



z/OS VSAM Fundamentals

Duration: 3 Days

Audience:

Delegates will be IT professionals requiring an understanding of basic VSAM structures and the capabilities of the Access Method Services utility IDCAMS.

Pre-requisites:

A working knowledge Job Control Language, and TSO/ISPF is required or equivalent for editing text files.

Course Objectives

At the completion of this course, students will know and understand the structure of VSAM data sets, how to create them, how to manage them and how to list and interpret catalogue information.

All students will be able to:

- Explain why VSAM is important to a number of sub-systems and products.
- Explain the IDCAMS utility statement syntax and structure
- Explain the terms associated with VSAM data sets, including data set types
- Create data sets of each type
- List the catalogue for acquiring varying amounts of information
- Create and populate an alternate index
- Manipulate data by changing attributes, copying, printing and renaming
- Explain the impact of different buffer assignments,
- Resolve conflicts between batch and online use.
- Explain the relationship with programming languages such as Assembler, COBOL and REXX.



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Course Content

Module 1: VSAM overview

- A general introduction to terms,
- Brief history of VSAM
- Data organization and Cluster types
- Why use VSAM? and what uses VSAM?
- Catalogue overview
- IDCAMS overview

Module 2: Access Method Services

- Access Method Services (AMS) Functions
- Invoking AMS
- IDCAMS control statements syntax,
- Modal commands and comments.

Module 3 Defining data sets with IDCAMS

- Detailed review of the DEFINE command,
- followed by practical exercises involving
- ESDS, KSDS, and RRDS data sets.

Module 4: Defining data sets without IDCAMS

- Using JCL DD statement LIKE & REFDD operands
- Using ISPF panels
- Using the TSO ALLOC command
- REXX and Access Method Services

Module 5: Data set structure

- Explanation of Control Areas (CAs), Control Intervals (CIs),
- Relative Byte Addressing,
- What is a split?
- The impact of Freespace on KSDS file updates
- Schematics of internal cluster layouts

Module 6: Listing catalogue information

- Review of information available
- How to access it in batch and online
- LISTCAT command structure.



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Module 7: REPRO Command

- Loading versus Copying data
- REPRO Command syntax
- Copying ESDS to KSDS considerations
- REPRO and RRDS considerations
- Performing partial copies
- Merging two KSDS clusters
- Unloading a KSDS cluster

Module 8: Printing data sets

- PRINT command syntax
- Print an entire data set
- Performing a partial print

Module 9: ALTER COMMAND

- ALTER command syntax
- Amending cluster attributes
- Renaming a cluster
- Extending the volume list
- Nullifying cluster attributes
- Generation Data Group (GDG) operands

Module 10: DELETE Command

- Delete Command syntax
- Delete examples

Module 11: Alternate indices

- Why use an Alternate Index (AIX)
- Calculate the size of an AIX
- Creating and populating an alternate index
- Defining the PATH which links the AIX to the base cluster
- AIX JCL implications