

# Partial RMAN Restore Missing Datafile (Same Server)

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This scenario assumes a single datafile is missing or is corrupt on the current server.  
It assumes that the Recovery Catalog is still available.  
The below is an example of restoring data from DUBELIVE.

Information taken from Oracle 11gR2 RMAN documentation

[http://docs.oracle.com/cd/E11882\\_01/backup.112/e10642/rcmrepai.htm#CHDCDHFD](http://docs.oracle.com/cd/E11882_01/backup.112/e10642/rcmrepai.htm#CHDCDHFD)

The stages of the restore are ...

1. Confirm Error Message
2. Connect to Target Database and Recovery Catalog
3. Use Data Recovery Advisor to Restore Datafile

## **Confirm Error Message**

In the case of a missing datafile, this will be noticed when opening the database or selecting data from a table. If you believe there is an error you can also validate the database to check.

```
RMAN> VALIDATE DATABASE;
```

## **Connect To Target Database and Recovery Catalog**

Connect to the target database and recovery catalog using rman.

```
rman target / catalog rman/<pwd> @//sheffield/rman11g
```

Now startup mount the instance, we are assuming in this scenario that the spfile, control files and online redo logs are all still available.

```
STARTUP FORCE MOUNT;
```

## **Use Data Recovery Advisor to Restore Datafile**

Reconnect to the target database using rman. Enter the commands below and the DRA will automatically restore and recover the missing datafile for you.

```
rman target /  
LIST FAILURE;  
ADVISE FAILURE;  
REPAIR FAILURE;
```

This process took approximately 25 minutes for the Unit-e live database on 4<sup>th</sup> June 2013, when one datafile approximately 20Gb in size was deleted.

## Example Restore Scenario

```
[oracle@nazca datafile]$ ls -ltrh
total 48G
-rw-r-----. 1 oracle oinstall 401M Jun  4 10:40 ol_mf_unite_ar_8rt2zmjy_.dbf
-rw-r-----. 1 oracle oinstall  12G Jun  4 10:40 ol_mf_unite_in_8rt2zmcq_.dbf
-rw-r-----. 1 oracle oinstall  17G Jun  4 10:40 ol_mf_unite_da_8rt2zm9o_.dbf
-rw-r-----. 1 oracle oinstall  12G Jun  4 10:40 ol_mf_unite_in_8rt2zmcy_.dbf
-rw-r-----. 1 oracle oinstall 1.3G Jun  4 11:35 ol_mf_sysaux_8rt2zmgk_.dbf
-rw-r-----. 1 oracle oinstall 801M Jun  4 11:35 ol_mf_system_8rt2zmgs_.dbf
-rw-r-----. 1 oracle oinstall 761M Jun  4 11:35 ol_mf_undotbs1_8rt2zmjo_.dbf
[oracle@nazca datafile]$ rm ol_mf_unite_in_8rt2zmcq_.dbf
[oracle@nazca datafile]$ sqlplus / as sysdba
```

SQL\*Plus: Release 11.2.0.3.0 Production on Tue Jun 4 11:40:48 2013

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Connected to:

Oracle Database 11g Enterprise Edition Release 11.2.0.3.0 - 64bit Production  
With the Partitioning, OLAP, Data Mining and Real Application Testing options

SQL> alter database open;

alter database open

\*

ERROR at line 1:

ORA-01157: cannot identify/lock data file 7 - see DBWR trace file

ORA-01110: data file 7:

'/u02/oradata/DUBELIVE/datafile/ol\_mf\_unite\_in\_8rt2zmcq\_.dbf'

SQL> exit

Disconnected from Oracle Database 11g Enterprise Edition Release 11.2.0.3.0 - 64bit Production  
With the Partitioning, OLAP, Data Mining and Real Application Testing options

[oracle@nazca datafile]\$ rman target /

Recovery Manager: Release 11.2.0.3.0 - Production on Tue Jun 4 11:41:10 2013

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connected to target database: DUBELIVE (DBID=1682235201, not open)

RMAN> LIST FAILURE;

using target database control file instead of recovery catalog

List of Database Failures

=====

Failure ID	Priority	Status	Time Detected	Summary
28	HIGH	OPEN	04-JUN-13	One or more non-system datafiles are missing

RMAN> ADVISE FAILURE;

List of Database Failures

=====

Failure ID	Priority	Status	Time Detected	Summary
28	HIGH	OPEN	04-JUN-13	One or more non-system datafiles are missing

analyzing automatic repair options; this may take some time

allocated channel: ORA\_DISK\_1

channel ORA\_DISK\_1: SID=770 device type=DISK

analyzing automatic repair options complete

Mandatory Manual Actions

=====

no manual actions available

Optional Manual Actions

=====

1. If file /u02/oradata/DUBELIVE/datafile/ol\_mf\_unite\_in\_8rt2zmcq\_.dbf was unintentionally renamed or moved,  
restore it

Automated Repair Options

=====

Option Repair Description

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1 Restore and recover datafile 7

Strategy: The repair includes complete media recovery with no data loss

Repair script: /u01/app/oracle/diag/rdbms/DUBELIVE/DUBELIVE/hm/reco\_3013023159.hm

RMAN> **REPAIR FAILURE;**

Strategy: The repair includes complete media recovery with no data loss

Repair script: /u01/app/oracle/diag/rdbms/DUBELIVE/DUBELIVE/hm/reco\_3013023159.hm

contents of repair script:

```
# restore and recover datafile
restore datafile 7;
recover datafile 7;
sql 'alter database datafile 7 online';
```

Do you really want to execute the above repair (enter YES or NO)? **YES**

executing repair script

Starting restore at 04-JUN-13

using channel ORA\_DISK\_1

channel ORA\_DISK\_1: starting datafile backup set restore

channel ORA\_DISK\_1: specifying datafile(s) to restore from backup set

channel ORA\_DISK\_1: restoring datafile 00007 to /u02/oradata/DUBELIVE/datafile/o1\_mf\_unite\_in\_8rt2zmcq\_.dbf

channel ORA\_DISK\_1: reading from backup piece

/backup/fast\_recovery\_area/DUBELIVE/backupset/2013\_06\_04/o1\_mf\_nnndf\_TAG20130604T100355\_8tvccx3b\_.bkp

channel ORA\_DISK\_1: piece

handle=/backup/fast\_recovery\_area/DUBELIVE/backupset/2013\_06\_04/o1\_mf\_nnndf\_TAG20130604T100355\_8tvccx3b\_.bkp

tag=TAG20130604T100355

channel ORA\_DISK\_1: restored backup piece 1

channel ORA\_DISK\_1: restore complete, elapsed time: 00:25:15

Finished restore at 04-JUN-13

Starting recover at 04-JUN-13

using channel ORA\_DISK\_1

starting media recovery

media recovery complete, elapsed time: 00:00:00

Finished recover at 04-JUN-13

sql statement: alter database datafile 7 online

repair failure complete

Do you want to open the database (enter YES or NO)? **YES**

database opened

RMAN>