

## ORACLE 11g DBA II

Duration: 5 days

### *You can develop advanced skills to effectively administer an Oracle Server Database and configure an Oracle Database*

#### Course Description:

Through hands-on experience in administering an Oracle 11g Database you can understand a wide variety of advanced concepts to let you fully master administration of an Oracle Database.

This course includes a thorough discussion of new Oracle 11g automation features including Flashback Technologies, Automated Storage Management, Automated Tuning Tools and Automated Management Tools such as the new Scheduler.

#### You can learn...

- How to configure for globalization support
- How to secure the Oracle listener
- How to configure and use Recovery Manager
- How to identify and use diagnostic information
- How to recover your database
- How and why to flashback a database
- How to use the new Automation Tools
- How to use the new Performance Tuning Tools
- How to manage database storage
- How to manage memory
- How to manage other database resources
- How to use Scheduler to automate tasks
- How to configure and use Automated Storage Mgt.

#### Who Needs to Attend:

Data Analysts, Database Administrators, Systems Administrators, Network Managers and Technical Support Personnel

#### Prerequisites:

Knowledge of SQL, the *Introduction to Oracle 11g SQL and SQL\* Plus* course or equivalent experience.

The *Introduction to Oracle 11g PL/SQL* course or equivalent experience is highly recommended.

#### Course Labs:

- Lab 1: Recovery Manager Configuration
- Lab 2: Recovery Manager Backups
- Lab 3: Database Recovery using RMAN
- Lab 4: Flashback Database
- Lab 5: Flashback For User Errors
- Lab 6: Dealing With Block Corruption
- Lab 7: Automated Management Tools
- Lab 8: Using the Scheduler
- Lab 9: Managing Storage
- Lab 10: Scheduler
- Lab 11: Listener Security
- Lab 12: Diagnostic Sources
- Lab 13: Oracle Auditing
- Lab 14: Performance Tuning

#### Course Content:

##### Recovery Manager Configuration

- Parameters affecting RMAN
- Use of a Flashback Recovery Area
- The CONFIGURE Command
- Persistent Settings
- NOCATALOG / CATALOG mode
- Catalog Management / Virtual Catalog
- Channel allocation
- Controlfile Autobackup
- Retention Policies

##### Recovery Manager Operations

- Using the BACKUP command
- Creating Backup Sets / Image Copies
- Parallelization
- Compressed Backups
- Whole Database Copying / Cloning
- Incremental Backups
- Block Change Tracking
- RMAN Backup Monitoring
- REPORT and LIST commands

##### Non-Critical Loss Recovery

- Password and network files
- Read-Only tablespaces
- Temporary tablespaces
- Index tablespaces
- Redo log members / Control files

##### Database Recovery

- Recovering the control file
- Reasons for incomplete recovery
- Recovery after RESETLOGS
- Incomplete recovery using EM
- Incomplete recovery using RMAN
- Incomplete recovery using SQL

##### Flashback Database

- When to use
- Configuration and use
- Monitoring Flashback Database
- Using EM for Flashback Database
- Flash Recovery Area maintenance
- Flash Recovery Area monitoring

##### User Error Recovery

- The new Recycle Bin
- Flashback a dropped table using EM
- Querying dropped tables
- Flashback Versions Query
- Flashback Transaction Query

##### Block Corruption Management

- DBVERIFY and ANALYZE
- DBMS\_REPAIR
- Block Media Recovery
- DBMS\_BLOCK\_CHECKING parameter
- Using RMAN for block corruption

##### Automatic Database Management

- Management and Advisory Framework
- Automatic Statistics Collection
- The Automated Workload Repository
- Database Advisors
- SQL Tuning Advisors
- SQL Access Advisors
- Active Session History (ASH)
- Automatic Statistics Collection
- Automatic Undo Retention
- Adjusting thresholds / managed metrics

##### Automatic Storage Management

- ASM Architecture
- ASM Initialization Parameters
- ASM filenames in SQL commands
- ASM tablespaces
- Disk groups / Failure groups
- ASM Startup/Shutdown / ASMCMD
- ASM Disk Group Administration

##### Globalization Support

- Timezones and Datetimes
- Language dependent behavior
- Locales and variants
- Case and accent insensitive sorts
- Linguistic sorting
- Querying GS configuration

##### Resource Management

- Resource Manager Configuration
- Resource Consumer Groups
- Resource Plans and Directives
- Directives for resource allocation
- Adaptive Consumer Group Mapping
- Enabling and switching plans

##### Scheduler

- Creating jobs and job classes
- Creating schedules and windows
- Scheduler programs
- Prioritizing jobs
- Scheduler component reuse
- Query Scheduler information

##### Storage Management

- Tuning Archiving
- Redo Log Size Advisor
- Segment Advisor
- Managing resumable operations
- Proactive tablespace management
- Table/Index size estimation
- Optimizing storage options
- Online index rebuilds

##### Listener Security

- Password authentication
- Securing EXTPROC
- Controlling access

##### Diagnostic Sources

- Alert Logs and Trace Files
- Enterprise Manager and Alerts
- Controlling trace file size
- Alert notification

##### Memory Management

- Memory Structures
- Automatic Shared Memory Management
- SGA configuration / SGA\_TARGET
- Automatic PGA Memory Management
- The Memory Advisor

##### Performance Tuning

- Application Identification
- Enterprise Manager Tools
- SQL Tuning Advisor
- SQL Access Advisor
- DBMS\_SQLTUNE
- DBMS\_ADVISOR
- Quick Tune

##### The Virtual Private Database