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Oracle 11g OCM 考纲 Streams 单向流 复制



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1	SHCH-1	ASANA

目录

文档控制.....	2
变更记录.....	2
审阅人.....	2
审批人.....	2
文档分发.....	2
目录.....	3
1. 实验环境.....	4
2.检查和调整数据库参数.....	4
2.1 源端和目标端.....	4
2.2 数据库参数.....	5
2.3 确认归档模式.....	6
3.流环境配置.....	6
3.1 创建 表空间 STREAMS_TBS , 创建流用户 STRMADMIN 使用此表空间并赋权。	6
3.2 创建目录对象.....	6
3.3 创建 DBlink.....	7
4.配置复制和测试.....	7
5.其他.....	9
其他问题.....	10
未解决的问题.....	10
已解决的问题.....	10

1. 实验环境

SYS user passwd:oracle

SYSTEM user password:oracle

	节点 1	节点 2
Oracle SID	Orcl	Orcl
Global DB name/service Name	Orcl1	Orcl2
Net server Name	amer	euro
字符集	AL32UTF8	AL32UTF8

2. 检查和调整数据库参数

2.1 源端和目标端

tnsnames.ora 的配置：

```
vi /u01/app/oracle/product/11.2.0/db_1/network/admin/tnsnames.ora
```

```
amer =
```

```
(DESCRIPTION =
  (ADDRESS = (PROTOCOL = TCP)(HOST = 192.168.199.118)(PORT = 1521))
  (CONNECT_DATA =
    (SERVER = DEDICATED)
    (SERVICE_NAME = orcl1)
  )
)
```

```
euro =
```

```
(DESCRIPTION =
  (ADDRESS = (PROTOCOL = TCP)(HOST = 192.168.199.225)(PORT = 1521))
  (CONNECT_DATA =
    (SERVER = DEDICATED)
  )
)
```

```
(SERVICE_NAME = orcl2)
)
)
```

2.2 数据库参数

参数	选项或值
Compatible	11.2.0.0.0 (或更高)
global_names	TRUE
service_names	Orcl1 orcl2
Processes	150
job_queue_processes	1000
memory_target	700M
memory_max_target	700M
sga_max_size	700M
streams_pool_size	200M

```
export ORACLE_SID=amer
sqlplus / as sysdba
show parameter compatible
show parameter global_names
alter system set global_names=true;
show parameter service_names
show parameter processes
show parameter memory_target
show parameter memory_max_target
show parameter sga_max_target
show parameter stream_pool_size
alter system set streams_pool_size=200M;
```

调整 global_name 和 service_name:

源端 :

```
alter database rename global_name to orcl1;
alter system set service_name=orcl1;
```

目标端 :

```
alter database rename global_name to orcl2;
alter system set service_name=orcl2;
```

2.3 确认归档模式

```
archive log list;
```

2. 流环境配置

3.1 创建 表空间 STREAMS_TBS, 创建流用户 STRMADMIN 使用此表空间并赋权。

源端和目标端：

创建表空间

```
create          tablespace          streams_tbs          datafile
'/u01/app/oracle/oradata/orcl/streams_tbs01.dbf' size 25M;
```

创建用户：

```
create USER strmadmin identified by strmadmin DEFAULT TABLESPACE
streams_tbs QUOTA UNLIMITED ON streams_tbs ;
```

赋权：

```
grant dba to strmadmin;
```

```
execute DBMS_STREAMS_AUTH.GRANT_ADMIN_PRIVILEGE('STRMADMIN');
```

3.2 创建目录对象

源端：

```
create directory SRC_EXP_DIR as '/home/oracle/amer';
```

```
!mkdir -p /home/oracle/amer
```

目标端：

DIRECTORY_PATH (/hom/oracle/euro)中.

```
create directory DEST_EXP_DIR as '/home/oracle/euro';
```

```
!mkdir -p /home/oracle/euro
```

3.3 创建 DBlink

源端：

```
sqlplus strmadmin/strmadmin@amer
CREATE DATABASE LINK orcl2
CONNECT TO strmadmin
IDENTIFIED BY strmadmin USING 'euro';
```

目标端：

```
sqlplus strmadmin/strmadmin@euro
CREATE DATABASE LINK orcl1
CONNECT TO strmadmin
IDENTIFIED BY strmadmin USING 'amer';
```

4.配置复制和测试

在源端创建测试表：

```
sqlplus scott/scott@amer
set sqlprompt "AMER>"
create table dept_history as select * from dept;
```

在目标端查询：

```
sqlplus scott/scott@euro
set sqlprompt "EURO>"
select count(*) from dept_history;
```

```
SQL> set sqlprompt "EURO>"
EURO>select count(*) from dept_history;
select count(*) from dept_history
      *
ERROR at line 1:
ORA-00942: table or view does not exist
```

创建队列：

```
conn strmadmin/strmadmin
execute
dbms_streams_adm.set_up_queue(queue_table => 'strmadmin.queue_table', queue_name => 'strmadmin.queue_table', queue_user => 'STRMADMIN');
```

创建进程：

源端端

```
conn strmadmin/strmadmin
```

```
execute
```

```
dbms_streams_adm.add_schema_rules( schema_name => 'scott', streams_type => 'capture', streams_name => 'capture_src', queue_name => 'strmadmin.queue_table', include_dml => true, include_ddl => true);
```

目标端：

```
conn strmadmin/strmadmin
```

```
execute
```

```
dbms_streams_adm.add_schema_rules( schema_name => 'scott', streams_type => 'apply', streams_name => 'apply_dest', queue_name => 'strmadmin.queue_table', include_dml => true, include_ddl => true, inclusion_rule => true);
```

使用 expdp 进行数据初始化：

目标端

```
expdp strmadmin/strmadmin directory=DEST_EXP_DIR dumpfile=scott.dmp  
nologfile=Y network_link=ORCL1 schemas=scott
```

```
impdp strmadmin/strmadmin directory=DEST_EXP_DIR dumpfile=scott.dmp  
nologfile=Y remap_schema=scott:scott remap_tablespace=users:users  
table_exists_action=replace
```

#创建传播规则并修改 propagation 休眠时间为 0，表示实时传播 LCR。

源端：

```
connect strmadmin/strmadmin
```

```
execute
```

```
dbms_streams_adm.add_schema_propagation_rules(schema_name => 'scott', streams_name => 'prop_to_dest', source_queue_name => 'strmadmin.queue_table', destination_queue_name => 'strmadmin.queue_table@orcl2', include_dml => true, include_ddl => true, source_database => 'orcl1');
```

```
execute
```

```
dbms_aqadm.alter_propagation_schedule(queue_name => 'strmadmin.queue_table', destination => 'orcl2', destination_queue => 'strmadmin.queue_table', latency => 0);
```


开启进程：

源端：

```
conn strmadmin/strmadmin
```

```
execute dbms_capture_adm.start_capture(capture_name => 'capture_src');
```

目标端：

```
conn strmadmin/strmadmin
```

```
execute dbms_apply_adm.start_apply(apply_name => 'apply_dest');
```

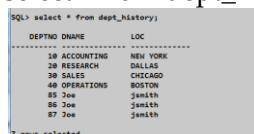
在源端插入测试数据

```
insert into dept_history values (87, 'Joe', 'jsmith');
```

```
commit;
```

目标端再次查询：

```
select * from dept_history where DEPTNO=87;
```



```
SQL> select * from dept_history;
```

DEPTNO	ENAME	LOC
10	ACCOUNTING	NEW YORK
20	RESEARCH	DALLAS
30	SALES	CHICAGO
40	OPERATIONS	BOSTON
85	Joe	jsmith
86	Joe	jsmith
87	Joe	jsmith

7 rows selected.

5.其他

---停止进程：

```
exec dbms_capture_adm.stop_capture(capture_name => 'capture_SRC');
```

```
exec dbms_apply_adm.stop_apply(apply_name => 'apply_dest');
```

删除全部配置：

```
exec DBMS_STREAMS_ADM.remove_streams_configuration();
```

其他问题

未解决的问题

问题号	问题描述	解决方案	日期

已解决的问题

问题号	问题描述	解决方案	解决日期



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