Lesson Title

Installing Jupyter Notebooks, Opening a Notebook, and Setting the Kernel

Description

A PDF is provided here. This PDF documents the work we will be doing during this lesson. It can be used in a variety of ways but it is suggested that you download the PDF, watch through the entire lesson and then complete the steps on your own outside of the lesson. Of course, you can use it to follow along with the lesson as you wish.

This is the same information as in the PDF:

Creating Your Playground Server

It is advised your start a Playground server to follow along with the lessons and practice on your own.

Create a Playground server

We are going to create a simple Ubunto 18 server and install what we need as we go along. Choosing **Ubuntu 18.10 Bionic Beaver LTS** will install a basic Ubuntu 18 server.

Playground Server Settings

Choose the following settings in making your Playground Server. ***You may choose a different tag if desired.***

- Distribution: Ubuntu 18.04 Bionic Beaver LTS
- Zone: North America
- Size: Micro
- Tag: Using Python for Database Operations and Reporting

SSH into your playground server

Once the server indicates it is ready, using your terminal:

```
ssh cloud_user@<the public IP address shown>
```

- type **yes** when asked to allow connection to the server
- enter **<the temporary password shown>**
- You will be asked to change your password
- For Old Password, enter **<the temporary password shown>**
- For New Password, enter **your new password**
- Enter the New Password again, enter **your new password**

- **Don't forget your new password!** You will use this new password when you log-in to your Playground server.
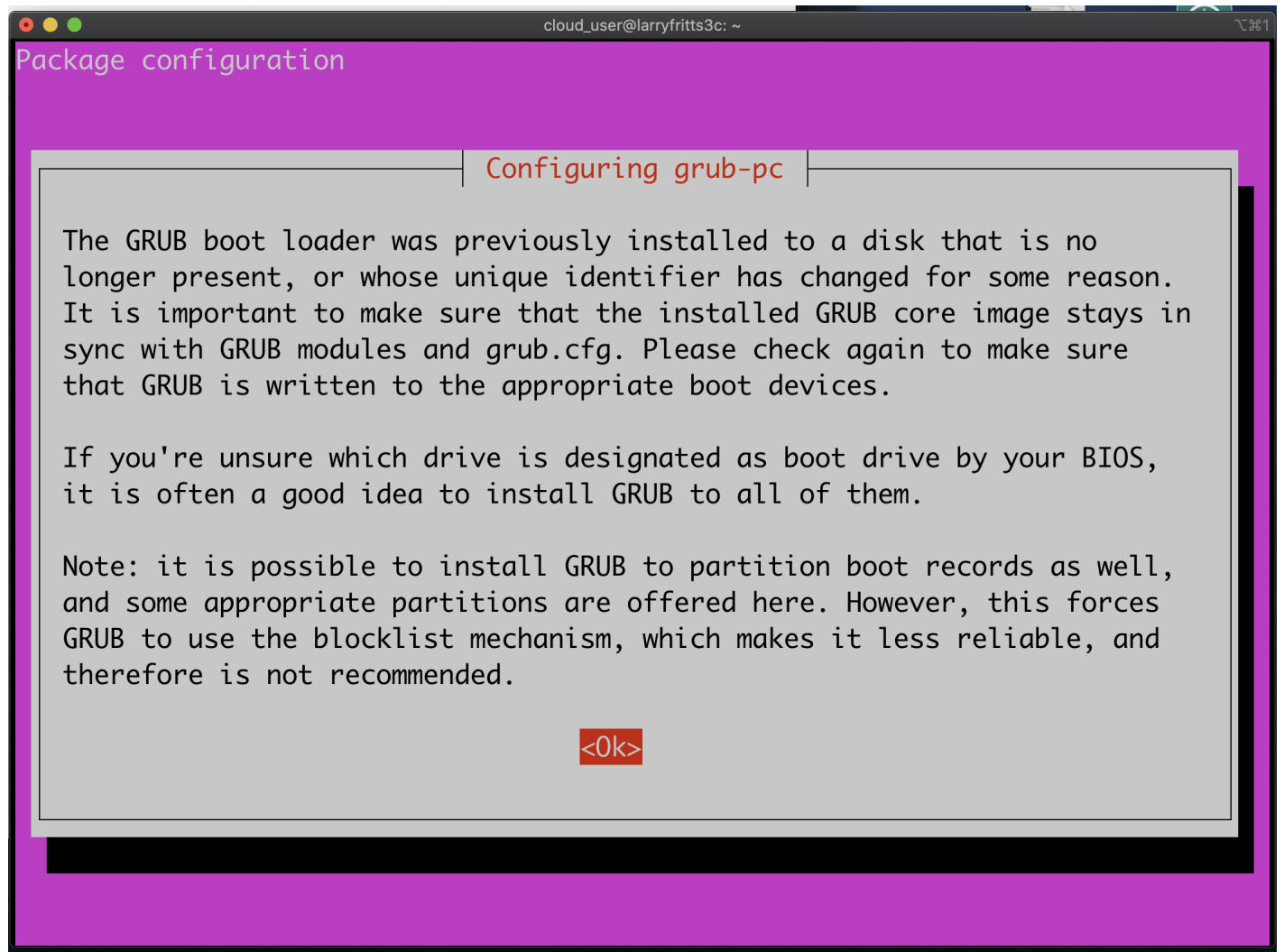
Update Ubuntu

Let's make sure we have all security patches installed on the server:
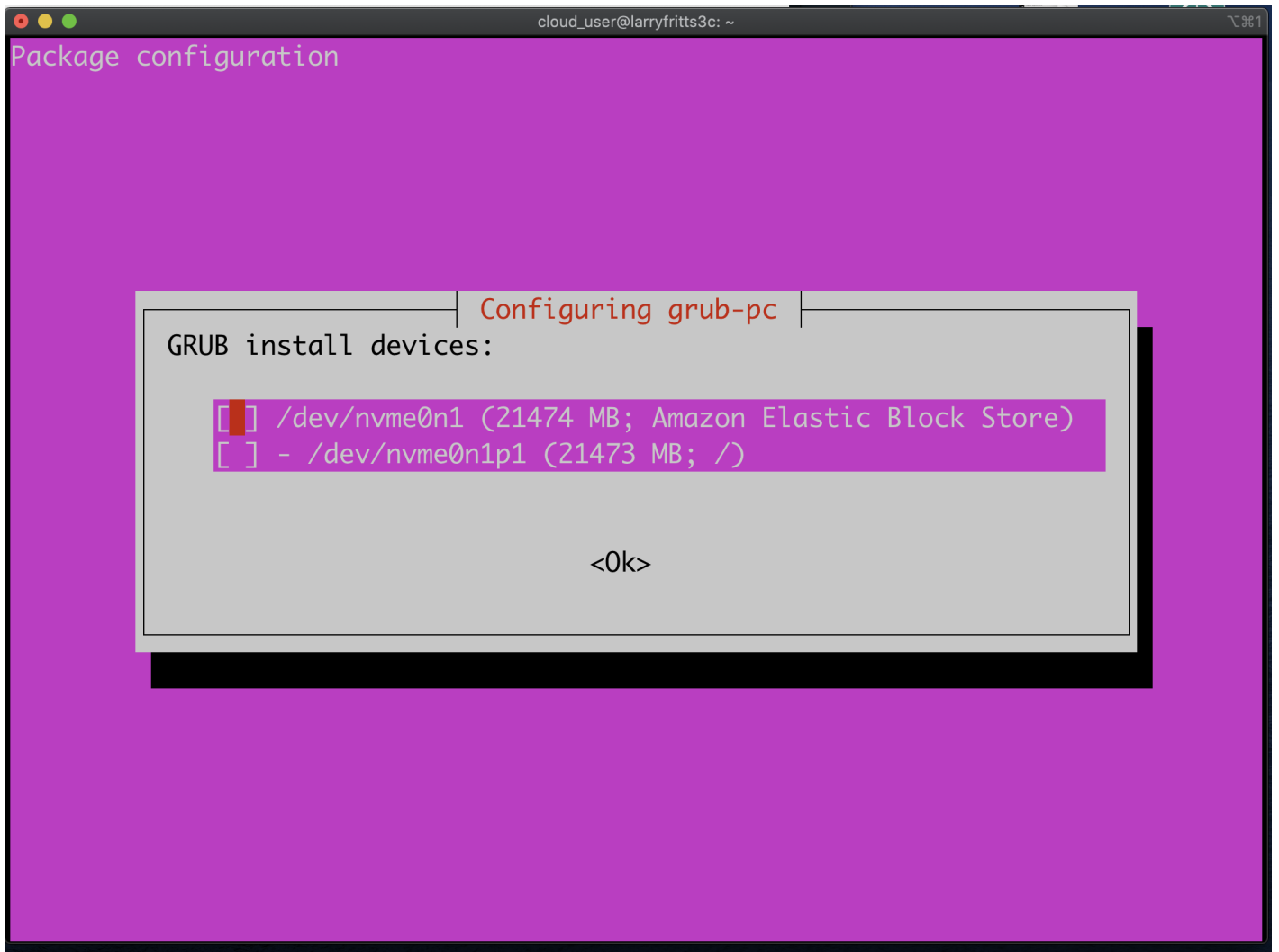
```
sudo apt upgrade -y
```

```
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```

During this process an information screen may pop up that looks like this:

Just select `enter` or `return`.

Another information screen may pop up that looks like this:

Now select `space` and then `return/enter`.

We need to install one more package needed for our work. This package is needed to later turn our notebooks to PDF.

```
sudo apt install -y texlive-xetex
```

Installing Anaconda

We are using Anaconda for this course. Anaconda is a data science and machine learning platform based on Python that can also be used to write standard Python apps also. We will be using it because it makes the use of Jupyter Notebooks very easy. The work with the Jupyter Notebooks could be done without it but it suggested by Project Jupyter that using Anaconda is the best solution.

To install, we first need to download the Anaconda package

```
cd /tmp
curl -O https://repo.anaconda.com/archive/Anaconda3-2019.03-Linux-x86_64.sh
```

We should check that the package we downloaded is not corrupt:

```
sha256sum Anaconda3-2019.03-Linux-x86_64.sh
```

The result should be:

- 45c851b7497cc14d5ca060064394569f724b67d9b5f98a926ed49b834a6bb73a Anaconda3-2019.03-Linux-x86_64.sh

If the checksum is not the same, if the checksums do not match, it indicates the file may be corrput in some way. **Please stop installation of the Playground server.** *Please ask for help from Linux Academy before proceeding.*

If the checksums do match being the installation of Anaconda:

```
bash Anaconda3-2019.03-Linux-x86_64.sh
```

Near the beginning of the install you will get this message:

```
Welcome to Anaconda3 2019.03

In order to continue the installation process, please review the license
agreement.
Please, press ENTER to continue
>>>
```

After reading the license agreement, you will get the message:

```
Do you approve the license terms? [yes|no]
```

if you enter yes then this message will appear:

```
Anaconda3 will now be installed into this location:
/home/sammy/anaconda3

  - Press ENTER to confirm the location
  - Press CTRL-C to abort the installation
  - Or specify a different location below

[/home/sammy/anaconda3] >>>
```

Please make the appropriate selection.

After installation is complete, this message will appear:

```
installation finished.
Do you wish the installer to prepend the Anaconda3 install location
to PATH in your /home/sammy/.bashrc ? [yes|no]
[no] >>>
```

Please enter yes. This will update you ~/.bashrc file so that you can use conda on the command.

Move back to your directory:

```
cd ~
```

We need to restart the shell to include the changes made:

```
source ~/.bashrc
```

You will see a (base) prepended to your command line. That indicates that the base conda virtual environment has been activated. This will happen everytime we start the terminal. We don't want that behavior; to turn it off:

```
conda config --set auto_activate_base false
```

Now let's update the conda base code:

```
conda update -n base -c defaults conda
```

Create a conda Environment For This Course

We want to create a conda virtual environment for this course using Python 3. I am naming this environment python_data_course using the -n flag. You may choose a different virtual envornment name. python=3 tells the virtual environment to use the lastest version of Python 3 installed in conda.

```
conda create -n python_data_course python=3
```

You will need to activate this virtual environment before you work on the code in the repo we are about to clone. To do so:

```
conda activate python_data_course
```

To leave the virtual environment:

```
conda deactivate
```

Please note: You will recieve errors if you try to run the code without activated the virtual environment. If you do encounter errors when starting work, please check that you have activated the virtual environment.

Use the git Repo for the Course to Practice What We Do in Lessons

Now we will make a directory to hold the github repo.

```
mkdir python_data_course
```

You change the above name to something you like if desired.

Move to the directory, activate the virtual environment (if it is not active, look for the parenthesis statement prepended to your command line, it does not hurt to rn the activate command more than once) and install two packages we need.

```
cd python_for_database_reporting
conda activate python_data_course
conda install jupyter psutil
```

To clone the repo:

```
git clone https://github.com/linuxacademy/content-python-for-database-and-reporting.git .
```