Introduction to VSAM

Course Summary

Description

VSAM (Virtual Storage Access Method) is a popular access method of IBM. VSAM plays an integral part of almost every z/OS application infrastructure.

This course provides an overview of key VSAM concepts and provides details from implementing, trouble shooting, and tuning VSAM based applications. Hands on labs are included as part of the curriculum to reinforce the material that is presented.

Objectives

At the end of this course, students will be able to:

- Familiarize themselves with VSAM concepts and terminology
- Understand the similarities and differences between the multiple VSAM organizations
- Use IDCAMs and JCL to maintain and access their VSAM files
- Familiarize themselves with VSAM internal processes such as splits and buffering
- Understand and be able to use some of the advanced features of VSAM data sets
- Diagnose VSAM performance problems and correct them

Topics

- Introduction to VSAM
- VSAM Terminology and Concepts
- VSAM Data Set Organizations
- Advanced VSAM Concepts Overview
- Processing VSAM
- VSAM Performance and Tuning

Audience

This course is intended for those whose job it is to create access, use and maintain VSAM files.

Prerequisites

There are no prerequisites required for this course.

Duration

Four days

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Course Outline

I. Introduction to VSAM
- **A.** History of VSAM
- **B.** VSAM File Types
- **C.** VSAM Access Types
- **D.** Catalog Management vs. Record Management

II. VSAM Terminology and Concepts
- **A.** Logical Records
- **B.** Physical Records
- **C.** Keys
- **D.** Control Intervals
- **E.** Control Areas
- **F.** Spanned Records
- **G.** Data Component
- **H.** Index Component
- **I.** Cluster
- **J.** Sphere
- **K.** Alternate Index
- **L.** Understanding Splits

III. VSAM Data Set Organizations
- **A.** Key-Sequenced Data Sets
- **B.** Entry Sequenced Data Sets
- **C.** Relative Record Data Sets
- **D.** Variable Relative Record Data Sets
- **E.** Linear Data Sets
- **F.** Comparing VSAM Organizations
- **G.** Choosing VSAM Organizations

IV. Advanced VSAM Concepts Overview
- **A.** Extended Format Data Sets
- **B.** Extended Addressability
- **C.** Data Striping
- **D.** VSAM Buffering

V. Processing VSAM
- **A.** IDCAMS Overview
- **B.** Using IDCAMS DEFINE
- **C.** Using IDCAMS REPRO
- **D.** Using IDCAMS IMPORT/EXPORT
- **E.** Using IDCAMS LISTCAT
- **F.** VSAM parameters in JCL
- **G.** Using DITTO with VSAM

VI. VSAM Performance and Tuning
- **A.** Understanding Performance Metrics
- **B.** VSAM Rules-Of-Thumb
- **C.** VSAM Parameter Tuning
- **D.** VSAM Buffering Options
- **E.** Managing VSAM Buffers
  1. NSR - Non-Shared Resources
  2. LSR - Local Shared Resources
  3. GSR - Global Shared Resources
  4. RLS - Record Level Sharing
- **F.** Understanding Data Compression
- **G.** VSAM Data Striping

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