

ORACLE9i DBA Fundamentals I - Architecture and Administration (5 Days)

Custom Training Institute

9085 Coyote Springs Road
Prescott Valley, AZ 86314
(928) 772-3811
FAX (928) 441-6444

**ORACLE9i DBA
Fundamentals I – Architecture
and Administration (CTI 154)**

ORACLE is the most widely used relational database in the world, running on PCs, Macintoshes and UNIX minicomputers. Designed to give the Oracle database administrator (DBA) a firm foundation in basic database administrative tasks, students will gain a conceptual understanding of the Oracle9i database architecture and how the architectural structures work and interact with one another. Students also learn how to create an operational database and properly manage the various structures in an effective and efficient manner in order to have a well-designed and operational database.

Prerequisites: Course HE152, Introduction to Oracle9i with SQL.

Minimum hardware requirements (per student): 500 MHz Pentiums (or comparable), 128 or 256 Mb RAM, 700 Mb to 1 gig free hard disk space; Macintosh running System 7, 8 Mb RAM, 200 Mb free hard disk space; or single UNIX workstation. PCS are to be networked.

Software requirements: Oracle9i Enterprise and Windows 2000 installed on each PC (instructor and students). PLEASE NOTE THESE INSTALLATION INSTRUCTIONS: Do NOT install the networking option. Install only the sample database and SQL*PLUS with the Enterprise options ON. Turn everything else OFF (unchecked).

Microsoft PowerPoint and Internet access on instructor's workstation for presentation purposes.

Module 1: Oracle Architectural Components

- Physical Structure
- Memory Structure
- Process Structure
- Logical Structure
- Stages of an SQL Statement
- Oracle Database, the Oracle Server and the Oracle Instance

Module 2: Getting Started with the Oracle Server

- Database Administrative Tools
- Features of the Universal Installer

Module 3: Managing an Oracle Instance

- Creating, Managing and Using Initialization Files: PFILE and SPFILE
- Various States of Starting an Instance
- Various Options Available to Shutdown an Instance
- Monitoring Alert and Trace Files

Module 4: Creating a Database

- Using the Database Configuration Assistant
- Creating a Database Manually

Module 5: Using the Data Dictionary

- Uses and Contents of the Data Dictionary
- Using the Data Dictionary to Obtain Information about the Database

Module 6: Maintaining the Control File

- Uses of the Control File
- Contents of the Control File

Module 7: Maintaining Redo Log Files

- Online Redo Log Files
- Structure of Online Redo Log Files

Module 8: Managing Tablespaces and Data Files

- Outlining the Database Storage Hierarchy
- Types of Tablespaces

Module 9: Storage Structure and Relationships

- Various Segment Types and Their Uses
- Storage Clause Precedence

**ORACLE9i DBA
Fundamentals I –
Architecture and
Administration
(CTI 154) - continued**

Module 10: Managing Undo Data

Purpose of Undo Data
Managing Undo Data

Module 11: Managing Tables

Outlining Various Oracle Data Types
The Two Types of ROWID Formats

Module 12: Managing Indexes

Classification of Types and Uses Indexes
Creating B-Tree and Bitmap Indexes

Module 13: Managing Data Integrity

Various Types and States of Constraints
Data Integrity Constraints

**Module 14: Managing Password Security
and Resources**

Managing Passwords Using Profiles
Administering Profiles

Module 15: Managing Users

Database Schema and Objects
Creating New Database Users

Module 16: Managing Privileges and Roles

System and Object Privileges

Module 17: Using Globalization Support

Character Set and National Character Set
for a Database
Language-Dependent Behavior

Module 18: Review and Summary