

MAA Seminar Questions and Answers

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Questions

1. Which is the minimal retention time that can be used when using Flashback Database?
2. Is it possible to open a 10g Physical Standby read-write, perform application testing on it, and reinstantiate it as Physical Standby using flashback technologies?
3. Which is the correct High Availability configuration for tnsnames.ora when using Data Guard?
4. How I can avoid redo shipping when the standby database is not available?
5. Which are 10g Data Guard Data Type restrictions?
6. Is it possible to use tape compression in top of Rman compression?
7. Is it possible to use Rman Convert command on a small endian ASM diskgroup mounted on a big endian server?
8. Is it possible to integrate Oracle and My Sql?
9. Is it possible to use Storage backups with ASM?

Answers

1. Which is the minimal retention time that can be used when using Flashback Database?

This question was made in the context of being able to implement Data Guard Physical Standby Fast Start Failover (fsfo) option.

In this context we need to be able to flashback the Physical Standby to a moment before the primary crashed.

The default threshold to initiate failover is 30 seconds, usually manually set to 5 seconds.

A small window of flashback logs should be enough to cover this time, still consider that the target retention time is not enforced, unless using a guaranteed restore point, Oracle does not write changed blocks in a continuous stream to the flashback logs, but from time to time.

Because of this I think that a minimal set for DB_FLASHBACK_RETENTION_TARGET should be ~30 minutes.

Still you can set this parameter to smaller values, like 10 or 15 and perform FSFO tests with them.

DB_FLASHBACK_RETENTION_TARGET specifies the upper limit (in minutes) on how far back in time the database may be flashed back.

DB_FLASHBACK_RETENTION_TARGET can be set from 1 minute to $2^{32} - 1$.

The minimal retention time should be set to a period that is relevant for the purpose of the flashback database feature, a too short retention target can be irrelevant, while a too long time will require a lot of space for storing flashback logs.

2. Is it possible to open a 10g Physical Standby read-write, perform application testing on it, and reinstantiate it as Physical Standby using flashback technologies?

Yes, you need to use version 10g R2. A step-by-step description of the test performed during the seminar can be found on this article: [Using a Physical Standby For Read/Write Testing and Reporting](#)

3. Which is the correct High Availability configuration for tnsnames.ora when using Data Guard?

There are different approaches to provide application high availability on a Data Guard Configuration. The best I think it is to use the DB_ROLE_CHANGE system event to trigger a service reconfiguration that is managed with DBMS_SERVICE.MODIFY_SERVICE procedure.

This way the services used by the clients will point always to the database that is holding the primary role.

You can find a description of how to implement this technique in the paper '[Client Failover Best Practices for Highly Available Oracle Databases](#)'

In addition a detailed description of parameter and network configuration files on a data guard environment is provided on the "[Oracle Database High Availability Best Practices](#)"

4. How I can avoid redo shipping when the standby database is not available?

First we need to check on the primary database the actual values for the standby archive log destination

```
SQL> show parameters log_archive_dest_state_2
```

```
NAME TYPE VALUE
```

```
-----  
log_archive_dest_state_2 string ENABLE
```

```
SQL> show parameters log_archive_dest_2
```

```
NAME TYPE VALUE
```

```
-----  
log_archive_dest_2 string SERVICE=dgfdb LGWR ASYNC
```

```
VALID_FOR=(ONLINE_LOGFILES,PRIMARY_ROLE)
```

```
DB_UNIQUE_NAME=dgfdb
```

Once we are sure which is the destination to defer we can execute on the primary database the defer command

```
SQL> ALTER SYSTEM SET LOG_ARCHIVE_DEST_STATE_2=DEFER;
```

```
System altered.
```

```
SQL> show parameters log_archive_dest_state_2
```

```
NAME TYPE VALUE
```

```
-----  
log_archive_dest_state_2 string DEFER
```

5. Which are 10g Data Guard Data Type restrictions?

Data Type and other restrictions do exist for Logical Standby Databases.

Logical standby databases do not support the following data types:

- BFILE
- Collections (including VARRAYS and nested tables)

- Encrypted columns
- Multimedia data types (including Spatial, Image, and Context)
- ROWID, UROWID
- User-defined types
- XMLType

Unsupported Storage Type

Logical standby databases do not support the segment compression storage type.

Unsupported PL/SQL Supplied Packages

Packages that modify system metadata are not supported by SQL Apply:

DBMS_JAVA, DBMS_REGISTRY, DBMS_ALERT, DBMS_SPACE_ADMIN, DBMS_REFRESH, DBMS_REDEFINITION, DBMS_SCHEDULER, and DBMS_AQ.

- Partial support for DBMS_JOB has been provided.
- Job execution is suspended on a logical standby
- Jobs submitted on the primary database are replicated in the standby database.
- In the event of a switchover or failover, jobs scheduled on the original primary database will automatically begin running on the new primary database.

For a complete list of restrictions that exist for the logical standby please check “[Data Type and DDL Support on a Logical Standby Database](#)” on the Data Guard Concepts and Administration Manual.

6. Is it possible to use tape compression in top of Rman compression?

Oracle does not recommend to use both Rman + Tape.

You should check the compression rate provided by the media manager, and if this satisfy your needs use it.

In the case that you need to decrease network traffic Rman compression may be preferable. Rman usually give high rates of compression.

For more details check "[Factors Affecting Backup Speed to Tape](#)" on the 10g R2, Database Backup and Recovery Advanced User's Guide.

You can find information about Rman Compression at "[Using Compressed Backupsets for RMAN Backup](#)" on the 10g R2 Database Backup and Recovery Basics Guide.

7. Is it possible to use Rman Convert command on a small endian ASM diskgroup mounted on a big endian server?

ASM is not cross platform enabled; it is not possible to mount ASM disks from one platform into another.

There are several options to achieve a cross-platform migration from little endian to big endian; you can find a step-by-step example on this article "[Using Cross Platform Transportable Tablespaces into ASM](#)"

8. Is it possible to integrate Oracle and My Sql?

Yes, Oracle provides integration to several data sources, including MySql through Heterogeneous Services ODBC (hsodbc)

For a step-by-step description of configuring connectivity between Oracle RDBMS and MySql please review on [Metalink](#) Note 260981.1 **“How to Setup Generic Connectivity - HSODBC - to MySQL”**

9. Is it possible to use Storage backups with ASM?

Yes, there is an excellent joint publication between Oracle and EMC describing the best practices for configuring ASM on EMC that includes a chapter about storage backups and ASM.

[“Using Oracle Database 10g’s Automatic Storage Management with EMC Storage Technology”](#)

You can also find step-by-step process description and scripts on these 2 blog entries:

[“Backup and Recovery of a RAC 10gR2 Database Based On ASM Storage Using EMC SRDF”](#)

[“Backup Script for RAC with ASM using EMC's SRDF”](#)

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