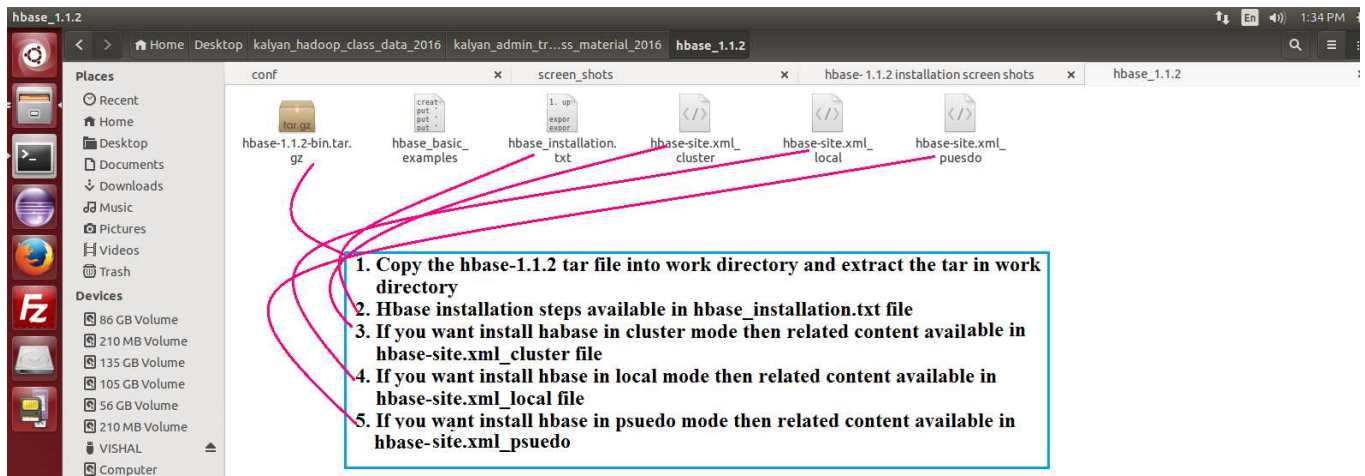
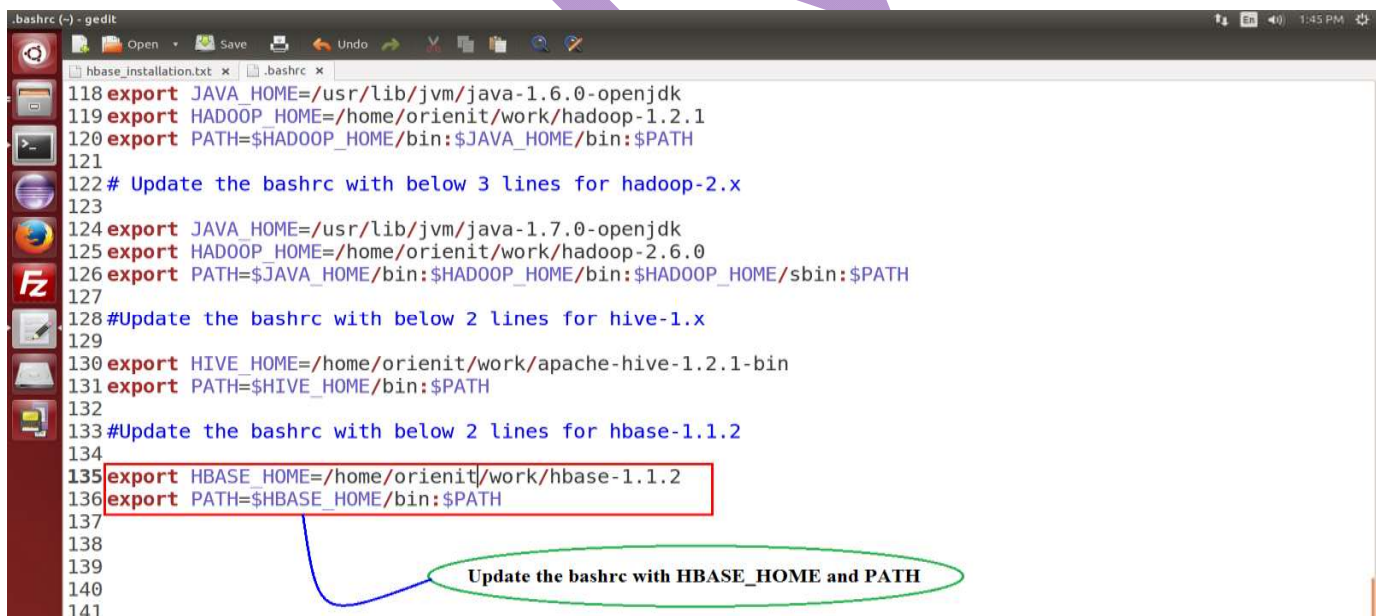


HBase-1.1.2 Version Installation Steps

1. Download the **hbase-1.1.2-bin** tar file from [Apache Mirrors](#).
2. Follow the instructions on screen shot.



3. Open the `~/.bashrc` file and update **HBASE_HOME** information, see below screen shot.



4. Please verify hbase configuration is correct or not using below command **"echo \$HBASE_HOME"**.



5. Hbase & Hadoop installation three modes.

Hadoop-2.6.0

Hbase-1.1.2

Local Mode → Local Mode

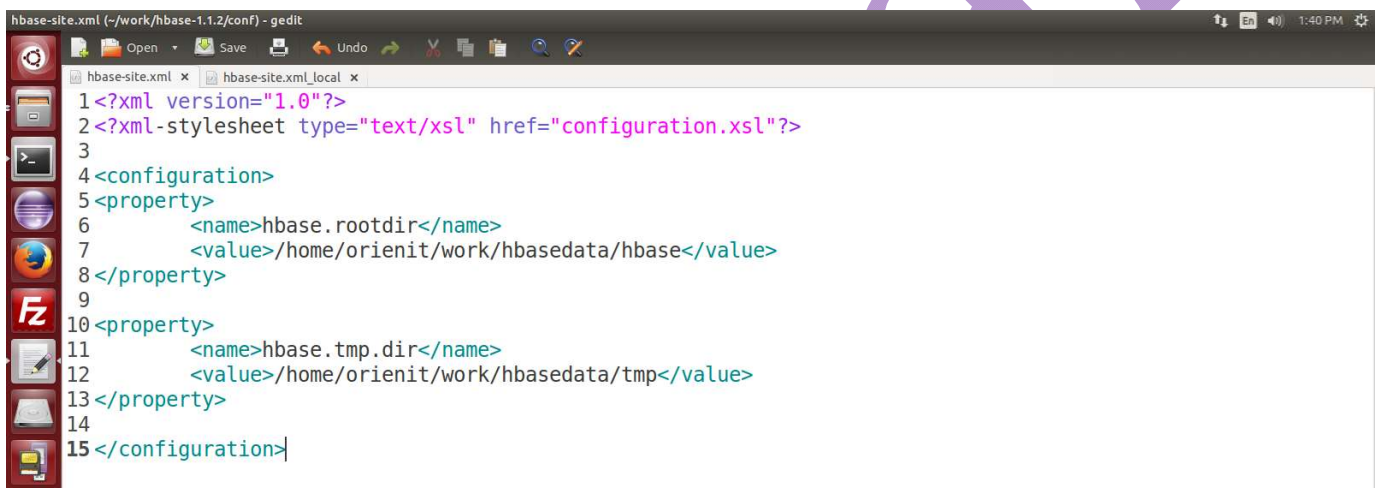
Pseudo Mode → Pseudo Mode

Cluster Mode → Cluster Mode

Internal Zookeeper

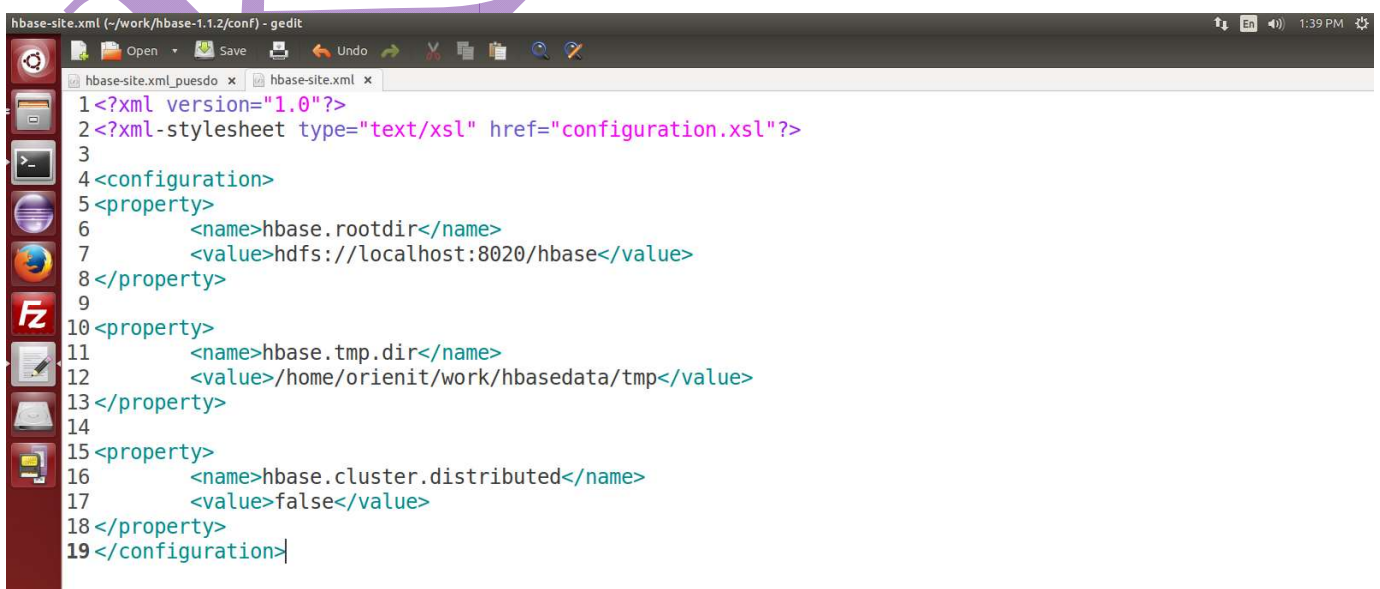
External Zookeeper

6. If we want install Hbase in **Local Mode** then we will write below screen shots content in **hbase-site.xml** file



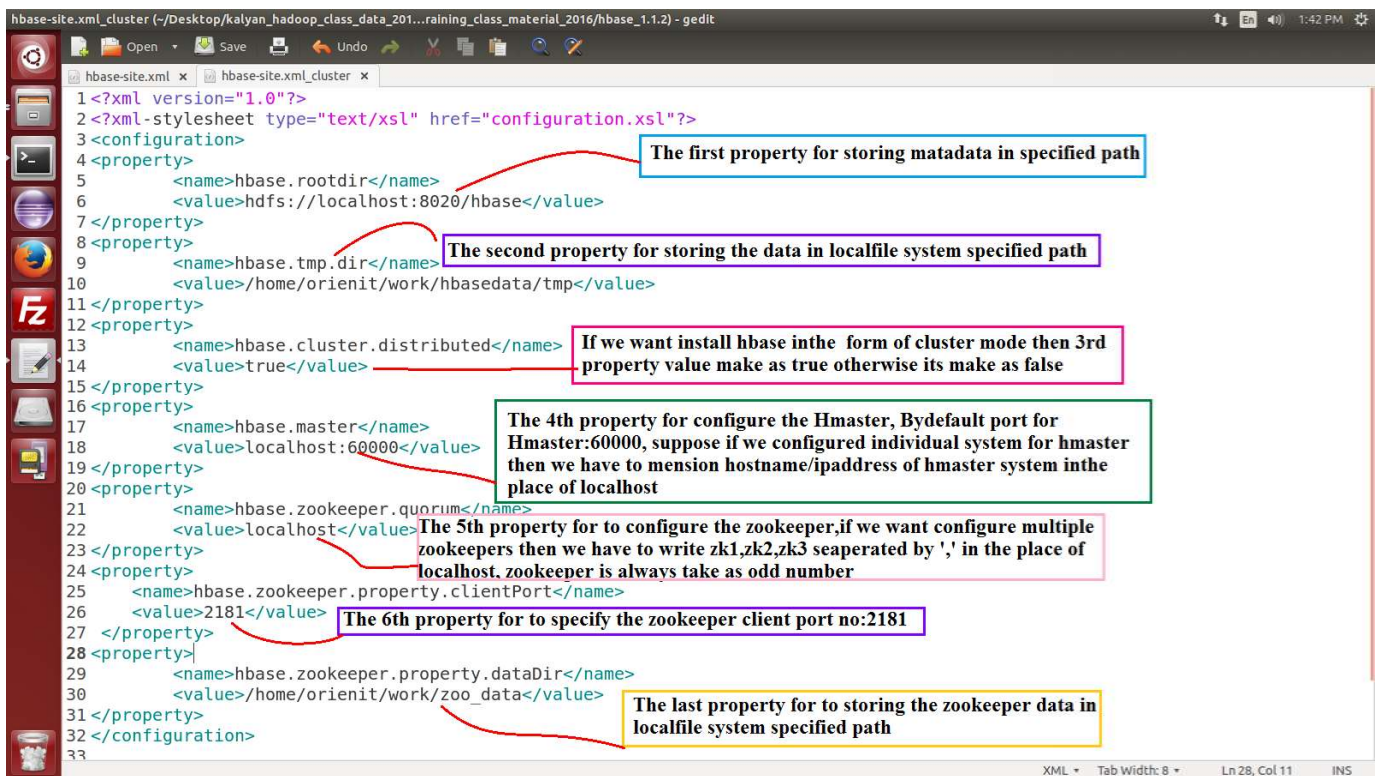
```
hbase-site.xml (-/work/hbase-1.1.2/conf) - gedit
1 <?xml version="1.0"?>
2 <?xml-stylesheet type="text/xsl" href="configuration.xsl"?>
3
4 <configuration>
5 <property>
6     <name>hbase.rootdir</name>
7     <value>/home/orienit/work/hbasedata/hbase</value>
8 </property>
9
10 <property>
11     <name>hbase.tmp.dir</name>
12     <value>/home/orienit/work/hbasedata/tmp</value>
13 </property>
14
15 </configuration>
```

7. If we want install Hbase in **Pseudo Mode** then we will write below screen shots content in **hbase-site.xml** file



```
hbase-site.xml (-/work/hbase-1.1.2/conf) - gedit
1 <?xml version="1.0"?>
2 <?xml-stylesheet type="text/xsl" href="configuration.xsl"?>
3
4 <configuration>
5 <property>
6     <name>hbase.rootdir</name>
7     <value>hdfs://localhost:8020/hbase</value>
8 </property>
9
10 <property>
11     <name>hbase.tmp.dir</name>
12     <value>/home/orienit/work/hbasedata/tmp</value>
13 </property>
14
15 <property>
16     <name>hbase.cluster.distributed</name>
17     <value>>false</value>
18 </property>
19 </configuration>
```

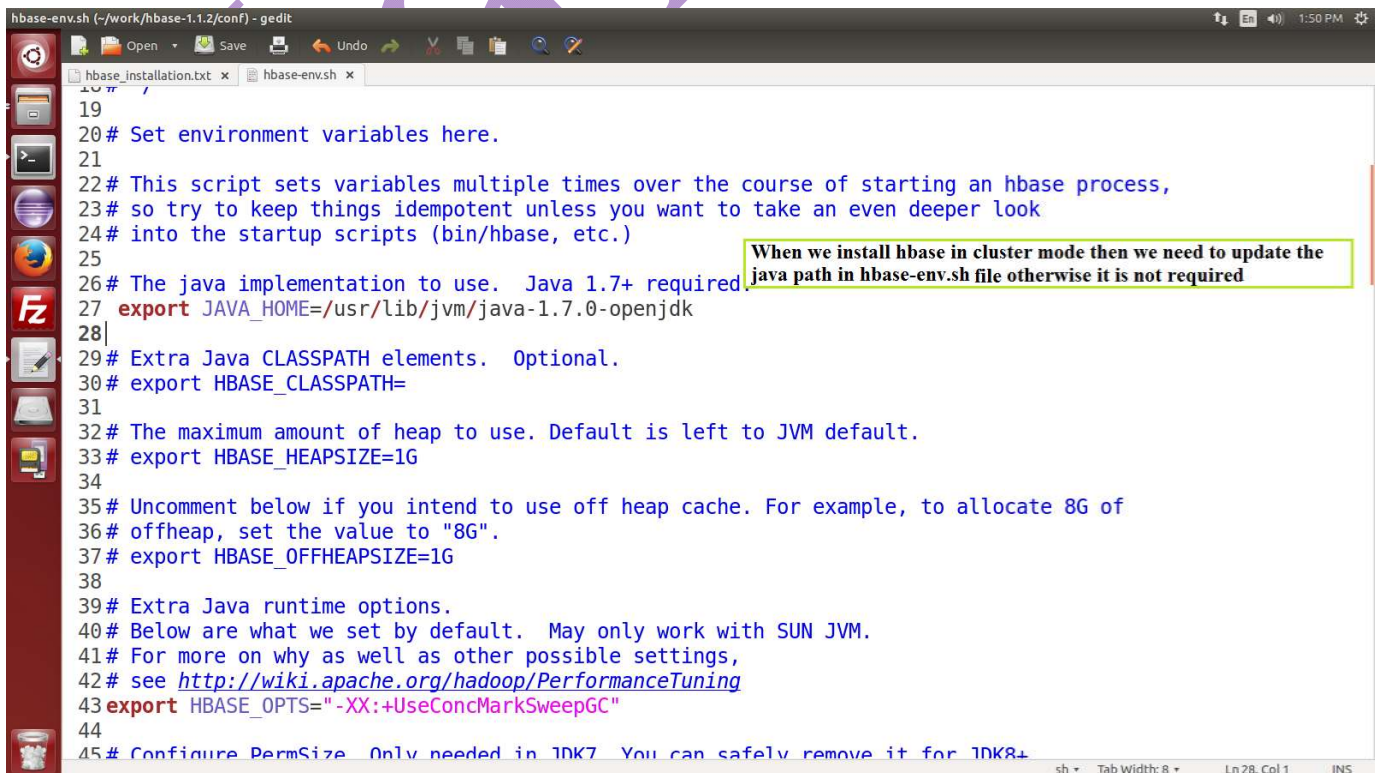
8. If we want install Hbase in Cluster Mode then we will write the below screen shot content in **hbase-site.xml** file.



The screenshot shows the `hbase-site.xml` file in a text editor. The file contains XML configuration for HBase. Annotations with red arrows point to specific lines:

- The first property for storing matadata in specified path** points to line 5: `<name>hbase.rootdir</name>` and line 6: `<value>hdfs://localhost:8020/hbase</value>`.
- The second property for storing the data in localfile system specified path** points to line 9: `<name>hbase.tmp.dir</name>` and line 10: `<value>/home/orienit/work/hbasedata/tmp</value>`.
- If we want install hbase inthe form of cluster mode then 3rd property value make as true otherwise its make as false** points to line 13: `<name>hbase.cluster.distributed</name>` and line 14: `<value>true</value>`.
- The 4th property for configure the Hmaster, Bydefault port for Hmaster:60000, suppose if we configured individual system for hmaster then we have to mension hostname/ipaddress of hmaster system inthe place of localhost** points to line 17: `<name>hbase.master</name>` and line 18: `<value>localhost:60000</value>`.
- The 5th property for to configure the zookeeper,if we want configure multiple zookeepers then we have to write zk1,zk2,zk3 seaperated by ',' in the place of localhost. zookeeper is always take as odd number** points to line 21: `<name>hbase.zookeeper.quorum</name>` and line 22: `<value>localhost</value>`.
- The 6th property for to specify the zookeeper client port no:2181** points to line 25: `<name>hbase.zookeeper.property.clientPort</name>` and line 26: `<value>2181</value>`.
- The last property for to storing the zookeeper data in localfile system specified path** points to line 29: `<name>hbase.zookeeper.property.dataDir</name>` and line 30: `<value>/home/orienit/work/zoo_data</value>`.

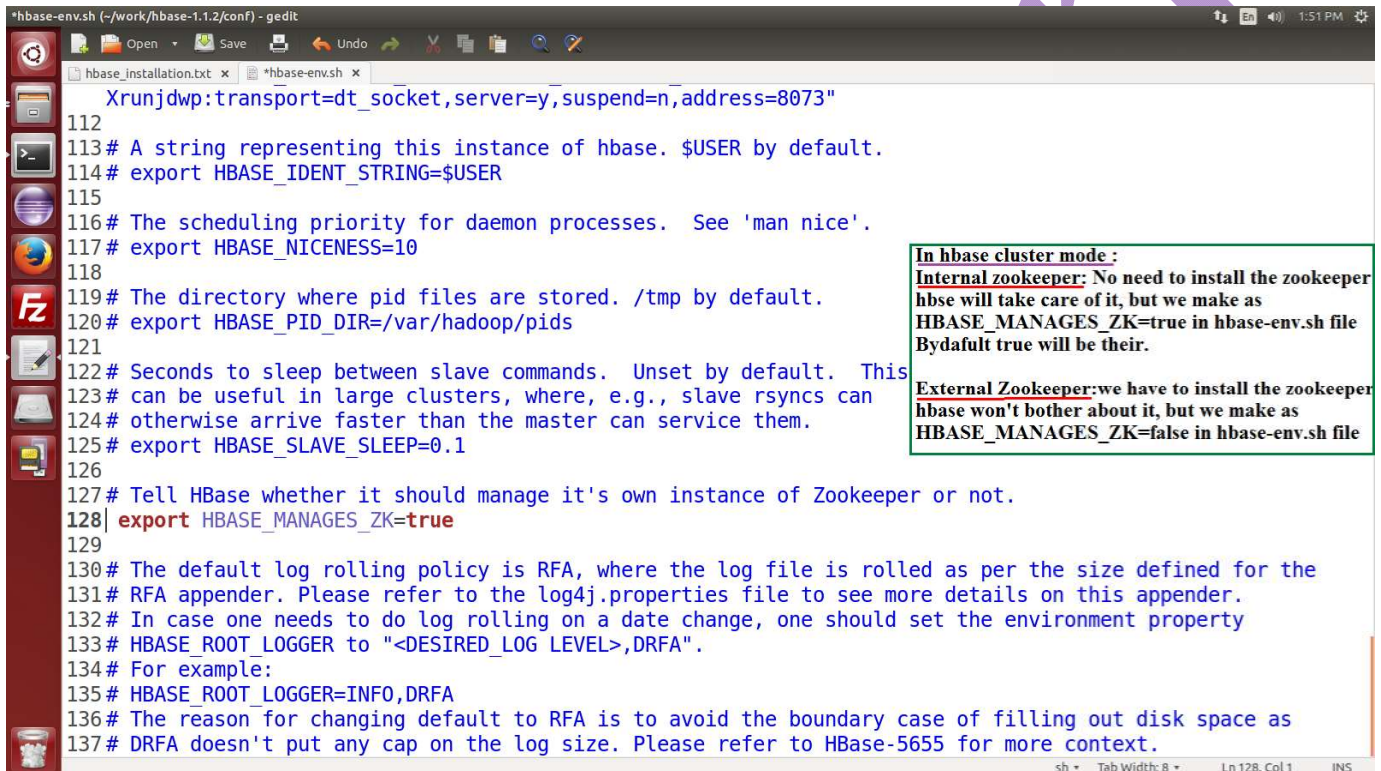
9. When we want install hbase in cluster mode then we have to update **JAVA_HOME** path in **hbase-env.sh** file. Follow the below screen shot and read the inside box content.



The screenshot shows the `hbase-env.sh` file in a text editor. The file contains shell script for setting environment variables. An annotation with a green box points to line 27:

- When we install hbase in cluster mode then we need to update the java path in hbase-env.sh file otherwise it is not required** points to line 27: `export JAVA_HOME=/usr/lib/jvm/java-1.7.0-openjdk`.

10. If we want to install hbase in cluster mode.
11. If **internal zookeeper**
 - a. **export HBASE_MANAGES_ZK=true** in hbase-site.xml
 - b. zookeeper will start by hbase only
 - c. by default value is **`true`**
12. If **external zookeeper**
 - a. **export HBASE_MANAGES_ZK=false** in hbase-site.xml
 - b. zookeeper we need to start manually
13. Observe the below screen shots.

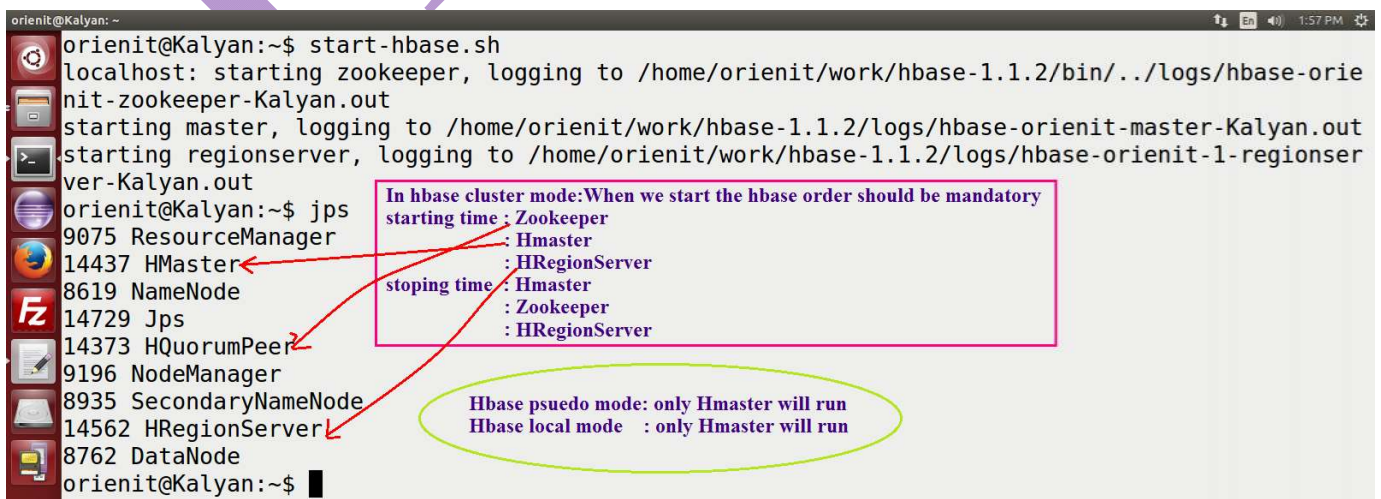


```

hbase-env.sh (~/.work/hbase-1.1.2/conf) - gedit
Xrunjdpw:transport=dt_socket,server=y,suspend=n,address=8073"
112
113# A string representing this instance of hbase. $USER by default.
114# export HBASE_IDENT_STRING=$USER
115
116# The scheduling priority for daemon processes. See 'man nice'.
117# export HBASE_NICENESS=10
118
119# The directory where pid files are stored. /tmp by default.
120# export HBASE_PID_DIR=/var/hadoop/pids
121
122# Seconds to sleep between slave commands. Unset by default. This
123# can be useful in large clusters, where, e.g., slave rsyncs can
124# otherwise arrive faster than the master can service them.
125# export HBASE_SLAVE_SLEEP=0.1
126
127# Tell HBase whether it should manage it's own instance of Zookeeper or not.
128| export HBASE_MANAGES_ZK=true
129
130# The default log rolling policy is RFA, where the log file is rolled as per the size defined for the
131# RFA appender. Please refer to the log4j.properties file to see more details on this appender.
132# In case one needs to do log rolling on a date change, one should set the environment property
133# HBASE_ROOT_LOGGER to "<DESIRED_LOG_LEVEL>,DRFA".
134# For example:
135# HBASE_ROOT_LOGGER=INFO,DRFA
136# The reason for changing default to RFA is to avoid the boundary case of filling out disk space as
137# DRFA doesn't put any cap on the log size. Please refer to HBase-5655 for more context.
  
```

In hbase cluster mode :
Internal zookeeper: No need to install the zookeeper hbase will take care of it, but we make as HBASE_MANAGES_ZK=true in hbase-env.sh file By default true will be their.
External Zookeeper: we have to install the zookeeper hbase won't bother about it, but we make as HBASE_MANAGES_ZK=false in hbase-env.sh file

14. Start the hbase and observe the order also.



```

orienit@Kalyan:~$ start-hbase.sh
localhost: starting zookeeper, logging to /home/orienit/work/hbase-1.1.2/bin/./logs/hbase-orienit-zookeeper-Kalyan.out
starting master, logging to /home/orienit/work/hbase-1.1.2/logs/hbase-orienit-master-Kalyan.out
starting regionserver, logging to /home/orienit/work/hbase-1.1.2/logs/hbase-orienit-1-regionserver-Kalyan.out
orienit@Kalyan:~$ jps
9075 ResourceManager
14437 HMaster
8619 NameNode
14729 Jps
14373 HQuorumPeer
9196 NodeManager
8935 SecondaryNameNode
14562 HRegionServer
8762 DataNode
orienit@Kalyan:~$
  
```

In hbase cluster mode: When we start the hbase order should be mandatory
 starting time : Zookeeper
 : Hmaster
 : HRegionServer
 stopping time : Hmaster
 : Zookeeper
 : HRegionServer

Hbase psuedo mode: only Hmaster will run
 Hbase local mode : only Hmaster will run