

## 關於如何用python on linux 連入位於其他主機上的sql server (pyspark亦同)

注意：1.被連入方的防火牆要做設定

在 控制台\系統及安全性\Windows 防火牆\允許的程式 加入port:1433

2.在spark上如果用map去call database連線數會爆掉喔！建議是用在  
reducer並控制reducer數量

**Step1.**連入方(linux)要有下列兩個套件，UnixODBC, FreeTDS

**Step2.**連入方python要有pypyodbc套件

**Step3.**設定 LD\_LIBRARY\_PATH

**Step4.**找出下列檔案並按圖修改：

/etc/odbc.ini

```
# Define a connection to a Microsoft SQL server
# The Description can be whatever we want it to be.
# The Driver value must match what we have defined in /etc/
odbcinst.ini
# The Database name must be the name of the database this
connection will connect to.
# The ServerName is the name we defined in /etc/freetds/
freetds.conf
# The TDS_Version should match what we defined in /etc/freetds/
freetds.conf
[mssql]
Description          = MSSQL Server
Driver               = freetds
Database             = XXXXXX
ServerName           = MSSQL
TDS_Version          = 8.0
/etc/odbcinst.ini
```

注意：path 路徑是根據libtdsodbc.so和libtdsS.so在哪而定

```
# Define where to find the driver for the Free TDS connections.
[freetds]
Description          = MS SQL database access with Free TDS
Driver               = /usr/lib/i386-linux-gnu/odbc/libtdsodbc.so
Setup                = /usr/lib/i386-linux-gnu/odbc/libtdsS.so
UsageCount           = 1
/etc/freetds/freetds.conf
```

```
# The basics for defining a DSN (Data Source Name)
# [data_source_name]
#     host = <hostname or IP address>
#     port = <port number to connect to - probably 1433>
#     tds version = <TDS version to use - probably 8.0>

# Define a connection to the Microsoft SQL Server
[mssql]
    host = XXXXXX
```

```
port = 1433
tds version = 8.0
```

測試連線：

```
isql mssql username password
```

測試結果：

```
+-----+
| Connected!
|
| sql-statement
| help [tablename]
| quit
|
+-----+
SQL>
```

在python打Driver 名稱時driver名稱為freetds 至於其他database如法炮製。  
**Setting PATH and LD\_LIBRARY\_PATH for the bash shell**

Type the following to see if /usr/local/bin is already in your path:

```
echo $PATH
```

If not then open the .bash\_profile file in your home directory and add the following lines:

```
PATH=$PATH:/usr/local/bin
export PATH
```

Then type the following to see if /usr/local/lib is in your library loading path:

```
echo $LD_LIBRARY_PATH
```

If not then add the following lines to the .bash\_profile file in your home directory:

```
LD_LIBRARY_PATH=$LD_LIBRARY_PATH:/usr/local/lib
export LD_LIBRARY_PATH
```

參考文件：

<http://stackoverflow.com/questions/16925825/having-troubles-with-unixodbc-freetds-and-pyodbc>

[https://code.google.com/p/pypyodbc/wiki/Linux\\_ODBC\\_in\\_3\\_steps](https://code.google.com/p/pypyodbc/wiki/Linux_ODBC_in_3_steps)

[http://taopm.sourceforge.net/docs/online\\_userman/UserManual\\_13.html](http://taopm.sourceforge.net/docs/online_userman/UserManual_13.html)