

Db2 11.5 Quickstart for Relational DBAs

CL489GIN

Course Description:

This course teaches you to perform, basic and advanced, database administrative tasks using Db2 11.5. These tasks include creating and populating databases and implementing a logical design to support recovery requirements. The access strategies selected by the Db2 Optimizer will be examined using the Db2 Explain tools. Various diagnostic methods will be presented, including using various db2pd command options. Students will learn how to implement automatic archival for database logs and how to plan a redirected database restore to relocate either selected table spaces or an entire database. The REBUILD option of RESTORE, which can build a database copy with a subset of the tablespaces, will be discussed. We will also cover using the TRANSPORT option of RESTORE to copy schemas of objects between two Db2 databases. The selection of indexes to improve application performance and the use of SQL statements to track database performance and health will be covered. This course provides a quick start to Db2 database administration skills for experienced relational Database Administrators (DBAs). The lab demonstrations are performed using Db2 11.5.6 for Linux. For some lab tasks, students will have the option to complete the task using a Db2 command line processor, or using the graphical interface provided by IBM Data Server Manager..

Course Objectives:

- Administer a Db2 database system using commands and GUI tools like IBM Data Server Manager
- Compare DMS and Automatic storage management for table space storage
- Implement a given logical database design using Db2 to support integrity and concurrency requirements
- Compare the features available with different Db2 product editions Select the appropriate Db2 client software to support application client or server systems
- Define a Db2 recovery strategy and perform the tasks necessary to support the strategy
- Explore the Db2 recovery facilities and database configuration options Perform the implementation of automated archival and retrieval of database logs
- Use autonomic features of Db2 for collection of table and index statistics Implement Db2 security

- Select indexes to support application performance requirements
- Plan for supporting database and disaster recovery scenarios using Db2 database and table space backups using the RESTORE command with a REBUILD option
- Select appropriate methods for moving Db2 tables, including ADMIN_MOVE_TABLE, DB2MOVE or the TRANSPORT option of the RESTORE command.
- Utilize the Db2 Explain tools to examine access strategies. Select the appropriate utility to relocate a database or a portion of a database, including using the RESTORE utility or the db2relocatedb command
- Use the Db2 Design Advisor to analyze SQL statements to suggest new indexes to improve application performance
- Investigate current application activity that might indicate performance problems using SQL statements
- Use the Db2 provided monitor and Functions in SQL to evaluate efficient use of database memory for locks, sorting and package cache

Prerequisites:

- Participants should have the following skills:
- Perform basic database administration tasks on a relational database system
- Use basic OS functions such as utilities, file permissions, hierarchical file system, commands, and editor
- State the functions of the Structured Query Language (SQL) and be able to construct DDL, DML, and authorization statements
- Discuss basic relational database concepts and objects such as tables, indexes, views, and joins

Audience:

This is an intermediate course for experienced DBAs and technical individuals, with experience on other relational database platforms, who plan, implement, and maintain Db2 11.5 for Linux, UNIX, and Windows databases. These skills can also be utilized to support cloud based databases using Db2 on Cloud or Db2 Hosted environments.

Course Duration:

4

Course Topics:

- Overview of Db2 11.5
- Db2 Command Line Processor (CLP) and GUI tools
- The Db2 database manager instance

- Creating databases and data placement
- Creating database objects
- Moving data
- Backup and recovery
- Database maintenance, monitoring, and problem determination
- Locking and concurrency
- Security
- Database rebuild support
- Db2 database and tablespace relocation
- Using Explain tools
- Using indexes for performance
- Advanced monitoring