

Course overview:

Oracle Database 10g

Administration II

(D111eng, 5-day)



the courseware
company

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Overview and objectives

One of the most challenging tasks ever presented to database administrators is that of recovery from failure, especially if the recovery must not result in a loss of any data. This 5-day course presents all the standard failure scenarios and the best recovery strategies for each. Strategies for on-line backups, complete and incomplete recovery, media recovery vs. flashback database recovery and many other subjects are discussed. Extensive exercises allow students to simulate failures and perform actual recovery within the workshop.

Additionally, some of the most exciting new technologies ever released by Oracle are considered within this course. Subjects like the Database Scheduler, Flashback operations, Automatic Storage Management (ASM) and many others are included. This course book is filled with in-depth conceptual diagrams, hundreds of actual code examples, detailed exercises and complete solutions.

The overall objective of this course is to bring database administrators beyond a basic understanding of their environment and to focus attention on more advanced skills needed to effectively configure, administer, monitor and tune the database. Specific subjects to be considered are:

- Using flashback technology to recover from user errors and from database failures.

- Controlling resource utilization on database servers whose resource demand exceeds its capacity.

- Automating routine tasks and functions using the database Scheduler.

- Handling database corruption and even preventing such occurrences wherever possible.

- Utilizing diagnostic sources in troubleshooting database problems.

- Automatic database management, monitoring and tuning facilities. Included is automatic management of storage space and memory resources within the database.

- Automatic resumption of database operations even in the face of failures and errors.

- User-managed and automatically managed backup strategies and database recovery operations.

Who should attend?

Oracle database administrators

Suggested prerequisites

- Oracle Database 10g Introduction to SQL

- Oracle Database 10g: Program With PL/SQL

- Oracle Database 10g: Administration I

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ORACLE FLASHBACK TECHNOLOGY

- ABOUT FLASHBACK TECHNOLOGY • FLASHBACK QUERY • SELECT...AS OF TIMESTAMP • SELECT...AS OF SCN • FLASHBACK TABLE • FLASHBACK VERSIONS QUERY • FLASHBACK TRANSACTION QUERY • GUARANTEE UNDO RETENTION

MANAGING RESOURCES

- DATABASE RESOURCE MANAGER ARCHITECTURE • CONSUMER GROUPS • RESOURCE PLANS • AUTOMATIC & ADAPTIVE CONSUMER GROUP MAPPING • ENABLING & MONITORING THE RESOURCE MANAGER • EXPLICIT CONSUMER GROUP SWITCHING

AUTOMATING TASKS WITH THE DATABASE SCHEDULER (BASIC)

- SCHEDULER ARCHITECTURE • MANAGE PROGRAMS • MANAGE SCHEDULES • MANAGE JOBS

AUTOMATING TASKS WITH THE DATABASE SCHEDULER (ADVANCED)

- MANAGE JOB CLASSES • MANAGE WINDOWS & WINDOW GROUPS • MANAGE CHAINS • ABOUT EVENTS & THE SCHEDULER

GLOBALIZATION SUPPORT OBJECTIVES

- GLOBALIZATION SETTINGS • NLS_LANG • NLS_LANGUAGE & NLS_TERRITORY • DATE & TIME LOCALIZATION • LINGUISTIC INDEXES • ABOUT LOCALE BUILDER

HANDLING DATABASE CORRUPTION

- ABOUT DATABASE CORRUPTION • DB_BLOCK_CHECKSUM • ANALYZE...VALIDATE STRUCTURE • DBVERIFY • USING DBMS_REPAIR()

DIAGNOSTIC SOURCES

- MORE ABOUT THE TRACE & ALERT FILES • DIAGNOSTIC HIGHLIGHTS FROM EM • CONFIGURING THE ALERT LOG • MANAGING POLICIES

SECURING THE ORACLE LISTENER

- MANAGING & MONITORING THE LISTENER • SECURE THE LISTENER • SECURE EXTERNAL PROCEDURE CALLS

MONITORING & MANAGING MEMORY

- AUTOMATIC SHARED MEMORY MANAGEMENT • USING EM & THE MEMORY ADVISORS • MONITOR IN MEMORY ACCESS MODE

MONITORING & MANAGING STORAGE

- ABOUT RESUMABLE SPACE ALLOCATION • TABLE MANAGEMENT • USING THE SEGMENT ADVISOR

MANAGING REDO LOG STORAGE & MONITORING INSTANCE RECOVERY

- ABOUT REDO DATA • TUNE REDO WRITING & ARCHIVING • MORE ABOUT INSTANCE RECOVERY • LOG_CHECKPOINTS_TO_ALERT

FLASHBACK DATABASE

- ABOUT FLASHBACK DATABASE • CONFIGURING THE FLASH RECOVERY AREA • PERFORMING DATABASE FLASHBACK • MONITORING FLASHBACK PERFORMANCE • FLASHBACK DATABASE CONSIDERATIONS

CONFIGURING RMAN

- ABOUT DATABASE BACKUP & RECOVERY STRUCTURES • RMAN ARCHITECTURE • LAUNCH & USE RMAN • CONFIGURE RMAN • ALLOCATE RMAN CHANNELS

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BACKUP WITH RMAN

- ABOUT BACKUP FILE TYPES • PERFORMING FULL BACKUPS • PERFORMING INCREMENTAL BACKUPS • ESTABLISHING A BACKUP RETENTION POLICY • GENERATE CATALOG REPORTS • REPORT UNRECOVERABLE • REPORT NEED BACKUP • REPORT SCHEMA • LIST INCARNATION

BACKUP WITH RMAN USING EM

- MONITORING THE FLASH RECOVERY AREA • ABOUT EM & RMAN • SCHEDULING BACKUPS WITH RMAN • MANAGE CURRENT BACKUPS • BACKUP REPORTS • MANAGE RESTORE POINTS

NON-CRITICAL RECOVERY OPERATIONS

- ABOUT THE RECOVERY PROCESS • RECOVER TEMPORARY TABLESPACES • RECOVER READ-ONLY TABLESPACES • RECOVER INDEX TABLESPACES • RECOVER REDO LOG GROUP MEMBER • RECREATE THE PASSWORD FILE

DATABASE RECOVERY OPERATIONS

- CONTROL FILE RECOVERY • COMPLETE MEDIA RECOVERY • INCOMPLETE MEDIA RECOVERY • PERFORMING BLOCK MEDIA RECOVERY • RECOVERY USING EM

AUTOMATIC STORAGE MANAGEMENT

- ASM AND THE BROADER DATABASE ARCHITECTURE • DEFINING AN ASM INSTANCE • CONFIGURING STORAGE IN THE ASM INSTANCE

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