Oracle Database 19c Multitenant Architecture (TTOR20719)

Category: AI, Data & Analytics | **Vendor:** Trivera Tech

Duration: 24.00 hours (3 days) **19.5 CPD Hours** **Rating:** ⭐ 4.6 (5,878 reviews)

Course Information

Delivery Format: Instructor Led - Online

Course Overview

The multitenant architecture enables you to have many pluggable databases inside a single Oracle Database instance. Oracle Database 19c Multitenant Architecture is a three-day hands on course that explores the multitenant architecture and the different types of pluggable databases (PDBs) in multitenant container databases (CDBs).

About This Course

The multitenant architecture enables you to have many pluggable databases inside a single Oracle Database instance. Oracle Database 19c Multitenant Architecture is a three-day hands on course that explores the multitenant architecture and the different types of pluggable databases (PDBs) in multitenant container databases (CDBs).

Who Should Attend

This course is introductory-level, but technical in nature. In order to participate in the hands-pon labs you should have a basic understanding of database principles, basic scripting skills (in relation to Oracle) and basic analytics skills.

Prerequisites & Entry Requirements

General Prerequisites:

This course is introductory-level, but technical in nature. In order to participate in the hands-pon labs you should have a basic understanding of database principles, basic scripting skills (in relation to Oracle) and basic analytics skills.

Learning Outcomes

Upon successful completion of this course, participants will be able to:

This course is approximately 50% hands-on, combining expert lecture, real-world demonstrations and group discussions with machine-based practical labs and exercises. Working in a hands-on learning environment led by our Oracle Certified expert facilitator, students will learn how to:
Core concepts of regular PDBs
Creating a CDB, and then using different methods to create PDBs.
How to start and shut down a CDB and how to open and close a PDB.
Security aspects in CDBs and PDBs in various areas like privileges and roles, lockdown profiles, auditing, Database Vault, and encryption.
Availability through backup, duplicate, recovery, and flashback topics and then performance, monitoring, and resources allocation management in CDBs and PDBs.
How you can move data from a non-CDB environment to a PDB.
How to move data between PDBs by using utilities such as the export and import features of Oracle Data Pump, SQL*Loader, external tables, and Oracle Recovery Manager.

Detailed Course Outline

Multitenant Architecture

- CDB Basics
- CDB and Regular PDBs
- Application PDBs and Application Installation

PDB Creation

- PDB Creation
- CDB and PDB Management
- Storage

Security

- Security
- Backup and Duplicate
- Recovery and Flashback
- Performance
- Resources Allocation

Data Movement

- Data Movement
- Upgrade Methods
- Miscellaneous

, 1. CDB Basics

Challenges

Non-CDB Architecture

Multitenant Architecture: Benefits

Other Benefits of Multitenant Architecture

Oracle Multitenant Container Database

Configurations

Database Objects in a non-CDB

User-Added Objects to a non-CDB

SYSTEM Objects in the USER Container

Provisioning a Pluggable Database

Multitenant Container Database Architecture

Containers & Tools

Data Dictionary and Dynamic Views

Impacts

2. CDB and Regular PDBs

Creating a CDB

Creating a CDB: Using SQL*Plus

New Clause: SEED FILE_NAME_CONVERT

New Clause: ENABLE PLUGGABLE DATABASE

After CDB Creation: What's New in CDB

Data Dictionary Views: DBA_xxx

Data Dictionary Views: CDB_xxx

Data Dictionary Views: Examples

Data Dictionary Views: V$xxx Views

After CDB Creation: To do List

Automatic Diagnostic Repository

Automatic Diagnostic Repository: alert.log File

Provisioning New Pluggable Databases

Tools

Create New PDB from PDB$SEED

Steps: With FILE_NAME_CONVERT

Steps: Without FILE_NAME_CONVERT

3. Application PDBs and Application Installation

Regular PDBs

PDBs and Applications

Application Containers

Application Containers: Other Features

Types of Containers

Creating Application PDBs

Application Name and Version

Installing Applications

Patching and Upgrading Applications

Application Common Objects

Use Cases for Application Containers

Use Case: Pure PDB-Based Versus Hybrid Model

Container Map

Container Map: Example

Query Routed Appropriately

Dynamic Container Map

Container Map and Containers Default

Query Across CDBs Using Application Root Replica

Durable Location Transparency

Data Dictionary Views

Terminology in Application Container Context

Commonality in Application Containers

Impacts

4. PDB Creation

Cloning Regular PDBs

Cloning Application Containers

Plugging a Non-CDB into CDB

Plugging a Non-CDB into CDB Using DBMS_PDB

Replicating Non-CDB into CDB

Cloning a Non-CDB or Remote PDB

Plugging an Unplugged Regular PDB into CDB

Flow

Plugging Using Archive File

Unplugging and Plugging Application PDBs

Converting Regular PDBs to Application PDBs

Unplugging and Plugging a PDB with Encrypted Data

Local UNDO Mode Versus Shared UNDO Mode

Cloning Remote PDBs in Hot Mode

Near-Zero Downtime PDB Relocation

Proxy PDB: Query Across CDBs Proxying Root Replica

Creating a Proxy PDB

Dropping PDBs

5. CDB and PDB Management

Connection

Switching Connection

Creating Services

Renaming Services

Starting Up a CDB Instance

Mounting a CDB

Opening a CDB

Opening a PDB

Automatic PDB Opening

Closing a PDB

Shutting Down a CDB Instance

Changing PDB Mode

Modifying PDB Settings

Instance Parameter Change Impact

Instance Parameter Change Impact: Example

Using ALTER SYSTEM Statement on PDB

Configuring Host Name and Port Number per PDB

6. Storage

Objects in Tablespaces

Tablespaces Created During PDB Creation

Defining Default PermanentTablespaces

Temporary Tablespaces

UNDO Tablespaces

7. Security

Creating Common Users in the CDB and PDBs

Creating Common Roles in the CDB and PDBs

Granting Privileges Commonly in the CDB and PDBs

Creating Common Profiles in the CDB and PDBs

Common Objects in Application Containers

Operations on Data-Linked Objects

Enabling Common Users to Access Data in PDBs

Finding Information About CONTAINER_DATA Attributes

Restricting Operations with PDB Lockdown Profiles

Restricting Operations in a PDB Lockdown Profile

PDB Lockdown Profiles Inheritance

Static and Dynamic PDB Lockdown Profiles

Auditing Actions in the CDB and PDBs

Managing Other Types of Security Policies in Application Containers

Securing Data with Oracle Database Vault

Oracle Database Vault-Enabled Strict Mode

Managing Keystore in the CDB and PDBs

Creating and Opening a Keystore

Setting TDE Master Encryption Keys

Managing Keystore in the CDB and PDBs

Keystore Management Changes for PDBs

Defining the Keystore Type

Isolating a PDB Keystore

Converting a PDB to Run in Isolated Mode

Converting a PDB to Run in United Mode

Migrating a PDB Between Keystore Types

Unplugging and Plugging a PDB with Encrypted Data

Per-PDB Wallet for PDB Certificates

8. Backup and Duplicate

Goals

Syntax and Clauses in RMAN

CDB Backup: Whole CDB Backup

CDB Backup: Partial CDB Backup

PDB Backup: Partial PDB Backup

Using RMAN Backup to Plug an Unplugged PDB

Duplicating Pluggable Databases

Cloning Active PDB into an Existing CDB

Duplicating On-Premise CDB as Cloud Encrypted CDB

Duplicating On-Premise Encrypted CDB as Cloud Encrypted CDB

Migrating Cloud Encrypted CDB as On-Premise CDB

Checking for Block Corruption

9. Recovery and Flashback

Instance Failure and Instance Recovery

NOARCHIVELOG Mode

PDB Tempfile Recovery

PDB SYSTEM or UNDO Tablespace Recovery

PDB non-SYSTEM Tablespace Recovery

PITR

Migrating a Non-CDB to a CDB

Migrating a Non-CDB and Transporting Non-CDB Backups to a CDB

Relocating/Plugging a PDB into Another CDB

Plugging a PDB and Transporting PDB Backups to a CDB - 1

Plugging a PDB and Transporting PDB Backups to a CDB - 2

Using PrePlugin Backups

CDB and PDB Flashback

PDB Flashback and Clean Restore Point

PDB Snapshot Carousel

Creating PDB Snapshot

Creating PDBs Using PDB Snapshots

Dropping PDB Snapshots

Flashbacking PDBs Using PDB Snapshots

Switching Over a Refreshable Cloned PDB

Unplanned Switchover

10. Performance

Tuning a CDB

Sizing the CDB

Testing the Estimates

Managing SGA and PGA for PDBs

Monitoring PDB Memory Usage

AWR and ADDM Behavior

PDB-Level Snapshot Views

AWR Report

ADDM Tasks: At the CDB Level Only

Basic Rules: Statistics for Common Objects

Controlling the Degree of Parallelism of Queries

Heat Map and ADO Support

Managing Heat Map and ADO Policies in PDB

CDB Fleet

CDB Lead and CDB Members

Use Cases

Consolidated Database Replay Use Cases

Use Cases: Source Workloads

The Big Picture

11. Resources Allocation

Allocating Resources in the CDB

Resource Manager and Pluggable Databases

Managing Resources Between PDBs

CDB Resource Plan Basics: Limits

PDB IO Rate Limit

Maintaining a CDB Resource Plan

Managing Resources Within a PDB

Putting It Together

PDB-Level Parallel Statement Queuing

PDB-Level Parallel Statement Queuing: CPU_COUNT

Session PGA Limit

Performance Profiles

12. Data Movement

Using Oracle Data Pump with PDBs

Exporting from non-CDB and Importing into PDB

Exporting and Importing Between PDBs

Exporting from PDB and Importing into non-CDB

Full Transportable Export/Import: Overview

Full Transportable Export/Import: Usage

Full Transportable Export/Import: Example

Transporting a Database Over the Network: Example

Using SQL*Loader with PDBs

13. Upgrade Methods

Upgrading CDB and PDBs

Converting and Upgrading Regular PDBs to Application PDBs

Cross-Platform Transportable PDB

14. Time Permitting / Extras

Using Xstreams with a CDB and PDB

Creating a Standby of a CDB

Instantiating a PDB on a Standby

Scheduling Operations in a PDB

Jobs Coordinator and Resources

Mining Statements of a PDB Using LogMiner

Additional Course Details

Nexus Humans Oracle Database 19c Multitenant Architecture (TTOR20719) training program is a workshop that presents an invigorating mix of sessions, lessons, and masterclasses meticulously crafted to propel your learning expedition forward.

This immersive bootcamp-style experience boasts interactive lectures, hands-on labs, and collaborative hackathons, all strategically designed to fortify fundamental concepts.

Guided by seasoned coaches, each session offers priceless insights and practical skills crucial for honing your expertise. Whether you're stepping into the realm of professional skills or a seasoned professional, this comprehensive course ensures you're equipped with the knowledge and prowess necessary for success.

While we feel this is the best course for the Oracle Database 19c Multitenant Architecture (TTOR20719) course and one of our Top 10 we encourage you to read the course outline to make sure it is the right content for you.

Additionally, private sessions, closed classes or dedicated events are available both live online and at our training centres in Dublin and London, as well as at your offices anywhere in the UK, Ireland or across EMEA.

Frequently Asked Questions

Q: What delivery options are available for Oracle Database 19c Multitenant Architecture (TTOR20719)?

We offer multiple delivery formats:

- Live Instructor-Led Classroom Online (Virtual/Live Online)
- Traditional Instructor-Led Classroom Training (ILT)
- On-site delivery at your offices anywhere in United Kingdom
- Private dedicated courses customized for your team

Q: How many CPD hours does this course provide?

The 3-day Oracle Database 19c Multitenant Architecture (TTOR20719) course provides up to 19.5 CPD hours of structured learning. CPD certificates can be provided upon request.

Q: What is the duration of the Oracle Database 19c Multitenant Architecture (TTOR20719) training?

The training takes place over 3 day(s), with each day lasting approximately 24.00 hours including breaks for lunch and refreshments.

Q: Do you provide corporate training for Oracle Database 19c Multitenant Architecture (TTOR20719)?

Yes, we provide corporate training, dedicated training, and closed classes for Oracle Database 19c Multitenant Architecture (TTOR20719). Training can take place anywhere in United Kingdom including London, Manchester, Birmingham, Edinburgh, or live online allowing teams from across United Kingdom or internationally to attend.

Q: What related terms do people search for?

Popular related searches include: Oracle DBA; Database

Q: Why choose Nexus Human for Oracle Database 19c Multitenant Architecture (TTOR20719)?

Nexus Human is recognized as one of the leading training providers. Our trainers have won multiple awards including:

- Small Firms Best Trainer Award
- National Training Partner of the Year (Ireland) - Multiple Years
- Global Top 30 Instructor Awards (2012, 2019, 2021)
- Tech Excellence Award Nominations
- Learning Performance Institute (LPI) External Training Provider Sponsor 2024

Q: Are there any discount codes available?

Yes! Use discount code **PENPAL5** when booking your Oracle Database 19c Multitenant Architecture (TTOR20719) training. Please note that only one discount code can be used per booking and cannot be combined with other special offers.

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