13/10/25

Task9: Backing up and recovery in databases

Aim:

To perform and understand various RMAN backup and recovery scenarios in oracle database

Scenario 1: Recovering a NOARCHIVELOG Database with Incremental Backups.

Backup DATABASE Hospital TO DISK = 'C:\Backup\hospital-full.bak' WITH NOFORMAT, NOINIT, NAME = "Full Hospital Database Backup; SKIP, REWIND, NOUNLOAD, STATS = 10;

Output:

Processed 10240 pages for database 'Hospital', file 'Hospital-Data' on file 1.

Processed 52 pages for database Hospital, file 'Hospital-log' on file 1.

Step 2: Create Incremented Backup

Backup DATABASE Hospital to disk = 'C:\Backup\hospital-incremental.bak' WITH DIFFERENTIAL, NOFORMAT, NOINIT, NAME = 'Incremental hospital Database Backup', SKIP, REWIND, NOUNLOAD, STATS = 10;

output:

Differential backup completed successfully.
Backup file : C:\Backup\hospital-Incremental.bak created.

Step 3: Simulate Data loss

DELETE from Patients where Patient_ID = 105;

output

1 row affected

Step 4: Restore Database

RESTORE DATABASE Hospital FROM DISK = 'C:\Backup\hospital-full.bak' WITH REPLACE;

output

Database restored from 'hospital-full.bak'.
RESTORE DATABASE successfully processed.

Step 5: APPly Incremental Backup

RESTORE DATABASE Hospital from DISK = 'C:\Backup\hospital-Incremental.bak' WITH REPLACE;

Output:

Database restored from differential backup 'hospital-Incremental.bak'.

Step 6 : Recover Database

RECOVER DATABASE Hospital;

Output

Database recovery complete.
No errors detected.

Step 7 open database

ALTER DATABASE HOSPITAL SET ONLINE;

output:

command completed successfully.
Database 'Hospital is now online.

Scenario 2: Restoring the server parameter File

Step 1: Backup SPFILE

BACKUP SERVER PARAMETER FILE TO FILE = 'C:\Backup\Spfile-hospital

output:

Server parameter file backed up successfully.

Step 2: simulate SPFILE LOSS

Manually delete or rename the file

Output:

SPFILE not found error.

Step3: Restore SPFILE

STARTUP MOUNT;

RESTORE SERVER PARAMETER FILE FROM FILE = 'C:\Backup\SP file_hospital.bak';

SHUTDOWN;

STARTUP;

Output

Database mounted.

Server parameter file restored from 'C:\Backup\SP file_hospital.bak'.

Instance shutdown and restarted successfully.

Scenario 3: Performing Recovery.

Step1: Backup control File

Backup controlFILE TO FILE = 'C:\Backup\hospital-controlfile.bak';

output

control file backed up successfully to 'C:\Backup\hospital-controlfile.bk

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Step 2: Simulate Control File loss

- Delete or modify control file -

output:

control file missing error

Step 3: Restore Control File

```
STARTMOUNT;
RESTORE CONTROLFILE FROM FILE=
'C:\Backup\hospital-controlfile.bak';
ALTER CONTROL REUSE;
```

OUTPUT

Instance mounted

control file restored successfully from 'hospital-controlfile.bak'.

ALTER CONTROL FILE REUSE COMPLETED Successfully.

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Recover Database

Recover DATABASE USING BACKUP CONTROLFILE;

Output:

Media recovery complete
Database synchronized using backup control file.

Step 5: open Database

ALTER DATABASE OPEN RESTLOGS;

OUTPUT:

Database opened with RESTLOGS option.
All recovery operations completed successfully.

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EX NO.	9
PERFORMANCE (5)	5
RESULT AND ANALYSIS (5)	5
VIVA VOCE (5)	5
RECORD (5)	5
TOTAL (20)	15
SIGN WITH DATE	6/10/24

Result:
Thus the hospital database was successfully backed up and recovered using incremental, SPFILE and control file