

Chapter 1: Introduction

You will learn:

- A definition of VSAM performance.
- Integrated catalogs and space management consolidation.
- Physical components: CI - Control Interval and CA - Control Area.
- VSAM structures.
- KSDS: Key Sequenced Data Set.
- ESDS: Entry Sequenced Data Set.
- RRDS: Relative Record Data Set.
- AIX - Alternate Index.
- VSAM type comparison.
- User catalog.
- ICF catalogs.
- Index levels and physical I/O's.
- DASD response time.

Chapter 2: KSDS Structure in Depth

You will learn:

- Structure of the index.
- Index record structure.
- Index CI sizes and capacity.
- Index CI capacity.
- Long keys can distort capacity estimates.
- How data is added to and removed from the CI.
- CI and CA splits.
- Freespace.

Chapter 3: Cluster on the Disk

You will learn:

- CIs and physical blocks.
- Physical records per CI size - 3390 device.
- CAs and device characteristics.

Chapter 4: Tuning the AMS Define Cluster

You will learn:

- Tuning at the AMS DEFINE CLUSTER level.
- AMS utility.
- Define cluster for the KSDS: the critical parameters.
- Selecting an Index Control Interval size.
- Reanalyzing the index records.
- Choosing adequate index CI size.
- Eliminating wasted data CIs.
- Large control areas.
- Spanned records.
- Space allocation and physical placement.
- Rules of space acquisition.
- Multiple cylinder data sets.
- Calculation of space for a VSAM Key-sequenced data set.
- Space calculation of the data components and index component.
- Impact of Shareoptions.
- Sequential access.
- VSAM buffer handling.
- Maximizing sequential efficiency.
- Maximizing random access efficiency.
- Local shared resources.

Chapter 5: Alternate Indexes and Paths

You will learn:

- Structure of alternate indexes and paths.
- How to use an alternate index.
- Methods of maintenance.

Chapter 6: Programming for Performance

You will learn:

- Direct processing.
- Sequential processing.
- Alternating between processing options.
- How to use generic keys.

Chapter 7: Strings and Buffer Pools

You will learn:

- Tuning NSR data set.
- Lookaside.
- Storage.
- LSR: Local Shared Resources.

Chapter 8: Monitoring for Performance

You will learn:

- The LISTCAT.
- Information contained in the catalog entry.
- How to utilize performance monitoring.
- Reorganizing files for better performance.
- Tools.

Chapter 9: KSDS Index Component

You will learn:

- Index record structure.
- Key compression.
- Index entry format.
- Front and rear compression.
- Free Control Interval pointers.
- Index entries for spanned records.
- How to calculate VSAM's key compression rate.
- How to analyze an index record.
- Index record components.
- How to calculate the average key entry length.