

# Oracle Database Administrator Workshop

*We Make Training Affordable*

*Learn by Doing*



# Oracle Database Administrator Workshop

## Course Overview

This advanced Oracle Database Administrator Workshop provides in-depth coverage of Oracle architecture, instance management, security, performance tuning, backup and recovery, and proactive maintenance. Over five days, participants gain practical skills to manage, secure, optimize, and troubleshoot Oracle databases in enterprise environments, including networking, automation, and Oracle support practices.

## Duration & Module Coverage

Duration: 5 Days (40 hrs)  
Time: 9.30 am to 5.30 pm

<u>Per Day Schedule</u>	<u>Module Coverage</u>
<b><u>Session 1:</u></b> 09.30 - 11.00 Theory 11.00 - 11.10 Break 11.10 - 13.10 Practical 13.10 - 13.50 Break <b><u>Session 2:</u></b> 13.50 - 15.50 Theory 15.50 - 16.00 Break 16.00 - 17.30 Practical	<b>Day 1 – Modules 1 to 5</b>  <b>Day 2 - Modules 6 to 9</b>  <b>Day 3 – Modules 10 to 14</b>  <b>Day 4- Modules 15 to 18</b>  <b>Day 5 – Modules 19 &amp; 20</b>
<a href="#">Click here to view full detailed module list</a>	

## Learning Goals

This course aims to build strong, practical skills in Oracle database administration by covering architecture, instance management, storage, networking, and security across the database lifecycle. Participants will learn to manage users, roles, auditing, concurrency, backup and recovery, performance monitoring, SQL tuning, automation, and space management while applying best practices for stability and compliance. By the end of the program, learners will be equipped to confidently administer, optimize, and support Oracle databases in enterprise production environments.

## Pre-Requisites

Participants should have a basic understanding of relational database concepts and SQL fundamentals, along with general familiarity with operating systems and basic IT infrastructure. Prior exposure to Oracle databases or database administration concepts is helpful but not mandatory.



## **Teaching Methodology**

This is a very hands-on course where participants carry out practical exercises in the classroom. The concepts are taught through implementation of real-world use-cases. Our exercises have been carefully designed to replicate scenarios participants will face in real life work conditions. We have adopted a 'Learn by Doing' pedagogical approach - Class room training with practical. Our trainings are not only PPT based.

## **Who Should Take This Course?**

This course is ideal for aspiring and junior Oracle Database Administrators, IT professionals responsible for managing Oracle databases, and support engineers seeking to strengthen their core DBA skills. It is also suitable for developers or system administrators who want a structured understanding of Oracle database administration and operations.

# Course Content

## Day 1 - Oracle Architecture, Instance & Networking

### Learning Outcomes:

- ❖ Understand Oracle database architecture
- ❖ Administer core database services
- ❖ Configure connectivity and storage

<a href="#"><u>Session 1: Modules 1 to 3</u></a> <a href="#"><u>Time: 09.30 to 13.10</u></a>	<a href="#"><u>Session 2: Modules 4 &amp; 5</u></a> <a href="#"><u>Time: 13.50 to 17.30</u></a>
<p><b>1. Introduction to Oracle Database</b></p> <ul style="list-style-type: none"> <li>• Overview of Oracle database</li> <li>• Relational database concepts</li> <li>• Multitenant architecture (CDB/PDB)</li> <li>• Oracle RAC and Data Guard overview</li> <li>• Oracle ASM architecture</li> </ul> <p><b>2. Oracle Database Architecture</b></p> <ul style="list-style-type: none"> <li>• Memory structures (SGA, PGA)</li> <li>• Background processes</li> <li>• Server/client processes</li> <li>• Logical vs physical storage</li> <li>• Connecting to Oracle database</li> </ul> <p><b>3. Administering a Database Instance</b></p> <ul style="list-style-type: none"> <li>• Administrative tools (SQL*Plus, SQL Developer)</li> <li>• Enterprise Manager Database Express &amp; Cloud Control</li> <li>• Initialization parameter files</li> </ul>	<p><b>4. Oracle Network Configuration</b></p> <ul style="list-style-type: none"> <li>• Oracle Net listener setup</li> <li>• Naming methods and tools</li> <li>• Testing connectivity and client configuration</li> </ul> <p><b>5. Storage Structures</b></p> <ul style="list-style-type: none"> <li>• Database block overview</li> <li>• Tablespaces and datafiles</li> <li>• Creating and managing tablespaces</li> <li>• Temporary tablespaces</li> <li>• Using Oracle Managed Files (OMF)</li> </ul>

## Day 2 - Security & User Management

### Learning Outcomes:

- ❖ Manage database users and access
- ❖ Implement privilege and resource controls
- ❖ Configure auditing and compliance

<u>Session 1: Modules 6 &amp; 7</u> <u>Time: 09.30 to 13.10</u>	<u>Session 2: Module 8 &amp; 9</u> <u>Time: 13.50 to 17.30</u>
<p><b>6. User Management</b></p> <ul style="list-style-type: none"> <li>Database administration accounts</li> <li>Creating and managing users</li> <li>Authentication and passwords</li> <li>Monitoring users and sessions</li> </ul> <p><b>7. Privileges &amp; Roles</b></p> <ul style="list-style-type: none"> <li>System vs object privileges</li> <li>Granting and revoking privileges</li> <li>Using predefined roles</li> <li>Creating and managing custom roles</li> </ul>	<p><b>8. Profiles &amp; Resource Controls</b></p> <ul style="list-style-type: none"> <li>User profiles overview</li> <li>Resource parameters</li> <li>Password management</li> <li>Controlling resource usage</li> </ul> <p><b>9. Auditing</b></p> <ul style="list-style-type: none"> <li>Database auditing basics</li> <li>Security compliance</li> <li>Standard auditing</li> <li>Unified Audit Trail</li> <li>Configuring audit options</li> </ul>

## Day 3 - Concurrency, Undo & Maintenance

### Learning Outcomes:

- ❖ Manage concurrency and undo effectively
- ❖ Implement backup, recovery, and maintenance
- ❖ Monitor and optimize database performance

<a href="#"><u>Session 1: Modules 10 to 12</u></a> <a href="#"><u>Time: 09.30 to 13.10</u></a>	<a href="#"><u>Session 2: Module 13 &amp; 14</u></a> <a href="#"><u>Time: 13.50 to 17.30</u></a>
<p><b>10. Data Concurrency &amp; Locking</b></p> <ul style="list-style-type: none"> <li>• Locking levels in Oracle</li> <li>• Lock acquisition methods</li> <li>• Contention causes and resolution</li> </ul> <p><b>11. Undo Management</b></p> <ul style="list-style-type: none"> <li>• Undo data concepts</li> <li>• Monitoring undo space</li> <li>• Configuring undo retention policies</li> <li>• Undo tablespace administration</li> </ul> <p><b>12. Backup &amp; Recovery Configuration</b></p> <ul style="list-style-type: none"> <li>• Oracle backup strategies</li> <li>• Backup, restore and recovery overview</li> <li>• Flashback technologies</li> <li>• Recoverability configuration</li> </ul>	<p><b>13. Proactive Maintenance</b></p> <ul style="list-style-type: none"> <li>• Oracle Database maintenance tasks</li> <li>• Alert log and trace files</li> <li>• Automatic Workload Repository (AWR)</li> <li>• Automatic Database Diagnostic Monitor (ADDM)</li> </ul> <p><b>14. Performance Monitoring</b></p> <ul style="list-style-type: none"> <li>• Performance monitoring fundamentals</li> <li>• Identifying bottlenecks</li> <li>• Instance and memory management basics</li> </ul>

## Day 4 - SQL Tuning & Data Movement

### Learning Outcomes:

- ❖ Tune SQL for optimal performance
- ❖ Manage data movement and resources
- ❖ Automate database tasks and workloads

<b><u>Session 1: Modules 15 &amp; 16</u></b> <b><u>Time: 09.30 to 13.10</u></b>	<b><u>Session 2: Module 17 &amp; 18</u></b> <b><u>Time: 13.50 to 17.30</u></b>
<b>15. SQL Tuning Essentials</b> <ul style="list-style-type: none"> <li>• SQL tuning basics</li> <li>• Oracle optimizer concepts</li> <li>• SQL Plan directives &amp; adaptive plans</li> <li>• SQL Tuning Advisor</li> </ul> <b>16. Data Pump &amp; SQL*Loader</b> <ul style="list-style-type: none"> <li>• Data Pump architecture</li> <li>• Export and import operations</li> <li>• SQL*Loader fundamentals</li> <li>• External tables overview</li> </ul>	<b>17. Resource Manager</b> <ul style="list-style-type: none"> <li>• Database Resource Manager basics</li> <li>• Creating resource plans</li> <li>• Resource allocation directives</li> </ul> <b>18. Task Automation with Scheduler</b> <ul style="list-style-type: none"> <li>• Scheduler components</li> <li>• Creating jobs and schedules</li> <li>• Time-based and event-based scheduling</li> </ul>

## Day 5 - Space Management & Oracle Support

### Learning Outcomes:

- ❖ Optimize database space utilization
- ❖ Implement efficient space management strategies
- ❖ Manage Oracle support and patching processes

<b><u>Session 1: Modules 19</u></b> <b><u>Time: 09.30 to 13.10</u></b>	<b><u>Session 2: Module 20</u></b> <b><u>Time: 13.50 to 17.30</u></b>
<b>19. Space Management</b> <ul style="list-style-type: none"> <li>• Segment and block space management</li> <li>• Allocating extents and space</li> <li>• Row chaining &amp; migration</li> <li>• Creating tables without segments</li> </ul>	<b>20. Oracle Support &amp; Patching</b> <ul style="list-style-type: none"> <li>• Enterprise Manager Support Workbench</li> <li>• Oracle Support integration</li> <li>• Managing patches</li> <li>• My Oracle Support usage</li> </ul>