

## Oracle Database 10g: Performance Tuning

**Duração:** 4 Dias

### Objetivos do Curso

Get the most out of your 10g Database by learning performance tuning methods that maximize the utility of the database. Students learn how to benefit from Oracle Database 10g automatic tuning features, as well as practicing the manual tuning methods using the statspack tool. After clearly defining the various methodologies one can use to tune an Oracle Database, the course covers the various tunable components of an Oracle Database. Throughout the course, students experience hands-on the tuning of an Oracle Database by practicing through a series of workshops. This course counts towards the Hands-on course requirement for the Oracle Database 10g Administrator Certification. Only instructor-led inclass or instructor-led online formats of this course will meet the Certification Hands-on Requirement. Self Study CD-Rom and Knowledge Center courses are excellent study and reference tools but DO NOT meet the Hands-on Requirement for certification.

### Público

Administrador de Banco de Dados  
Consultor Técnico  
Database Administrators  
Support Engineer  
Technical Consultant

### Pré-requisitos

*Pré-requisitos Obrigatórios*

Oracle Database 10g: New Features for Administrators Release 2

*Pré-requisitos Recomendados*

Knowledge of Database Administration

### Objetivos do Curso

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 Statspack reports to tune the database  
Diagnose and tune common database performance problems  
Use Enterprise Manager performance-related pages to monitor an Oracle database

### Tópicos do Curso

#### 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

### **Cursos Equivalentes**

Oracle Database 10g: Performance Tuning Self-Study CD Course