

**COURSE CODE:** ORA11P  
**COURSE TITLE:** Oracle **11g** New Features & Performance for DBAs  
**CURRENCY:** 11g  
**AUDIENCE:** Oracle DBAs and system administrators.  
**PREREQUISITES:** Conversant with Oracle 10g or 9i architecture, schema objects, etc.

**DURATION:** 3 days

**SUMMARY:** This DBA-oriented course presents the more useful new and enhanced features incorporated as part of Oracle 11g such as:

- Change management
- Database automation
- Storage management
- Fault diagnosis
- High-availability
- Security
- Partitioning
- Etc.

At regular intervals, hands-on practicals are used to enhance the attendee's learning experience. Then Oracle 11g features are summarised in terms of best practices and performance. OLTP and BI/data warehousing are given equal billing.

**OBJECTIVES:** Upon completion of this presentation, the delegate should have a practical knowledge of Oracle 11g's new features and enhancements as these relate to both transactional on Bi solutions.

**FORMAT:** Lecture and hands-on, including:

- Management: automatic SQL tuning
- Storage management: table compression
- BI (data warehousing): partition manipulation and loading

## 1. CHANGE MANAGEMENT

- Database Replay
- SQL Performance Analyzer

## 2. DATABASE AUTOMATION

- Automatic memory management
- Automatic SQL tuning
- Automatic Database Diagnostic Monitor (ADDM)

## 3. PERFORMANCE

- Automatic Workload Repository
- SQL Plan Management
- Multicolumn statistics
- Private statistics
- Server-side result cache
- SQL Test Case Builder

## 4. FAULT DIAGNOSIS FEATURE

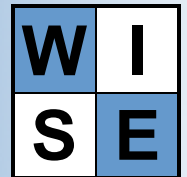
- Automatic diagnostic repository
- Automatic Health Monitor
- Support Workbench
- Incident Packaging Service

## 5. DATA GUARD

- Real-time query standby database
- Snapshot standby database
- Logical standby database
- Redo log compression
- Data Guard Broker
- Recovery Manager (RMAN) integration with Data Guard
- Rolling upgrades
- Fast-start failover

## 6. STORAGE MANAGEMENT

- Rolling upgrades
- ASM fast disk resynchronisation
- ASM preferred read failure groups
- ASM diskgroup attributes for backward compatibility
- Separation of the DBA and SA roles via the **sysasm** role
- New manageability options for **check**, **mount** and **drop** commands
- **copy** command for copying files
- ASM extensions



## 7. DATABASE MANAGEMENT

- Invisible indexes
- New partitioning schemes
- Virtual columns
- Read-only tables
- Addition of columns
- Data Pump

## 8. SECURITY

- Tablespace encryption
- Case-sensitive passwords
- Data remapping
- Enterprise Manager Database Console
- OCI security

## 9. APPLICATION ENHANCEMENTS

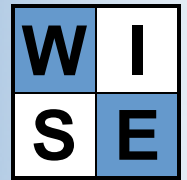
- Pivot operations
- Unpivot operations
- PL/SQL code without a C compiler
- Cross-session PL/SQL function result cache
- Inlining in PL/SQL
- SIMPLE\_INTEGER datatype
- Triggers
- REGEXP\_INSTR() and REGEXP\_SUBSTR()
- Binary XME
- The XML schema
- XQuery
- XMLIndex

## 10. PARTITIONING

- Reference partitioning
- Interval partitioning
- Extended composite partitioning
- Virtual column partitioning

## 11. HIGH-AVAILABILITY

- Network-aware duplication
- Flashback transaction backout feature
- Flashback archive
- SQL Repair Advisor
- Data Recovery Advisor
- Virtual private catalogs
- Flashback logs
- Parallel backups of datafiles
- Online patching



## **12. ADVANCED COMPRESSION**

- Compress OLTP data
- Compress export data

## **13. BUSINESS INTELLIGENCE (BI) & DATA WAREHOUSING**

- Oracle Warehouse Builder
- ETL
- Data profiling
- Data sources/destinations (e.g., PeopleSoft, SAP R/3)
- Partitioning (e.g., VLDB)
- Compression
- Data mining
- OLAP

## **14. INSTALLATION & UPGRADING**

- Server installation new features
- Installing Oracle Database 11g
- Database creation new features
- Upgrading to Oracle Database 11g