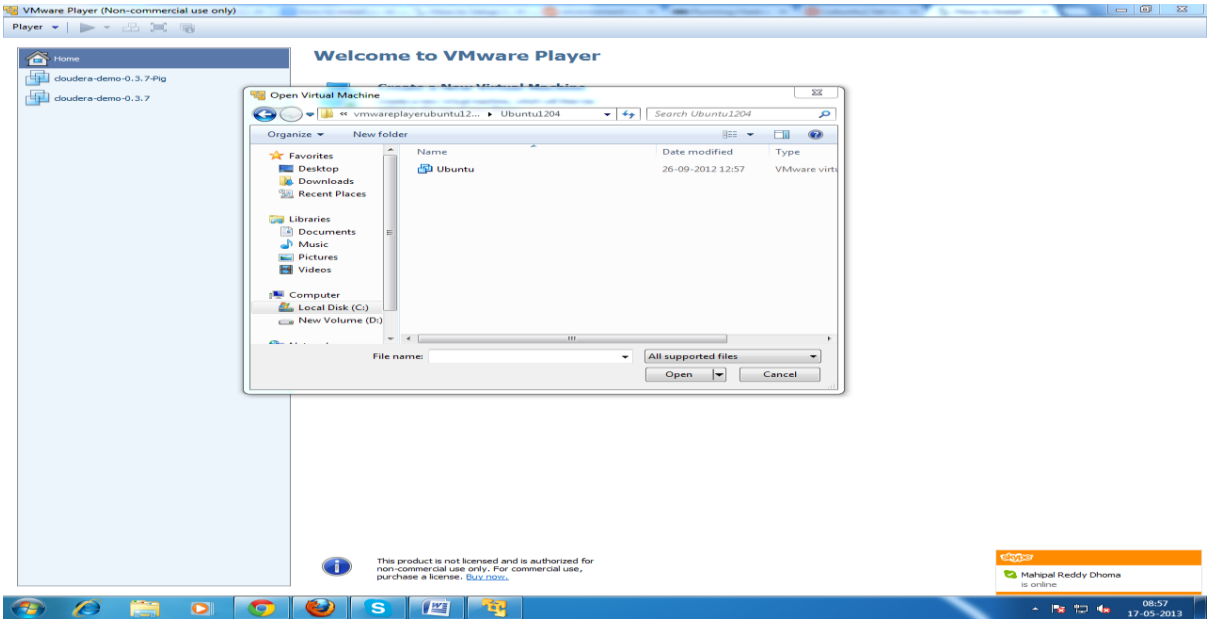
edureka!

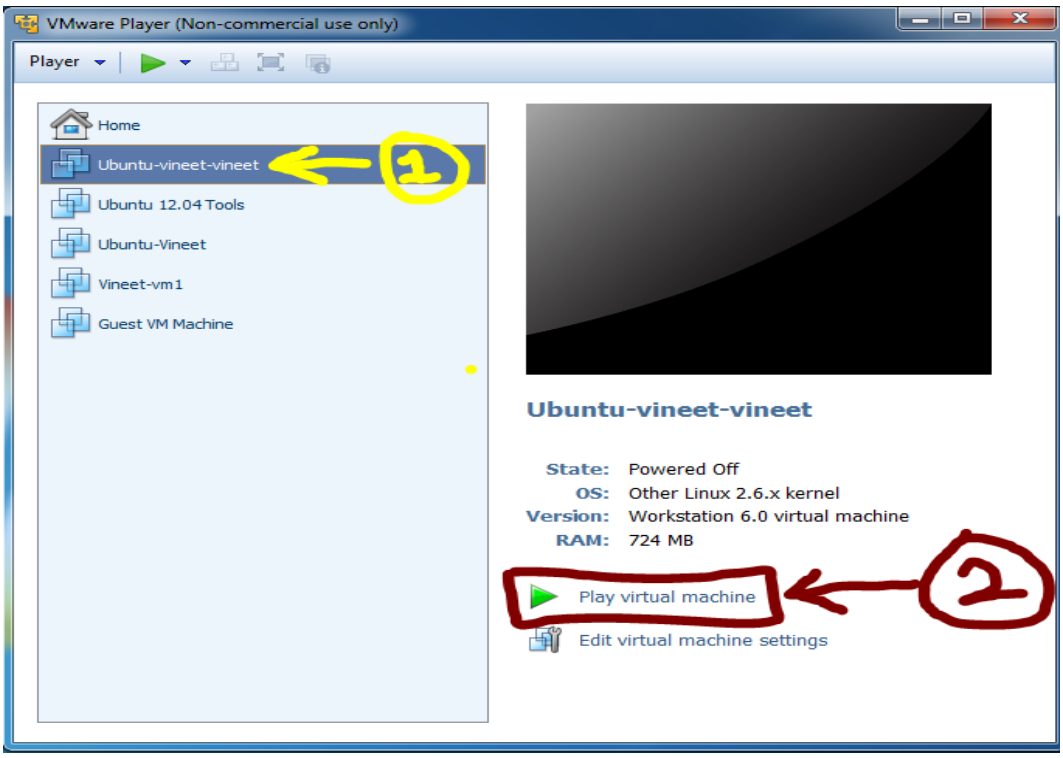
# Hadoop Installation with Single DataNode

- **Go to the below link and download the image of ubuntu 12.04**
  - http://www.traffictool.net/vmware/ubuntu1204t.html

- **Open VMware Player and click open virtual machine and select path where you have extracted image of Ubuntu. After that select the .vmx file and click ok.**

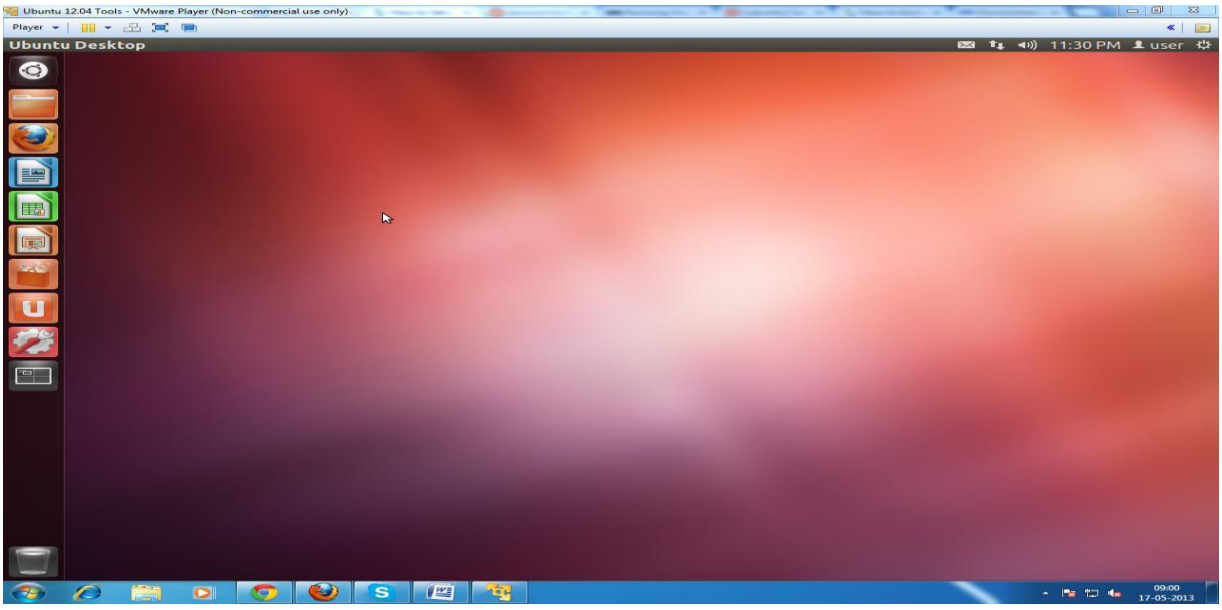



- **Now you can see the below screen in VMware Player.**



- **Double click on ubuntu present in VMware Player. You will get a screen of the below image.**

Username **: user**
Password **: password**




- **Open a Terminal**


- **Update the repository:**
- **Command:** sudo apt-get update

```
user@ubuntu:~$ sudo apt-get update
```

- **Once the Update is complete :**
- **Command:** sudo apt-get install openjdk-6-jdk

```
user@ubuntu:~$ sudo apt-get install openjdk-6-jdk
```

- **After Java has been Installed, To check whether Java is installed on your system or not give the below command :**
- **Command:**java -version

```
user@ubuntu:~$ java -version
java version "1.6.0_27"
OpenJDK Runtime Environment (IcedTea6 1.12.5) (6b27-1.12.5-0ubuntu0.12.04.1)
OpenJDK Client VM (build 20.0-b12, mixed mode, sharing)
user@ubuntu:~$
```

- **Install openssh-server:**
- **Command:** sudo apt-get install openssh-server

```
user@ubuntu: ~
user@ubuntu:~$ sudo apt-get install openssh-server
[sudo] password for user:
```

```
user@ubuntu: ~
user@ubuntu:~$ sudo apt-get install openssh-server
[sudo] password for user:
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following extra packages will be installed:
  openssh-client ssh-import-id
Suggested packages:
  libpam-ssh keychain monkeysphere openssh-blacklist openssh-blacklist-extra
  rssh molly-guard
The following NEW packages will be installed:
  openssh-server ssh-import-id
The following packages will be upgraded:
  openssh-client
1 upgraded, 2 newly installed, 0 to remove and 562 not upgraded.
Need to get 1,309 kB of archives.
After this operation, 891 kB of additional disk space will be used.
Do you want to continue [Y/n]? Y
```

- **Download and extract Hadoop:**
- **Command: wget http://archive.apache.org/dist/hadoop/core/hadoop-1.2.0/hadoop-1.2.0.tar.gz**
- **Command: tar -xvf hadoop-1.2.0.tar.gz**

```
user@ubuntu:~$ ls
Desktop     examples.desktop     Music      Templates
Documents   hadoop-1.2.0         Pictures   Videos
Downloads   hadoop-1.2.0.tar.gz  Public
user@ubuntu:~$
```

- **Edit core-site.xml:**
- **Command: sudo gedit hadoop-1.2.0/conf/core-site.xml**

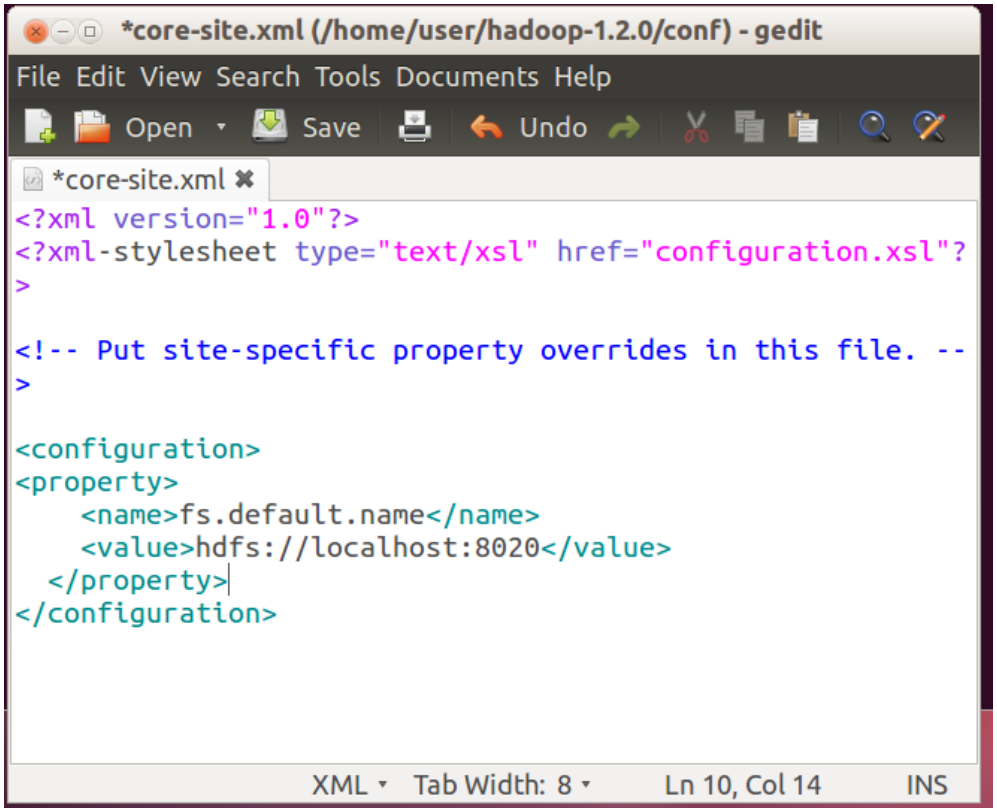
*<property>*

*<name>fs.default.name</name>*

*<value>hdfs://localhost:8020</value>*

*</property>*

```
user@ubuntu:~$ sudo gedit hadoop-1.2.0/conf/core-site.xml
[sudo] password for user:
```




- **Edit hdfs-site.xml:**
- **Command: sudo gedit hadoop-1.2.0/conf/hdfs-site.xml**

***<property>***

***<name>dfs.replication</name>***

***<value>1</value>***

***</property>***

***<property>***

***<name>dfs.permissions</name>***

***<value>false</value>***

***</property>***

```
user@ubuntu:~$ sudo gedit hadoop-1.2.0/conf/hdfs-site.xml
user@ubuntu:~$
```

hdfs-site.xml

```
<?xml version="1.0"?>
<?xml-stylesheet type="text/xsl" href="configuration.xsl"?>

<!-- Put site-specific property overrides in this file. -->

<configuration>
<property>
    <name>dfs.replication</name>
    <value>1</value>
  </property>
  <property>
     <name>dfs.permissions</name>
     <value>false</value>
  </property>
</configuration>
```

- **Edit mapred-site.xml:**
- **Command: sudo gedit hadoop-1.2.0/conf/mapred -site.xml**

***<property>***

***<name>mapred.job.tracker</name>***

***<value>localhost:8021</value>***

***</property>***

```
user@ubuntu:~$ sudo gedit hadoop-1.2.0/conf/mapred-site.xml
user@ubuntu:~$
```

*mapred-site.xml

```
<?xml version="1.0"?>
<?xml-stylesheet type="text/xsl" href="configuration.xsl"?>

<!-- Put site-specific property overrides in this file. -->

<configuration>
<property>
    <name>mapred.job.tracker</name>
    <value>localhost:8021</value>
  </property>
</configuration>
```

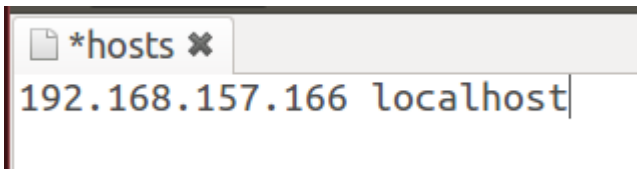
- **Get your ip address:**
- **Command:** ifconfig
- **Command:** sudo gedit /etc/hosts

```
user@ubuntu: ~
user@ubuntu:~$ ifconfig
eth0      Link encap:Ethernet  HWaddr 00:0c:29:3c:bf:09
          inet addr:192.168.157.166  Bcast:192.168.157.255  Mask:255.255.255.0
          inet6 addr: fe80::20c:29ff:fe3c:bf09/64 Scope:Link
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
          RX packets:106707 errors:0 dropped:0 overruns:0 frame:0
          TX packets:65046 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:134094191 (134.0 MB)  TX bytes:4525014 (4.5 MB)
          Interrupt:17 Base address:0x1080

lo        Link encap:Local Loopback
          inet addr:127.0.0.1  Mask:255.0.0.0
          inet6 addr: ::1/128 Scope:Host
          UP LOOPBACK RUNNING  MTU:16436  Metric:1
          RX packets:24323 errors:0 dropped:0 overruns:0 frame:0
          TX packets:24323 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:0
          RX bytes:4315399 (4.3 MB)  TX bytes:4315399 (4.3 MB)

user@ubuntu:~$
```

```
user@ubuntu: ~
user@ubuntu:~$ sudo gedit /etc/hosts
user@ubuntu:~$
```




- **Create a ssh key:**
- **Command:** ssh-keygen -t rsa –P ""

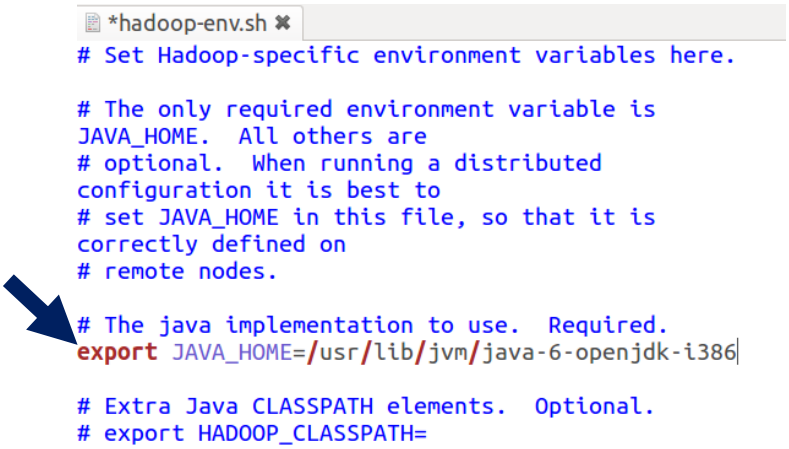
- **Moving the key to authorized key:**
- **Command:** cat $HOME/.ssh/id_rsa.pub >> $HOME/.ssh/authorized_keys

----------Reboot the system----------

## Configuration

- **Add JAVA_HOME in hadoop-env.sh file:**
- **Command:** sudo gedit hadoop-1.2.0/conf/hadoop-env.sh
- **Type :**export JAVA_HOME=/usr/lib/jvm/java-6-openjdk-i386

**Uncomment the below shown export and add the below the path to your JAVA_HOME:**




- **Change the directory where hadoop is installed.**
- **Command:** cd hadoop-1.2.0

- **Format the name node**
- **Command:** bin/hadoop namenode -format

- **Start the namenode, datanode**
- **Command:** bin/start-dfs.sh

- **Start the task tracker and job tracker**
- **Command:** bin/start-mapred.sh

- **To check if Hadoop started correctly**
- **Command: jps**