



**A global view of your resource performance and utilization**



# Sample Reports & Graphs

## InfoDASD

### DASD Device Utilization

- DASD device Utilization by Shift ● DASD Device Utilization by LCU ● Peak Period DASD Device Utilization by Shift ● Shared DASD Device Utilization by Shift ● Shared DASD Device Utilization by LCU ● Peak Period Shared DASD Device Utilization ● DASD Device Utilization by SMS Group ● Shared DASD Device Utilization by SMS Group ● Peak Period DASD Device Utilization by SMS Group

### DASD Device Response Time

- DASD Device Response Time by LCU ● Peak Period DASD Device Response Time by Shift ● Shared DASD Device Response Time by Shift ● Shared DASD Device Response Time by LCU ● Peak Period Shared DASD Device Response Time ● DASD Device Response Time by SMS Group ● Shared DASD Device Response Time by SMS Group ● Peak Period DASD Device Response Time by SMS Group

### DASD Device I/O's

- DASD Device I/O's by Shift ● DASD Device I/O's by LCU ● Peak Period DASD Device I/O's by Shift ● Shared DASD Device I/O's by Shift ● Shared DASD Device I/O's by LCU ● Peak Period Shared DASD Device I/O's ● DASD Device I/O's by SMS Group ● Shared DASD Device I/O's by SMS Group ● Peak Period DASD Device I/O's by SMS Group

### Disk Data

- Data Set Reports by Volume Serial ● Data Set Reports by Volume Group ● Data Set Report by Owner ● Total Allocation vs. Used ● Total Aging ● Allocation by Owner ● Aging by Owner ● Allocation By SMS Group

### Monthly Trending

- Total Allocation vs. Used ● Total Aging ● Total SMS Group Allocation ● Allocation by Owner ● Aging by Owner

## InfoTAPE

### Tape Device Reports & Graphs

- Average Drive Usage by Hour by Pool ID ● Tape Drive Frequency by Drives Allocated ● Tape Drive Frequency by Day by Hour ● Average Drive Mounts by Hour by Pool ID ● Average Giga-bytes Transferred ● Bytes Read and Written ● Bytes Transferred vs. Mounts ● Giga-bytes Transferred, Average & Maximum ● Tape Mounts ● Tape Drive Allocation, Average & Maximum ● VTS Physical vs Virtual Drives/Mounts ● VTS Tape Volume Cache/Stages/Migrates/Reclamation

### Tape Data Sets

- Tape Volume Aging by Owner ID ● Tape Volume Usage by Owner ID ● Megabytes per Volume by Owner ID ● Tape Volume Summary Report ● ATL Volume Summary Report ● ATL Volume Ownership by Data Set Size ● ATL Volume Ownership by ATL

### Monthly Trending

- Use vs. Scratch - Total Library ● Volume Usage - Total Library ● Volume Aging - Total Library ● Volume Usage by Owner ● Volume Aging by Owner

## InfoCPU

### CPU Device Reports & Graphs

- CPU Utilization by Service Class: overall, by shift, by peak period, at system max ● Max CPU Utilization by Service Class: overall, by shift, by peak period, at system max ● CPU Utilization by Workload: overall, by shift, by peak period, at system max ● Max CPU Utilization by Workload: overall, by shift, by peak period, at system max ● I/O by Service Class: overall, by shift, by peak period, at system max ● Max I/O by Service Class: overall, by shift, by peak period, at system max ● I/O by Workload: overall, by shift, by peak period, at system max ● Max I/O by Workload: overall, by shift, by peak period, at system max ● CPU Utilization by LPAR: overall, by shift, by peak period, at system max

### Trending Summary

- Trending Summary by Hour ● Missed Goals Report



It's taken 300,000 years for humans to accumulate 12 exabytes of information. It will take just 2.5 more years to create the next 12 exabytes, according to a new study produced by a team of faculty and students at the School of Information Management and Systems at the University of California at Berkeley.

According to the co-author of the study, "The difficulty will be in managing this information effectively. This is no easy task. Our ability to store and communicate information has far outpaced our ability to search, retrieve and present it. Information management may turn out to be one of the major challenges of the new century."

## How will you manage this information?

One of the most challenging jobs in today's business environment is effectively managing a large computing enterprise. Economic pressures are enormous and technology continues to change at exponential speed. IT managers need to know what is happening within their data centers on a timely basis. Management reports on performance and media utilization are essential.

Advanced Software Products Group, Inc. (ASPG) has addressed this challenge by developing the INFO Suite of Tools for both data center executives and IT professionals. The INFO Suite of Tools provides management with timely data that enables informed and accelerated decision-making. The suite consists of five products: InfoTAPE, InfoDASD, InfoCPU and desktop-based InfoVision and SEStudio that provides "at a glance" utilization information in easy to understand graphs.

- Simple to install and use
- No training cycle
- No programming skills required
- No mainframe software prerequisites
- Detailed reports
- Graphs & report files on the PC



## ■ InfoDASD

Online DASD storage has grown extraordinarily in the last decade. While a large user had 2-3 terabytes of DASD storage in the past, this number has grown to over 50. Even with the shrinking cost per character, storage costs continues to increase. InfoDASD helps control those costs through data collection, reformatting and reporting for DASD subsystems. InfoDASD provides the storage assessment, planning and reporting tools necessary to plan future storage needs. To determine how effective storage is being used, InfoDASD provides a basis for better resource management as well as reporting on System Managed Storage (SMS) and DFSMSHsm process of data migration.

InfoDASD provides an automated reporting system that generates a standard set of reports on device performance, media utilization, and media ownership. It provides information such as:

- Who owns all the data in the data center?
- What data is being used and what is not?
- How much of the allocated space are development groups actually using?
- How many tape mounts are being satisfied within automated tape libraries, as compared to manual tape drives or VTS?

The InfoDASD product frees the data center personnel to analyze data without imposing requirements to understand complex programming languages. Using a proven performance management methodology, InfoDASD integrates disk performance and ownership usage to show a complete picture. Disk usage trending reports show space utilization and data set aging analysis by SMS pools and by data set ownership. Data managers can view disk usage quickly and easily in a month-by-month comparison. Using advanced statistical techniques, the DASD reports the actual disk response across all system ID's.

In addition to generating a complete set of reports, InfoDASD provides this information on the PC and provides output in three forms: SYSOUT reports, report files in PC format and Microsoft Excel graphs files. InfoDASD processes MVS system generated data to produce PC files and graphs that communicate the status of an installation's storage. InfoDASD is a complete system, which can be used to generate daily, weekly or monthly status reports, as well as, a monthly trend analysis. Equally important, the product uses the data already collected by your installation, so there are no additional software requirements.

## ■ InfoTAPE

Recent industry studies indicate the need for IT enterprises to gain control of tape usage. Some ASPG customers report they have between 500,000 and a million tape volumes with annual storage costs ranging from \$6 to as much as \$50 associated with each volume. For 500,000 tapes, even \$6 can represent an annual tape storage cost of \$3 million! Moreover, thirty percent or more of the tapes in a data center are less than twenty percent utilized, driving storage costs even higher. In order to control

these escalating costs, data center managers need to understand who is using the tape volumes, how much is being used and how often they are accessed.

InfoTAPE helps reduce the cost of tape storage by performing data collection, reformatting and reporting of tape subsystems. InfoTAPE provides both traditional mainframe reports and PC graphs of tape device performance, media utilization and media ownership. InfoTAPE leaves managers and technicians free to analyze the data rather than spending time organizing it. Best of all, data center personnel are not required to learn complex programming and analysis techniques.

Using a proven performance management methodology, InfoTAPE provides a global view of tape usage. Both tape mounts and media are integrated to show a complete picture of ATL (Automated Tape Library) and non- ATL tapes. Tape usage trends are shown from month-to-month by tape pools and data owners. InfoTAPE processes MVS system generated data and tape status of an installation's tape library to include IBM Virtual Tape Servers (VTS). Graphical output is displayed using Microsoft Excel.

Tapping information from the Tape Management Catalog or STK tape robot software, InfoTAPE determines the current state of current tape usage, the number of volumes, how many are in use, how full the tapes are, and how often they are used. For example, the report entitled "Tape Volume Ownership Summary By Owner Identification Report - Days Since Last Referenced" provides lists of tapes, by owner ID, the amount of time that has passed since each specific tape was last referenced. This list is also sorted by specified time periods. InfoTAPE makes it easy to identify tapes that are candidates for SCRATCH, consolidation, migration or any other activity that can reduce storage costs.

InfoTAPE is a complete system which can be used to generate daily, weekly or monthly status reports, as well as a monthly trend analysis - crucial to identifying increases in utilization and tape consolidation. Additionally, historical information on tape usage is tracked and reported to show trends in tape volume utilization by tape pool. Combined with reports revealing tape utilization, historical information can help IT managers gauge whether sufficient resources existing for future peak periods of tape process and perhaps even forestall the purchase of new media.

InfoTAPE uses existing data sources, so there is no need to collect additional data. Tape management catalogs and SMF data can be used and reports and graphs include all systems using MVS attached tape drives. In addition to generating a complete set of reports, InfoTAPE provides this information on the PC and generates output in three forms: spreadsheet, SYSOUT, or Microsoft Excel graph files.

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## ■ InfoCPU

Obtaining accurate information on systems performance and usage is essential in managing today's complex computing environments. To address this challenge, InfoCPU was developed to generate reports on CPU usage. The reports and graphs created by InfoCPU show CPU utilization from a global viewpoint, encompassing all partitions within a complex.

InfoCPU provides graphical and non-graphical reports regarding CPU usage in Workload Manager and non-WLM environments without the need to learn complex programming techniques. Clean summary reporting, trending and impact analysis are generated with the push of a button. The color graphs and management-style reporting allows management to make performance and tuning decisions easily and efficiently. The product's ability to logically rearrange WLM Workloads and Service Classes allows data managers the ability to view the effects of configuration changes before they are actually made.

Reports can easily be produced by LPAR, WLM Workload or WLM Service Class. These levels can then be further broken down by weekday, weekend, or by three distinct, user-defined shifts. This functionality enables IT managers to quickly identify how resources are being used during peak and off-peak periods so they can plan the appropriate adjustments. In less than one day per month, any data manager can produce the reports and graphs generated by InfoCPU. It allows systems programmers and managers to analyze situations together, without complicated algorithm analysis. InfoCPU collects and reformats input from SMF (RMF/CMF) and allows the user to easily and efficiently produce custom graphical reporting on CPU and WLM information. The InfoCPU reporter, SAECPU, produces three types of output files: graph files, mainframe SYSOUT reports and comma-delimited files. As with all the INFO products, the goal of InfoCPU is to very easily provide reports and graphs of resource usage, leaving management free to analyze the data rather than gather and format it.

## ■ InfoVision

InfoVision is part of InfoCPU and is used to create reports showing CPU usage trending and WLM goal exceptions. Reports are created using Crystal Reports API's.

InfoVision was designed to supply both management level and system programmer level reports and graphs. Although the summary reports were intended for management and the exception reports designed for system programmers, they may be shared among these groups. The summary reports show a trend over a period of time selected by the user. The exception reports are mainly for the system programmers who may need to take action based upon the results achieved by WLM workloads and service classes. Reports include tabular and graphical/chart output. The tabular output produced by the Summary by Day report, expresses the average amount of CPU utilization in terms of percentages. The tabular output generated by the Summary by Hour report provides three

numbers for each workload and service class: average amount of CPU utilization (expressed in terms of percentages), the number of samples during the time period where the goal was not achieved, and the number of samples represented as a percentage of the total number. Each tabular report has an associated graphical output that is displayed by clicking the next page of each report.

## ■ SEStudio

SEStudio provides a single PC interface to explode any graph file generated by InfoTAPE, InfoDASD and InfoCPU, create a custom presentation, and display the presentation in Microsoft Excel. This product can be run manually or can be set up to run in "AutoMode". Each reporter program on the mainframe produces at least one graph file. The user can also export the presentation to a diskette or a common disk on a server for distribution to interested parties. SEStudio allows the user to create different presentations that reflect the interests of the receiving party. If printed reports are preferred, SEStudio AutoMode has a setting to automatically route the reports for printing. The Customize function provides the ability to build a custom presentation containing only the desired charts and graphs.



**For more information or a FREE 30 day trial evaluation, contact your e3 Sciences representative today.**



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