

IMS Database Design and Implementation: IMS Physical Organization of Databases

Course Summary

Description

This course provides the student with the skills necessary to design, implement, and tune IMS database structures. Comprehensive physical design alternatives are discussed. Classroom exercises reinforce topics presented in lectures. The class format is lecture with classroom exercises and group discussion.

Objectives

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

- Choose the appropriate IMS database access method
- Define optimization parameters for maximum efficiency
- Describe the tools and techniques used in tuning existing structures

Topics

- Data Requirements Analysis
- Overview of IMS Database Management System
- Database Control Blocks (DBD, PSB, ACB)
- VSAM in an IMS Database Environment
- Sequential and Direct Access Methods (HSAM, HISAM, SHISAM, GSAM, HDAM, HIDAM, INDEX)
- HALDB (PHDAM, PHIDAM, PSINDEX, ILDS)
- RAPs, Data Cascading, RAAs, MRBN
- Pointers (PCF, PCL, PTF, PTB)
- Dataset Groups
- Unkeyed Segments
- Logical Relationships
- Secondary Indexes
- Logical DBDs
- Logical Pointers (LP, LC, LTF, LTB, LCF, LCL)
- Tuning Considerations and Tools

Audience

This course is designed for senior technical staff, including DBAs and applications and production support personnel, who need a detailed understanding of the structure of IMS full-function and HALDB databases and their performance implications.

Prerequisites

Before taking this course, a working knowledge of the IMS database environment; programming experience is not required.

Duration

Five days