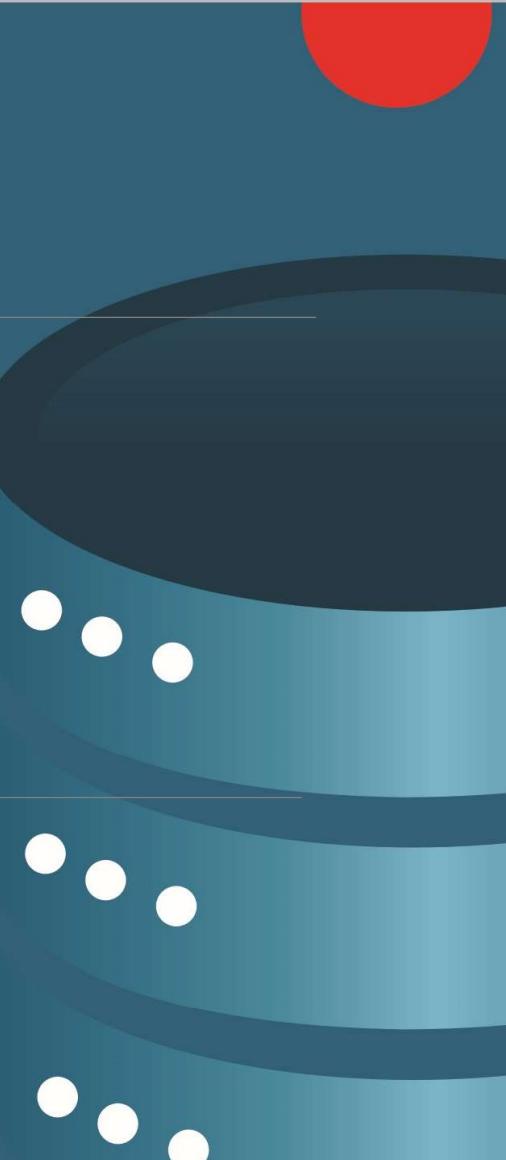


# AULA 07

**MÓDULO DISASTER E RECOVERY**  
RESTAURANDO PROBLEMA NO  
CONTROLFILE



# Garantindo o Backup

---

Primeiramente teremos que garantir que temos um backup do ambiente, não apenas snapshot da VM, mas sim um backup mesmo feito com RMAN.

Para isso voltaremos no script da aula 03...

# Scripts de backup

---

1- Vamos criar dois scripts já deixando pronto para colocar na crontab do Linux.

1.1 Vamos criar um arquivo chamado rman\_full\_cdbrac com seguinte conteúdo:

```
su - oracle -c /bkp_prod/scripts/rman_full_cdbrac.sh
```

Este arquivo será executado na crontab do root executando como oracle, por isso o “su - oracle...”

2.2 Vamos criar o script que irá executar o backup com o seguinte conteúdo:

# Scripts de backup

---

```
# Oracle Settings
export ORACLE_SID=CDBRAC
TMP=/tmp; export TMP
TMPDIR=$TMP; export TMPDIR
ORACLE_BASE=/u01/app/oracle; export ORACLE_BASE
ORACLE_HOME=/u01/app/oracle/product/12.1.0.2/db_1; export ORACLE_HOME
ORACLE_TERM=xterm; export ORACLE_TERM
PATH=/usr/sbin:$PATH; export PATH
PATH=$ORACLE_HOME/bin:$PATH; export PATH
NLS_LANG=AMERICAN_AMERICA.WE8ISO8859P1; export NLS_LANG
LD_LIBRARY_PATH=$ORACLE_HOME/lib:/lib:/usr/lib; export LD_LIBRARY_PATH
CLASSPATH=$ORACLE_HOME/JRE:$ORACLE_HOME/lib:$ORACLE_HOME/rdbms/jlib; export CLASSPATH
export NLS_DATE_FORMAT='DD/MM/YYYY HH24MISS'
export DATE=$(date +%Y-%m-%d-%H-%M)
rman target / msglog /bkp_prod/logs/backup_online_full_CDBRAC_${DATE}.log <<EOF
run {
allocate channel dev1_1 DEVICE TYPE DISK FORMAT '/bkp_prod/CDBRAC/datafiles/data_%u_%p_%c' MAXPIECESIZE 10G;
allocate channel dev1_2 DEVICE TYPE DISK FORMAT '/bkp_prod/CDBRAC/datafiles/data_%u_%p_%c' MAXPIECESIZE 10G;
allocate channel dev1_3 DEVICE TYPE DISK FORMAT '/bkp_prod/CDBRAC/datafiles/data_%u_%p_%c' MAXPIECESIZE 10G;
backup full database fileserset 3;
#sql 'alter system archive log current';
backup archivelog all delete all input format '/bkp_prod/CDBRAC/archivelogs/arc_%u_%p_%c';
sql 'alter system checkpoint';
backup current controlfile format '/bkp_prod/CDBRAC/archivelogs/ctlf_%u_%p_%c';
release channel dev1_1;
release channel dev1_2;
release channel dev1_3;
}
EOF
exit
```

# Scripts de backup

Para que o script execute corretamente precisará criar antes os diretórios onde estarão armazenados os logs, scripts e backups:

```
[root@rac1 bkp_prod]# pwd  
/bkp_prod  
[root@rac1 bkp_prod]# ls -lsrt  
total 12  
4 drwxrwxrwx 4 oracle oinstall 4096 Apr 28 17:59 CDBRAC  
4 drwxrwxrwx 2 oracle oinstall 4096 Apr 28 18:06 scripts  
4 drwxrwxrwx 2 oracle oinstall 4096 Apr 28 18:06 logs  
[root@rac1 bkp_prod]#
```

```
[root@rac1 CDBRAC]# pwd  
/bkp_prod/CDBRAC  
[root@rac1 CDBRAC]# ls -lsrt  
total 8  
4 drwxrwxrwx 2 oracle oinstall 4096 Apr 28 17:59 datafiles  
4 drwxrwxrwx 2 oracle oinstall 4096 Apr 28 17:59 archivelogs  
[root@rac1 CDBRAC]#
```

```
[root@rac1 bkp_prod]# cd scripts/  
[root@rac1 scripts]# ls -lsrt  
total 8  
4 -rwxrwxrwx 1 oracle oinstall 53 Apr 28 17:53 rman_full_cdbrac  
4 -rwxrwxrwx 1 oracle oinstall 1395 Apr 28 18:06 rman_full_cdbrac.sh  
[root@rac1 scripts]#
```

# Falha por não estar em modo archivelog

---

Para que os backups possam ser feitos com o banco no ar, isto é, sem precisar baixa-lo, primeiramente precisaremos coloca-lo em modo archivelog.

1- Definir local onde ficarão armazenados os archivelogs:

```
ALTER SYSTEM SET log_archive_dest_1='LOCATION=+RECO_DATA' sid='*';
```

Com o comando acima definiremos que os archivelogs serão armazenados dentro do diskgroup RECO\_DATA no ASM.

# Falha por não estar em modo archivelog

---

## 2- Colocar o banco em modo archivelog:

2.1 – *shutdown immediate;*

2.2 – *startup mount;*

2.3 – *alter database archivelog;*

2.4 – *alter database open;*

# Recuperando a perda do controlfile

---

```
[oracle@rac1 ~]$ sqlplus / as sysdba
SQL*Plus: Release 12.1.0.2.0 Production on Thu Apr 29 01:07:30 2021
Copyright (c) 1982, 2014, Oracle. All rights reserved.

Connected to an idle instance.

SQL> startup
ORACLE instance started.

Total System Global Area 1258291200 bytes
Fixed Size          2923920 bytes
Variable Size       520094320 bytes
Database Buffers    721420288 bytes
Redo Buffers        13852672 bytes
ORA-00205: error in identifying control file, check alert log for more info
```

# Recuperando a perda do controlfile

---

Recuperar a perda do controlfile existem duas situações básicas:

- 1 – Com autobackup controlfile configurado;
- 2 – Sem autobackup controlfile configurado;

# Recuperando a perda do controlfile

---

## 1 – Com autobackup controlfile configurado:

```
RMAN> show all;

using target database control file instead of recovery catalog
RMAN configuration parameters for database with db_unique_name CDBRAC are:
CONFIGURE RETENTION POLICY TO REDUNDANCY 1; # default
CONFIGURE BACKUP OPTIMIZATION OFF; # default
CONFIGURE DEFAULT DEVICE TYPE TO DISK; # default
CONFIGURE CONTROLFILE AUTOBACKUP ON;
CONFIGURE CONTROLFILE AUTOBACKUP FORMAT FOR DEVICE TYPE DISK TO '%F'; # default
CONFIGURE DEVICE TYPE DISK PARALLELISM 1 BACKUP TYPE TO BACKUPSET; # default
CONFIGURE DATAFILE BACKUP COPIES FOR DEVICE TYPE DISK TO 1; # default
CONFIGURE ARCHIVELOG BACKUP COPIES FOR DEVICE TYPE DISK TO 1; # default
CONFIGURE MAXSETSIZE TO UNLIMITED; # default
CONFIGURE ENCRYPTION FOR DATABASE OFF; # default
CONFIGURE ENCRYPTION ALGORITHM 'AES128'; # default
CONFIGURE COMPRESSION ALGORITHM 'BASIC' AS OF RELEASE 'DEFAULT' OPTIMIZE FOR LOAD TRUE ; # default
CONFIGURE RMAN OUTPUT TO KEEP FOR 7 DAYS; # default
CONFIGURE ARCHIVELOG DELETION POLICY TO NONE; # default
CONFIGURE SNAPSHOT CONTROLFILE NAME TO '/u01/app/oracle/product/12.1.0.2/db_1/dbs/snapcf_CDBRAC1.f'; # default
```

Comando:

RMAN>*restore controlfile from autobackup;*

# Recuperando a perda do controlfile

---

2 – Sem autobackup controlfile configurado:

Modo 01:

a) Pegar no script de backup o local do backup do controlfile

```
[oracle@rac1:/bkp_prod/scripts]$ cat backup_rac1.sh
#!/bin/ksh
#
# Oracle Database 12c Release 1 (12.1.0.2)
#
# Set environment variables
export ORACLE_SID=CDBRAC1
TMP=/tmp; export TMP
TMPDIR=$TMP; export TMPDIR
ORACLE_BASE=/u01/app/oracle; export ORACLE_BASE
ORACLE_HOME=/u01/app/oracle/product/12.1.0.2/db_1; export ORACLE_HOME
ORACLE_TERM=xterm; export ORACLE_TERM
PATH=/usr/sbin:$PATH; export PATH
PATH=$ORACLE_HOME/bin:$PATH; export PATH
NLS_LANG=AMERICAN_AMERICA.WE8ISO859P1; export NLS_LANG
LD_LIBRARY_PATH=$ORACLE_HOME/lib:/lib:/usr/lib; export LD_LIBRARY_PATH
CLASSPATH=$ORACLE_HOME/JRE:$ORACLE_HOME/rdbms/jlib; export CLASSPATH
export NLS_DATE_FORMAT='DD/MM/YYYY HH24MISS'
export DATE=$(date +%Y-%m-%d-%H-%M)
rman target / msglog /bkp_prod/logs/backup_online_full_CDBRAC_${DATE}.log <<EOF
run {
allocate channel devl_1 DEVICE TYPE DISK FORMAT '/bkp_prod/CDBRAC/datafiles/data_%u_%p_%c' MAXPIECESIZE 10G;
allocate channel devl_2 DEVICE TYPE DISK FORMAT '/bkp_prod/CDBRAC/datafiles/data_%u_%p_%c' MAXPIECESIZE 10G;
allocate channel devl_3 DEVICE TYPE DISK FORMAT '/bkp_prod/CDBRAC/datafiles/data_%u_%p_%c' MAXPIECESIZE 10G;
backup full database filesperset 3;
nogc 'alter system archive log current';
backup archivelog all delete all input format '/bkp_prod/CDBRAC/archivelogs/arc_%u_%p_%c';
nogc 'alter system checkpoint';
backup current controlfile format '/bkp_prod/CDBRAC/archivelogs/ctlf_%u_%p_%c';
release channel devl_1;
release channel devl_2;
release channel devl_3;
}
EOF
exit
```

# Recuperando a perda do controlfile

---

2 – Sem autobackup controlfile configurado:

Modo 01:

b) Pegar nome da peça de backup:

```
[oracle@rac1 archivelogs]$ pwd  
/bkp_prod/CDBRAC/archivelogs  
[oracle@rac1 archivelogs]$ ls -lsrt  
total 257256  
86152 -rw-r----- 1 oracle oinstall 88218112 Apr 28 23:58 arc_06vtfcp5_1_1  
60232 -rw-r----- 1 oracle oinstall 61677568 Apr 28 23:58 arc_07vtfcp5_1_1  
18164 -rw-r----- 1 oracle oinstall 18599936 Apr 28 23:58 arc_08vtfcp6_1_1  
18560 -rw-r----- 1 oracle oinstall 19005440 Apr 28 23:58 ctlf_09vtfcpo_1_1  
14604 -rw-r----- 1 oracle oinstall 14952960 Apr 29 01:05 arc_0gvtfgmj_1_1  
13252 -rw-r----- 1 oracle oinstall 13569536 Apr 29 01:05 arc_0hvtfgmj_1_1  
7020 -rw-r----- 1 oracle oinstall 7185408 Apr 29 01:05 arc_0ivtfgmk_1_1  
1024 -rw-r----- 1 oracle oinstall 1046016 Apr 29 01:05 arc_0jvtfgmo_1_1  
18560 -rw-r----- 1 oracle oinstall 19005440 Apr 29 01:05 ctlf_0kvtfgmu_1_1  
1128 -rw-r----- 1 oracle oinstall 1152512 Apr 29 01:17 arc_0ovtfhcc_1_1  
18560 -rw-r----- 1 oracle oinstall 19005440 Apr 29 01:17 ctlf_0qvtfhcr_1_1  
[oracle@rac1 archivelogs]$
```



# Recuperando a perda do controlfile

---

2 – Sem autobackup controlfile configurado:

Modo 01:

c) Executar o Comando:

```
RMAN>restore controlfile from '/bkp_prod/CDBRAC/archivelogs/ctlf_09vtfcpo_1_1';
```

*Depois provavelmente precisará rodar:*

```
RMAN> recover database;
```

```
RMAN> alter database open resetlogs;
```

# Recuperando a perda do controlfile

---

2 – Sem autobackup controlfile configurado:

Modo 02:

- Pegar pelo asmcmd o nome correto do controlfile que ainda existe:

```
[oracle@rac1 ~]$ . grid_env
[oracle@rac1 ~]$ asmcmd
ASMCMD> cd RECO_DATA
ASMCMD> cd CDBRAC
ASMCMD> cd controlfile
ASMCMD> pwd
+RECO_DATA/CDBRAC/controlfile
ASMCMD> ls
Current.256.1050718357
ASMCMD>
```



# Recuperando a perda do controlfile

---

2 – Sem autobackup controlfile configurado:

Modo 02:

a) Comando:

b) *restore controlfile from '+RECO\_DATA/CDBRAC/CONTROLFILE/Current.256.1050718357';*

## Nas próximas aulas...

---

Vamos destruir datafiles...

Portanto certifiquem-se de ter o backup configurado e que também tenha o snapshot da VM.

# AULA 07

# FIM

