

# Oracle Database 10g Performance Tuning

## Course information

Days : 4

Total lessons : 15

Suggested Prerequisites :

- Oracle Database 10g: Administrator Workshop I
- Oracle Database 10g: Administrator Workshop II

Training includes :

- Experienced trainer(s)
- Pre-test and Post-test
- Practices and solutions

Public price

- 22,000 baht(THB) : 1 person

In-house price

- 66,000 baht(THB) : Economic Class : 1 – 5 people
- 94,000 baht(THB) : Small Class : 6 - 10 people
- 120,000 baht(THB) : Medium Class : 11 - 20 people
- 140,000 baht(THB) : Big Class : 21 - 30 people

All prices exclude VAT 7 %

## Course details

### Day 1

Lesson 1 : Introduction

Lesson 2 : Performance Tuning: Overview

Lesson 3 : Statistics and Wait Events

Lesson 4 : Metrics, Alerts, and Baselines

Lesson 5 : Using Statspack

### Day 2

Lesson 6 : Using Automatic Workload Repository

Lesson 7 : Reactive Tuning

Lesson 8 : Tuning the Shared Pool

### Day 3

Lesson 9 : Tuning the Buffer Cache

Lesson 10 : Automatic Shared Memory Management

Lesson 11 : Checkpoint and Redo Tuning

### Day 4

Lesson 12 : Tuning I/O

Lesson 13 : Tuning PGA and Temporary Space

Lesson 14 : Tuning Block Space Usage

Lesson 15 : Performance Tuning: Summary

## Lesson details

### Lesson 1 : Introduction

- 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 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



## **Lesson 2 : 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

## **Lesson 3 : Statistics and Wait Events**

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

## **Lesson 4 : Metrics, Alerts, and Baselines**

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

## **Lesson 5 : Using Statspack**

- Install Statspack
- Create Statspack snapshots
- Generate Statspack reports I
- identify the major sections of the Statspack report

## **Lesson 6 : Using Automatic Workload Repository**

- Create and manage Automatic Workload Repository (AWR) snapshots
- Generate AWR reports
- Create snapshot sets and compare periods
- Generate ADDM reports
- Generate ASH reports

## **Lesson 7 : Reactive Tuning**

- Use Enterprise Manager pages to identify performance issues
- Eliminate operating system issues

## **Lesson 8 : Tuning the Shared Pool**

- Diagnose shared pool problems
- Size the shared pool
- Size the reserved area
- Keep objects in the shared pool

## **Lesson 9 : 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

## **Lesson 10 : Automatic Shared Memory Management**

- Enable Enterprise Manager (EM) memory parameters
- Set auto-tuned memory parameters
- Override minimum size with the manually tuned SGA parameters



- Use the SGA advisor to set SGA\_TARGET

## **Lesson 11 : Checkpoint and Redo Tuning**

- Diagnose checkpoint and redo issues
- Implement Fast Start MTTR Target
- Monitor the performance impact of Fast Start MTTR Target
- Tune the redo chain
- Size the redo log file
- Size the redo log buffer

## **Lesson 12 : 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
- Tune I/O using Automatic Storage Management (ASM)

## **Lesson 13 : Tuning PGA and Temporary Space**

- Diagnose PGA memory issues
- Size the PGA memory
- Diagnose temporary space issues
- Specify temporary tablespace parameters for efficient operation

## **Lesson 14 : 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 migration
- Diagnose table fragmentation
- Compare characteristics of bigfile and smallfile tablespaces

## **Lesson 15 : Performance Tuning: Summary**

- List best practices identified throughout the course
- Summarize the performance tuning methodology

---

*For more information please contact :*  
VT Technology Co.,Ltd.  
Tel +66 0 2594 5185  
Fax +66 0 2594 5621  
[contact@vttech.co.th](mailto:contact@vttech.co.th)

*To see other available Oracle courses  
Please go to [www.vttech.co.th/course.html](http://www.vttech.co.th/course.html)*

