

通过DBLINK远程执行procedure的问题

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昨天，遇到一个问题，本机的procedure能够正常运行，但是，通过DBLINK在另外一台主机访问，就出现异常，无法正常运行，后经多方测试，已找到原因并解决，现总结如下：

参考metalink相关文档Doc ID: Note:1026597.6:

Problem Description:

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You are operating a distributed environment.

You have a remote package created for DML processing. When the package is executed at the local site it works, but on the on the remote master site it fails with ORA-2064.

However, when you resubmit the package locally at that remote site the package works.

Solution Description:

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The DML package included a COMMIT.

A remote procedure call (RPC) cannot contain a commit.

At the time that the package is resubmitted at the local site, it is no longer an RPC and executes.

根据metalink的说法，远程调用procedure中不能含有commit字句，可是实际测试情况与其有出入：

```
SQL>
SQL> create or replace procedure alan_test2
  2  as
  3  begin
  4    insert into test_alan values ( sysdate );
  5    commit ;
  6  end ;
  7  /

Procedure created.

SQL> select count(*) from test_alan ;

   COUNT(*)
-----
          4

SQL> begin
  2    alan_test2 ;
  3  end ;
  4  /

PL/SQL procedure successfully completed.

SQL> select count(*) from test_alan ;

   COUNT(*)
-----
          5
```

这是在本机的执行，可以正常运行，再来看看远端执行状况

```

SQL>
SQL> desc alan_test2@xta6_zwa
PROCEDURE 2@xta6_zwa

SQL> select count(*) from test_alan@xta6_zwa ;

  COUNT(*)
-----
         6

SQL> begin
  2   alan_test2@xta6_zwa ;
  3   end ;
  4   /

PL/SQL procedure successfully completed.

SQL> select count(*) from test_alan@xta6_zwa ;

  COUNT(*)
-----
         7

```

事实证明，在远端的运行也是正常的，两边数据库的版本都是9206，metalink的说法确实不够准确，后来，经过我们研究，当procedure中含有返回值（OUT）时，在远端执行时，procedure中不能含有commit字句，如下：

```

SQL>
SQL> CREATE OR REPLACE PROCEDURE ALAN_TEST ( aaa out INTEGER )
  2   as
  3   begin
  4     select count(*)
  5     into   aaa
  6     from   test_alan ;
  7     commit ;
  8   end ;
  9   /

Procedure created.

SQL> commit ;

Commit complete.

SQL>
SQL> Variable v a number ;
SQL> exec alan test(:v a) ;

PL/SQL procedure successfully completed.

SQL> print v_a ;

  V_A
-----
     7

```

```

SQL>
SQL> Variable v_a number ;
SQL>
SQL> exec alan_test@xta6_zwa(:v_a) ;
BEGIN alan_test@xta6_zwa(:v_a) ; END;

*
ERROR at line 1:
ORA-02064: distributed operation not supported
ORA-06512: at "XTA6.ALAN_TEST", line 7
ORA-06512: at line 1

SQL>

```

包含COMMIT字句的,带OUT值的procedure在本机正常运行,但是在远端通过DBLINK执行时,就会报出'operation not supported'错误.这时,将COMMIT字句去掉后再尝试一次:

```

SQL>
SQL> CREATE OR REPLACE PROCEDURE ALAN_TEST ( aaa out INTEGER )
  2  as
  3  begin
  4    select count(*)
  5    into   aaa
  6    from   test_alan ;
  7  end ;
  8  /

Procedure created.

SQL>
SQL> Variable v_a number ;
SQL>
SQL> exec alan_test(:v_a) ;

PL/SQL procedure successfully completed.

SQL> print v_a ;

          V_A
-----
          7

```

```

SQL> Variable v_a number ;
SQL> exec alan_test@xta6_zwa(:v_a) ;

PL/SQL procedure successfully completed.

SQL> print v_a ;

          V_A
-----
          7

```

去掉 commit 字句后,带 out 值的 procedure 在远端可以正常执行,实际应用中存在的问题被找到,问题解决,metalink 的说法不够准确.