

IMS DBA

COURSE CURRICULUM | COURSE CODE C017

13

MODULES

40 hrs

TOTAL INSTRUCTION

EVILT

DELIVERY METHOD

None

PREREQUISITES

IMS DBA CURRICULUM

MODULES 1 – 3

MODULE

1

IMS DB Concepts

An IMS DBA must fully understand the IMS Hierarchical concepts and be highly skilled at accessing data using DL1 database calls.

Training

- Perform a DLI trace. This helps with troubleshooting and understanding how the calls work.
- Practice accessing data via a secondary index. Document how this was accomplished.
- Perform database calls using DLT0.

MODULE

2

IMS Database Design

A DBA must be able to create, modify, & implement IMS databases, psbs, & acbs.

Training

- What is a DBD?
- What is a PSB?
- What is an ACB?
- What is HIDAM, HDAM, HISAM, HSAM Databases, Create Different types of Databases
- Design a new database in test which includes a secondary index: (a) Build a BMP PSB which can access the database; (b) Use DLT0 and the BMP psb to update data in the database

MODULE

3

IMS Database Utilities

- Unload and Reload utility
- Image copy
- Batch Backout
- Image Recovery
- Forward Recovery Or Time Stamp Recovery
- Build Secondary index (Theory Session with Demo class)
- DBRC Utility (i.e DSPURX00) and How to Create your Personal Recons files for DBRC
- HALDB Basics (Theory Session with Demo Class)
- The file select and formatting print utility, DFSERA10

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MODULES 4 – 7

MODULE

4

DBRC

A DBA must have a good understanding of Database Recovery Control.

Training

- "What is DBRC?"
- Browse through contents of the DBRC IMS Manual. Document the actual IMS Manual.
- Run a DBRC list history on the database. Briefly describe a few of the Flags & Counters in the first section of the list.
- Document the various Held Authorization states (1 thru 7).
- Define a database to DBRC in test. Save the JCL. Then remove the database from DBRC. Document what steps were involved.
- Answer the question, "What does DBRC require after a database Reload?"
- Execute a notify ic command.
- Execute a delete subsys command.

MODULE

5

Space Management
(Theory Session)

A DBA should be an expert at monitoring database capacities and managing DASD placement.

Training

- Execute a listcat on the New DB and its Index. Document all volsers the dataset resides on.
- Briefly document the difference between OSAM and VSAM datasets (particularly as it applies to DASD pack management). Document the 5 databases with over 5 extents.
- Make the necessary del/def card changes to remove all databases.

MODULE

6

Database Recovery

A DBA must be an expert at recovering databases.

Training

- Build a test database using a production image copy. Record the job name.
- Execute a DBRC list history against a database and identify what would need to occur to recover the database. Build the recovery jcl. Briefly document the procedures you went through.
- Execute a batch backout in test. Save the jcl and record the job name.

MODULE

7

IMS DC/TP
Concepts

A DBA must have a good understanding of IMS online transaction processing and how the application uses it.

Training

- Read an IMS DC/TP manual and/or attend an IMS DC/TP course.
- (a) Which programs/functions do they trigger. Briefly document a sample transaction & program. Describe how it works and what function it performs. (b) What transaction class do they run in. Document a sample transaction. (c) What message regions can they run in. Document all the regions a sample transaction can use.
- Unit test program(s) that read & write to IMS transaction queue(s). Insert displays in test to help see how it works.
- Perform an Online DLI trace. This helps with troubleshooting and understanding how the calls work.

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MODULES 8 – 10

MODULE

8

BMP Processing

A DBA must have a good understanding of how BMP jobs work & how it compares to DLI & MPP processing.

Training

- "What's the difference between MPP, BMP, & DLI programs?"
- Convert a small DLI job to BMP and execute in test.
- Modify the test BMP to issue simple & extended checkpoints.
- Perform a BMP checkpoint restart in test.
- Investigate and briefly document what the ENQDEQ table is & how BMPs could impact it.
- Investigate and briefly document what data locking is and how BMPs could impact online performance.

MODULE

9

IMS Commands

A DBA must have a good understanding of various IMS Commands.

- In test, perform 5 different DBR commands, 10 different STA commands, 5 different STO commands, and 15 different display commands. Record each command performed.
- Browse the SPOOL dataset and find the commands you just performed above. Document the spool dataset name.
- Find the manual on the various IMS commands and browse through description of each command. Document which manual was used.
- Execute an mto command in test. Briefly document what a mto command is.

MODULE

10

IMS Database Performance

A DBA should consider performance in all database designs. Plus, he/she should be able to monitor, troubleshoot, and tune database performance.

Training

- Create a DFSVSAMP buffer utility and use it in a test DLI job. Run the test job several times modifying the number of buffers upwards & downwards and document the performance differences.
- Remove a required buffer from your test DFSVSAMP utility and document what happens & why.
- Print the Online Database buffer cards and briefly document what the first few buffer pools are used for. Document the online buffer dataset name.
- Investigate what a long twin chain is and briefly document what performance impacts it can have.
- Investigate & document what performance impacts an alternate PCB could have.
- Investigate & document the performance pros & cons of a secondary index.
- "What is OSAM Sequential Buffering?" Use it in a test DLI job and record the performance differences with and without this buffering.
- Create and implement a database compression routine. Document the steps involved. Do some batch performance testing and document the differences.
- Read the HDAM Tuning document and tune an HDAM database (test & prod). Use the DBA promotion checklist as a guide. Document the item number.

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MODULES 10 – 13

MODULE

10

IMS Database Performance (cont.)

- Turn on an IMS monitor and generate a Monitor report. Save the JCL and record the job name.
- Looking at an IMS monitor report, find and document the average elapse time of a given transaction. Also, find and document the longest IWait time incurred and which database it occurred on. Document how this was done.
- Remove a compression routine from a database in test and record the online performance difference with & without the compression routine.

MODULE

11

Genjcl

A DBA must be proficient with GENJCL.

Training

- Execute a production GX job & save the output. Briefly document how this was done.
- Document where the GM jcl goes.
- Document the dataset our GENJCL is in.
- Add a comment to all the unload jobs. Document what the comment was.
- Modify a GM job from tape dataset to disk via genjcl. Record the job name and item number.
- Run a genjcl member in a test environment. Briefly document the steps you took to accomplish this.
- What do the GX/GM JOBS represent?

MODULE

12

Conversions

A DBA should understand the conversion process and be able to determine which conversions are scheduled over a given weekend. And, he/she should be able to assist with conversion scheduling.

Training

- Print and read all the documents under the conversions tab on the documents database. List the documents.
- Create and support a conversion release scoop.

MODULE

13

Book Manager

A DBA must have the ability to access & use book manager.

Training

- Browse through a book in book manager. Execute a find command on a specific item. List the manual name.

COURSE DETAILS

Course Overview

- Learn from fundamentals to advanced concepts on administering IMS - An Hierarchical Database
- Learn tips and tricks on real time trouble shooting issues
- Learn the fundamentals and lay a strong foundation to your Administration Journey

COURSE DETAILS (CONTINUED)

Course Activities

- Expert Trainers who have real time experience in managing Mainframe hardware
- All Basic to Advanced concepts required for industry is covered in the course
- All common trouble shooting tips and tricks are covered as a part of the course
- You will be trained on Interview Preparation to crack any tough Interview
- Job Assistance is provided on completion of the course

Target Audience

1. Mainframe Operations Professionals who wanted to enter into Admin role
2. Mainframe Monitoring & Scheduling Professionals who wanted to change into a stable role and look for foreign Opportunities
3. Mainframe Prod Support & Testing Professionals who wanted to stabilize their Job and a better role in the industry
4. Software Engineers who are in prod support can kick start their career in Admin

Note

Online IMS and Database Tuning will be Theory Sessions with demo and no Lab sessions will be provided.

Delivery Method

Ez-Learn Virtual Instructor Led Training (EVILT)

Course Duration

40 hrs

Prerequisites

None

Recommended Training

Batch of People (Online)

Learning Path

<https://www.ez-learn.global/ims-dba-admin-basic-intermediate/>