

Oracle9i DBA Fundamentals II – Networking and Backup and Recovery

(5 Days)

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

Oracle9i DBA Fundamentals II – Networking and Backup and Recovery (CTI 155)

ORACLE is the most widely used relational database in the world, running on PCs, Macintoshes and UNIX minicomputers. This course is designed to give the Oracle database administrator (DBA) a firm foundation in fundamental database administrative tasks. Loading and transporting for databases and the utilities used to perform these activities are described. Then networking concepts and configuration parameters, as well as how to solve some common network problems, are covered. This course also addresses backup and recovery techniques and examines various backup, failure, restore and recovery scenarios. Students will also examine backup methodologies based on business requirements in a mission critical enterprise. They will utilize multiple strategies and Oracle Recovery Manager to perform backups and restore and recovery operations.

Prerequisites: Course CTI 154, Oracle9i DBA Fundamentals I.

Minimum hardware requirements (per student): 500 MHz Pentiums (or comparable), 128 or 256 Mb RAM, 700 Mb to 1 gig free hard disk space, plus one terminal per student. **Two more PC's/workstations than the number of students in the class.**

Software requirements: Oracle9i Enterprise and Microsoft Windows NT installed on server, latest Service Pack, with Windows NT on clients. Sample database installed on each client. MS Word on each client.

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

Module 1: Networking Overview

- E-Commerce Architecture
- Dedicated and Multi-Threaded Servers
- Network Components
- Client/Server Applications
- Web Client Connections
- Oracle Net Architecture
- Oracle Listener Architecture

Module 2: Solutions Included with Oracle9i for Managing Complex Networks

- Oracle Networking Solutions
- Basic Oracle Net Architecture
- Oracle Net Services Role

Module 3: Becoming Familiar with Oracle Net Services

- Understanding the Oracle Net Manager
- Connecting to the Database
- Configuring SQL*Net Listener
- Setting Up Database Aliases for SQL*Net
- Database Links
- Server Side Configurations

Module 4: Oracle Net Server-Side Configuration

- How Listener Responds
- Components of the Listener
- Configuring the Listener
- Controlling the Listener
- Configuring Service Registration

Module 5: Oracle Net Client-Side Configuration

- Naming Methods
- Configuring the Host Naming Method
- Configuring the Local Naming Method
- Configuring Net Service Names
- Troubleshooting

Module 6: Usage and Configuration of the Oracle Shared Server

- Identifying the Components of the Oracle Shared Server
- Oracle Shared Server Architecture
- Configuring the Oracle Shared Server
- Shared Server Related Dictionary Views

Oracle9i DBA Fundamentals II – Networking and Backup and Recovery (CTI 155) - continued

Module 7: Network Troubleshooting

- Tasks Involved in Troubleshooting
- Monitoring Runtime Behavior
- Configure Tracing Process
- Trace Assistant Utility Options
- Monitoring the Log Files
- Identify Features of Files that Log Information

Module 8: Backup and Recovery Overview

- Why Plan Backups?
- Possible Causes of Failure
- Hardware Protection and Redundancy
- Archivelog Mode vs. Noarchivelog Mode
- Physical and Logical Backups
- Recovery Using RMAN
- OS Backups
- Hot and Cold Backups

Module 9: Recovery Structures and Processes

- Memory Structures, Processes and File Structures
- Structures for Instances and Media Recovery
- Control Files and Redo Logs

Module 10: Physical Backups

- Recovery Implications of Hot and Cold Backups
- Backup of a Closed Database
- Backup of an Opened Database in Archivelog Mode
- Identifying the Backup Implications
- Backup of Control Files Using Different Methods
- Backup Issues
- Data Dictionary Views Useful for Backup Operations

Module 11: Complete Recovery of an Oracle Database

- Implications of Media Failure with a Database in Noarchivelog Mode
- Recovering a Database in Noarchivelog Mode
- Implications of Instance Failure with an Archivelog Mode Database
- Complete Recovery Operation
- Recovery of a Database in Archivelog Mode After Media Failure

Module 12: Incomplete Recovery of an Oracle Database with Archiving

- Situations to Use an Incomplete Recovery to Recover Database
- Performing an Incomplete Database Recovery
- Recovering after Losing Current and Active Redo Log Files
- Describing and Performing a Tablespace-Point-In-Time Recovery
- Recovery Strategy

Module 13: Additional Recovery Issues

- Starting Oracle with Missing Data Files
- Recovering with Missing Data Files Backup
- Parallelizing Recovery Operations
- Recovering Read-Only Tablespaces
- Recovering from Loss of Control Files

Module 14: Oracle9i Utilities for Troubleshooting

- Early Detection of Block Corruption
- Using Log and Trace Files to Diagnose Problems Associated with Backup and Recovery Operations
- Using LOGMINER to Analyze Log Files (Configuring Checksum Operations)
- Using DBMS_REPAIR for Recovering a Table/Index with Block Corruption
- What is DBVERIFY?

Module 15: Oracle9i Recovery Manager Architecture

- Components of RMAN
- Advantages of RMAN
- Content of Recovery Catalog
- SQL Commands and RMAN
- Media Management Layer and Tape Catalog
- Creating a Recovery Catalog
- Connecting to Recovery Manager

Module 16: Oracle9i Physical Backups Using RMAN

- Identifying Types of RMAN Backups
- Describing Backup Concepts Using RMAN
- Performing Incremental and Cumulative Backups
- Troubleshooting Backup Problems
- Viewing Information from the Data Dictionary

**Oracle9i DBA
Fundamentals II –
Networking and
Backup and
Recovery (CTI 155) -
continued**

**Module 17: Oracle9i Restore and Recover
Using RMAN**

- Restore Validate Whole Database
- Restore Validate Control File
- Using the Validate Command
- Database Recovery
- Recovering Tablespaces and Control Files

Module 18: Oracle9i Standby Database

- Explaining the Standby Database
- Configuring Initialization Parameters
- Creating, Maintaining, and Activating a Standby Database
- Effects of Changing the Structure of the Primary Database
- Impact of Nologging Actions on the Primary Database
- Sustained Recovery of Standby Database
- Setting Up the Standby Database in Read-Only Mode