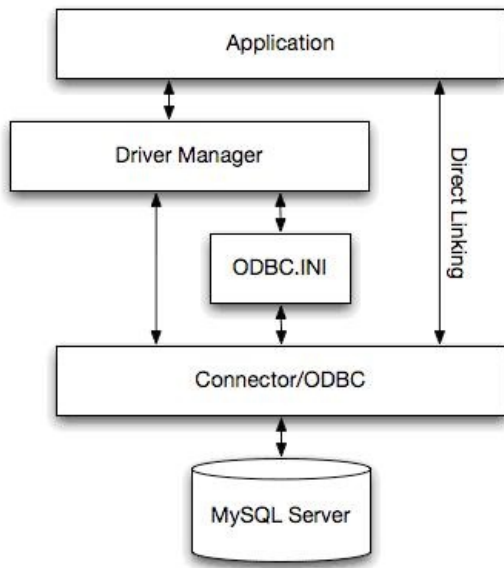


oracle dg4odbc for mysql

一、架构



连接过程是：

oracle 实例=====》 Unixodbc=====》 odbc connect for mysql=====》 mysql db

二、配置

1、查看 dg4odbc 是 64 还是 32。

64-bit versions of DG4ODBC require a 64-bit ODBC driver. If you do not know whether your version of DG4ODBC is 32-bit or 64-bit, log on as your Oracle user and run:

```
cd $ORACLE_HOME/bin
file dg4odbc
```

If the command output contains something like "ELF 64-bit LSB executable", your version of DG4ODBC is 64-bit, and you need to use it with a 64-bit ODBC driver.

这是我本机的结果：

```
root@74e26c7f9370:~# cd $ORACLE_HOME/bin; file dg4odbc
dg4odbc: ELF 64-bit LSB executable, x86-64, version 1 (SYSV), dynamically linked, interpreter /lib64/ld-linux-x86-64.so.2, for GNU/Linux 2.4.0, stripped
```

2、安装 unixodbc 和 odbc Connector for mysql

a、安装 unixodbc（略）

下面是我本机安装的 unixodbc


```
root@74e26c7f9370:~# dpkg -l | grep odbc
ii  libodbc1:amd64      2.3.1-4.1      ODBC library for Unix
ii  odbcinst            2.3.1-4.1      Helper program for accessing odbc ini files
ii  odbcinst1debian2:amd64  2.3.1-4.1      Support library for accessing odbc ini files
ii  unixodbc           2.3.1-4.1      Basic ODBC tools
```

b、安装 odbc Connector（略）

下面是我安装的：

网址：<https://dev.mysql.com/downloads/connector/odbc/>

附件：

 mysql-connector-odbc-5.3.9-linux-ubuntu16.04-x86-64.gz
2017/08/01 11:30, 11.30MB

下载时图：

Connector/ODBC 5.3.9

Select Operating System:

Ubuntu Linux

Looking for previous GA versions?

Select OS Version:

Ubuntu Linux 16.04 (x86, 64-bit)

Compressed TAR Archive

5.3.9

11.3M

Download

(mysql-connector-odbc-5.3.9-linux-ubuntu16.04-x86-64bit.tar.gz)

MD5: dd825178e8f68296f847f12a9503cefa | Signature



We suggest that you use the MD5 checksums and GnuPG signatures to verify the integrity of the packages you download.

下载解压后只使用so文件【自定义存放位置】即可，下面是我系统的libmyodbc5*.so文件的位置：

```
root@74e26c7f9370:~# ls $ORACLE_HOME/lib/libmyodbc5*.so -al
-rw-r--r-- 1 oracle dba 5637064 Jul 31 01:30 /u01/app/oracle/product/11.2.0/xe/lib/libmyodbc5S.so
-rw-r--r-- 1 oracle dba 10909720 Jul 31 01:30 /u01/app/oracle/product/11.2.0/xe/lib/libmyodbc5a.so
-rw-r--r-- 1 oracle dba 10905504 Jul 31 01:30 /u01/app/oracle/product/11.2.0/xe/lib/libmyodbc5w.so
```

其中myodbc5a.so 使用ansi编码，myodbc5w.so使用unicode编码

3.配置odbc for mysql

下图是我本地的配置：

```
root@74e26c7f9370:~# cat /etc/odbc.ini
[ODBC Data Sources]
data_source_name = my5w
data_source_name = my5a

[my5w]
Driver           = /u01/app/oracle/product/11.2.0/xe/lib/libmyodbc5w.so
DATABASE        = ict
DESCRIPTION     = MySQL ODBC 5.3 Unicode Driver
SERVER          = 192.168.1.100
USER            = root
PORT            = 3306
PASSWORD        =
SOCKET          =

[my5a]
Driver           = /u01/app/oracle/product/11.2.0/xe/lib/libmyodbc5a.so
DATABASE        = ict
DESCRIPTION     = MySQL ODBC 5.3 ANSI Driver
SERVER          = 192.168.1.100
USER            = root
PORT            = 3306
PASSWORD        =
SOCKET          =
```

其中：

data_source_name是odbc实例【如不在ODBC Data Sources中指定也可以】

Driver：驱动so文件路径

DATABASE：指定数据库

SERVER：mysql服务器，这里写的是ip地址

USER：mysql数据库帐号

PASSWORD：mysql数据库密码

PORT：mysql数据库端口

测试：

```
root@74e26c7f9370:~# isql my5w -v
+-----+
| Connected!
+-----+
| sql-statement
| help [tablename]
| quit
+-----+
SQL> select count(*) from t_1;
+-----+
| count(*)
+-----+
| 13
+-----+
SQLRowCount returns 1
1 rows fetched
SQL>
```

注意：这一步仅代表unixodbc配置是正确的

4、配置oracle 外部实例

a、listener.ora配置，下图红色框内为添加部分

```
root@74e26c7f9370:/u01/app/oracle/product/11.2.0/xe/network/admin# cd $ORACLE_HOME/network/admin ; cat listener.ora ; cd
# listener.ora Network Configuration File:

SID_LIST_LISTENER =
  (SID_LIST =
    (SID_DESC =
      (SID_NAME = PLSExtProc)
      (ORACLE_HOME = /u01/app/oracle/product/11.2.0/xe)
      (PROGRAM = extproc)
    )
    (SID_DESC =
      (PROGRAM = dg4odbc)
      (SID_NAME = myodbc5w)
    )
  )

LISTENER =
  (DESCRIPTION_LIST =
    (DESCRIPTION =
      (ADDRESS = (PROTOCOL = IPC)(KEY = EXTPROC_FOR_XE))
      (ADDRESS = (PROTOCOL = TCP)(HOST = 74e26c7f9370)(PORT = 1521))
    )
  )

DEFAULT_SERVICE_LISTENER = (XE)
```

说明：实例指定是dg4odbc实例，并且自定义实例名是myodbc5w

b、initmyodbc5w.ora 配置：

```
root@74e26c7f9370:~# cd $ORACLE_HOME/hs/admin ; cat initmyodbc5w.ora ; cd
# This is a sample agent init file that contains the HS parameters that are
# needed for the Database Gateway for ODBC
#
# HS init parameters
#
HS_FDS_CONNECT_INFO = my5w
HS_FDS_SHAREABLE_NAME = /usr/lib/x86_64-linux-gnu/libodbc.so.2.0.0
HS_LANGUAGE=AMERICAN_AMERICA.ZHS16GBK
#
# ODBC specific environment variables
#
# Environment variables required for the non-oracle system
#
#set <envvar>=<value>
root@74e26c7f9370:~# █
```

说明：

HS_FDS_CONNECT_INFO指定odbc的实例，上面我创建了两个odbc实例，现在指定其中一个是my5w，当oracle与其连接时，会默认读取/etc/odbc.ini文件。

HS_FDS_SHAREABLE_NAME指定odbc的so文件【oracle与odbc连接调用使用】，如果在系统lib环境下可以不指定。

HS_LANGUAGE指定语言字符集，这里用来识别mysql中字符集的，这里可以暂且指定一个，但有可能通过oracle查询导致汉字乱码。

重启监听：

```
root@74e26c7f9370:~# lsnrctl stop && lsnrctl start

LSNRCTL for Linux: Version 11.2.0.2.0 - Production on 01-AUG-2017 04:26:38
Copyright (c) 1991, 2011, Oracle. All rights reserved.

Connecting to (DESCRIPTION=(ADDRESS=(PROTOCOL=IPC)(KEY=EXTPROC_FOR_XE)))
The command completed successfully

LSNRCTL for Linux: Version 11.2.0.2.0 - Production on 01-AUG-2017 04:26:40
Copyright (c) 1991, 2011, Oracle. All rights reserved.

Starting /u01/app/oracle/product/11.2.0/xe/bin/tnslsnr: please wait...

TNSLSNR for Linux: Version 11.2.0.2.0 - Production
System parameter file is /u01/app/oracle/product/11.2.0/xe/network/admin/listener.ora
Log messages written to /u01/app/oracle/product/11.2.0/xe/log/diag/tnslsnr/74e26c7f9370/listener/alert/log.xml
Listening on: (DESCRIPTION=(ADDRESS=(PROTOCOL=ipc)(KEY=EXTPROC_FOR_XE)))
Listening on: (DESCRIPTION=(ADDRESS=(PROTOCOL=tcp)(HOST=74e26c7f9370)(PORT=1521)))

Connecting to (DESCRIPTION=(ADDRESS=(PROTOCOL=IPC)(KEY=EXTPROC_FOR_XE)))
STATUS of the LISTENER
-----
Alias                LISTENER
Version              TNSLSNR for Linux: Version 11.2.0.2.0 - Production
Start Date            01-AUG-2017 04:26:40
Uptime                0 days 0 hr. 0 min. 0 sec
Trace Level           off
Security              ON: Local OS Authentication
SNMP                  OFF
Default Service      XE
Listener Parameter File /u01/app/oracle/product/11.2.0/xe/network/admin/listener.ora
Listener Log File    /u01/app/oracle/product/11.2.0/xe/log/diag/tnslsnr/74e26c7f9370/listener/alert/log.xml
Listening Endpoints Summary...
  (DESCRIPTION=(ADDRESS=(PROTOCOL=ipc)(KEY=EXTPROC_FOR_XE)))
  (DESCRIPTION=(ADDRESS=(PROTOCOL=tcp)(HOST=74e26c7f9370)(PORT=1521)))
Services Summary...
Service "PLSExtProc" has 1 instance(s).
  Instance "PLSExtProc", status UNKNOWN, has 1 handler(s) for this service...
Service "myodbc5w" has 1 instance(s).
  Instance "myodbc5w", status UNKNOWN, has 1 handler(s) for this service...
The command completed successfully
root@74e26c7f9370:~# █
```

测试：

```
root@74e26c7f9370:~# tnsping '(DESCRIPTION=(ADDRESS=(PROTOCOL=TCP)(HOST=██████████)(PORT=1521))(CONNECT_DATA=(SID=myodbc5w))(HS=OK))'
TNS Ping Utility for Linux: Version 11.2.0.2.0 - Production on 01-AUG-2017 04:33:09
Copyright (c) 1997, 2011, Oracle. All rights reserved.
Attempting to contact (DESCRIPTION=(ADDRESS=(PROTOCOL=TCP)(HOST=74e26c7f9370)(PORT=1521))(CONNECT_DATA=(SID=myodbc5w))(HS=OK))
OK (0 msec)
root@74e26c7f9370:~#
```

注意：这里的测试成功只能代表oracle的配置没问题，至于oracle连接odbc是否成功，只能通过dblink实测。

5、创建dblink

这是我本地测试：

```
SQL> create public database link my5w connect to "root" identified by "ctf.ac.cn@" using '(DESCRIPTION=(ADDRESS=(PROTOCOL=TCP)(HOST=██████████)(PORT=1521))(CONNECT_DATA=(SID=myodbc5w))(HS=OK))';
Database link created.
SQL> select count(*) from "tb_user"@my5w;
   COUNT(*)
-----
         13
```

参考：<http://www.easysoft.com/applications/oracle/database-gateway-dg4odbc.html>