Table of Contents

Overview 5

About DBA University, Inc. 6

Eligibility 6

Oracle Certified Professional (OCA, OCP) Certification 6

Pricing and Registration 7

- Live Training 7
- Video Recorded Training 7

Remote LAB access 8

Course Topics 8

- Introduction to database management systems and databases 8
  - What is a database? 9
  - Popular database management system (DBMS) software and why Oracle DBMS. 9
  - History and Current trends of DBMS and Database Administration. 9
  - Oracle database market share and about its current competitive landscape 9
  - Tasks of a Database Administrator. 9
- Oracle 12c R1 database software installation 9
  - Understand prerequisites for a successful Oracle RDBMS software installation. 9
  - Installation of Oracle 12c R1 database software with the latest patchset. 9
- Oracle 19c database software installation 9
  - Introduction to Oracle 19c release. 9
  - Oracle 19c Release Update (RU) and Release Update Revision (RUR) concepts. 9
  - Install Oracle 19c database software on Linux 64-bit server. 9
  - Installation of Oracle 19c examples software 9
- Oracle database creation 9
  - Creating an Oracle 12c R1 database using the CREATE DATABASE SQL command 9

Copyright 2010 – 2021 DBA University, Inc. Chicago USA

Creating an Oracle 19c database using the Graphical Tool (Database Configuration Assistant). 9
Accessing an Oracle Database with Oracle supplied Tools 9
Using SQL Plus 9
Using Oracle enterprise Manager (OEM) Database Express 9
Using the Database Configuration Assistant (DBCA) 9
Understanding Oracle Database Architecture 10
Understanding Oracle Database Instance Configurations. 10
Understanding Logical and Physical Database Structures. 10
Understanding Oracle Database Memory and Process Structures. 10
Understanding Oracle Database Server Architecture. 10
Managing Database Instances 10
Starting Up Oracle Database Instances 10
Using Data Dictionary Views 10
Using the Alert Log and Trace Files 10
Shutting Down Oracle Database Instances 10
Managing Initialization Parameter Files 10
Using Dynamic Performance Views 10
Advance Startup and Shutdown scenarios. 10
Managing Tablespaces and Datafiles 10
Oracle tablespaces and allocation types. 10
Viewing Tablespace Information 10
Creating, Altering and Dropping Tablespaces 10
How to create datafiles with fixed size and auto extend option. 10
What are control files and how to view control file content in a trace file. 10
Moving and Renaming Online Data Files 10
Temporary tablespaces and temporary tablespace groups. 10
Managing Undo 11
Understanding Transactions and Undo Data 11
Storing Undo Information 11
Configuring Undo Retention 11
Comparing Undo Data and Redo Data 11

Copyright 2010 – 2021 DBA University, Inc. Chicago USA

Understand Oracle database read consistency 11
Configuring Oracle Net Services (Oracle Networking) 11
Introduction to Oracle Net Services component. 11
Configuring the Oracle Net Listener (Dynamic and Static Listeners). 11
Administering Naming Methods in sqlnet.ora. 11
Dynamic Service Registration 11
Connecting to an Oracle Database Instance (local and remote). 11
Oracle netca (Network Configuration Assistant) tool for configuration file generation. 11
Oracle netmgr tool for adding database services to a static listener.ora configuration file. 11
Oracle listener administration and TNS_ADMIN environment variable 11
Configuring Communication Between Database Instances (database links). 11
Managing Users, Roles and Privileges 11
Assigning Quotas to Users 12
Applying the Principal of Least Privilege 12
Creating and Assigning Profiles 12
Managing Oracle Database Users, Privileges, and Roles 12
Standard database auditing 12
Used Managed (Manual) Backup and Recovery 12
Backup and Recovery Concepts (Redo log files and archive log files.) 12
Backup and Recovery Configuration (Configure the fast recovery area and ARCHIVELOG mode.) 12
Introduction and planning for a robust Backup and Recovery Strategy 12
How to create a consistent database backup aka offline backup (COLD BACKUP) 12
Hot to create an inconsistent database backup aka online backup (HOT BACKUP) 12
How to clone a database from a consistent database backup. 12
How to clone a database using Cancel based recovery from an inconsistent database backup. 12
How to clone a database using Time based recovery (Database point in time recovery) from an inconsistent database backup 12
RMAN Backup and Recovery 12
Advantages of RMAN method compared to the user-managed method. 13
Create consistent database backups using RMAN 13
Create inconsistent database backups (without shutting it down) using RMAN. 13

Copyright 2010 – 2021 DBA University, Inc. Chicago USA

Oracle database RMAN backup metadata. 13
How to take a full database backup to a custom location. 13
How to backup archive logs only using RMAN. 13
How to create incremental backups using RMAN. 13
How to monitor fast recovery area usage in an Oracle database. 13
How to clone a database using RMAN backup-based duplication. 13
How to restore and recover a full database from its RMAN backup. 13
How to drop a database using RMAN 13
Oracle database backup retention policies 13
How to purge old backups using RMAN. 13
Use Data Recovery Advisor to perform recovery of the control file and redo log file. 13
Oracle opatch utility (Oracle Interim Patch Installer) 13
Learn about Oracle Interim Patch Installer (OPATCH). 13
What is an Oracle interim patch and how to apply it? 13
How to apply an Oracle 19c release update (RU) and release update revision (RUR). 13
Oracle 12c R1 to Oracle 19c database upgrade 13
Oracle 19c upgrade paths. 13
Upgrade an Oracle 12c R1 database to Oracle 19c release using dbua tool 13
Moving Data 14
Oracle database logical backup and restore operations (Data Pump Export and Import). 14
Business use cases of logical backups compared to physical backups. 14
Various Data Pump Export modes. 14
Data Pump Import to import data from an export backup. 14
Advanced features in Oracle Data Pump Export. 14
Miscellany 14
The Oracle database job scheduler API (DBMS_SCHEDULER package) 14
How to generate a stack trace for *ORA*- errors (on-error diagnostic dump files) 14
Oracle Database Performance Tuning 14
How to handle performance issues in the real world. 14
V$ dynamic views for performance monitoring and analysis. 14
How to size the Oracle database memory structures for optimal performance. 14

Copyright 2010 – 2021 DBA University, Inc. Chicago USA
https://www.DBAUniversity.com – email: info@DBAUniversity.com – Ph: 720 934 1260

Oracle database wait events. 14
How to trace database sessions using DBMS_MONITOR and DBMS_SESSION packages. 14
How to format SQL trace files using the tkprof utility. 14
Index Monitoring and internals of index maintenance by Oracle. 14
Statistics data collection for Oracle database optimizer. 14
What is Oracle automatic workload repository (AWR) and how to obtain AWR reports. 14
Real world life of an Oracle DBA 14
Type of Oracle errors. Valid errors and internal exceptions (ORA-00600 and ORA-07445 errors). 15
How to work with Oracle Support https://support.oracle.com to create Service Requests. 15
Parlance and terminology used by Oracle DBAs. 15
Working with Oracle Forums for issues. 15
Productivity tools required when you join the workplace. 15
Scheduling JOBS and scripts through UNIX/LINUX crontab utility 15
Oracle ASM (Automatic Storage Management) 15
Oracle Database High Availability (RAC, Data Guard) 15
Unique Teaching Methodology 15
More Information 15

Overview

Database Administrators (DBAs) are responsible for the design, implementation, support and maintenance of computerized databases in today's organizations. The role also includes architecting, building and scaling databases for future data growth and capacity. They are also responsible for security, performance and availability of data to users and customers.

All the above tasks are performed with the help of a Database Management System (**DBMS**) and the leading and most widely used DBMS' across the world today are Oracle, Microsoft SQL Server, MySQL and PostgreSQL etc.

Copyright 2010 – 2021 DBA University, Inc. Chicago USA

DBAs play an important and responsible role in every company's Information Technology (IT) department. DBAs are also **well paid,** and the average annual salary is **more than $100,000** in the USA.

About DBA University, Inc.

DBA University, Inc. is a professionally run organization based in Chicago, USA specializing in training and services in computer database administration and development. We are currently offering training in Oracle DBA, Oracle SQL & PL/SQL, SQL Server DBA, Big Data and AWS cloud computing using expert instructors and excellent REMOTE LAB access through **affordable prices**.

We are very dedicated and committed towards the success of our students. Our courses are **very hands-on** and aimed at **job placement** and preparing our students to face the real world with self-confidence and expert level technical skills in Oracle DBA, Oracle SQL & PL/SQL, SQL Server DBA, Big Data and AWS cloud computing.

Most of our courses are taught online and hence students all ***over the world*** are welcome to register for our courses. Registration for our upcoming courses can be done at https://www.DBAuniversity.com

Eligibility

Anyone can purchase our Oracle DBA course at https://dbauniversity.com/course/oracle_dba_training But If you are new to Oracle databases, we strongly recommend you to first complete our Oracle SQL Training course for $499 at https://dbauniversity.com/course/oracle_sql_training/

Oracle Certified Professional (OCA, OCP) Certification

Students can use this training to prepare for Oracle Database Administration I Exam Number: 1Z0-082 towards becoming an Oracle Database Administration Certified Professional. The same training course can be used for preparing for the Oracle Database 12c Administration 1Z0-062 examination towards Oracle OCA certification (Oracle Certified Associate).

This Oracle DBA Training also contains various topics from the Oracle Database Administration II Exam Number: 1Z0-083

This exam 1Z0-082 also contains various topics on "Oracle Database: Introduction to SQL" and these can be mastered by taking our Oracle SQL Training https://dbauniversity.com/course/oracle_sql_training/

Copyright 2010 – 2021 DBA University, Inc. Chicago USA

Pricing and Registration

Live Training

The course fee for live online training is **$699 (all-inclusive price)**. We also provide remote lab access for practical exercises. Students can connect to the lab server using either a Windows PC or an Apple MAC computer using the Remote Desktop Connection program. So, it is very easy to connect to the lab server.

We teach using a Digital White Board and it gives a traditional classroom like experience. This is a very lengthy and comprehensive database administration course.

a) Live online training using ZOOM
b) 8 weeks course in 64 hours.

Sundays (4 hours each)

8:00 am central time to 10:00 am central time
30 minutes break
10:30 am central time to 12:30 pm central time

Mondays and Tuesday (2 hours each)

7:30 pm central time to 9:30 pm central time

c) Remote Desktop Connection for lab practical exercises.
d) Training material PDF book of about 330 pages to each student.
e) The training fee is **$699 (all-inclusive price)**

We use a ***DIGITAL WHITE BOARD*** for teaching our courses. Teaching with a DIGITAL WHITE BOARD gives our students a traditional ***classroom like experience.*** The instructor writes and draws by his/her free hand on the DIGITAL WHITE BOARD and all our students can see it in real time in the online classroom. This is a much better training methodology for easier understanding of the course topics.

Please purchase online at https://dbauniversity.com/course/oracle_dba_training/

We accept online DEBIT CARD, CREDIT CARD or PayPal.

Video Recorded Training

Copyright 2010 – 2021 DBA University, Inc. Chicago USA

The video recorded training course fee is **$699 (all-inclusive price)**. We provide access to our 32 video recordings for 12 months of on demand access on a 24*7 basis and it also comes with our remote lab access for 6 months (with an option to extend the lab access duration to 1 year). Students can connect to the lab using either a Windows PC or an Apple MAC computer using the Remote Desktop Connection program. So, it is very easy to connect to the lab server.

Even though it is an on-demand course based on video recordings, it still provides you a real classroom like experience because the videos are developed using a White Board. This is a very lengthy and comprehensive database administration course.

a) 32 video recordings.

b) Access for 12 months on a 24*7 basis.

c) Each video is about 1 hour to 1.5 hours approximately.

d) Remote Desktop Connection for 6 months. (with an option to extend the access time to 1 year)

e) Training material PDF book through Dropbox.com email download.

f) The training fee is $699 (all-inclusive price)

Please purchase online at https://dbauniversity.com/course/oracle_dba_training/

We accept online DEBIT CARD, CREDIT CARD or PayPal.

Remote LAB access

- We provide a dedicated Remote Desktop Connection to each student to access our lab servers.
- Students can connect from either a Windows or MAC computer with an internet connection.
- We provide LINUX 64-bit server as the operating system for the lab practical exercises.

Course Topics

Introduction to database management systems and databases

Copyright 2010 – 2021 DBA University, Inc. Chicago USA

What is a database?

Popular database management system (DBMS) software and why Oracle DBMS.

History and Current trends of DBMS and Database Administration.

Oracle database market share and about its current competitive landscape.

Tasks of a Database Administrator.

Oracle 12c R1 database software installation

Understand prerequisites for a successful Oracle RDBMS software installation.

Installation of Oracle 12c R1 database software with the latest patchset.

Oracle 19c database software installation

Introduction to Oracle 19c release.

Oracle 19c Release Update (RU) and Release Update Revision (RUR) concepts.

Install Oracle 19c database software on Linux 64-bit server.

Installation of Oracle 19c examples software

Oracle database creation

Creating an Oracle 12c R1 database using the CREATE DATABASE SQL command.

Creating an Oracle 19c database using the Graphical Tool (Database Configuration Assistant).

Accessing an Oracle Database with Oracle supplied Tools

Using SQL Plus

Using Oracle enterprise Manager (OEM) Database Express

Using the Database Configuration Assistant (DBCA)

Copyright 2010 – 2021 DBA University, Inc. Chicago USA

Understanding Oracle Database Architecture

Understanding Oracle Database Instance Configurations.

Understanding Logical and Physical Database Structures.

Understanding Oracle Database Memory and Process Structures.

Understanding Oracle Database Server Architecture.

Managing Database Instances

Starting Up Oracle Database Instances

Using Data Dictionary Views

Using the Alert Log and Trace Files

Shutting Down Oracle Database Instances

Managing Initialization Parameter Files

Using Dynamic Performance Views

Advance Startup and Shutdown scenarios.

Managing Tablespaces and Datafiles

Oracle tablespaces and allocation types.

Viewing Tablespace Information

Creating, Altering and Dropping Tablespaces

How to create datafiles with fixed size and auto extend option.

What are control files and how to view control file content in a trace file.

Moving and Renaming Online Data Files

Temporary tablespaces and temporary tablespace groups.

Copyright 2010 – 2021 DBA University, Inc. Chicago USA

Managing Undo

Understanding Transactions and Undo Data

Storing Undo Information

Configuring Undo Retention

Comparing Undo Data and Redo Data

Understand Oracle database read consistency

Configuring Oracle Net Services (Oracle Networking)

Introduction to Oracle Net Services component.

Configuring the Oracle Net Listener (Dynamic and Static Listeners).

Administering Naming Methods in sqlnet.ora.

Dynamic Service Registration

Connecting to an Oracle Database Instance (local and remote).

Oracle netca (Network Configuration Assistant) tool for configuration file generation.

Oracle netmgr tool for adding database services to a static listener.ora configuration file.

Oracle listener administration and TNS_ADMIN environment variable.

Configuring Communication Between Database Instances (database links).

Managing Users, Roles and Privileges

Copyright 2010 – 2021 DBA University, Inc. Chicago USA

Assigning Quotas to Users

Applying the Principal of Least Privilege

Creating and Assigning Profiles

Managing Oracle Database Users, Privileges, and Roles

Standard database auditing
How to audit DBA login sessions and statements
How to enable non-DBA login session auditing.
How to disable non-DBA login session auditing
How to purge older audit trail records.

Used Managed (Manual) Backup and Recovery

Backup and Recovery Concepts (Redo log files and archive log files.)

Backup and Recovery Configuration (Configure the fast recovery area and ARCHIVELOG mode.)

Introduction and planning for a robust Backup and Recovery Strategy.

How to create a consistent database backup aka offline backup (COLD BACKUP)

Hot to create an inconsistent database backup aka online backup (HOT BACKUP).

How to clone a database from a consistent database backup.

How to clone a database using Cancel based recovery from an inconsistent database backup.

How to clone a database using Time based recovery (Database point in time recovery) from an inconsistent database backup.

RMAN Backup and Recovery

Copyright 2010 – 2021 DBA University, Inc. Chicago USA

Advantages of RMAN method compared to the user-managed method.

Create consistent database backups using RMAN.

Create inconsistent database backups (without shutting it down) using RMAN.

Oracle database RMAN backup metadata.

How to take a full database backup to a custom location.

How to backup archive logs only using RMAN.

How to create incremental backups using RMAN.

How to monitor fast recovery area usage in an Oracle database.

How to clone a database using RMAN backup-based duplication.

How to restore and recover a full database from its RMAN backup.

How to drop a database using RMAN

Oracle database backup retention policies

How to purge old backups using RMAN.

Use Data Recovery Advisor to perform recovery of the control file and redo log file.

Oracle opatch utility (Oracle Interim Patch Installer)

Learn about Oracle Interim Patch Installer (OPATCH).

What is an Oracle interim patch and how to apply it?

How to apply an Oracle 19c release update (RU) and release update revision (RUR).

Oracle 12c R1 to Oracle 19c database upgrade

Oracle 19c upgrade paths.

Upgrade an Oracle 12c R1 database to Oracle 19c release using dbua tool

Copyright 2010 – 2021 DBA University, Inc. Chicago USA

Moving Data

Oracle database logical backup and restore operations (Data Pump Export and Import).

Business use cases of logical backups compared to physical backups.

Various Data Pump Export modes.

Data Pump Import to import data from an export backup.

Advanced features in Oracle Data Pump Export.

Miscellany

The Oracle database job scheduler API (DBMS_SCHEDULER package)

How to generate a stack trace for *ORA-* errors (on-error diagnostic dump files)

Oracle Database Performance Tuning

How to handle performance issues in the real world.

V$ dynamic views for performance monitoring and analysis.

How to size the Oracle database memory structures for optimal performance.

Oracle database wait events.

How to trace database sessions using DBMS_MONITOR and DBMS_SESSION packages.

How to format SQL trace files using the tkprof utility.

Index Monitoring and internals of index maintenance by Oracle.

Statistics data collection for Oracle database optimizer.

What is Oracle automatic workload repository (AWR) and how to obtain AWR reports.

Real world life of an Oracle DBA

Copyright 2010 – 2021 DBA University, Inc. Chicago USA

Type of Oracle errors. Valid errors and internal exceptions (ORA-00600 and ORA-07445 errors).

How to work with Oracle Support **https://support.oracle.com** to create Service Requests.

Parlance and terminology used by Oracle DBAs.

Working with Oracle Forums for issues.

Productivity tools required when you join the workplace.

Scheduling JOBS and scripts through UNIX/LINUX crontab utility.

Oracle ASM (Automatic Storage Management)

For Oracle RAC, ASM and Data Guard we have a separate course. Please purchase it at https://dbauniversity.com/course/oracle_rac_asm_dg_training/ for $699.

Oracle Database High Availability (RAC, Data Guard)

For Oracle RAC, ASM and Data Guard we have a separate course. Please purchase it at https://dbauniversity.com/course/oracle_rac_asm_dg_training/ for $699.

Unique Teaching Methodology

We use a ***DIGITAL WHITE BOARD*** for teaching our online courses. Teaching with a DIGITAL WHITE BOARD gives our students a traditional classroom experience**.** The instructor writes and draws by free hand on the DIGITAL WHITE BOARD and this method of teaching is also adopted in Khan Academy (a world-famous mathematics training organization).

More Information

1. Register for Oracle DBA training at https://dbauniversity.com/course/oracle_dba_training/
2. For additional information, please email srini@dbauniversity.com

Copyright 2010 – 2021 DBA University, Inc. Chicago USA