

Oracle DBA Interview Questions & Answers

Including real time scenario based questions answers

Edition: 4th

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By

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This book is dedicated to my dad, Prafulchandra Nanubhai Trivedi, my mother, Naliniben Prafulchandra Trivedi, my wife Kashmira Giteshkumar Trivedi, and my daughter Nirali Giteshkumar Trivedi. Without their constant and noble love, guidance, sacrifices and support, I would not have achieved the goal of completing this book.

About Author

Gitesh P Trivedi

Gitesh works as Project Manager/ Technical Lead at Dbamatrix Solutions. He has more than 15 years of experience in the Information Technology industry. During his career, Gitesh has provided Database Administration services to clients around the globe including ones in India, UAE, Singapore, Malaysia, Australia, UK, USA, and Africa. Gitesh has been involved with Oracle right from Oracle7 to its latest version Oracle11g. Gitesh has also worked as a freelance DBA for several companies and as a corporate faculty in many reputed training institutes. He has extensive experience managing very large Oracle databases in banking and finance domains. Gitesh has helped several clients design and implement high availability and disaster management strategies.

Gitesh has Bachelor of Sciences degree from Gujarat University and is an Oracle certified professional for Oracle 11g, 10g, 9i, 8i, 8 and an Oracle RAC DBA for Oracle 11g,10g. He holds Brainbench certification for Oracle 10g, 9i, 8i and certification in Unix system administration. He has also provided Oracle recruitment services to various companies. Gitesh has been awarded best support provider and best team leader several times during his professional career. His team was awarded Best DBA team of the year in 2008.

Preface

These days we are using computer systems for various tasks, cars for getting around, and cellular phone devices for communication. In the same way, this publication was not published instantaneously. The voyage of this book goes many years in the past with many individuals to be thanked for.

To start with, we want to thank all the hiring managers who decline interviewees by saying they need to know Oracle DBA fundamentals regardless of quality of their experience and high score in OCP exams. Employers typically offer jobs to those who possess a solid understanding of Oracle fundamentals. Many candidates are knowledgeable about Oracle but are not able to come up with the right answer during the interview. Interviewers have a tendency to ask trick questions or technical questions pertaining to a real time scenario. Without solid experience, it is difficult for the interviewee to understand the question and come up with the right answer. In this book, I have covered real scenario based questions and their answers for your preparation.

In this book, I have tried to cover as many tough, tricky and real time scenarios based questions as possible and have answered them based on my experiences as an Oracle DBA. I hope that this book will help you prepare for an Oracle DBA interview by providing and insight into the interviewer's mind. The book is also intended to be a quick reference for Oracle DBAs. The book covers Oracle versions 11g / 10g / 9i / 8i. I hope it will boost your confidence, improve your knowledge and sharpen your skills. If you are an interviewer, this book should help you ask right questions to your potential employee.

I would appreciate any feedback from you about making this book and even more valuable resource for the Oracle DBA community.

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Wish you best of luck.

Gitesh P Trivedi

Prerequisites of this Book usage:

This book is intended to not only prepare you, but help you excel in an Oracle DBA interview. While the reader is not expected to possess detailed knowledge about Oracle internals, he is expected to have a decent understanding of Oracle architecture, advanced features and responsibilities of an Oracle DBA.

If you are an Oracle DBA, this book will not only serve as a quick reference but also help you enhance your skills.

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Backup and Recovery

- Explain the difference between a hot backup and a cold backup and the benefits associated with each.

A hot backup is basically taking a backup of the database while it is still up and running and it must be in archive log mode. A cold backup is taking a backup of the database while it is shut down and does not require being in archive log mode. The benefit of taking a hot backup is that the database is still available for use while the backup is occurring and you can recover the database to any ball in time. The benefit of taking a cold backup is that it is typically easier to administer the backup and recovery process. In addition, since you are taking cold backups the database does not require being in archive log mode and thus there will be a slight performance gain as the database is not cutting archive logs to disk.

- You have just had to restore from backup and do not have any control files. How would you go about bringing up this database?

I would create a text based backup control file, stipulating where on disk all the data files where and then issue the recover command with the using backup control file clause.

- Explain the difference between ARCHIVELOG mode and NOARCHIVELOG mode and the benefits and disadvantages to each.

ARCHIVELOG mode is a mode that you can put the database in for creating a backup of all transactions that have occurred in the database so that you can recover to any ball in time. NOARCHIVELOG mode is basically the absence of ARCHIVELOG mode and has the disadvantage of not being able to recover to any ball in time. NOARCHIVELOG mode does have the advantage of not having to write transactions to an archive log and thus increases the performance of the database slightly.

- What command would you use to create a backup control file?

Alter database backup control file to trace.

- What is the purpose of the IMPORT option IGNORE? What is its default setting?

The IMPORT IGNORE option tells import to ignore "already exists" errors. If it is not specified the tables that already exist will be skipped. If it is specified, the error is ignored and the table's data will be inserted. The default value is N.

- You are using hot backup without being in archive log mode, can you recover in the event of a failure? Why or why not?

We are unable to take hot backup in noarchive mode. You can't use hot backup without being in archive log mode. So no, you couldn't recover.

- How many redo logs should you have and how should they be configured for maximum recoverability?

You should have at least three groups of two redo logs with the two logs each on a separate disk spindle (mirrored by Oracle). The redo logs should not be on raw devices on UNIX if it can be avoided.

- Users aren't being allowed on the system. The following message is received: ORA-00257 archiver is stuck. Connect internal only, until freed : What is the problem?

The archive destination is probably full, take backup of archive logs and remove them . archiver process will re-start.

- You get a call from you backup DBA while you are on vacation. He has corrupted all of the control files while playing with the ALTER DATABASE BACKUP CONTROLFILE command. What do you do?

```
CONNECT sys as sysdba
STARTUP MOUNT
```

(Take any read-only tablespaces offline before next step ALTER DATABASE DATAFILE OFFLINE;)

RECOVER DATABASE USING BACKUP CONTROLFILE

ALTER DATABASE OPEN RESETLOGS;

(bring read-only tablespaces back online)

Shutdown and backup the system, then restart

If they have a recent output file from the ALTER DATABASE BACKUP CONTROL FILE TO TRACE; command, they can use that to recover as well.

If no backup of the control file is available then the following will be required:

CONNECT INTERNAL

STARTUP NOMOUNT

CREATE CONTROL FILE

However, they will need to know all of the datafiles, logfiles, and settings for MAXLOGFILES, MAXLOGMEMBERS, MAXLOGHISTORY, MAXDATAFILES for the database to use the command.

- What are the steps involved in Database Startup?

Start an instance, Mount the Database and Open the Database.

- What are the steps involved in Instance Recovery?

Rolling forward to recover data that has not been recorded in data files yet has been recorded in the on-line redo log, including the contents of rollback segments. Rolling back transactions that have been explicitly rolled back or have not been committed as indicated by the rollback segments regenerated in step a. Releasing any resources (locks) held by transactions in process at the time of the failure. Resolving any pending distributed transactions undergoing a two-phase commit at the time of the instance failure.

- Can Full Backup be performed when the database is open?

No.

- What are the steps involved in Database Shutdown?

Close the Database, Dismount the Database and Shutdown the Instance.

- What is Archived Redo Log?

Archived Redo Log consists of Redo Log files that have archived before being reused.

- What is Restricted Mode of Instance Startup?

An instance can be started in (or later altered to be in) restricted mode so that when the database is open connections are limited only to those whose user accounts have been granted the RESTRICTED SESSION system privilege

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About Author:

GitopA Trivedi has **15+** years international experience and Oracle certified in various Oracle versions. He was working as freelancer Oracle consultant in many countries and attached as corporate trainer in various training institutes.