

## **Oracle 12c Database: New Features, Deployment and Administration**

### **Course Summary**

#### **Description**

This five day class covers the information critical for planning the deployment of Oracle Database 12c or the upgrade of previous versions of the Oracle Database to version 12cR1. Database 12cR1 is the first significant change in physical and logical infrastructure to the basic Oracle Database since version 6 and a move to 12c requires knowledge and experience different from what was required to deploy and upgrade with earlier versions. This 12c Boot Camp is designed to transfer from our instructors to the members of your team the real-world information and experience they will require to return to their job and perform the tasks necessary to successfully deploy Oracle Database 12c as either a new installation or as an upgrade to an existing database including deployment of new capabilities such as Multi-Tenant and In-Memory functionality.

How does this class compare to those offered by others? Not a lot of similarities other than in the class name. Our class will be taught by an Oracle ACE Director who is an internationally recognized subject matter expert on Database 12c and who was personally selected by Oracle as a member of the Beta test team. The instructor has spoken at 17 Oracle Technology Network conferences and events including Oracle OpenWorld since 2012 throughout North America, Latin America, Europe, and the Asia-Pacific region and has taught Oracle at both the University of Washington and Harvard University. Our class has serious real-world content ... it is not slow death by PowerPoint ... and it is not someone reading PowerPoint slides but rather using slides to guide students through the instructor's personal experience with the product.

#### **Topics**

- Container Database Concepts & Architecture
- Installation & Patching
- Container Administration and Management
- Database Upgrades
- Data Dictionary
- **Security**
- **Backup and Recovery**
- **Automatic Data Optimization**
- **Database Tuning**
- **Uses and Space Management**

#### **Audience**

Experienced Oracle database administrators or senior developer.

#### **Prerequisites**

- The student must be familiar with basic Oracle 10g/11g database administration
- Participants are comfortable with the vi editor and the SQL\*Plus command line
- Previous work as an Oracle DBA is helpful but not required

#### **Duration**

Three days

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### Course Outline

#### I. Container Database Concepts & Architecture

- A. Explain the different components of the new multi-tenant logical and physical architecture
- B. Discuss all the changes in commands, and how they act, required by the new architecture
- C. Discuss the hardware requirements and prerequisites
- D. Identifying the dangers presented by trying to manage a 12c database with the same techniques used to manage previous versions of the Oracle database.

#### II. Installation & Patching

- A. Pre-installation planning and preparations
- B. Install a 12cR1 Database
- C. Upgrade an existing 11gR2 database to 12cR1 as a PDB
- D. Create, plug in and unplug PDBs (pluggable databases)

#### III. Container Administration and Management

- A. Navigating Creating pluggable database architecture
- B. Creating pluggable databases from PDB\$SEED
- C. Transporting pluggable databases between CDBs
- D. Starting and stopping CDBs and PDBs

#### IV. Database Upgrades

- A. Preparing 9 to 11g databases for upgrading to 12c
- B. Changing initialization parameters

#### V. Data Dictionary

- A. V\$ and GV\$ dynamic performance views in a container database
- B. CDB\_ data dictionary views

#### VI. Security

- A. Container database security by design
- B. Designing and implementing Unified Audit Policies
- C. Credentials management with the DBMS\_CREDENTIAL built-in package

#### VII. Backup and Recovery

- A. Backing up a 12c container database at all levels
- B. Restoring and recovering a 12c container database at all levels

#### VIII. Automatic Data Optimization

- A. Heat Maps
- B. Integrated Lifecycle Management

#### IX. Database Tuning

- A. New AWR and ASH report options
- B. Creating evolve tasks

#### X. Uses and Space Management

- A. Creating common users and common roles
- B. Creating and managing tablespaces and data files