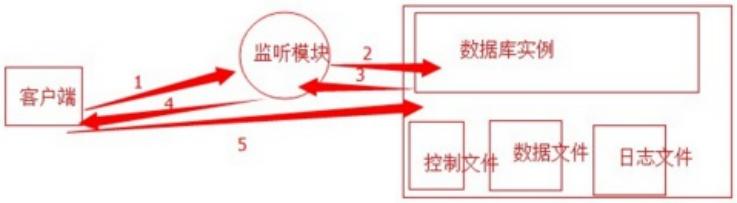
Oracle网络配置（原创）

Oracle 客户端连接到数据库依赖于Oracle Net。Oracle提供了很多基于客户端或服务器的配置工具。

重要名词：监听、服务名、命名方法、NETCA、NETMGR、LSNRCTL、SRVCTL、LISTENER.ORA、SQLNET.ORA、TNSNAMES.ORA等

客户端与服务器通信原理图：



1客户端通过配置好的ip、端口、服务名等去连接监听程序。
2监听程序通过服务名去连接数据实例。
3数据库实例创建一个服务器进程，然后把服务器进程的地址告诉监听。
4监听再将服务器地址告诉客户端。
5客户端拿着这个地址直接去连接数据库实例，客户端会把用户名和密码给服务器进程，服务器进程验证通过后，正式建立链接，以后的客户端和数据库实例连接 都不经过监听了。

一、配置监听

监听分为动态监听和静态监听，从ORACLE9i开始，ORACLE支持动态监听。

动态监听必须在数据库实例打开后才能正常启动和提供监听服务。

在安装GRID后，ASM接管了监听服务，ORACLE数据库也可以配置监听，但一般都在ASM实例下去管理监听。

1.动态监听

动态监听为服务器自动管理监听服务，不需要配置listener.ora文件。

演示如下：

```
[grid@dbserver admin]$ pwd
/u01/app/grid/product/11.2.0/grid/network/admin
[grid@dbserver admin]$ ll
total 24
-rw-r--r-- 1 grid oinstall  491 Mar 20 20:48 listener.bak
-rw-r--r-- 1 grid oinstall  777 Mar 21 00:30 listener.ora
-rw-r--r-- 1 grid oinstall  677 Mar 21 00:28 listener.ora.bak.dbserver
drwxr-xr-x 2 grid oinstall 4096 Mar 14 00:50 samples
-rw-r--r-- 1 grid oinstall  381 Dec 17  2012 shrept.lst
-rw-r--r-- 1 grid oinstall  215 Mar 14 01:50 sqlnet.ora
[grid@dbserver admin]$ rm -rf listener.ora   --删除监听配置文件
[grid@dbserver admin]$ ll
total 20
-rw-r--r-- 1 grid oinstall  491 Mar 20 20:48 listener.bak
-rw-r--r-- 1 grid oinstall  677 Mar 21 00:28 listener.ora.bak.dbserver
drwxr-xr-x 2 grid oinstall 4096 Mar 14 00:50 samples
-rw-r--r-- 1 grid oinstall  381 Dec 17  2012 shrept.lst
-rw-r--r-- 1 grid oinstall  215 Mar 14 01:50 sqlnet.ora

[grid@dbserver ~]$ lsnrctl           --在服务器中进入监听管理程序
LSNRCTL for Linux: Version 11.2.0.4.0 - Production on 21-MAR-2017 20:16:38
Copyright (c) 1991, 2013, Oracle.  All rights reserved.
Welcome to LSNRCTL, type "help" for information.
```

```
LSNRCTL> status
Connecting to (ADDRESS=(PROTOCOL=tcp)(HOST=)(PORT=1521))
TNS-12541: TNS:no listener
 TNS-12560: TNS:protocol adapter error
  TNS-00511: No listener
   Linux Error: 111: Connection refused
LSNRCTL> start
Starting /u01/app/grid/product/11.2.0/grid/bin/tnslsnr: please wait...
TNSLSNR for Linux: Version 11.2.0.4.0 - Production
Log messages written to /u01/app/grid/diag/tnslsnr/dbserver/listener/alert/log.xml
Listening on: (DESCRIPTION=(ADDRESS=(PROTOCOL=tcp)(HOST=dbserver)(PORT=1521)))
Connecting to (ADDRESS=(PROTOCOL=tcp)(HOST=)(PORT=1521))
STATUS of the LISTENER
------------------------
Alias                     LISTENER      --显示监听默认名字
Version                   TNSLSNR for Linux: Version 11.2.0.4.0 - Production     --显示监听版本信息
Start Date                21-MAR-2017 20:16:53              --显示开启监听的时间
Uptime                    0 days 0 hr. 0 min. 5 sec         --表示监听服务打开时间
Trace Level               off                               --显示监听跟踪关闭，不产生监听trace文件
Security                  ON: Local OS Authentication       --显示为操作系统认证
SNMP                      OFF
Listener Log File         /u01/app/grid/diag/tnslsnr/dbserver/listener/alert/log.xml     --显示监听的日志文件路径
Listening Endpoints Summary...
  (DESCRIPTION=(ADDRESS=(PROTOCOL=tcp)(HOST=dbserver)(PORT=1521)))   --显示连接协议、主机、端口
The listener supports no services                   --没有监听到数据库服务
The command completed successfully

LSNRCTL> status   --间隔一段时间后再次查看监听状态
Connecting to (ADDRESS=(PROTOCOL=tcp)(HOST=)(PORT=1521))
STATUS of the LISTENER
------------------------
Alias                     LISTENER
Version                   TNSLSNR for Linux: Version 11.2.0.4.0 - Production
Start Date                21-MAR-2017 20:16:53
Uptime                    0 days 0 hr. 1 min. 42 sec     --一般在1分钟内，监听程序可以侦测到数据库服务并正常打开服务监控。
Trace Level               off
Security                  ON: Local OS Authentication
SNMP                      OFF
Listener Log File         /u01/app/grid/diag/tnslsnr/dbserver/listener/alert/log.xml  --表示监听日志文件
Listening Endpoints Summary...
  (DESCRIPTION=(ADDRESS=(PROTOCOL=tcp)(HOST=dbserver)(PORT=1521)))
Services Summary...
Service "+ASM" has 1 instance(s).
  Instance "+ASM", status READY, has 1 handler(s) for this service...          --READY表示动态监听
Service "sztech1" has 1 instance(s).
  Instance "sztech1", status READY, has 1 handler(s) for this service...
Service "sztech1XDB" has 1 instance(s).
  Instance "sztech1", status READY, has 1 handler(s) for this service...
Service "sztech2" has 1 instance(s).
  Instance "sztech1", status READY, has 1 handler(s) for this service...
The command completed successfully

LSNRCTL> help    --查看监听控制程序的相关命令
The following operations are available
An asterisk (*) denotes a modifier or extended command:

start             stop              status
services          version           reload
save_config       trace             spawn
change_password   quit              exit
set*              show*

LSNRCTL>
```

2.静态监听

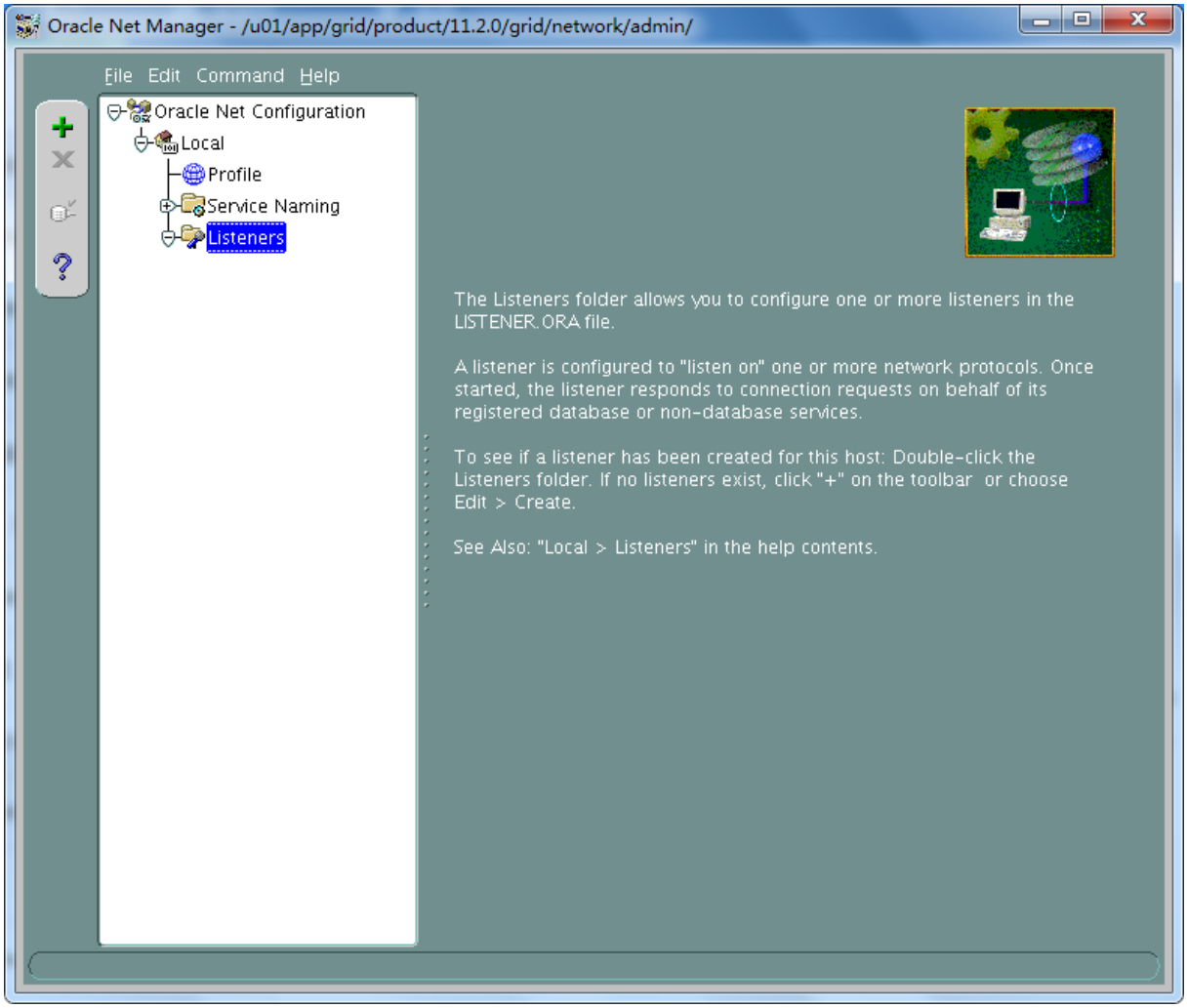
静态监听为用户自己配置的监听，配置文件为$ORACLE_HOME/network/admin/listener.ora

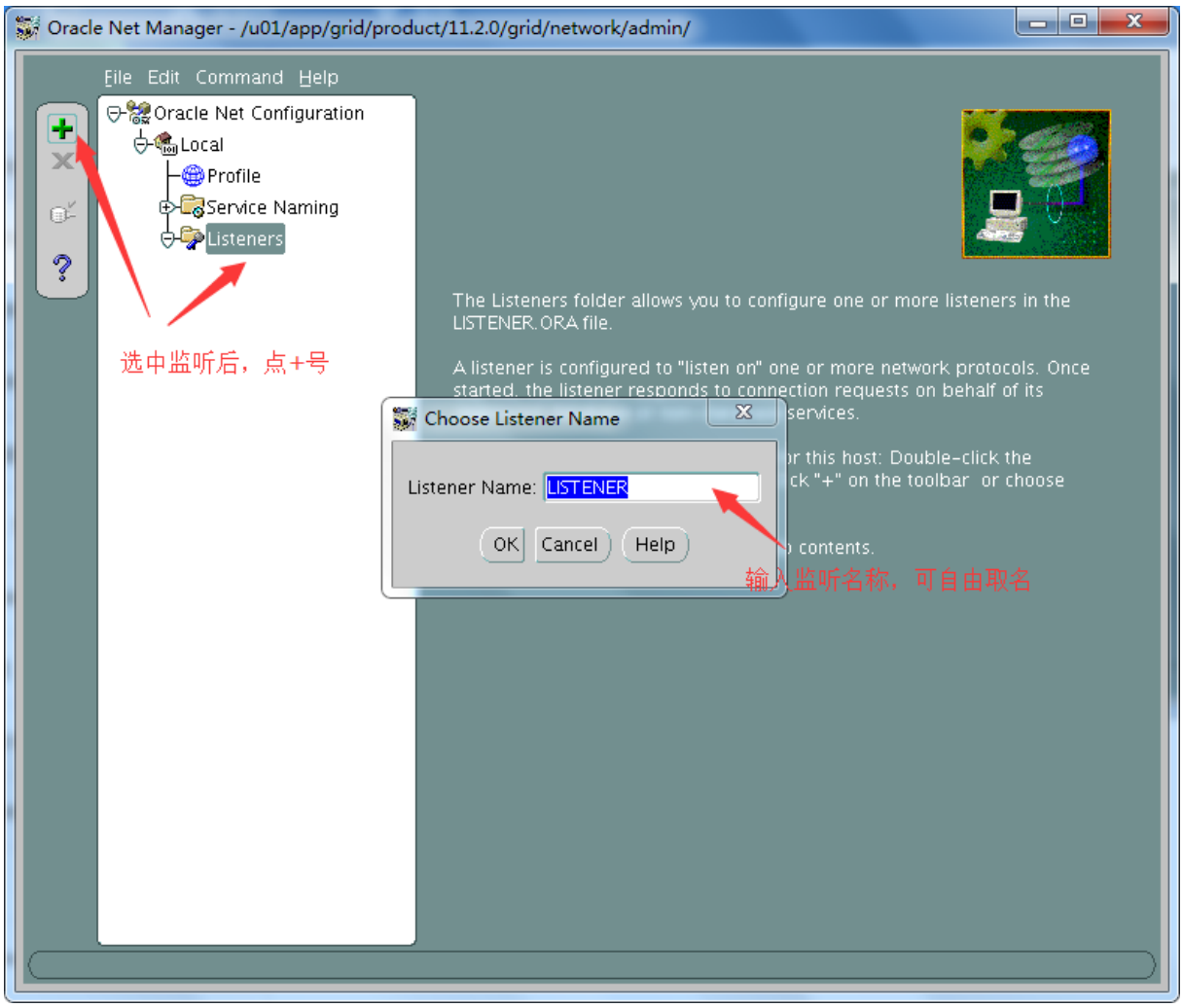
静态监听即使数据库没有正常打开，也可以开始提供监听连接服务，只是无法正常连接到数据。

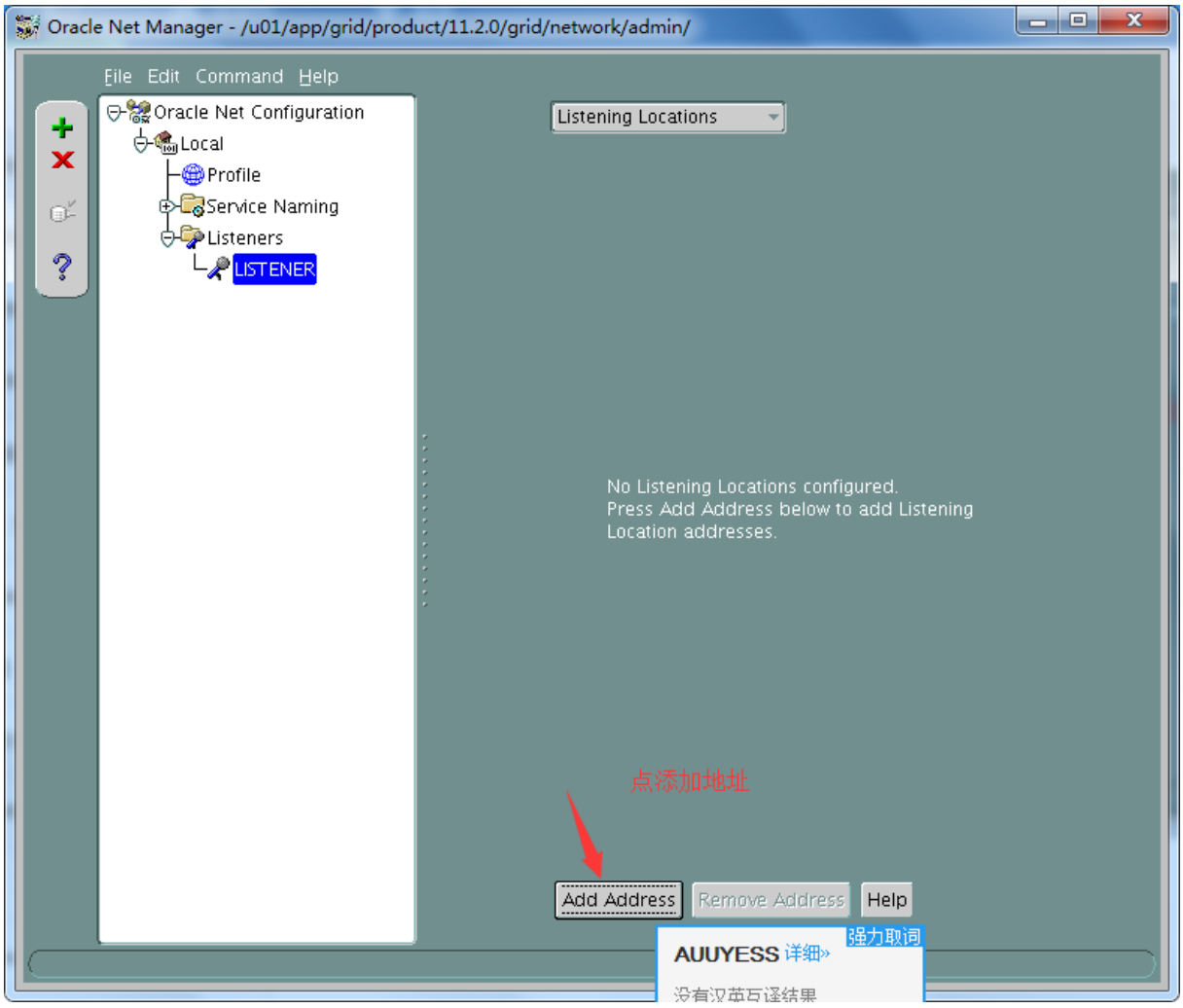
配置静态监听可以使用：netmgr和netca图形工具、lsnrctl命令行工具、EM等。

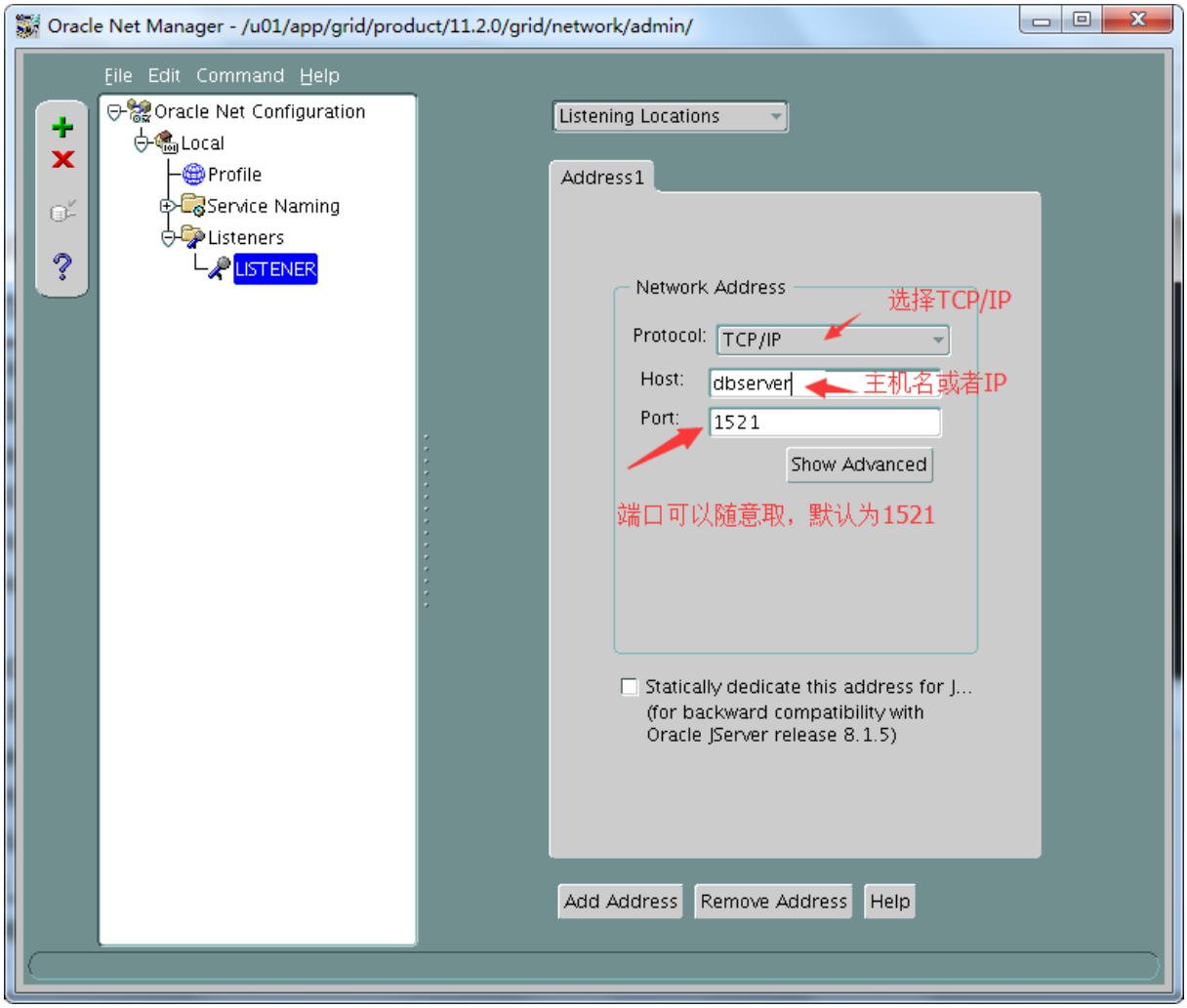
这里我使用netmgr来演示：

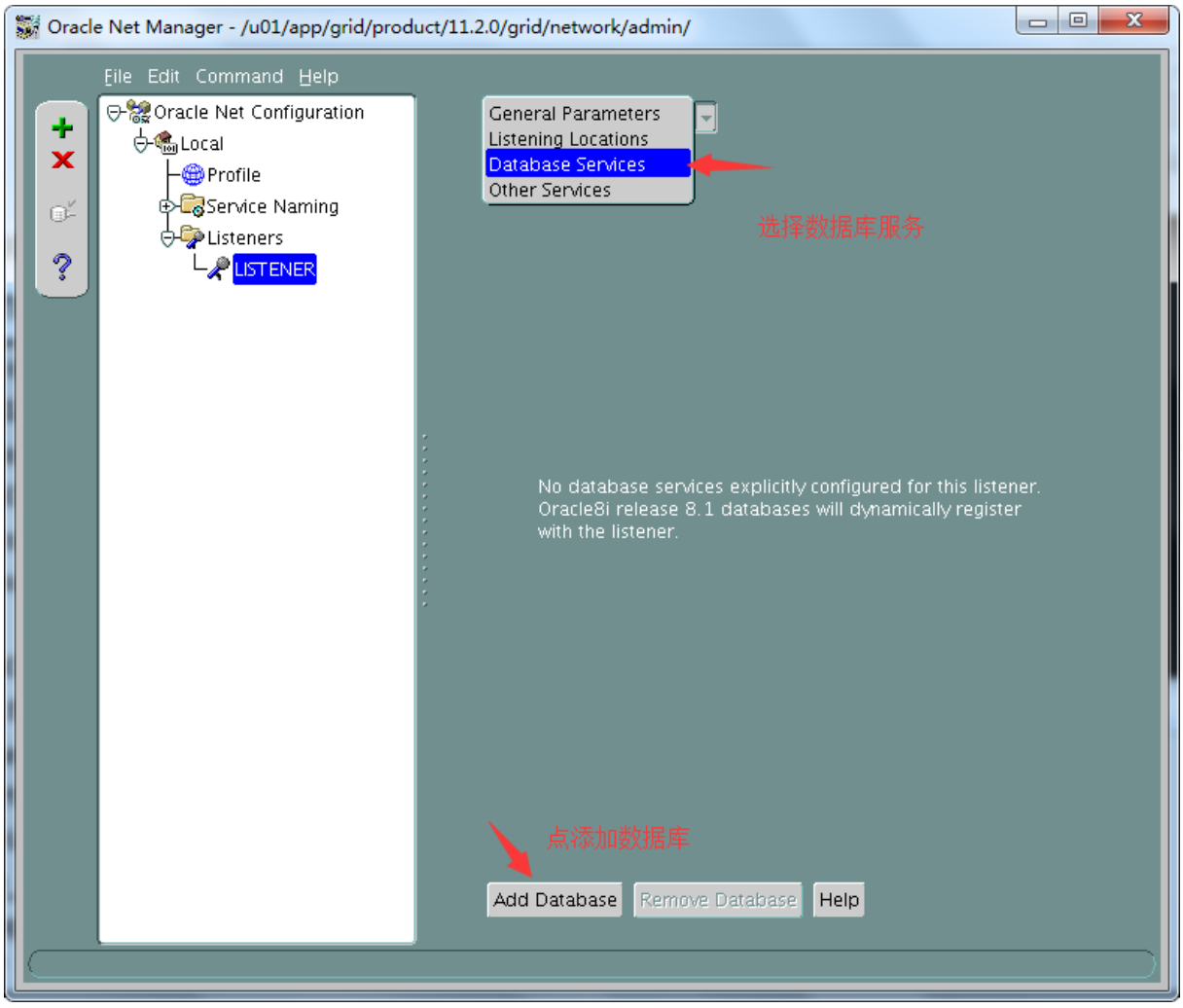
[grid@dbserver ~]$ export DISPLAY=192.168.132.1:0.0
[grid@dbserver ~]$ netmgr

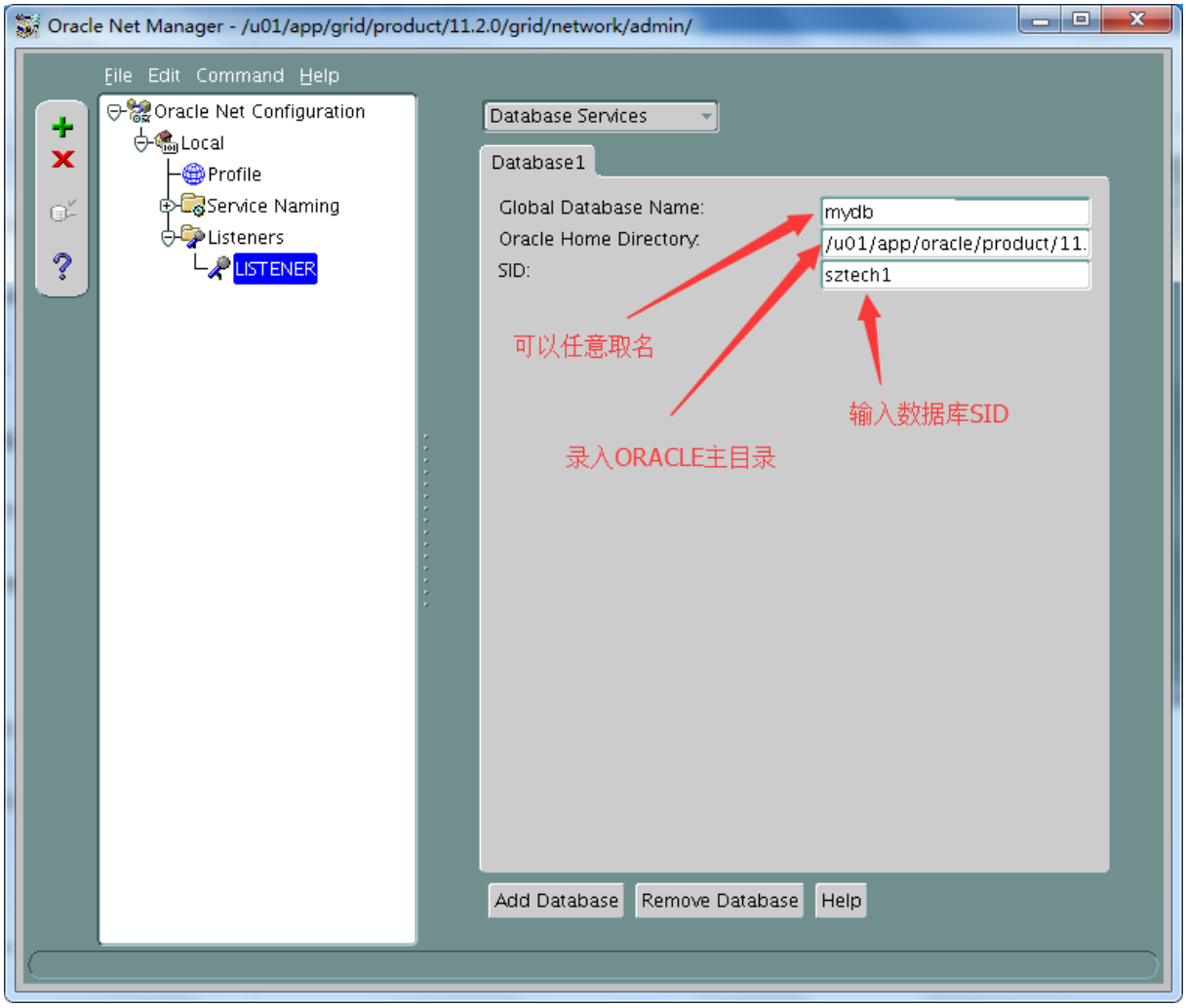



Oracle Net Manager - /u01/app/grid/product/11.2.0/grid/network/admin/
File Edit Command Help
Oracle Net Configuration
Local
Profile
Service Naming
Listeners
选中监听后，点+号
The Listeners folder allows you to configure one or more listeners in the LISTENER.ORA file.
A listener is configured to "listen on" one or more network protocols. Once started, the listener responds to connection requests on behalf of its
services.
Choose Listener Name
Listener Name: LISTENER
OK
Cancel
Help
输入监听名称，可自由取名


Oracle Net Manager - /u01/app/grid/product/11.2.0/grid/network/admin/
File Edit Command Help
Oracle Net Configuration
Local
Profile
Service Naming
Listeners
LISTENER
Listening Locations
No Listening Locations configured.
Press Add Address below to add Listening
Location addresses.
点添加地址
Add Address
Remove Address
Help
AUUYESS 详细»
强力取词


Oracle Net Manager - /u01/app/grid/product/11.2.0/grid/network/admin/
File Edit Command Help
Oracle Net Configuration
Local
Profile
Service Naming
Listeners
LISTENER
Listening Locations
Address1
Network Address
选择TCP/IP
Protocol: TCP/IP
Host: dbserver
主机名或者IP
Port: 1521
Show Advanced
端口可以随意取，默认为1521
Statically dedicate this address for J...
(for backward compatibility with
Oracle JServer release 8.1.5)
Add Address
Remove Address
Help


Oracle Net Manager - /u01/app/grid/product/11.2.0/grid/network/admin/
File Edit Command Help
Oracle Net Configuration
Local
Profile
Service Naming
Listeners
LISTENER
General Parameters
Listening Locations
Database Services
Other Services
选择数据库服务
No database services explicitly configured for this listener.
Oracle8i release 8.1 databases will dynamically register
with the listener.
点添加数据库
Add Database
Remove Database
Help



【

添加服务步骤可以省略，默认为数据库名。

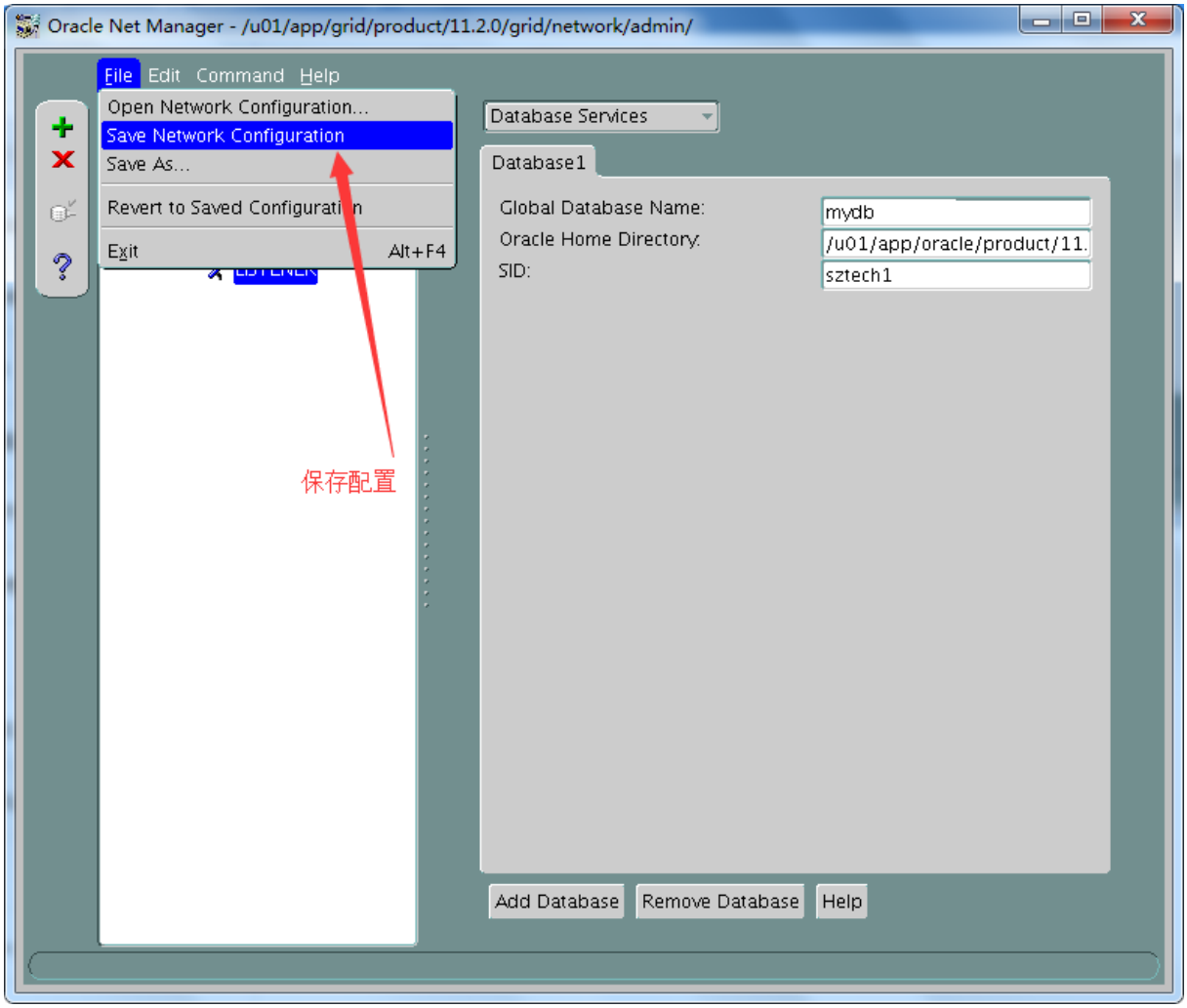
也可以通过命令来添加服务名：

```
[oracle@dbserver ~]$ srvctl add service -d sztech1 -s sztech2
[oracle@dbserver ~]$
```

或者使用sqlplus来设置服务名：

```
SQL> alter system set service_names='sztech1,sztech2,sztech3,mydb' scope=spfile;
System altered.
SQL> startup force
ORACLE instance started.
Total System Global Area 1603411968 bytes
Fixed Size                  2253664 bytes
Variable Size            1006636192 bytes
Database Buffers          587202560 bytes
Redo Buffers                7319552 bytes
Database mounted.
Database opened.
SQL> show parameter service_names
NAME                                 TYPE        VALUE
------------------------------------ ----------- ------------------------------
service_names                        string      sztech1,sztech2,sztech3,mydb
SQL>
```

】



[grid@dbserver ~]$ cd /u01/app/grid/product/11.2.0/grid/network/admin/
[grid@dbserver admin]$ ll
total 24
-rw-r--r-- 1 grid oinstall 454 Mar 21 20:45 listener.ora
drwxr-xr-x 2 grid oinstall 4096 Mar 14 00:50 samples
-rw-r--r-- 1 grid oinstall 381 Dec 17 2012 shrept.lst
-rw-r--r-- 1 grid oinstall 215 Mar 14 01:50 sqlnet.ora
[grid@dbserver admin]$ more listener.ora
listener.ora Network Configuration File: /u01/app/grid/product/11.2.0/grid/network/admin/listener
.ora
Generated by Oracle configuration tools.

```
SID_LIST_LISTENER =
 (SID_LIST =
  (SID_DESC =
   (GLOBAL_DBNAME = mydb)
   (ORACLE_HOME = /u01/app/oracle/product/11.2.0/db_1)
   (SID_NAME = sztech1)
  )
 )

LISTENER =
 (DESCRIPTION =
  (ADDRESS = (PROTOCOL = TCP)(HOST = dbserver)(PORT = 1521))
 )

ADR_BASE_LISTENER = /u01/app/grid
```

[grid@dbserver admin]$

查看新增服务的监听状态：

[grid@dbserver ~]$ lsnrctl

```
LSNRCTL for Linux: Version 11.2.0.4.0 - Production on 21-MAR-2017 21:12:34

Copyright (c) 1991, 2013, Oracle.  All rights reserved.

Welcome to LSNRCTL, type "help" for information.

LSNRCTL> reload   --重新加载监听程序，只对修改的有效，也可以stop后再start
Connecting to (DESCRIPTION=(ADDRESS=(PROTOCOL=TCP)(HOST=dbserver)(PORT=1521)))
The command completed successfully
LSNRCTL> status
Connecting to (DESCRIPTION=(ADDRESS=(PROTOCOL=TCP)(HOST=dbserver)(PORT=1521)))
STATUS of the LISTENER
------------------------
Alias                     LISTENER
Version                   TNSLSNR for Linux: Version 11.2.0.4.0 - Production
Start Date                21-MAR-2017 21:00:01
Uptime                    0 days 0 hr. 12 min. 41 sec
Trace Level               off
Security                  ON: Local OS Authentication
SNMP                      OFF
Listener Parameter File   /u01/app/grid/product/11.2.0/grid/network/admin/listener.ora
Listener Log File         /u01/app/grid/diag/tnslsnr/dbserver/listener/alert/log.xml
Listening Endpoints Summary...
  (DESCRIPTION=(ADDRESS=(PROTOCOL=tcp)(HOST=dbserver)(PORT=1521)))
Services Summary...
Service "+ASM" has 1 instance(s).
  Instance "+ASM", status READY, has 1 handler(s) for this service...
Service "mydb" has 1 instance(s).
  Instance "sztech1", status UNKNOWN, has 1 handler(s) for this service...    --状态UNKNOWN表示静态监听
Service "sztech1" has 1 instance(s).
  Instance "sztech1", status READY, has 1 handler(s) for this service...
Service "sztech1XDB" has 1 instance(s).
  Instance "sztech1", status READY, has 1 handler(s) for this service...
Service "sztech2" has 2 instance(s).
  Instance "sztech1", status READY, has 1 handler(s) for this service...
  Instance "sztech1", status READY, has 1 handler(s) for this service...
Service "sztech3" has 1 instance(s).
  Instance "sztech1", status READY, has 1 handler(s) for this service...
The command completed successfully
```

对lsnrctl工具的相关操作（执行stop和reload）进行密码认证的方法：

```
LSNRCTL> start                  --启动监听
Starting /u01/app/oracle/product/11.2.0/db_1/bin/tnslsnr: please wait...

TNSLSNR for Linux: Version 11.2.0.4.0 - Production
System parameter file is /u01/app/oracle/product/11.2.0/db_1/network/admin/listener.ora
Log messages written to /u01/app/oracle/diag/tnslsnr/dbserver/listener/alert/log.xml
Listening on: (DESCRIPTION=(ADDRESS=(PROTOCOL=tcp)(HOST=dbserver)(PORT=1521)))

Connecting to (DESCRIPTION=(ADDRESS=(PROTOCOL=TCP)(HOST=dbserver)(PORT=1521)))
STATUS of the LISTENER
------------------------
Alias                     LISTENER
Version                   TNSLSNR for Linux: Version 11.2.0.4.0 - Production
Start Date                10-MAY-2017 22:05:21
Uptime                    0 days 0 hr. 0 min. 0 sec
Trace Level               off
Security                  ON: Local OS Authentication                --安全默认设置为操作系统认证
SNMP                      OFF
Listener Parameter File   /u01/app/oracle/product/11.2.0/db_1/network/admin/listener.ora
Listener Log File         /u01/app/oracle/diag/tnslsnr/dbserver/listener/alert/log.xml
Listening Endpoints Summary...
  (DESCRIPTION=(ADDRESS=(PROTOCOL=tcp)(HOST=dbserver)(PORT=1521)))
The listener supports no services
```

```
The command completed successfully
LSNRCTL> change_password      --修改密码
Old password:                 --直接回车
New password:                 --输入密码
Reenter new password:         --重输密码
Connecting to (DESCRIPTION=(ADDRESS=(PROTOCOL=TCP)(HOST=dbserver)(PORT=1521)))
Password changed for LISTENER
The command completed successfully
LSNRCTL> save_config          --保存密码设置
Connecting to (DESCRIPTION=(ADDRESS=(PROTOCOL=TCP)(HOST=dbserver)(PORT=1521)))
Saved LISTENER configuration parameters.
Listener Parameter File   /u01/app/oracle/product/11.2.0/db_1/network/admin/listener.ora
Old Parameter File   /u01/app/oracle/product/11.2.0/db_1/network/admin/listener.bak
The command completed successfully
LSNRCTL> stat                 --查看监听状态
Connecting to (DESCRIPTION=(ADDRESS=(PROTOCOL=TCP)(HOST=dbserver)(PORT=1521)))
STATUS of the LISTENER
------------------------
Alias                     LISTENER
Version                   TNSLSNR for Linux: Version 11.2.0.4.0 - Production
Start Date                10-MAY-2017 22:05:21
Uptime                    0 days 0 hr. 2 min. 29 sec
Trace Level               off
Security                  ON: Password or Local OS Authentication      --安全变更为密码和操作系统认证，但先进行操作系统认证
SNMP                      OFF
Listener Parameter File   /u01/app/oracle/product/11.2.0/db_1/network/admin/listener.ora
Listener Log File         /u01/app/oracle/diag/tnslsnr/dbserver/listener/alert/log.xml
Listening Endpoints Summary...
  (DESCRIPTION=(ADDRESS=(PROTOCOL=tcp)(HOST=dbserver)(PORT=1521)))
Services Summary...
Service "sztech1" has 1 instance(s).
  Instance "sztech1", status READY, has 1 handler(s) for this service...
Service "sztech1XDB" has 1 instance(s).
  Instance "sztech1", status READY, has 1 handler(s) for this service...
Service "sztech2" has 1 instance(s).
  Instance "sztech1", status READY, has 1 handler(s) for this service...
Service "sztech3" has 1 instance(s).
  Instance "sztech1", status READY, has 1 handler(s) for this service...
The command completed successfully
LSNRCTL> exit          --退出监听配置工具
[oracle@dbserver admin]$ cd $ORACLE_HOME/network/admin
[oracle@dbserver admin]$ pwd
/u01/app/oracle/product/11.2.0/db_1/network/admin    --进入监听文件目录
[oracle@dbserver admin]$ vi   listener.ora
# listener.ora Network Configuration File: /u01/app/oracle/product/11.2.0/db_1/network/admin/
listener.ora
# Generated by Oracle configuration tools.
Local_OS_Authentication_listener=off              --手动增加这一行，表示关闭操作系统认证

LISTENER =
  (DESCRIPTION =
    (ADDRESS = (PROTOCOL = TCP)(HOST = dbserver)(PORT = 1521))
  )
ADR_BASE_LISTENER = /u01/app/oracle

#----ADDED BY TNSLSNR 10-MAY-2017 22:05:39---
PASSWORDS_LISTENER = 6D7AA003392C436A       --监听文件会增加密码配置信息
#--------------------------------------------

[oracle@dbserver admin]$ lsnrctl          --重新进入监听管理工具

LSNRCTL for Linux: Version 11.2.0.4.0 - Production on 10-MAY-2017 22:14:11

Copyright (c) 1991, 2013, Oracle.  All rights reserved.

Welcome to LSNRCTL, type "help" for information.
LSNRCTL> start                            --启动监听，会应用配置文件中新增的密码设置
Starting /u01/app/oracle/product/11.2.0/db_1/bin/tnslsnr: please wait...
```

TNSLSNR for Linux: Version 11.2.0.4.0 - Production
System parameter file is /u01/app/oracle/product/11.2.0/db_1/network/admin/listener.ora
Log messages written to /u01/app/oracle/diag/tnslsnr/dbserver/listener/alert/log.xml
Listening on: (DESCRIPTION=(ADDRESS=(PROTOCOL=tcp)(HOST=dbserver)(PORT=1521)))

Connecting to (DESCRIPTION=(ADDRESS=(PROTOCOL=TCP)(HOST=dbserver)(PORT=1521)))
STATUS of the LISTENER

Alias LISTENER
Version TNSLSNR for Linux: Version 11.2.0.4.0 - Production
Start Date 10-MAY-2017 22:14:13
Uptime 0 days 0 hr. 0 min. 0 sec
Trace Level off
Security ON: **Password** **--安全配置选项已变更为只通过密码认证**
SNMP OFF
Listener Parameter File /u01/app/oracle/product/11.2.0/db_1/network/admin/listener.ora
Listener Log File /u01/app/oracle/diag/tnslsnr/dbserver/listener/alert/log.xml
Listening Endpoints Summary...
(DESCRIPTION=(ADDRESS=(PROTOCOL=tcp)(HOST=dbserver)(PORT=1521)))
The listener supports no services
The command completed successfully
LSNRCTL> **stop** **--尝试停止监听**
Connecting to (DESCRIPTION=(ADDRESS=(PROTOCOL=TCP)(HOST=dbserver)(PORT=1521)))
TNS-01169: The listener has not recognized the password **--报密码未通过认证**
LSNRCTL> **set password** **--通过set password命令进行密码认证**
Password: **--输入密码**
The command completed successfully
LSNRCTL> stop **--再次尝试停止监听**
Connecting to (DESCRIPTION=(ADDRESS=(PROTOCOL=TCP)(HOST=dbserver)(PORT=1521)))
The command completed successfully **--可成功关闭**

截断监听日志文件：
LSNRCTL> stat
Connecting to (DESCRIPTION=(ADDRESS=(PROTOCOL=TCP)(HOST=dbserver)(PORT=1521)))
STATUS of the LISTENER

Alias LISTENER
Version TNSLSNR for Linux: Version 11.2.0.4.0 - Production
Start Date 10-MAY-2017 22:36:48
Uptime 0 days 0 hr. 5 min. 26 sec
Trace Level off
Security ON: Local OS Authentication
SNMP OFF
Listener Parameter File /u01/app/oracle/product/11.2.0/db_1/network/admin/listener.ora
Listener Log File **/u01/app/oracle/diag/tnslsnr/dbserver/listener/alert/log.xml** **--显示监听日志文件（xml格式）**
Listening Endpoints Summary...
(DESCRIPTION=(ADDRESS=(PROTOCOL=tcp)(HOST=dbserver)(PORT=1521)))
Services Summary...
Service "sztech1" has 1 instance(s).
Instance "sztech1", status READY, has 1 handler(s) for this service...
Service "sztech1XDB" has 1 instance(s).
Instance "sztech1", status READY, has 1 handler(s) for this service...
Service "sztech2" has 1 instance(s).
Instance "sztech1", status READY, has 1 handler(s) for this service...
Service "sztech3" has 1 instance(s).
Instance "sztech1", status READY, has 1 handler(s) for this service...
The command completed successfully
LSNRCTL> **set log_status off** **--关闭监听日志写入日志文件（有客户在通过监听不断连接服务时，要先关闭日志写入）**
Connecting to (DESCRIPTION=(ADDRESS=(PROTOCOL=TCP)(HOST=dbserver)(PORT=1521)))
LISTENER parameter "log_status" set to OFF
The command completed successfully
LSNRCTL> exit
[oracle@dbserver trace]$ **rm -rf $ORACLE_BASE/diag/tnslsnr/dbserver/listener/trace/listener.log** **--删除log文件**
[oracle@dbserver trace]$ **rm -rf $ORACLE_BASE/diag/tnslsnr/dbserver/listener/alert/log.xml** **--删除xml文件**

LSNRCTL> **set log_status on** **--再次打开监听日志文件记录**

Connecting to (DESCRIPTION=(ADDRESS=(PROTOCOL=TCP)(HOST=dbserver)(PORT=1521)))
LISTENER parameter "log_status" set to ON
The command completed successfully

在linux中可以通过简便方法进行监听日志文件清空：
[oracle@dbserver trace]$ > /u01/app/oracle/diag/tnslsnr/dbserver/listener/trace/listener.log
[oracle@dbserver trace]$ > /u01/app/oracle/diag/tnslsnr/dbserver/listener/alert/log.xml

配置listener.ora中ADMIN_RESTRICTIONS参数：

参数作用：

当在listener.ora文件中设置了ADMIN_RESTRICTIONS参数后，在监听器运行时，不允许执行任何管理命令，同时set命令将不可用，不论是在服务器本地还是从远程执行都不行。此时对于监听的设置仅仅通过手工修改listener.ora文件，要使修改生效，只能使用lsnrctl reload命令或lsnrctl stop/start命令重新载入一次监听器配置信息。

修改方法：

在listener.ora文件中手动加入下面这样一行

ADMIN_RESTRICTIONS_<监听器名> = ON

3. sqlnet.ora介绍

如果使用了SQLNET.AUTHENTICATION_SERVICES=(NTS)
则说明可以使用OS认证就，只要conn / as sysdba 就可以登陆
但如果注释掉或SQLNET.AUTHENTICATION_SERVICES=(none)
必须要使用conn sys/password@Oracle as sysdba才能登陆

1）、在windows下，SQLNET.AUTHENTICATION_SERVICES必须设置为NTS或者 ALL才能使用OS认证；不设置或者设置为其他任何值都不能使用OS认证。
2）、在Linux下，在SQLNET.AUTHENTICATION_SERVICES的值设置为ALL，或者不设置的情况下，OS验证才能成功；设置为其他任何值都不能使用OS认证。

[grid@dbserver admin]$ more sqlnet.ora

sqlnet.ora Network Configuration File: /u01/app/grid/product/11.2.0/grid/network/admin/sqlnet.ora
Generated by Oracle configuration tools.

NAMES.DIRECTORY_PATH= (TNSNAMES, EZCONNECT) --首先通过本地命名进行连接和解析，其次通过简易连接。
#SQLNET.AUTHENTICATION_SERVICES=(ALL) --此处未启动该参数，默认为支持操作系统认证
ADR_BASE = /u01/app/grid   --设置服务器监听相关的诊断和日志目录，默认为$ORACLE_BASE
[grid@dbserver admin]$

4.命令方法

一般分为简易连接、本地命名、目录命名、外部命名

客户端大都采用本地命名，DBA一般使用简易连接。

目录命名和外部命名不会经常使用。

1)简易连接

主机（IP）：端口/服务名

例：192.168.132.120：1521/sztech1

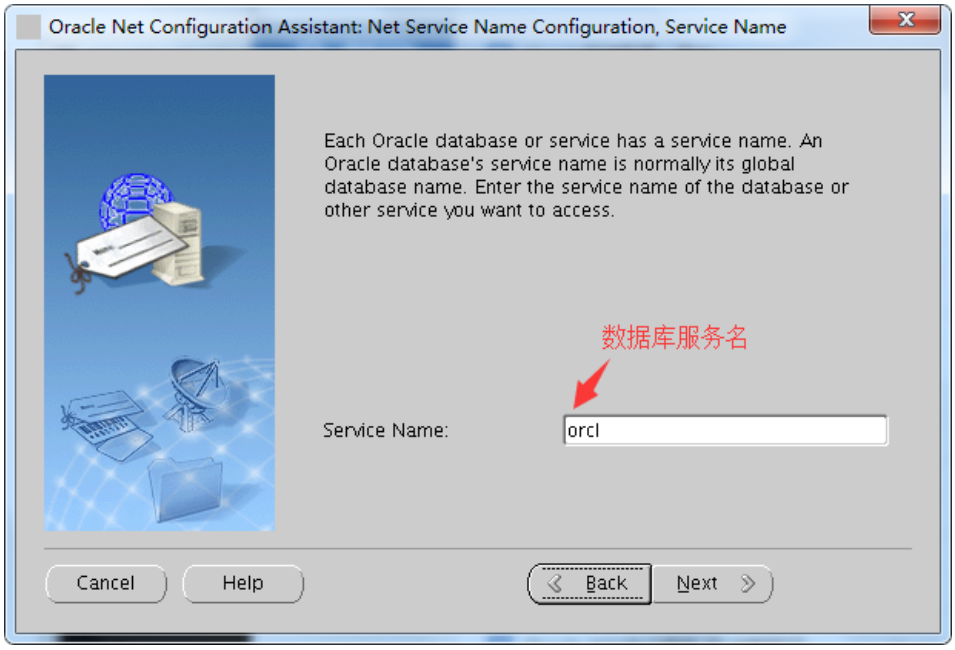
SQL> conn hr/hr@192.168.132.120:1521/sztech1

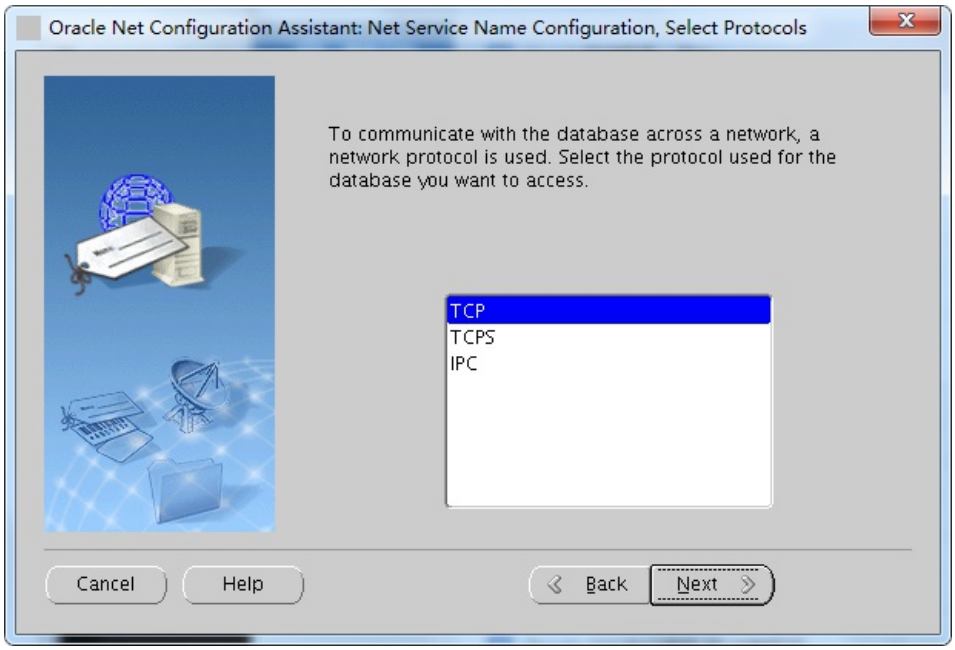
Connected.
SQL>

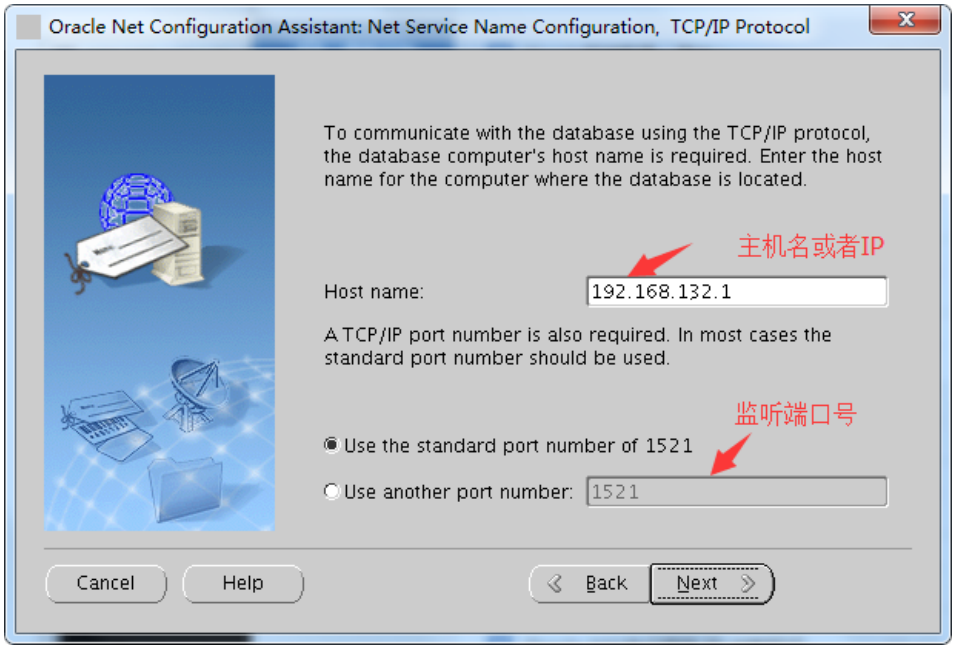
2)本地命名

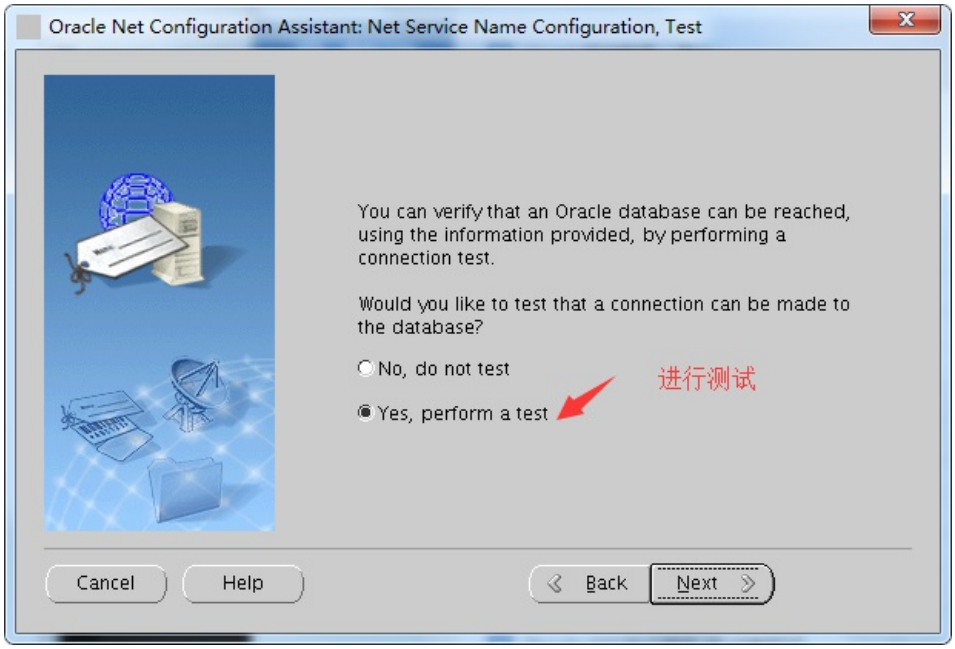
可以直接设置tnsnames.ora文件,也可以通过配置工具来设置。

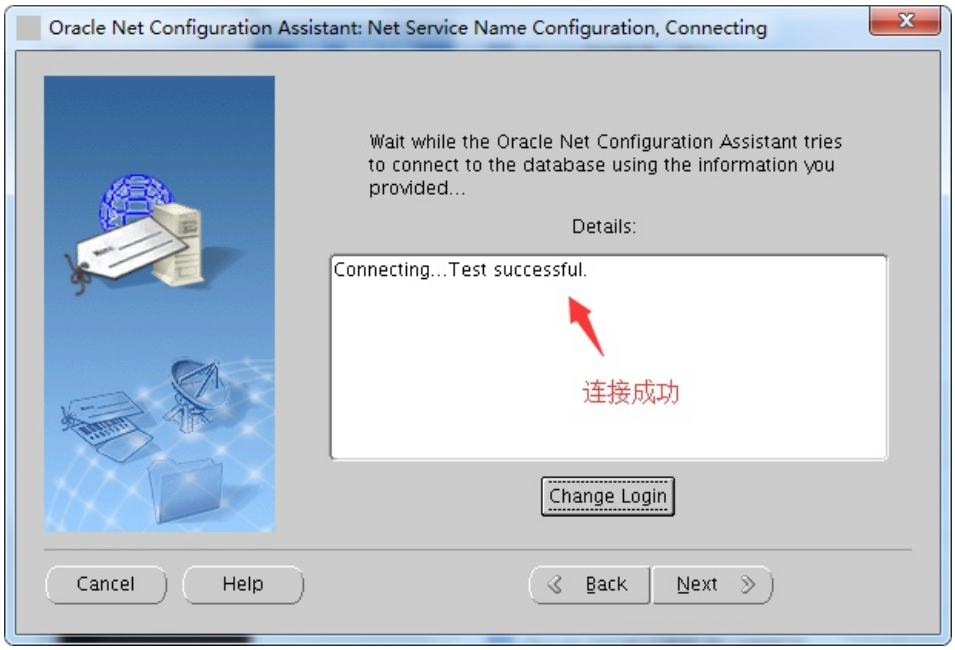
[grid@dbserver grid]$ netca











配置后会在$ORACLE_HOME/network/admin 中生成tnsnames.ora文件，也可以手工配置该文件。

测试连接：

[grid@dbserver grid]$ **tnsping** orcl
（--tnsping用于连接监听是否连通，但无法检测数据库是否正常打开，即是说能连接监听，但不一定能连接数据库。）
TNS Ping Utility for Linux: Version 11.2.0.4.0 - Production on 21-MAR-2017 21:32:28
Copyright (c) 1997, 2013, Oracle. All rights reserved.
Used parameter files:
/u01/app/grid/product/11.2.0/grid/network/admin/sqlnet.ora
Used TNSNAMES adapter to resolve the alias
Attempting to contact (DESCRIPTION = (ADDRESS_LIST = (ADDRESS = (PROTOCOL = TCP)(HOST = 192.168.132.1)(PORT = 1521))) (CONNECT_DATA = (SERVICE_NAME = orcl)))
OK (10 msec)

查看之前配置的命名文件内容：
[grid@dbserver grid]$ more /u01/app/grid/product/11.2.0/grid/network/admin/tnsnames.ora
tnsnames.ora Network Configuration File: /u01/app/grid/product/11.2.0/grid/network/admin/tnsnames.ora
Generated by Oracle configuration tools.

```
ORCL =
 (DESCRIPTION =
   (ADDRESS_LIST =
     (ADDRESS = (PROTOCOL = TCP)(HOST = 192.168.132.1)(PORT = 1521))
   )
   (CONNECT_DATA =
     (SERVICE_NAME = orcl)
   )
 )
```

使用本地命名时限制用户连接超时可以加入下面的内容（如果不限制，默认超时时间是60秒）：

```
ORCL =
 (DESCRIPTION =
   (TRANSPORT_CONNECT_TIMEOUT=10)                    --注意，是在DESCRIPTION参数后面加入(TRANSPORT_CONNECT_TIMEOUT=10)
   (ADDRESS_LIST =
     (ADDRESS = (PROTOCOL = TCP)(HOST = 192.168.132.1)(PORT = 1521))
   )
   (CONNECT_DATA =
     (SERVICE_NAME = orcl)
   )
 )
```

5.启动/或者关闭监听的其它方法

srvctl命令行

```
[grid@dbserver grid]$ srvctl start listener -h    --适用GI环境
Starts the listener.
Usage: srvctl start listener [-l <lsnr_name>]
    -l <lsnr_name>          Listener name
    -h                      Print usage
[grid@dbserver grid]$ srvctl stop listener   --关闭监听
[grid@dbserver grid]$ srvctl start listener  -l listener   --启动监听，-l listener可以省略，默认为listener
[grid@dbserver grid]$ srvctl status listener   --查看监听状态
Listener LISTENER is enabled
Listener LISTENER is running on node(s): dbserver
```

EM管理监听：（略）

监听程序: LISTENER_dbserver

监听程序进程的行为和身份不仅由监听端点 ('主机' 和 '端口') 定义, 还由用于启动监听程序进程的 "监听程序参数文件" (listener.ora) 定义。"监听程序参数文件
数。因此, 它的位置对于 EM 唯一标识 "监听程序目标" 是必需的。

主目录 | 性能 | 所服务的数据库

一般信息

编辑 停止 封锁

状态	**启动**
可用性 (%)	99 (前 24 小时)
别名	**LISTENER**
版本	**11.2.0.4.0**
Oracle 主目录	/u01/app/grid/product/11.2.0/grid
网络地址	**(ADDRESS=(PROTOCOL=TCP)(HOST=dbserver)(PORT=1521))**
LISTENER.ORA 位置	**/u01/app/grid/product/11.2.0/grid/network/admin**
启动时间	**2017-3-21 21:00:01**
主机	dbserver
Oracle Restart	启用

状态

TNS 试通 (毫秒)	✔ 0
每分钟建立的连接	5.81
每分钟拒绝的连接	0

违反策略

当前 5 3 0　　违反的不同规则 3 3 0　　相容性分数 (%) **91**　　策略趋势概览