IBM - IMS Database Performance and Tuning

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

Skills Gained

- 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

Who Can Benefit

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

Prerequisites

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 Hierarchical Indexed Sequential Access Method (HISAM), Hierarchical Indexed Direct Access Method (HIDAM), and Hierarchical 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

Course Details

Course Outline

- 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
- 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