

11g – RMAN Recovery Advisor Let's Break A Datafile!



```
Applications Actions [Icons] Thu Oct 15, 10:51 AM [Speaker]
oracle@localhost:/u01/app/oracle/oradata/oral11g
File Edit View Terminal Tabs Help
[oracle@localhost oral11g]$ sqlplus /nolog

SQL*Plus: Release 11.1.0.6.0 - Production on Thu Oct 15 10:50:39 2009

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SQL> connect / as sysdba
Connected to an idle instance.
SQL> startup
ORACLE instance started.

Total System Global Area  535662592 bytes
Fixed Size                  1301112 bytes
Variable Size               394265992 bytes
Database Buffers           134217728 bytes
Redo Buffers                 5877760 bytes
Database mounted.
Database opened.
SQL> select name from v$datafile;

NAME
-----
/u01/app/oracle/oradata/oral11g/system01.dbf
/u01/app/oracle/oradata/oral11g/sysaux01.dbf
/u01/app/oracle/oradata/oral11g/undotbs101.dbf
/u01/app/oracle/oradata/oral11g/users01.dbf

SQL> █
```

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oracle@localhost:/u01/app/oracle/oradata/oral11g
File Edit View Terminal Tabs Help
00000000 00 A2 00 00 00 00 C0 FF 00 00 00 00 00 00 00 00 66 FB 00 00 .....f...
00000014 00 20 00 00 00 01 00 00 7D 7C 7B 7A A0 81 00 00 00 00 00 00 .....}|{z.....
00000028 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....
0000003C 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....
00000050 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....
00000064 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....
00000078 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....
0000008C 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....
000000A0 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....
000000B4 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....
000000C8 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....
000000DC 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....
000000F0 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....
00000104 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....
00000118 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....
0000012C 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....
00000140 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....
00000154 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....
00000168 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....
0000017C 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....
00000190 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....
000001A4 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....
000001B8 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....
000001CC 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....
000001E0 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....
000001F4 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....
00000208 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....
0000021C 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....
"users01.dbf" 2105344 bytes 00000000 \000 0x00 0 NUL
oracle@localhost:/u01/app/oracle oracle@localhost:/u01/app/oracle [oracle]
```

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Applications Actions Thu Oct 15, 10:52 AM

oracle@localhost:/u01/app/oracle/oradata/oral11g

File Edit View Terminal Tabs Help

```
000020E4 FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF .....
000020F8 FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF .....
0000210C FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF .....
00002120 FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF .....
00002134 FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF .....
00002148 FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF .....
0000215C FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF .....
00002170 FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF .....
00002184 FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF .....
00002198 FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF .....
000021AC FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF .....
000021C0 FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF .....
000021D4 FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF .....
000021E8 FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF .....
000021FC 10 00 F5 67 02 00 00 00 00 00 00 00 00 00 00 00 00 00 .....g.....
00002210 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....
00002224 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....
00002238 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....
0000224C 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....
00002260 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....
00002274 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 0A 00 0A 00 .....
00002288 0A 00 01 00 00 00 00 00 00 00 00 00 00 00 00 02 00 00 01 .....
0000229C 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....
000022B0 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....
000022C4 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....
000022D8 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....
000022EC 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....
00002300 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....
000021FB \377 0xFF 255
```

oracle@localhost:/u01/app/oracle| oracle@localhost:/u01/app/oracle| [oracle]

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```
Applications Actions Thu Oct 15, 10:53 AM
oracle@localhost:/u01/app/oracle/oradata/oral11g
File Edit View Terminal Tabs Help
[oracle@localhost oral11g]$ sqlplus /nolog

SQL*Plus: Release 11.1.0.6.0 - Production on Thu Oct 15 10:52:52 2009

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SQL> connect / as sysdba
Connected.
SQL> shutdown immediate;
ORA-01122: database file 4 failed verification check
ORA-01110: data file 4: '/u01/app/oracle/oradata/oral11g/users01.dbf'
ORA-01251: Unknown File Header Version read for file number 4
SQL> select * from v$instance;

INSTANCE_NUMBER INSTANCE_NAME
-----
HOST_NAME
-----
VERSION          STARTUP_T STATUS      PAR    THREAD# ARCHIVE LOG_SWITCH_WAIT
-----
LOGINS           SHU DATABASE_STATUS INSTANCE_ROLE ACTIVE_ST BLO
-----
                1 oral11g
localhost.localdomain
11.1.0.6.0      15-OCT-09 OPEN          NO      1 STARTED
ALLOWED        NO ACTIVE      PRIMARY_INSTANCE NORMAL    NO

SQL>
```

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```
Applications Actions Thu Oct 15, 10:53 AM
oracle@localhost:/u01/app/oracle/oradata/oral11g
File Edit View Terminal Tabs Help
[oracle@localhost oral11g]$ $0B/rman

Recovery Manager: Release 11.1.0.6.0 - Production on Thu Oct 15 10:53:37 2009

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RMAN> connect target /

connected to target database: ORAL11G (DBID=2375957550)

RMAN> list failure;

using target database control file instead of recovery catalog
List of Database Failures
=====

Failure ID Priority Status Time Detected Summary
-----
1202 HIGH OPEN 15-OCT-09 One or more non-system datafiles are corrupt

RMAN> █
```

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```
Applications Actions Thu Oct 15, 10:53 AM
oracle@localhost:/u01/app/oracle/oradata/oral11g
File Edit View Terminal Tabs Help
[oracle@localhost oral11g]$ $0B/rman

Recovery Manager: Release 11.1.0.6.0 - Production on Thu Oct 15 10:53:37 2009

Copyright (c) 1982, 2007, Oracle. All rights reserved.

RMAN> connect target /

connected to target database: ORAL11G (DBID=2375957550)

RMAN> list failure;

using target database control file instead of recovery catalog
List of Database Failures
=====

Failure ID Priority Status Time Detected Summary
-----
1202 HIGH OPEN 15-OCT-09 One or more non-system datafiles are corrupt

RMAN> █
```


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The screenshot shows a terminal window titled "oracle@localhost:/u01/app/oracle/oradata/oral11g". The window contains the following text:

```
Applications Actions [system tray icons] Thu Oct 15, 10:55 AM [volume icon]
oracle@localhost:/u01/app/oracle/oradata/oral11g
File Edit View Terminal Tabs Help
[oracle@localhost oral11g]$ exit
exit
host command complete

RMAN> repair failure;

Strategy: The repair includes complete media recovery with no data loss
Repair script: /u01/app/oracle/diag/rdbms/oral11g/oral11g/hm/reco_1862532411.hm

contents of repair script:
# restore and recover datafile
sql 'alter database datafile 4 offline';
restore datafile 4;
recover datafile 4;
sql 'alter database datafile 4 online';

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

The terminal window has a taskbar at the bottom with three open windows: "oracle@localhost:/u01/app/oracle", "oracle@localhost:/u01/app/oracle", and "[oracle]".

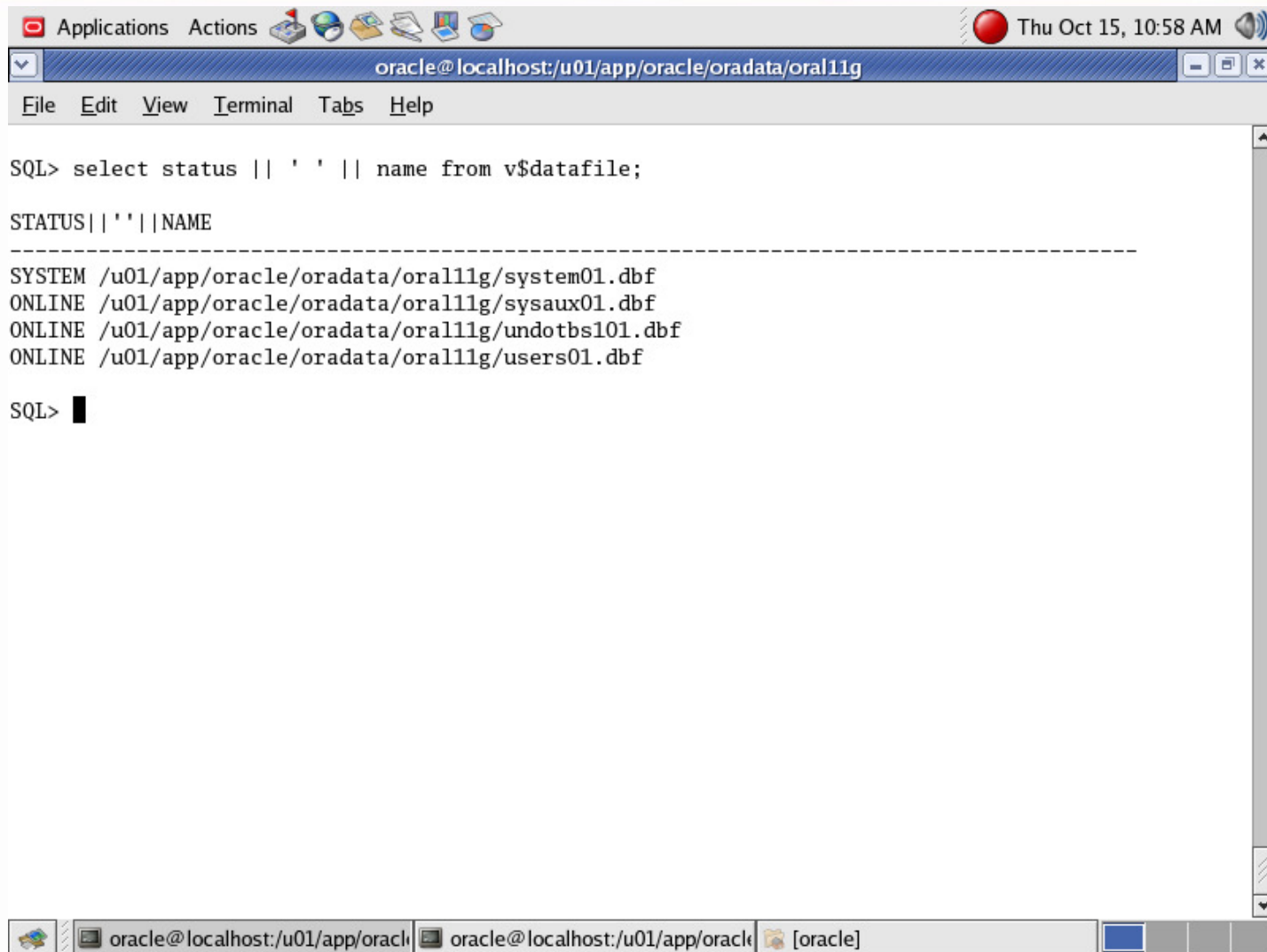
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```
Applications Actions Thu Oct 15, 10:57 AM
oracle@localhost:/u01/app/oracle/oradata/oral11g
File Edit View Terminal Tabs Help
Do you really want to execute the above repair (enter YES or NO)? YES
executing repair script
sql statement: alter database datafile 4 offline
Starting restore at 15-OCT-09
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 00004 to /u01/app/oracle/oradata/oral11g/users01.dbf
channel ORA_DISK_1: reading from backup piece /u01/app/oracle/product/11.1.0/db_1/dbs/2ckrrotn_1_1
channel ORA_DISK_1: piece handle=/u01/app/oracle/product/11.1.0/db_1/dbs/2ckrrotn_1_1 tag=TAG20091015T104055
channel ORA_DISK_1: restored backup piece 1
channel ORA_DISK_1: restore complete, elapsed time: 00:00:01
Finished restore at 15-OCT-09
Starting recover at 15-OCT-09
using channel ORA_DISK_1
starting media recovery
archived log for thread 1 with sequence 157 is already on disk as file /u02/oracle/arch/1_157_677930866.dbf
...
archived log file name=/u02/oracle/arch/1_160_677930866.dbf thread=1 sequence=160
media recovery complete, elapsed time: 00:00:01
Finished recover at 15-OCT-09

sql statement: alter database datafile 4 online
repair failure complete
█
```

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A screenshot of a terminal window. The title bar shows "oracle@localhost:/u01/app/oracle/oradata/oral11g" and the system clock is "Thu Oct 15, 10:58 AM". The terminal content shows an SQL query and its output. The output lists four datafiles: system01.dbf, sysaux01.dbf, undotbs101.dbf, and users01.dbf, all in an ONLINE state. The terminal prompt "SQL>" is followed by a cursor.

```
Applications Actions  Thu Oct 15, 10:58 AM   
oracle@localhost:/u01/app/oracle/oradata/oral11g  
File Edit View Terminal Tabs Help  
  
SQL> select status || ' ' || name from v$datafile;  
  
STATUS||' '||NAME  
-----  
SYSTEM /u01/app/oracle/oradata/oral11g/system01.dbf  
ONLINE /u01/app/oracle/oradata/oral11g/sysaux01.dbf  
ONLINE /u01/app/oracle/oradata/oral11g/undotbs101.dbf  
ONLINE /u01/app/oracle/oradata/oral11g/users01.dbf  
  
SQL> █
```

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QUESTIONS

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(that was fun)