Installation of Ubuntu on Virtual Box.

- 1. Down to ad the iso image for desktop for Ubuntu.
- 2. Open Virtual box and click on the new button.
- 3. Give a name to the virtual machine and select the location for it to install.
- 4. Assign RAM size to your virtual machine.
- 5. Greate a virtual hard disk for the machine to store files.
- 6. Select the type of hard disk. Using VDI type is recommended.
- 7. Either of physical storage type can be selected using dynamically allocated disk is by default.
- 8. Select disk size and provide the destination folder to install.
- 9. After the disk creation is done, boot the nirtual markine and begin installed
- 10. If the installation disk is not automatically detected. Browse the fite location and select the iso file for Uburhu.
- 11. proceed with installation file and wait for future option.
- 12. click on Install Ubuntu and select keyboard layout.
- 13. Select installation type and click on the install now.
- 14. Select location, time zone, thouse name for computer and set password.
- 15. Once the installation priviess is dones reboot VM.

Installing Hadoop on Ubuntu

- 1. Install Java Development Kit (JDK)
 - souda apt update
 - > sudo apt Enstall open Jok 8 Jdh
- 2. verily java version.
 - > Java Version.
- 3. Install SSH:

> sudo opt Install ash.

secure shell (SSH) is essertantal to Hodoop's operation since.

4. Create Hadoop user.

> sudo add user hadoop.

Create a dedicated user specifically for hadoop operation.

- 5. Switch wer
 - > su hadoop.
- 6. configure SSH
 - > 1sh kuygen trsa
- 7. set permission

cat ~1. ssh/id- rsa. pub >> 1. shh / authorized heys. chmod 640 ~1. ssh / authorized - keys.

- 8. ISH to localhost:
 - > 1sh localhost
 - 9. switch wer:
 - > su-hadoop.
 - 10. Install hadoop.

```
> wget https: Malcan. apathe. org / had oop / common!
            hodrop-3.3.6 / Ladrop-3.3.6.tar 93
      extract the contents using,
             tat - xubb hadoup 3.3.6. langs
             rane ~ 1. Lashre
     > to skup the opinionment variables:
       export Java-Home = / um / lib/s/m/joura - 8 - open joh - areadby
       export lladoop Home = thome I hadoop I hadoop
       export hadop Install + $ hadoop home.
       export Hodoop-maprid-home : & hadoop-home
       export hadoop-common-home = & hadoop-home
       export hadoop-HDFS-home = & hadoop-home
       export hadoop-youn-home = $ hadoop-home
        export hadoop-common-lib native. Dir = $ hadoop-home / Lib/ rative
      export path = & path: & had out-home / shin: & hadoop-home/bin.
      export Hodrop-opts = "-Djava. Library. Path = $ Hodrop-home / Lib/ration
      > source v/. bashrc.
ropen hadoop environment configuration file.
   nano & hadoop-home /elc/hadoop/hadoop.env.sh.
> sel Jova patt:
  export Java-home = / wx / lib/jvm/java-8- open-jde .-andby.
  H. configure fladoup:
 > create necessary directories.
        ed hadoup /
        mk dir pn/hadoopdala/halfs/fnamenede, dalanode?
 , Edit core - silt. xml:
```

nano & Aladoop-home / etc / hadoop / core - site. xml.

> Edit holls - site.xml

nano & HADDOD- HOME /etc/ hodoop/holls - site.xml

> Edit mapred. site.xml

nano & Hadoop. Home / etc/ hadoop/mapred. site.xml

> Edit yarn-site.xml

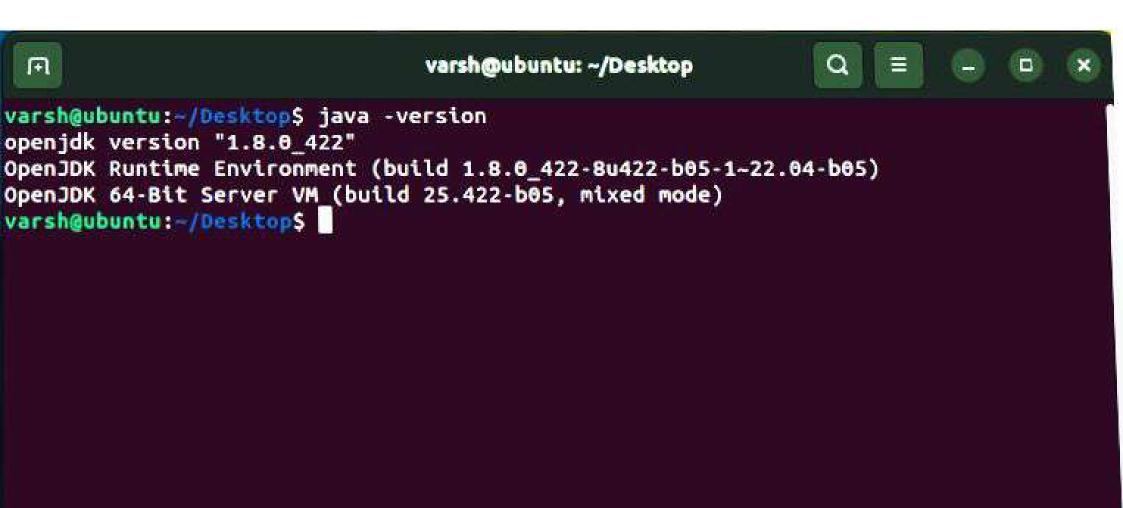
nano & Hadoop- home / etc/ hodoop/youn-site.xml

12. Start Hadoop eluster:

> Format the name nodo:

holfs name node-format

> Start the hadoop eluster start-all-sh.



a

Expanded Security Maintenance for Applications is not enabled.

https://ubuntu.com/pro

https://landscape.canonical.com

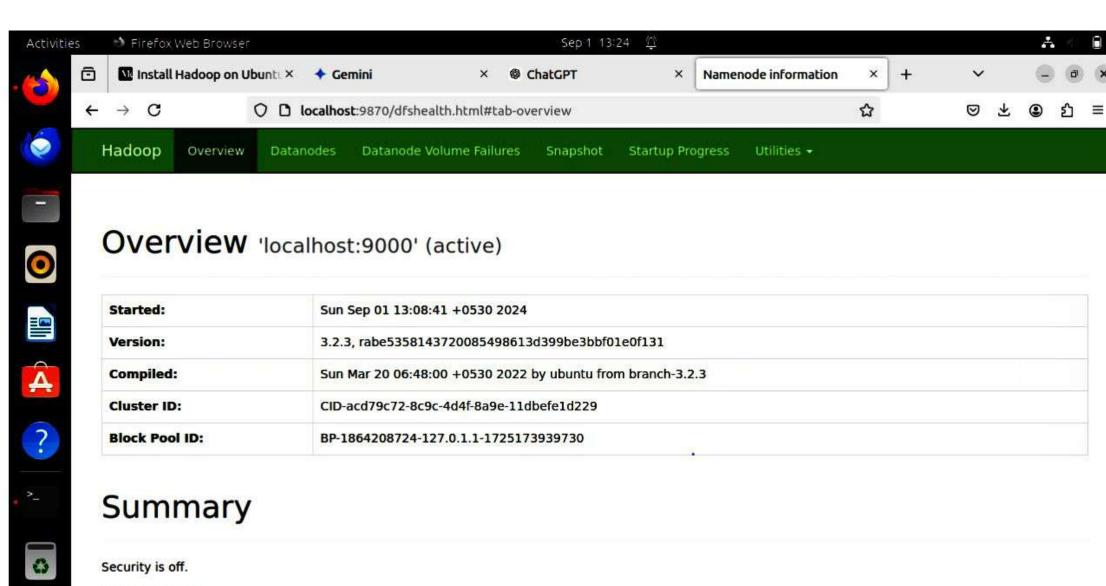
* Management:

* Support:

= . .0 | . + .0 ..| . ++.0 0|

+----[SHA256]----+ varsh@ubuntu:~S

```
varsh@ubuntu: $ ls /home/varsh/hadoop-3.2.3/bin
container-executor hadoop hadoop.cmd hdfs hdfs.cmd mapred mapred.cmd oom-listener test-container-executor yarn yarn.cmd
varsh@ubuntu:~S nano ~/.bashrc
varsh@ubuntu:~$ source ~/.bashrc
varsh@ubuntu:~$ hadoop version
Hadoop 3.2.3
Source code repository https://github.com/apache/hadoop -r abe5358143720085498613d399be3bbf01e0f131
Compiled by ubuntu on 2022-03-20T01:18Z
Compiled with protoc 2.5.0
From source with checksum 39bb14faec14b3aa25388a6d7c345fe8
This command was run using /home/varsh/hadoop-3.2.3/share/hadoop/common/hadoop-common-3.2.3.jar
varsh@ubuntu:~$ hadoop fs -mkdir /user
varsh@ubuntu: $ hadoop fs -mkdir /user/hadoopEg
varsh@ubuntu:~$ touch demo.csv
varsh@ubuntu:~$ hadoop fs -put demo.csv /user/hadoopEg
varsh@ubuntu:-$
```



Safemode is off.

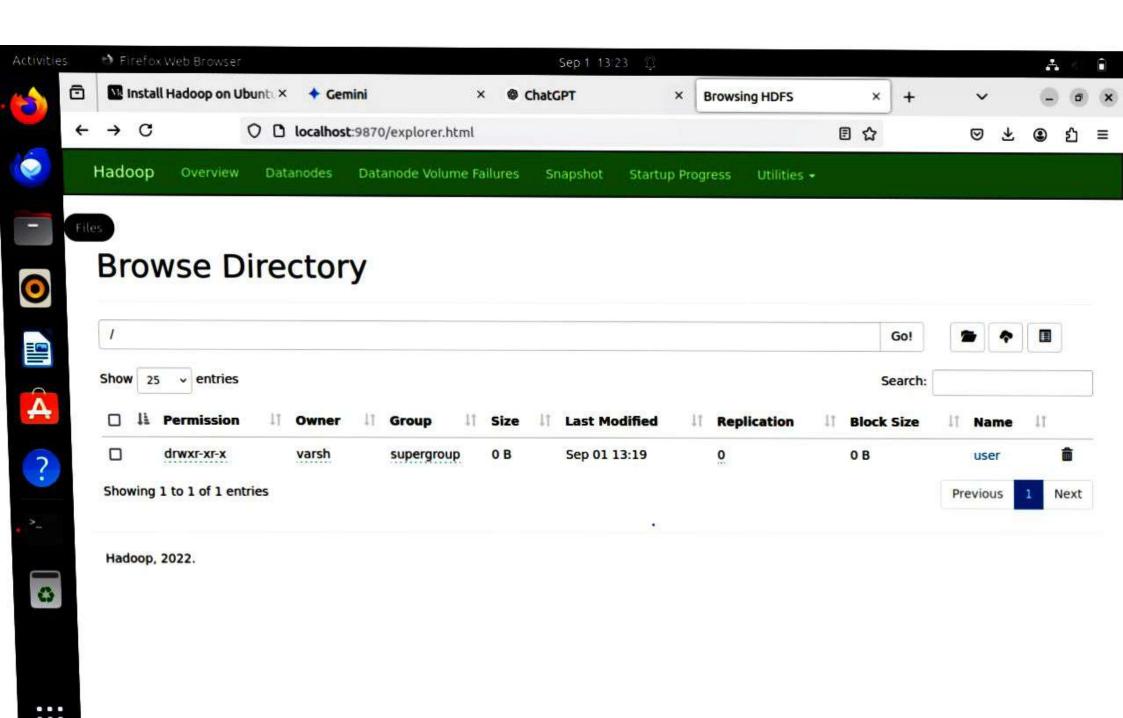
4 files and directories, 0 blocks (0 replicated blocks, 0 erasure coded block groups) = 4 total filesystem object(s).

Heap Memory used 104.76 MB of 187 MB Heap Memory. Max Heap Memory is 654.5 MB.

Non Heap Memory used 60.48 MB of 61.71 MB Committed Non Heap Memory. Max Non Heap Memory is <unbounded>.

Configured Capacity:

23.94 GB



WARNING: Attempting to start all Apache Hadoop daemons as varsh in 10 seconds.
WARNING: This is not a recommended production deployment configuration.
WARNING: Use CTRL-C to abort.
Starting namenodes on [localhost]
Starting datanodes
Starting secondary namenodes [ubuntu]
Starting resourcemanager
resourcemanager is running as process 9810. Stop it first and ensure /tmp/hadoop-varsh-resourcemanager.pid file is empty before ret
ry.
Starting nodemanagers

varsh@ubuntu: \$ /home/varsh/hadoop-3.2.3/sbin/start-all.sh

```
varsh@ubuntu:~$ /home/varsh/hadoop-3.2.3/sbin/stop-all.sh
WARNING: Stopping all Apache Hadoop daemons as varsh in 10 seconds.
WARNING: Use CTRL-C to abort.
Stopping namenodes on [localhost]
Stopping datanodes
Stopping secondary namenodes [ubuntu]
Stopping nodemanagers
Stopping resourcemanager
varsh@ubuntu:~$
```