Course duration

- 3 days

Course Benefits

- Learn to gain a deeper knowledge and understanding of the Kognitio Architecture and Kognitio SQL and how to write it.

Course Outline

1. Introduction to the Kognitio Architecture
    1. What is Parallel Processing?
    2. The Basics of a Single Computer
    3. Data in Memory is fast as Lightning
    4. Parallel Processing Of Data
    5. Kognitio is an In-Memory System
    6. Kognitio has Three Table Distribution Options
    7. Kognitio has Linear Scalability
    8. Nexus is Now Available for Kognitio
2. Kognitio Table Structures
    1. Kognitio has Three Table Distribution Options
    2. A Table that is distributed via a Round Robin Technique
    3. Round Robin Technique is the Default
    4. Random Distribution
    5. A Table that is distributed by Hash
    6. Tables that join are excellent candidates for Hashed Tables
    7. Hash Distribution
3. Nexus for Kognitio
    1. Nexus is Available on the Cloud
    2. Nexus Queries Every Major System
    3. How to Use Nexus
    4. Why is Nexus Special? Visualization and Automatic SQL
    5. Why is Nexus Special? Cross-System Joins
    6. Why is Nexus Special? The Amazing Hub System
    7. Why is Nexus Special? Save Answer Sets as Tables
    8. Why is Nexus Special? Automated Data Movement
    9. Why is Nexus Special? Nexus makes the Servers Talk Directly
    10. What Makes Nexus Special? The Garden of Analysis
    11. The Garden of Analysis Grouping Sets Tab
4. The Basics of SQL
    1. Introduction

5. RANK Defaults to Ascending Order
6. Getting RANK to Sort in DESC Order
7. RANK OVER and PARTITION BY
8. RANK and DENSE RANK
9. CSUM
10. CSUM The Sort Explained
11. CSUM Rows Unbounded Preceding Explained
12. CSUM Making Sense of the Data
13. CSUM Making Even More Sense of the Data
14. CSUM The Major and Minor Sort Key(s)

12. Temporary Tables
    1. There are Two Types of Temporary Tables
    2. CREATING A Derived Table
    3. Naming the Derived Table
    4. Aliasing the Column Names in the Derived Table
    5. Multiple Ways to Alias the Columns in a Derived Table
13. Strings
    1. The LENGTH Command Counts Characters
    2. The LENGTH Command Spaces can Count too
    3. The LENGTH Command Counts Trailing Spaces
    4. The LENGTH Command and TRIM
    5. UPPER and LOWER Commands
    6. Using the LOWER Command
    7. Using the UPPER Command
    8. Non-Letters are Unaffected by UPPER and LOWER
    9. The CHARACTERS Command Counts Characters
14. Interrogating the Data
    1. The NULLIF Command
    2. The COALESCE Command Fill In the Answers
    3. The COALESCE Answer Set
    4. The COALESCE Command
15. Set Operators Functions
    1. Rules of Set Operators
    2. INTERSECT Explained Logically
    3. INTERSECT Explained Logically
    4. UNION Explained Logically
    5. UNION Explained Logically
    6. UNION ALL Explained Logically
    7. UNION ALL Explained Logically
16. View Functions
    1. The Fundamentals of Views
    2. Creating a Simple View to Restrict Sensitive Columns
    3. Creating a Simple View to Restrict Rows
    4. Basic Rules for Views
    5. Exception to the ORDER BY Rule inside a View
    6. Views sometimes CREATED for Formatting
17. Table Create and Data Types

    1. Kognitio Has Three Table Distribution Options
    2. A Table that is distributed via a Round Robin Technique
    3. Round Robin Technique is the Default
    4. A Table that is distributed by Hash
    5. Tables that join are excellent candidates for Hashed Tables
    6. A Table that is distributed by Hash by Multiple Columns
    7. The Reasons for a Multi-Column HASHED Distribution Key
    8. Creating a Table that is replicated across all Nodes
    9. The Concept is all about the Joins
18. Data Manipulation Language (DML)
    1. INSERT Syntax # 1
    2. INSERT example with Syntax 1
    3. INSERT Syntax # 2
    4. INSERT example with Syntax 2
    5. INSERT example with Syntax 3
19. Kognitio Explain
    1. How to See an EXPLAIN Plan
    2. Seeing an EXPLAIN Plan with Nexus
    3. The Eight Rules to Reading an EXPLAIN Plan
    4. Interpreting Keywords in an EXPLAIN Plan
    5. Interpreting an EXPLAIN Plan
    6. A Single Segment Retrieve The Fastest Query
20. Statistical Aggregate Functions
    1. The Stats Table
    2. Numeric Manipulation Functions
    3. Ceiling Gets the Smallest Integer Not Smaller Than X
    4. Floor Finds the Largest Integer Not Greater Than X
    5. The Round Function and Precision
    6. The STDDEV_POP Function
    7. A STDDEV_POP Example

Class Materials

Each student will receive a comprehensive set of materials, including course notes and all the class examples.