IMS Operator Training

Course Summary

Description

This course provides the skills to operate an IMS environment. Students will have the opportunity to enhance their knowledge of IMS concepts and functions.

Objectives

At the completion of this course, the student will be able to:

- Affect on-line transaction processing dynamically
- Describe components of the IMS Stage 1 generation
- Control and modify the various components and resources of an IMS system

Topics

- Control Region, Message Regions and Queues
- Batch Message Processing Programs (BMPs) and Message Processing Programs (MPPs)
- Logical Terminals (LTERMs) and Physical Terminals (PTERMs)
- IMS Fast Path
- Hierarchical Databases and DL/I
- Checkpoint and Recovery
- MSC Link
- Intro to the Parallel Sysplex Environment

Audience

This course is designed for operations personnel.

Prerequisites

This course requires that students have a familiarity with the basic concepts of operations in IMS.

Duration

Two days

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Course Outline

I. **Introduction**
   A. Characteristics of Batch Systems
   B. Characteristics of Online Systems
   C. Data Communication Software
   D. Database Software
   E. IBM DC And DB Products
   F. DB-DC Connections

II. **IMS Data Communications (DC)**
   A. Message Processing Program (MPP)
   B. IMS Batch Message Program (BMP)
   C. Advanced Program to Program
   D. Communication / IMS (APPC/IMS)
   E. IMS Architecture
   F. IMS DB/DC System
   G. IMS Message Region
   H. Batch Message Processing Region
   I. IMS Region Comparison

III. **IMS Operator Commands**
   A. IMS Master Terminal
   B. IMS Command Format
   C. Display Command
   D. Start Command
   E. General Exercise Information

IV. **Message Processing**
   A. Message Switches
   B. Transactions
   C. Messages Queues
   D. Input Messages
   E. Output Messages
   F. Message Class
   G. Transaction Scheduling
   H. Transaction Priority
      1. Transaction Priority and Limit Count Example
   I. Parallel Scheduling
   J. Processing Limit Count
   K. Sample IMS SysGen Macros
   L. Display Queued Command
      1. Display Queue Counts by Transaction
      2. Display Queue Counts by Class
   M. Display Message Queue Buffer Pool
   N. Changing Transaction Characteristics

   O. Display Transaction
   P. Display Program
   Q. Assign Command

V. **Stops and Starts**
   A. Stopping Transactions
      1. Stopping Programs
      2. Stopping a Specific Class
      3. Stopping a region or Thread
      4. Stop Transaction by Region
      5. Additional Stop Region Parameters
      6. Force Down a Region
      7. Close VTAM ACB
   B. Process Stop a Transaction
   C. Purging Transactions
   D. Start Command
      1. Start Program Command
   E. Start a Specific Transaction Class

VI. **IMS Network Support and Control**
   A. Static Terminal Definition
   B. Communications Demands
   C. Display Command
      1. Display LTERM
      2. Display PTERM
      3. Display NODE
      4. Display LINE
      5. Display QUEUE
   D. Assign Command
      1. Assign LTERM
      2. Display Assignment
   E. Display Assignment
      1. Idle Command
      2. Active Command
   F. Draining Messages
      1. Dequeue Command
      2. Suspend Queues
      3. Dead Letter Queues
   G. Purge Command

VII. **Introduction to Databases**
   A. What is a Database?
   B. Common Types of Database Structures
   C. Loan Database
   D. Hierarchic Database

1. Components of and IMS Database System
E. Database Control Block Terminology
F. IMS and Program Communication
G. Database Definition (DBD)
H. Loan Database DBD
I. Program Communication Block

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Course Outline (Cont'd)

J. Program Specification Block (PSB)
K. Test PSB
L. IMS SysGen for Databases
   1. Display Database
   2. Display Database with BKERR
   3. Database Recovery
   4. Database Dump
   5. Stop Database
   6. Start Database

VIII. Miscellaneous Topics
A. Synchronization Points
B. Abnormal Termination
C. Recovery from Transaction Abend
D. Bringing Down IMS
E. Shutdown Options
F. Forced Shutdown
G. Emergency Restart Command
H. Normal Restart
   1. IMS Cold Start
I. Database Recovery Control (DBRC)
J. DBRC Components and Subsystems
K. DBRC Components
L. DBRC Functions
M. LOG Control
N. IMS Online Logging Overview
O. Controlling IMS Logs
P. Starting IMS Logs
Q. Stopping IMS Logs
R. Broadcast Command
S. Broadcast to Specific Terminals
T. Additional Display Commands
U. Displaying IMS Storage Pools
V. Conversational Transactions
W. Display Conversation
X. Hold Conversation
Y. Terminating a Conversation

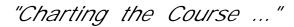**IX. Fast Path Operations**
A. Data Entry Database (DEDB)
   1. Area Characteristics

2. DEDB Operations
   a) /DISPLAY AREA areaname | ALL [IOVF]
   b) /DISPLAY Database dbdname | ALL
   c) /DISPLAY DBD dbdname
   d) /DISPLAY FPVIRTUAL
   e) /DISPLAY HSSP
   f) /DISPLAY POOL EPCB | FP | FPDB | FPWP
   g) /DISPLAY PSB psbname
   h) /DISPLAY STATUS Database
   i) /DBRECOVERY DATABASE dbdname | ALL [NOFEOV]
   j) /DBRECOVERY AREA areaname [NOFEOV]
   k) /START DATABASE dbdname | ALL [ACCESS= ...]
   l) /START AREA areaname | ALL
   m) /STOP DATABASE dbdname | ALL
   n) /STOP AREA areaname | ALL
   o) /STOP ADS ddname
   p) /VUNLOAD AREA areaname
3. Summary of /DBR and /STOP Commands
B. Expedited Message Handling
   1. EMH – The Big Picture
   2. EMH Operator Command Summery

X. Parallel Sysplex Overview
A. Parallel Sysplex Components
   1. S/390 Architecture
   2. Hardware System Area
   3. Coupling Facility (CF)
   4. Coupling Facility Links (CF Links)
   5. Parallel Sysplex Software
   6. Parallel Sysplex Services
   7. Coupling Facility Structures
   8. Structure Manipulation
   9. Persistence
   10. Summery of Persistence

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