Manual for Setting up the Peer (PA2)

**Steps:**

* Start the at least one peer first as it is the one which will listening on the port and waiting for other peer connections.
* The Peer can be started up in either the same machine or different one.
* First you have to do the config file. Add the peer ips and peer ports in the same format as given by config file which I have included.
* Steps to start peer:

1. Copy the peer.py file on to the target machine. Make sure u have python version 2.7 or higher.
2. You can start the simple peer using the command:

python peer.py

1. You can also setup the ports and ip to listen on using the following command structure: python peer.py peerip peerport testcase(True or False) resilience(True or False)

ex:- python peer.py 127.0.0.1 1234 True True

1. As shown this is the format of the startup. If these values are not given it takes the default values which are set in the program when you use the simple command.
2. By default the resilience (making duplicates to make more copies of same file) is set to True.
3. Also the testcase is set to false, this means that the user io interface is called

True – Execute test case

False – execute the user IO interface

* Once the peer is setup it listens for sockets on the port and create a new thread for each socket connection from any client

CASSANDRA Setup and Readme :

Steps to Install Java 8:

1) sudo add-apt-repository ppa:webupd8team/java

2) sudo apt-get update

3) sudo apt-get install oracle-java8-installer

Switching between Oracle Java 8 and Java 7:

1) sudo update-java-alternatives -s java-7-oracle

2) sudo update-java-alternatives -s java-8-oracle

Setting Java environment variables:

1) sudo apt-get install oracle-java8-set-default

Steps to Setup Cassandra:

1) echo "deb http://debian.datastax.com/community stable main" | sudo tee -a /etc/apt/sources.list.d/cassandra.sources.list

2) curl -L http://debian.datastax.com/debian/repo\_key | sudo apt-key add -

3) sudo apt-get update

4) sudo apt-get install cassandra

Start-Up Cassandra:

1) sudo cassandra -f

or

2) sudo /etc/init.d/cassandra start (dont use this -- this is only for cassandra as a service)

Check Cassandra Service status

1) ps -ef | grep cassandra

Shutdown Cassandra:

1) kill -9 <pid>

or

2) sudo /etc/init.d/cassandra stop (dont use this -- this is only for cassandra as a service)

Remove Cassandra databases and log files:

1) sudo rm -r /var/log/cassandra

1) sudo rm -r /var/lib/cassandra

Note:

\* Cassandra default port: native\_transport\_port: 9042

\* Stop cassandra to modify the conf file to allow cassandra db to listen to all ports.

\* vi /etc/cassandra/cassandra.yaml

\* # Listen to local interface only. Make the below change to listen on all interfaces.

rpc\_address: localhost --> comment out

rpc\_address: 0.0.0.0 --> set this value

broadcast\_rpc\_address: 1.2.3.4 --> uncomment this line

Py Cassandra:

1) sudo apt-get install freetds-dev

2) sudo apt-get install python-dev

3) sudo pip install cassandra-driver

Cassandra cli:

1) cqlsh

2) CREATE KEYSPACE test

WITH REPLICATION = { 'class' : 'SimpleStrategy', 'replication\_factor' : 1 };

3) USE mykeyspace;

4) CREATE TABLE dht (

key text PRIMARY KEY,

value text);

5) SELECT \* FROM benchmark;

To run the benchmarkings script use command

Python pyca.py

DYNAMODB Setup and Readme:

1. Just install boto using pip

Using Command : pip install boto

1. Create a ~/.aws/credentials file containing your access key and secret key to your aws amazon account.
2. Run the given dynamo.py file from anywhere

Using the command: python dynamo.py

MongoDB Setup and Readme:

1. We are essentially following the steps given in the mongo official site

<https://docs.mongodb.org/manual/tutorial/install-mongodb-on-amazon/>

1. And we are essentially using this python driver from

<https://docs.mongodb.org/getting-started/python/>

to install the driver and use its api

1. You can run the benchmarking script using the command

Python pym.py