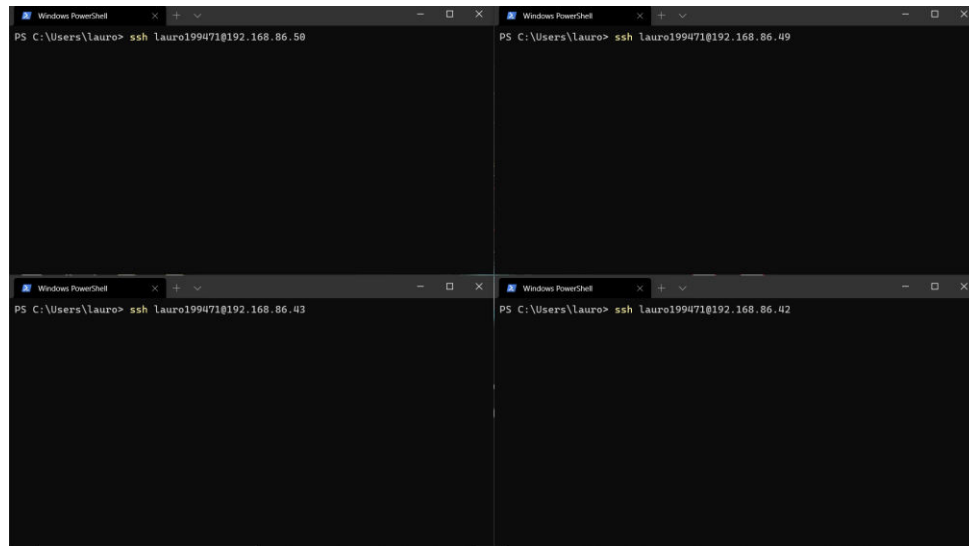


How to get Dask Client/Scheduler up and running.

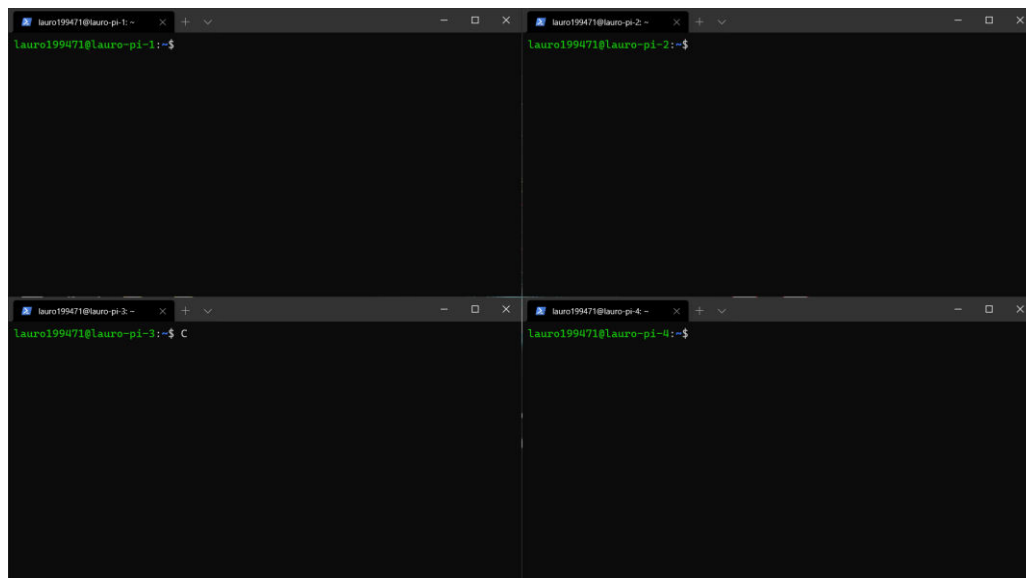
This document will cover on how to setup the Dask Client and Scheduler running on a local network. For our setup we have used a laptop, 4 raspberry pi, and a desktop computer all running Ubuntu 20. The scheduler will be running on the laptop and the clients will be running on pi's and the desktop computer. The following are the steps to configure the computers.

1) SSH into the raspberry pi



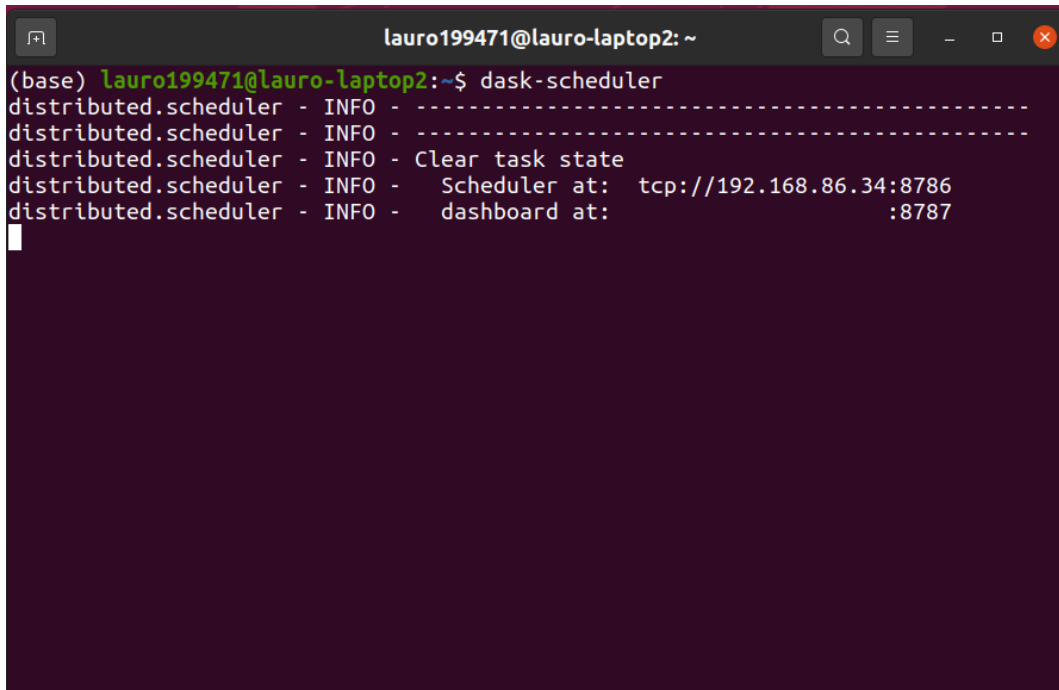
2) Once SSH into the PI, install Dask using pipy repo.

pip install dask



- 3) Run the Dask Scheduler (Laptop)

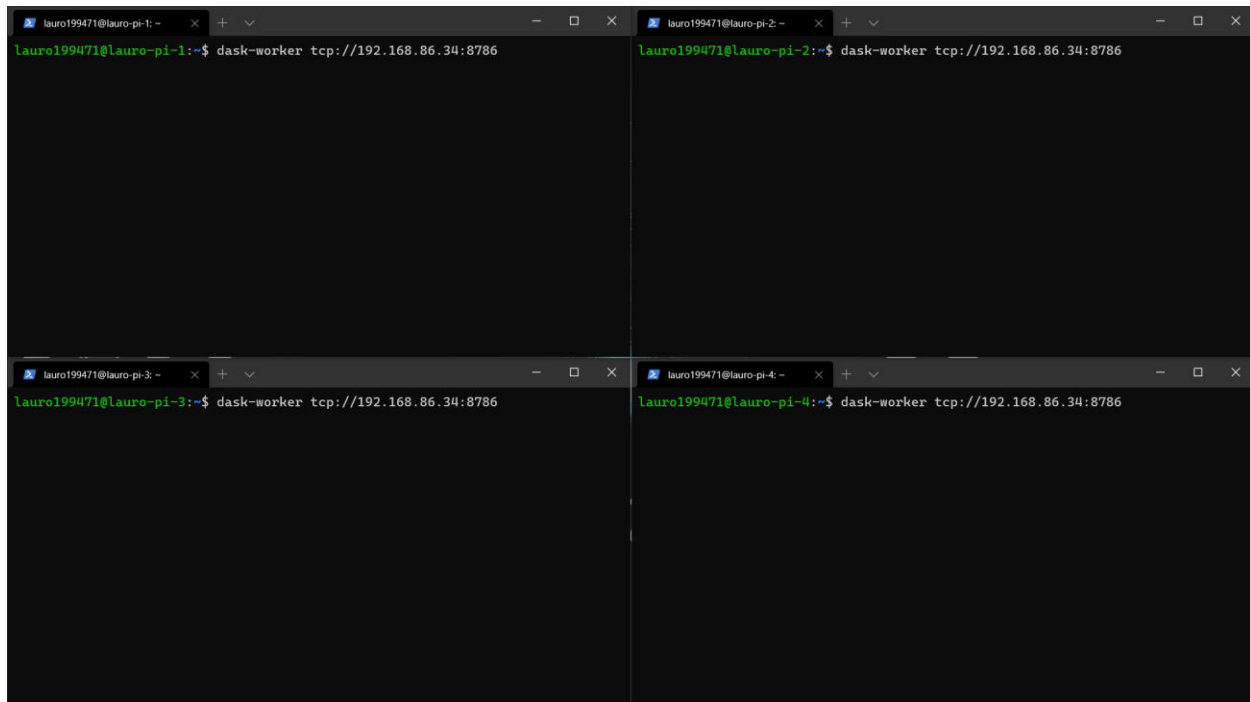
\$ dask-scheduler

A terminal window titled 'lauro199471@lauro-laptop2: ~' with standard window controls. The command '(base) lauro199471@lauro-laptop2:~\$ dask-scheduler' has been executed. The output shows several INFO messages from 'distributed.scheduler': a separator line, 'Clear task state', 'Scheduler at: tcp://192.168.86.34:8786', and 'dashboard at: :8787'.

```
(base) lauro199471@lauro-laptop2:~$ dask-scheduler
distributed.scheduler - INFO - -----
distributed.scheduler - INFO - -----
distributed.scheduler - INFO - Clear task state
distributed.scheduler - INFO - Scheduler at: tcp://192.168.86.34:8786
distributed.scheduler - INFO - dashboard at: :8787
```

- 4) Run Dask Client and provide the ip of the computer that is running the dask scheduler.

\$ dask-wroker tcp://<ip>:<port>

Four terminal windows are shown in a 2x2 grid, each titled 'lauro199471@lauro-pi-1' through 'lauro-pi-4'. Each window shows the command 'dask-worker tcp://192.168.86.34:8786' being executed at the prompt.

```
lauro199471@lauro-pi-1:~$ dask-worker tcp://192.168.86.34:8786
lauro199471@lauro-pi-2:~$ dask-worker tcp://192.168.86.34:8786
lauro199471@lauro-pi-3:~$ dask-worker tcp://192.168.86.34:8786
lauro199471@lauro-pi-4:~$ dask-worker tcp://192.168.86.34:8786
```

5) Results after previous command

```
lauro199471@lauro-pi-1: ~$ cat /dev/null > /dev/null
distributed.worker - INFO - Waiting to connect to: tcp://192.168.86.34:878
distributed.worker - INFO -
distributed.worker - INFO -
distributed.worker - INFO - Threads:
distributed.worker - INFO - Memory: 1.94 G
distributed.worker - INFO - Local Directory: /home/lauro199471/dask-wo
distributed.worker - INFO - rker-space/dask-worker-space/worker-qsk36108
distributed.worker - INFO -
distributed.worker - INFO - Registered to: tcp://192.168.86.34:878
distributed.worker - INFO -
distributed.worker - INFO -
distributed.worker - INFO - Starting established connection

lauro199471@lauro-pi-2: ~$ cat /dev/null > /dev/null
distributed.worker - INFO - Waiting to connect to: tcp://192.168.86.34:878
distributed.worker - INFO -
distributed.worker - INFO -
distributed.worker - INFO - Threads:
distributed.worker - INFO - Memory: 1.94 G
distributed.worker - INFO - Local Directory: /home/lauro199471/dask-wo
distributed.worker - INFO - rker-space/dask-worker-space/worker-3gj_h7rd
distributed.worker - INFO -
distributed.worker - INFO - Registered to: tcp://192.168.86.34:878
distributed.worker - INFO -
distributed.worker - INFO -
distributed.worker - INFO - Starting established connection

lauro199471@lauro-pi-3: ~$ cat /dev/null > /dev/null
distributed.worker - INFO - Waiting to connect to: tcp://192.168.86.34:878
distributed.worker - INFO -
distributed.worker - INFO -
distributed.worker - INFO - Threads:
distributed.worker - INFO - Memory: 1.94 G
distributed.worker - INFO - Local Directory: /home/lauro199471/dask-wo
distributed.worker - INFO - rker-space/dask-worker-space/worker-jh4nj614
distributed.worker - INFO -
distributed.worker - INFO - Registered to: tcp://192.168.86.34:878
distributed.worker - INFO -
distributed.worker - INFO -
distributed.worker - INFO - Starting established connection

lauro199471@lauro-pi-4: ~$ cat /dev/null > /dev/null
distributed.worker - INFO - Waiting to connect to: tcp://192.168.86.34:878
distributed.worker - INFO -
distributed.worker - INFO -
distributed.worker - INFO - Threads:
distributed.worker - INFO - Memory: 1.94 G
distributed.worker - INFO - Local Directory: /home/lauro199471/dask-wo
distributed.worker - INFO - rker-space/dask-worker-space/worker-yktvetgq
distributed.worker - INFO -
distributed.worker - INFO - Registered to: tcp://192.168.86.34:878
distributed.worker - INFO -
distributed.worker - INFO -
distributed.worker - INFO - Starting established connection
```

6) Everything should be connected and now can refer to the Jupiter notebook in the repository

7) Pictures of our hardware

