

## Lab 6

### 1) Backup using rman.

Steps involved while using rman for back:

**Step 1:** Goto bin folder of setup file and open cmd from that location.

**Step 2:** Give command as below as show in screenshot

...\bin>rman target/

```
E:\DBA\WINDOWS.X64_193000_db_home\bin>rman target/

Recovery Manager: Release 19.0.0.0.0 - Production on Fri Dec 17 07:33:40 2021
Version 19.3.0.0.0

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connected to target database: MERODB (DBID=2207720884)
```

RMAN> backup database;

```
RMAN> backup database
2> ;

Starting backup at 17-DEC-21
using target database control file instead of recovery catalog
allocated channel: ORA_DISK_1
channel ORA_DISK_1: SID=267 device type=DISK
RMAN-00571: =====
RMAN-00569: ===== ERROR MESSAGE STACK FOLLOWS =====
RMAN-00571: =====
RMAN-03002: failure of backup command at 12/17/2021 07:34:21
RMAN-06149: cannot BACKUP DATABASE in NOARCHIVELOG mode
```

If database is in NOARCHIVELOG mode than we need to shutdown it immediately using following command

RMAN> shutdown immediate;

```
RMAN> shutdown immediate;

database closed
database dismounted
Oracle instance shut down
```

RMAN> startup mount;

```
RMAN> startup mount;

connected to target database (not started)
Oracle instance started
database mounted

Total System Global Area      1677719744 bytes

Fixed Size                     9267392 bytes
Variable Size                  956301312 bytes
Database Buffers               704643072 bytes
Redo Buffers                    7507968 bytes
```

RMAN> backup database;

NOTE: we can also give some tag to backup data using command as backup database tag 'you\_special\_name\_here';

```
RMAN> backup database;

Starting backup at 17-DEC-21
allocated channel: ORA_DISK_1
channel ORA_DISK_1: SID=179 device type=DISK
channel ORA_DISK_1: starting full database backup set
channel ORA_DISK_1: specifying datafile(s) in backup set
input datafile file number=00001 name=C:\ORADATA\HEROOD\DATAFILE\01_HF_SYSTEM_VPDRWB3_.DBF
input datafile file number=00003 name=C:\ORADATA\HEROOD\DATAFILE\01_HF_SYSAUX_VPD5R8Z_.DBF
input datafile file number=00004 name=C:\ORADATA\HEROOD\DATAFILE\01_HF_UNDOTBS1_VPD7SRF_.DBF
input datafile file number=00007 name=C:\ORADATA\HEROOD\DATAFILE\01_HF_USERS_VPD7V53_.DBF
channel ORA_DISK_1: starting piece 1 at 17-DEC-21
channel ORA_DISK_1: finished piece 1 at 17-DEC-21
piece handle=C:\ORAF\FAST_RECOVERY_AREA\HEROOD\BACKUPSET\2021_12_17\01_HF_NNDF_TAG20211217T073752_VQVCPWF_ .BKP tag=TAG20211217T073752 comment=NONE
channel ORA_DISK_1: backup set complete, elapsed time: 00:00:15
channel ORA_DISK_1: starting full database backup set
channel ORA_DISK_1: specifying datafile(s) in backup set
input datafile file number=00009 name=C:\ORADATA\HEROOD\3818548F22064CD098A38282967361DF\DATAFILE\01_HF_SYSAUX_VPGF6P8_.DBF
input datafile file number=00011 name=C:\ORADATA\HEROOD\3818548F22064CD098A38282967361DF\DATAFILE\01_HF_SYSTEM_VPGF6P9_.DBF
input datafile file number=00012 name=C:\ORADATA\HEROOD\3818548F22064CD098A38282967361DF\DATAFILE\01_HF_UNDOTBS1_VPGF6PD_.DBF
input datafile file number=00013 name=C:\ORADATA\HEROOD\3818548F22064CD098A38282967361DF\DATAFILE\01_HF_USERS_VPGG4HC_.DBF
channel ORA_DISK_1: starting piece 1 at 17-DEC-21
channel ORA_DISK_1: finished piece 1 at 17-DEC-21
piece handle=C:\ORAF\FAST_RECOVERY_AREA\HEROOD\3818548F22064CD098A38282967361DF\BACKUPSET\2021_12_17\01_HF_NNDF_TAG20211217T073752_VQVQ6WR_ .BKP tag=TAG20211217T073752
comment=NONE
channel ORA_DISK_1: backup set complete, elapsed time: 00:00:15
channel ORA_DISK_1: starting full database backup set
channel ORA_DISK_1: specifying datafile(s) in backup set
input datafile file number=00005 name=C:\ORADATA\HEROOD\DATAFILE\01_HF_SYSAUX_VPD5R8Z_.DBF
input datafile file number=00005 name=C:\ORADATA\HEROOD\DATAFILE\01_HF_SYSTEM_VPD5R8Z_.DBF
input datafile file number=00005 name=C:\ORADATA\HEROOD\DATAFILE\01_HF_UNDOTBS1_VPD7SRF_.DBF
input datafile file number=00005 name=C:\ORADATA\HEROOD\DATAFILE\01_HF_USERS_VPD7V53_.DBF
channel ORA_DISK_1: starting piece 1 at 17-DEC-21
channel ORA_DISK_1: finished piece 1 at 17-DEC-21
piece handle=C:\ORAF\FAST_RECOVERY_AREA\HEROOD\51950038BED4F0193F02A60ABD22869\BACKUPSET\2021_12_17\01_HF_NNDF_TAG20211217T073752_VQVQOYF_ .BKP tag=TAG20211217T073752
comment=NONE
channel ORA_DISK_1: backup set complete, elapsed time: 00:00:15
Finished backup at 17-DEC-21

Starting Control File and SPFILE Autobackup at 17-DEC-21
piece handle=C:\ORAF\FAST_RECOVERY_AREA\HEROOD\AUTOBACKUP\2021_12_17\01_HF_5_10P1518519_VQVF6B3_ .BKP comment=NONE
Finished Control File and SPFILE Autobackup at 17-DEC-21
```

RMAN> list backup;

```
RMAN> list backup;

List of Backup Sets
=====

BS Key Type LV Size Device Type Elapsed Time Completion Time
-----
1 Full 1.11G DISK 00:00:14 17-DEC-21
BP Key: 1 Status: AVAILABLE Compressed: NO Tag: TAG20211217T073752
Piece Name: C:\ORAF\FAST_RECOVERY_AREA\HEROOD\BACKUPSET\2021_12_17\01_HF_NNDF_TAG20211217T073752_VQVCPWF_ .BKP
List of Datafiles in backup set 1
File LV Type Ckp SCN Ckp Time Abs Fuz SCN Sparse Name
-----
1 Full 2003991 17-DEC-21 NO C:\ORADATA\HEROOD\DATAFILE\01_HF_SYSTEM_VPDRWB3_.DBF
3 Full 2003991 17-DEC-21 NO C:\ORADATA\HEROOD\DATAFILE\01_HF_SYSAUX_VPD5R8Z_.DBF
4 Full 2003991 17-DEC-21 NO C:\ORADATA\HEROOD\DATAFILE\01_HF_UNDOTBS1_VPD7SRF_.DBF
7 Full 2003991 17-DEC-21 NO C:\ORADATA\HEROOD\DATAFILE\01_HF_USERS_VPD7V53_.DBF

BS Key Type LV Size Device Type Elapsed Time Completion Time
-----
2 Full 441.60M DISK 00:00:00 17-DEC-21
BP Key: 2 Status: AVAILABLE Compressed: NO Tag: TAG20211217T073752
Piece Name: C:\ORAF\FAST_RECOVERY_AREA\HEROOD\3818548F22064CD098A38282967361DF\BACKUPSET\2021_12_17\01_HF_NNDF_TAG20211217T073752_VQVQ6WR_ .BKP
List of Datafiles in backup set 2
Container ID: 3, POB Name: PLUGDB
File LV Type Ckp SCN Ckp Time Abs Fuz SCN Sparse Name
-----
9 Full 2007393 16-DEC-21 NO C:\ORADATA\HEROOD\3818548F22064CD098A38282967361DF\DATAFILE\01_HF_SYSTEM_VPGF6P9_.DBF
10 Full 2007393 16-DEC-21 NO C:\ORADATA\HEROOD\3818548F22064CD098A38282967361DF\DATAFILE\01_HF_SYSAUX_VPGF6P8_.DBF
11 Full 2007393 16-DEC-21 NO C:\ORADATA\HEROOD\3818548F22064CD098A38282967361DF\DATAFILE\01_HF_UNDOTBS1_VPGF6PD_.DBF
12 Full 2007393 16-DEC-21 NO C:\ORADATA\HEROOD\3818548F22064CD098A38282967361DF\DATAFILE\01_HF_USERS_VPGG4HC_.DBF
```

```
BS Key Type LV Size Device Type Elapsed Time Completion Time
-----
3 Full 468.91M DISK 00:00:00 17-DEC-21
BP Key: 3 Status: AVAILABLE Compressed: NO Tag: TAG20211217T073752
Piece Name: C:\ORAF\FAST_RECOVERY_AREA\HEROOD\51950038BED4F0193F02A60ABD22869\BACKUPSET\2021_12_17\01_HF_NNDF_TAG20211217T073752_VQVQOYF_ .BKP
List of Datafiles in backup set 3
Container ID: 2, POB Name: PDB$SEED
File LV Type Ckp SCN Ckp Time Abs Fuz SCN Sparse Name
-----
5 Full 1971512 16-DEC-21 NO C:\ORADATA\HEROOD\DATAFILE\01_HF_SYSTEM_VPD5R8Z_.DBF
6 Full 1971512 16-DEC-21 NO C:\ORADATA\HEROOD\DATAFILE\01_HF_SYSAUX_VPD5R8Z_.DBF
8 Full 1971512 16-DEC-21 NO C:\ORADATA\HEROOD\DATAFILE\01_HF_UNDOTBS1_VPD5R8Z_.DBF

BS Key Type LV Size Device Type Elapsed Time Completion Time
-----
4 Full 17.95M DISK 00:00:01 17-DEC-21
BP Key: 4 Status: AVAILABLE Compressed: NO Tag: TAG20211217T073841
Piece Name: C:\ORAF\FAST_RECOVERY_AREA\HEROOD\AUTOBACKUP\2021_12_17\01_HF_5_10P1518519_VQVF6B3_ .BKP
SPFILE Included: Modification time: 17-DEC-21
SPFILE db unique name: HEROOD
Control File Included: ckp SCN: 2003991 Ckp time: 17-DEC-21
```

RMAN> alter database open;

```
RMAN> alter database open;

Statement processed
```

## 2) To be familiarize with stored procedure.

### Query:

```
CREATE OR REPLACE PROCEDURE greetings
AS
BEGIN
    DBMS_OUTPUT.PUT_LINE('Hello world');
END;
/
```

### Output:

```
Procedure GREETINGS compiled
```

Query to execute above procedure:

```
execute greetings;
```

### Output:

```
Connecting to the database ORCL2.
Hello World
Process exited.
Disconnecting from the database ORCL2.
```

**NOTE:** we can also write exec in place of execute

### Next example:

```
CREATE OR REPLACE PROCEDURE selecctedcustomers
IS
BEGIN
    UPDATE customers
    SET first_name='Ram'
    WEHRE customer_id=6;
END;
/
```

**Output:**

```
Procedure SELECTEDCUSTOMERS compiled
```

Query to execute above procedure:

```
exec selectedcustomers;
```

**Conclusion and discussion:**

Hence, we are able to backup database using rman and also become familiarize with stored procedure.