Linux Installation Instructions

Some Linux distributions ship with just Python 2 installed. However, it is becoming more and more common to see Python 2 and Python 3 installed by default. To determine if you have Python installed, open a terminal emulator application and type `python --version` and `python3 --version` at the command prompt. In many cases the `python` command will actually be Python 2 and there will be a `python3` command for running Python 3.

```
[jason@linuxbox ~]$ python --version
Python 2.7.6
[jason@linuxbox ~]$ python3 --version
Python 3.4.1
```

If `python` or `python3` is not installed on your Linux system you will see a "command not found" error message. In the following example, Python 2 is installed but Python3 is not.

```
[jason@linuxbox ~]$ python --version
Python 2.7.6
[jason@linuxbox ~]$ python3 --version
python3: command not found
```

Installing Python on Debian Based Linux Distributions

To install Python 3 on Debian based distributions such Debian, Ubuntu, and Linux Mint, run `apt-get install -y python3 idle3`. Installing software requires root privileges so execute the `apt` command as the root user or precede the command with `sudo`. Note that `sudo` will only work if it has been configured, either by the distribution, you, or the system administrator. Here is an example of installing Python 3 on an Ubuntu Linux system using sudo.

```
[jason@ubuntu ~]$ sudo apt-get install -y python3 idle3
...
Setting up python3
[jason@ubuntu ~]$ python3 --version
3.4.1
```

To perform the installation as root, log into the Linux system as root or switch to the root user using the `su -` command.

```
[jason@ubuntu ~]$ su -
Password:
[root@ubuntu ~]# apt-get install -y python3 idle3
...
```

```
Setting up python3
[root@ubuntu ~]# python3 --version
3.4.1
[root@ubuntu ~]# exit
[jason@ubuntu ~]$
```

Installing Python on RPM Based Linux Distributions

For RPM based Linux distributions such as CentOS, Fedora, RedHat, and Scientific Linux attempt to install Python 3 using the `yum install -y python3 python3-tools` command. Be sure to run the command as root or precede it with `sudo` as installing software requires root privileges. Note that `sudo` will only work if it has been configured, either by the distribution, you, or the system administrator. Here is an example of installing Python 3 on a Fedora Linux system using sudo.

```
[jason@fedora ~]$ sudo yum install -y python3 python3-tools
...
Complete!
[jason@fedora ~]$ python3 --version
3.4.1
```

If you get an error message like "No package python3 available" or "Error: Nothing to do," then you will have to install Python3 from source code. Start out by installing the tools required to build and install Python by running `yum groupinstall -y 'development tools'` with root privileges. Next, install the remaining dependencies by running `yum install -y zlib-dev openssl-devel sqlite-devel bzip2-devel tk-devel`.

```
[jason@centos ~]$ sudo yum groupinstall -y 'development tools'
...
Complete!
[jason@centos ~]$ sudo yum install -y zlib-dev openssl-devel sqlite-devel bzip2-
devel tk-devel
...
Complete!
```

Next, visit the Python downloads page at https://www.python.org/downloads and click on "Download Python 3.x.x." In a terminal emulator application navigate to the directory where Python was just saved. Extract the contents of the file using `tar xf Python*z`. Change into the directory that was created from performing the extraction with `cd Python-*`. Run `./configure` followed by `make` and finally, as root, run `make install`. If sudo is configured on your system you can run `sudo make install`. This process will install Python 3 into the /usr/local/bin directory.

```
[jason@centos ~]$ cd ~/Downloads
```

```
[jason@centos ~/Downloads]$ tar xf Python*z
[jason@centos ~/Downloads/Python-3.4.1]$ cd Python-*
[jason@centos ~/Downloads/Python-3.4.1]$ ./configure
...
creating Makefile
[jason@centos ~/Downloads/Python-3.4.1]$ make
...
[jason@centos ~/Downloads/Python-3.4.1]$ sudo make install
...
[jason@centos ~/Downloads/Python-3.4.1]$ which python3
/usr/local/bin/python3
[jason@centos ~/Downloads/Python-3.4.1]$ python3 --version
Python 3.4.1
```

If you are interested in learning more about the Linux operating system I encourage you to read *Linux for Beginners*. You can get a copy by visiting http://www.LinuxTrainingAcademy.com/linux or http://www.amazon.com/gp/product/B00HNC1AXY.