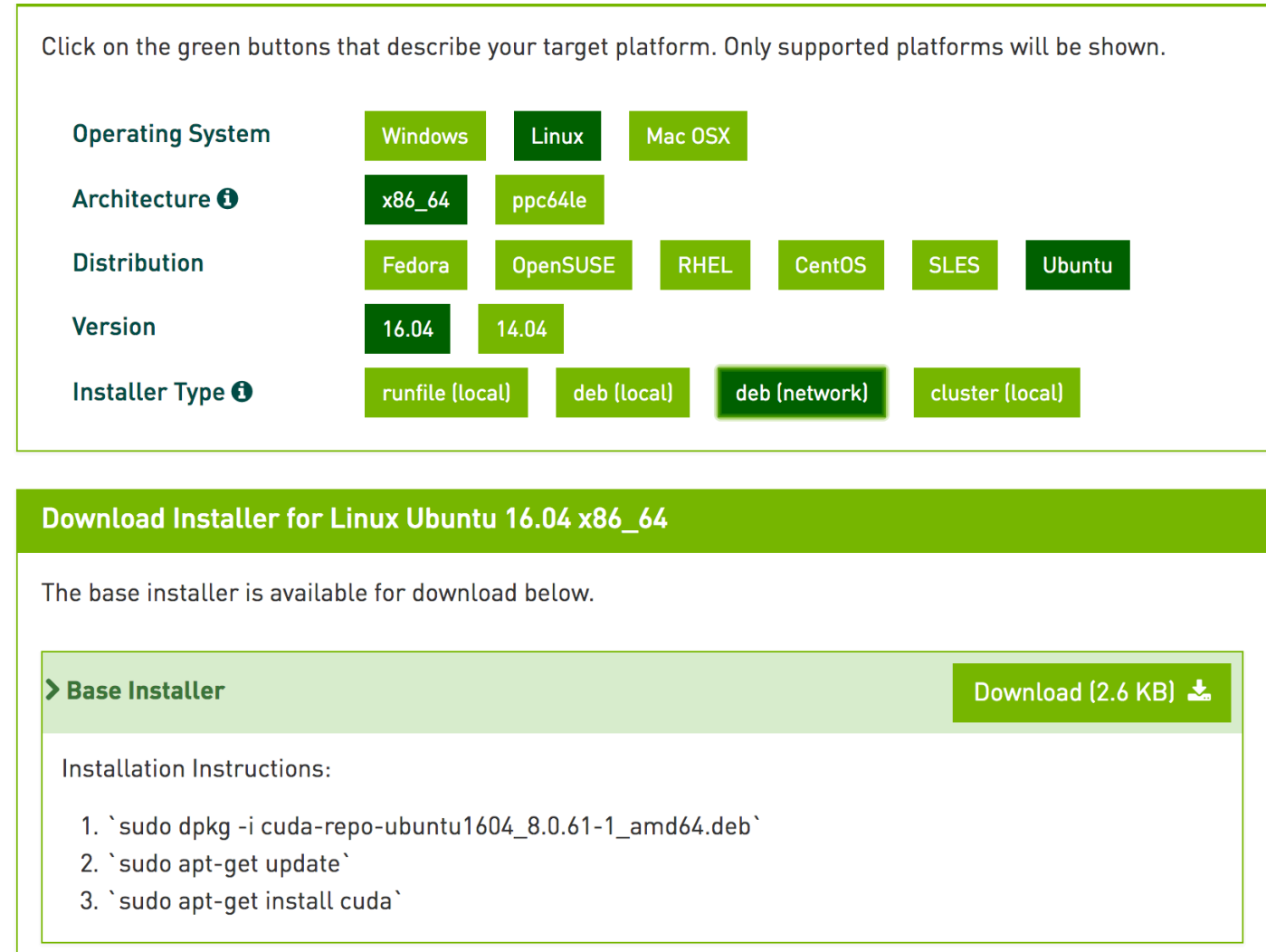


1、安装虚拟环境virtualenv相关配置(创建了python3.5的环境)

```
# virtualenv config
export WORKON_HOME=$HOME/.virtualenvs
source /usr/local/bin/virtualenvwrapper.sh
```

2、<http://docs.nvidia.com/cuda/cuda-installation-guide-linux/#axzz4VZnqTJ2A>，这个网址去检查相关配置系统是否满足CUDA要求，之后去官网下载cuda*.deb网络版本， 这里面有驱动程序，还有别的本地下载方式可以根据选择下载

如图：



```
(im2txt) root@itcast:~/library# ls
cuda-repo-ubuntu1604_8.0.61-1_amd64.deb
(im2txt) root@itcast:~/library# sudo dpkg -i cuda-repo-ubuntu1604_8.0.61-1_amd64.deb
Selecting previously unselected package cuda-repo-ubuntu1604.
(Reading database ... 132028 files and directories currently installed.)
Preparing to unpack cuda-repo-ubuntu1604_8.0.61-1_amd64.deb ...
Unpacking cuda-repo-ubuntu1604 (8.0.61-1) ...
Setting up cuda-repo-ubuntu1604 (8.0.61-1) ...
OK
(im2txt) root@itcast:~/library#
```

```
OK
(im2txt) root@itcast:~/library# sudo apt-get update
Hit:1 https://mirrors.ustc.edu.cn/ubuntu xenial InRelease
Hit:2 https://mirrors.ustc.edu.cn/ubuntu xenial-security InRelease
Hit:3 https://mirrors.ustc.edu.cn/ubuntu xenial-updates InRelease
Hit:4 https://mirrors.ustc.edu.cn/ubuntu xenial-backports InRelease
Ign:5 http://developer.download.nvidia.com/compute/cuda/repos/ubuntu1604/x86_64 InRelease
Get:6 http://developer.download.nvidia.com/compute/cuda/repos/ubuntu1604/x86_64 Release [564 B]
Get:7 http://developer.download.nvidia.com/compute/cuda/repos/ubuntu1604/x86_64 Release.gpg [801 B]
Get:8 http://developer.download.nvidia.com/compute/cuda/repos/ubuntu1604/x86_64 Packages [66.0 kB]
Fetched 67.4 kB in 2s (24.7 kB/s)
Reading package lists... Done
(im2txt) root@itcast:~/library# ls
cuda-repo-ubuntu1604_8.0.61-1_amd64.deb
(im2txt) root@itcast:~/library# sudo apt-get install cuda
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following packages were automatically installed and are no longer required:
  linux-headers-4.4.0-34
  linux-headers-4.4.0-34-generic
```

然后就可以等很久了， 如果前期检查不通过的话， 这一步会有问题

3、去.bashrc配置CUDA相关环境

```
# cuda config
# if you choose runfile installation method,you should add LD_LIBRARY_PATH
export CUDA_HOME=/usr/local/cuda-8.0
export LD_LIBRARY_PATH=/usr/local/cuda-8.0/lib64:$LD_LIBRARY_PATH
export PATH=/usr/local/cuda-8.0/bin:$PATH

source .bashrc
```

4、检查是否安装成功

```
$ cd /usr/local/cuda-8.0/samples/5_Simulations/nbody
$ sudo make
$ ./nbody
```

If successful, a new window will popup running n-body simulation.

5、下载cuDNN: cudnn-8.0-linux-x64-v5.1.tgz

```
然后运行以下命令
$ tar -xvf cudnn-8.0-linux-x64-v5.1.tgz
$ sudo cp cuda/include/cudnn.h /usr/local/cuda/include
$ sudo cp cuda/lib64/libcudnn* /usr/local/cuda/lib64
$ sudo chmod a+r /usr/local/cuda/include/cudnn.h /usr/local/cuda/lib64/libcudnn*
```

6、在3.5版本的环境中安装TensorFlow（我们使用的是1.0.1版本）
pip install tensorflow-gpu==1.0.1 --trusted-host pypi.douban.com

```
(im2txt) root@itcast:~/im2txt# pip list
DEPRECATION: The default format will switch to columns in the future. You can use --format egacy(columns) in your pip.conf under the [list] section) to disable this warning.
decorator (4.1.2)
ipython (6.2.0)
ipython-genutils (0.2.0)
jedi (0.10.2)
nlTK (3.2.4)
numpy (1.13.1)
pexpect (4.2.1)
pickleshare (0.7.4)
pip (9.0.1)
pkg-resources (0.0.0)
prompt-toolkit (1.0.15)
protobuf (3.4.0)
ptyprocess (0.5.2)
Pygments (2.2.0)
setuptools (20.7.0)
simplegeneric (0.8.1)
six (1.11.0)
tensorflow-gpu (1.0.1)
traitlets (4.3.2)
wcwidth (0.1.7)
wheel (0.29.0)
```

找到一个非常清楚地官方教程网址：<https://www.nvidia.com/en-us/data-center/gpu-accelerated-applications/tensorflow/>

2、程序所需构建工具安装

使用Bazel自定义APT存储库（推荐）

1.安装JDK 8

使用以下方式安装JDK 8:

```
sudo apt-get install openjdk-8-jdk
```

在Ubuntu 14.04 LTS上， 您必须使用PPA:

```
sudo add-apt-repository ppa:webupd8team/java
sudo apt-get update && sudo apt-get install oracle-java8-installer
```

2.添加Bazel分发URI作为包源（一次设置）

```
echo "deb [arch=amd64] http://storage.googleapis.com/bazel-apt stable jdk1.8" | sudo tee /etc/apt/sources.list.d/bazel.list
curl https://bazel.build/bazel-release.pub.gpg | sudo apt-key add -
```

如果你想安装巴泽尔的测试版本， 替换 **stable** 用 **testing**。

3.安装并更新Bazel

```
sudo apt-get update && sudo apt-get install bazel
```

一旦安装， 您可以升级到更新版本的Bazel:

```
sudo apt-get upgrade bazel
```

<https://docs.bazel.build/versions/master/install-ubuntu.html>