DB2 for z/OS Data Sharing Performance and Tuning

Course Summary

Description
This course covers all aspects of DB2 for z/OS data sharing performance, from the hardware and software components of the DB2 data sharing group and the z/OS parallel sysplex that most affect performance, to performance-enhancing application programming techniques, to the tools available for data sharing performance monitoring and the rules of thumb that facilitate effective use of these tools. Knowledge transfer is enhanced through the use of paper-based lab exercises that involve analysis of configuration and monitoring reports drawn from real-world, production DB2 data sharing installations.

Objectives
At the end of this course, students will be able to:

- Describe the z/OS and coupling facility components that most heavily impact DB2 data sharing performance
- Monitor and tune the performance of z/OS and coupling facility components that support DB2 data sharing
- Describe how group buffer pools impact data sharing performance.
- Monitor and tune DB2 group buffer pools
- Describe how global locking affects data sharing performance
- Monitor and tune DB2 global locking operations
- Describe the linkages between DB2 performance at the local subsystem level and the performance of the data sharing group of which the subsystem is a member
- Describe application design techniques that can be used to enhance performance in a DB2 data sharing environment
- Describe and apply performance and tuning rules of thumb developed by leading DB2 professionals who support large production data sharing systems

Topics

- z/OS Support Services
- Tuning z/OS Support Services
- DB2 Data Sharing Mechanics – GBPs
- DB2 Data Sharing Mechanics – Locking and the SCA
- Structure Tuning – GBPs
- Structure Tuning – Lock, SCA, and XCF
- DB2 Subsystem Tuning
- Application Tuning
- Tuning and Monitoring Your Data Sharing system – Putting it All Together

Audience
This course is intended for experienced DB2 professionals who are involved in DB2 data sharing support from a performance monitoring and tuning perspective.

Prerequisites
Students should be familiar with the DB2 for z/OS mainframe environment, ideally with production experience with DB2 for z/OS Version 7 or beyond.

Duration
Four days

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Course Outline

I. z/OS Support Services

A. Covers the main z/OS components that impact data sharing performance (XES, XCF, and WLM), along with components of a coupling facility that enable data sharing.

II. Tuning z/OS Support Services

A. Describes z/OS monitoring and tuning as it applies to DB2 data sharing (such as WLM settings and XCF tuning), along with coupling facility link and structure monitoring and tuning.

III. DB2 Data Sharing Mechanics – GBPs

A. Describes how DB2 data sharing performance is impacted by group buffer pool activity.

IV. DB2 Data Sharing Mechanics – Locking and the SCA

A. Describes how global locking activity affects data sharing performance, along with the purpose of the Coupling Facility Shared Communications Area and its impact on data sharing performance.

V. Structure Tuning – GBPs

A. Covers the monitoring and tuning of DB2 group buffer pools.

VI. Structure Tuning – Lock, SCA, and XCF

A. Describes how the activity of coupling facility structures that support global locking, inter-system database exception alerting, and cross-system communications can be monitored and tuned.

VII. DB2 Subsystem Tuning

A. Describes how the performance of a DB2 subsystem can be monitored and tuned in support of the data sharing group of which the subsystem is a member.

VIII. Application Tuning

A. Covers design techniques that can be used to enhance the performance of applications running in a DB2 data sharing environment.

IX. Tuning and Monitoring Your Data Sharing system – Putting it All Together

A. Covers real-world hints, tips, and rules-of-thumb that have been developed by DB2 professionals who support real-world production DB2 data sharing systems.

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