



DB3052 DB2 for z/OS Database Performance

Course ID#: 0370-305-DB-W

Hours: 21

Course Content

Course Description:

The course provides detail guidance information for all personnel who will be participating in DB2 for z/OS database performance analysis and tuning. Both data sharing and non-data sharing considerations are covered.

Prerequisites:

DB3010 DB2 for z/OS Database Administration or equivalent experience and a working knowledge of SQL.

Topics:

I. Performance Overview

- Performance Objectives
- Service Level Agreement
- Monitoring Performance
 - Continuous Monitoring
 - Periodic Monitoring
 - Detailed Monitoring
 - Exception Monitoring
- Investigating DB2 Performance Problems
 - CPU regression
 - Application Response or elapsed time
 - Analyzing Concurrency
 - Investigation SQL performance using EXPLAIN
 - Maintaining data organization and statistics
- Tuning Approach
 - Use the 80/20 Rule
 - SQL Tuning
 - Database Tuning
 - System Resource Tuning

- Sorts
- Parallelism
- Join Methods
- Materialism

III. Application Performance Tuning

- Identify Workload type
 - OLTP Performance
 - OLAP Performance
 - Batch Performance
- Code Review
- Tuning for Concurrency
- Minimizing trips to DB2
- Insert Processing
- Delete Processing
- Stored Procedures
- Identifying Long Running Units of Recovery
- Identifying Bottlenecks

IV. Maintaining Statistics

- Catalog Statistics
- Setting Default Statistics
- Distribution Statistics
- History Statistics
- Real Time Statistics

II. SQL Performance Tuning using EXPLAIN

- Access Path Analysis
- Predicate Analysis
- Query Cost Analysis



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- Deciding whether to Rebind
- Modeling Production Statistics in Test

V. Database Performance Tuning

- Indexes for Performance
 - Index Type
 - Composite Indexes
 - Index Compression
- Tablespace Performance Tuning
 - Page Size
 - Free Space
 - Locking & Concurrency
 - Partitioning for Parallelism
 - Resource Consumption
 - Compression
 - Health Check

VI. System Performance Tuning

- Subsystem Parameters
- Buffer Pools
- Storage
- Total Working Set