MICRO FOCUS

Data Sheet
StarTool IOO

StarTool IOO: the Comprehensive, Cost-Effective Way to Achieve Automated System Tuning

As a z/OS Performance professional, you have long known that the best manual tuning cannot produce the performance savings of an automated and dynamic tuning utility. However, until now, no one single integrated and comprehensive tool existed to tune all of your I/O processing with one easy to maintain approach. Micro Focus® StarTool® IOO is the most comprehensive, cost-effective, fastest and easiest way to achieve total, automated system tuning.

Micro Focus StarTool IOO is an integrated optimization system that automatically and dynamically tunes the major components of z/OS's I/O processing functions to achieve dramatic throughput improvements both in batch and online. It is the ultimate I/O throughput optimizer for z/OS. It is based on a proprietary analysis and intelligence gathering process during OPEN processing and I/O request to any VSAM or SAM (QSAM, BSAM and EXCP) dataset. StarTool IOO delivers the performance needed for applications that operate in today's fast-changing business environment.

Features and Benefits

VSAM Optimization

Eighty percent (80%) of all VSAM mainframe applications use NonShared Resources (NSR) because most only support NSR. Micro Focus StarTool IOO allows programs written in any language (including COBOL) to use Local Shared Resources (LSR) when the program is dynamically or randomly accessing a VSAM file. Micro Focus StarTool IOO builds the optimal number of LSR buffers to maximize performance. Most indexes are placed in main memory to reduce the number of physical I/Os to access a logical record. If sequential processing is requested, the number of NSR buffers for read-ahead processing is provided. LSR and NSR buffers are built above the 16M line to alleviate virtual storage constraints in the private area. For LSR, expanded storage using hyperspace buffering is automatically and transparently used when the file size is larger than the LSR pool.

Dynamic Memory Management

For those programs that are coded in assembler and already use native LSR, the perfect quantity of above the 16M line buffers and hyperspaces are transparently allocated based on file size. For all LSR processing (NSR-LSR or LSR native), a separate LSR pool is used for each file (up to 255 LSR pools transparently allocated) to eliminate buffer stealing. When applications change processing modes from Direct to Sequential, Micro Focus StarTool IOO detects this and reoptimizes tuning parameters.

Key Benefits

- Automates I/O tuning for the z/OS
- Reduces analyst time devoted to I/O tuning
- Can reduce processing time by 30–50%
- Dynamically adjusts performance criteria and operating conditions based on I/O requests
- Intelligence database contains industry standard I/O performance information
- Easy to use, no program or JCL changes required

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Sequential Optimization

Micro Focus StarTool IOO dynamically optimizes SAM files to provide the best throughput and response time for I/O requests. Elapsed time savings of up to 75% have been obtained through IOO's non-VSAM optimization of an application.

Blocking

Most sequential QSAM, SAM and EXCP processing is highly dependent upon efficient block sizes. System Determined Block sizes cannot reblock all of a shop's sequential files. The Micro Focus StarTool IOO replaces or enhances SDB's reblocking function and performs reblocking on all sequential data sets, including managing programs with hard-coded DCBs. The product reblocks all device types including tape data sets and reblocks without any JCL changes. The physical block size is attached dynamically and automatically managed regardless of what logical block size the program is dependent upon. Therefore, even all SORT products, F O CUS files, SAS sequential files and all QSAM and BSAM sequential files are optimized.

Micro Focus StarTool IOO is smart enough to reblock only 35% of all your eligible data sets but achieve 90% of the potential savings.

Buffer Management

Micro Focus StarTool IOO dynamically optimizes buffers and Start I/O's for QSAM, BSAM and sequential EXCP I/Os. Specifically, it optimizes physical sequential data sets, permanent and temporary, including data sets generated by most utilities (e.g., IEBGENER, etc.). It improves QSAM, BSAM and EXCP performance as much as 75%, saves up to 50% elapsed time for DB2 Unloads and Reloads and saves up to 40% elapsed time for IDMS sweeps.

Built-In Intelligence

Micro Focus StarTool IOO contains a database of information containing parameters and values that deliver the best I/O performance by type of device and by type of access. Customers can easily override the rules by keying in their own parameters or by excluding a dataset or job name from Micro Focus StarTool IOO's optimization process. Most users, however, use the default parameters and achieve outstanding results from its I/O optimization.

Summary

This solution automates the I/O tuning efforts, increases the level of benefits received from practicing performance management and boosts user productivity. By using the Micro Focus StarTool IOO product, enterprise IT organizations can help to ensure application efficiency and responsiveness throughout the life of their z/OS based mission-critical applications, thereby controlling costs, satisfying customers, and supporting growth. Before you decide you need a new CPU, additional DASD or start a manual system tuning project, find out your true capacity and performance potential with the Micro Focus StarTool IOO.

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