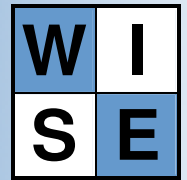


# Oracle 10g Releases 1 & 2 New Features & Performance



WISE LTD.

- COURSE CODE:** ORA10P
- COURSE TITLE:** Oracle **10g Releases 1 & 2** New Features & Performance
- CURRENCY:** 10g Releases 1 & 2 (where useful, compared with 9i)
- AUDIENCE:** Oracle DBAs, system administrators and technical support
- PREREQUISITES:** Experienced Oracle DBAs and/or system administrators who are conversant with Oracle 9i's new features and enhancements.
- DURATION:** 4 days
- SUMMARY:** This presentation elaborates on Oracle's 10g R1 & R2 new features and enhancements as these should be of interest to Oracle technicians. Each 10g new feature and enhancement is compared, where useful, with its version 9i counterpart. Then Oracle 10g features are summarised in terms of best practices and performance.
- OBJECTIVES:** Upon completion of this presentation, the delegate should be able to think clearly so as to exploit new and enhanced options available in Oracle 10g, in both OLTP and data warehousing environments.

### 1. 10g RELEASES 1 & 2 NEW FEATURES – A GLANCE

- Server administration and maintenance
- Network administration and maintenance
- Storage management
- Schema object space and management
- Backup/recovery management (including Oracle's Flashback)
- Automated instance tuning
- Application tools and enhancements
- Application development enhancements
- SQL\*Plus enhancements
- Clustering options
- Grid computing
- Workload management
- Job scheduling
- Security and authorisation
- BI and data warehousing
- Very Large Database (VLDB) support
- UNICODE support enhancements
- SQL enhancements
- PL/SQL enhancements
- XML support
- Windows support
- DB/SQL Advisors
- Oracle streams

### 2. AUTOMATED STORAGE MANAGEMENT (ASM)

- Definition and scope
- Components
- Instance management
- Disk group management
- Database object management
- Migration considerations
- ASM metadata
- Sample ASM scenario

### 3. AUTOMATED MEMORY MANAGEMENT (AMM)

- Definition and scope
- Components
- Instance level parameters
- Obsolete SGA parameters
- SGA views
- Database buffer management
- Shared pool management
- Log buffers management
- Sample scenario

#### 4. ORACLE 9i VS. 10g INITIALISATION PARAMETERS

- Definition and scope
- Basic vs. advanced
- 9i vs. 10g
- Sample scenario

#### 5. DATABASE RESOURCE MANAGEMENT AND SCHEDULING

- Definition and scope
- Components
- DROP DATABASE; new scope
- DB Resource Manager
- Automatic scheduling of tasks
- Resource/plans and directories
- Consumer group mapping

#### 6. DATABASE TUNING

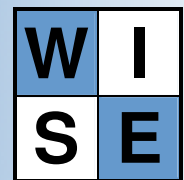
- Buffer cache flushing
- CPU costing
- Automated checkpoint tuning
- Dynamic sampling
- Transaction recovery

#### 7. APPLICATION TUNING

- Definition and scope
- Rule Based Optimizer (RBO) vs. Cost Based Optimizer (CBO)
- New Optimizer hints
- Renamed Optimizer hints
- Deprecated Optimizer hints
- Changed Optimizer hints
- Dynamic sampling
- Time-series SQL tuning
- New trace facilities
- A sample scenario

#### 8. SQL TUNING ADVISOR

- Definition and scope
- Database waits
- Identifying and examining top SQL
- Tuning SQL via advisors
- Advanced Workload Repository (AWR)
- Automatic DB Diagnostic Monitor (ADDM)
- Sample scenario



### 9. TABLESPACE MANAGEMENT

- Definition and scope
- SYSAUX tablespace
- Temporary tablespace
- Tablespace renaming
- Bigfile tablespace
- Sample scenario

### 10. TABLE & INDEX MAINTENANCE

- Oracle index usage and good practices
- B-tree indexes
- Function based indexes
- Index organised tables/secondary indexes
- Partitioned tables
- Index partitions
- Local indexes
- Text indexes
- Hash clustered indexes
- Hash clusters
- *Skip\_unusable\_index* parameters
- Sample scenarios

### 11. DATA MANIPULATION STATEMENTS (DML)

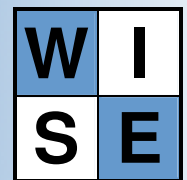
- Definitions and scope
- Single-set aggregates
- MODEL clause and SPREADSHEETS
- Expanded SELECT statements
- Expression filters
- EVALUATE operator
- Regular expressions
- Row timestamp

### 12. UTILITY ENHANCEMENTS

- Data pump vs. EXPORT/IMPORT
- Utility schedule
- SQL\*Plus

### 13. BACKUP & RECOVERY

- Flashback and RMAN
- RMAN enhancements
- Backup management
- Encrypted backups
- Restore point and point-in-time recovery
- Incremental backup



### 14. BUSINESS INTELLIGENCE & DATA WAREHOUSING

- Definition and scope
- Asynchronous Changed Data Capture (CDC)
- Transportable table spaces
- Table functions
- External table unload
- MERGE statements
- Materialized Views (MVs)
- Query rewrite
- SQL Access Advisor
- VLDB support
- Partition change tracking
- OLAP support
- Sample scenario

### 15. GRID COMPUTING

- Definition and scope
- Automatic Storage Management (ASM)
- Real Application Clusters (RAC)
- Flashback database
- Flashback Backup
- Automatic SGA management
- Automatic Workload Repository (AWR)
- Automatic Database Diagnostic Monitor (ADDM)
- SQL tuning advisor
- Transportable table spaces
- Oracle streams
- Oracles scheduler

### 16. SECURITY & AUTHORISATION

- Definition and scope
- Security and directory
- Administration
- Integration and interoperability
- Security and privacy