Training: IBM
IMS Database Performance and Tuning

TRAINING GOALS:

Learn how to tune Information Management System (IMS) databases for use in IMS/Batch, IMS/Data Communications (DC), CICS-Local-Data Language One (DL/I), and Data Base Control (DBCTL) environments.

Explore the IMS database features that affect performance such as data set considerations and buffers for VSAM and OSAM. You will also practice a method for estimating performance before implementation. Plus, you will reinforce the skills you have learned with seven machine labs.

IACET Continuing Education Units: 4.0

- Analyze performance data about the IMS database environment
- Choose IMS access methods that provide the best database performance
- Improve performance by selecting database buffer pools and buffer pool options and with the correct data set access method and storage attributes
- Implement the optimum performance options for VSAM data sets at define and execute time
- Evaluate the need for secondary indexes and select implementation options to improve their performance
- Choose physical database implementation options to improve performance
- Select HDAM randomizing parameters that can improve the key randomization process

This intermediate course is for ndividuals interested in the performance of the IMS Database System.

CONSPECT:

- Introduction to IMS database tuning
- Introduction to the lab project
- Review of the IMS access methods
- Measuring IMS database performance
- Lab 1: The base case
- Lab 2: Using IMS Reports
- Tuning VSAM buffers
- Lab 3: Tuning VSAM buffers

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- Tuning VSAM data sets
- Lab 4: Tuning VSAM data sets
- Additional performance issues
- Tuning secondary indexes
- Lab 5: Tuning secondary indexes
- Tuning HDAM
- Lab 6: Tuning HDAM
- Tuning OSAM data sets and buffers
- Lab 7: OSAM data sets and buffers
- Other tuning considerations
- Database tuning summary

REQUIREMENTS:

You should complete:

- *IMS Physical Organization of Databases Workshop (U3722)*

or have four to six months experience with the IMS database system.

For additional prerequisites visit our Web site and search on U3720.

- Describe the physical storage and processing characteristics of Hierarchial Indexed Sequential Access Method (HISAM), Hierarchial Indexed Direct Access Method (HIDAM), and Hierarchial Direct Access Method (HDAM) access methods.
- Code the Data Base Definitions (DBD) and Program Specification Blocks (PSB) macros to implement secondary indexing, HISAM, HIDAM, and HDAM physical databases.
- Describe the physical storage characteristics of secondary indexes.
- Describe the PSB and programming requirements and processing characteristics when using a secondary index.
- Use the IMS utilities to load and reorganize logically related databases with secondary indexes.
- Use Virtual Storage Access Method (VSAM)s access method services to delete and define the Key-Sequenced Data Set (KSDS) and Entry-Sequenced Data Set (ESDS) data sets needed to support the database environment.
- Use reports created by the database tool's program, DBD/PSB/ACB MapperSpecify buffers for VSAM data set supported databases

Difficulty level

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