

Oracle Database 11g: Administer a Data Warehouse New

Duración:

4 días

Lo que aprenderá:

Participants learn about Oracle's Database partitioning architecture and how to identify the benefits of partitioning in addition to using parallel operations to reduce response time for data-intensive operations. Participants extract, transform, and load data into an Oracle database warehouse. Participants also use materialized views to improve the data warehouse performance and learn how query rewrites can improve performance.

The usage of SQL Access Advisor to optimize the entire workload, tuning materialized views for fast refresh and query rewrite and also how to use the compression and resumable sessions features are discussed.

Learn To:

- Implement partitioning
- Use parallel operations to reduce response time
- Extract, Transform, and Load data
- Create, use, and refresh materialized views to improve the data warehouse performance
- Use Query rewrite to quickly answer business queries using materialized views
- Use SQL Access Advisor and PL/SQL procedures to tune materialized views for fast refresh and query rewrite

Prerequisitos Requeridos:

- Ability to read and understand execution plans
- Good working knowledge of SQL and in data warehouse design and implementation
- Data Warehouse design, implementation, and maintenance experience

Objetivos Del Curso:

- Use parallel operations to reduce response time for data-intensive operations
- Extract, Transform, and Load data in the data warehouse
- Create, use, and refresh materialized views to improve the data warehouse performance
- Use Query rewrite to quickly answer business queries using materialized views
- Use SQL Access Advisor and PL/SQL procedures to tune materialized views for fast refresh and query rewrite
- Use the features of compression and resumable sessions
- Review the basic Oracle data warehousing concepts

Temas Del Curso:

Introduction

- Development Tools
- Oracle SQL Developer
- Enterprise Manager
- Sample Schemas used

Data Warehouse Design: Overview

- Characteristics of a Data Warehouse
- Comparing OLTP and Data Warehouses

- Data Warehouse Architectures
- Data Warehouse Design
- Data Warehouse objects
- Data Warehouse Schemas

Data Warehouse Tuning Considerations

- Optimizing Star Queries
- Introducing Bitmap Join Indexes
- Understanding Star Query Optimization and Bitmap Joined Index Optimization

Partitioning Basics

- Partitioned Tables and Indexes
- Partitioning Methods
- Partitioning Types
- Partition Pruning and Star queries

Parallelism Concepts

- Operations That Can Be Parallelized
- How Parallel Execution Works
- Degree of Parallelism
- Parallel execution plan
- Automatic Parallelism

Parallel Operations in Data Warehouses

- Parallel Query
- Parallel DDL
- Parallel DML
- Tuning Parameters for Parallel Execution
- Balancing the Workload

ETL: Extraction and Transportation

- Extraction Methods
- Capturing Data With Change Data Capture
- Sources and Modes of Change Data Capture
- Publish and Subscribe Model: The Publisher and the Subscriber
- Synchronous and Asynchronous CDC
- Asynchronous AutoLog Mode and Asynchronous HotLog Mode
- Transportation in a Data Warehouse
- Transportable Tablespaces

ETL: Loading

- Loading Mechanisms
- Applications of External Tables
- Defining external tables with SQL*Loader
- Populating external tables with Data Pump
- Other Loading Methods

ETL: Transformation

- Data transformation
- Transformation Mechanisms

- Transformation Using SQL
- Table Functions
- DML error logging

Materialized Views

- The Need for Summary Management
- Types of Materialized Views
- Using Materialized Views for Summary Management
- Materialized View Dictionary views

Refreshing Materialized Views

- Refresh Options
- Refresh Modes
- Conditions That Effect Possibility of Fast Refresh
- Materialized View Logs
- Partition Change Tracking (PCT) Refresh
- Refresh Performance Improvements

Working With Dimensions

- What Are Dimensions
- Creating Dimensions and Hierarchies
- Dimensions and Privileges
- Dimension Restrictions
- Verifying Relationships in a Dimension
- Dimension Invalidation

Query Rewrite

- Query Rewrite: Overview
- What Can be Rewritten
- Conditions Required for Oracle to Rewrite a Query
- Query Rewrite guidelines
- Setting Initialization Parameters for Query Rewrite
- Query Rewrite Methods
- Partition Change Tracking (PCT) and Query Rewrite
- Query Rewrite Enhancement to Support Queries Containing Inline Views

Using the SQL Access Advisor, Compression, and Resumable Sessions

- SQL Access Advisor: Usage Model
- Setting Initial Options
- Specifying the Workload Source
- Recommendation Options
- Schedule and Review
- PL/SQL Procedure Flow
- Tuning Materialized Views for Fast Refresh and Query Rewrite
- Table Compression and Resumable Sessions

Sugerencias sobre el próximo curso:

- [Oracle Database 11g: OLAP Essentials](#)
- [Oracle Database 11g: Performance Tuning DBA Release 2](#)
- [Oracle Database 11g: Performance Tuning](#)
- [Implement Oracle Data Warehousing Best Practices](#) **NEW**