



BMC MAINVIEW Batch Optimizer

Optimize your batch processing performance

KEY BENEFITS

- > Reduces elapsed time for batch processes
- > Reduces total cost of ownership for your mainframe
- > Optimizes VSAM, QSAM, BSAM, and BPAM data sets, eliminating I/Os and tape mounts
- > Enables parallel execution of data-dependent jobs
- > Enables parallel execution of data-dependent steps
- > Can help postpone costly CPU upgrades
- > Provides a candidate utility to help you understand which jobs might benefit from I/O optimization and parallel execution
- > Seamlessly integrates with the BMC CONTROL-M scheduling product

Businesses require continual data availability, and batch processing remains the backbone of most large organizations' IT systems. Because of the costs and resource drains associated with rewriting old code and modifying JCL, managers often have to live with the inefficiencies of existing batch processes. Nevertheless, IT professionals understand that optimizing the batch process can greatly increase efficiency. Increased demands on cost containment have shaped the need for automated optimization techniques that will deliver tangible improvements in both resource optimization and efficiency while providing direct benefit to the bottom line.

BUSINESS CHALLENGE

Despite years of changes and advances in data processing techniques and practices, most of the work in the data center is still processed in batch mode. This issue is further complicated by increased business demands and requirements. Because of the demand for continual operations, businesses no longer have the luxury of additional offline time to accommodate longer-running batch jobs. Data center managers are searching for new ways to increase offline processing without affecting online availability.

Many batch jobs, although operating correctly, have been in service for many years and have not benefited from advanced technology, coding practices, or processing methods. Many of these programs still reside and execute below the 16MB line and have buffering techniques and sizes optimized for older hardware, DASD, and so on. Because of the high cost of the effort to rewrite old code and modify JCL, many of these jobs continue to function – inefficiently – night after night, year after year.

THE BMC SOLUTION

BMC MAINVIEW Batch Optimizer can significantly improve I/O performance, dynamically execute multiple batch job steps in parallel, and pipe file I/O between batch processes for concurrent execution of data dependent steps or jobs. It exploits the sysplex environment by dynamically moving and executing job steps on processors and images with available capacity. These technologies optimize batch processing to significantly reduce the elapsed time for processing batch jobs to widen the batch window, which allows more time for problem solving and enables you to meet service level agreements for batch and online processing.

FEATURES

BMC MAINVIEW Batch Optimizer offers the following features:

Data optimization

BMC MAINVIEW Batch Optimizer maximizes elapsed-time savings for a wide variety of programs, access methods, and file types.

- > Dynamically adjusts buffer values and processing techniques based on current system conditions
- > Builds local shared resources (LSR) buffer pools and dynamically switches to LSR processing for random access
- > Performs read-ahead for fast sequential access during LSR processing
- > Automatically sets VSAM options (for example, deferred write)
- > Moves buffers and control blocks above the line to aid virtual storage control relief for non-shared resources (NSR) and LSR processing
- > Replaces low-level I/O functions to control buffer management and physical I/O requests for non-VSAM data sets

- > Reads large amounts of data and overlaps I/Os to maximize performance regardless of blocking characteristics for sequential processes
- > Retains multiple data tracks in memory to maximize cache-hit performance benefits for random processes
- > Optimizes data management buffer values for tape, PDS members, and striped data sets

Job optimization

Most batch job streams contain steps that are related because they form a logical unit, but often there is no direct data relationship between many of the steps. These steps are organized into a single batch job because they must execute as a group to produce a specific business result, for example, cutting payroll checks or producing invoices. BMC MAINVIEW Batch Optimizer can logically separate the batch job to execute multiple steps in parallel. Concurrent execution of steps that would otherwise run sequentially produces significant elapsed time savings.

BMC MAINVIEW Batch Optimizer intercepts and analyzes the JCL, and builds a history database entry for each job to identify candidates for parallel and serial execution. It analyzes jobs multiple times before intercepting and altering the job stream. When a job meets the criteria you set, BMC MAINVIEW Batch Optimizer optimizes the job structure based on the collected history.

Data piping

Ordinarily, a job or step writes records to a file, closes it, and passes it to a downstream task that opens the file and reads the data. BMC MAINVIEW Batch Optimizer dynamically creates a data pipe between data-related tasks to enable parallel execution.

BMC MAINVIEW Batch Optimizer provides in-memory piping of job-to-job data. For step-to-step data, BMC MAINVIEW Batch Optimizer provides a choice of writing to memory or writing to disk or tape. Writer/reader jobs or job steps execute concurrently rather than sequentially.

The job-to-job and step-to-step data piping techniques are designed to enable a maximum amount of parallel batch processing to ensure the greatest amount of elapsed time savings.

Candidate utility

BMC MAINVIEW Batch Optimizer provides a candidate utility that generates reports to help you understand which jobs might benefit from I/O optimization and parallel execution in your environment and where you might achieve significant elapsed-time savings. Based on SMF input, this utility identifies candidates for I/O optimization, step splitting, and data piping, and forecasts potential savings. Although the candidate utility provides an estimate of elapsed-time savings, actual savings can only be proven through a trial or implementation in your processing environment. This utility is available on the BMC Web site at www.bmc.com.

ABOUT BMC SOFTWARE

BMC Software delivers the solutions IT needs to increase business value through better management of technology and IT processes. Our industry-leading Business Service Management solutions help you reduce cost, lower risk of business disruption, and benefit from an IT infrastructure built to support business growth and flexibility. Only BMC provides best practice IT processes, automated technology management, and award-winning BMC® Atrium™ technologies that offer a shared view into how IT services support business priorities. Known for enterprise solutions that span mainframe, distributed systems, and end-user devices, BMC also delivers solutions that address the unique challenges of the midsized business. Founded in 1980, BMC has offices worldwide and fiscal 2006 revenues of more than \$1.49 billion. Activate your business with the power of IT. www.bmc.com.



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