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# Installing

Note: This tutorial doesn’t use dockers.

* If you have Python 2 installed, go to the directory, for example, go to **/opt/Python-2.7.6** and create soft-link python2 that points to Python. Type (as root)

ln -s python python2

* From <https://repo.anaconda.com/archive/> download Anaconda3-2019.03-Linux-x86\_64.sh, put Anaconda3-2019.03-Linux-x86\_64.sh to some temporary location on the server, for example, /opt.
* Login with the root user to your Linux machine
* Go to the directory that you put the script and type  
    
  bash ./Anaconda3-2019.03-Linux-x86\_64.sh -b -f -p /opt/anaconda3/

See <https://axdlog.com/2018/setting-up-anaconda-and-jupyter-notebook-on-gnu-linux/>

<https://linuxhandbook.com/anaconda-linux/>

* ~~Type  
  cd /etc/profile.d~~
* ~~Create file anaconda3.sh with chmod 755. Put the following content:~~

~~if ! echo ${PATH} | /bin/grep -q /opt/anaconda3/bin ; then~~

~~PATH=${PATH}:/opt/anaconda3/bin~~

~~fi~~

* ~~Create file anaconda3.csh with chmod 755. Put the following content:~~

~~if ( "${path}" !~ \*/opt/anaconda3/bin\* ) then~~

~~set path = ( $path /opt/anaconda3/bin )~~

~~endif~~

* The technique above is recommended one, but it doesn’t work because we reset the $path in \* .bashrc for every user. So, we will modify /home/hadoop/.bashrc and /root/.bashrc

Type:

nano /home/hadoop/.bashrc  
  
Go to line that starts as “export PATH=” and append “:/opt/anaconda3/bin”, this is expected result:

export PATH=/usr/lib64/qt-3.3/bin:/usr/local/maven/bin:/usr/local/sbin:/usr/local/bin:/sbin:/bin:/usr/sbin:/usr/bin:/opt/dell/srvadmin/bin:/opt/dell/srvadmin/sbin:/root/bin:/opt/jdk1.8.0\_40/bin:/opt/jdk1.8.0\_40/jre/bin:/opt/anaconda3/bin

Save it. Type

nano /root/.bashrc

Go to line that starts as “export PATH=” and append “:/opt/anaconda3/bin”, this is expected result:

export PATH=/usr/lib64/qt-3.3/bin:/usr/local/maven/bin:/usr/local/sbin:/usr/local/bin:/sbin:/bin:/usr/sbin:/usr/bin:/opt/dell/srvadmin/bin:/opt/dell/srvadmin/sbin:/root/bin:/opt/jdk1.8.0\_40/bin:/opt/jdk1.8.0\_40/jre/bin:/opt/anaconda3/bin

* Go to **/opt/anaconda3/bin** and create soft-link conda3 that points to conda. Type

ln -s conda conda3

* Go to **/opt/anaconda3/bin** and create soft-link pip3 that points to pip. Type

ln -s pip pip3

* Logout and Login to the terminal as root.
* Update anaconda. Type  
  conda3 update conda
* Go to **/opt/anaconda3/bin** and upgrade pip. Type

pip3 install --upgrade pip  
pip3 install -U setuptools

* ~~Go to~~ **~~/opt/anaconda3~~** ~~and create soft-link for data-files in the same shape as venv did. Type~~

~~ln -s lib/python3.7/ Lib~~

* Logout and Login to the terminal as root.
* Check, that Python2 is still default Python.  
  Type ‘python --version’ and `pip --version`

You should see that it works with python 2

* Check, that Python2 works fine.  
  Type ‘python2 --version’ and `pip2 --version`  
  You should see that it works with python 2
* Check, that Python3 works fine.

Type ‘python3 --version’ and `pip3 --version`  
You should see that it works with python 3

* Logout and Login to the terminal as hadoop.
* Check, that Python2 is still default Python.  
  Type ‘python --version’ and `pip --version`

You should see that it works with python 2

* Check, that Python2 works fine.  
  Type ‘python2 --version’ and `pip2 --version`  
  You should see that it works with python 2
* Check, that Python3 works fine.

Type ‘python3 --version’ and `pip3 --version`  
You should see that it works with python 3

* Creating soft link for python3 (shebang #!/usr/bin/python3 will work)

cd /usr/bin  
ln -s /opt/anaconda3/bin/python3 python3  
chmod 755 python3

* Uninstalling packages from Anaconda (they will be reinstalled from pip later). Type  
  conda3 uninstall imageio

conda3 uninstall llvmlite  
conda3 uninstall PyYAML  
conda3 install pyyaml=5.1

conda3 uninstall entrypoints

conda3 install entrypoints=0.2.3

# Fixing input() function

* Reinstall Jupyter (it doesn’t work with this Anaconda installation)

conda3 uninstall jupyter tornado

conda3 install jupyter=1.0.0

* Downgrade tornado in order input() function to work

pip3 install tornado==5.1.1

* Type

python3 -m pip install ipykernel

python3 -m ipykernel install  
ipython kernelspec install-self  
ipython3 kernelspec install-self

pip3 install --upgrade ipython==6.5

# More

* Installing SASL support on Linux
* yum install cyrus-sasl-devel saslwrapper
* Install ODBC support on Linux
* yum install unixODBC-devel

# Finaly

**python3 -m pip uninstall wheel**

**python3 -m pip install wheel**

python3 -m pip install -U pip

python3 -m pip install -U setuptools

# Installing numpy+scipy+scikit+graphs

<https://www.scipy.org/install.html>

* Type  
  pip3 install numpy==1.16.2

pip3 install scipy==1.2.1

pip3 install matplotlib==3.0.3  
pip3 install pandas==0.24.2  
pip3 install sympy==1.3

pip3 install scikit-learn== 0.20.3

pip3 install seaborn==0.9.0

* Type  
  <https://stackoverflow.com/questions/40632486/dot-exe-not-found-in-path-pydot-on-python-windows-7/52685027#52685027>   
  conda3 install graphviz=2.38.0
* Ensure that path C:\programs\Anaconda3\pkgs\graphviz-2.38-hfd603c8\_2\Library\bin exist
* Add C:\programs\Anaconda3\pkgs\graphviz-2.38-hfd603c8\_2\Library\bin to the system PATH at the end
* Type

pip3 install pydot=1.4.1

More. Type  
pip3 install mock==3.0.3

# Requirements.txt

* Copy [requirements.txt](https://mbww.app.box.com/file/452793578708) to  
  some temporary location on the server, for example, /opt
* Remove lines (if exists)

datashape==0.5.4

menuinst==1.4.14

mkl-fft==1.0.6  
numpy==1.16.2+mkl

pywin32==223

pywinpty==0.5.5

tables==3.4.4

xlwings==0.15.1

awscli==1.16.147

jupyter==1.0.0

jupyter-client==5.2.4

jupyter-console==6.0.0

jupyter-core==4.4.0

* Add line

numpy=1.16.2

* Login with the root user to your Linux machine
* Go to the directory that you put the file and type  
  pip3 install -r requirements.txt
* Copy check1.py to
* some temporary location on the server, for example, /opt
* Go to the directory that you put the file and type  
  ./check1.py (this is basically check shebang)  
  Type  
  chmod 755 check1.py  
    
  You should see

Hello World!

Python version is

3

True

* ~~and not~~

~~Hello World!~~

~~Python version is~~

~~(3,)~~

~~False~~

* Copy check2.py to  
    
  some temporary location on the server, for example, /opt
* Go to the directory that you put the file and type  
  ./check2.py (this will check pandas, numpy, seaborn, matplotlib, scikit-learn)  
  Type  
  chmod 755 check2.py