

# **DASD-PLUS SUITE**

DASD-Plus automates disk management on IBM System i. Significant gains in machine throughput and performance are the result of optimizing disk space wasted by the operating system, application software, IFS, and data. Extensive reporting capabilities identify and track emerging problems, and resource forecasting features facilitate better hardware purchase decisions.

DASD-Plus included more than 25 different disk maintenance routines, from clearing history logs, to re-sizing libraries, job queues and objects on the fly. DASD-Plus analyzes disk usage by library, file, user, group, total disk, or user-defined criteria. These routines can be performed automatically at scheduled intervals to ensure that the system is always optimized. All DASD-Plus routines are parameter-driven with time constraints so the amount of computer time that is spent on housekeeping is contained.

# Real Time Spike Detection

DASD-Plus also provides real-time spike detection, notification services and automated data collection/analysis. The analysis provides system operators with the detailed, root-cause information they need to take corrective action.

When disk utilization starts to climb because of a runaway job or query, and goes undetected, the system can crash. If an operator notices this growth, it is very difficult to identify which job(s) are consuming disk resources. Even if there are a small number of jobs, the objects that are consuming disk resources are detected.

### Job Management

DASD-Plus includes a built-in job monitoring and control system, called Job Execution Manager. Technicians can easily setup and run IBM i and DASD-Plus tasks as a complete job stream without having to create CL programs.

### Central Management

Technicians can manage DASD-Plus on IBM System i machines anywhere in the enterprise without having to log-on to the remote machine. This feature set virtually eliminates need for on-site DASD support at remote locations.

### Disk Space Analysis

The Analyze Disk Space tools analyze disk space, and offer opinions to run analysis, variance, and trend surveys for a variety of reports and queries. Analyze Disk Space functions may be run interactively or as a Job Execution Manager step.

"What if" functionality shows objects that can be removed and simulates resulting space-savings without committing to the cleanup.

# Save Disk Space

Save Disk Space utilities scour DASD storage based on user-defined rules. These utilities are separated into two key areas of functionality:

S4i Systems, Inc. 616 South El Camino Real Suite M San Clemente, CA 92672 949/366.5234 ph 800/231.5280 ph 949/366.5338 fax www.s4isystems.com **Reclaim Disk Space:** Reclaim Disk Space functions are utilities that reduce your DASD usage by removing, reorganizing, and resizing various objects that are no longer needed.

**Compress and Expand:** The Compress and Expand group of utilities compresses physical files and objects, which creates even more free disk capacity.

# Simple & Automated

DASD-Plus allows the system operator to easily configure the utility and set up threshold indicators. These indicators can be used to easily identify disk consumption based on threshold and the jobs, objects and users responsible. Immediate action can be taken to preserve valuable disk resources. Since the utility runs as a low-impact background job, the high cost of dedicated, manual monitoring is eliminated, and the root-cause detail it provides helps to avoid strategic application downtime which is not only very expensive, but politically dangerous.

# Reporting

DASD-Plus includes a report definition facility where you can set parameters to produce DASD-Plus reports that meet your individual needs.

Trend Reports enable managers to track DASD growth, and forecast future DASD requirements based on historical trends. DASD-Plus uses linear regression formulas to forecast your future DASD growth and size.

Variance Reports identify if and when an object has changed. Surveys can be set up to report changes to objects measured against a baseline or between defined periods. Exception reporting allows you to focus only on the most critical information.

Here are some reports included in DASD-Plus:

ANALYSIS	VARIANCE	TREND
Surveys by survey	Changes in record counts	Changes in record counts
Surveys by size	Objects created	Objects created
Print DASD information	Objects deleted	Objects deleted
ASPs by ASP	Any change in any object	Any change in any object
ASPs by size	Object size change by library	Object size change by library
Attributes by type/attributes	Library size change	Library size change
Attributes by size		
Libraries by library		
Libraries by size		
Objects by library		
Objects by size		

User defined reports are limitless! More reports include:

**Consumption by Job:** Identifies the jobs depleting disk space. The jobs, that have exceeded threshold values, can be quickly identified so immediate action can be taken.

**Identification of Objects:** Identify the objects that are growing and consuming disk space. The object name and type are shown to assist in determining the root cause of disk consumption.

**User Profile Storage:** The top 20 consumers of disk storage are listed. The users, which have shown increased storage from the last collection session, will be shown allowing the system operator to take appropriate action.

**Job Temporary Storage:** Lists the top 20 jobs that are consuming temporary storage. The storage, in megabytes, for each job, user and number are displayed. These jobs can be easily monitored.

**IFS Storage Increase:** Details the change in disk consumption by user, object and type in the IFS. The object name and path where the object is located is listed for easy access.

**DASD-Plus Events:** Reports the threshold history of the product. The date, time and overall storage.

# And Graphical Reporting

DASD-Plus' reporting capabilities allow you to easily translate survey results into illustrations such as pie, line, bar, high/low, and difference charts and graphs for a visual of how disk usage changes and how it compares at a system, LPAR, library or object level. You have the flexibility to determine what data points to include in your illustrations which can be saved as a graphic and pulled into a report or presentation. Exporting data to Excel enables you to further analyze the survey results or add other business metrics such as revenue, number of claims processed, etc. so that you can chart how disk consumption changes with changes in the organization.

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**DASD-Plus Top Ten Disk Storage User Report** 

### Informative

With DASD-Plus, the system operator can take appropriate action to correct the problem much more quickly and with accurate information (as opposed to guesses), potentially averting system downtime and the cost/crisis that follows.

# Easy Configuration

DASD-Plus is easily configured from one main menu and once complete, the settings are recognized throughout the product. These settings and configuration can be done while the monitor is active and customized per auxiliary storage pool. To facilitate the tracking and diagnostics process, administrators can customize the report names and job description in the DASD-Plus attributes.

### Get more from DB2

The way that DB2 is architected, the database will perform a number of table joins and build indexes to satisfy the users' requests for information. Some of these requests can result in large, temporary objects being built and stored in the database, some of them as large 5 GB to 30 GB. Also, other applications such as WebSphere can increase the utilization of IBM i's IFS for production storage.

Knowing where the problem is generally coming from is one thing. But having the information to actually tackle the problem in an efficient manner was entirely another.

DASD-Plus takes the disk utilization results returned by the PEX tool and compiles them into a format that's easier to read and use. With DASD-Plus running, systems administrators can quickly find out which jobs are consuming disk, what objects are associated with those jobs, and who created the job--all the things that an administrator needs to know when he has to manually go in and stop the process, and do it fast.

Some applications can leave trails and logs that the administrators didn't know about. With DASD-Plus you can set up procedures to clean up and remove them.

As System i companies move away from an RPG-centric approach to its applications and toward a DB2-centric approach, it will likely have more disk usage spikes to deal with. RPG allocated disk resources can be much more predictable than DB2. But if you're armed with the DASD-Plus, you're covered.





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