



Chapter 1: Introduction

IBM DB2 Universal Database V8.1

Database Administration Certification Preparation Course

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Welcome !!

- Welcome to the DB2 UDB V8 DBA Certification preparation class.
- This class review of the objectives and material required to better prepare you for the DB2 UDB V8 Certification Tests:
 - ▶ Exam 700 (DB2 UDB V8 Family Fundamentals) and
 - ▶ Exam 701 (DB2 UDB V8 Database Administration for Linux, UNIX, and Windows)
- Students must have the following prerequisites:
 - ▶ Received the Certification Guide prior to the class
 - ▶ Reviewed/Studied the DB2 Universal Database Certification Guide
 - ▶ An understanding of Relational Database Concepts
 - ▶ Experience using the SQL language
 - ▶ An understanding of DB2 UDB V8.1

Objectives of the DB2 Family Fundamental Exam

■ Planning

- ▶ Knowledge of DB2 UDB products (client, server, etc.)
- ▶ Knowledge of DB2 tools
- ▶ Knowledge of Datawarehouse and OLAP concepts
- ▶ Knowledge of non-relational data concepts (extenders, etc)

■ Security

- ▶ Knowledge of restricting data access
- ▶ Knowledge of different privileges

■ Accessing DB2 UDB Data

- ▶ Ability to identify and locate DB2 UDB servers
- ▶ Ability to access and manipulate DB2 UDB objects
- ▶ Ability to create basic DB2 UDB objects

Objectives of the DB2 Family Fundamental Exam

■ Working with DB2 UDB Data

- ▶ Knowledge of transactions
- ▶ Given a DDL SQL statement, knowledge to identify results
- ▶ Given a DML SQL statement, knowledge to identify results
- ▶ Given a DCL SQL statement, knowledge to identify results
- ▶ Ability to use SQL to SELECT data from tables
- ▶ Ability to use SQL to SORT or GROUP data
- ▶ Ability to use SQL to UPDATE, DELETE, or INSERT data
- ▶ Ability to call a procedure

■ Working with DB2 UDB Objects

- ▶ Ability to demonstrate usage of DB2 UDB data types
- ▶ Given a situation, ability to create table
- ▶ Knowledge to identify when referential integrity should be used
- ▶ Knowledge to identify methods of data constraint
- ▶ Knowledge to identify characteristics of a table, view or index

■ Data Concurrency

- ▶ Knowledge to identify factors that influence locking
- ▶ Ability to list objects on which locks can be obtained
- ▶ Knowledge to identify characteristics of DB2 UDB locks
- ▶ Given a situation, knowledge to identify the isolation levels that should be used

Objectives of the DB2 DBA Exam

■ DB2 Server Management

- ▶ Ability to configure/manage DB2 instances (e.g. scope)
- ▶ Knowledge of DB2 authentication
- ▶ Knowledge of DB2 authorizations
- ▶ Ability to set user and/or group privileges
- ▶ Knowledge of the DB2 force command
- ▶ Ability to configure client/server connectivity
- ▶ Ability to schedule jobs
- ▶ Ability to configure client server connectivity using DISCOVERY
- ▶ Skill in interpreting the Notify log

■ Data Placement

- ▶ Ability to create a database
- ▶ Skill in discussing the use of schemas
- ▶ Skill in discussing the various table space states
- ▶ Ability to create and manipulate the various DB2 objects
- ▶ Ability to create and discuss the characteristics of an SMS tablespace
- ▶ Ability to create and discuss the characteristics of a DMS tablespace

Objectives of the DB2 DBA Exam

■ Database Access

- ▶ Ability to create DB2 Tasks using the GUI tools
- ▶ Knowledge of the creation and management of indexes
- ▶ Ability to create constraints on tables (e.g., RI, Informational, Unique)
- ▶ Ability to create views on tables
- ▶ Skill in examining the contents of the System Catalog tables
- ▶ Ability to use GUI Tools to access DB objects
- ▶ Knowledge of how to enforce data uniqueness

■ Monitoring DB2 Activity

- ▶ Ability to obtain/modify database manager configuration information
- ▶ Ability to obtain/modify database configuration information
- ▶ Ability to capture EXPLAIN/VISUAL EXPLAIN information
- ▶ Skill in analyzing EXPLAIN/VISUAL EXPLAIN information (sortheap, buffpage, degree)
- ▶ Ability to identify the functions of the DB2 Governor and Query Patroller
- ▶ Ability to obtain and modify DB2 registry variables
- ▶ Ability to capture snapshots
- ▶ Ability to create and activate event monitors
- ▶ Ability to Identify output from the Health Center

Objectives of the DB2 DBA Exam

■ DB2 Utilities

- ▶ Ability to use EXPORT utility to extract data from a table
- ▶ Ability to use IMPORT utility to insert data into a table
- ▶ Ability to use the LOAD utility to insert data into a table
- ▶ Knowledge to identify when to use IMPORT vs. LOAD
- ▶ Ability to use the REORG, REORGCHK, REBIND and RUNSTATS utilities
- ▶ Ability to use DB2Move and DB2Look
- ▶ Knowledge of the functionality of the DB2 Advisors
- ▶ Ability to use the DB2 Control Center

■ Backup and Recovery

- ▶ Ability to perform database-level and table space level BACKUP & RESTORE
- ▶ Knowledge to identify and explain issues on index recreation
- ▶ Knowledge of database logging
- ▶ Knowledge of crash recovery
- ▶ Knowledge of version recovery
- ▶ Knowledge of Roll Forward recovery

Ready??
Let's get started.