
PostgreSQL与Python

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王凡

wangfan

wf141732@sohu.com

woshiwangfan@gmail.com

版本	修改日期	内容
1.0	2011.01.13	创建

1. 简介

PostgreSQL是排名第二的开源数据库，但是mysql被oracle拿到手后不知道会不会成为牺牲品，不敢花多的时间到mysql上了！

1.1. 环境信息

PostgreSQL: 9.0.2-1 64bit

OS: Red Hat Enterprise Linux 5 64-bit

Psycopg2:2.2.1

Pathon:2.7.1

Django:1.2.4

Apache:2.2

1.2. 相关文档

《Python学习》

2. 软件准备

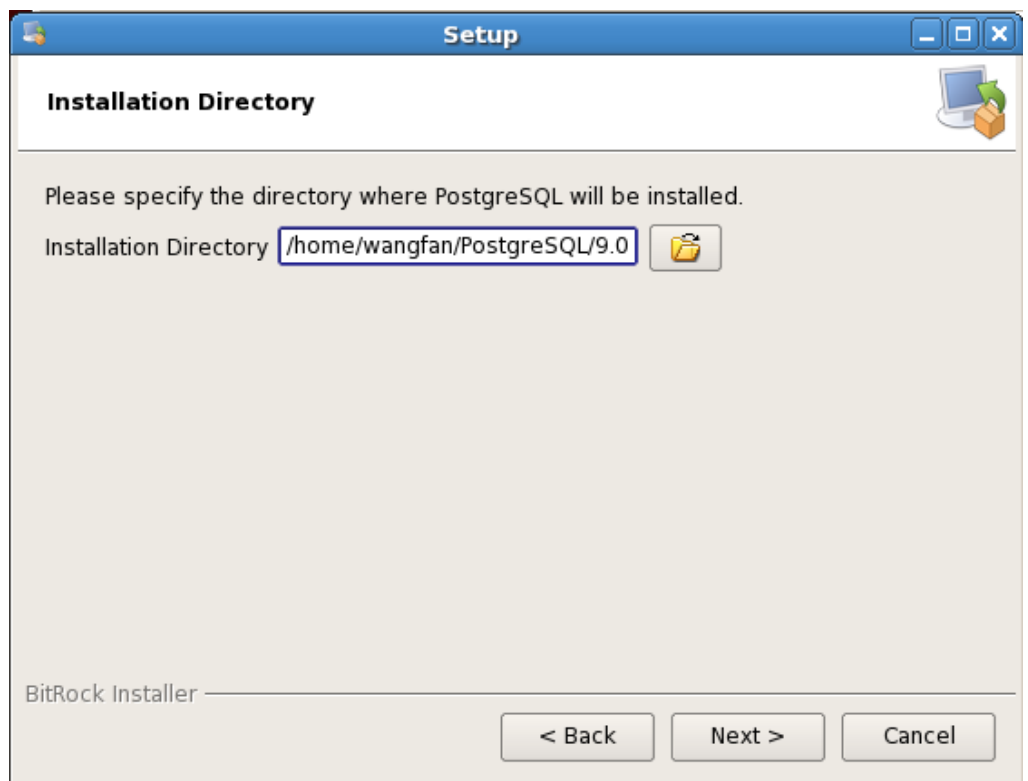
2.1. PostgreSQL安装

<http://www.onlinedown.net/soft/44156.htm>

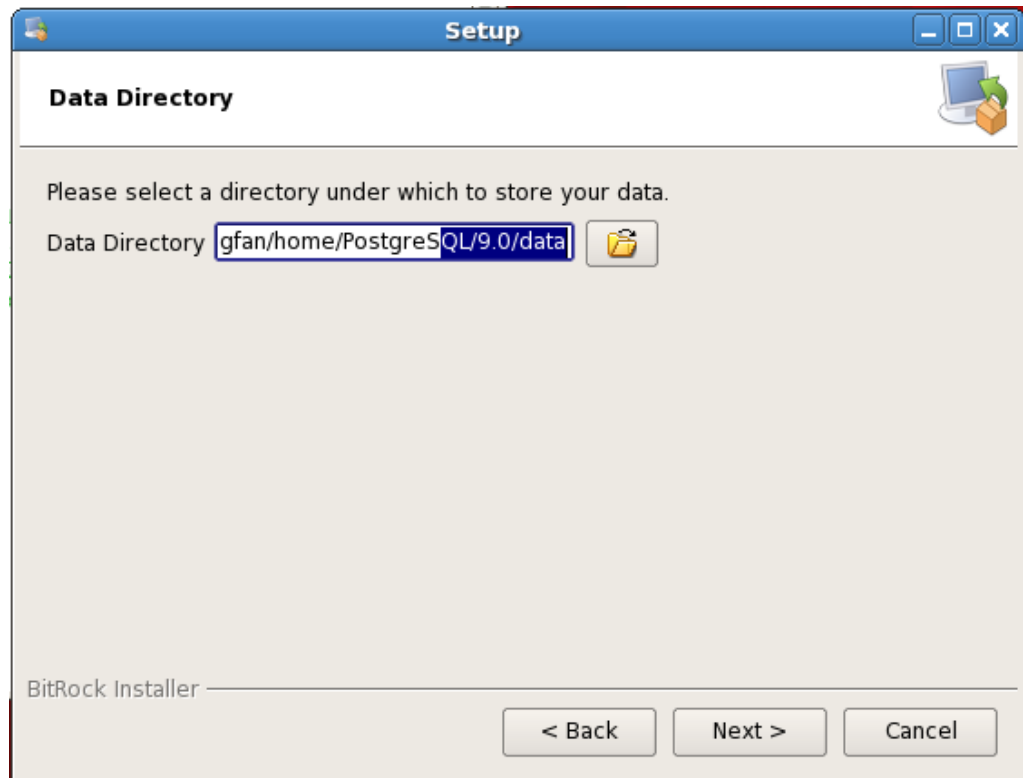
根据地点选择



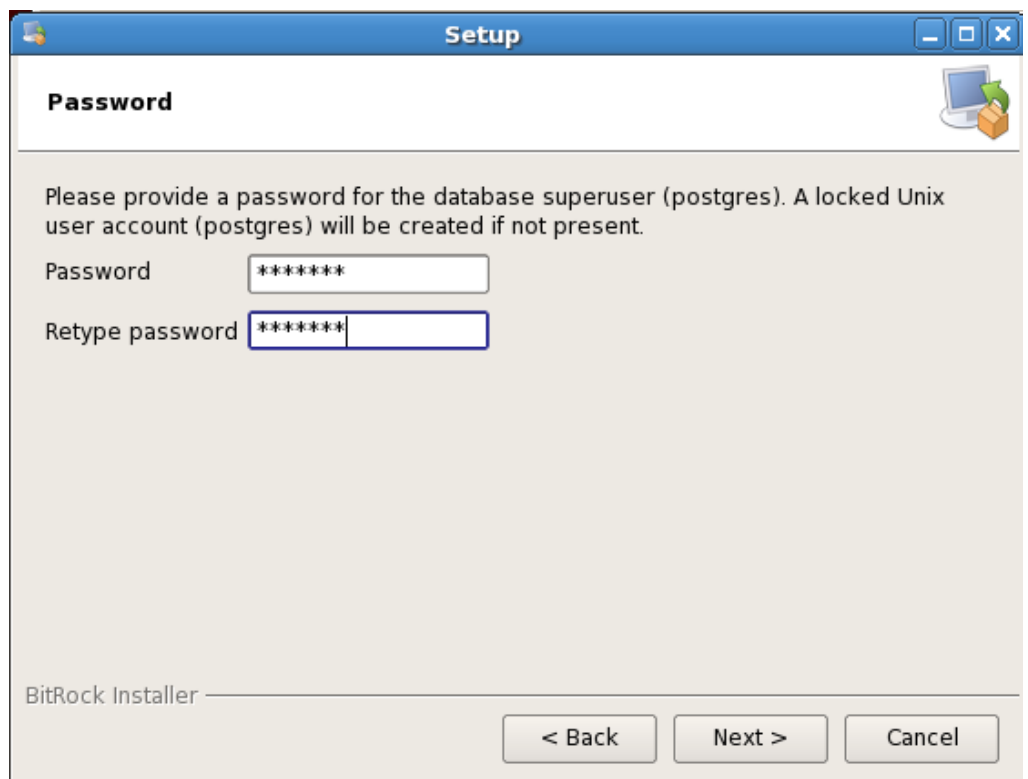
选择安装路径



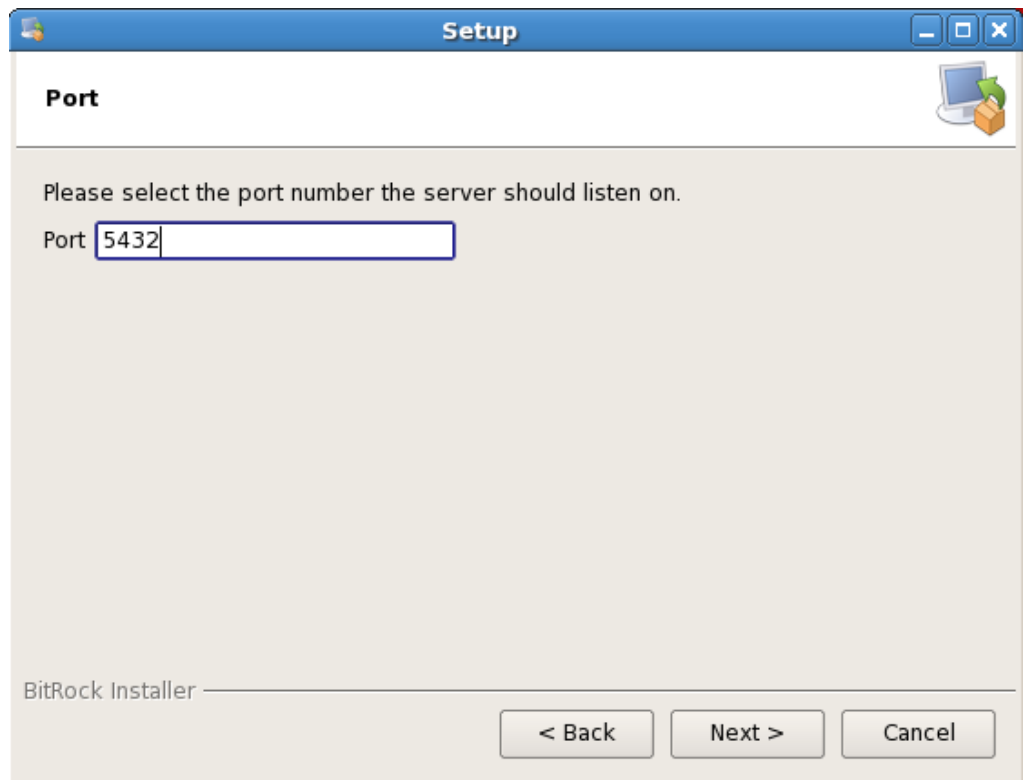
数据目录



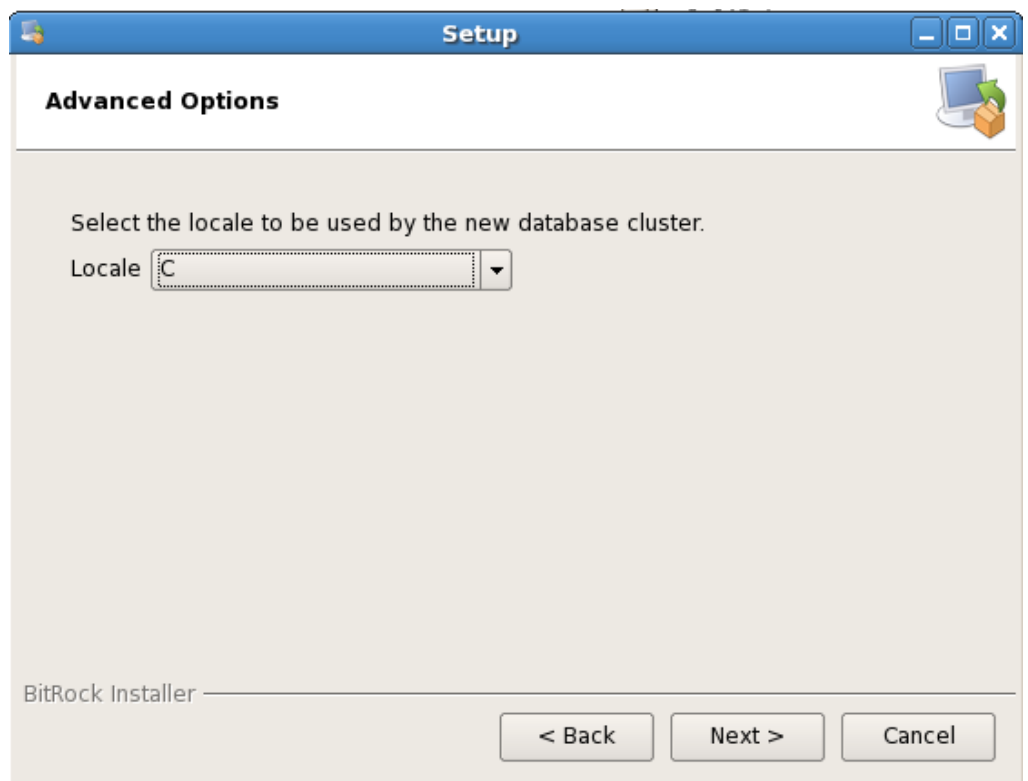
输入密码



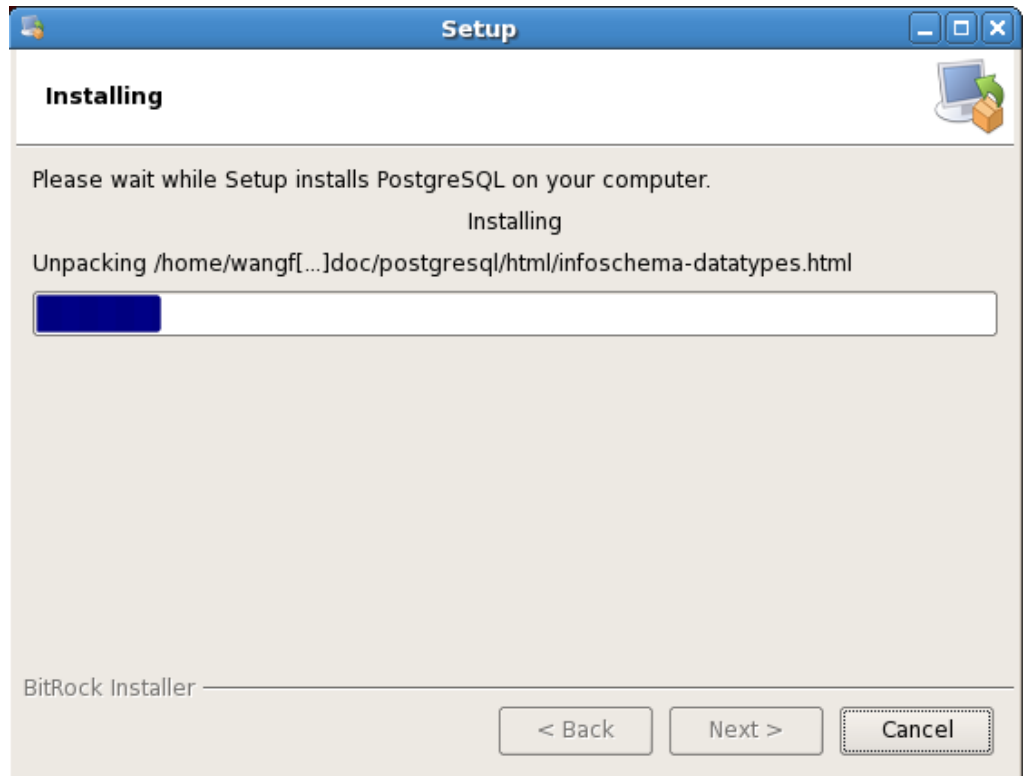
选择端口号



选择编码集



开始安装



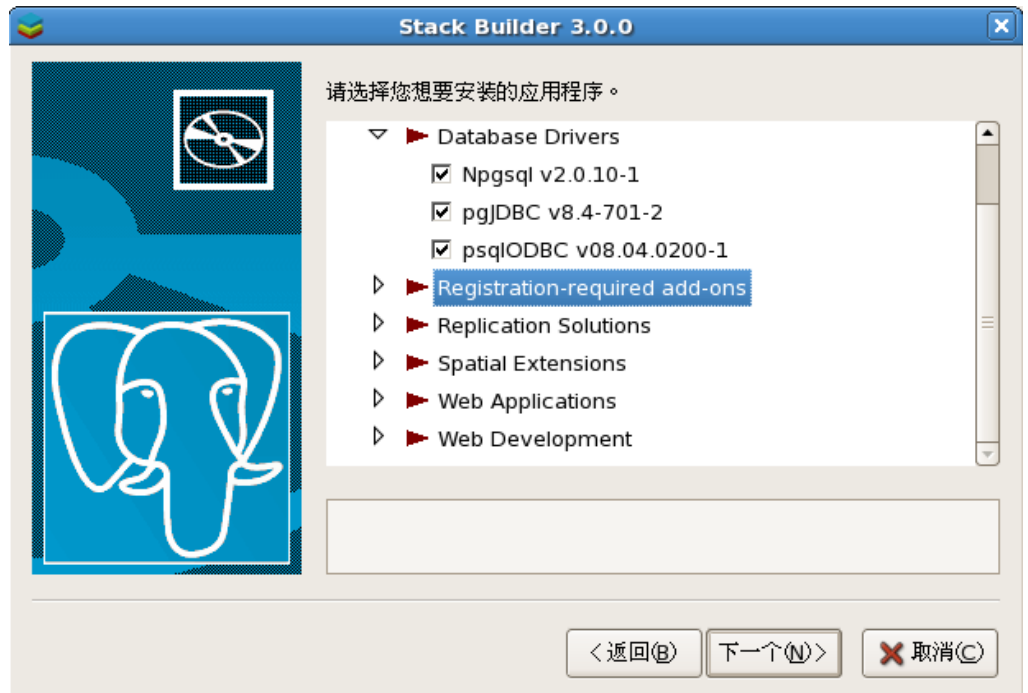
安装完成

2.2. 选择附加软件



也可以在启动附件安装





然后跳出各个程序的安装程序

等待都安装后



2.3. 安装psycpg2

下载地址: <http://initd.org/psycpg/tarballs/PSYCOPG-2-2/psycpg2-2.2.1.tar.gz>

解压: `tar xzvf psycpg2-2.2.1.tar.gz`

安装: `sudo python setup.py install`

测试连接python

```
>>> import psycpg2
```

```
>>> psycpg2.apilevel
```

```
'2.0'
```

3. 操作Postgres

3.1. 连接数据库

本地连接可使用`psql -U postgres`如果连接远程则使用命令

如果远程连接则使用`psql -h ip -p 5432 -U postgres`

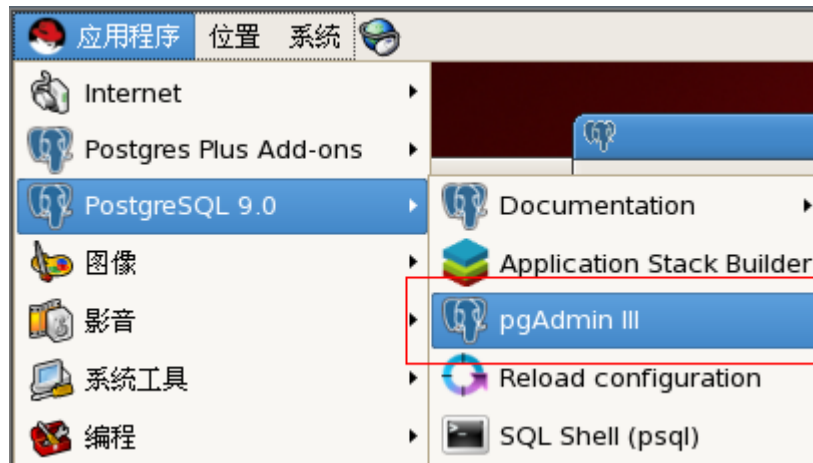
-h ip ip为具体的远程数据库地址

5432为远程数据库端口

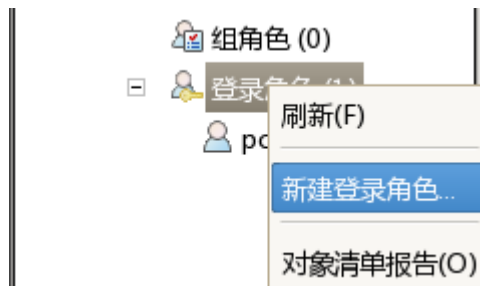
postgres为数据库用户

3.2. 创建用户

图形界面



在登陆角色->右键->新建登陆角色



在console中为

```
CREATE ROLE wangfan LOGIN ENCRYPTED PASSWORD 'wangfan'
CREATEDB
VALID UNTIL 'infinity';
```

3.3. 建立表空间

在console中创建脚本如下：

```
sudo chmod 0700 tbspc
postgres=#create tablespace wftbspc owner wangfan location
'/home/wangfan/PostgreSQL/9.0/tbspc';
```

3.4. 新建数据库

同样也可以使用图形界面

在console中如何创建数据库呢

```
postgres=# create database wangfan with encoding='utf8' owner=wangfan
connection limit=100 set tablespace wftbspc;
CREATE DATABASE
删除数据库
drop database wangfan
```

```
postgres=# drop database wangfan;
DROP DATABASE
```

3.5. 模式

postgresql里面的模式就是schemaname默认的是public，也可以分应用建立

```
create schema wangfan authorization wangfan;
```

创建一个wangfan的schema拥有者是wangfan

4. Django与postgresql

4.1. 建立数据库连接

和oracle类似，修改settings.py

```
DATABASES = {
    'default': {
        'ENGINE': 'django.db.backends.postgresql_psycopg2', # Add
        'postgresql_psycopg2', 'postgresql', 'mysql', 'sqlite3' or 'oracle'.
        'NAME': 'wangfan', # Or path to database file if using sqlite3.
        'USER': 'wangfan', # Not used with sqlite3.
        'PASSWORD': 'wangfan', # Not used with sqlite3.
        'HOST': 'localhost', # Set to empty string for localhost. Not used with
        'PORT': '5432', # Set to empty string for default. Not used with
    }
}
```

postgresql_psycopg2和postgresql让人很疑惑。

postgresql_psycopg2是postgresql客户端库，如果django是建立在没有安装postgresql的服务器上的话，则可以安装postgresql_psycopg2或者postgresql来作为连接的载体。

4.2. 建立数据库对象

在建立数据库之前需要设置时区，具体见《python学习》

```
unrecognized time zone name: "America/Chicago"
```

```
[wangfan@bogon mysite]$ python manage.py syncdb
```

```
Creating table auth_permission
```

```
Creating table auth_group_permissions
```

```
Creating table auth_group
```

```
Creating table auth_user_user_permissions
```

```
Creating table auth_user_groups
```

```
Creating table auth_user
```

```
Creating table auth_message
```

```
Creating table django_content_type
```

```
Creating table django_session
```

```
Creating table django_site
```

You just installed Django's auth system, which means you don't have any superusers defined.

Would you like to create one now? (yes/no): yes

Username (Leave blank to use 'wangfan'): wangfan

E-mail address: wf141732@sohu.com

Password:

Password (again):

Superuser created successfully.

Installing index for auth.Permission model

Installing index for auth.Group_permissions model

Installing index for auth.User_user_permissions model

Installing index for auth.User_groups model

Installing index for auth.Message model

No fixtures found.

```
wangfan=> select * from pg_tables t where t.schemaname='public';
```

schemaname	tablename	tableowner	tablespace	hasindexes	hasrules	hastriggers
public	auth_group_permissions	wangfan		t	f	t
public	auth_group	wangfan		t	f	t
public	auth_user_user_permissions	wangfan		t	f	t
public	auth_user_groups	wangfan		t	f	t
public	auth_message	wangfan		t	f	t
public	auth_user	wangfan		t	f	t
public	auth_permission	wangfan		t	f	t
public	django_content_type	wangfan		t	f	t
public	django_session	wangfan		t	f	f
public	django_site	wangfan		t	f	f

(10 行)

5. 常见问题

5.1. The database cluster initialization failed

在本地化的地方选择C，选其他的都不可以，具体log可以看/tmp目录下面的scim-bridge-0.3.0.lockfile-500

5.2. ./psycopg/psycopg.h:31:22

安装psycopg2时报在包含自 psycopg/psycopgmodule.c: 32 的文件中:

./psycopg/psycopg.h:31:22: 错误: libpq-fe.h: 没有那个文件或目录

In file included from psycopg/psycopgmodule.c:33:

./psycopg/connection.h:103: 错误: expected specifier-qualifier-list before 'PGconn'

./psycopg/connection.h:126: 错误: expected ')' before '*' token

./psycopg/connection.h:127: 错误: expected ')' before '*' token

./psycopg/connection.h:128: 错误: expected ')' before '*' token

./psycopg/connection.h:132: 错误: expected declaration specifiers or '...' before 'PGconn'

In file included from psycopg/psycopgmodule.c:34:

./psycopg/cursor.h:60: 错误: expected specifier-qualifier-list before 'PGresult'

In file included from psycopg/psycopgmodule.c:35:

./psycopg/green.h:63: 错误: expected '=', ',', ';', 'asm' or
'__attribute__' before '*' token

在包含自 psycopg/psycopgmodule.c: 36 的文件中:

./psycopg/object.h:31:28: 错误: libpq/libpq-fs.h: 没有那个文件或目录

In file included from psycopg/psycopgmodule.c:36:

./psycopg/object.h:51: 错误: expected specifier-qualifier-list before 'Oid'

./psycopg/object.h:57: 错误: expected declaration specifiers or '...' before
'Oid'

./psycopg/object.h:57: 错误: expected declaration specifiers or '...' before
'Oid'

psycopg/psycopgmodule.

一堆错误

export C_INCLUDE_PATH=/wangfan/home/PostgreSQL/9.0/include

export LIBRARY_PATH=/wangfan/home/PostgreSQL/9.0/lib

没用换成低版本成功

5.3. could not set permissions on directory

将需要的目录访问权限设置成0700

sudo chmod -R 0700 tbspc

装换文件夹所有者

sudo chown -R postgres:postgres tbspc

0700为postgresql的bug

```
01283     /*
01284     * Attempt to coerce target directory to safe permissions. If
this
01285     * fails, it doesn't exist or has the wrong owner.
01286     */
01287     if (chmod(location, 0700) != 0)
01288         ereport(ERROR,
01289             (errcode_for_file_access(),
01290              errmsg("could not set permissions on directory
\"%s\": %m",
01291                  location)));
```

5.4. libpq.so.5: cannot open shared object file

libpq.so.5: cannot open shared object file: No such file or directory

export

LD_LIBRARY_PATH=\$LD_LIBRARY_PATH:/wangfan/home/PostgreSQL/9.0/lib