

## 【故障 | 监听】

# TNS-12518、TNS-00517 和 Linux Error: 32: Broken pipe

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## 【故障|监听】TNS-12518、TNS-00517 和 Linux Error: 32: Broken pipe

### 1.1 BLOG 文档结构图



### 1.2 前言部分

#### 1.2.1 导读和注意事项

各位技术爱好者，看完本文后，你可以掌握如下的技能，也可以学到一些其它你所不知道的知识，~o(n\_n)o~:

① Linux Error: 32: Broken pipe 的可能原因 (重点)

② TNS-12518: TNS:listener could not hand off client connection 的一般解决过程

③ SQL\*Plus 登录报错: ORA-12537: TNS:connection closed

#### Tips:

- ① 本文在 itpub (<http://blog.itpub.net/26736162>)、博客园 (<http://www.cnblogs.com/lhrbest>) 和微信公众号 (xiaomaimiaolhr) 上有同步更新。
- ② 文章中用到的所有代码、相关软件、相关资料及本文的 pdf 版本都请前往小麦苗的云盘下载，小麦苗的云盘地址见: <http://blog.itpub.net/26736162/viewspace-1624453/>。
- ③ 若网页文章代码格式有错乱，请下载 pdf 格式的文档来阅读。
- ④ 在本篇 BLOG 中，代码输出部分一般放在一行一列的表格中。

本文如有错误或不完善的地方请大家多多指正，ITPUB 留言或 QQ 皆可，您的批评指正是我写作的最大动力。

### 1.3 故障分析及解决过程

#### 1.3.1 故障环境介绍

项目	source db
db 类型	单机
db version	11.2.0.3.0
db 存储	ASM
OS 版本及 kernel 版本	RHEL 6.5

#### 1.3.2 故障发生现象及报错信息

登陆报错:

```
[oracle@orcltest ~]$ sqlplus 'sys/"l@h\r/0"'@LHRDB as sysdba

SQL*Plus: Release 11.2.0.3.0 Production on Thu Mar 16 12:06:36 2017

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ERROR:
ORA-12537: TNS:connection closed
```

查监听日志 (/u01/app/11.2.0/grid/network/admin/listener.ora)，报错如下:

```
16-MAR-2017 12:06:36 *
(CONNECT_DATA=(SERVER=DEDICATED)(SERVICE_NAME=lhrdb)(CID=(PROGRAM=sqlplus)(HOST=orcltest)(USER=oracle))
) * (ADDRESS=(PROTOCOL=tcp)(HOST=192.168.59.129)(PORT=12333)) * establish * lhrdb * 12518
TNS-12518: TNS:listener could not hand off client connection
TNS-12547: TNS:lost contact
TNS-12560: TNS:protocol adapter error
TNS-00517: Lost contact
Linux Error: 32: Broken pipe
```

#### 1.3.3 故障分析

潇湘隐者: <http://www.cnblogs.com/kerrycode/p/4164838.html>  
我的解决参考: <http://www.itpub.net/thread-1870217-1-1.html>

根据 MOS: Troubleshooting Guide for TNS-12518 TNS listener could not hand off client connection (文档 ID 550859.1)中,

Error: 32: Broken pipe

Error stack in listener log:

```
TNS-12518: TNS:listener could not hand off client connection
TNS-12547: TNS:lost contact
  TNS-12560: TNS:protocol adapter error
    TNS-00517: Lost contact
      IBM/AIX RISC System/6000 Error: 32: Broken pipe
```

Cause:

The error 32 indicates the communication has been broken while the listener is trying to hand off the client connection to the server process or dispatcher process.

Action:

1. One of reason would be processes parameter being low, and can be verified by the v\$resource\_limit view.
2. In Shared Server mode, check the 'lsnrctl services' output and see if the dispatcher has refused any connections, if so, then consider increasing the number of dispatchers.
3. Check the alert log for any possible errors.
4. Memory resource is also another cause for this issue. Check the swap, memory usage of the OS.
5. If RAC/SCAN or listener is running in separate home, check the following note:

Note: 1069517.1 ORA-12537 or TNS-12518 if Listener (including SCAN Listener) and Database are Owned by Different OS User

根据第 5 条, 因为我的 grid 是 11.2.0.1, 而 Oracle 是 11.2.0.3 的, 查询 MOS:ORA-12537 / ORA-12547 or TNS-12518 if Listener (including SCAN Listener) and Database are Owned by Different OS User (文档 ID 1069517.1), 里边明确指出是由于 \$RDBMS\_HOME/bin/oracle 文件的权限问题导致。

### 1.3.4 故障解决

\$ORACLE\_HOME/bin/oracle 文件的权限问题, 应该为 -rwsr-s--x, 属主应该是 oracle:asmadmin.

解决办法:

方法:

- 1、修改 oracle 的权限为 6751

```
[root@orcltest bin]# ll /u01/app/oracle/product/11.2.0/dbhome_1/bin/oracle
-rwxr-s--x. 1 oracle asmadmin 210823844 May 18 2014 /u01/app/oracle/product/11.2.0/dbhome_1/bin/oracle
[root@orcltest ~]# chmod 6751 /u01/app/oracle/product/11.2.0/dbhome_1/bin/oracle
[root@orcltest bin]# ll /u01/app/oracle/product/11.2.0/dbhome_1/bin/oracle
-rwsr-s--x. 1 oracle asmadmin 210823844 May 18 2014 /u01/app/oracle/product/11.2.0/dbhome_1/bin/oracle
[root@orcltest bin]#
```

- 2、重新用 setasmgidwrap 设置 oracle

```
[root@orcltest bin]# ll /u01/app/oracle/product/11.2.0/dbhome_1/bin/oracle
-rwxr-s--x. 1 oracle asmadmin 210823844 May 18 2014 /u01/app/oracle/product/11.2.0/dbhome_1/bin/oracle
[root@orcltest ~]# /u01/app/11.2.0/grid/bin/setasmgidwrap -o
/u01/app/oracle/product/11.2.0/dbhome_1/bin/oracle
[root@orcltest bin]# ll /u01/app/oracle/product/11.2.0/dbhome_1/bin/oracle
-rwsr-s--x. 1 oracle asmadmin 210823844 May 18 2014 /u01/app/oracle/product/11.2.0/dbhome_1/bin/oracle
[root@orcltest bin]#
[root@orcltest bin]# stat /u01/app/oracle/product/11.2.0/dbhome_1/bin/oracle
File: `/u01/app/oracle/product/11.2.0/dbhome_1/bin/oracle'
```

```
Size: 210823844      Blocks: 411776      IO Block: 4096   regular file
Device: 802h/2050d   Inode: 1717737    Links: 1
Access: (6751/-rwsr-s--x)  Uid: ( 501/ oracle)   Gid: ( 504/asmadmin)
Access: 2017-03-16 11:05:44.809363974 +0800
Modify: 2014-05-18 17:09:50.508549983 +0800
Change: 2017-03-16 12:33:15.733816820 +0800
[root@orcltest bin]#
[root@orcltest bin]#
```

重新连接:

```
[oracle@orcltest ~]$ sqlplus 'sys/"l@h\r/0"'@LHRDB as sysdba

SQL*Plus: Release 11.2.0.3.0 Production on Thu Mar 16 13:32:48 2017

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Connected to:
Oracle Database 11g Enterprise Edition Release 11.2.0.3.0 - 64bit Production
With the Partitioning, Automatic Storage Management, OLAP, Data Mining
and Real Application Testing options

SYS@LHRDB>
```

## 1.4 故障处理总结

如果可执行文件\$ORACLE\_HOME/bin/oracle 的属主或权限设定出了问题,那么可能会造成很多问题。例如:无法登陆到数据库、ora-600 错误、“TNS-12518: TNS:listener could not hand off client connection”、“Linux Error: 32: Broken pipe”、“ORA-12537: TNS:connection closed”、访问 ASM 磁盘出错等。解决办法很简单,可以在 grid 用户下运行 setasmgidwrap 命令重新配置\$ORACLE\_HOME/bin/oracle 可执行文件的权限和属主或者直接将 oracle 文件的权限修改为 6751。\$ORACLE\_HOME/bin/oracle 可执行文件正确属主应该是 oracle:asmadmin,并且权限必须有 s 共享才可以,如下所示:

```
[root@orcltest ~]$ which setasmgidwrap
/u01/app/11.2.0/grid/bin/setasmgidwrap
[root@orcltest ~]$ setasmgidwrap -o /u01/app/oracle/product/11.2.0/dbhome_1/bin/oracle
[root@orcltest ~]$ ll /u01/app/oracle/product/11.2.0/dbhome_1/bin/oracle
-rwsr-s--x 1 oracle asmadmin 232399083 Apr 21 2015 /u01/app/oracle/product/11.2.0/dbhome_1/bin/oracle
[root@orcltest ~]# ll /u01/app/11.2.0/grid/bin/oracle
-rwsr-s--x. 1 grid oinstall 203972117 Jan 5 2015 /u01/app/11.2.0/grid/bin/oracle
[root@orcltest ~]# chmod 6751 /u01/app/oracle/product/11.2.0/dbhome_1/bin/oracle
[root@orcltest ~]# ll /u01/app/oracle/product/11.2.0/dbhome_1/bin/oracle
-rwsr-s--x 1 oracle asmadmin 232399083 Apr 21 2015 /u01/app/oracle/product/11.2.0/dbhome_1/bin/oracle
[root@orcltest bin]# cd /u01/app/oracle/product/11.2.0/dbhome_1/bin/
[root@orcltest bin]# which stat
/usr/bin/stat
[root@orcltest bin]# stat oracle
  File: `oracle'
  Size: 210823844      Blocks: 411776      IO Block: 4096   regular file
Device: 802h/2050d   Inode: 1717737    Links: 1
Access: (6751/-rwsr-s--x)  Uid: ( 501/ oracle)   Gid: ( 504/asmadmin)
Access: 2017-03-16 12:33:44.809363974 +0800
```

```
Modify: 2014-05-18 17:09:50.508549983 +0800
Change: 2017-03-16 11:05:15.733816820 +0800
```

问:在 UNIX/LINUX 环境中,oracle 数据库启动后存在许多后台进程和前台进程,虽然相关进程产生一些 trace 文件也是常有的事情,但是真正是什么决定了 oracle 相关进程的属性呢?

答:通常来说,oracle 的后台进程的调用是依赖于\$ORACLE\_HOME/bin/oracle 这个二进制文件,但它从远端连入而分配的服务器进程(server process)相关属主的属性则是继承自 listener 进程,而 listener 进程的属主属性同样是进程自其启动的用户(分 oracle 用户和 grid 用户)\$ORACLE\_HOME/bin/oracle 的属主属性。

其他原因:

启动 ORACLE 监听的时候 报错 Linux Error: 32: Broken pipe

原因: 原来/home/oracle/product/9.2.0.1.0/network/log/listener.log 文件超过 2G, 监听就会断掉。

解决办法: 清空日志文件

```
[oracle@localhost oracle]$ cd $ORACLE_HOME/network/log
[oracle@chicago log]$ cat </dev/null> listener.log
```

至此问题解决

有个命令可以对这个写日志进行关闭

```
LSNRCTL> set log_status off
```

要继续写日志, 只需要

```
LSNRCTL> set log_status on
```

也可以在 listener.ora 文件里面添加一项

```
LOGGING_LISTENER = OFF
```

添加了这个之后无论你怎么重启监听, 都不会写日志了。

## 1.5 用到的 SQL 集合

```
setasmgidwrap -o /u01/app/oracle/product/11.2.0/dbhome_1/bin/oracle
chmod 6751 /u01/app/oracle/product/11.2.0/dbhome_1/bin/oracle
stat oracle
```

## 1.6 参考文章

### 1.6.1 MOS

#### 1.6.1.1 Troubleshooting Guide for TNS-12518 TNS listener could not hand off client connection (文档 ID 550859.1)



Troubleshooting Guide for TNS-12518 TNS listener could not hand off client connection (文档 ID 550859.1).mhtml

#### 1.6.1.2 ORA-12537 / ORA-12547 or TNS-12518 if Listener (including SCAN Listener) and Database are Owned by Different OS User (文档 ID 1069517.1)



ORA-12537 ORA-12547 or TNS-12518 if Listener (including SCAN Listener) and Database are Owned by Different OS User (文档 ID 1069517.1).mhtml

#### 1.6.1.3 TNS Listener Crash with Core Dump (文档 ID 549932.1)



TNS Listener Crash with Core Dump (文档 ID 549932.1).mhtml

### 1.6.2 博客

潇湘隐者: <http://www.cnblogs.com/kerrycode/p/4164838.html>

<http://blog.csdn.net/killvoon/article/details/49420485>

我的解决参考: <http://www.itpub.net/thread-1870217-1-1.html>

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