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DB2 10 for zOS System Administration
Information

Length: 40.0 Hours
Ref: CV851G □
Delivery method: Classroom
Price: AUD

Overview

The course is updated for DB2 10 for z/OS. This course is the classroom delivered version of the Instructor led Online course *DB2 10 for z/OS System Administration - ILO (3V851)*.

Administrators of DB2 10 for z/OS can acquire a view of the architecture and fundamental processes required to manage a DB2 10 for z/OS subsystem. Engage in lectures and hands-on labs to gain experience to:

- Relate the z/OS IPL process to a DB2 subsystem
- Explain effects of stopping and starting DB2
- Explain how DB2 sets and use Integrated Catalog Facility (ICF) catalog names
- The use of DSN command processor running in batch and foreground
- Use views to minimize your ability to see into the DB2 catalog
- See how the catalog (through grant activity) controls access to data
- Search the catalog for problem situations
- Use the catalog and DB2 utilities to determine data recovery requirements
- Describe Internal Resource Lock Manager (IRLM) in a DB2 environment
- Implement DB2 and Resource Access Control Facility (RACF) security
- Describe DB2 program flow for all environments
- Display normal and problem threads and database status
- See how the SQL Processor Using File Input (SPUFI) AUTOCOMMIT option defers the COMMIT/ROLLBACK decision
- Interpret lock displays
- Identify and cancel particular threads
- Describe available DB2 utilities to manage system and user page sets

Public

This intermediate course is for system administrators, database administrators, and other technical individuals, who manage and implement DB2 10 for z/OS.

Prerequisites

You should have an understanding of the objects (tables, indexes, databases,**and** so forth) used in DB2 systems, **and** of how those objects are created, managed,**and** recovered.

These skills can be developed by taking the *DB2 Database Administration Workshop (CF83)*/ *DB2 9 for z/OS Database Administration Workshop Part 1 (CV830)* **or** through equivalent experience. You should also have a working knowledge of SQL. The *DB2 SQL Workshop (CF12)*/ *SQL Workshop - Instructor Led Online (3E120)* provides that.

In addition, you should have:

- At least one year as a z/OS systems programmer **or** equivalent experience
- **Or**, one year working with DB2 on the mainframe as a DBA on the mainframe **or** equivalent experience

Objective

Prior to enrolling, IBM Employees must follow their Division/Department processes to obtain approval to attend this public training class. Failure to follow Division/Department approval processes may result in the IBM Employee being personally responsible for the class charges.

GBS practitioners that use the EViTA system for requesting external training should use that same process for this course. Go to the EViTA site to start this process:<http://w3.ibm.com/services/gbs/evita/BCSVTEnrl.nsf>

Once you enroll in a GTP class, you will receive a confirmation letter that should show:

- The current GTP list price
- The 20% discounted price available to IBMers. This is the price you will be invoiced for the class.

Topics

Basic architecture and fundamental mechanisms

- Explain the principles of:
 - IPLing z/OS
 - TSO/E LOGON
 - Allocation CLIST
 - Control of DB2
 - START DB2 process
 - DSNZPARM member
 - DB2 address space structure
 - DB2 log
 - Catalog and directory

- Data sharing feature
- Connection process
- Command routing process
- Program preparation and execution processes
- Transaction and points of consistency
- Set up and tune the IRLM
- Recognize the important IRLM parameters

System security

- Protect DB2 data sets when DB2 is up or down
- Protect connections to DB2
- Describe the high-level operation of DB2 security exits

DB2 program flow for all environments

- Describe DB2 program execution
- Explain what a DB2 thread is
- Explain commit processing
- Describe connection types
 - DSN
 - CAF
 - IMS
 - CICS
 - RRSAP

TSO and batch environments

- Describe TSO facilities
- Describe the facilities of DB2I
- Invoke the DSN command processor in various ways
- Invoke DB2 utilities
- Describe the QMF environment

DB2 authorization

- Provide appropriate authorization for your user community
- Monitor authorization in the DB2 catalog
- Effectively assign administrative authorities like SYSADM, DBADM, and BINDAGENT
- Create objects for others

Logging

- Explain the basic algorithms of the DB2 logging facility
- Set up and operate your log efficiently
- Recover from BSDS failures
- Recover from certain lost log data set situations
- Explain the use of the log maintenance tools

DB2 9 for z/OS utilities

- Categorize and discuss DB2 utilities
- Explain how to back up and recover DB2 objects using BACKUP SYSTEM and RESTORE SYSTEM utilities
- Define high-level qualifier for catalog and directory
- Rename DB2 data sets
- Print log map of BSDS

Object recovery

- Describe the different types of application recovery
- Perform various health checks to detect damaged data
- Read the log using DSN1LOGP
- Avoid certain lost log scenarios

Transaction flow in IMS and CICS

- Describe the two-phase commit process
- Explain thread recycling and the complete connection process for a DB2 thread
- Describe the input to and output from a SIGNON exit

CICS - DB2 environment

- Outline a CICS connection to DB2
- Use the DSNB transaction
- Encourage CICS thread recycling

Operations (monitoring and controlling DB2)

- Monitor and control DB2
- Train operators at your local site
- Discuss the functions of ATS (Administrative Task Scheduler)

System recovery/restart

- Describe the DB2 restart process following both normal and abnormal terminations

- Prevent restart failures
- Recover from restart failures
- Begin planning for offsite recovery

IMS - DB2 environment

- Integrate IMS transactions into the DB2 environment
- Integrate IMS BATCH jobs into the DB2 environment
- Control which plans, subsystems, and connection IDs transactions and batch jobs use

Distributed - DB2 environment

- Describe the use of DB2 for z/OS enterprise servers in a multitier environment
- Explain the difference between JDBC and SQLJ
- Describe the Java database connectivity capabilities: use SQLJ and/or JDBC
- Document the requirements to set up the DB2 and Java environment in a z/OS environment