MVS solutions inc.

Defer your next processor upgrade

Is Buying More Cycles Performance Management?

The cost of mainframe computers has plummeted and installations have grown rapidly as a result of business requirements. At the same time, due to the economic pressures of recent years and the retirement of qualified staff, many datacenters have reduced headcounts. The availability of MVS-related skill-sets is in decline and difficult to replace and Performance Analysts are not exempt from these influences.

Rather than optimizing system performance and throughput, the tendency is to simply acquire more cycles – they're relatively inexpensive in themselves, although the related software costs may be substantial – and it's often less contentious and easier to justify than adding people. But this just masks the need for real system performance management.

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What Is Performance Management?

The objective of Performance Management is to meet your throughput goals, your response time goals, your growth requirements and your responsibilities to the business. It involves people – Performance and Capacity Analysts – using software tools to minimize system inefficiencies.

System inefficiencies are simply the things that prevent you from realizing the potential of your hardware. Many inefficiencies are caused by contention for critical resources. For example, allocation recovery for tape drives, dataset enqueue conflicts, DB2 thread contention and waiting for HSM recalls are frequent events.

These issues cause batch jobs to extend their run times and hold resources longer, causing more contention. And in turn, the batch workload affects the entire datacenter.

ThruPut Manager removes many of these inefficiencies and gives system-wide throughput and response improvements.

What is ThruPut Manager?

ThruPut Manager is a JES2 system software product that gives you control of your batch workload and improves your batch throughput and overall system performance. It complements your automated job scheduler. It dynamically analyzes batch jobs to determine their resource requirements, gives you a means to set rules for the management of each category of work and automatically controls each category and the required resources. It provides:

- **A Workload Manager Implementation that Works:** ThruPut Manager can automatically set the job class and priority, often the key determinants of the Service Class, based on accurate – not user-provided – information. It can set the Service Class directly, based on its superior knowledge of the jobs' characteristics. It can control WLM so that tape drives are not over-allocated, systems intended for primarily online are not overloaded with batch, and the dataset enqueue "ripple" does not occur.

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ON TIME Automation Designed for Batch

And rather than depending on user-specified Scheduling Environments, ThruPut Manager's automated binding agents control where and when jobs run. Your implementation of WLM Goal Mode and WLM Initiators is more effective.

- **A Buffer Between the Datacenter and Users:** ThruPut Manager can verify standards, do SAF checks and change many JCL parameters, including the job class, priority, region size, service class, scheduling environment, CPU time and WLM arrival time. It provides a buffer between the data center and its users, allowing the data center to change internally while protecting the users from technical details and the impact of constant change.
- **Optimized HSM and Robotics Operation:** ThruPut Manager can selectively recall archived datasets before the job that needs them starts. It can also ensure that required cartridges are entered into your robotics library before a job runs. Various causes of execution "wait time" are minimized or eliminated.
- **Automated Job Routing and Improved Resource Management:** ThruPut Manager can automatically bind jobs to logical resources they need, such as DB2 regions, a software license, your last few reel tape drives and many other resources. With ThruPut Manager you can automatically limit the number of reel units, cartridge drives, robotics library drives and so on requested for allocation at any one time. You can restrict the number of jobs allowed to concurrently access a DBMS and dynamically change that limit when necessary. You can restrict the number of jobs any programmer may run concurrently, regardless of job class or LPAR.
- **Minimized Contention Bottlenecks:** ThruPut Manager can automatically detect dataset enqueue contention before a job initiates and hold the job back if necessary. The job is automatically released when the contention is over. Jobs can be prioritized so that high priority work is released first and the dataset disposition can be changed to avoid dataset or volume contention.

How does ThruPut Manager Improve Performance?

ThruPut Manager is an automated "system managed" solution that makes it possible to use more of the available service units of your processor by eliminating unnecessary overhead, minimizing initiator idle time and increasing parallel processing. It reduces DBMS contention, over-allocation of resources and waits for mounts and recalls. It reduces batch interference with online and improves your response time. It gives you the tools to react to system problems and workload growth. It improves batch throughput. And it makes WLM Goal Mode and WLM initiators more effective.

With ThruPut Manager you can postpone your next processor upgrade and only acquire more cycles when your workload growth truly demands it. And, once your major inefficiencies are under control, it allows your performance analysts to focus their tuning efforts on the high visibility jobs and transactions that drive your business.

This document assumes the reader is familiar with ThruPut Manager. Only certain highlights of the product have been discussed here. For further information, please contact us as noted on the first page.

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