

How to do a DB2 z/OS Performance Review

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Abstract:

The **How to do a z/OS DB2 Performance Review** class presents the research, process and impact of doing a performance review of your DB2 z/OS environments, systems, and applications. An overall system, architectural, database and performance tuning review can dramatically reduce costs and improve system and application performance, availability and scalability. By analyzing, many processing performance conditions and detailing various recommendations you can quickly improve database application performance, throughput and response time.

This class discusses problem areas found at many consulting clients of over the last 14 years. This class details the improvements in system configurations, database designs and batch, online and web applications. These techniques have dramatically reduced daily CPU consumption and saved clients millions of dollars in CPU costs and sometimes avoided costly hardware upgrades.

Outline

Chapter 1: Performance Overview

- Platform Properties
- Systems, Applications & Processes
- Applications Processing Characteristics
- Web & Java Characteristics
- System Settings
- Database Details

Chapter 2: DB2 Component Architectures

- DB2 z/OS Components
- DB2 10 Features
- DB2 z/OS Architecture
- DB2 z/OS Address Spaces
- DB2 System Parameters
- Operational Flow

Chapter 3: System Research Techniques

- Basic Processing
- Performance Attributes
- File and Database I/O Characteristics
- CPU, Memory and I/O
- Statistics Gathering

Chapter 4: Table space Design Review

- Table space Page Considerations
- Table space Types Overview
- Partitioning Clustering Alternatives
- Universal Partition by Growth PBG
- Universal Partition by Range PBR
- History Tables
- Temporal and Bi Temporal Tables
- XML, LOB and Unstructured Data Tables
- Table space Design Checklist

Chapter 5: Index Performance Factors

- Index Keys Considerations
- Types of Index Key Designs
- Indexing and Partitioning Considerations
- Keys for Parallelism
- Special Index Keys – ID, SEQ, Timestamps etc..
- z/OS unique advantages
- LUW unique settings

Chapter 6: Application Performance Keys

- Connection Type and Processes
- Distributed Java applications
- Error checking and Handling
- Application Top Ten Analysis

Chapter 7: Application & SQL Research Methods

- System and Application Methodology
- SQL Access Paths Overview
- EXPLAIN SQL Access Paths
- How to Improve I/O Bound Processing
- How to Improve CPU Bound Processes

Appendix 1: DB2 z/OS Architecture & Memory Model

Appendix 2: SQL Access Path Chart

Appendix 3: DB2 10 Performance Features List
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Additional or custom material substituted per request