

Oracle Database 10g: Performance Tuning

Course Objectives:

- Use the Oracle Database tuning methodology appropriate to the available tool
- Utilize database advisors to proactively tune an Oracle database
- Use the tools based on the Automatic Workload Repository to tune the database
- Use Stats pack reports to tune the database
- Diagnose and tune common database performance problems
- Use Enterprise Manager performance-related pages to monitor an Oracle database

Course Topics:

Performance Tuning Overview

- Write appropriate tuning goals
- Apply the tuning methodology
- Balance performance and safety trade-offs
- Identify common tuning problems
- Log a performance Service Request with Oracle Support

Statistics and Wait Events

- Identify dynamic performance views useful in tuning
- Identify key tuning components of the alert log file
- Identify key tuning components of user trace files
- Use dynamic performance views to view statistics and wait events

Metrics, Alerts, and Baselines

- View metrics using the metrics history views
- Create metric thresholds
- View alerts
- Create metric baselines
- Enable adaptive thresholds

Using Statspack

- Install Statspack
- Create Statspack snapshots

Generate Statspack reports

Identify the major sections of the Statspack report

Using AWR

Create and manage AWR snapshots

Generate AWR reports

Create snapshot sets and compare periods

Generate ADDM reports

Generate ASH reports

Reactive Tuning

Use Enterprise Manager pages to identify symptoms

Eliminate operating system issues

Tuning the Shared Pool

Diagnose shared pool problems

Size the shared pool

Size the reserved area

Keep objects in the shared pool

Tuning the Buffer Cache

Describe the buffer cache architecture

Size the buffer cache

Resolve common performance issues related to the buffer cache

Use common diagnostic indicators to suggest a possible solution

Automatic Shared Memory

Enable Automatic Shared Memory

Set auto-tuned memory parameters

Set the manually tuned SGA parameters

Use the SGA advisor to set SGA target

Checkpoint and Redo Tuning

Diagnose checkpoint and redo issues

Implement Fast Start MTTR target

Monitor performance impact of Fast Start MTTR target

Implement multiple database writers

Tune the redo chain

Size the redo log file

Size the redo log buffer

Tuning I/O

Diagnose database I/O issues

Describe the Stripe and Mirror Everything (SAME) concept

Explain the benefits of asynchronous I/O

Choose appropriate I/O solutions

Tuning PGA and Temporary Space

Diagnose PGA memory issues

Size the PGA memory

Diagnose temporary space issues

Specify temporary tablespace parameters for efficient operation

Tuning Block Space Usage

Tune segment space management

Convert from dictionary managed tablespaces

Convert to automatic segment space management

Tune block space management

Diagnose and correct row chaining

Diagnose table fragmentation

Compare characteristics of bigfile and smallfile tablespaces

Initial Configuration

List best practices identified throughout the course

Nombre Oracle: Oracle Database 10g: Performance Tuning

Nombre Sence: Oracle 10g Afinamiento de la base de datos

Duración: 32 Horas

Código Sence:12.37.7801.03

Manuales de acuerdo al curso

Perfil Relator

- Especialista en Ciencias de la Informática y SW Oracle
- Certificación en los temas de la especialidad Oracle correspondiente a cada curso
- Experiencia en Consultoría