



Batch Magic

The easiest way to understand your z/OS tape workloads

Batch Magic is a powerful application for tape and batch window tuning and capacity planning. It enables you to understand all aspects of your z/OS tape workloads so that you can make wise tape hardware investments, optimize the use of your tape libraries, and monitor the load on your virtual tape systems.

Tape remains an important medium to store large amounts of information. With virtualization, tape storage becomes easier and more economical to use, and you can now maintain a secondary copy on a remote site without having to transport tapes. The newest virtual tape systems can provide throughput capabilities well beyond what was thought possible before.

At the same time it has become more and more difficult to understand how to optimize your current tape environment, and which tape hardware decisions are really beneficial. This is especially true because modern tape hardware is shared across multiple z/OS images and the true picture of tape performance is only obtained by aggregating workload and tape hardware information from all LPARs.

Batch Magic efficiently consolidates information about tape usage across all your LPARs, even from several Parallel Sysplexes, providing a comprehensive overview of all tape activity. It can analyze weeks of SMF records to show you tape workload behavior and patterns over time.

Batch Magic provides tabular and graphical output, allowing you to change the focus of the analysis and zoom into a particular period or type of workload. There is no easier solution to understand and balance your tape and batch window operations.

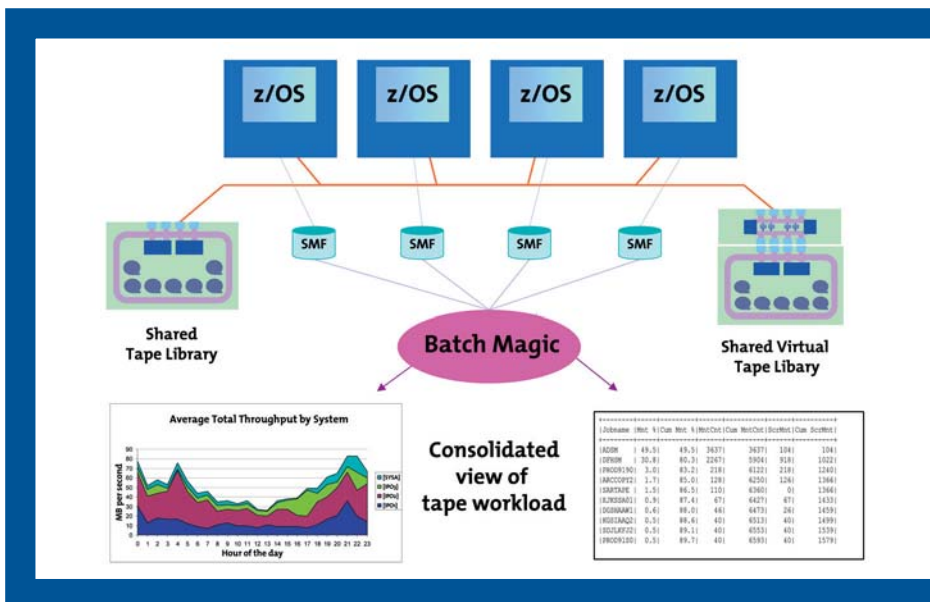
Use Batch Magic to:

- ▶ Report on tape workload for your complete tape environment
- ▶ Tune your tape and batch window by understanding how to optimize application scheduling
- ▶ Easily monitor tape usage over time and analyze tape performance trends
- ▶ Plan for options such as Remote Copy and FICON
- ▶ Size new IBM virtual tape systems

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◀ **Batch Magic process**
Batch Magic consolidates the tape workload information from all your zSeries hosts and allows you to view the workload characteristics in graphical and tabular format.

Batch Magic Applications

▶ Tape Performance Monitoring

With Batch Magic you can easily see how your tape workloads behave over time, and how each workload stresses your tape environment. Batch Magic reports both the number of mounts and the throughput in MB/s. It also reports scratch and specific mounts as well as the data volume for each workload and for the complete tape environment. With virtual tape systems from IBM and STK, only recalls that cannot be served from the disk buffer require an actual tape mount. The simulation feature in Batch Magic accurately shows the cache behavior of the virtual tape system, also for tapeless systems.

▶ Batch Window Tuning

Batch Magic shows which workloads are running concurrently and how rescheduling will affect the overall performance in your tape environment. Most batch jobs using tape do not need to run at a particular time, while recalls from HSM or ADSM are time critical. With Batch Magic you will know which workloads can be moved around. This way, you can minimize tape activity from other workloads during peak-recall periods. This will maximize tape drive availability for the high priority jobs.

▶ Capacity Planning

Batch Magic will ensure that your upgrade decisions are well-founded. Batch Magic gives you the full tape library view in addition to the workload perspective such as job and dataset name. You can determine if you need to add channels or if an upgrade to FICON would be beneficial. You can also size remote copy links. The aggregate specific mount information provides the number of drives that are required in a library.

▶ IBM Virtual Tape Sizing

Advanced modeling of IBM virtual tape systems takes the guess-work out of upgrades and migrations. Current tape performance and capacity data is used to provide information on how many IBM TS77xx virtual tape systems are required, including important resource information such as cache usage and host throughput. This feature can be used to consolidate existing virtual tape systems or add new systems for remote replication.

▶ Identify the Heaviest Tape Users

The detailed reports generated by Batch Magic show exactly which programs and batch jobs are using most of your tape resources, and at what time of the day or night they do so. These activity reports can be used to determine which are the most resource intensive jobs and programs and whether jobs need to be scheduled differently.

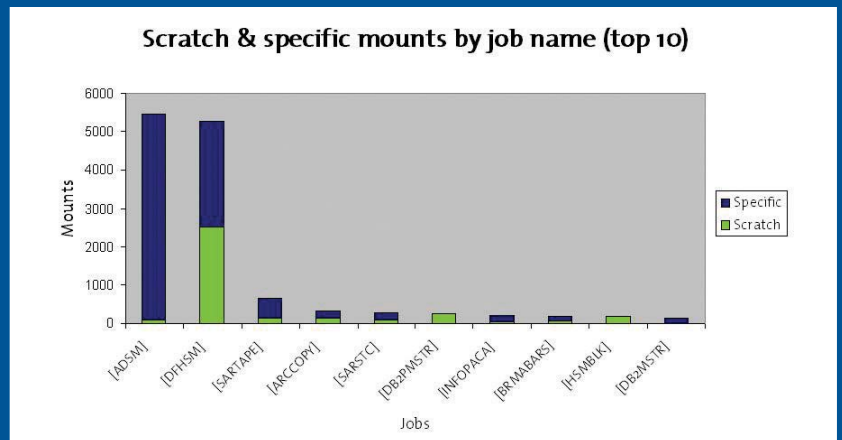
▶ ESCON to FICON Migration

Modern tape libraries provide very high data throughput capabilities that cannot be fully exploited if they are connected by ESCON channels.

Batch Magic provides the insight to know whether the throughput requirements for your installation on a per-library basis justify a move to FICON. Batch Magic indicates which applications use the most bandwidth, so that you can accurately decide if those applications really need the investment in FICON capable controllers.

▼ Mount chart for most active jobs

Batch Magic creates charts and tables by job, program, recording technology, library and many more. This chart shows the number of mounts for the most active jobs.



Batch Magic Features

► Efficient SMF Data Consolidation from all LPARs

Batch Magic provides you with a consolidated view on all tape related activity, regardless of the number of LPARs or Parallel Sysplexes the tape libraries are attached to.

Batch Magic efficiently collects SMF data originating from one or more z/OS servers and extracts and consolidates the tape workload information. The analysis is based on SMF records 14, 15, 21, 30 and 40. With these records the product analyzes the tape workload at both the application level and the hardware level. In the analysis, Batch Magic considers every individual jobstep and mount.

► Easy to Use on both z/OS and Windows Platforms

You can run Batch Magic as a batch job on z/OS or interactively on a Microsoft Windows PC. You will find it easy to switch to the platform most suited for a particular analysis.

If you plan to do the study on the PC, SMF data can be compressed on the mainframe so only a limited amount of data needs

to be transferred to the PC. This reduction in data volume makes it easy to do the interactive data analysis on the PC.

The outputs can be viewed as printed reports, or you can use the Batch Magic Windows application for interactive reporting and graphing on the PC. Reports can be directly loaded into Microsoft Excel by the Windows application.

► Flexible Workload Definitions

You can create your own workload grouping criteria for Batch Magic to report on. This means that you can see the scratch and specific mount counts and rates, the read and write megabytes, volume statistics, and many other metrics for each of the workloads that you have selected. You can use these workload definitions to distinguish between applications, groups of devices, or to make any grouping that you desire.

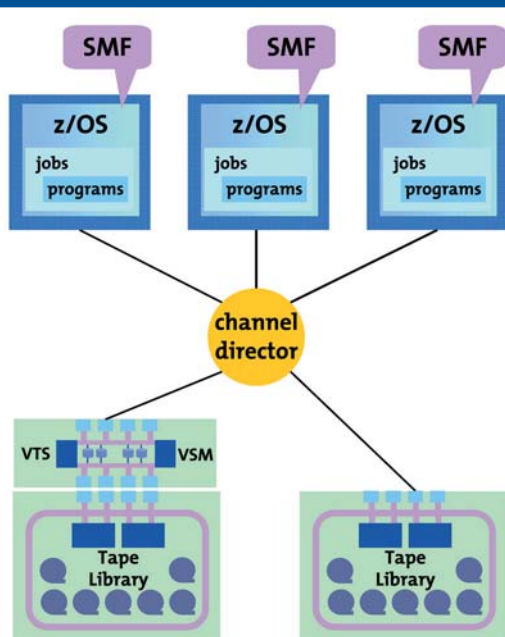
Batch Magic is delivered with sample workload grouping definitions that distinguish the major tape applications based on the dataset names they employ, so that you will get useful reports even without customization.

► Intuitive Graph and Table Reporting Options

Batch Magic reports are in a tabular format on the mainframe, and are created directly in Excel by the Windows version of Batch Magic. Report options include:

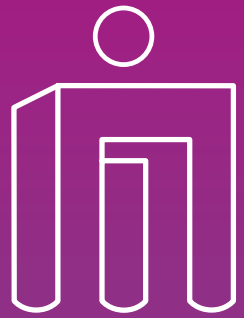
- Total, daily and hourly metrics:
 - By recording technology (3480, 3490, 3590, etc)
 - By device address range, e.g. for each virtual tape server
 - By user-defined workload
- Top 20 active job names and program names
- Details like open time, read and write megabytes etc. for individual data sets, or for individual mounts

Batch Magic can create a wide variety of graphs and tables, showing aggregate or detail level data. The product contains a set of default summary graphs for quick reporting out of the box.



◀ Report on shared tape libraries

Batch Magic consolidates information from all your LPARs and libraries, including VTS and VSM, which gives you a comprehensive view of all tape related activity.



IntelliMagic

About IntelliMagic

IntelliMagic is known for its expertise in Storage Performance Management. Our software products enable proactive performance management for complex storage configurations for z/OS mainframes as well as open systems environments.

The IntelliMagic product suite enables you to use your storage hardware efficiently, save cost, and increase application user satisfaction.

The IntelliMagic product suite uses advanced algorithms for data analysis and performance prediction, in combination with a flexible and intuitive user interface. The products are easy to use and do not require time-consuming implementation projects.

With the IntelliMagic product suite, truly proactive Storage Performance Management is possible, both through early warning of potential problems before they affect production applications, as well as by being able to choose and configure storage hardware components in a way that maximizes the benefit-cost ratio.

As a company, we strive towards long-term relationships with our employees, customers, and suppliers. Our goal is complete customer satisfaction. Responsiveness to questions and a customer-first mentality are very important to us.

Besides Batch Magic, IntelliMagic provides a complete Suite for Storage Performance Management for disk that consists of three products:

► IntelliMagic Vision

IntelliMagic Vision analyzes the performance utilization and health of all the storage system components. Direct benefits are the prevention of performance issues, faster problem resolution and more efficient usage of storage hardware. You can optimize the throughput of your disk configurations and use existing hardware for a longer period. IntelliMagic Vision supersedes RMF Magic.

► IntelliMagic Balance

IntelliMagic Balance advises how to layout volumes on RAID array groups such that optimal balance is achieved. Balanced configurations are the lowest cost configurations that best exploit your hardware. IntelliMagic Balance also advises on tiering. Existing configurations can be tuned with the 'best moves' function.

► IntelliMagic Direction

IntelliMagic Direction is a Windows-based modeling product that evaluates upgrade scenarios for your disk storage systems. This product saves organizations money because it enables them to buy exactly the hardware and options that their workload needs. IntelliMagic Direction was formerly known as Disk Magic.

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