch processing is not required in the first place
- 10-15% of batch processing is not performed using the correct tools and utilities
- 40% can be optimised using various tuning options



Avoid Unnecessary Processing

SmartProduction improves the performance of the production batch workload by identifying certain tasks (jobs, steps or functions) that are actually not required. For example, a job that continues to run each day even though the requirement for this job ended some time ago.

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

Optimise I/O

When elapsed batch run time is broken into components, the bulk of the time is usually consumed performing I/O (60-70% on average, and 90% or more if the job is I/O bound).

I/O optimisation often generates the most significant payback in any tuning project. 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 efficiently as possible.

"In only a few weeks, we were able to shave well over an hour from our nightly batch production run. SmartProduction has provided us with a simple and cost effective solution to help us manage our system resources, saving CPU cycles, DASD and manpower resources."

- Carl Wambach. BlueCross/BlueShield
Snr. Systems Programmer

Increase Parallelism

The batch workload can run much faster if tasks can be executed in parallel rather than sequentially.

Improvements made by SmartProduction include:

- Switching to more efficient utilities (present at the site) to copy and extract data via "smart" I/O operations
- Making optimal use of DB2 queries, CPU, and data-sharing parallelism
- Optimising the use of resources and eliminating the 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 Operational Success.

When batch tasks requiring certain physical or logical resources are delayed or slowed, optimising the use of resources and eliminating resource contention can significantly reduce elapsed time.

Increase Online Availability.

Online availability not only requires online systems to be up and active, but also that all data sets and databases used by these systems are as optimised and accessible as possible.

Optimising data sets and DB2 data bases used under the online systems results in increased online availability and faster online response time.

Improvements made by SmartProduction include:

- Optimising data set definitions and accesses
- Solving actual and potential data set access conflicts
- Optimising DB2 data base access and housekeeping

Improve Application Efficiency

Many site-developed and vendor-provided programs and utilities are not as efficient as they could be. With SmartProduction you can optimise efficiency by deleting unnecessary tasks that consume time and resources.

Reduce Failure Frequency & Cost

Job failures cause the batch workload to take significantly longer to complete. For some sites, it is a major case of batch performance problems.

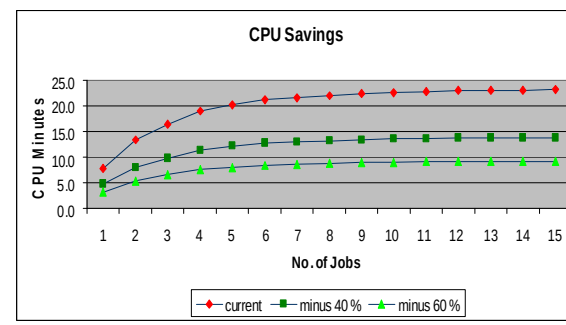
SmartProduction provides statistics as well as details on the frequency and impact of the different types of failures, and reports on jobs having poor availability.

Optimise Backup Procedures

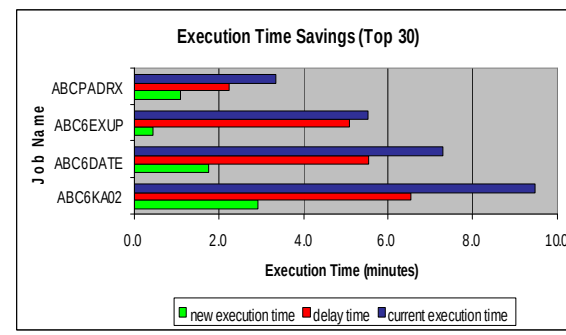
Batch tasks that require certain physical or logical resources are frequently delayed or slowed.

Optimising backup procedures can significantly reduce backup elapsed time, backup window time, and usage of system resources.

Graphical Analysis Facility



Using the SmartProduction Graphical Analysis Facility you can easily display the expected savings from areas such as unnecessary passes over data (above image) and Allocation Delays (below image).



Why SmartProduction?

SmartProduction offers a combination of features, functionality and price, making it the ultimate and indispensable choice for all professionals concerned with z/OS and OS/390 production optimisation.

Product Components

The following are the main components of SmartProduction and their inter-relationships:

Online Definition and Control Facility

Allows the user to perform actions such as requesting the analysis of a job or data set, or triggering the Good Candidates report.

JOBHIST Database

Set up during product installation and is initialised with historical job execution statistics.

Example: job run times, CPU and I/O resource consumption, data set access patterns.

Job Statistics Extractor

Extracts historical job execution SMF statistics for production jobs and accumulates them in the SmartProduction JOBHIST database. The Extractor is executed under batch mode.

Good Candidates Report

Automatically determines, based on information in the SmartProduction JOBHIST database, which production jobs and data sets are the best candidates for optimisation.

Job Analyser

Analyses using job-related information from various sources, including historical job execution information recorded in the JOBHIST database, MVS catalogs and VTOCs.

Data Set Analyser

Uses data set related information from various sources, including historical job execution sources, MVS catalogs and VTOCs

Trend Analysis Report

Compares two JOBHIST databases from different periods and provides indication of increasing or decreasing efficiency in utilisation of resources.

Technical Specification

The SmartProduction product runs on z/OS and OS/390 operating systems. The product has no special processor hardware requirements and supports all standard disk types.

Hardware Requirements

Processors - The SmartProduction product runs on any hardware configuration supported by z/OS and OS/390.

Example: IBM processor families 9672, ES/9000 and 3090. Fully compatible processors from HDS and AMDAHL are supported as well.

Disk Storage:

The SmartProduction files may reside on any disk device supported by z/OS and OS/390.

Tape Drive:

The SmartProduction installation process requires one 3480-cartridge drive or equivalent.

Software Requirements

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

- z/OS
- OS/390

The following products are required:

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

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