Steps to setup and configure selenium grid- Hub and nodes.

1. To setup HUB
   A. `Make a directory with mkdir ~/selenium`

      `$ cd ~/selenium`

      `$ wget http://goo.gl/rQhaxb`

      `$ mv selenium-server-standalone-2.49.1.jar ~/selenium/`

   B. Download dependencies-
               Download and install selenium WebDriver bindings for Python

I. Wget
https://pypi.python.org/packages/source/s/selenium/selenium-2.49.2.tar.gz#md5=17cfe7c6adb2cad1f64a61cf753f0738
II tar -zxvf selenium-2.49.2.tar.gz
III cd selenium-2.49.2
IV python2.7 setup.py install --user

   C. Create your Test case file.
            https://github.com/kishan0894/Pykishan/blob/master/Automation_Script_selenium

   D. Dependencies -

            I. sudo apt-get install software-properties-common
            II. `sudo apt-get install oracle-java8-installer`

   E. Initiate the HUB.
    java -jar selenium-server-standalone-3.10.0.jar -role hub

   F. Now we have to configure our Node to the hub.
            Here is an example of node configuration for Chrome and Firefox nodes.
            1. Firefox - https://github.com/kishan0894/Pykishan/blob/master/selenium/configuration_firefox.json
            2. Chrome- https://github.com/kishan0894/Pykishan/blob/master/selenium/configuration_chrome.json

   G. The step which connects node and hub to communicate after the hub is initialized -

   `java -jar selenium-server-standalone-3.10.0.jar -role node`
   `--configuration_firefox.json/ --configuration_chrome.json`

   H. Executing the Automation_script_selenium.py will redirect request to node which is on hub.

Deploying grid architecture on Docker Container.

1. Install Docker.
   a. Sudo apt-get install docker.io
2. Find appropriate docker image for HUB and grids

Image	Command
Selenium Hub	Docker pull selenium/hub
Selenium firefox node	docker pull selenium/node-firefox
Selenium chrome node	docker pull selenium/node-chrome
Selenium firefox debug	docker pull selenium/node-firefox-debug
Selenium chrome debug	docker pull selenium/node-chrome-debug

3. docker run -d -P --link selenium-hub:hub selenium/selenium/node-chrome
4. docker run -d -P --link selenium-hub:hub selenium/selenium/node-firefox
5. Mention port id in executable command in Automation_script_selenium.
6. Ready environment you have
7. Enjoy you testing.