

# ODAT-52 - ORACLE DATABASE: MANAGING MULTITENANT ARCHITECTURE

## ED 1

Categoria: **Database**

### INFORMAZIONI SUL CORSO



**Durata:**  
4 Giorni



**Categoria:**  
Database



**Qualifica Istruttore:**  
Oracle Certified  
Professional



**Dedicato a:**  
Professionista IT



**Produttore:**  
Oracle

### OBIETTIVI

- Manage PDB snapshots
- Encrypt data in PDBs and isolate PDB keystore
- Monitor performance in CDBs and PDBs
- Audit users in CDB and PDBs
- Protect data with Database Vault policies in CDB and PDBs
- Manage a CDB fleet
- Manage resource allocation between PDBs and within a PDB
- Use Data Pump operations from a non-CDB or CDB into a PDB
- Upgrade 12c CDBs or PDBs to 18c
- Configure and create a CDB
- Create, clone, unplug, plug, relocate, proxy, switch over and drop PDBs
- Startup and shutdown CDBs and PDBs
- Manage tablespaces in CDB and PDBs
- Manage common and local users, roles, privileges, profiles, objects in CDBs and PDBs
- Manage PDB lockdown profiles
- Backup, duplicate, recover and flashback CDB and PDBs

### PREREQUISITI

#### **Suggested Prerequisite**

- Basic knowledge of Linux operating system
- Working knowledge of SQL and use of PL/SQL packages

#### **Required Prerequisite**

- Oracle Database 18c: Administration Workshop
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### CONTENUTI

#### **CDB Basics**

- Differentiate the CDB root from a pluggable database

- Describe the multitenant architecture
- List impacts in various areas
- Describe the CDB root and pluggable database containers
- Understand the terminology of commonality

### **CDB and Regular PDBs**

- Create a new PDB from the CDB seed
- Explore the structure of PDBs
- Explore the instance
- Provision new PDBs
- Explore the Automatic Diagnostic Repository (ADR)
- Configure and create a CDB

### **Application PDBs and Application Installation**

- Define application PDBs
- Use a dynamic container map
- Describe application containers in CDBs
- Create application PDBs
- Describe the commonality concept in application contexts
- Explain the purpose of application root and application seed
- Install, upgrade and patch an application
- Explain application installation on top of application containers

### **PDB Creation**

- Convert regular PDBs to application PDBs
- Clone a regular PDB
- Unplug and plug a non-CDB
- Unplug and plug a regular PDB
- Perform hot cloning and relocation
- Configure and use the local UNDO mode
- Unplug and plug an application container
- Clone an application PDB

### **CDB and PDB Management**

- Start up and shut down a CDB
- Configure host name and port number per PDB
- Change the different modes and settings of PDBs
- Start PDB service
- Open and close PDBs
- Avoid service name conflicts
- Establish connections to CDB and PDB
- Evaluate the impact of parameter value changes

### **Storage**

- Manage temporary tablespaces in CDB and PDBs
- Manage permanent tablespaces in CDB and PDBs
- Manage the UNDO tablespaces in CDB root and PDB

### **Security**

- Enable common users to access data in PDBs
- Encrypt data in PDBs
- Manage PDB lockdown profiles
- Manage common and local objects in application containers
- Manage common and local users, roles, privileges and profiles in PDBs
- Protect data with Database Vault policies in CDB and PDBs
- Audit users in CDB and PDBs
- Manage other types of policies in application containers

### **Backup and Duplicate**

- Validate CDBs and PDBs
- Duplicate PDBs
- Backup CDB and PDBs
- Duplicate a CDB as encrypted
- Use RMAN backups to plug unplugged PDBs
- Duplicate an active PDB into an existing CDB

### **Recovery and Flashback**

- Reuse preplugin backups after conversion of a non-CDB to a PDB
- Perform CDB flashback
- Perform PDB flashback
- Recover a PDB from essential file damage
- Use clean restore points to complete PDB flashback
- Recover a PDB from non-essential file damage
- Reuse preplugin backups after plugging/relocating a PDB into another CDB
- Manage PDB snapshots

### **Performance Monitoring**

- Control PDB IO rate limits
- Run ADDM tasks for CDB and PDB recommendations
- Manage AWR snapshots at the CDB and PDB levels
- Monitor performance in a CDB and PDBs
- Manage application shared object statistics
- Monitor operations in a CDB and PDBs
- Control query DOP involving the containers() construct
- Manage SGA and PGA limits at the PDB level

### **Resources Allocation**

- Avoid excessive session PGA
- Enable parallel statement queuing at PDB level
- Manage PDB performance profiles
- Manage resource allocation between PDBs and within a PDB

### **Data Movement**

- Export from a PDB and import into a PDB
- Export from a non-CDB and import into a PDB
- Export from a PDB and import into a non-CDB
- Use SQL\*Loader to load data into a PDB

### Upgrade methods

- Plug in a remote PDB through XTTS into a target CDB
- Upgrade 12.2 CDB to 18c
- Upgrade 12.2 PDBs to PDBs in 18c

### Miscellaneous

- Mine PDB statements using LogMiner
- Describe XStreams usage with PDB and CDB
- Describe Data Guard with CDB and PDB
- Schedule operations in a PDB using Oracle Scheduler
- Describe the limits of data replication

## INFO

**Manuale:** Il Materiale Didattico Ufficiale per tutti i corsi Oracle University non è in forma cartacea ma consiste in un eKit elettronico che lo studente iscritto può scaricare dal sito Oracle. Il Materiale Didattico è compreso nel prezzo sia per i corsi a Calendario sia per quelli Dedicati.

**Prezzo manuale:** incluso nel prezzo del corso a Calendario

**Natura del corso:** Operativo (previsti lab su PC)