Oracle Database 12c: Implement Partitioning Ed 1

Duration: 2 Days

What you will learn

This Oracle Database 12c: Implement Partitioning training teaches you how to manage partitioning using Oracle Database 12c. Expert Oracle University instructors will demonstrate the benefits of partitioning for different types of workloads and learn the syntax for partitioning maintenance operations.

Learn To:

Apply partitioning strategies to enhance application performance.
Use partitioning techniques to reduce impact of table and index maintenance.
Use partitioning to decrease the time to refresh materialized views.
Partition lob segments, nested tables and object tables.
Understand the Oracle Partitioning methods for tables, index and materialized views available in Oracle Database 12c Release 1.

Benefits to You

Taking this course will introduce you to several new partitioning enhancements, including partition maintenance operations on multiple partitions, heat maps, partial indexes for partitioned tables, interval-reference partitioning and online move partition capabilities. When the new enhancements are added to all the existing methods of partitioning, this large range of choices and capabilities requires that database administrators and data architects understand each partitioning method and it's appropriate uses. Proper use of partitioning can greatly benefit many types of applications including data warehouses, information life cycle management and very large databases.

Audience

Database Administrators
Database Designers
Systems Architects

Related Training

Required Prerequisites

Basic Database Administration

Basic SQL Tuning

SQL Fundamentals

Oracle Database: SQL Workshop I

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Suggested Prerequisites
Basic Data Modeling and Relational Database Design

Basic knowledge of Data Warehousing Design

Oracle Database: SQL Tuning for Developers

Course Objectives

Describe the partitioning architecture, uses, and advantages

Describe the partition types supported by the Oracle RDBMS

List all of the options for creating partition tables

Create partitioned tables

Describe the table and index partition relationships

List all the options of partitioned indexes

Create partitioned indexes

List all of the alterable partitioned table and index attributes

Describe the overhead associated with each maintenance command

Use the data dictionary to verify partitioning structure

Create Materialized Views that are partitioned

Explain the benefits of partitioning materialized views

Show performance enhancements of partitioned materialized views

Choose appropriate partition attributes for various application requirements

Understand partitioning options with other database features

Describe Oracle Enterprise Manager support of partitioned objects

Course Topics

Partitioning Concepts
VLDB Manageability and Performance Constraints
Manual Partitions Versus Partitioning
Partitioned Tables and Indexes
Table Versus Index Partitioning
Partitioned Indexes

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Partitioning Strategies: Single-Level Partitioning
Partitioning Strategies: Composite Partitioning
Oracle Partitioning History

Implementing Partitioned Tables
Table, Partition, and Segment Relations
Creating Partitions with Enterprise Manager
CREATE TABLE Statement with Partitioning
Logical and Physical Attributes
Partition Strategy Declaration: Single-Level Partitioning
Specifying Partition Attributes
Range Partitioning
Interval Partitioning

Implementing Partitioned Indexes
Partitioned Indexes
Partitioned Index Attributes: Global or Local
Partitioned Index Attributes: Prefixed or Nonprefixed
Global Indexes
Local Prefixed Indexes
Local Nonprefixed Index
Index Partitioning and Type Matrix
Specifying an Index with Table Creation

Maintenance of Partitioned Tables and Indexes
Maintenance: Overview
Table and Index Interaction During Partition Maintenance
Modifying the Logical Properties of Tables and Indexes
Modifying Partition Properties on the Table
Using the ALTER TABLE and ALTER INDEX Commands
Renaming a Partition
Partition Storage Changes
Moving a Partition

Partitioning Administration and Usage
Using Partitioned Tables
Pruning Rules
Static and Dynamic Pruning
Pruning Tips
Static Partition Pruning and Star Query
Dynamic Partition Pruning and Star Query
Collecting Statistics for Partitioned Objects
ANALYZE and Partitioned Objects

Partitioning and Workload Types
Partitioning in Data Warehouses
Using Materialized Views for Summary Management
Partitioning and Materialized Views
Maintaining Partitions of a Materialized View
Partition Change Tracking (PCT) Refresh
PCT Refresh: Requirements
When Is PCT Refresh Used?

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