Enable Global Search on Moodle using solr on Ubuntu

Here is how I got Global Search running on a fairly vanilla Ubuntu Server running Moodle. I couldn't find reliable instructions on the web and so I documented what I did here.

I am using Moodle 3.1 and solr 6.3. The server is running Ubuntu 16.04 with mysql and php 7.

These instructions worked for me. They are based on lots of bits and pieces which I found on the web.

1. Install Java 8

(required for solr)

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

Check that it is working with

```
java -version
```

and it should say something like the following: java version "1.8.0_74"

2. Install solr

Do a search for apache solr download. In my case it was version 6.3. I copied the link and ...

```
# Download the file
wget http://mirrors.whoishostingthis.com/apache/lucene/solr/6.3.0/solr-6.3.0.tgz
# extract the data. I just want the file solr-6.3.0/bin/install_solr_service.sh
tar xvzf solr-6.3.0.tgz
#   Now, use the install_solr_service.sh to install it. (By default, it installs to /opt)
sudo solr-6.3.0/bin/install_solr_service.sh solr-6.3.0.tgz
# Remove the now redundant extracted files.
rm -r solr-6.3.0
```

The solr service should now be running: Access the web intereface at http://Server IP:8983/

3. Create a moodle core

```
sudo su - solr -c "/opt/solr-6.3.0/bin/solr create -c moodle"
```

Now moodle can use this to index its files. You should be able to see that the moodle core exists by going to the core admin page on the solr web interface.

4. Install php-solr

```
sudo apt-get install php-solr
sudo service apache2 restart
```

5. # Enable global search on moodle

Log onto moodle as admin. In site administration, perform a search for global search. Enable global search. Go to manage global search. You can see that you need to need to set up search engine and then index data.

a. ## Setup search engine

You need to tell moodle about your solr installation, that is the host name, index name and port. Just enter 127.0.0.1, moodle and 8983. The index name is whatever value you entered when you created a moodle core (above). The other values are the defaults. I also selected the "enable file indexing" option.

b. ## Index data

Select what parts you want to index and press Execute. I selected "Index all site contents".

6. # Perform a search

Now, if all went well, everything should be working. Log on to your moodle site, there should be a search option on the upper right, just to the left of your user name. You can search the web site.

7. # Security

For security purposes, disable anything other than localhost access to solr (See explanation here: http://stackoverflow.com/questions/28043957/how-to-set-apache-solr-admin-password)

```
iptables -A INPUT -p tcp -s localhost --dport 8983 -j ACCEPT
iptables -A INPUT -p tcp -s YOUR_SERVERS_IP --dport 8983 -j ACCEPT
iptables -A INPUT -p tcp --dport 8983 -j DROP
```

Relax! You are done.