Oracle AI Database : New Features for Administrators

Prix : 2 590 €HT

Durée : 3 jours

Code de Référence : D1106067

Catalogue Database

4,61/5 Satisfaction globale - Moyenne des 24 derniers mois

Cette formation couvre les dernières nouveautés et améliorations d'Oracle Database 26ai. Elle fournit aux administrateurs de bases de données Oracle des connaissances sur les nouveautés, en se concentrant sur les performances, l'architecture, la sécurité et le partitionnement des bases de données. Les sujets incluent les mises à jour des tables Blockchain, la migration des données avec RMAN, les tables larges et les réservations sans verrouillage.

Les exercices et travaux pratiques se font dans un environnement Oracle Database 26ai. Les concepts abordés sont valables pour les versions antérieures hormis les nouveautés spécifiques à la version 26ai.

Objectifs de la formation

A l'issue de cette formation Oracle, vous aurez acquis des connaissances sur :

- Améliorations du traitement des transactions
- Améliorations des performances
- Architecture de base de données
- Nouvelles fonctionnalités de sécurité
- Améliorations du partage
- Autres caractéristiques

Public

Cette formation Oracle AI Database Nouvelles fonctionnalités pour administrateur s'adresse aux administrateurs de base de données, concepteurs de base de données et développeurs.

Prérequis

Avoir de l'expérience et des connaissances sur Oracle Database versions antérieures.

Compréhension de l'anglais et du vocabulaire anglais spécifique IT.

Vous souhaitez faire vérifier vos prérequis ? Contactez-nous pour l'organisation d'un entretien téléphonique avec un de nos consultants formateurs.

Programme de la formation

Course Overview

Oracle AI Vector Search

- Oracle AI Vector Search Benefits
- Benefits of Oracle AI Vector Search
- VECTOR Data Type
- Examples
- The Complete Workflow
- Vector Embeddings
- Vector Embedding Models
- Import Embedding Models
- Basic Queries and Similarity Search
- Basic Queries
- Basic Queries: Comparison Operations
- Similarity Search
- Exact Similarity Search
- Vector Distance Metrics
- Vector Distance Metric Example: Exact Similarity Search
- Euclidean Metric
- Euclidean Squared Distance Metric Example
- Approximate Similarity Search
- Approximate Similarity Search or Exact Similarity Search?
- Approximate Similarity Search
- Approximate Similarity Search: HNSW
- Approximate Similarity Search: IVF

True Cache

- About True Cache
- True Cache Benefits
- True Cache: High-Level View
- True Cache: Good to Know
- True Cache Application Usage
- Concurrency Control
- Configuring and Deploying True Cache
- Configuring True Cache Overview
- Uniform Configuration
- Partition Configuration COLOCATION_TAG
- Partition Configuration Multiple Services
- True Cache Configuration Process Overview
- True Cache Best Practices
- Best Practices for Maximum Availability Architecture (MAA)
- Configuring and Deploying True Cache: With DBCA
- DBCA Prerequisites
- Configuring True Cache with DBCA

- Configuring True Cache Database Application Services
- Configuring and Deploying True Cache: Manually
- Manually Configuring True Cache: Prerequisites
- Manually Configuring True Cache: Simplified Steps
- Configuring Oracle True Cache: tnsnames.ora
- Configuring Oracle True Cache: tnanames.ora
- Configuring Oracle True Cache: Local Listener
- Configuring Oracle True Cache: Password File
- Configuring Oracle True Cache: Prepare PFILE
- Configuring Oracle True Cache: Initial True Cache Startup
- Configuring Oracle True Cache: Create True Cache Database Instance
- Configuring and Deploying True Cache: Application Services
- Configuring True Cache Database Application Services
- Creating Database Application Services on the Primary Database
- Verifying Database Application Services Are Created
- Starting Corresponding Database Application Services
- Configuring and Deploying True Cache: RAC Primary Database
- Deploying True Cache for an Oracle RAC Primary Database
- Configuring and Deploying True Cache: Verify Configuration
- Configuring Oracle True Cache: Verify Status
- Configuring Oracle True Cache: Verify Listener
- Configuring Oracle True Cache: Verify Application Services
- Configuring and Deploying True Cache: Enable DML Redirection
- Configuring Oracle True Cache: Enable DML Redirection
- Configuring and Deploying True Cache: Deploy in Containers
- Deploying True Cache in Containers
- Managing True Cache: Shutdown and Start
- Shutting Down and Starting True Cache
- Managing True Cache: Deleting True Cache
- Deleting True Cache: DBCA
- Deleting True Cache: Manually
- Monitoring True Cache
- Monitoring True Cache: V$TRUE_CACHE View
- Monitoring True Cache: V$TRUE_CACHE View Columns
- Monitoring True Cache: Automatic Workload Repository
- Using Oracle True Cache in Your Applications
- True Cache Application: JDBC
- Best Practices for Load Balancing in a Uniform Configuration
- Complementary Caching Features
- Test Application

Sharding New Features

- Database Sharding
- Oracle Database Sharding
- Oracle Database 23ai Sharding New Features
- Sharding Native Replication (RAFT-Based)
- Directory-Based Sharding
- Coordinated Backup and Restore for Sharded Databases
- Centralized Backup Recovery
- Automatic Bulk Data Move on Sharding Key Update

- Split/Move of a Partitionset with Bulk Data Movement

Automatic SQL Plan Management

- Automatic SQL Plan Management: Overview
- SPM Evolve Advisor
- Benefits
- Problems It Solves
- When to Use
- How to Use It

Automatic Transaction Rollback

- Overview
- Using Automatic Transaction Rollback
- Automatic Transaction Rollback
- Using Automatic Transaction Rollback
- Monitoring
- Benefits

Automatic Transaction Quarantine

- Overview
- Automatic Transaction Quarantine: Workflow
- Monitoring Quarantined Transactions
- Resolving Quarantined Transactions
- Resolving Quarantined Transactions Examples
- Resolving Quarantined Transactions: Examples
- Dropping Quarantined Transactions
- Quarantined Transaction Escalation

Flashback Log Placement

- Flashback Log Overview
- Flashback Log Parameters
- Flashback Log Management

Simplified Database Migration Across Platforms Using RMAN Backups

- Overview
- Methods of Transporting with Recovery Catalog
- Methods of Transporting in NOCATALOG Mode
- Methods of Transporting Over Network Link
- Prerequisites Generic
- Prerequisites Specific
- Recovery Catalog Methods for PDBs
- Quickly Transport a PDB with Recovery Catalog
- Transport a PDB by Using a Pre-existing Backup with Recovery Catalog
- Transport a PDB Using Multiple Incremental Backups with Recovery Catalog
- Recovery Catalog Methods for Tablespaces
- Recovery Catalog Method for Tablespaces
- Quickly Transport a Tablespace with Recovery Catalog

- Transport a Tablespace by Using a Pre-existing Backup with Recovery Catalog
- Transport a Tablespace Using Multiple Incremental Backups with Recovery
- Catalog
- Transport a PDB Using Multiple Incremental Backups with Recovery Catalog
- Methods of Transporting in NOCATALOG Mode
- NOCATALOG Mode for PDBs
- Quickly Transport a PDB NOCATLOG
- Transport a PDB Using a Pre-existing Backup NOCATLOG
- Transport a PDB Using Multiple Incremental Backups NOCATLOG
- NOCATALOG Mode for Tablespaces
- Quickly Transport a Tablespace NOCATALOG
- Transport a Tablespace by Using a Pre-existing Backup NOCATALOG
- Transport a Tablespace Using Multiple Incremental Backups NOCATALOG
- Methods of Transporting Over Network Link
- Transporting PDBs Over Network Link
- Quickly Transport a PDB Over Network Link
- Transporting PDBs by Restoring Backups Incrementally Over the Network
- Methods of Transporting Over Network Link
- Transporting Tablespaces Over Network Link
- Quickly Transport a Tablespace Over Network Link
- Transporting Tablespaces by Restoring Backups Incrementally Over the Network

Lock-Free Reservations

- Optimistic vs Lock Free
- Optimistic Approach
- Lock-Free Approach
- Frequently Modified Values
- Lock-Free Reservations
- Lock-Free Reservation Features
- Lock-Free Reservation Benefits
- Functionality Requirements
- Create, Modify, Delete
- Lock-Free Journal Table
- Journal Table Restrictions
- Lock-Free Reservations
- Views

Wide Columns

- Prior Challenges
- Benefits
- Increase Column Limits
- Performance

Improved Performance Hybrid Columnar Compression (HCC)

- Objectives
- HCC Pre 23ai
- HCC in 23ai
- Database Compatibility
- Performance

Unrestricted Parallel DMLs

- Overview Parallel DML
- 23ai Parallel DML Improvements
- Benefits

Unrestricted Direct Loads

- Direct Loads Pre 23ai
- Direct Loads 23ai
- Benefits

Accelerate SecureFiles LOB Write Performance

- Overview
- Benefits

Fast Inserts Enhancements

- Fast Ingest Overview (aka Deferred Inserts)
- Fast Ingest Overview
- Using Fast Ingest
- Enhancements
- Benefits
- Management

Blockchain Tables

- Blockchain Table Overview
- Blockchain Table Row Versions
- Blockchain Table User Chains
- Blockchain Table Delegate Signer
- Blockchain Table Countersignature

Security New Features

- Database Security
- Pluggable Database Hybrid Read-Only Mode
- Read-Only User and Session
- New Developer Role
- Simplified Schema Privileges
- Simplified Schema Privileges: Example
- Audit Object Actions at the Column Level
- Ability to Control Authorizations for Unified Auditing with Database Vault
- Integration of Microsoft Azure Active Directory with Additional Oracle Database Environments

Data Storage Improvements

- SecureFiles
- Traditional SecureFiles Shrinking
- Automatic SecureFiles Shrinking: Advantages
- High-Level View
- Controlling Automatic SecureFiles Shrink

- Automatic Storage Compression
- Automatic Storage Compression and Automatic Clustering
- Automatic Storage Compression: Advantages
- Controlling Automatic Storage Compression

Time and Date Handling Changes

- Enhanced Time Zone Data Upgrade
- Time Zone Definitions Change: Considerations
- Optimizing Time Zone File Upgrade
- Benefits of Enhanced Time Zone Update
- Tables with TIMESTAMP WITH TIME ZONE Data
- New Parameter in the init.ora File
- Configuring Database Parameters
- SYSDATE and SYSTIMESTAMP
- Date and Time in Oracle Databases
- Database Time Versus OS System Time
- Database-Specific Time in Oracle Database 23ai
- Setting Database-Specific Time: Example

Méthodes pédagogiques

Alternance d'apports théoriques et d'exercices avec un vaste choix d'exercices pratiques et de scénarios d'atelier permettent de mettre en œuvre les connaissances acquises.

Les exercices et travaux pratiques se font dans un environnement Oracle Database 26ai. Les concepts abordés sont valables pour les versions antérieures hormis les nouveautés spécifiques à la version 26ai.

La dernière version du support en anglais est accessible en ligne. Vous aurez à votre disposition un accès contenant tous les matériels de cours de votre formation, ainsi qu'un accès à 5 h de visionnage d'une autre formation de votre choix dans la même thématique. L'ensemble sera disponible pendant 90 jours.

Méthodes d'évaluation des acquis

Afin d'évaluer l'acquisition de vos connaissances et compétences, il vous sera envoyé un formulaire d'auto-évaluation, qui sera à compléter en amont et à l'issue de la formation.
Un certificat de réalisation de fin de formation est remis au stagiaire lui permettant de faire valoir le suivi de la formation.