

## Oracle Database Configurations on Primary and Standby Databases

These Oracle Database configurations are recommended on every primary and standby database in the Oracle Data Guard environment.

- Configure a fast recovery area for each database (the recovery area is local to a database).

The fast recovery area is a single storage location on a file system or Oracle Automatic Storage Management (Oracle ASM) disk group where all files needed for recovery reside. These files include the control file, archived logs, online redo logs, flashback logs, and RMAN backups. As new backups and archived logs are created in the fast recovery area, older files (which are either outside of the retention period, or have been backed up to tertiary storage) are automatically deleted to make room for them. In addition, notifications can be set up to alert the DBA when space consumption in the fast recovery area is nearing its predefined limit. The DBA can then take action, such as increasing the recovery area space limit, adding disk hardware, or decreasing the retention period.

```
DB_RECOVERY_FILE_DEST = <file system location or Oracle ASM Disk
Group>
DB_RECOVERY_FILE_DEST_SIZE = <disk space quota>
```

- Use a server parameter file (SPFILE) so that it can be backed up to save instance parameters in backups.
- Enable Flashback Database on primary and standby databases.

When Flashback Database is enabled, Oracle Database maintains flashback logs in the fast recovery area. These logs can be used to roll the database back to an earlier point in time, without requiring a complete restore.

### RMAN Configurations at the Primary Database

1. Connect RMAN to the primary database and recovery catalog.
2. Configure the retention policy for the database as *n* days
 

```
CONFIGURE RETENTION POLICY TO RECOVERY WINDOW OF <n> DAYS;
```
3. Use the `DELETE OBSOLETE` command to delete any backups that are not required (per the retention policy in place) to perform recovery within the specified number of days.
4. Specify when archived logs can be deleted with the `CONFIGURE ARCHIVELOG DELETION POLICY` command. For example, to delete logs after ensuring that they shipped to all destinations, use the following configuration:

```
CONFIGURE ARCHIVELOG DELETION POLICY TO SHIPPED TO ALL STANDBY;
```

To delete logs after ensuring that they were applied on all standby destinations, use the following configuration:

```
CONFIGURE ARCHIVELOG DELETION POLICY TO APPLIED ON ALL STANDBY;
```

## RMAN Configurations at a Standby Database Where Backups are Performed

These RMAN configurations are recommended at a standby database where backups are done.

1. Connect RMAN to the standby database (where backups are performed) as target, and to the recovery catalog.
2. Enable automatic backup of the control file and the server parameter file

```
CONFIGURE CONTROLFILE AUTOBACKUP ON;
```

3. Skip backing up data files for which there already exists a valid backup with the same checkpoint:

```
CONFIGURE BACKUP OPTIMIZATION ON;
```

4. Configure the tape channels to create backups as required by media management software:

```
CONFIGURE CHANNEL DEVICE TYPE SBT PARMS '<channel parameters>';
```

5. Because the archived logs are backed up at the standby database, Oracle recommends that you configure the **BACKED UP** option for the log deletion policy:

```
CONFIGURE ARCHIVELOG DELETION POLICY BACKED UP n TIMES TO DEVICE TYPE SBT;
```

## Recovery Scenarios in an Oracle Data Guard Environment

### Rolling Forward a Standby With One Command

As of Oracle Database 18c, you can refresh a standby database over the network using one RMAN command, `RECOVER STANDBY DATABASE`.

The `RECOVER STANDBY DATABASE` command restarts the standby instance, refreshes the control file from the primary database, and automatically renames data files, temp files, and online logs. It restores new data files that were added to the primary database and recovers the standby database up to the current time.

When you use the `RECOVER STANDBY DATABASE` command to refresh a standby database, you specify either a `FROM SERVICE` clause or a `NOREDO` clause. The `FROM SERVICE` clause specifies the name of a primary service. The `NOREDO` clause specifies that backups should

be used for the refresh, which allows a standby to be rolled forward to a specific time or SCN.

The MRP must be manually stopped on the standby before any attempt is made to sync with primary database.

The following is an example of using the RECOVER STANDBY DATABASE command. It shows optional usage of the PFILE clause to specify a parameter file for the standby database (used when the spfile is not available).

```
RECOVER STANDBY DATABASE FROM SERVICE service_name PFILE=pfile_location;
```