

## Objectifs

Back up and recover a database Configure Oracle Database for optimal recovery Administer ASM disk groups Use an RMAN backup to duplicate a database Automating Tasks with the Scheduler

## Participants

Administrateurs de base de données Administrateurs de data warehouse Consultant Technique Data Warehouse Administrator Database Administrators Ingénieurs support Support Engineer Technical Consultant

## Prérequis

Cours pré-requis obligatoire(s) Oracle Database 11g: Administration Workshop I

## Pédagogie

La pédagogie est basée sur le principe de la dynamique de groupe avec alternance d'apports théoriques, de phases de réflexion collectives et individuelles, d'exercices, d'études de cas et de mises en situations observées. Formation / Action participative et interactive : les participants sont acteurs de leur formation notamment lors des mises en situation car ils s'appuient sur leurs connaissances, les expériences et mettront en oeuvre les nouveaux outils présentés au cours de la session.

## Profil de l'intervenant

Consultant-formateur expert sur cette thématique. Suivi des compétences techniques et pédagogiques assurée par nos services.

## Moyens techniques

Encadrement complet des stagiaires durant la formation. Espace d'accueil, configuration technique des salles et matériel pédagogique dédié pour les formations en centre. Remise d'une documentation pédagogique papier ou numérique à échéance de la formation.

## Méthodes d'évaluation des acquis

Exercices individuels et collectifs durant la formation. Evaluation des acquis et attestation de fin de stage adressés avec la facture.

## Programme

# Oracle Database 11g - Administration Workshop II - LVC

5 jours - 35 heures

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**Cours pré-requis obligatoire(s) Oracle Database 11g: Administration Workshop I**

## Pédagogie

In this course, the concepts and architecture that support backup and recovery, along with the steps of how to carry it out in various ways and situations, are covered in detail. This includes how to define and test your own backup and recovery scenarios. Also, the students learn to manage memory effectively and to perform some performance evaluation and tuning tasks, including using some of the advisors. All types of flashback technologies, scheduling jobs inside and outside of the database, and controlling system resource usage are covered. Topics are reinforced with hands-on practices. This course counts towards the Hands-on course requirement for the Oracle Database 11g Administrator **Certification**. Only instructor-led inclass or instructor-led online formats of this course will meet the Certification Hands-on Requirement. Self Study CD-Rom and Knowledge Center courses DO NOT meet the Hands-on Requirement. Learn To: Back up and recover a database using RMAN and Enterprise Manager Configure Oracle Database for optimal recovery for any environment Identify burdensome database sessions and poorly performing SQL Configure the database instance such that resources are allocated among sessions and tasks appropriately Schedule jobs to run inside or outside of the database A Live Virtual Class (LVC) is exclusively for registered students; unregistered individuals may not view an LVC at any time. Registered students must view the class from the country listed in the registration form. Unauthorized recording, copying, or transmission of LVC content may not be made.

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## Programme

### Database Architecture and ASM

Oracle Database Architecture Overview

ASM General Architecture

Creating an ASM Instance

Using Enterprise Manager to Manage ASM Users

ASM Storage Concepts

The ASMCMD Utility

ASM Scalability and Performance

### Monitoring and Tuning RMAN

Parallelization of Backup Sets

Monitoring RMAN Sessions

Interpreting RMAN Message Output

Using the DEBUG Option

## **Tuning RMAN**

### **RMAN Multiplexing**

### **Comparing Synchronous and Asynchronous I/O**

### **Tape Subsystem Performance Rules**

## **Using Flashback Technology**

### **Flashback Technology**

### **Transactions and Undo**

### **Guaranteeing Undo Retention**

### **Preparing Your Database for Flashback**

### **Flashback Drop and the Recycle Bin**

### **Using Flashback Technology to Query Data**

### **Possible Workflow**

### **Flashback Transaction Wizard**

## **Using Flashback Database**

### **Flashback Table**

### **Enabling Row Movement on a Table**

### **Flashback Database Architecture**

### **Configuring Flashback Database**

### **Performing Flashback Database Using EM**

### **Flashback Database Considerations**

### **Flashback Data Archive**

## **Diagnosing the Database**

### **Automatic Diagnostic Workflow & Repository**

### **Location for Diagnostic Traces**

### **Viewing the Alert Log Using Enterprise Manager**

### **The Support Workbench and Oracle Configuration Manager**

### **Create a Service Request**

### **Package and upload diagnostic data to Oracle Support**

### **Incident Packaging Configuration**

### **Health Monitor Overview & Data Recovery Advisor**

## **Managing Memory**

### **Oracle Memory Structures**

### **Automatic Memory Management Overview**

### **Oracle Database Memory Parameters**

### **Auto Memory Parameter Dependency**

### **Automatic Shared Memory Management: Overview**

### **Automatic PGA Memory Management**

**Using the Memory Advisor to Size the SGA**

**Memory Tuning Guidelines for the Library Cache**

**Managing Database Performance**

**Tuning Activities**

**Performance Planning & Performance Tuning Methodology**

**Instance Tuning**

**Troubleshooting and Tuning Views**

**Automatic Workload Repository**

**SQL Tuning & SQL Advisors**

**Using the SQL Tuning Advisor**

**SQL Access Advisor: Overview**

**Using the Segment Advisor**

**Space Management: Overview**

**Proactive Tablespace Monitoring**

**Thresholds and Resolving Space Problems**

**Monitoring Tablespace Space Usage**

**Shrinking Segments**

**Space Reclamation with ASSM**

**Automatic Segment Advisor**

**Minimum Compatibility Level**

**Managing Resources**

**Database Resource Manager: Overview**

**Database Resource Manager Concepts**

**Accessing Resource Plans**

**Default Maintenance Resource Manager Plan**

**Creating Consumer Groups**

**Resource Allocation Methods for Resource Plans**

**Monitoring the Resource Manager**

**Automating Tasks with the Scheduler**

**Simplifying Management Tasks**

**Key Components and Steps**

**Creating an Event-Based Schedule**

**Creating Complex Schedules**

**Creating Job Chains**

**Administering the Scheduler**

**Advanced Scheduler Concepts**

**Job Classes**

**Windows**

**Prioritizing Jobs Within a Window**

**Remote Jobs**

**Installing the Scheduler Agent**

**Dictionary Views Supporting Remote Jobs**

**Configuring for Recoverability**

**Purpose of Backup and Recovery Functionality**

**Typical Backup and Recovery Tasks**

**Oracle Backup and Recovery Solutions**

**Using Recovery Manager (RMAN)**

**Using a Flash Recovery Area**

**Flash Recovery Area Space Management**

**Globalization**

**Globalization Support Features**

**What Every DBA Needs to Know**

**Understanding Unicode**

**Database Character Sets and National Character Sets**

**Language- and Territory-Dependent Parameters**

**Linguistic Searching and Sorting**

**Case- and Accent-Insensitive Search and Sort**

**NLS Data Conversion with Oracle Utilities**

**Using the RMAN Recovery Catalog**

**Configuring Backup Specifications**

**Using RMAN to Create Backups**

**Configuring Persistent Settings for RMAN**

**Using Enterprise Manager to Configure RMAN Settings**

**Control File Auto-backups**

**Managing Persistent Settings**

**Configuring Devices for Backup**

**Configuring and Allocating Channels for Use in Backups**

**Configuring Backup Optimization**

**Creating Backups**

**Creating an Oracle-Suggested Backup**

**Creating Backup Sets & Image Copies**

**Creating a Whole Database Backup**

**RMAN Backup Types**

**Monitoring Block Change Tracking**

**Creating Duplex Backup Sets**

**Archival Backups: Concepts**

**Encrypting Backups**

**Performing User-Managed Backup and Recovery**

**Restoring and Recovering**

**Causes of File Loss**

**Critical Versus Non-critical**

**Recovering from a TEMPFILE Loss**

**Re-creating Indexes**

**Recovering from a Lost Index Tablespace**

**Authentication Methods for Database Administrators**

**Recovering a Read-Only Tablespace**

**Using RMAN to Perform Recovery**

**Using RMAN RESTORE and RECOVER Commands**

**Performing Recovery Using Enterprise Manager**

**Recovery Using Incrementally Updated Backups**

**Perform a Fast Switch to Image Copies**

**Restoring and Recovering the Database on a New Host**

**Performing Disaster Recovery**

**Using RMAN to Duplicate a Database**

**Using RMAN to Create a Duplicate Database**

**Creating a Duplicate Database**

**Creating an Initialization Parameter File for the Auxiliary Instance**

**Allocating Auxiliary Channels**

**Understanding the RMAN Duplication Operation**

**Using EM to Clone a Database**

**Cloning a Running Database**

**Performing Tablespace Point-in-time Recovery**

**Tablespace Point-in-Time Recovery (TSPITR) Concepts**

**Tablespace Point-in-Time Recovery: Architecture**

**Understanding When to Use TSPITR**

**Determining the Tablespaces for the Recovery Set**

**Using Enterprise Manager to Perform TSPITR**

**Understanding TSPITR Processing**

**Troubleshooting RMAN TSPITR**

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