

DB2 UDB[®] Utilities for Application Programmer

Course No.	1092
Description	This course uses a combination of lecture and numerous hands-on workshops to provide a working knowledge of the IBM DB2 UDB [®] utilities that are installed with the database manager. Participants learn how to execute UDB's major utilities including LOAD, CHECK DATA, COPY, QUIESCE, REORG, RECOVER, RUNSTATS, and UNLOAD.
Audience	This course is recommended for application developers who are responsible for creating, and/or maintaining DB2 UDB [®] utility JOBS.
Prerequisites	A working knowledge of DB2 UDB [®] table structures is required.
Objectives	<ul style="list-style-type: none">• Define the characteristics of a DB2 UDB[®] environment• Execute DB2 UDB[®] commands such as –START, –STOP, and –DISPLAY• Restart utilities which abnormally terminate• Load tables using the LOAD utility• Check referential integrity using CHECK DATA• Gather statistics efficiently using RUNSTATS• Develop and implement a backup/recovery strategy• Reorganize a tablespace using several different strategies• Unload data from DB2 UDB• Process multiple objects using LISTDEF and TEMPLATE• Define the use of the IBM Service Aids DSN1PRNT, DSN1COPY, DSN1COMP, and DSN1LOGP
Major Topics	<ul style="list-style-type: none">• DB2 UDB[®] Overview• The DB2 UDB[®] Command Interface• DB2 UDB[®] Load Process• DB2 UDB[®] Backup and Recovery• DB2 UDB[®] REORG and UNLOAD• Processing multiple objects• Standalone utilities
Duration	3 days



Course Contents

1. DB2 UDB® Utilities Overview and Commands

- Common DB2 Objects
- Common DB2 Commands
- Displaying Objects
- -DISPLAY Database
- Other Options
- DB2® Option 7
- Status Codes
- -START Database
- -STOP Database
- Logical/Physical Design for Lab

2. The DB2 UDB® LOAD Process and Utilities

- Alternatives for Loading Tables
- Application Program Load Algorithm
- Application Program vs. LOAD Utility
- Load Capabilities
- LOAD Overview
- LOAD JCL
- LOAD JCL Components
- LOAD Schematic
- Utility Phases
- Load Phases
- LOAD Control Statement
- LOADING a File That Matches the Table Definition
- Loading a File that Does Not Match the Table Definition
- LOAD Statement Notes
- COBOL Datatypes vs. Load Datatypes
- The DB2I Utility Panel
- Utility Ids
- Tracking Utilities
- LOAD Return Codes/Abends
- Logical/Physical Design for Lab
- DDL Labs
- Load Control Statement Options
- LOAD – Append vs. Overlay
- High Performance LOAD – Logging
- High Performance LOAD – R.I.
- LOAD Discard Limits
- LOADING Partitions in Parallel
- LOAD – Compressed Data
- LOADING Only Selected Input Records
- Messaging Data As It Is Loaded

- Combining LOAD Parameters
- LOADING More Than One Table
- Overriding Default DD Names
- High Performance LOAD – Parallel Index Build
- Creating an Image Copy when LOADING
- Preformatting Pages with LOAD
- LOADING Data Extracted by REORG
- Gathering Statistics When LOADING
- V7 LOAD Enhancements
- LOAD Performance Tips
- Gathering Statistics Via RUNSTATS
- RUNSTATS Parameters
- Removing Historical Statistics

3. The DB2 UDB® LOAD Process and Utilities (Continued)

- RUNSTATS Correlated Statistics
- Removing “Pending” Statuses after LOADING
- “Parent” CHKP Events
- “Child” CHKP Events
- Removing CHKP Status
- The Check Data Utility
- Removing Erroneous Data Using the Check Data Utility

4. DB2 UDB® and RECOVER Utilities

- Summary of Recovery –Related Utilities
- Important Recovery Factors
- Recovery and R.I.
- Developing a Backup/Recovery Strategy
- Your Backup Strategy
- Your Recovery Strategy
- Effective Backup/Recovery
- The COPY Utility
- Specifying Objects to COPY
- COPY Parameters – DD Names
- COPY Parameters – Performance
- COPY Parameters – Automating the COPY Type Decision
- Copying a List of Objects
- COPY – Other Notes
- Image Copies in SYCOPY
- Recovery Enhancement Utilities
- The QUIESCE Utility



- QUIESCE Parameters
- The REPORT Utility
- The MODIFY RECOVERY Utility
- The Modify Utilities
- The RECOVER Utility
- Point-In-Time Recovery
- What Makes Recovery Necessary?
- The RECOVER Utility
- Eight Steps to Recovery
- RECOVER Parameter
- Controlling the Recovery Point
- Tablespace Recovery Example
- Notes on RECOVER Rebuilding and Index Using REBUILD INDEX
- Notes on Point-In-Time Recovery
- The COPYTOCOPY Utility
- The MERGECOPY Utility
- Stacking Image Copies on Tape

5. The REORG Utility

- Reasons to REORG
- Off-Line vs. Online REORG

- Statistics That May Drive REORG
- REORG Schematic
- Off-Line REORG Phases
- REORG Datasets
- Sample REORG Control Statement
- REORG Parameters – Performance
- REORG Parameter – Unloading Only
- REORG Parameters – Autoinitiation
- RESTART
- Return Codes/Abends and Restartability
- Online REORG Phases
- Online REORG – REFERENCE Considerations
- Online REORG – CHANGE Considerations
- Online REORG Mapping Table
- REORG INDEX
- REORG INDEX – Parameters
- CHECK INDEX
- The UNLOAD Utility
- UNLOAD Control Statement
- UNLOAD Parameters

