# VSAM Management
## Overview

## z/OS

CSI International
8120 State Route 138
Williamsport, OH 43164-9767
http://www.CSI-International.com


(800) 795-4914 - USA
(740) 420-5400 - Main Operator
(740) 333-7335 - Facsimile


sales@CSI-International.com
info@CSI-International.com
support@CSI-International.com


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# Override

**Although VSAM is very important to most installations, it is rarely used optimally. Override significantly increases the performance of VSAM in every installation.**

- Performance benefits can be so significant that it may be possible in some cases to defer the purchase of new hardware. Perhaps best of all, these savings can be realized almost immediately.

- Override installs in minutes with no need to change any existing files, programs, or JCL.

- Override does not alter any VSAM files or make modifications to VSAM itself.

- The following savings have been achieved in benchmarks of real-life applications:

| Physical | I/Os | Elapsed |
|---|---|---|
| Typical sequential access | 33% | 10-50% |
| Typical random access | 25-50% | 40-60% |
| Clustered random access | 99% | 95% |

- Override remains transparent to the programs involved.

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# Reliant

**Reliant provides dataset protection for your shop's VSAM datasets, with VSAM dataset recovery and VSAM journaling for batch programs.**

- Reliant allows users to recreate a file's condition prior to a disk failure or file deletion, using a file backup and the appropriate journals.

- Reliant provides batch programs with the type of journaling support for VSAM datasets that is provided by CICS for online programs, ensuring total recovery for your online and batch systems.

- Application programmers need not include specialized change-log logic in their CICS programs if the IBM-supplied automatic journaling feature of CICS is used. This feature, along with Reliant, is all that is needed to provide VSAM file recovery.

- Reliant provides a batch journaling facility that is analogous to CICS journaling, allowing recovery of VSAM updates made in a batch environment without re-running the batch jobs.

- Reliant will re-apply changes made since the latest backup after a destroyed VSAM file has been restored.

- Verification software and procedures are included that ensure the correct execution of all the steps involved in the recovery process—the CICS journaling, your backup and restore system, and the Reliant software.

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# VShare

**VShare allows batch programs to update the same VSAM file simultaneously by letting your CICS regions control the VSAM requests.**

- VShare consists of three basic components:

    ✓ The first component executes in the batch programs area—it intercepts the I/O requests and ships them to the second component of VShare residing in CICS.

    ✓ The second component of VShare resides in the CICS region owning the VSAM files—it performs all of the VSAM I/O on behalf of the batch job.

    ✓ The third component of VShare also resides in the CICS region—it comprises a series of online programs providing the following functions:

        ◇ Define CICS regions to use VShare
        ◇ Define the TCP/IP address to VShare
        ◇ Monitor active jobs currently using VShare
        ◇ Suspend a job that is currently active
        ◇ Restart a job previously suspended
        ◇ Cancel a job
        ◇ Reduce the rate of I/O requests being sent to CICS in the event of heavy online activity
        ◇ Review prior executions of batch jobs

- VShare communicates using TCP/IP and z/OS Cross Memory Services:

    ✓ TCP/IP can be used when the batch job and the CICS regions reside on the same or different CPUs. You can override the CICS region that owns the VSAM file using a DD dataset name parameter.

    ✓ Cross Memory Services provides a performance boost but the batch job and the CICS region must be in the same z/OS system.

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# VSUM

**VSUM offers powerful design, monitoring, and tuning capabilities for VSAM catalogs and datasets, providing improved DASD-space utilization and job run performance through the efficient design and tuning of existing datasets.**

- With VSUM, time spent scanning VSAM catalog listings and performing complex space calculations for new and existing data sets is greatly reduced, saving personnel hours of valuable time.

- VSUM can be executed either ONLINE using an ISPF interface or BATCH.

- VSUM provides the following major functions, which simplify many of the routine and complex tasks necessary for effective VSAM dataset design and management:

  ✓ An extended catalog search/list function to provide intelligent search capabilities based on over 100 individual catalog search parameters

  ✓ A dataset modeling and design feature to provide a simpler and more effective method for designing all types of VSAM datasets—support for SMS controlled files and extended addressing is now available

  ✓ A dataset recommendations feature, which makes tuning and design recommendations for datasets being listed or analyzed

  ✓ A dataset space utilization analysis and backup option to interrogate a complete or user-specified part of a VSAM dataset and produce a variety of valuable statistics

  ✓ Batch dataset analysis reports can be generated from statistics that can optionally be saved by VSUM

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# VSUM-PC

**VSUM-PC is a collection of Microsoft Windows-based applications that provide powerful analysis and file design capabilities for IBM mainframe-based VSAM files.**

VSUM- PC

- Provides various rapid query and reporting functions to greatly enhance the productivity of VSAM file analysis and maintenance.

- Extracts and enhances the standard VSAM catalog information and stores that data in one or more PC databases. These databases are created in Paradox database format so that the information can be easily read by spreadsheet, reporting, and database packages for customized analysis projects.

- Includes
    - ✓ VSAM LISTCAT Extract—reads the standard VSAM LISTCAT output files to produce the PC databases used by the other tools
    - ✓ VSAM Catalog Scan—allows the stored VSAM catalog information to be quickly sorted by various key statistics, to locate the files that may require additional analysis
    - ✓ VSAM File Manager—provides a unique alternative method for viewing the stored VSAM file information, modeled after the Windows File Manager
    - ✓ VSAM Space List—provides quick access to the VSAM-managed DASD space associated with VSAM Catalogs, including printing of standard space utilization reports
    - ✓ VSAM Top File Reports—provides a quick way of obtaining standard reports from the stored VSAM file information, which can be used as to-do lists for VSAM Administrators or systems programmers
    - ✓ VSAM Top File Charts—allows you to view standard charts or graphs from the stored VSAM file information
    - ✓ VSAM Model Definition—provides a fast path to the VSAM modeling functions also available in the other applications, helping you make accurate estimates of new VSAM file requirements prior to file definition and loading

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