

Maclean Liu 技术分享 11g ocm 考纲复习 Data Guard  
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Data Guard 讨论帖 : <http://t.askmaclean.com/thread-2530-1-1.html>

版本 11.2.0.3

OCM 考纲

[http://education.oracle.com/pls/web\\_prod-plq-dad/db\\_pages.getpage?page\\_id=5001&get\\_params=p\\_exam\\_id:11GOCM](http://education.oracle.com/pls/web_prod-plq-dad/db_pages.getpage?page_id=5001&get_params=p_exam_id:11GOCM)

Active Data Guard + Fast Failover + DG Broker

开始的时候一定要 做的一致 因为 duplicate 比较容易出错， 做多几次后 再按照自己的方式做。

	primary	standby
db_name	MACDB	MACDB
db_unique_name	MACDBN	MACDBS
instance_name	MACDBN	MACDBS
主机	mlab1	mlab2
存储	ASM +DATA	ASM +DATA
归档	+FRA	+FRA
DGMGRL	MACDBN_DGMGRL	MACDBS_DGMGRL

ORACLE\_HOME /s01/oracle/app/oracle/product/11.2.0/dbhome\_1

GRID\_HOME /g01/oracle/app/oracle/product/11.2.0/grid

asm.sh GRID ASM 的环境变量

db.sh DB RDBMS 的环境变量

1、primary database 初始配置， 在 mlab1 上执行

```
[oracle@mlab1 ~]$ cat db.sh
```

```
export ORACLE_SID=MACDBN
export ORACLE_HOME=/s01/oracle/app/oracle/product/11.2.0/dbhome_1
export ORACLE_BASE=/s01
export PATH=$ORACLE_HOME/bin:/bin:/sbin:/usr/bin:/usr/sbin:$ORACLE_HOME/OPatch
```

```
SQL> show parameter db_name
```

NAME	TYPE	VALUE
db_name	string	MACDB

```
select name from v$DATAFILE;
```

```
SQL> archive log list
```

==>确认已打开归档

Database log mode	Archive Mode
Automatic archival	Enabled
Archive destination	+FRA
Oldest online log sequence	4
Next log sequence to archive	6
Current log sequence	6

```
shutdown immediate;
```

```
startup mount;
```

```
alter database archivelog;
```

```
alter database flashback on;
```

```
alter database open;
```

```
select FORCE_LOGGING from v$database;
```

```
FOR
```

```
---
```

```
NO
```

```
alter database force logging;
```

Database altered.

```
select FORCE_LOGGING from v$database;
```

FOR

---

YES

```
alter system set db_unique_name='MACDBN' scope=spfile;
```

```
alter system set log_archive_config='DG_CONFIG=(MACDBN,MACDBS)' scope=spfile;
```

```
SQL> show parameter control
```

NAME	TYPE	VALUE
control_file_record_keep_time	integer	7
control_files	string	+DATA/macdb/controlfile/curren t.260.816581503, +FRA/macdb/co ntrolfile/current.411.81658150 3

```
SQL> alter system set log_archive_dest_1='LOCATION=+FRA  
VALID_FOR=(ALL_LOGFILES,ALL_ROLES) DB_UNIQUE_NAME=MACDBN' scope=spfile;
```

System altered.

```
SQL> alter system set log_archive_format='arch_%r_%t_%s.arc' scope=spfile;
```

System altered.

```
SQL> alter system set log_archive_dest_2='SERVICE=MACDBS ASYNC LGWR  
VALID_FOR=(ONLINE_LOGFILES,PRIMARY_ROLE) DB_UNIQUE_NAME=MACDBS' scope=spfile;
```

System altered.

```
SQL> alter system set fal_server=MACDBS scope=spfile;
```

System altered.

```
SQL> alter system set fal_client=MACDBN scope=spfile;
```

System altered.

```
SQL> alter system set standby_file_management=AUTO;
```

System altered.

```
alter database add standby logfile group 7 size 50M;  
alter database add standby logfile group 8 size 50M;  
alter database add standby logfile group 9 size 50M;  
alter database add standby logfile group 10 size 50M;  
alter database add standby logfile group 11 size 50M;
```

重建密码文件,密码为 oracle

```
rm $ORACLE_HOME/dbs/orapwMACDBN  
orapwd file=$ORACLE_HOME/dbs/orapwMACDBN password=oracle entries=10 ignoreCase=Y
```

配置 listener.ora , 在 GRID\_HOME 下

```
export GRID_HOME=/g01/oracle/app/oracle/product/11.2.0/grid  
[oracle@mlab1 ~]$ vi $GRID_HOME/network/admin/listener.ora
```

```
DGLSN =  
  (DESCRIPTION =  
    (ADDRESS = (PROTOCOL = TCP)(HOST = mlab1.oracle.com)(PORT = 1521))  
  )
```

```
SID_LIST_DGLSN =  
  (SID_LIST =  
    (SID_DESC =
```

```

        (GLOBAL_DBNAME = MACDBN)
        (ORACLE_HOME = /s01/oracle/app/oracle/product/11.2.0/dbhome_1)
        (SID_NAME = MACDBN)
    )
    (SID_DESC =
        (GLOBAL_DBNAME = MACDBN_DGMGRL)
        (ORACLE_HOME = /s01/oracle/app/oracle/product/11.2.0/dbhome_1)
        (SID_NAME = MACDBN)
    )
)

```

ADR\_BASE\_DGLSN = /g01

vi \$ORACLE\_HOME/network/admin/tnsnames.ora 添加服务别名

```

MACDBN =
  (DESCRIPTION =
    (ADDRESS = (PROTOCOL = TCP)(HOST = mlab1.oracle.com)(PORT = 1521))
    (CONNECT_DATA =
      (SERVER = DEDICATED)
      (SERVICE_NAME = MACDBN )
    )
  )

```

```

MACDBS =
  (DESCRIPTION =
    (ADDRESS = (PROTOCOL = TCP)(HOST = mlab2.oracle.com)(PORT = 1521))
    (CONNECT_DATA =
      (SERVER = DEDICATED)
      (SERVICE_NAME = MACDBS)
    )
  )

```

source asm.sh

[oracle@mlab1 admin]\$ lsnrctl stop DGLSN

[oracle@mlab1 admin]\$ lsnrctl start DGLSN

```
source db.sh
```

```
[oracle@mlab1 ~]$ sqlplus sys/oracle@MACDBN as sysdba  
==》验证登陆
```

```
[oracle@mlab1 ~]$ sqlplus sys/oracle@mlab1:1521/MACDBN_DGMGRL as sysdba  
==》验证登陆
```

确认 primary 上 audit dump 目录

```
SQL> show parameter audit_file_dest
```

NAME	TYPE	VALUE
audit_file_dest	string	/s01/admin/MACDB/adump

重启 primary

```
shutdown immediate;  
startup;
```

2、在 standby host 上配置，在 mlab2 上执行

```
[oracle@mlab2 ~]$ cat db.sh
```

```
export ORACLE_SID=MACDBS  
export ORACLE_HOME=/s01/oracle/app/oracle/product/11.2.0/dbhome_1  
export ORACLE_BASE=/s01  
export  
PATH=$ORACLE_HOME/bin:/bin:/sbin:/usr/bin:/usr/sbin:$ORACLE_HOME/OPatch:/opt/oracle.SupportTools
```

```
mkdir -p /s01/admin/MACDB/adump
```

```
rm $ORACLE_HOME/dbs/orapwMACDBS
```

```
orapwd file=$ORACLE_HOME/dbs/orapwMACDBS password=oracle entries=10 ignoreCase=Y
```

```
export GRID_HOME=/g01/oracle/app/oracle/product/11.2.0/grid
```

```
vi $GRID_HOME/network/admin/listener.ora
```

```
DGLSN =
```

```
(DESCRIPTION =
```

```
(ADDRESS = (PROTOCOL = TCP)(HOST = mlab2.oracle.com)(PORT = 1521))
```

```
)
```

```
SID_LIST_DGLSN =
```

```
(SID_LIST =
```

```
(SID_DESC =
```

```
(GLOBAL_DBNAME = MACDBS)
```

```
(ORACLE_HOME = /s01/oracle/app/oracle/product/11.2.0/dbhome_1)
```

```
(SID_NAME = MACDBS)
```

```
)
```

```
(SID_DESC =
```

```
(GLOBAL_DBNAME = MACDBS_DGMGRL)
```

```
(ORACLE_HOME = /s01/oracle/app/oracle/product/11.2.0/dbhome_1)
```

```
(SID_NAME = MACDBS)
```

```
)
```

```
)
```

```
source asm.sh
```

```
[oracle@mlab2 ~]$ lsnrctl stop DGLSN
```

```
[oracle@mlab2 ~]$ lsnrctl start DGLSN
```

```
source db.sh
```

```
vi $ORACLE_HOME/network/admin/tnsnames.ora 添加服务别名
```

```
MACDBN =
```

```
(DESCRIPTION =
```

```
(ADDRESS = (PROTOCOL = TCP)(HOST = mlab1.oracle.com)(PORT = 1521))
(CONNECT_DATA =
  (SERVER = DEDICATED)
  (SERVICE_NAME = MACDBN )
)
)
```

MACDBS =

```
(DESCRIPTION =
  (ADDRESS = (PROTOCOL = TCP)(HOST = mlab2.oracle.com)(PORT = 1521))
  (CONNECT_DATA =
    (SERVER = DEDICATED)
    (SERVICE_NAME = MACDBS)
  )
)
```

[oracle@mlab2 ~]\$ sqlplus sys/oracle@MACDBN as sysdba ==》验证  
登陆

[oracle@mlab2 ~]\$ sqlplus sys/oracle@MACDBS as sysdba ==》验证  
登陆

[oracle@mlab2 ~]\$ sqlplus sys/oracle@mlab2:1521/MACDBS\_DGMGRL as sysdba ==》  
验证登陆

[oracle@mlab2 ~]\$ echo "db\_name=MACDB" >> \$ORACLE\_HOME/dbs/initMACDBS.ora

[oracle@mlab2 ~]\$ echo \$ORACLE\_SID  
MACDBS

[oracle@mlab2 ~]\$ sqlplus / as sysdba

SQL> startup nomount;  
ORACLE instance started.

Total System Global Area	250560512 bytes
Fixed Size	2227256 bytes
Variable Size	192938952 bytes
Database Buffers	50331648 bytes
Redo Buffers	5062656 bytes



### 3、duplicate standby ， 在 mlab1 上执行

[oracle@mlab1 ~]\$ sqlplus sys/oracle@MACDBS as sysdba ==》验证登陆

duplicate\_mac.sql

```
duplicate target database
for standby
from active database
DORECOVER
spfile
set db_unique_name='MACDBS'
set          log_archive_dest_1='location=+FRA          VALID_FOR=(ALL_LOGFILES,ALL_ROLES)
DB_UNIQUE_NAME=MACDBS'
set          log_archive_dest_2='SERVICE=MACDBN          ASYNC          LGWR
VALID_FOR=(ONLINE_LOGFILES,PRIMARY_ROLE) DB_UNIQUE_NAME=MACDBN'
set standby_file_management='AUTO'
set fal_server='MACDBN'
set fal_client='MACDBS'
set control_files='+DATA'
set memory_target='0'
set sga_target='600M';
```

[oracle@mlab1 ~]\$ rman target / auxiliary sys/oracle@MACDBS cmdfile=duplicate\_maclean.sql

### 4、 配置 dg\_broker

2 边实例均 设置 dg\_broker\_start=true;

primary :

alter system set dg\_broker\_start=true;

standby :  
alter system set dg\_broker\_start=true;

[oracle@mlab1 ~]\$ dgmgrl sys/oracle@MACDBN

create CONFIGURATION macdb as primary database is MACDBN CONNECT IDENTIFIER IS  
MACDBN;

add database MACDBS as CONNECT IDENTIFIER IS MACDBS MAINTAINED AS PHYSICAL;

enable configuration;

show configuration;

switchover to macdb;

switchover to macdbn;

show database verbose macdb

## 5、测试 ADG

primary:

SQL> create table maclean\_test as select \* from sh.sales;

SQL> select count(\*) from maclean\_test;

COUNT(*)
918843

standby :

alter database open;

SQL> select count(\*) from maclean\_test;

COUNT(*)
----------

-----  
918843

6、convert standby to snapshot

CONVERT DATABASE MACDBS to SNAPSHOT STANDBY;

snapshot standby :

SQL> truncate table maclean\_test;

DGMGRL> CONVERT DATABASE MACDBS to PHYSICAL STANDBY;

7、启动 fast\_start failover

standby : shutdown immediate; startup mount; alter database flashback on;

DGMGRL> ENABLE FAST\_START FAILOVER  
Enabled.

DGMGRL> start observer  
Observer started

DGMGRL> stop observer;  
Done.

SHOW FAST\_START FAILOVER;

enable fast\_start failover condition "Stuck Archiver";  
Succeeded.

SHOW FAST\_START FAILOVER;

```
dgmgrl sys/oracle@MACDBN
```

```
show configuration
```

8、配置 archivelog delete policy

```
SQL> alter system set "_log_deletion_policy"=ALL;
```

```
System altered.
```

```
CONFIGURE ARCHIVELOG DELETION POLICY TO shipped to standby;
```

```
CONFIGURE ARCHIVELOG DELETION POLICY TO applied on standby;
```