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Complete Restoration using RMAN

Scenario – Take a complete backup using RMAN, now let's delete the entire database and recover from RMAN

rman > backup database plus archivelog

Create table rec (t number t1 date)

Insert into rec values(1, sysdate)

Commit;

Remove the datafiles, controlfile, redo files

RMAN files –

```
-rw-r----- 1 obi dba 1054932992 Jan 23 10:39 df_t741177483_s9_p1
-rw-r----- 1 obi dba 9830400 Jan 23 10:39 df_t741177558_s10_p1
-rw-r----- 1 obi dba 168960 Jan 23 10:39 al_t741177571_s11_p1
-rw-r----- 1 obi dba 9797632 Jan 23 10:39 control0cm2qu7e_1_1
-rw-r--r-- 1 obi dba 6204 Jan 23 10:39 obi_backup.log
```

Recover the entire database

```
SQL> startup nomount
ORACLE instance started.

Total System Global Area 1590267904 bytes
Fixed Size 1300184 bytes
Variable Size 939526440 bytes
Database Buffers 637534208 bytes
Redo Buffers 11907072 bytes
SQL>
```

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```
RMAN> restore controlfile from '/d02/oracle/backup/obi/control0cm2qu7e_1_1';

Starting restore at 23-JAN-11
using channel ORA_DISK_1

channel ORA_DISK_1: restoring control file
channel ORA_DISK_1: restore complete, elapsed time: 00:00:01
output file name=/d02/oracle/obi/oradata/obi/control01.ctl
output file name=/d02/oracle/obi/oradata/obi/control02.ctl
output file name=/d02/oracle/obi/oradata/obi/control03.ctl
Finished restore at 23-JAN-11

RMAN> alter database mount;

database mounted
released channel: ORA_DISK_1
```

```
[obi@linux1 obi]$ cat obi_backup.log | grep "piece handle"
piece handle=/d02/oracle/backup/obi/df_t741177483_s9_p1 tag=TAG20110123T103803 comment=NONE
piece handle=/d02/oracle/backup/obi/df_t741177558_s10_p1 tag=TAG20110123T103803 comment=NONE
piece handle=/d02/oracle/backup/obi/al_t741177571_s11_p1 tag=TAG20110123T103931 comment=NONE
piece handle=/d02/oracle/backup/obi/control0cm2qu7e_1_1 tag=TAG20110123T103942 comment=NONE
backup piece handle=/d02/oracle/backup/obi/df_t741177260_s5_p1 RECID=5 STAMP=741177270
backup piece handle=/d02/oracle/backup/obi/df_t741177335_s6_p1 RECID=6 STAMP=741177346
backup piece handle=/d02/oracle/backup/obi/al_t741177348_s7_p1 RECID=7 STAMP=741177357
backup piece handle=/d02/oracle/backup/obi/control08m2qu0f_1_1 RECID=8 STAMP=741177370
backup piece handle=/d02/oracle/backup/obi/df_t741177483_s9_p1 RECID=9 STAMP=741177493
backup piece handle=/d02/oracle/backup/obi/df_t741177558_s10_p1 RECID=10 STAMP=741177569
backup piece handle=/d02/oracle/backup/obi/al_t741177571_s11_p1 RECID=11 STAMP=741177581
backup piece handle=/d02/oracle/backup/obi/control0cm2qu7e_1_1 RECID=12 STAMP=741177593
backup piece handle=/d02/oracle/backup/obi/df_t741177260_s5_p1 RECID=5 STAMP=741177270
backup piece handle=/d02/oracle/backup/obi/df_t741177335_s6_p1 RECID=6 STAMP=741177346
backup piece handle=/d02/oracle/backup/obi/al_t741177348_s7_p1 RECID=7 STAMP=741177357
backup piece handle=/d02/oracle/backup/obi/control08m2qu0f_1_1 RECID=8 STAMP=741177370
```

open the logfile-

input archived log thread=1 sequence=10 RECID=12 STAMP=741177570
input archived log thread=1 sequence=11 RECID=14 STAMP=741177571

Give one extra - 12

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```
[obi@linux1 ~]$ cat > restore.sh
run{
set until sequence 12 thread 1;
allocate channel ch01 type disk;
allocate channel ch02 type disk;
restore database;
recover database;
release channel ch01;
release channel ch02;
}
[obi@linux1 ~]$ nohup rman TARGET / NOCATALOG CMDFILE restore.sh LOG restore.log &
```

```
channel ch01: piece handle=/d02/oracle/backup/obi/df_t741177483_s9_p1 tag=TAG20110123T103803
channel ch01: restored backup piece 1
channel ch01: restore complete, elapsed time: 00:01:05
Finished restore at 23-JAN-11

Starting recover at 23-JAN-11

starting media recovery

channel ch01: starting archived log restore to default destination
channel ch01: restoring archived log
archived log thread=1 sequence=10
channel ch01: restoring archived log
archived log thread=1 sequence=11
channel ch01: reading from backup piece /d02/oracle/backup/obi/al_t741177571_s11_p1
channel ch01: piece handle=/d02/oracle/backup/obi/al_t741177571_s11_p1 tag=TAG20110123T103931
channel ch01: restored backup piece 1
channel ch01: restore complete, elapsed time: 00:00:01
archived log file name=/d02/oracle/obi/flash_recovery_area/OBI/archivelog/2011_01_23/o1_mf_1_10_6mqj2jow_.arc thread=1 sequence=10
channel default: deleting archived log(s)
archived log file name=/d02/oracle/obi/flash_recovery_area/OBI/archivelog/2011_01_23/o1_mf_1_10_6mqj2jow_.arc RECID=15 STAMP=741179688
archived log file name=/d02/oracle/obi/flash_recovery_area/OBI/archivelog/2011_01_23/o1_mf_1_11_6mqj2jtk_.arc thread=1 sequence=11
channel default: deleting archived log(s)
archived log file name=/d02/oracle/obi/flash_recovery_area/OBI/archivelog/2011_01_23/o1_mf_1_11_6mqj2jtk_.arc RECID=16 STAMP=741179688
media recovery complete, elapsed time: 00:00:01
Finished recover at 23-JAN-11

released channel: ch01

released channel: ch02

Recovery Manager complete.
```

```
RMAN> alter database open resetlogs;

using target database control file instead of recovery catalog
database opened
```

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```
SQL> select object_name from dba_objects where trunc(CREATED) = trunc(sysdate);

OBJECT_NAME
-----
REC

SQL> select * from rec;

      T T1
-----
1 23-JAN-11
```

RMAN-06059: expected archived log not found, lost of archived log compromises recoverability

RMAN-06059: expected archived log not found

RMAN attempted to backup an archive log file, but couldn't find it.

This can happen for a variety of reasons; the file has been manually moved or deleted, the archive log destination has recently been changed, the file has been compressed, etc.

```
Starting backup
current log archived
released channel: t1
RMAN-00571: =====
RMAN-00569: ===== ERROR MESSAGE STACK FOLLOWS =====
RMAN-00571: =====
RMAN-03002: failure of backup command at 14:24:55
RMAN-06059: expected archived log not found, lost of archived log
compromises recoverability
ORA-19625: error identifying file /u02/oradata/scr9/archive/1_1160.dbf
ORA-27037: unable to obtain file status
Linux Error: 2: No such file or directory
Additional information: 3
```

Your options are either to restore the missing file(s), or to perform a crosscheck. To perform a crosscheck, run the following command from within RMAN:

change archivelog all crosscheck;

It is advisable to perform a full backup of the database at this point.