



A Unit of Sequelgate Innovative Technologies Pvt. Ltd.

ORACLE DBA

Complete Practical & Real-Time Training

Oracle DBA Training Highlights:

✓ Job Support	✓ Placement Support
✓ 24x7 Support	✓ Certification Support
✓ Complete Practical	✓ Interview Preparation
✓ Real-time Scenarios	✓ 100% Guaranteed Results
✓ Resume Preparation	✓ Study Material & Practice Labs

All Training Sessions are Completely Practical & Real-time

Every session includes Study Material and Practice Material.

SQL School (SequelGate Innovative Technologies Pvt. Ltd.), #108/2RT, 1st Floor, Behind Metro Station: Gate #D, SR Nagar, Hyderabad - 38, India. **CREDITS:** ISO Certified Trainers. Microsoft Learning Partner.

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Oracle DBA Training

CHAPTER 1 : Overview of Oracle DBA tasks

Oracle as a flexible, complex & robust RDBMS The evolution of hardware and the relation to Oracle Different DBA job roles (VP of DBA, developer DBA, production DBA, database babysitter) The changing job role of the Oracle DBA Environment management (network, CPU, disk and RAM) Instance management (managing SGA regions) Oracle table and index management

CHAPTER 2 : Instance Architecture

Instance vs. database Components of an instance Creating the OFA file structure (\$DBA, bdump, udump, pfile)

CHAPTER 3 : Oracle Instance Internals

SGA vs. PGA Background processes Interfaces with server and disk I/O subsystem

CHAPTER 4 : Using SQL*Plus for DBA management

Connecting and executing SQL Using the "as sysdba" syntax Overview of SQL*Plus DBA commands (startup, etc.)

CHAPTER 5 : Control file, UNDO and REDO management

Explaining the use of control files Listing the Contents of the control File File locations for control Files Obtaining Control File Information Listing control file contents Displaying and Creating Undo segments Altering Undo Segments Determining the Number and Size of Undo segments Understanding flashback technology Troubleshooting Undo – snapshot too old Redo log concepts for recovery Online redo log (log_buffer) online redo logs and archived redo logs Oracle ARCH and LGWR background processes Redo log dictionary queries Redo log switch frequency and performance Multiplexing the Online Redo Log Files Archiving the Oracle Redo Logs Recovery using the redo log files

CHAPTER 6 : User and privilege management

The three security methods (VPD, Grant security/role-based security, grant execute) Creating New Database Users Using pre-spawned Oracle connections Auditing User activity Identifying System and Object Privileges Granting and Revoking Privileges Creating and Modifying Roles Displaying user security Information from the Data Dictionary

CHAPTER 7 : Overview of instance management

Parameter files (init.ora, listener.ora, tnsnames.ora) Rules for sizing SGA components Automated Oracle memory management (AMM)

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CHAPTER 8 : Initialization file management

Creating the init.ora file Using spfile Displaying init.ora values with v\$parameter

CHAPTER 9 : Oracle*Net configuration

Creating the listener.ora file Creating the tnsnames.ora file

CHAPTER 10 : Data buffer configuration & sizing

Inside the Oracle data buffers Using the KEEP pool Monitoring buffer effectiveness Using multiple blocksizes (multiple buffer pools)

CHAPTER 11 : Shared pool and PGA configuration & Sizing

Shared pool concepts and components Understanding the library cache Relieving shared pool contention Overview of PGA for sorting and hash joins Using sort_area_size, hash_area_size and pga_aggregate_target

CHAPTER 12 : Troubleshooting network connectivity

Verifying network connectivity with ping and tnsping Testing database links

CHAPTER 13 : Oracle tables, views and materialized views

Types of Oracle tables (regular, IOT, sorted hash clusters, nested tables) Oracle Views Oracle materialized views

CHAPTER 14 : Oracle indexes

Types of Oracle indexes (b-tree, bitmap, bitmap join index) Creating B*-Tree, bitmap and function-based Indexes Function-based indexes Finding indexing opportunities Index maintenance

CHAPTER 15 : Oracle constraints

Costs & benefits of constraints Types of Oracle indexes constraints (check, not null, unique, PK, FK) Cascading constraints

CHAPTER 16 : Schema, File & tablespace management

Describing the relationship between data files, tablespaces and table Understanding Oracle segments Creating Tablespaces – using the autoextend option Changing the Size of Tablespaces – alter database datafile command Defining a TEMP tablespace Changing the default storage Settings for a tablespace Review of the storage parameters in DBA views (ASM, ASSM, pctfree, pctused and freelists). Monitoring Chained rows (fetch continued rows) Monitoring Insert and Update performance (pctused, APPEND)

CHAPTER 17 : Database Maintenance

Reason for reorgs – chained rows, imbalanced freelists Reorganizing Tables using Export and Import Using CTAS to reorganize data Index rebuilding Backup & Recovery overview

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(hot & cold Backups, RMAN, block change tracking)

Chapter 18 : Oracle DBA Utilities

Data pump (Imp and exp utilities) SQL*Loader LogMiner Flashback DataGuard Oracle DBA utilities – Oracle dbms packages (dbms_redefinition) Replication (Streams, multimaster, materialized views)

CHAPTER 19 : Dictionary and v\$ views

The dba_, all_ and user_ structures Querying the tables, indexes, and segments views Querying the AWR (STATSPACK) tables

CHAPTER 20 : Table & index monitoring

Monitoring table extents and fragmentation Using the dba_tables and dba_segments views Monitoring table CBO statistics Monitoring table extents and fragmentation Locating chained rows Monitoring table & index growth Monitoring index usage Monitoring index fragmentation Locating un-used indexes Identifying IOT candidates Reorganizing Indexes with alter index rebuild Dropping Indexes Getting Index Information from the Data Dictionary

CHAPTER 21 : workload & trend monitoring

Oracle automated workload tools Using v\$dbh to monitor buffer activity Using v\$sql and v\$sql_plan

CHAPTER 22 : Instance monitoring

Monitoring with the AWR and STATSPACK Creating a time-series performance report Using www.statspackanalyzer.com Scripts for AWR and STATSPACK Plotting performance data (Ion, Excel) Finding performance trends and signatures

CHAPTER 23 : Oracle environment monitoring

Displaying and managing Oracle sessions (v\$session, v\$process) Using AWR to monitor disk, network and CPU consumption Monitoring the alert log Oracle trace/dump files

CHAPTER 24 : STATSPACK and AWR performance management

Installing STATSPACK Running STATSPACK reports Interpreting a STATSPACK report Getting time series reports with STATSPACK Finding performance signatures with STATSPACK

CHAPTER 25 : Bottleneck performance analysis

Drill-down into AWR reports Top-5 timed events External Server Bottlenecks (Network, I/O, RAM, CPU) Network troubleshooting

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CHAPTER 26 : Instance Tuning

Changing init.ora optimizer parameters (index_optimizer_cost_adj, optimizer_mode)
Managing region parameters (shared_pool_size, db_cache_size) Understanding instance contention (e.g. Buffer busy waits, library cache contention)

CHAPTER 27 : SQL and CBO behavior

Introduction to cost-based optimization Changing the default optimizer modes Optimizer parameters Dynamic sampling Collecting table and index statistics (dbms_stats) Using column histograms and skewonly

CHAPTER 28 : Tracing SQL Execution

Using EXPLAIN PLAN Using "set autotrace" Interpreting EXPLAIN PLAN Output Using TKPROF / SQL*Trace

CHAPTER 29 : SQL Execution Internals

Review of Basic joining methods Merge join Hash Join Nested Loop join Advanced SQL operators Between operator

CHAPTER 30 : SQL Tuning

Using hints to improve SQL performance Using parallel query to improve performance SQL reusability within the library cache Table high-water mark Table striping and table partitions Using indexes to improve performance Identifying full-table scans Re-writing SQL queries Tuning sub-queries

CHAPTER 31 : Oracle High Availability Tools

Continuous availability and disaster recovery Quantifying the cost of unplanned downtime Oracle multi-master replication DataGuard Oracle Streams Real Application Clusters

CHAPTER 32 : Backup & Recovery

OS-level backups Hardware-level backup & recovery Block-level change tracking Disk mirroring Backup & recovery and RAID level Oracle-level backups (expdp & RMAN) Hot vs. Cold backups

For free demo and registrations:

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