**Setting up Multi Node Cassandra cluster on a single Windows Machine.**

1. Downloads
2. Raise TARMAC and Remedy to download below:

        ​JDK1.8 ,Python 2.7 and Apache Cassandra 3.9 from Raise TARMAC and Remedy.

*Note*: Ensure Python version is 2.7. Not more, not less.

Using a Python version above 2.7 will throw syntax errors due to compatibility issues between Cassandra and Python.

2.  Edit "hosts" file from available at "C:\Windows\System32\drivers\etc\". You *will* need admin permission to edit this file.

The content of file should look as below:

#Cassandra Nodes

127.0.0.1            127.0.0.2

127.0.0.1            127.0.0.3

# You can add more nodes like this.

3. Create below folder structure on your Disk.

C:\cassandra\1

C:\cassandra\2

C:\cassandra\3

4.  Extract Cassandra "apache-cassandra-3.9-bin.tar.gz" download once and copy entire structure (bin,conf,doc,interface,javadoc,lib,pylib,tools, .....) in each folder (C:\cassandra\1,C:\cassandra\2 and C:\cassandra\3) . So that 3 different cassandra instances can be started later.

5.  Alter all the 3 cassandra.yaml file from below locations.

             C:\cassandra\1\conf\cassandra.yaml

C:\cassandra\2\conf\cassandra.yaml

C:\cassandra\3\conf\cassandra.yaml

6. Give the cluster name a meaningful value.

cluster\_name: ‘TmpCluster’

*Note*: a. Parameter name should be in all-small, and should not have leading spaces (“ “). Leading spaces will throw syntax error.

b. Value can be anything, preferably like the one shown above.

c. All nodes should have the same cluster\_name.

7. First and second node will be marked as seed nodes so change auto\_bootstrap to false for these two and true for others. Add it to the bottom of the file, if not present already.

auto\_bootstrap: false

8.  Specify Seeds under seed\_provider. Out of N number of nodes specify at least 2 seed nodes. Choose any two IP address.

       seeds: “127.0.0.1,127.0.0.2”

9.  Setup data, commitlog and save caches path.

data\_file\_directories : /cassandra/1/var/lib/Cassandra/data

commitlog\_directory: /cassandra/1/var/lib/Cassandra/commitlog

saved\_caches\_directory: /cassandra/1/var/lib/Cassandra/saved\_caches

**Make sure you change “1” to “2” and “3” for other nodes**

**Try to maintain the orignal format of the existing parameters. Leading spaces and tabs will cause syntax errors.**

**10**. Change listen and rpc address for all nodes.

listen\_address: 127.0.0.1

rpc\_address: 127.0.0.1

Accordingly use “.2” and “.3” for node “2” and “3”.

11.  Edit ./bin/cassandra.bat file, for each node change port from default 7199 to something unique for each node.

For node “1” Dcom.sun.management.jmxremote.port=7199

For node “2”  Dcom.sun.management.jmxremote.port=8199

For node “3”   Dcom.sun.management.jmxremote.port=9199

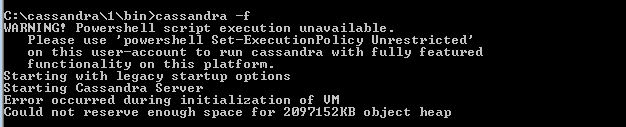
12.  Once you have edited cassandra.bat go to each of your bin folders and double click cassandra.bat to start each node.

(OR) Execute the below command, for detailed info:

C:\cassandra\1\bin> cassandra -f

**Troubleshooting Memory issue:**

If you encounter any memory issue as show in the snapshot below,



Edit the ./bin/cassandra.bat file, change the JAVA\_OPTS value of Xms2G^ (highlighted below) to a lesser value like Xms1G^ or Xms512M^ and execute the cassandra.bat file again.

set JAVA\_OPTS=-ea^

-javaagent:"%CASSANDRA\_HOME%\lib\jamm-0.3.0.jar"^

**-Xms1G^**

**-Xmx1G^**

-XX:+HeapDumpOnOutOfMemoryError^

…

14.  Verify cluster

C:\cassandra\1\bin> nodetool –p 7199 –h 127.0.0.1 ring

For more info, see: nodetool help

15. Open cqlsh window by typing the command

C:\cassandra\1\bin> cqlsh

Alternatively, you can download DataStax DevCenter for Windows and connect to your cluster. Link:

[DataStax DevCenter   
Download](https://academy.datastax.com/downloads/ops-center?destination=downloads/ops-center&dxt=DevCenter#devCenter)

Raise a TARMAC request. You may NOT need admin rights to download and extract.