

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



```
Applications Actions [Icons] Tue May 19, 8:02 AM [Speaker]
oracle@localhost:/media/usbdisk
File Edit View Terminal Tabs Help
[oracle@localhost usbdisk]$ sqlplus /nolog

SQL*Plus: Release 11.1.0.6.0 - Production on Tue May 19 08:01:57 2009

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SQL> connect / as sysdba
Connected.
SQL> select name from v$controlfile;

NAME
-----
/u01/app/oracle/oradata/orall1g/control01.ctl
/u01/app/oracle/oradata/orall1g/control02.ctl
/u01/app/oracle/oradata/orall1g/control03.ctl

SQL> host
[oracle@localhost usbdisk]$ bvi /u01/app/oracle/oradata/orall1g/control01.ctl
```

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```
Applications Actions [Icons] Tue May 19, 8:03 AM [Speaker]
oracle@localhost:/media/usbdisk
File Edit View Terminal Tabs Help
00000000 00 C2 00 00 00 00 C0 FF 00 00 00 00 00 00 00 00 02 F8 00 00 .....
00000014 00 40 00 00 64 02 00 00 7D 7C 7B 7A A0 81 00 00 00 00 00 00 .@.d...}|{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 .....
"/u01/app/oracle/oradata/oral11g/control01.ctl" 10043392 bytes 00000000 \000 0x00 0 NUL
oracle@localhost:/media/usbdisk
```


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```
Applications Actions [Icons] Tue May 19, 8:04 AM [Speaker]
oracle@localhost:/media/usbdisk
File Edit View Terminal Tabs Help

SQL> select name, status from v$controlfile;

NAME
-----
STATUS
-----
/u01/app/oracle/oradata/orall1g/control01.ctl

/u01/app/oracle/oradata/orall1g/control02.ctl

/u01/app/oracle/oradata/orall1g/control03.ctl

SQL> alter system switch logfile;
alter system switch logfile
*
ERROR at line 1:
ORA-03113: end-of-file on communication channel
Process ID: 7049
Session ID: 118 Serial number: 1426

SQL> [ ]
```

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```
Applications Actions  Tue May 19, 8:05 AM 
oracle@localhost:/media/usbdisk
File Edit View Terminal Tabs Help
SQL> exit
Disconnected from Oracle Database 11g Enterprise Edition Release 11.1.0.6.0 - Production
With the Partitioning, OLAP, Data Mining and Real Application Testing options
[oracle@localhost usbdisk]$ ps -ef|grep smon_
oracle 7255 6849 0 08:04 pts/2 00:00:00 grep smon_
[oracle@localhost usbdisk]$ sqlplus /nolog

SQL*Plus: Release 11.1.0.6.0 - Production on Tue May 19 08:04:43 2009

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

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

Total System Global Area 640303104 bytes
Fixed Size 1301756 bytes
Variable Size 222298884 bytes
Database Buffers 411041792 bytes
Redo Buffers 5660672 bytes
ORA-00205: error in identifying control file, check alert log for more info

SQL>
SQL>
SQL>
SQL>
SQL> 
```

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```
Applications Actions  Tue May 19, 8:05 AM 
oracle@localhost:/u01/app/oracle/diag/rdbms/oral11g/oral11g/trace
File Edit View Terminal Tabs Help
Tue May 19 08:04:51 2009
DBWO started with pid=9, OS id=7304
Tue May 19 08:04:51 2009
LGWR started with pid=10, OS id=7306
Tue May 19 08:04:51 2009
CKPT started with pid=11, OS id=7308
Tue May 19 08:04:51 2009
SMON started with pid=12, OS id=7310
Tue May 19 08:04:51 2009
RECO started with pid=13, OS id=7312
Tue May 19 08:04:51 2009
MMON started with pid=14, OS id=7314
starting up 1 dispatcher(s) for network address '(ADDRESS=(PARTIAL=YES)(PROTOCOL=TCP))'...
Tue May 19 08:04:51 2009
MMNL started with pid=15, OS id=7316
starting up 1 shared server(s) ...
ORACLE_BASE from environment = /u01/app/oracle
Tue May 19 08:04:51 2009
ALTER DATABASE MOUNT
ORA-00210: cannot open the specified control file
ORA-00202: control file: '/u01/app/oracle/oradata/oral11g/control01.ctl'
ORA-27048: skgfifi: file header information is invalid
Tue May 19 08:04:54 2009
Errors in file /u01/app/oracle/diag/rdbms/oral11g/oral11g/trace/oral11g_m000_7328.trc:
ORA-00210: cannot open the specified control file
ORA-00202: control file: '/u01/app/oracle/oradata/oral11g/control01.ctl'
ORA-27048: skgfifi: file header information is invalid
ORA-205 signalled during: ALTER DATABASE MOUNT...
>alert_oral11g.log" 11414 lines --100%-- 11414,1 Bot
oracle@localhost:/u01/app/oracle/diag/rdbms/oral11g/oral11g/trace
```

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```
Applications Actions  Tue May 19, 8:30 AM 
oracle@localhost:/media/usbdisk
File Edit View Terminal Tabs Help
Connected.
SQL> select name from v$controlfile;

NAME
-----
/u01/app/oracle/oradata/orall1g/control01.ctl
/u01/app/oracle/oradata/orall1g/control02.ctl
/u01/app/oracle/oradata/orall1g/control03.ctl

SQL> host bvi /u01/app/oracle/oradata/orall1g/control01.ctl

bvi version 1.3.2 Copyright (C) 1996-2004 by Gerhard Buergmann

SQL> shutdown immediate;
startup
Database closed.
Database dismounted.
ORACLE instance shut down.
SQL> ORACLE instance started.

Total System Global Area 640303104 bytes
Fixed Size 1301756 bytes
Variable Size 226493188 bytes
Database Buffers 406847488 bytes
Redo Buffers 5660672 bytes
ORA-00205: error in identifying control file, check alert log for more info

SQL> 
```

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```
Applications Actions [Icons] Tue May 19, 8:31 AM [Speaker]
oracle@localhost:/media/usbdisk
File Edit View Terminal Tabs Help
[oracle@localhost usbdisk]$ $OB/rman

Recovery Manager: Release 11.1.0.6.0 - Production on Tue May 19 08:30:42 2009

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

RMAN> connect target /

connected to target database: ORAL11G (not mounted)

RMAN> validate database;

Starting validate at 19-MAY-09
using target database control file instead of recovery catalog
allocated channel: ORA_DISK_1
channel ORA_DISK_1: SID=150 device type=DISK
RMAN-00571: =====
RMAN-00569: ===== ERROR MESSAGE STACK FOLLOWS =====
RMAN-00571: =====
RMAN-03002: failure of validate command at 05/19/2009 08:30:52
ORA-01507: database not mounted

RMAN> list failure;

no failures found that match specification

RMAN> [ ]
```

Taskbar: oracle@localhost:/me oracle@localhost:/me 11gDRA [ctfile006.png]

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```
Applications Actions [Icons] Tue May 19, 8:32 AM [Speaker]
oracle@localhost:/media/usbdisk
File Edit View Terminal Tabs Help

SQL*Plus: Release 11.1.0.6.0 - Production on Tue May 19 08:31:32 2009

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

SQL> connect / as sysdba
Connected.
SQL> show parameter control

NAME                                TYPE                                VALUE
-----                                -                                -
control_file_record_keep_time       integer                             7
control_files                        string                             /u01/app/oracle/oradata/orall1
                                     g/control01.ctl, /u01/app/orac
                                     le/oradata/orall1g/control02.c
                                     tl, /u01/app/oracle/oradata/or
                                     all1g/control03.ctl
control_management_pack_access      string                             DIAGNOSTIC+TUNING
SQL> host
[oracle@localhost usbdisk]$ ls -tl /u01/app/oracle/oradata/orall1g/*ctl
-rw-r----- 1 oracle oinstall 10043392 May 19 08:29 /u01/app/oracle/oradata/orall1g/control01.ctl
-rw-r----- 1 oracle oinstall 10043392 May 19 08:29 /u01/app/oracle/oradata/orall1g/control02.ctl
-rw-r----- 1 oracle oinstall 10043392 May 19 08:29 /u01/app/oracle/oradata/orall1g/control03.ctl
[oracle@localhost usbdisk]$ cp /u01/app/oracle/oradata/orall1g/control02.ctl /u01/app/oracle/orad
ata/orall1g/control01.ctl
[oracle@localhost usbdisk]$ exit
exit

SQL> [ ]

[Icons] oracle@localhost:/me oracle@localhost:/me 11gDRA [ctfile006.png]
```

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```
Applications Actions  Tue May 19, 8:33 AM 
oracle@localhost:/media/usdisk
File Edit View Terminal Tabs Help

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 orall1g
localhost.localdomain
11.1.0.6.0        19-MAY-09 STARTED      NO      0 STOPPED
ALLOWED NO ACTIVE          UNKNOWN      NORMAL NO

SQL> alter database mount;

Database altered.

SQL> alter database open;

Database altered.

SQL> 
```

Taskbar: oracle@localhost:/me oracle@localhost:/me 11gDRA [ctfile006.png]

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```
Applications Actions [Icons] Tue May 19, 8:35 AM [Speaker]
oracle@localhost:/media/usbdisk
File Edit View Terminal Tabs Help
[oracle@localhost usbdisk]$ sqlplus /nolog

SQL*Plus: Release 11.1.0.6.0 - Production on Tue May 19 08:34:32 2009

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

SQL> connect / as sysdba
Connected.
SQL> select name from v$controlfile;

NAME
-----
/u01/app/oracle/oradata/oral11g/control01.ctl
/u01/app/oracle/oradata/oral11g/control02.ctl
/u01/app/oracle/oradata/oral11g/control03.ctl

SQL> host bvi /u01/app/oracle/oradata/oral11g/control01.ctl
```

oracle@localhost:/media/usbdisk oracle@localhost:/media/usbdisk 11gDRA

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```
Applications Actions  Tue May 19, 8:38 AM 
oracle@localhost:/u01/app/oracle/diag/rdbms/oral11g/oral11g/trace
File Edit View Terminal Tabs Help
Tue May 19 08:35:03 2009
Starting background process CJQ0
Tue May 19 08:35:03 2009
CJQ0 started with pid=37, OS id=10047
Tue May 19 08:35:38 2009
Thread 1 advanced to log sequence 52
Current log# 1 seq# 52 mem# 0: /u01/app/oracle/oradata/oral11g/redo01.log
Tue May 19 08:36:31 2009
***** ATTENTION: *****
The controlfile header block returned by the OS
has a sequence number that is too old.
The controlfile might be corrupted.
PLEASE DO NOT ATTEMPT TO START UP THE INSTANCE
without following the steps below.
RE-STARTING THE INSTANCE CAN CAUSE SERIOUS DAMAGE
TO THE DATABASE, if the controlfile is truly corrupted.
In order to re-start the instance safely,
please do the following:
(1) Save all copies of the controlfile for later
analysis and contact your OS vendor and Oracle support.
(2) Mount the instance and issue:
ALTER DATABASE BACKUP CONTROLFILE TO TRACE;
(3) Unmount the instance.
(4) Use the script in the trace file to
RE-CREATE THE CONTROLFILE and open the database.
*****
CKPT (ospid: 9514): terminating the instance
Instance terminated by CKPT, pid = 9514
11830,1 Bot
oracle@localhost:/u01/app/oracle/di 11gDRA
```

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```
Applications Actions [Icons] Tue May 19, 8:39 AM
oracle@localhost:/u01/app/oracle/diag/rdbms/oral11g/oral11g/trace
File Edit View Terminal Tabs Help
SQL> startup mount;
ORACLE instance started.

Total System Global Area  640303104 bytes
Fixed Size                  1301756 bytes
Variable Size              226493188 bytes
Database Buffers          406847488 bytes
Redo Buffers                5660672 bytes
ORA-00214: control file '/u01/app/oracle/oradata/oral11g/control02.ctl' version
5513 inconsistent with file '/u01/app/oracle/oradata/oral11g/control01.ctl'
version 5509

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 orallg
localhost.localdomain
11.1.0.6.0      19-MAY-09 STARTED      NO          0 STOPPED
ALLOWED        NO ACTIVE          UNKNOWN     NORMAL     NO
```

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



```
Applications Actions  Tue May 19, 8:48 AM 
```

```
oracle@localhost:/u01/app/oracle/diag/rdbms/oral11g/oral11g/trace
```

```
File Edit View Terminal Tabs Help
```

```
SQL> host bvi /u01/app/oracle/oradata/oral11g/control01.ctl
```

```
bvi version 1.3.2 Copyright (C) 1996-2004 by Gerhard Buergmann
```

```
SQL> host grep "users01" /u01/app/oracle/oradata/oral11g/control01.ctl
```

```
SQL> shutdown immediate;
```

```
Database closed.
```

```
Database dismounted.
```

```
ORACLE instance shut down.
```

```
SQL> host grep "users01" /u01/app/oracle/oradata/oral11g/control01.ctl
```

```
SQL> startup
```

```
ORACLE instance started.
```

```
Total System Global Area 640303104 bytes
```

```
Fixed Size 1301756 bytes
```

```
Variable Size 226493188 bytes
```

```
Database Buffers 406847488 bytes
```

```
Redo Buffers 5660672 bytes
```

```
Database mounted.
```

```
Database opened.
```

```
SQL> host grep "users01" /u01/app/oracle/oradata/oral11g/control01.ctl
```

```
Binary file /u01/app/oracle/oradata/oral11g/control01.ctl matches
```

```
SQL>
```

```
SQL>
```

```
SQL> 
```

```
 oracle@localhost:/u01/app/oracle/di 11gDRA 
```


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



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



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



QUESTIONS

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(that was fun)