

dist_tran_fail.txt

```
SYSTEM@tutor5c_n1educ2 SQL> @dist_tran_fail
SYSTEM@tutor5c_n1educ2 SQL> connect system/oracle@&p
```

Connected.

```
SYSTEM@tutor5c_n1educ2 SQL>
SYSTEM@tutor5c_n1educ2 SQL> rem reenable distributed
recovery to clean up
SYSTEM@tutor5c_n1educ2 SQL> rem any in-doubt distributed
transactions
SYSTEM@tutor5c_n1educ2 SQL> pause
```

```
SYSTEM@tutor5c_n1educ2 SQL>
SYSTEM@tutor5c_n1educ2 SQL> alter system enable
distributed recovery;
```

system altered.

```
SYSTEM@tutor5c_n1educ2 SQL> pause
```

```
SYSTEM@tutor5c_n1educ2 SQL>
SYSTEM@tutor5c_n1educ2 SQL> alter session advise nothing;
```

session altered.

```
SYSTEM@tutor5c_n1educ2 SQL> pause
```

```
SYSTEM@tutor5c_n1educ2 SQL>
SYSTEM@tutor5c_n1educ2 SQL> rem clean up
SYSTEM@tutor5c_n1educ2 SQL> pause
```

```
SYSTEM@tutor5c_n1educ2 SQL> drop public database link
angel;
```

Database link dropped.

```
SYSTEM@tutor5c_n1educ2 SQL> pause
```

```
SYSTEM@tutor5c_n1educ2 SQL> undefine tranid
SYSTEM@tutor5c_n1educ2 SQL> undefine scn
SYSTEM@tutor5c_n1educ2 SQL> pause
```

```
SYSTEM@tutor5c_n1educ2 SQL>
SYSTEM@tutor5c_n1educ2 SQL> rem create a link
SYSTEM@tutor5c_n1educ2 SQL> pause
```

```
SYSTEM@tutor5c_n1educ2 SQL> create public database link
angel
```

```
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2 connect to system identified by oracle
3 using 'ANGEL';
```

Database link created.

```
SYSTEM@tutor5c_n1educ2 SQL>
SYSTEM@tutor5c_n1educ2 SQL> pause
```

```
SYSTEM@tutor5c_n1educ2 SQL>
SYSTEM@tutor5c_n1educ2 SQL> rem see the link
SYSTEM@tutor5c_n1educ2 SQL> pause
```

```
SYSTEM@tutor5c_n1educ2 SQL>
SYSTEM@tutor5c_n1educ2 SQL> col owner for a8
SYSTEM@tutor5c_n1educ2 SQL> col db_link for a25
SYSTEM@tutor5c_n1educ2 SQL> col username for a8
SYSTEM@tutor5c_n1educ2 SQL> col host for a20
SYSTEM@tutor5c_n1educ2 SQL>
SYSTEM@tutor5c_n1educ2 SQL> select *
  2 from dba_db_links
  3 order by db_link;
```

Hit Any Key to Continue

OWNER	DB_LINK	USERNAME	HOST
-------	---------	----------	------

PUBLIC	ANGEL	SYSTEM	ANGEL
	13-may-2014 12:39:24		

1 row selected.

```
SYSTEM@tutor5c_n1educ2 SQL>
SYSTEM@tutor5c_n1educ2 SQL> pause
```

```
SYSTEM@tutor5c_n1educ2 SQL>
SYSTEM@tutor5c_n1educ2 SQL> rem see the commit point
strengths on both sides
SYSTEM@tutor5c_n1educ2 SQL> rem this parameter determines
which site is the commit
SYSTEM@tutor5c_n1educ2 SQL> rem point site
SYSTEM@tutor5c_n1educ2 SQL> pause
```

```
SYSTEM@tutor5c_n1educ2 SQL>
SYSTEM@tutor5c_n1educ2 SQL> col name for a30
SYSTEM@tutor5c_n1educ2 SQL> col value for a30
```

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SYSTEM@tutor5c_n1educ2 SQL> col location for a8

SYSTEM@tutor5c_n1educ2 SQL>

SYSTEM@tutor5c_n1educ2 SQL> select 'LOCAL' as
location,name,value

2 from v\$parameter

3 where name = 'commit_point_strength'

4 union

5 select 'REMOTE',name,value

6 from v\$parameter@angel

7 where name like 'commit_point_strength';

Hit Any Key to Continue

LOCATION	NAME	VALUE
----------	------	-------

LOCAL	commit_point_strength	1
-------	-----------------------	---

REMOTE	commit_point_strength	1
--------	-----------------------	---

2 rows selected.

SYSTEM@tutor5c_n1educ2 SQL>

SYSTEM@tutor5c_n1educ2 SQL> rem see the transaction
created by the remote query

SYSTEM@tutor5c_n1educ2 SQL> rem of the view

SYSTEM@tutor5c_n1educ2 SQL> pause

SYSTEM@tutor5c_n1educ2 SQL>

SYSTEM@tutor5c_n1educ2 SQL> col state for a30

SYSTEM@tutor5c_n1educ2 SQL>

SYSTEM@tutor5c_n1educ2 SQL> select 'LOCAL' as
location,branches,refcount,preparecount,state

2 from v\$global_transaction

3 union

4 select 'REMOTE',

branches,refcount,preparecount,state

5 from v\$global_transaction@angel;

Hit Any Key to Continue

LOCATION	BRANCHES	REFCOUNT	PREPARECOUNT	STATE
----------	----------	----------	--------------	-------

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```
LOCAL          1          1          0 [ORACLE  
COORDINATED]ACTIVE
```

```
REMOTE         1          1          0 [ORACLE  
COORDINATED]ACTIVE
```

2 rows selected.

```
SYSTEM@tutor5c_n1educ2 SQL>  
SYSTEM@tutor5c_n1educ2 SQL> pause
```

```
SYSTEM@tutor5c_n1educ2 SQL>  
SYSTEM@tutor5c_n1educ2 SQL> rem commit the transaction  
created by the remote  
SYSTEM@tutor5c_n1educ2 SQL> rem query of the v$view  
SYSTEM@tutor5c_n1educ2 SQL>  
SYSTEM@tutor5c_n1educ2 SQL> commit;
```

Commit complete.

```
SYSTEM@tutor5c_n1educ2 SQL>  
SYSTEM@tutor5c_n1educ2 SQL> pause
```

```
SYSTEM@tutor5c_n1educ2 SQL>  
SYSTEM@tutor5c_n1educ2 SQL> rem do a local update  
SYSTEM@tutor5c_n1educ2 SQL> pause
```

```
SYSTEM@tutor5c_n1educ2 SQL>  
SYSTEM@tutor5c_n1educ2 SQL> update scott.emp  
2 set sal=sal+0;
```

14 rows updated.

```
SYSTEM@tutor5c_n1educ2 SQL>  
SYSTEM@tutor5c_n1educ2 SQL> pause
```

```
SYSTEM@tutor5c_n1educ2 SQL>  
SYSTEM@tutor5c_n1educ2 SQL> rem now set advice to commit  
at this point  
SYSTEM@tutor5c_n1educ2 SQL> rem if failure occurs  
SYSTEM@tutor5c_n1educ2 SQL> pause
```

```
SYSTEM@tutor5c_n1educ2 SQL>  
SYSTEM@tutor5c_n1educ2 SQL> alter session advise commit;
```

Session altered.

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```
SYSTEM@tutor5c_n1educ2 SQL>
SYSTEM@tutor5c_n1educ2 SQL> pause

SYSTEM@tutor5c_n1educ2 SQL>
SYSTEM@tutor5c_n1educ2 SQL>
SYSTEM@tutor5c_n1educ2 SQL> rem now do a remote update
SYSTEM@tutor5c_n1educ2 SQL> rem thereby creating a
distributed transaction
SYSTEM@tutor5c_n1educ2 SQL> pause

SYSTEM@tutor5c_n1educ2 SQL>
SYSTEM@tutor5c_n1educ2 SQL> update scott.emp@angel
  2 set sal=sal+1;
```

14 rows updated.

```
SYSTEM@tutor5c_n1educ2 SQL> pause
```

```
SYSTEM@tutor5c_n1educ2 SQL>
SYSTEM@tutor5c_n1educ2 SQL> rem see the global
transaction caused by the update
SYSTEM@tutor5c_n1educ2 SQL> pause
```

```
SYSTEM@tutor5c_n1educ2 SQL>
SYSTEM@tutor5c_n1educ2 SQL> select 'LOCAL' as
location,branches,refcount,preparecount,state
  2 from v$global_transaction
  3 union
  4 select 'REMOTE',
branches,refcount,preparecount,state
  5 from v$global_transaction@angel;
Hit Any Key to Continue
```

LOCATION	BRANCHES	REFCOUNT	PREPARECOUNT	STATE
LOCAL	1	1	0	[ORACLE
COORDINATED]				ACTIVE
REMOTE	1	1	0	[ORACLE
COORDINATED]				ACTIVE

2 rows selected.

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```
SYSTEM@tutor5c_n1educ2 SQL>  
SYSTEM@tutor5c_n1educ2 SQL>  
SYSTEM@tutor5c_n1educ2 SQL> rem set the default session  
advice to rollback  
SYSTEM@tutor5c_n1educ2 SQL> rem note this will appear in  
the advice  
SYSTEM@tutor5c_n1educ2 SQL> rem column for use in  
in-doubt resolution  
SYSTEM@tutor5c_n1educ2 SQL> pause
```

```
SYSTEM@tutor5c_n1educ2 SQL>  
SYSTEM@tutor5c_n1educ2 SQL> exec  
dbms_transaction.advise_rollback
```

PL/SQL procedure successfully completed.

```
SYSTEM@tutor5c_n1educ2 SQL>  
SYSTEM@tutor5c_n1educ2 SQL> pause
```

```
SYSTEM@tutor5c_n1educ2 SQL>  
SYSTEM@tutor5c_n1educ2 SQL> rem now disable automatic  
distributed recovery  
SYSTEM@tutor5c_n1educ2 SQL> rem to help simulate what  
happens when errors  
SYSTEM@tutor5c_n1educ2 SQL> rem occur during two-phase  
commit processing  
SYSTEM@tutor5c_n1educ2 SQL> rem this does not remove the  
RECO process  
SYSTEM@tutor5c_n1educ2 SQL> rem but prevents it from  
automatically resolving  
SYSTEM@tutor5c_n1educ2 SQL> rem any in-doubt 2-phase  
commits  
SYSTEM@tutor5c_n1educ2 SQL> pause
```

```
SYSTEM@tutor5c_n1educ2 SQL>  
SYSTEM@tutor5c_n1educ2 SQL> alter system disable  
distributed recovery;
```

system altered.

```
SYSTEM@tutor5c_n1educ2 SQL>  
SYSTEM@tutor5c_n1educ2 SQL> pause
```

```
SYSTEM@tutor5c_n1educ2 SQL>  
SYSTEM@tutor5c_n1educ2 SQL> rem see that the reco process  
is still alive  
SYSTEM@tutor5c_n1educ2 SQL> pause
```

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```
SYSTEM@tutor5c_n1educ2 SQL>
SYSTEM@tutor5c_n1educ2 SQL> col name for a4
SYSTEM@tutor5c_n1educ2 SQL> col description for a40
SYSTEM@tutor5c_n1educ2 SQL>
SYSTEM@tutor5c_n1educ2 SQL>
SYSTEM@tutor5c_n1educ2 SQL> select name,description
  2   from v$bgprocess
  3   where name = 'RECO';
Hit Any Key to Continue
NAME DESCRIPTION
```

RECO distributed recovery

1 row selected.

```
SYSTEM@tutor5c_n1educ2 SQL>
SYSTEM@tutor5c_n1educ2 SQL> pause
```

```
SYSTEM@tutor5c_n1educ2 SQL>
SYSTEM@tutor5c_n1educ2 SQL> rem now that RECO is disabled
we can simulate failure
SYSTEM@tutor5c_n1educ2 SQL> rem using the Distributed
Transaction Crash Test feature
SYSTEM@tutor5c_n1educ2 SQL> rem There are 10 possible
crash simulations listed below
SYSTEM@tutor5c_n1educ2 SQL> rem which may be used by
adding a formatted comment to the
SYSTEM@tutor5c_n1educ2 SQL> rem commit statement as
follows 'ORA-2PC-CRASH-TEST-<num>'
SYSTEM@tutor5c_n1educ2 SQL> rem
SYSTEM@tutor5c_n1educ2 SQL> rem failure 1 - Crash commit
point site after collect
SYSTEM@tutor5c_n1educ2 SQL> rem failure 2 - Crash
non-commit point site after collect
SYSTEM@tutor5c_n1educ2 SQL> rem failure 3 - Crash
non-commit point site before prepare
SYSTEM@tutor5c_n1educ2 SQL> rem failure 4 - Crash
non-commit point site after prepare
SYSTEM@tutor5c_n1educ2 SQL> rem failure 5 - Crash commit
point site before commit
SYSTEM@tutor5c_n1educ2 SQL> rem failure 6 - Crash commit
point site after commit
```

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```
SYSTEM@tutor5c_n1educ2 SQL> rem failure 7 - Crash
non-commit point site before commit
SYSTEM@tutor5c_n1educ2 SQL> rem failure 8 - Crash
non-commit point site after commit
SYSTEM@tutor5c_n1educ2 SQL> rem failure 9 - Crash commit
point site before forget
SYSTEM@tutor5c_n1educ2 SQL> rem failure 10 - Crash
non-commit point site before forget
SYSTEM@tutor5c_n1educ2 SQL> rem
SYSTEM@tutor5c_n1educ2 SQL> pause
```

```
SYSTEM@tutor5c_n1educ2 SQL>
SYSTEM@tutor5c_n1educ2 SQL>
SYSTEM@tutor5c_n1educ2 SQL> rem now commit with a crash
test
SYSTEM@tutor5c_n1educ2 SQL> pause
```

```
SYSTEM@tutor5c_n1educ2 SQL>
SYSTEM@tutor5c_n1educ2 SQL> rem commit comment
'ORA-2PC-CRASH-TEST-&testno';
SYSTEM@tutor5c_n1educ2 SQL>
SYSTEM@tutor5c_n1educ2 SQL> commit comment
'ORA-2PC-CRASH-TEST-7';
commit comment 'ORA-2PC-CRASH-TEST-7'
*
```

```
ERROR at line 1:
ORA-02054: transaction 2.29.6181 in-doubt
ORA-02059: ORA-2PC-CRASH-TEST-7 in commit comment
```

```
SYSTEM@tutor5c_n1educ2 SQL>
SYSTEM@tutor5c_n1educ2 SQL> rem see the error message
produced by the crash test
SYSTEM@tutor5c_n1educ2 SQL> pause
```

```
SYSTEM@tutor5c_n1educ2 SQL>
SYSTEM@tutor5c_n1educ2 SQL> rem now try to access the the
local emp table
SYSTEM@tutor5c_n1educ2 SQL> pause
```

```
SYSTEM@tutor5c_n1educ2 SQL>
SYSTEM@tutor5c_n1educ2 SQL> select *
  2  from scott.emp;
select *
*
```

```
ERROR at line 1:
ORA-01591: lock held by in-doubt distributed transaction
2.29.6181
```


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```
SYSTEM@tutor5c_n1educ2 SQL>  
SYSTEM@tutor5c_n1educ2 SQL> rem it is not even readable!  
SYSTEM@tutor5c_n1educ2 SQL> pause
```

```
SYSTEM@tutor5c_n1educ2 SQL>  
SYSTEM@tutor5c_n1educ2 SQL> rem now lets see how to  
investigate this  
SYSTEM@tutor5c_n1educ2 SQL> rem first we will look at  
pending two phase commit  
SYSTEM@tutor5c_n1educ2 SQL> rem transactions  
SYSTEM@tutor5c_n1educ2 SQL> pause
```

```
SYSTEM@tutor5c_n1educ2 SQL>  
SYSTEM@tutor5c_n1educ2 SQL> desc dba_2pc_pending
```

Name	Null?	Type

LOCAL_TRAN_ID	NOT NULL	VARCHAR2(22)
GLOBAL_TRAN_ID		VARCHAR2(169)
STATE	NOT NULL	VARCHAR2(16)
MIXED		VARCHAR2(3)
ADVICE		VARCHAR2(1)
TRAN_COMMENT		VARCHAR2(255)
FAIL_TIME	NOT NULL	DATE
FORCE_TIME		DATE
RETRY_TIME	NOT NULL	DATE
OS_USER		VARCHAR2(64)
OS_TERMINAL		VARCHAR2(255)
HOST		VARCHAR2(128)
DB_USER		VARCHAR2(30)

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COMMIT#

VARCHAR2(16)

SYSTEM@tutor5c_n1educ2 SQL>

SYSTEM@tutor5c_n1educ2 SQL> pause

SYSTEM@tutor5c_n1educ2 SQL>

SYSTEM@tutor5c_n1educ2 SQL> rem lets trap the local
tranid for use later

SYSTEM@tutor5c_n1educ2 SQL> pause

SYSTEM@tutor5c_n1educ2 SQL>

SYSTEM@tutor5c_n1educ2 SQL> col ltranid new_value ltranid

SYSTEM@tutor5c_n1educ2 SQL>

SYSTEM@tutor5c_n1educ2 SQL> select local_tran_id as
ltranid

2 from dba_2pc_pending;

Hit Any Key to Continue

LTRANID

2.29.6181

1 row selected.

SYSTEM@tutor5c_n1educ2 SQL>

SYSTEM@tutor5c_n1educ2 SQL> pause

SYSTEM@tutor5c_n1educ2 SQL>

SYSTEM@tutor5c_n1educ2 SQL> rem see it

SYSTEM@tutor5c_n1educ2 SQL> pause

SYSTEM@tutor5c_n1educ2 SQL>

SYSTEM@tutor5c_n1educ2 SQL> def LTRANID

DEFINE LTRANID = "2.29.6181" (CHAR)

SYSTEM@tutor5c_n1educ2 SQL>

SYSTEM@tutor5c_n1educ2 SQL> pause

SYSTEM@tutor5c_n1educ2 SQL>

SYSTEM@tutor5c_n1educ2 SQL> rem now lets see the pending
transactions on both sides

SYSTEM@tutor5c_n1educ2 SQL> rem of the link

SYSTEM@tutor5c_n1educ2 SQL> pause

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```
SYSTEM@tutor5c_n1educ2 SQL>
SYSTEM@tutor5c_n1educ2 SQL>
SYSTEM@tutor5c_n1educ2 SQL> col local_tran_id for a12
SYSTEM@tutor5c_n1educ2 SQL> col global_tran_id for a26
SYSTEM@tutor5c_n1educ2 SQL> col state for a9
SYSTEM@tutor5c_n1educ2 SQL> col tran_comment for a20
SYSTEM@tutor5c_n1educ2 SQL> col os_user for a8
SYSTEM@tutor5c_n1educ2 SQL> col os_terminal for a8
SYSTEM@tutor5c_n1educ2 SQL> col host for a8
SYSTEM@tutor5c_n1educ2 SQL> col db_user for a8
SYSTEM@tutor5c_n1educ2 SQL> col commit# for a10
SYSTEM@tutor5c_n1educ2 SQL>
SYSTEM@tutor5c_n1educ2 SQL> rem if the global tranid and
the local are the same then this
SYSTEM@tutor5c_n1educ2 SQL> rem site is the Global
Coordinator of the transaction
SYSTEM@tutor5c_n1educ2 SQL> rem
SYSTEM@tutor5c_n1educ2 SQL> rem the mixed column shows if
there are any mixed outcome
SYSTEM@tutor5c_n1educ2 SQL> rem situations where a commit
was done in one place but a
SYSTEM@tutor5c_n1educ2 SQL> rem rollback in the other.
SYSTEM@tutor5c_n1educ2 SQL> rem
SYSTEM@tutor5c_n1educ2 SQL> rem the tran_comment has the
comment from the commit or rollback
SYSTEM@tutor5c_n1educ2 SQL> rem statement which in this
case is the special "Crash Test" comment.
SYSTEM@tutor5c_n1educ2 SQL> pause
```

```
SYSTEM@tutor5c_n1educ2 SQL>
SYSTEM@tutor5c_n1educ2 SQL> select 'LOCAL' as
location,state,global_tran_id,
2
local_tran_id,tran_comment,commit#,mixed,advice,fail_time
3 from dba_2pc_pending
4 where local_tran_id =
5 (select local_tran_id
6 from dba_2pc_pending)
7 union
8 select 'REMOTE' as location ,state,global_tran_id,
9
local_tran_id,tran_comment,commit#,mixed,advice,fail_time
10 from dba_2pc_pending@angel;
Hit Any Key to Continue
LOCATION STATE GLOBAL_TRAN_ID
LOCAL_TRAN_I TRAN_COMMENT COMMIT# MIXED
ADV FAIL_TIME
```

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```
-----  
-----  
-----  
LOCAL      prepared  TUTOR5C.58db07b1.2.29.6181 2.29.6181  
ORA-2PC-CRASH-TEST-7 213483121 no C  
13-may-2014 12:39:33  
REMOTE     committed TUTOR5C.58db07b1.2.29.6181 3.17.105177  
ORA-2PC-CRASH-TEST-7 213483123 no C  
13-may-2014 12:39:33
```

2 rows selected.

```
SYSTEM@tutor5c_n1educ2 SQL>  
SYSTEM@tutor5c_n1educ2 SQL>  
SYSTEM@tutor5c_n1educ2 SQL> rem see who the neighboring  
database is on both sides  
SYSTEM@tutor5c_n1educ2 SQL> pause
```

```
SYSTEM@tutor5c_n1educ2 SQL>  
SYSTEM@tutor5c_n1educ2 SQL> desc dba_2pc_neighbors  
Name  
          Null?      Type
```

```
-----  
-----  
-----  
LOCAL_TRAN_ID  
          VARCHA2(22)  
IN_OUT  
          VARCHA2(3)  
DATABASE  
          VARCHA2(128)  
DBUSER_OWNER  
          VARCHA2(30)  
INTERFACE  
          VARCHA2(1)  
DBID  
          VARCHA2(16)  
SESS#  
          NUMBER(38)  
BRANCH  
          VARCHA2(128)
```

```
SYSTEM@tutor5c_n1educ2 SQL>  
SYSTEM@tutor5c_n1educ2 SQL> pause
```

```
SYSTEM@tutor5c_n1educ2 SQL>  
SYSTEM@tutor5c_n1educ2 SQL> rem the database column has
```

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the db link name for outbound

SYSTEM@tutor5c_n1educ2 SQL> rem and the client database name for inbound

SYSTEM@tutor5c_n1educ2 SQL> rem

SYSTEM@tutor5c_n1educ2 SQL> rem interface has "C" for request commit or "N" for prepare

SYSTEM@tutor5c_n1educ2 SQL> rem or read only transaction commit

SYSTEM@tutor5c_n1educ2 SQL> rem

SYSTEM@tutor5c_n1educ2 SQL> rem if IN_OUT=OUT and INTERFACE=C then the remote DB is the

SYSTEM@tutor5c_n1educ2 SQL> rem commit point site and knows whether to commit or not

SYSTEM@tutor5c_n1educ2 SQL> rem

SYSTEM@tutor5c_n1educ2 SQL> rem if IN_OUT=OUT and INTERFACE=N then the local node has

SYSTEM@tutor5c_n1educ2 SQL> rem informed the remote node that the local is prepared

SYSTEM@tutor5c_n1educ2 SQL> rem

SYSTEM@tutor5c_n1educ2 SQL> rem if IN_OUT=IN and INTERFACE=C then the local node or

SYSTEM@tutor5c_n1educ2 SQL> rem another node further down a daisy chain is the commit

SYSTEM@tutor5c_n1educ2 SQL> rem point site.

SYSTEM@tutor5c_n1educ2 SQL> rem

SYSTEM@tutor5c_n1educ2 SQL> rem if IN_OUT=IN and INTERFACE=N then the remote node has

SYSTEM@tutor5c_n1educ2 SQL> rem informed the local node that it is prepared

SYSTEM@tutor5c_n1educ2 SQL> rem

SYSTEM@tutor5c_n1educ2 SQL> rem Branch is the transaction branch identifier at this Database

SYSTEM@tutor5c_n1educ2 SQL> pause

SYSTEM@tutor5c_n1educ2 SQL>

SYSTEM@tutor5c_n1educ2 SQL>

SYSTEM@tutor5c_n1educ2 SQL> col local_tran_id for a13

SYSTEM@tutor5c_n1educ2 SQL> col database for a10

SYSTEM@tutor5c_n1educ2 SQL> col DBID for a10

SYSTEM@tutor5c_n1educ2 SQL> col dbuser_owner for a8

SYSTEM@tutor5c_n1educ2 SQL> col branch for a46

SYSTEM@tutor5c_n1educ2 SQL>

SYSTEM@tutor5c_n1educ2 SQL> select 'LOCAL' as location, local_tran_id, in_out, interface,

2 database, dbuser_owner, branch

3 from dba_2pc_neighbors

4 where local_tran_id =

5 (select local_tran_id

```

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6      from dba_2pc_pending)
7  union
8  select 'REMOTE',local_tran_id,in_out,interface,
9  database,dbuser_owner,branch
10 from dba_2pc_neighbors@angel;
Hit Any Key to Continue
LOCATION LOCAL_TRAN_ID IN_OUT      INT DATABASE      DBUSER_O
BRANCH

```

```

-----
-----
LOCAL      2.29.6181      in          N          SYSTEM
0000
LOCAL      2.29.6181      out         C          ANGEL      SYSTEM
4
REMOTE     3.17.105177      in          C          TUTOR5C    SYSTEM
5455544F5235435B322E32392E363138315D5B312E345D

```

3 rows selected.

```

SYSTEM@tutor5c_n1educ2 SQL>
SYSTEM@tutor5c_n1educ2 SQL> pause

```

```

SYSTEM@tutor5c_n1educ2 SQL>
SYSTEM@tutor5c_n1educ2 SQL> rem we can see that the
remote database is the commit point site
SYSTEM@tutor5c_n1educ2 SQL> rem
SYSTEM@tutor5c_n1educ2 SQL> rem IN_OUT=OUT to DATABASE
ANGEL and INTERFACE=C
SYSTEM@tutor5c_n1educ2 SQL> rem
SYSTEM@tutor5c_n1educ2 SQL> rem has been reported from
the LOCAL location (TUTOR5C)
SYSTEM@tutor5c_n1educ2 SQL> rem
SYSTEM@tutor5c_n1educ2 SQL> rem and
SYSTEM@tutor5c_n1educ2 SQL> rem
SYSTEM@tutor5c_n1educ2 SQL> rem IN_OUT=IN to DATABASE
TUTOR5C and INTERFACE=C
SYSTEM@tutor5c_n1educ2 SQL> rem
SYSTEM@tutor5c_n1educ2 SQL> rem has been reported from
the REMOTE location (ANGEL)
SYSTEM@tutor5c_n1educ2 SQL> rem
SYSTEM@tutor5c_n1educ2 SQL> rem IN_OUT=IN to a NULL
Database represents the local client connection
SYSTEM@tutor5c_n1educ2 SQL> rem

```

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SYSTEM@tutor5c_n1educ2 SQL> pause

SYSTEM@tutor5c_n1educ2 SQL>

SYSTEM@tutor5c_n1educ2 SQL>

SYSTEM@tutor5c_n1educ2 SQL> rem now try to commit the txn
for the dist query

SYSTEM@tutor5c_n1educ2 SQL> pause

SYSTEM@tutor5c_n1educ2 SQL>

SYSTEM@tutor5c_n1educ2 SQL> commit;

Commit complete.

SYSTEM@tutor5c_n1educ2 SQL>

SYSTEM@tutor5c_n1educ2 SQL> pause

SYSTEM@tutor5c_n1educ2 SQL>

SYSTEM@tutor5c_n1educ2 SQL> rem trap the current scn for
later

SYSTEM@tutor5c_n1educ2 SQL> pause

SYSTEM@tutor5c_n1educ2 SQL>

SYSTEM@tutor5c_n1educ2 SQL> col scn new_value scn

SYSTEM@tutor5c_n1educ2 SQL>

SYSTEM@tutor5c_n1educ2 SQL> select to_char(current_scn)
as scn

2 from v\$database;

Hit Any Key to Continue

SCN

213485700

1 row selected.

SYSTEM@tutor5c_n1educ2 SQL>

SYSTEM@tutor5c_n1educ2 SQL> pause

SYSTEM@tutor5c_n1educ2 SQL>

SYSTEM@tutor5c_n1educ2 SQL> rem see it

SYSTEM@tutor5c_n1educ2 SQL> pause

SYSTEM@tutor5c_n1educ2 SQL>

dist_tran_fail.txt

```
SYSTEM@tutor5c_n1educ2 SQL> def scn
DEFINE SCN = "213485700" (CHAR)
SYSTEM@tutor5c_n1educ2 SQL>
SYSTEM@tutor5c_n1educ2 SQL>
SYSTEM@tutor5c_n1educ2 SQL> rem now force commit or force
rollback using
SYSTEM@tutor5c_n1educ2 SQL> rem the local transid and scn
SYSTEM@tutor5c_n1educ2 SQL> pause
```

```
SYSTEM@tutor5c_n1educ2 SQL>
SYSTEM@tutor5c_n1educ2 SQL> exec
dbms_transaction.commit_force('&ltranid','&scn')
```

PL/SQL procedure successfully completed.

```
SYSTEM@tutor5c_n1educ2 SQL>
SYSTEM@tutor5c_n1educ2 SQL> rem one may aslo use "commit
force '&ltranid' '&scn';"
SYSTEM@tutor5c_n1educ2 SQL> pause
```

```
SYSTEM@tutor5c_n1educ2 SQL>
SYSTEM@tutor5c_n1educ2 SQL> rem now try again to access
the table
SYSTEM@tutor5c_n1educ2 SQL> pause
```

```
SYSTEM@tutor5c_n1educ2 SQL>
SYSTEM@tutor5c_n1educ2 SQL> select *
2 from scott.emp;
```

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EMPNO	ENAME	JOB	MGR	HIREDATE
	SAL	COMM	DEPTNO	
7369	SMITH	CLERK	7902	17-dec-1980
00:00:00	800		20	
7499	ALLEN	SALESMAN	7698	20-feb-1981
00:00:00	1600	300	30	
7521	WARD	SALESMAN	7698	22-feb-1981
00:00:00	1250	500	30	
7566	JONES	MANAGER	7839	02-apr-1981
00:00:00	2975		20	
7654	MARTIN	SALESMAN	7698	28-sep-1981


```

                                dist_tran_fail.txt
00:00:00          1250          1400          30
          7698 BLAKE          MANAGER          7839 01-may-1981
00:00:00          2850          30
          7782 CLARK          MANAGER          7839 09-jun-1981
00:00:00          2450          10
          7788 SCOTT          ANALYST          7566 19-apr-1987
00:00:00          3000          20
          7839 KING          PRESIDENT          17-nov-1981
00:00:00          5000          10
          7844 TURNER          SALESMAN          7698 08-sep-1981
00:00:00          1500          0          30
          7876 ADAMS          CLERK          7788 23-may-1987
00:00:00          1100          20
          7900 JAMES          CLERK          7698 03-dec-1981
00:00:00          950          30
          7902 FORD          ANALYST          7566 03-dec-1981
00:00:00          3000          20
          7934 MILLER          CLERK          7782 23-jan-1982
00:00:00          1300          10

```

14 rows selected.

```

SYSTEM@tutor5c_n1educ2 SQL>
SYSTEM@tutor5c_n1educ2 SQL> rem now lets look at the
pending txns on both sides
SYSTEM@tutor5c_n1educ2 SQL> pause

```

```

SYSTEM@tutor5c_n1educ2 SQL>
SYSTEM@tutor5c_n1educ2 SQL> select 'LOCAL' as
location,state,global_tran_id,
2
local_tran_id,tran_comment,commit#,mixed,advice,force_time
3 from dba_2pc_pending
4 where local_tran_id =
5 (select local_tran_id
6 from dba_2pc_pending)
7 union

```

```

                                dist_tran_fail.txt
      8  select 'REMOTE' as location ,state,global_tran_id,
      9  local_tran_id,tran_comment,commit#,mixed,advice,force_time
     10  from dba_2pc_pending@angel;
Hit Any Key to Continue
LOCATION STATE          GLOBAL_TRAN_ID
LOCAL_TRAN_ID TRAN_COMMENT          COMMIT#      MIXED
ADV FORCE_TIME
-----
LOCAL      forced co TUTOR5C.58db07b1.2.29.6181 2.29.6181
ORA-2PC-CRASH-TEST-7 213485700 no          C
13-may-2014 12:40:10
          mmit

```

```

REMOTE      committed TUTOR5C.58db07b1.2.29.6181 3.17.105177
ORA-2PC-CRASH-TEST-7 213483123 no          C

```

2 rows selected.

```

SYSTEM@tutor5c_n1educ2 SQL>
SYSTEM@tutor5c_n1educ2 SQL> pause

```

```

SYSTEM@tutor5c_n1educ2 SQL>
SYSTEM@tutor5c_n1educ2 SQL> rem and look at the neighbors
on both sides
SYSTEM@tutor5c_n1educ2 SQL> pause

```

```

SYSTEM@tutor5c_n1educ2 SQL>
SYSTEM@tutor5c_n1educ2 SQL> select 'LOCAL' as location,
1.*

```

```

2  from dba_2pc_neighbors l
3  where local_tran_id =
4     (select local_tran_id
5        from dba_2pc_pending)
6  union
7  select 'REMOTE', r.*
8  from dba_2pc_neighbors@angel r;
Hit Any Key to Continue

```

```

LOCATION LOCAL_TRAN_ID IN_OUT      DATABASE  DBUSER_O INT
DBID          SESS#  BRANCH

```

dist_tran_fail.txt

```
-----  
-----  
-----  
LOCAL      2.29.6181      in          SYSTEM      N  
              1 0000  
  
LOCAL      2.29.6181      out         ANGEL        SYSTEM      C  
70717a0e          1 4  
  
REMOTE     3.17.105177      in          TUTOR5C     SYSTEM      C  
58db07b1          1  
5455544F5235435B322E32392E363138315D5B312E345D
```

3 rows selected.

```
SYSTEM@tutor5c_n1educ2 SQL>  
SYSTEM@tutor5c_n1educ2 SQL>  
SYSTEM@tutor5c_n1educ2 SQL> rem if there were mixed  
outcome results we would need to  
SYSTEM@tutor5c_n1educ2 SQL> rem purge them as follows  
SYSTEM@tutor5c_n1educ2 SQL> pause
```

```
SYSTEM@tutor5c_n1educ2 SQL>  
SYSTEM@tutor5c_n1educ2 SQL> exec  
dbms_transaction.purge_mixed('&1tranid')  
BEGIN dbms_transaction.purge_mixed('2.29.6181'); END;
```

```
*  
ERROR at line 1:  
ORA-01453: SET TRANSACTION must be first statement of  
transaction  
ORA-06512: at "SYS.DBMS_TRANSACTION", line 65  
ORA-06512: at "SYS.DBMS_TRANSACTION", line 74  
ORA-06512: at line 1
```

```
SYSTEM@tutor5c_n1educ2 SQL>  
SYSTEM@tutor5c_n1educ2 SQL> pause
```

```
SYSTEM@tutor5c_n1educ2 SQL>  
SYSTEM@tutor5c_n1educ2 SQL> rem if the remote database  
has gone for good and  
SYSTEM@tutor5c_n1educ2 SQL> rem one or more rows remain  
in the local dictionary then  
SYSTEM@tutor5c_n1educ2 SQL> rem they may be removed as  
follows  
SYSTEM@tutor5c_n1educ2 SQL> pause
```

dist_tran_fail.txt

```
SYSTEM@tutor5c_n1educ2 SQL>  
SYSTEM@tutor5c_n1educ2 SQL> exec  
dbms_transaction.purge_lost_db_entry('&1tranid')  
BEGIN dbms_transaction.purge_lost_db_entry('2.29.6181');  
END;
```

*

```
ERROR at line 1:  
ORA-01453: SET TRANSACTION must be first statement of  
transaction  
ORA-06512: at "SYS.DBMS_TRANSACTION", line 65  
ORA-06512: at "SYS.DBMS_TRANSACTION", line 87  
ORA-06512: at line 1
```

```
SYSTEM@tutor5c_n1educ2 SQL>  
SYSTEM@tutor5c_n1educ2 SQL> pause
```

```
SYSTEM@tutor5c_n1educ2 SQL>  
SYSTEM@tutor5c_n1educ2 SQL> rem reenable distributed  
recovery  
SYSTEM@tutor5c_n1educ2 SQL> pause
```

```
SYSTEM@tutor5c_n1educ2 SQL>  
SYSTEM@tutor5c_n1educ2 SQL> alter system enable  
distributed recovery;
```

system altered.

```
SYSTEM@tutor5c_n1educ2 SQL>  
SYSTEM@tutor5c_n1educ2 SQL> pause
```

```
SYSTEM@tutor5c_n1educ2 SQL>  
SYSTEM@tutor5c_n1educ2 SQL> rem check to see if RECO has  
done the business  
SYSTEM@tutor5c_n1educ2 SQL> pause
```

```
SYSTEM@tutor5c_n1educ2 SQL>  
SYSTEM@tutor5c_n1educ2 SQL> select  
'REMOTE',state,global_tran_id,  
2  
local_tran_id,tran_comment,commit#,fail_time,force_time  
3 from dba_2pc_pending@angel  
4 union  
5 select 'LOCAL' as location,state,global_tran_id,  
6  
local_tran_id,tran_comment,commit#,fail_time,force_time
```

```
                                dist_tran_fail.txt
7  from dba_2pc_pending
8  where local_tran_id like '%&&ltranid%';
old  8: where local_tran_id like '%&&ltranid%'
new  8: where local_tran_id like '%2.29.6181%'
```

no rows selected

```
SYSTEM@tutor5c_n1educ2 SQL>
SYSTEM@tutor5c_n1educ2 SQL>
SYSTEM@tutor5c_n1educ2 SQL> rem end the txn for the
distributed query
SYSTEM@tutor5c_n1educ2 SQL> pause
```

```
SYSTEM@tutor5c_n1educ2 SQL>
SYSTEM@tutor5c_n1educ2 SQL> commit;
```

Commit complete.

```
SYSTEM@tutor5c_n1educ2 SQL>
SYSTEM@tutor5c_n1educ2 SQL>
SYSTEM@tutor5c_n1educ2 SQL>
SYSTEM@tutor5c_n1educ2 SQL>
SYSTEM@tutor5c_n1educ2 SQL>
SYSTEM@tutor5c_n1educ2 SQL>
SYSTEM@tutor5c_n1educ2 SQL>
SYSTEM@tutor5c_n1educ2 SQL>
SYSTEM@tutor5c_n1educ2 SQL>
SYSTEM@tutor5c_n1educ2 SQL> spool off
```