opentext™   Fast Lane

Vertica Projection Tuning (VERTPT)

Important notes for the booking of Open Text trainings

Please note that prepayment is required for participation in an Open Text training course. Participation in a training course is possible for 12 months after booking the course. Cancellations are excluded. For further information, please refer to **our** General Terms and Conditions.

Course Overview

This three-day course teaches students how Vertica executes queries, and how they can improve the performance of query execution by identifying execution issues in execution plans, and creating projection designs that address those issues.

- The course includes a series of hands-on labs to teach the course material.
- The content in this course is covered in the Vertica Analyst certification exam.

Highlights:

- Reading and interpreting a query execution plan
- Automatic projection optimization using the Database Designer
- Manual table and projection design to optimize for specific query execution
- Overriding default configurations to improve query performance

Who should attend

Database administrators, product managers, and quality assurance team members

Prerequisites

To be successful in this course, you should have the following prerequisites or knowledge:

- Completion of Vertica Essentials (OnDemand or Instructor-

led) or equivalent experience
- A basic knowledge of SQL

Course Objectives

On completion of this course, participants should be able to:

- Interpret a query execution plan
- Optimize your database using the Database Designer
- Optimize database design for specific query execution
- Change table structures to optimize query execution
- Improve query execution by configuring database parameters

Course Content

- Module 1: The Lab Environment
- Module 2: Introduction to Database Design
- Module 3: Projections in Vertica
- Module 4: Query Execution
- Module 5: Optimizing the Database
- Module 6: Profile Analysis
- Module 7: Query Profiling Parameters
- Module 8: Column Positioning
- Module 9: Manual Projection Design
- Module 10: Flattened Tables
- Module 11: Partitioned Tables
- Module 12: Directed Queries
- Module 13: Next Steps

Detailed Course Outline

Module 1: The Lab Environment

- Log in to the training environment
- Review the environment configuration
- Using the valab utility
- Using a database in the Management Console

Module 2: Introduction to Database Design

- Identify common query performance issues
- Become familiar with the database environment

Module 3: Projections in Vertica

- Review the definition and structure of a projection
- Explore a sample projection DDL

Module 4: Query Execution

- Time a query
- Generate and evaluate a query plan
- Profile a query and evaluate the output

Module 5: Optimizing the Database

- Describe the function of the Database Designer
- Create and deploy a comprehensive projection design
- Create and deploy an incremental projection design

Module 6: Profile Analysis

- Uniquely identify a profiled query
- Identify the events, operators and counters for a profiled query

Module 7: Query Profiling Parameters

- Identify and describe the profiling parameters
- Describe the behavior of each profile parameter

Module 8: Column Positioning

- How projection column positioning affects query performance
- How projection column encoding affects query performance

Module 9: Manual Projection Design

- Optimize projections for groups
- Optimize projections for joins
- Optimize projections for network operations

Module 10: Flattened Tables

- Create a flattened table
- Populate the table with default and derived values

Module 11: Partitioned Tables

- Create a partitioned table
- Load data into partitions
- Move and remove partitioned data
- Review hierarchical partitioning

Module 12: Directed Queries

- Create an Optimizer-generated directed query
- Create a custom directed query

Module 13: Next Steps

- Additional information located in the Vertica portal

About Fast Lane

Fast Lane is a global, award-winning specialist in technology and business training as well as consulting services for digital transformation. As the only global partner of the three cloud hyperscalers- Microsoft, AWS and Google- and partner of 30 other leading IT vendors, Fast Lane offers qualification solutions and professional services that can be scaled as needed. More than 4,000 experienced Fast Lane professionals train and advise customers in organizations of all sizes in 90 countries worldwide in the areas of cloud, artificial intelligence, cyber security, software development, wireless and mobility, modern workplace, as well as management and leadership skills, IT and project management.

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