

Training: IBM DB2 for z/OS Application Performance and Tuning



TRAINING GOALS:

This Application Performance and Tuning course is designed to teach the students how to prevent application performance problems and to improve the performance of existing applications. Students will learn about indexes, table design, locking, and other issues relevant to application performance. This course includes paper exercises and machine exercises designed to reinforce the lecture content.

- Design better indexes
- Determine how to live with the optimizer (avoid pitfalls, help when necessary)
- Avoid locking problems
- Use accounting trace information to find significant performance problems in an operational application

This intermediate course is designed for DB2 for z/OS application developers, DB2 for z/OS DBAs, and anyone else who is responsible for application performance and tuning in a DB2 for z/OS environment.

CONSPECT:

- Introduction to Application Performance and Tuning
- List common causes of application performance problems
- Evaluate different approaches for detecting the problems
- Describe possible solutions
- Performance Analysis Tools
- Understand components of local response time (LRT)
- Identify touch random (TR), touch sequential (TS), and fetch (F) time costs
- Utilize VQUBE3 to estimate local response time (LRT)
- Locate necessary time values in an accounting trace report
- Draw and interpret a bubble chart
- Towards Better Indexes
- Understand DB2 index structure and usage
- Evaluate the cost of creating a new index or modifying an existing index
- Design the best possible index for a single table query
- Describe prefetch operations and multi-index access

- Multiple Table Access
- Identify various join methods and join types
- Predict table join order
- Design the best indexes for joining tables
- Optimize correlated and non-correlated subqueries
- Utilize UNION, INTERSECT, and EXCEPT operations
- Towards Better Tables
- Evaluate clustering alternatives
- Understand basic rules of normalization
- Consider conditions for denormalization
- Define materialized query tables
- Learning to Live with the Optimizer
- Describe the limitations related to dangerous predicates
- Identify situations when the optimizer needs help with filter factor estimates
- Massive Batch
- Detect performance problems with massive batch jobs
- Make batch jobs run faster
- Locking Issues
- Describe DB2 serialization
- Understand transaction locking
- Avoid locking problems in application design
- Course Summary
- Summarize the topics covered in this course

REQUIREMENTS:

You should have:

- Familiarity with DB2 for z/OS application programming and SQL.

Difficulty level

