

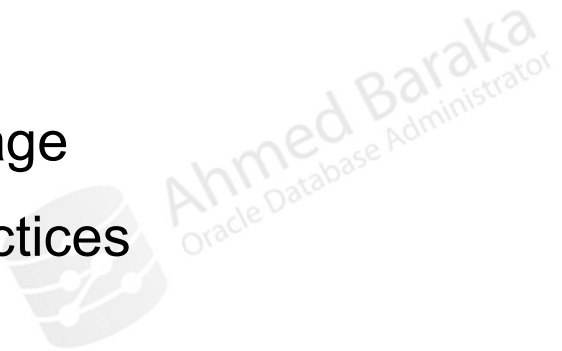
Managing the Fast Recovery Area

By Ahmed Baraka

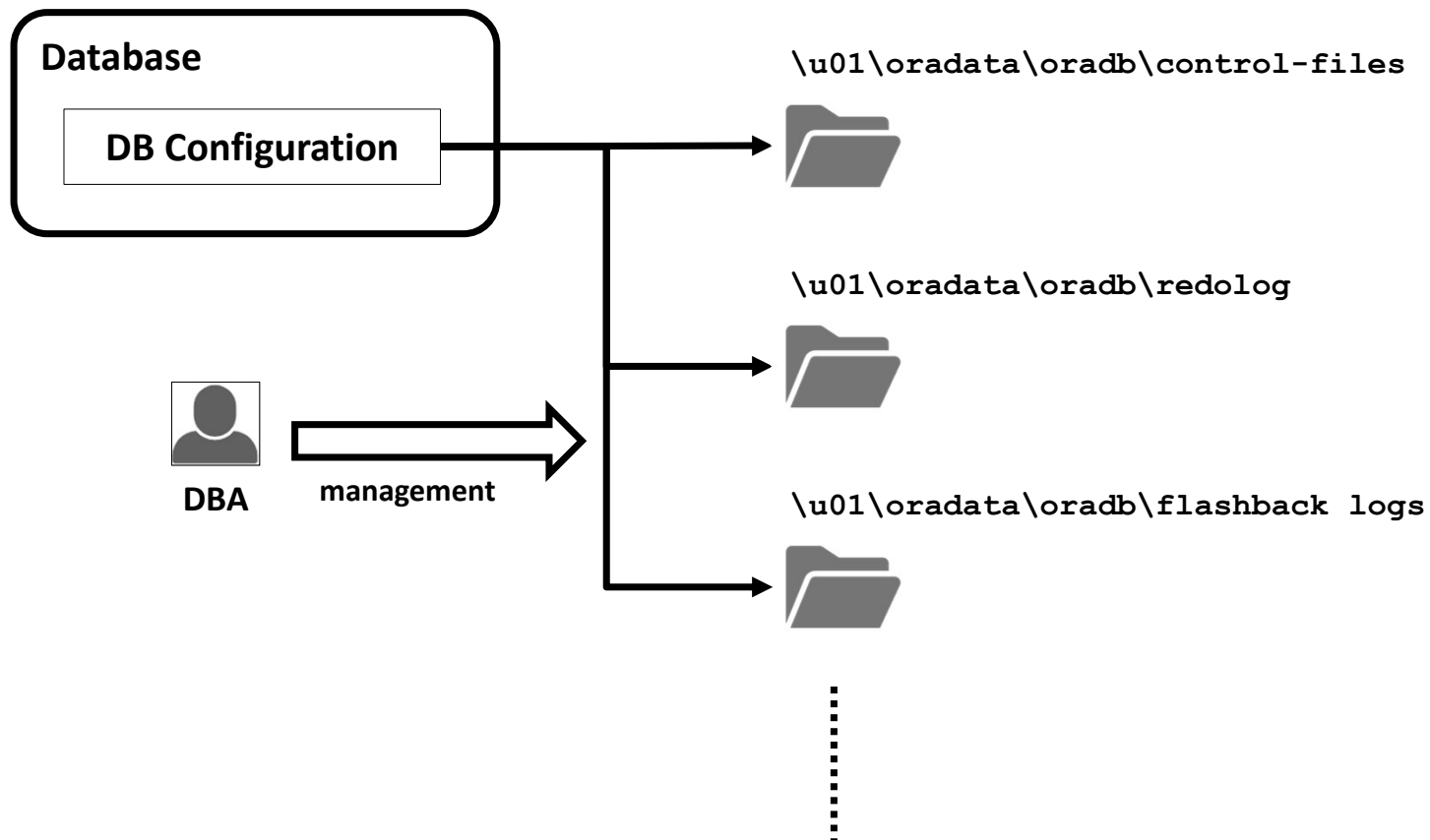
Objectives

In this lecture, you should learn how to perform the following:

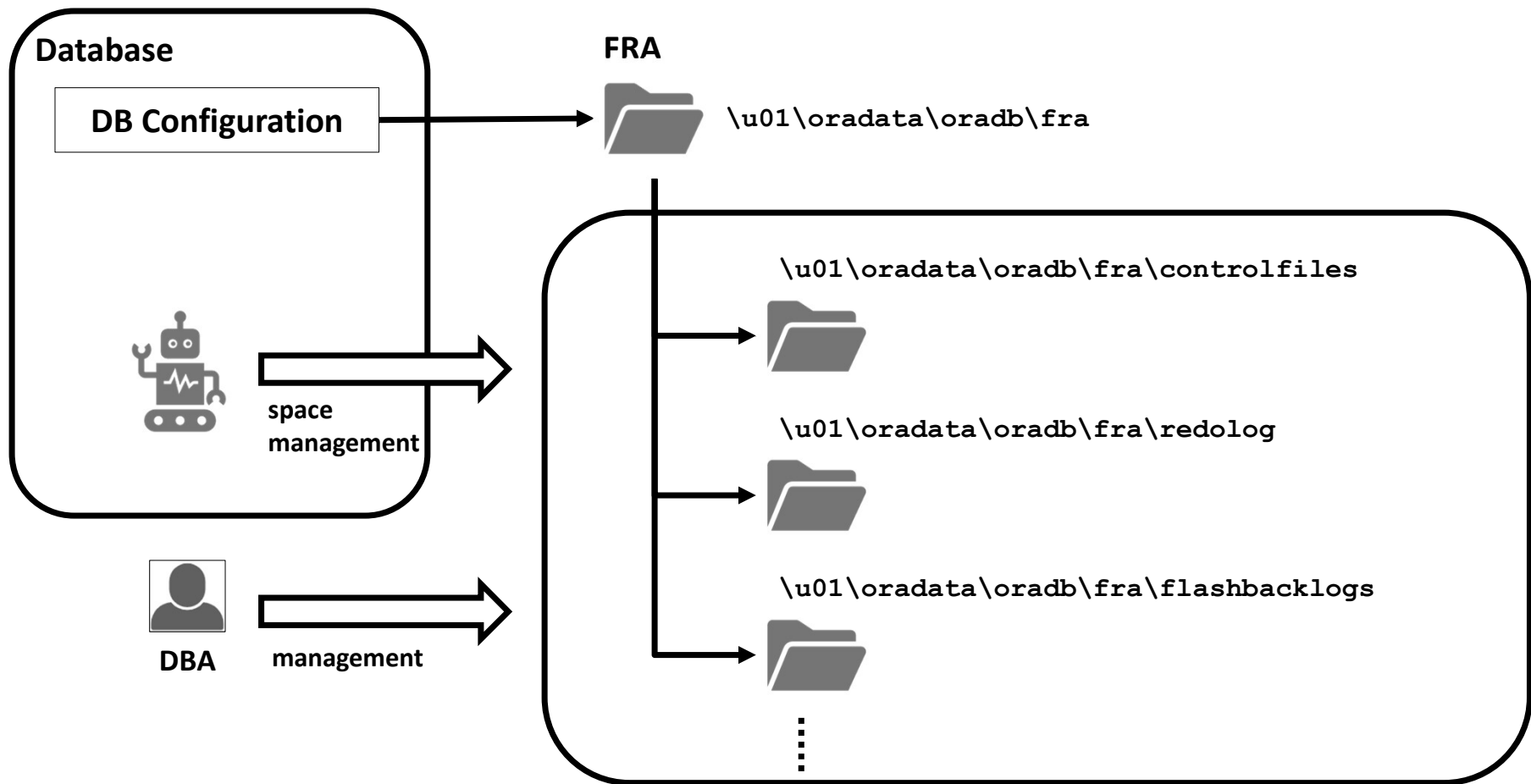
- Describe the Fast Recovery Area (FRA) and its benefits
- Enable FRA
- Monitor FRA space usage
- Describe FRA best practices



Saving Recovery Files without FRA



Saving Recovery Files with FRA



About Fast Recovery Area

- “a disk area (directory or an ASM Diskgroup) where the database can create and manage a variety of files related to backup and recovery.”
- It may contain the following files (the list is not complete):

File Types	Permanent or Transient (*)
Control Files	Permanent
Online Redo Log files	Permanent
Archived redo log files	Transient
flashback logs	Transient
RMAN backups	Transient

(*) **Permanent**: active files used by running database instance. **Transient**: other file type not required by the database operation but required for recoverability.

Fast Recovery Area Benefits

- Easy recovery files management
 - Can be used with OMF
- The database automatically apply the retention policy
- The database automatically monitors the total size of the files created in the FRA. When the fast recovery area is full, Oracle Database automatically deletes eligible files to reclaim space in FRA as needed.
 - FRA total disk space is configured by the DBA, not as per the actual disk space in the file system

Enabling the Fast Recovery Area

- To enable FRA, set the following parameters (shutdown not needed):

Initialization Parameter	Description
DB_RECOVERY_FILE_DEST_SIZE	Maximum storage in bytes of data to be used by the recovery area. If set to '', FRA is disabled.
DB_RECOVERY_FILE_DEST	Specifies the recovery area location, which can be a file system directory or ASM disk group

- Example:

```
ALTER SYSTEM SET
DB_RECOVERY_FILE_DEST_SIZE = 10G SCOPE=BOTH;

ALTER SYSTEM SET
DB_RECOVERY_FILE_DEST = '/u01/oradata/oradb/fast_recovery_area'
SCOPE = BOTH;
```

Enabling the Fast Recovery Area in dbca

Database Configuration Assistant - Create 'orcl' database - Step 6 of 14

Select Fast Recovery Option

19c ORACLE Database

Choose the recovery options for the database.

☒ Specify Fast Recovery Area

Recovery files storage type: File System

Fast Recovery Area: {ORACLE_BASE}/fast_recovery_area/{DB_UNIQUE_} Browse...

Fast Recovery Area size: 17271 MB

☐ Enable archiving Edit archive mode parameters...

Database Operation

Creation Mode

Deployment Type

Database Identification

Storage Option

Fast Recovery Option

Database Options

Configuration Options

Management Options

Monitoring Fast Recovery Area Space Usage

- To retrieve disk quota and space in use:

```
SELECT NAME, SPACE_LIMIT, SPACE_USED, SPACE_RECLAIMABLE,  
NUMBER_OF_FILES  
FROM V$RECOVERY_FILE_DEST;
```

- To retrieve the percentage of the total disk quota used by different file types:

```
SELECT FILE_TYPE, PERCENT_SPACE_USED, PERCENT_SPACE_RECLAIMABLE,  
NUMBER_OF_FILES, CON_ID  
FROM V$RECOVERY_AREA_USAGE;
```

Managing FRA Best Practices

- It is highly recommended to configure FRA but not necessarily to include all the possible files in it.
 - You may have an environment where backup files are saved separately
 - Online redo logs are better saved in high-specs storage
- If ASM is configured, set FRA in a disk group
- Back up the archive log files regularly and delete the files upon completion of the backup. Optionally, configure an archive redo log deletion policy.
- Remove backups and file copies that are not required
- Monitor FRA usage growth size for future planning

Summary

In this lecture, you should have learnt how to perform the following:

- Describe the Fast Recovery Area (FRA) and its benefits
- Enable FRA
- Monitor FRA space usage
- Describe FRA best practices

