# 安装python

## 1、安装前检查：

1）安装mysql数据库（过程略）

安装路径：/opt/mysql

添加环境变量：

[root@Centos6 bin]# vi /etc/profile

#结尾添加

export PATH="$PATH:/opt/mysql/bin/"

2）配置yum本地源，挂载Centos6.7镜像到/mnt/cdrom

[root@Centos6 gcc\_rpm]# mkdir /mnt/cdrom

[root@Centos6 gcc\_rpm]# mount /dev/cdrom /mnt/cdrom

mount: block device /dev/sr0 is write-protected, mounting read-only

[root@Centos6 gcc\_rpm]# df -h

Filesystem Size Used Avail Use% Mounted on

/dev/mapper/vg\_centos6-lv\_root

50G 3.7G 43G 8% /

tmpfs 344M 76K 344M 1% /dev/shm

/dev/sda1 477M 37M 415M 9% /boot

/dev/mapper/vg\_centos6-lv\_home

28G 159M 27G 1% /home

/dev/sr0 3.7G 3.7G 0 100% /media/CentOS\_6.7\_Final

/dev/sr0 3.7G 3.7G 0 100% /mnt/cdrom

[root@Centos6 gcc\_rpm]#

[root@Centos6 gcc\_rpm]# cd /etc/yum.repos.d/

[root@Centos6 yum.repos.d]# ls

CentOS-Base.repo CentOS-Debuginfo.repo CentOS-fasttrack.repo CentOS-Media.repo CentOS-Vault.repo

[root@Centos6 yum.repos.d]# mkdir bak

[root@Centos6 yum.repos.d]# mv \*.repo bak/

[root@Centos6 yum.repos.d]# ls

bak

[root@Centos6 yum.repos.d]# cat /etc/pki/rpm-gpg/RPM-GPG-KEY-CentOS-

RPM-GPG-KEY-CentOS-6 RPM-GPG-KEY-CentOS-Security-6

RPM-GPG-KEY-CentOS-Debug-6 RPM-GPG-KEY-CentOS-Testing-6

[root@Centos6 yum.repos.d]# sudo vim local.repo

[local\_server]

name=Thisis a local repo

baseurl=file:///mnt/cdrom

enabled=1

gpgcheck=1

gpgkey=file:///etc/pki/rpm-gpg/RPM-GPG-KEY-CentOS-6

[root@Centos6 yum.repos.d]# yum clean all

[root@Centos6 yum.repos.d]# yum makecache

...

Metadata Cache Created

3）安装前需确保linux具有gcc编译器，若无则可使用下面命令进行安装：

yum -y install gcc make

yum install zlib-devel bzip2-devel openssl-devel ncurses-devel sqlite-devel readline

## 2、[centos6.5安装python2.7.12](http://blog.csdn.net/yunken28/article/details/52872177)

CentOS 6.6自带的是**[Python](http://lib.csdn.net/base/python" \o "Python知识库" \t "_blank)** 2.6.6，而编译llvm需要**[python](http://lib.csdn.net/base/python" \o "Python知识库" \t "_blank)** 2.7以上。

### 1）上传安装包到/home/version

[root@Centos6 bin]# cd /home/version/

[root@Centos6 version]# ls

CentOS6-Base-163.repo MySQL-python-1.2.3c1.tar.gz pycrypto-2.6.1.tar.gz

cx\_Freeze-5.0.2-cp27-cp27m-win\_amd64.whl MySQL-python-1.2.5 selenium-3.4.3-py2.py3-none-any.whl

install\_mysql pip-9.0.1.tar.gz setuptools-0.6c11.tar.gz

[root@Centos6 version]# tar xvJf Python-2.7.12.tar.xz

...

[root@Centos6 version]# ls

CentOS6-Base-163.repo pip-9.0.1 Python-2.7.11.tar.xz

cx\_Freeze-5.0.2-cp27-cp27m-win\_amd64.whl pip-9.0.1.tar.gz selenium-3.4.3-py2.py3-none-any.whl

install\_mysql pycrypto-2.6.1 setuptools-0.6c11

MySQL-python-1.2.3c1.tar.gz pycrypto-2.6.1.tar.gz setuptools-0.6c11.tar.gz

MySQL-python-1.2.5 Python-2.7.11

### 2）先安装readline-devel ，避免Python安装后交互模式下乱码

[root@Centos6 yum.repos.d]# yum -y install readline-devel

### 3）安装到/usr/local目录下

[root@Centos6 Python-2.7.11]# ./configure --prefix=/usr/local

[root@Centos6 Python-2.7.11]# make && make altinstall

### 4）编译完成后仍未Python2.6

[root@Centos6 Python-2.7.11]# python

[16:44:58]Python 2.6.6 (r266:84292, Jul 23 2015, 15:22:56)

[16:44:58][GCC 4.4.7 20120313 (Red Hat 4.4.7-11)] on linux2

[16:44:58]Type "help", "copyright", "credits" or "license" for more information.

[16:45:01]>>> exit()

### 5）建立软连接，替换默认版本的python

[root@Centos6 Python-2.7.11]# mv /usr/bin/python /usr/bin/python2.6\_bak

[root@Centos6 Python-2.7.11]# ln -s /usr/local/bin/python2.7 /usr/bin/python

检查替换成功

[root@Centos6 Python-2.7.11]# python -V

Python 2.7.11

### 6）解决yum失效问题

[root@Centos6 Python-2.7.11]# vi /usr/bin/yum

#!/usr/bin/python #改为#!/usr/bin/python2.6

**安装完成！**

checking for python... /usr/bin/python

checking for python >= 2.7... not found

configure: error: found python 2.6.6 (/usr/bin/python); required >= 2.7

yum中最新的也是Python 2.6.6，只能下载Python 2.7.9的源代码自己编译安装。

操作步骤如下：

1）安装devtoolset

yum groupinstall "Development tools"

2）安装编译Python需要的包包

yum install zlib-devel bzip2-devel openssl-devel ncurses-devel sqlite-devel readline

yum install zlib-devel

yum install bzip2-devel

yum install openssl-devel

yum install ncurses-devel

yum install sqlite-devel

3）下载并解压Python 2.7.9的源代码

cd /opt

wget --no-check-certificate https://www.python.org/ftp/python/2.7.9/Python-2.7.9.tar.xz

tar xf Python-2.7.9.tar.xz

cd Python-2.7.9

4）编译与安装Python 2.7.9

./configure --prefix=/usr/local

make && make altinstall

安装完成之后，**[测试](http://lib.csdn.net/base/softwaretest" \o "软件测试知识库" \t "_blank)**python版本：

#python -V

Python 2.6.6

发现依然是老版本，这是因为centos系统默认指向的是2.6版本的python，此时需要进行如下设置：

**更改系统默认的python：**

建立软连接，使系统默认的python指向python2.7

正常情况下即使python2.7安装成功后，系统默认指向的python仍然是2.6版本，而yum是基于python2.6才能正常工作。所以要将系统默认的python指向到2.7版本。

# /usr/local/bin/python2.7 -V      
 # mv /usr/bin/python  /usr/bin/python.bak   
# ln -s /usr/local/bin/python2.7 /usr/bin/python

运行一下python，或者：  
# python -V

**修正yum报错：**

如果打yum命令，你会发现报错了。提示你可能是python版本不对。所以我们要把yum依旧指向老的python2.6版本：

vi /usr/bin/yum

在打开的文件里的头一行，也就是指定python环境的那行代码，修改成：

#!/usr/bin/python2.6

**python第三方包的安装位置：**

/usr/local/lib/python2.7/site-packages/

## 3、python插件安装

### 3.1 安装setuptools

进入setuptools安装包目录

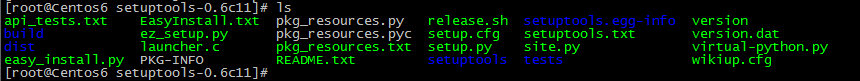
[root@Centos6 version]# ls

Python-2.7.11.tar.xz setuptools-0.6c11.tar.gz

[root@Centos6 version]# tar zxvf setuptools-0.6c11.tar.gz

[root@Centos6 version]# cd setuptools-0.6c11

[root@Centos6 setuptools-0.6c11]# ls



[root@Centos6 setuptools-0.6c11]# python setup.py build

注：install前先build，否则容易出错

[root@Centos6 setuptools-0.6c11]# python setup.py install

...

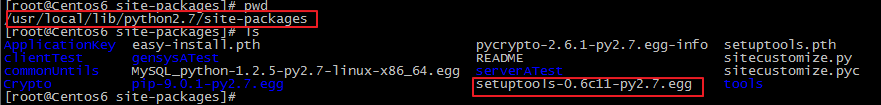
Installing easy\_install script to /usr/local/bin

Installing easy\_install-2.7 script to /usr/local/bin

Installed /usr/local/lib/python2.7/site-packages/setuptools-0.6c11-py2.7.egg

Processing dependencies for setuptools==0.6c11

查看：



**安装成功！**

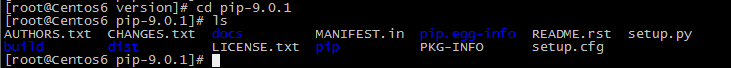
### 3.2 pip模块

#### 3.2.1 安装

[root@Centos6 version]# tar zxvf pip-9.0.1.tar.gz

[root@Centos6 version]# cd pip-9.0.1

[root@Centos6 pip-9.0.1]# ls



[root@Centos6 setuptools-0.6c11]# python setup.py build

注：install前先build，否则容易出错

[root@Centos6 setuptools-0.6c11]# python setup.py install

...

[root@Centos6 pip-9.0.1]# pip -V

pip 9.0.1 from /usr/local/lib/python2.7/site-packages/pip-9.0.1-py2.7.egg (python 2.7)

**安装成功！**

#### 3.2.2 pip安装Python模块

使用更新命令行：**pip** **install** PackageName

[root@Qtec-YMH site-packages]# pip install pdb

#### 3.2.3 pip 更新Python模块

使用更新命令行：**pip** **install** **-U** PackageName

[root@Qtec-YMH site-packages]# pip install -U PackageName

#### 3.2.4 pip 卸载Python模块

使用更新命令行：**pip uninstall PackageName**

[root@Qtec-YMH site-packages]# pip uninstall pdb

### 3.3安装PyMysql

下载解压：

[root@localhost]# wget http://ncu.dl.sourceforge[**.NET**](http://lib.csdn.net/base/dotnet)/project/[**MySQL**](http://lib.csdn.net/base/mysql)-[**Python**](http://lib.csdn.net/base/python)/[**mysql**](http://lib.csdn.net/base/mysql)-[**python**](http://lib.csdn.net/base/python)/1.2.3/MySQL-python-1.2.3.tar.gz" target="\_blank"  
[root@localhost]# tar xfz MySQL-python-1.2.3.tar.gz  
[root@localhost]# cd MySQL-python-1.2.3

#进入MySQL-python目录，查看site.cfg文件的mysql-config配置，如果与实际不符合，请自行修改

#注意啦，这一步是一定要做的，不然就安装不成功。

[root@localhost]# python setup.py build

[root@localhost]# python setup.py install #正式安装

然后进入:  
$python  
>>>import MySQLdb  
搞定  
一切正常，好啦.

### 3.4 PyCrypto

[root@Qtec-YMH version]# ls

MySQL-python-1.2.5 pip-9.0.1.tar.gz Python-2.7.11 setuptools-0.6c11

MySQL-python-1.2.5.zip pycrypto-2.6.1.tar.gz Python-2.7.11.tar.xz setuptools-0.6c11.tar.gz

[root@Qtec-YMH version]# tar zxvf pycrypto-2.6.1.tar.gz

pycrypto-2.6.1/

...

[root@Qtec-YMH version]# cd pycrypto-2.6.1

[root@Qtec-YMH pycrypto-2.6.1]# ls

ACKS configure COPYRIGHT LEGAL MANIFEST.in PKG-INFO setup.py TODO

ChangeLog configure.ac Doc lib pct-speedtest.py README src

[root@Qtec-YMH pycrypto-2.6.1]# python setup.py build

[root@Qtec-YMH pycrypto-2.6.1]# python setup.py install

running install

...

running install\_egg\_info

Writing /usr/local/lib/python2.7/site-packages/pycrypto-2.6.1-py2.7.egg-info

[root@Qtec-YMH pycrypto-2.6.1]#

验证是否安装成功，

[root@Qtec-YMH site-packages]# python

Python 2.7.11 (default, Jul 25 2017, 15:55:23)

[GCC 4.4.7 20120313 (Red Hat 4.4.7-18)] on linux2

Type "help", "copyright", "credits" or "license" for more information.

>>> import Crypto #OK

### 5）设置Python的编码为‘utf-8’

进入python的安装目录下的site-packages/，

[root@Qtec-YMH ~]# cd /usr/local/lib/python2.7/site-packages/

[root@Qtec-YMH site-packages]# sh

sh-4.1#

sh-4.1# ls -l sitecustomize.py

-rw-r--r--. 1 root root 73 Jun 1 14:02 sitecustomize.py

创建sitecustomize.py,内容如下，Python解析器会自动读取该文件

sh-4.1# vi sitecustomize.py

# encoding=utf8

import sys

reload(sys)

sys.setdefaultencoding('utf8')

sh-4.1#

sh-4.1# python

Python 2.7.12 (default, Jul 26 2017, 16:10:55)

[GCC 4.4.7 20120313 (Red Hat 4.4.7-18)] on linux2

Type "help", "copyright", "credits" or "license" for more information.

>>> import sys

>>> sys.getdefaultencoding()

'utf8'

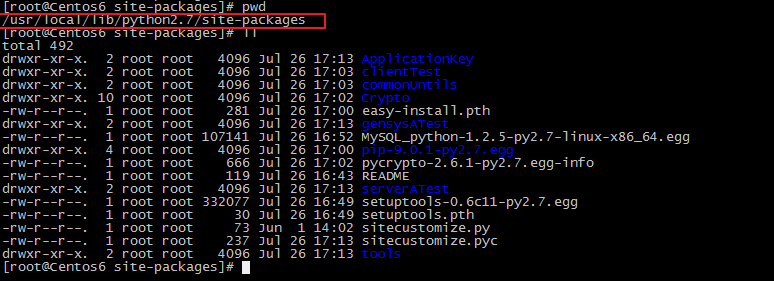
>>>

**Success！！！**

## 4、python项目由Windows上开发，在Linux运行时注意事项：

需要将项目中的模块放在python安装目录下的site-packages目录下,否则会报import model not found 错误，即找不到相关模块。

如本次环境中，蓝色字体为at脚本运行时需要的相关模块。



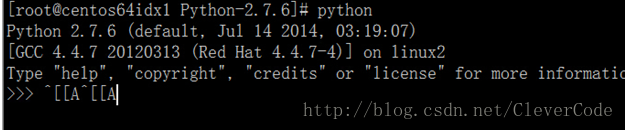
执行脚本命令为：

[root@Centos6 ~]# python \*.py

## 遇到的问题处理

### 1）解决交互模式乱码问题

当升级完成后。会出现输入方向键后乱码。如图.



解决方案  
这个问题主要是由于缺少readline Module问题导致的。而CentOS默认只有readline模块而没有readline-devel开发模块。所以只要安装下即可。  
# yum -y install readline-devel  
重新编译安装python  
# cd /usr/local/src/python/Python-2.7.6 #回到解压目录  
# ./configure --prefix=/usr/local/python276 #配置  
# make  #编译  
# make install 安装

### 2）、UnicodeEncodeError: 'ascii' codec can't encode character u'\u65f6' in position 19: ordinal not in range(128)

[root@Centos6 aaaaaaaaaaa]# ./autotest.py

Traceback (most recent call last):

File "./autotest.py", line 189, in <module>

print >>fw, u'! ^\_^\_^\_^----------æ—¶ é—´ :', time.strftime('%Y-%m-%d %H:%M:%S',time.localtime(time.time())),u'------------------------------^\_^\_^\_^----- !'

UnicodeEncodeError: 'ascii' codec can't encode character u'\u65f6' in position 19: ordinal not in range(128)

解决方法：

这里介绍一个一次性修改后永久生效的方法：

在python的lib\site-packages文件夹下新建一个sitecustomize.py

[root@Centos6 python2.7]# cd /usr/local/lib/python2.7/site-packages

[root@Centos6 site-packages]# sudo vim sitecustomize.py

# encoding=utf8

import sys

reload(sys)

sys.setdefaultencoding('utf8')

~

此时重启python解释器，执行sys.getdefaultencoding()

[root@Centos6 site-packages]# python

Python 2.7.11 (default, Jun 1 2017, 11:07:03)

[GCC 4.4.7 20120313 (Red Hat 4.4.7-18)] on linux2

Type "help", "copyright", "credits" or "license" for more information.

>>> import sys

>>> sys.getdefaultencoding()

'utf8'

>>>

### 3）、EnvironmentError: mysql\_config not found

报错：

[root@Qtec-YMH MySQL-python-1.2.5]# python setup.py install

sh: mysql\_config: command not found

Traceback (most recent call last):

File "setup.py", line 17, in <module>

metadata, options = get\_config()

File "/home/version/MySQL-python-1.2.5/MySQL-python-1.2.5/setup\_posix.py", line 43, in get\_config

libs = mysql\_config("libs\_r")

File "/home/version/MySQL-python-1.2.5/MySQL-python-1.2.5/setup\_posix.py", line 25, in mysql\_config

raise EnvironmentError("%s not found" % (mysql\_config.path,))

EnvironmentError: mysql\_config not found

解决方法：

查找mysql\_config文件的路径

[root@Qtec-YMH ~]# find / -name mysql\_config

/opt/mysql/bin/mysql\_config

修改setup\_posix.py", line 25, in mysql\_config内容，将查到的路径替换默认的mysql\_config，如下红色字体：

[root@Qtec-YMH MySQL-python-1.2.5]# vi setup\_posix.py

15 def mysql\_config(what):

16 from os import popen

17

18 f = popen("%s --%s" % (mysql\_config.path, what))

19 data = f.read().strip().split()

20 ret = f.close()

21 if ret:

22 if ret/256:

23 data = []

24 if ret/256 > 1:

2 raise EnvironmentError("%s not found" % (mysql\_config.path,))

26 return data

27 mysql\_config.path = "/opt/mysql/bin/mysql\_config"

### 4）ImportError: libmysqlclient.so.18: cannot open shared object file: No such file or directory

>>> import MySQLdb

/usr/local/lib/python2.7/site-packages/MySQL\_python-1.2.5-py2.7-linux-x86\_64.egg/\_mysql.py:3: UserWarning: Module \_mysql was already imported from /usr/local/lib/python2.7/site-packages/MySQL\_python-1.2.5-py2.7-linux-x86\_64.egg/\_mysql.pyc, but /home/version/MySQL-python-1.2.5/MySQL-python-1.2.5 is being added to sys.path

Traceback (most recent call last):

File "<stdin>", line 1, in <module>

File "MySQLdb/\_\_init\_\_.py", line 19, in <module>

import \_mysql

File "build/bdist.linux-x86\_64/egg/\_mysql.py", line 7, in <module>

File "build/bdist.linux-x86\_64/egg/\_mysql.py", line 6, in \_\_bootstrap\_\_

ImportError: libmysqlclient.so.18: cannot open shared object file: No such file or directory

解决方法：

根据最后提示，应该是找不着一个叫libmysqlclient.so.18的文件，于是到[mysql安装](http://www.111cn.net/tags.php/mysql%B0%B2%D7%B0/" \t "_blank)（/opt/mysql）目录里找到这个文件并且做一个软连接到/usr/lib

|  |  |
| --- | --- |
| 代码如下 | 复制代码 |
| ln -s /opt/mysql/lib/libmysqlclient.so.18 /usr/lib/libmysqlclient.so.18 | |

如果是64系统则：

|  |  |
| --- | --- |
| 代码如下 | 复制代码 |
| ln -s /opt/mysql/lib/libmysqlclient.so.18 /usr/lib64/libmysqlclient.so.18 | |

[root@Qtec-YMH lib]# ln -s /opt/mysql/lib/libperconaserverclient.so.18 /usr/lib64/libperconaserverclient.so.18

### 5）、ImportError: No module named \_ctypes

[root@Qtec-YMH qkcl]# python at\_linux.py

Traceback (most recent call last):

File "at\_linux.py", line 12, in <module>

from serverATest import qkmApply

File "/usr/local/lib/python2.7/site-packages/serverATest/qkmApply.py", line 6, in <module>

import ctypes

File "/usr/local/lib/python2.7/ctypes/\_\_init\_\_.py", line 10, in <module>

from \_ctypes import Union, Structure, Array

ImportError: No module named \_ctypes

解决方法：

Python或插件的安装方法不对，安装上面3过程重新安装，注意yum使用本地安装源。

亲测验证可行。