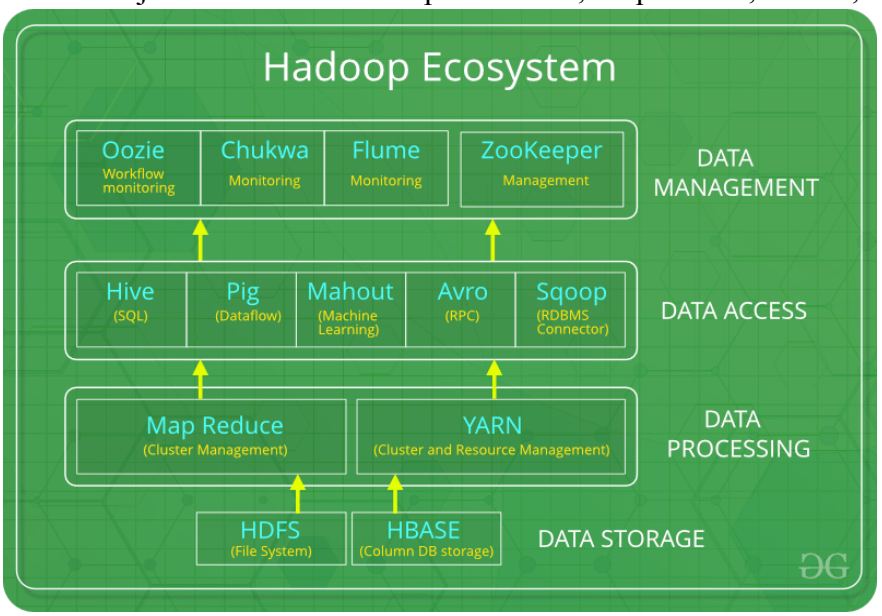
Experiment No.1
Hadoop HDFS Practical
Date of Performance: 04/09/23
Date of Submission: 04/09/23

AIM : Installation, Configuration of hadoop and performing basic file management operations in hadoop.

THEORY :

What is the Hadoop Ecosystem?

Hadoop Ecosystem is a platform or a suite which provides various services to solve the big data problems. It includes Apache projects and various commercial tools and solutions. There are four major elements of Hadoop i.e. HDFS, MapReduce, YARN, and Hadoop Common.



Following are the components that collectively form a Hadoop ecosystem:

- HDFS: Hadoop Distributed File System
- YARN: Yet Another Resource Negotiator
- MapReduce: Programming based Data Processing
- Spark: In-Memory data processing
- PIG, HIVE: Query based processing of data services
- HBase: NoSQL Database
- Mahout, Spark MLLib: Machine Learning algorithm libraries
- Solar, Lucene: Searching and Indexing
- Zookeeper: Managing cluster
- Oozie: Job Scheduling

HDFS:

HDFS is the primary or major component of Hadoop ecosystem and is responsible for storing large data sets of structured or unstructured data across various nodes and thereby maintaining the metadata in the form of log files.

HDFS consists of two core components i.e.

- Name node
- Data Node

Name Node is the prime node which contains metadata (data about data) requiring comparatively fewer resources than the data nodes that stores the actual data. These data nodes are commodity hardware in the distributed environment.

HDFS maintains all the coordination between the clusters and hardware.

YARN:

Yet Another Resource Negotiator, as the name implies, YARN is the one who helps to manage the resources across the clusters. In short, it performs scheduling and resource allocation for the Hadoop System.

Resource manager has the privilege of allocating resources for the applications in a system whereas Node managers work on the allocation of resources such as CPU, memory, bandwidth per machine and later on acknowledges the resource manager. Application manager works as an interface between the resource manager and node manager and performs negotiations as per the requirement of the two.

MapReduce:

MapReduce makes the use of two functions i.e. Map() and Reduce() whose task is:

Map() performs sorting and filtering of data and thereby organizing them in the form of group. Map generates a key-value pair based result which is later on processed by the Reduce() method.

Reduce(), as the name suggests does the summarization by aggregating the mapped data. In simple, Reduce() takes the output generated by Map() as input and combines those tuples into smaller set of tuples.

HIVE:

Hive is an ETL and Data warehousing tool used to query or analyze large datasets stored within the Hadoop ecosystem. Hive has three main functions: data summarization, query, and analysis of unstructured and semi-structured data in Hadoop. It features a SQL-like interface, HQL language that works similar to SQL and automatically translates queries into MapReduce jobs.

PIG:

Pig was basically developed by Yahoo which works on a pig Latin language, which is Query based language similar to SQL. It is a platform for structuring the data flow, processing and analyzing huge data sets. Pig does the work of executing commands and in the background, all the activities of MapReduce are taken care of. After the processing, pig stores the result in HDFS.

Apache Spark:

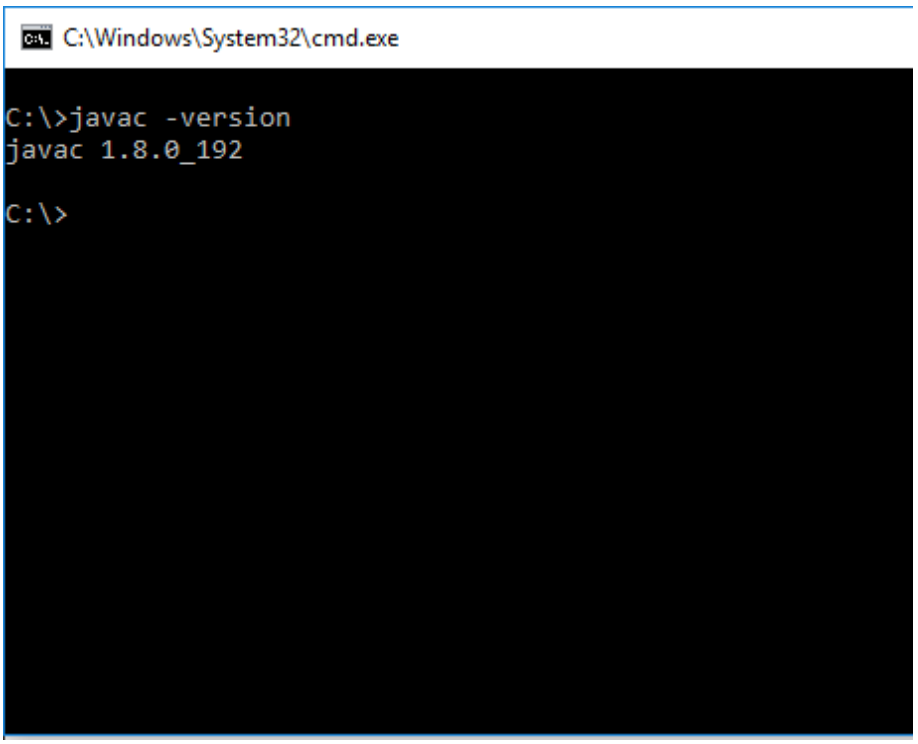
It's a platform that handles all the process consumptive tasks like batch processing, interactive or iterative real-time processing, graph conversions, and visualization, etc.

It consumes in memory resources hence, thus being faster than the prior in terms of optimization.

<u>Installation of Hadoop</u>

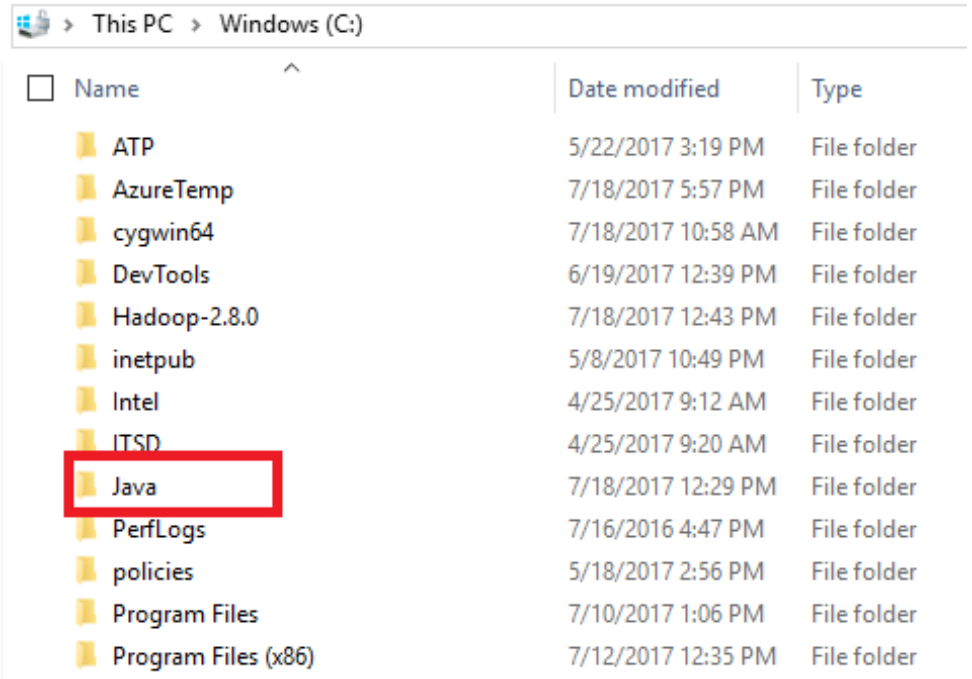
Download Hadoop 2.8.0 (Link: http://www-eu.apache.org/dist/hadoop/common/hadoop-2.8.0/hadoop-2.8.0.tar.gz OR
http://archive.apache.org/dist/hadoop/core//hadoop- 2.8.0/hadoop-2.8.0.tar.gz)

Java JDK 1.8.0.zip (Link: http://www.oracle.com/technetwork/java/javase/downloads/jdk8-

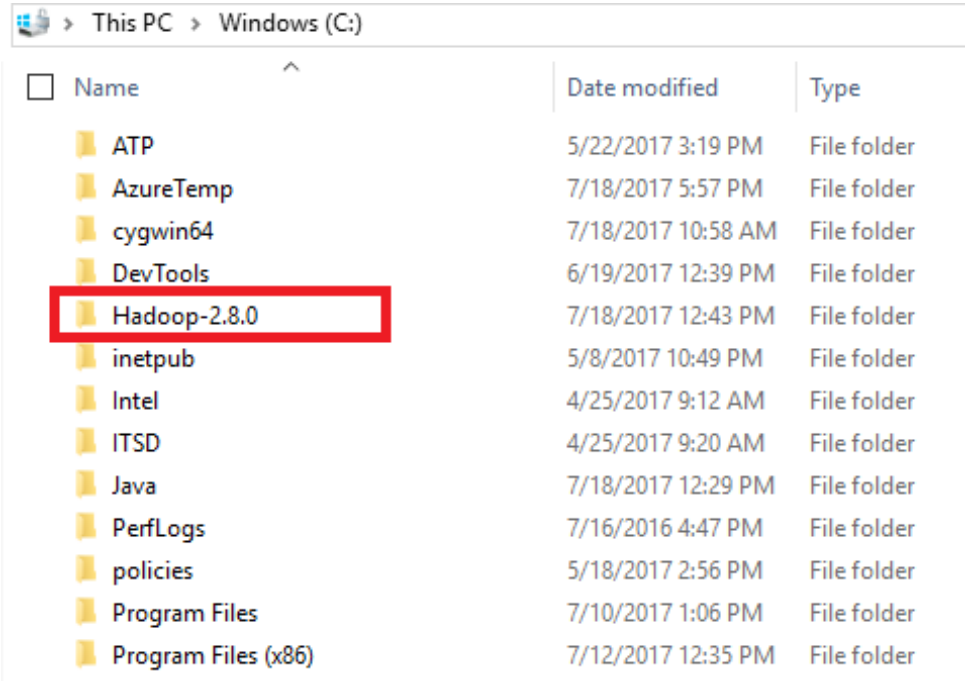


downloads-2133151.html)
Check either Java 1.8.0 is already installed on your system or not, use "Javac -version" to check.

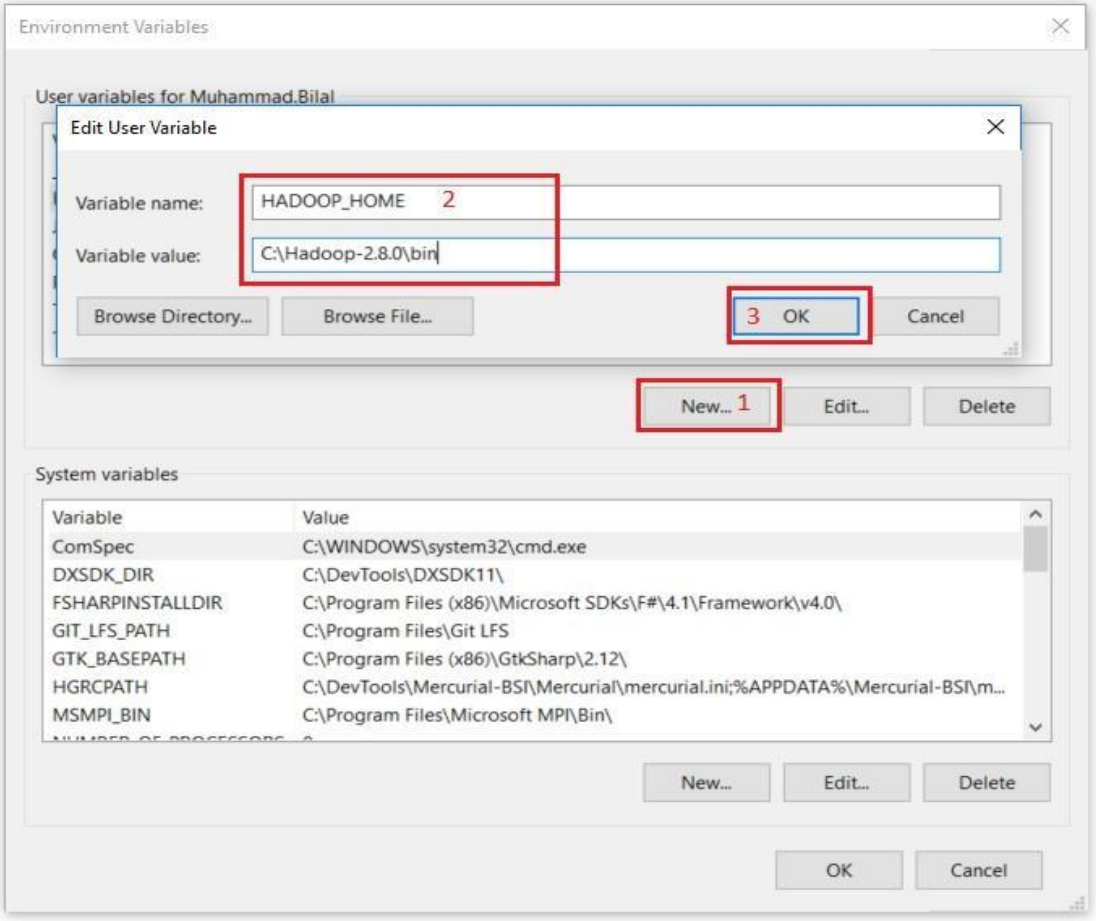
If Java is not installed on your system then first install java under "C:\JAVA"



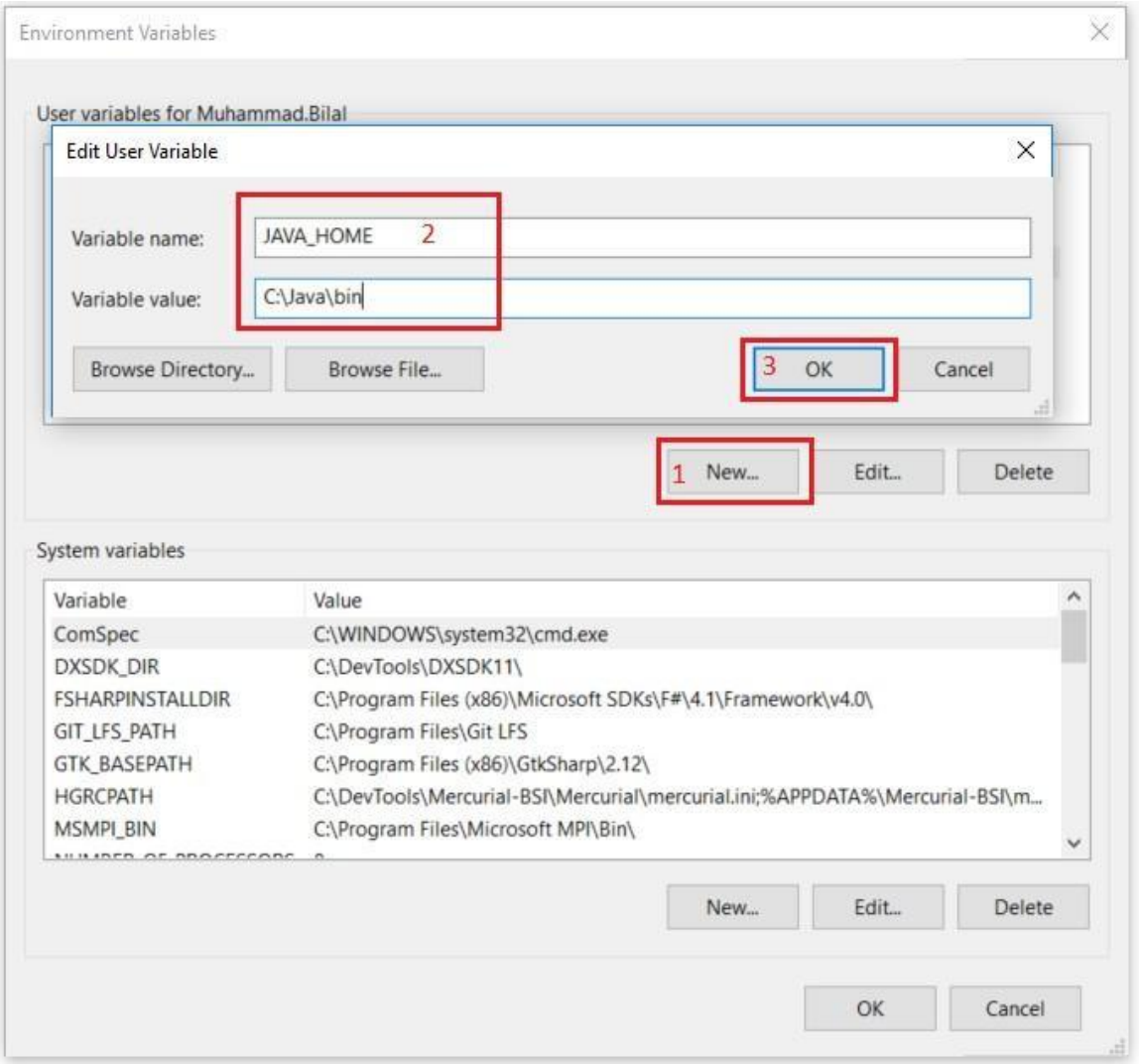
Extract file Hadoop 2.8.0.tar.gz or Hadoop-2.8.0.zip and place under "C:\Hadoop-2.8.0".



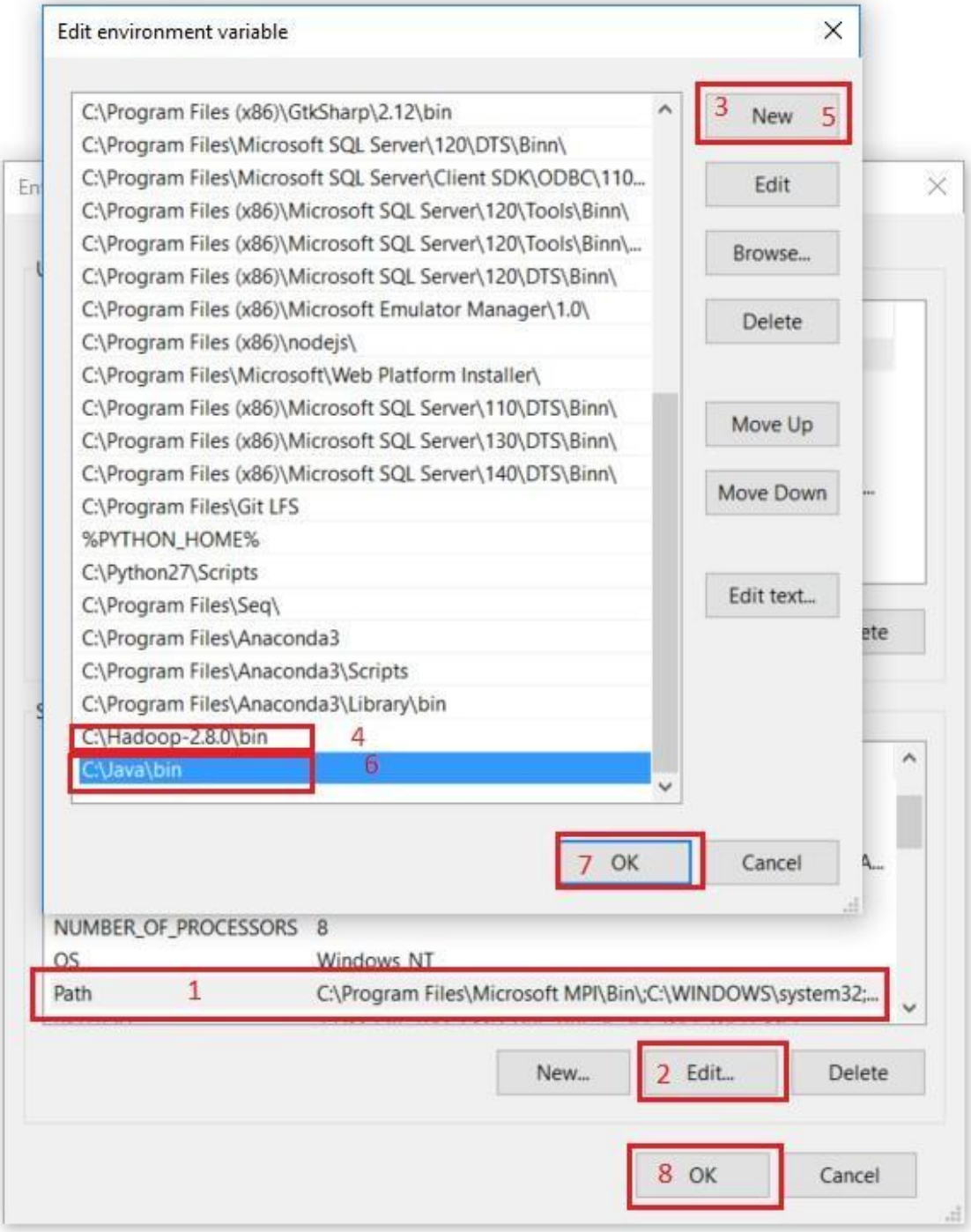
Set the path HADOOP_HOME Environment variable on windows 10(see Step 1,2,3 and 4 below).


Environment Variables
User variables for Muhammad.Bilal
Edit User Variable
Variable name:
HADOOP_HOME
2
Variable value:
C:\Hadoop-2.8.0\bin
Browse Directory...
Browse File...
3 OK
Cancel
New... 1
Edit...
Delete
System variables
Variable
Value
ComSpec
C:\WINDOWS\system32\cmd.exe
DXSDK_DIR
C:\DevTools\DXSDK11\
FSHARPINSTALLDIR
C:\Program Files (x86)\Microsoft SDKs\F#\4.1\Framework\v4.0\
GIT_LFS_PATH
C:\Program Files\Git LFS
GTK_BASEPATH
C:\Program Files (x86)\GtkSharp\2.12\
HGRCPATH
C:\DevTools\Mercurial-BSI\Mercurial\mercurial.ini;%APPDATA%\Mercurial-BSI\m...
MSMPI_BIN
C:\Program Files\Microsoft MPI\Bin\
New...
Edit...
Delete
OK
Cancel

Set the path JAVA_HOME Environment variable on windows 10(see Step 1,2,3 and 4 below).



Next we set the Hadoop bin directory path and JAVA bin directory path.



CONFIGURATION :

Edit file C:/Hadoop-2.8.0/etc/hadoop/core-site.xml, paste below xml paragraph and save this file.

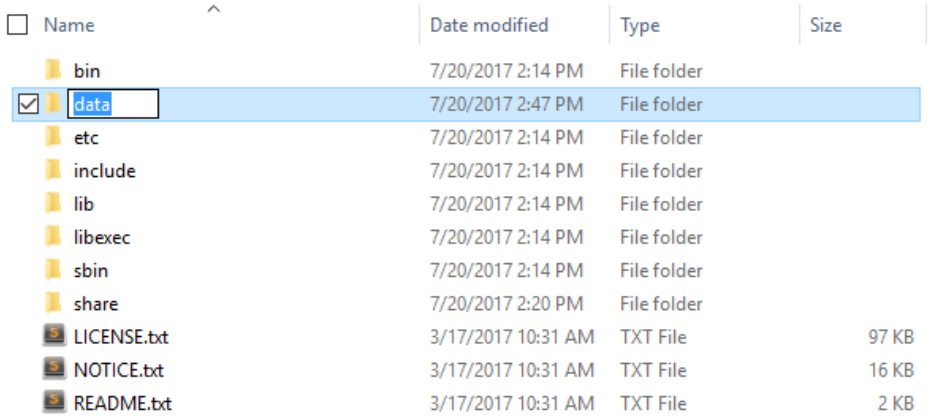
```
<configuration>
  <property>
```

```
    <name>fs.defaultFS</name>
    <value>hdfs://localhost:9000</value>
  </property>
</configuration>
```

Rename "mapred-site.xml.template" to "mapred-site.xml" and edit this file C:/Hadoop-2.8.0/etc/hadoop/mapred-site.xml, paste below xml paragraph and save this file.

```
<configuration>
  <property>
    <name>mapreduce.framework.name</name>
    <value>yarn</value>
  </property>
</configuration>
```

Create folder "data" under "C:\Hadoop-2.8.0"
Create folder "datanode" under "C:\Hadoop-2.8.0\data"
Create folder "namenode" under "C:\Hadoop-2.8.0\data"



Edit file C:\Hadoop-2.8.0/etc/hadoop/hdfs-site.xml, paste below xml paragraph and save this file.

```
<configuration>
  <property>
    <name>dfs.replication</name>
    <value>1</value>
  </property>
  <property>
    <name>dfs.namenode.name.dir</name>
    <value>C:\hadoop-2.8.0\data\namenode</value>
  </property>
  <property>
```

```
    <name>dfs.datanode.data.dir</name>
    <value>C:\hadoop-2.8.0\data\datanode</value>
  </property>
</configuration>
```

Edit file C:/Hadoop-2.8.0/etc/hadoop/yarn-site.xml, paste below xml paragraph and save this file.

```
<configuration>
  <property>
        <name>yarn.nodemanager.aux-services</name>
        <value>mapreduce_shuffle</value>
  </property>
  <property>
        <name>yarn.nodemanager.auxservices.mapreduce.shuffle.class</name>
        <value>org.apache.hadoop.mapred.ShuffleHandler</value>
  </property>
</configuration>
```

Edit file C:/Hadoop-2.8.0/etc/hadoop/hadoop-env.cmd by closing the command line "JAVA_HOME=%JAVA_HOME%" instead of set JAVA_HOME=”C:\Java\jdk\bin" (On C:\java this is path to file jdk.18.0)

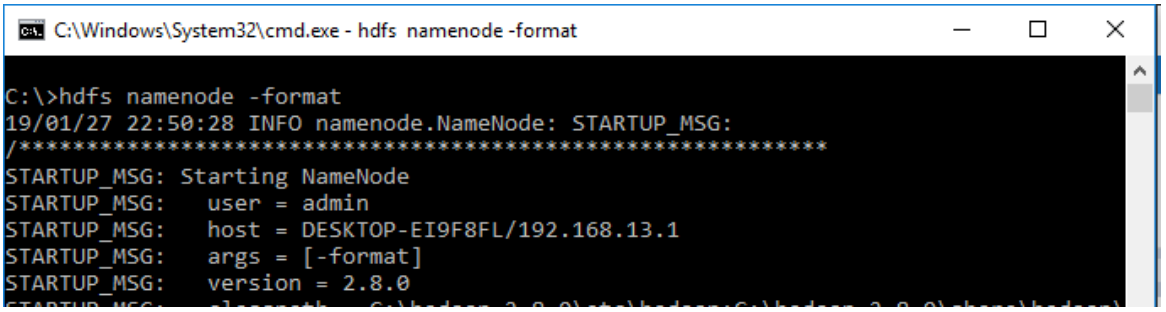
```
@rem The java implementation to use.  Required.
@rem set JAVA_HOME=%JAVA_HOME%
set JAVA_HOME=C:\java
```

HADOOP CONFIGURATION :

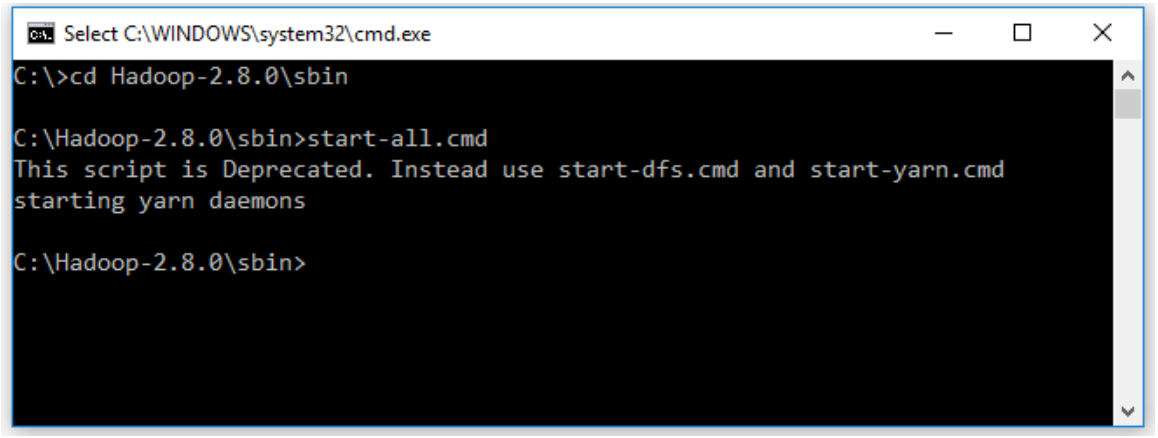
Dowload file Hadoop Configuration.zip (Link: https://github.com/MuhammadBilalYar/HADOOP-INSTALLATION-ON-WINDOW-10/blob/master/Hadoop%20Configuration.zip)

Delete file bin on C:\Hadoop-2.8.0\bin, replaced by file bin on file just download (from Hadoop Configuration.zip).

Open cmd and typing command "hdfs namenode –format" . You will see

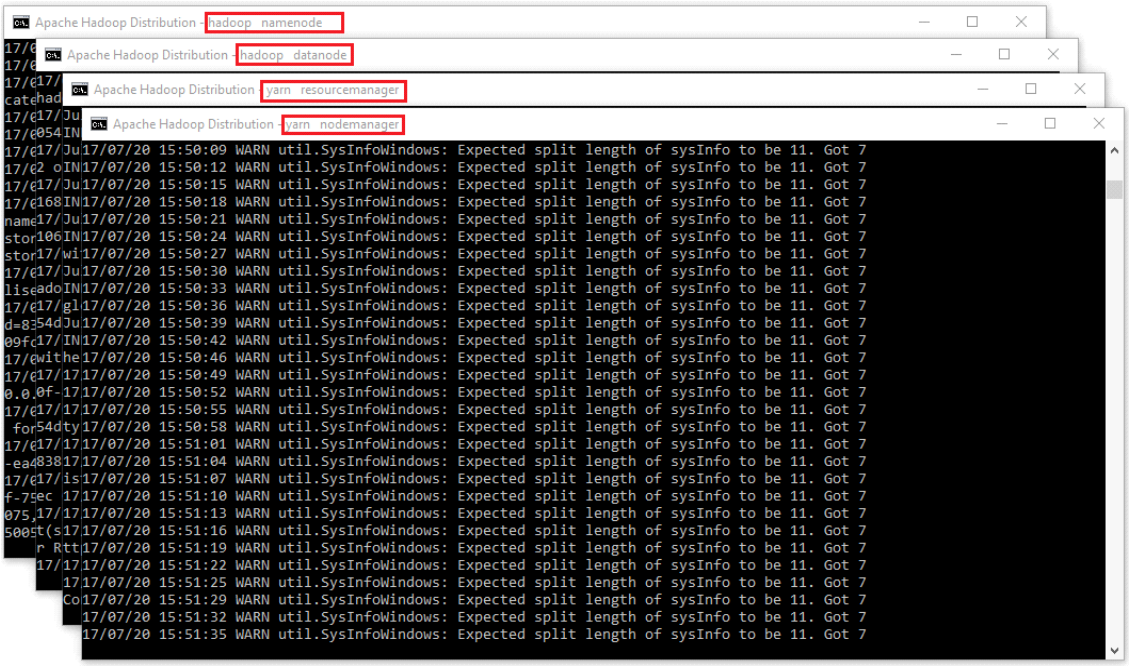


TESTING :

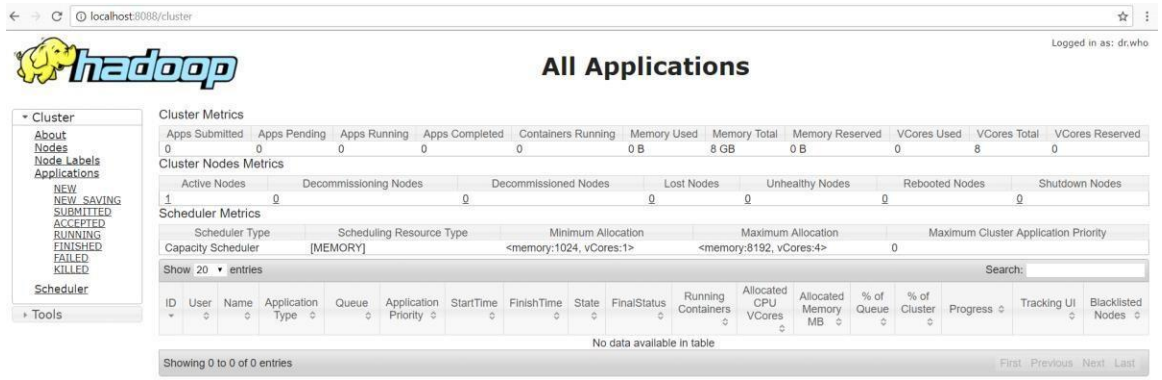


Open cmd and change directory to "C:\Hadoop-2.8.0\sbin" and type "start-all.cmd" to start apache.

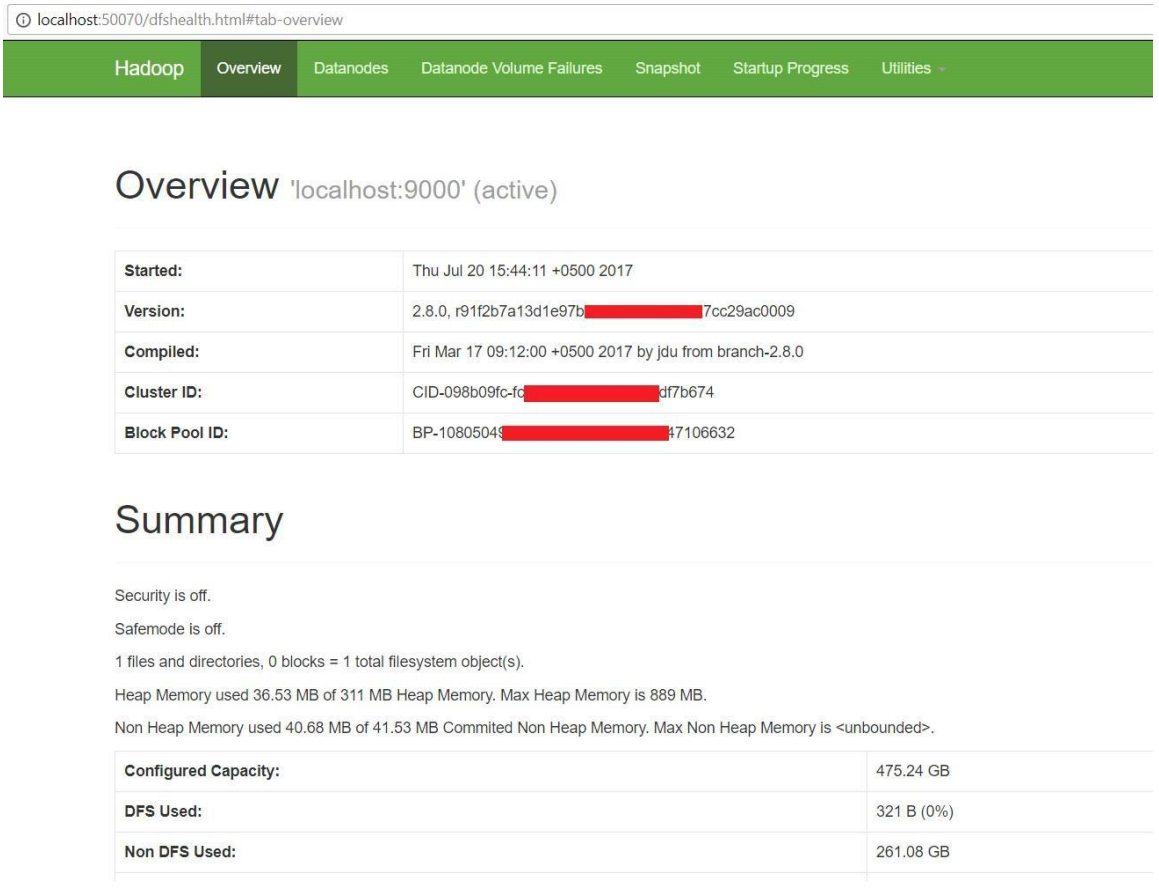
Make sure these apps are running :
Hadoop Namenode
Hadoop datanode
YARN Resourc Manager
YARN Node Manager



Open: http://localhost:8088



Open: http://localhost:50070



File management tasks in hadoop

In order to perform operations on Hadoop like copy, delete, move etc., following steps can be used:

Basic operations:

1. Create a directory in HDFS at given path(s). Usage:

hadoop fs -mkdir <paths>

2. List the contents of a directory. Usage :
hadoop fs -ls <args>

3. See contents of a file Same as unix cat command:
Usage:
hadoop fs -cat <path[filename]>

4. Copy a file from source to destination
This command allows multiple sources as well in which case the destination must be a directory.
Usage:
hadoop fs -cp <source> <dest>

5. Copy a file from/To Local file system to HDFS copyFromLocal
Usage:
hadoop fs -copyFromLocal <localsrc> URI
Similar to put command, except that the source is restricted to a local file reference.
copyToLocal
Usage:
hadoop fs -copyToLocal [-ignorecrc] [-crc] URI <localdst>
Similar to get command, except that the destination is restricted to a local file reference.

7. Move file from source to destination.
Note:- Moving files across filesystem is not permitted.
Usage :
hadoop fs -mv <src> <dest>

8. Remove a file or directory in HDFS.
Remove files specified as argument. Deletes directory only when it is empty
Usage :
hadoop fs -rm <arg>

Steps for copying file

1) Go to Hadoop folder and then to sbin
C:\>cd C:\hadoop-2.8.0\sbin
2) Start namenode and datanode with this command, Two more cmd windows will open
C:\hadoop-2.8.0\sbin>start-dfs.cmd
3) Now start yarn through following command, Two more windows will open, one for yarn resource manager and one for yarn node manager
C:\hadoop-2.8.0\sbin>start-yarn.cmd
4) Create a directory named 'sample' in the hadoop directory using the following command
C:\hadoop-2.8.0\sbin> hdfs dfs -mkdir /sample
5) To verify if the directory is created

6) C:\hadoop-2.8.0\sbin>hdfs dfs -ls /

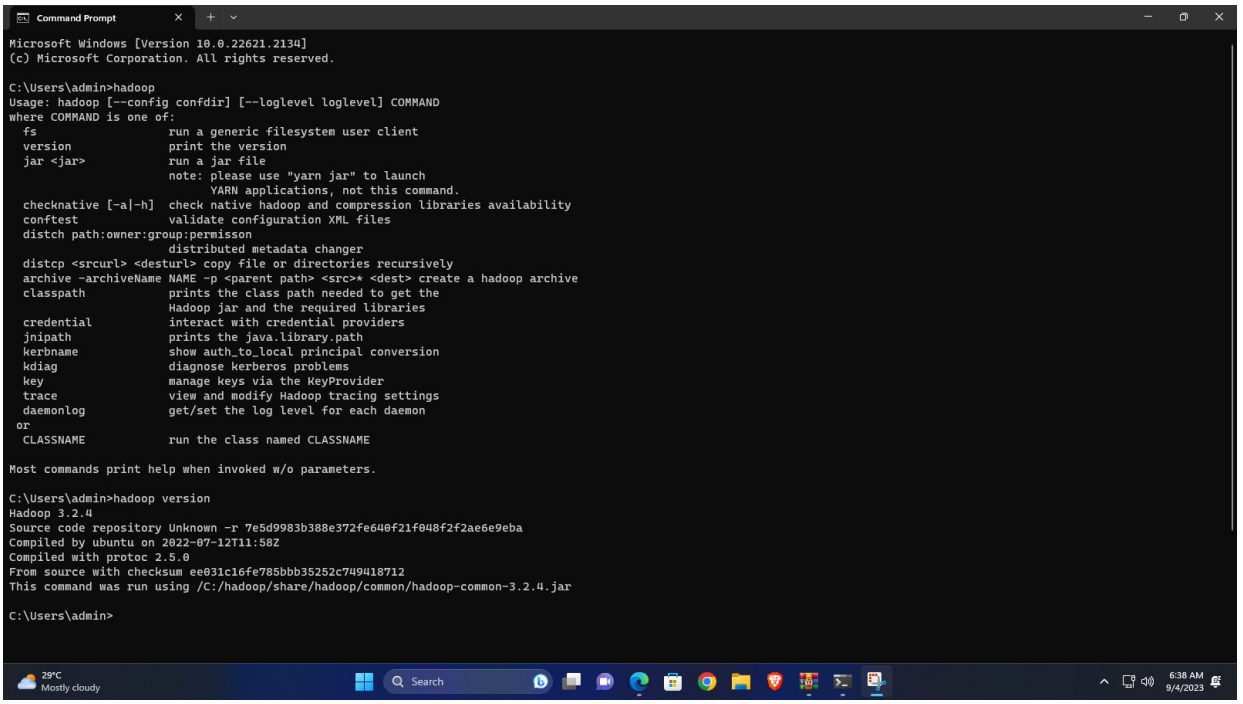
7) Copy text file from D drive to sample

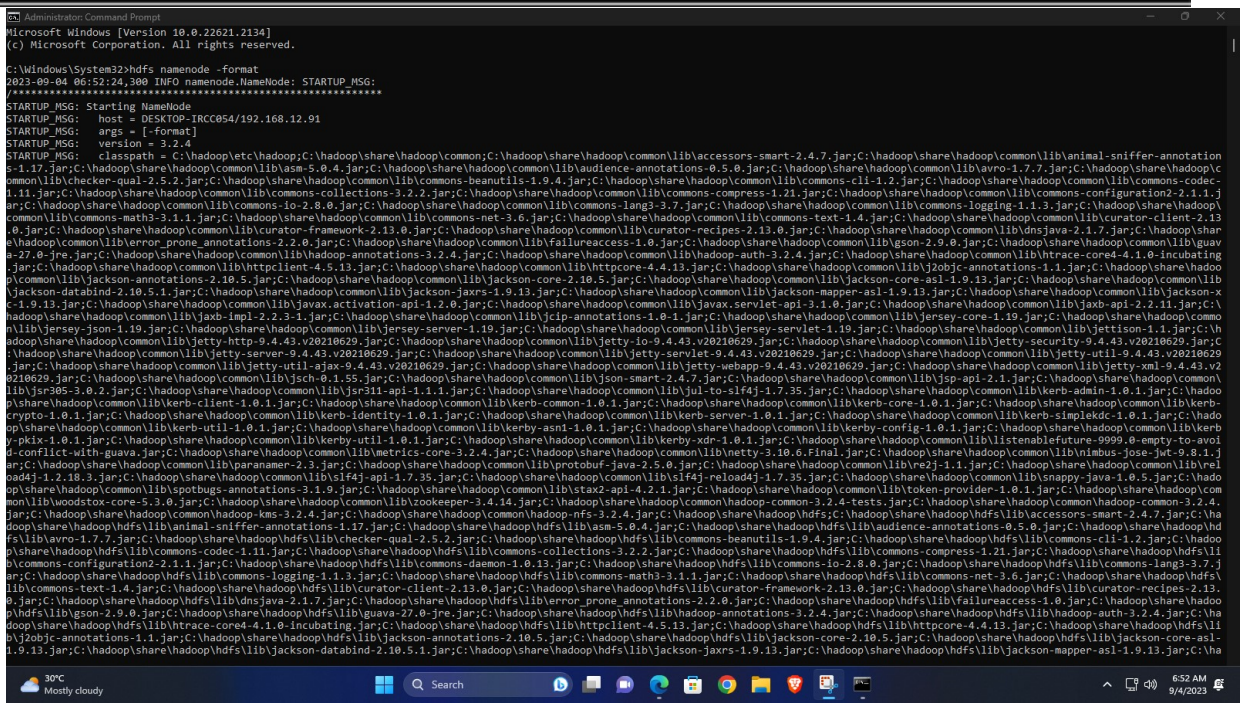
C:\hadoop-2.8.0\sbin>hdfs dfs -copyFromLocal d:\rally.txt /sample

8) To verify if the file is copied

C:\hadoop-2.8.0\sbin>hdfs dfs -ls /sample

OUTPUT:




Administrator: Command Prompt
Microsoft Windows [Version 10.0.22621.2134]
(c) Microsoft Corporation. All rights reserved.
C:\Windows\System32>hdfs namenode -format
2023-09-04 06:52:24,300 INFO namenode.NameNode: STARTUP_MSG:
/**
STARTUP_MSG: Starting NameNode
STARTUP_MSG: host = DESKTOP-IRCC054/192.168.12.91
STARTUP_MSG: args = [-format]
STARTUP_MSG: version = 3.2.4
STARTUP_MSG: classpath = C:\hadoop\etc\hadoop;C:\hadoop\share\hadoop\common;C:\hadoop\share\hadoop\common\lib\accessors-smart-2.4.7.jar;C:\hadoop\share\hadoop\common\lib\animal-sniffer-annotation
s-1.17.jar;C:\hadoop\share\hadoop\common\lib\asm-5.0.4.jar;C:\hadoop\share\hadoop\common\lib\audience-annotations-0.5.0.jar;C:\hadoop\share\hadoop\common\lib\avro-1.7.7.jar;C:\hadoop\share\hadoop\c
ommon\lib\checker-qual-2.5.2.jar;C:\hadoop\share\hadoop\common\lib\commons-beanutils-1.9.4.jar;C:\hadoop\share\hadoop\common\lib\commons-cli-1.2.jar;C:\hadoop\share\hadoop\common\lib\commons-codec-
1.11.jar;C:\hadoop\share\hadoop\common\lib\commons-collections-3.2.2.jar;C:\hadoop\share\hadoop\common\lib\commons-compress-1.21.jar;C:\hadoop\share\hadoop\common\lib\commons-configuration2-2.1.1.j
ar;C:\hadoop\share\hadoop\common\lib\commons-io-2.8.0.jar;C:\hadoop\share\hadoop\common\lib\commons-lang3-3.7.jar;C:\hadoop\share\hadoop\common\lib\commons-logging-1.1.3.jar;C:\hadoop\share\hadoop\
common\lib\commons-math3-3.1.1.jar;C:\hadoop\share\hadoop\common\lib\commons-net-3.6.jar;C:\hadoop\share\hadoop\common\lib\commons-text-1.4.jar;C:\hadoop\share\hadoop\common\lib\curator-client-2.13
.0.jar;C:\hadoop\share\hadoop\common\lib\curator-framework-2.13.0.jar;C:\hadoop\share\hadoop\common\lib\curator-recipes-2.13.0.jar;C:\hadoop\share\hadoop\common\lib\dnsjava-2.1.7.jar;C:\hadoop\shar
e\hadoop\common\lib\error_prone_annotations-2.2.0.jar;C:\hadoop\share\hadoop\common\lib\failureaccess-1.0.jar;C:\hadoop\share\hadoop\common\lib\gson-2.9.0.jar;C:\hadoop\share\hadoop\common\lib\guav
a-27.0-jre.jar;C:\hadoop\share\hadoop\common\lib\hadoop-annotations-3.2.4.jar;C:\hadoop\share\hadoop\common\lib\hadoop-auth-3.2.4.jar;C:\hadoop\share\hadoop\common\lib\htrace-core4-4.1.0-incubating
.jar;C:\hadoop\share\hadoop\common\lib\httpclient-4.5.13.jar;C:\hadoop\share\hadoop\common\lib\httpcore-4.4.13.jar;C:\hadoop\share\hadoop\common\lib\j2objc-annotations-1.1.jar;C:\hadoop\share\hadoo
p\common\lib\jackson-annotations-2.10.5.jar;C:\hadoop\share\hadoop\common\lib\jackson-core-2.10.5.jar;C:\hadoop\share\hadoop\common\lib\jackson-core-asl-1.9.13.jar;C:\hadoop\share\hadoop\common\lib
\jackson-databind-2.10.5.1.jar;C:\hadoop\share\hadoop\common\lib\jackson-jaxrs-1.9.13.jar;C:\hadoop\share\hadoop\common\lib\jackson-mapper-asl-1.9.13.jar;C:\hadoop\share\hadoop\common\lib\jackson-x
c-1.9.13.jar;C:\hadoop\share\hadoop\common\lib\javax.activation-api-1.2.0.jar;C:\hadoop\share\hadoop\common\lib\javax.servlet-api-3.1.0.jar;C:\hadoop\share\hadoop\common\lib\jaxb-api-2.2.11.jar;C:\
hadoop\share\hadoop\common\lib\jaxb-impl-2.2.3-1.jar;C:\hadoop\share\hadoop\common\lib\jcip-annotations-1.0-1.jar;C:\hadoop\share\hadoop\common\lib\jersey-core-1.19.jar;C:\hadoop\share\hadoop\commo
n\lib\jersey-json-1.19.jar;C:\hadoop\share\hadoop\common\lib\jersey-server-1.19.jar;C:\hadoop\share\hadoop\common\lib\jersey-servlet-1.19.jar;C:\hadoop\share\hadoop\common\lib\jettison-1.1.jar;C:\h
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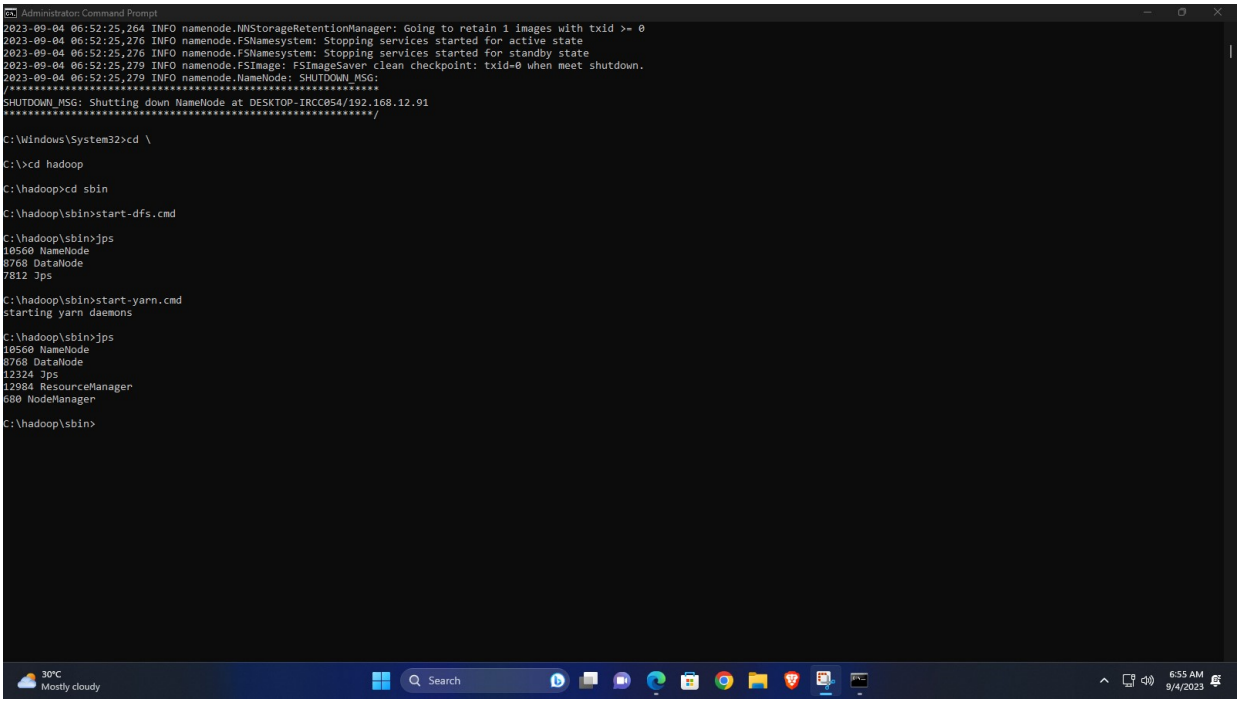
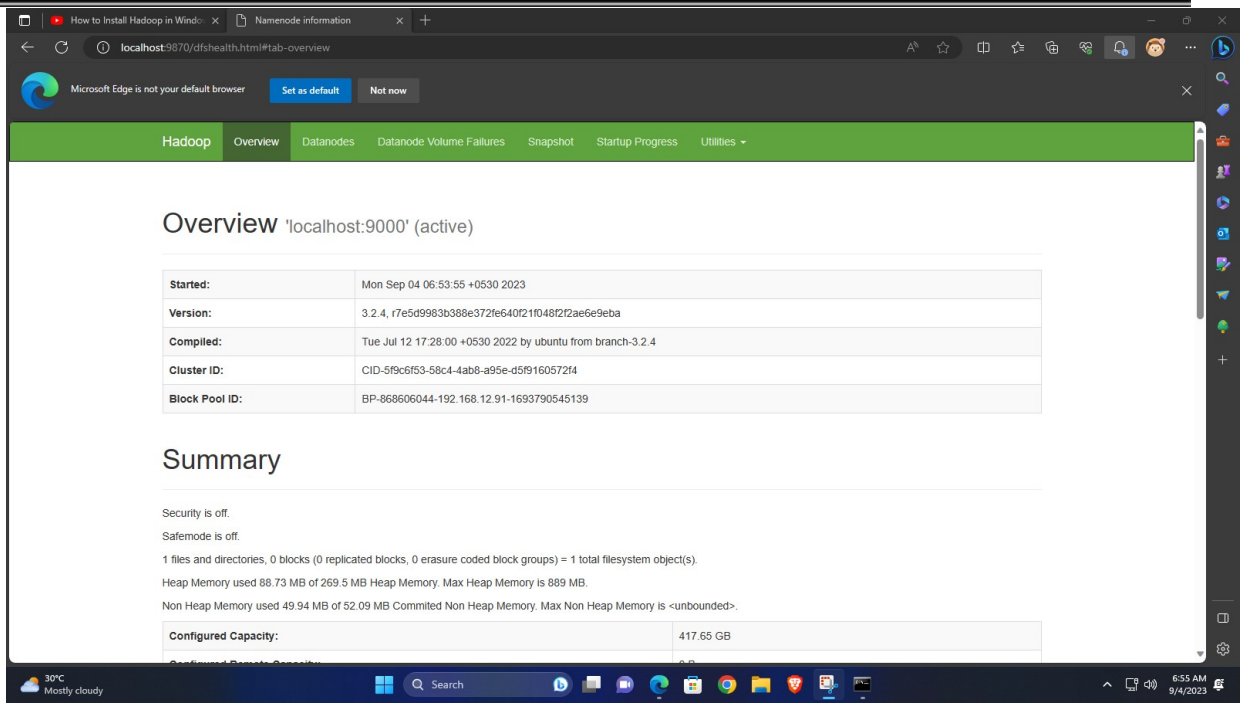
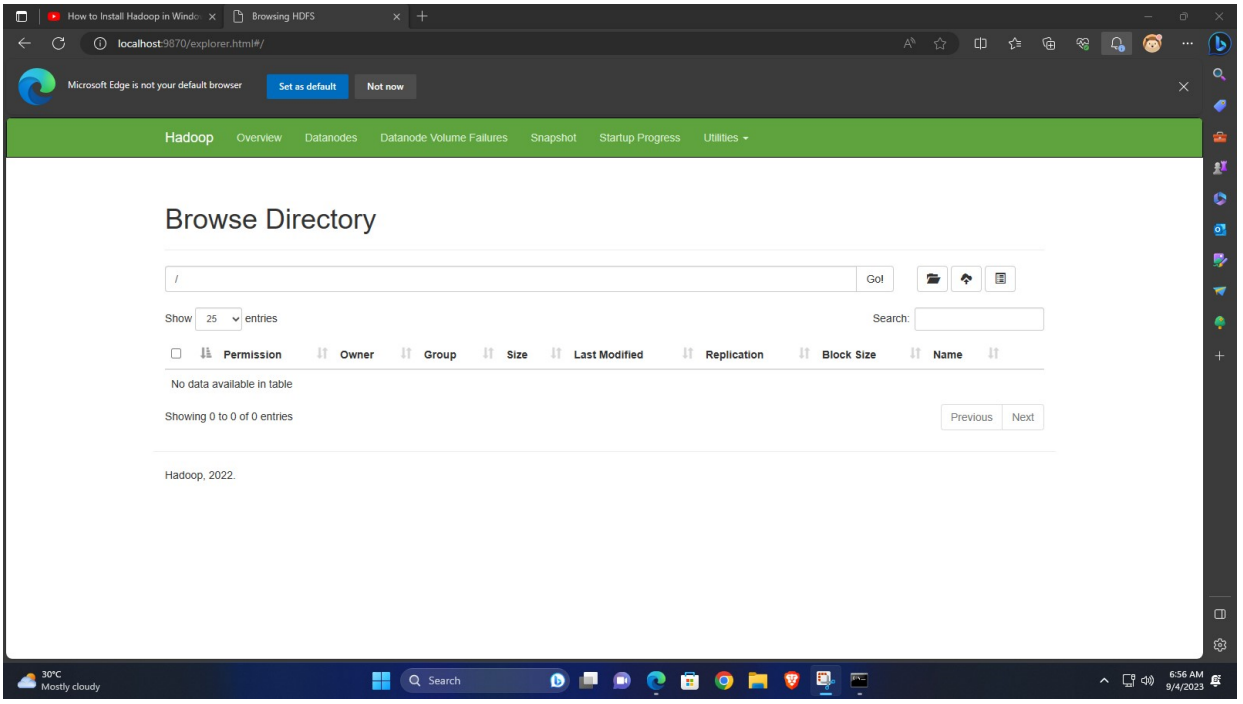
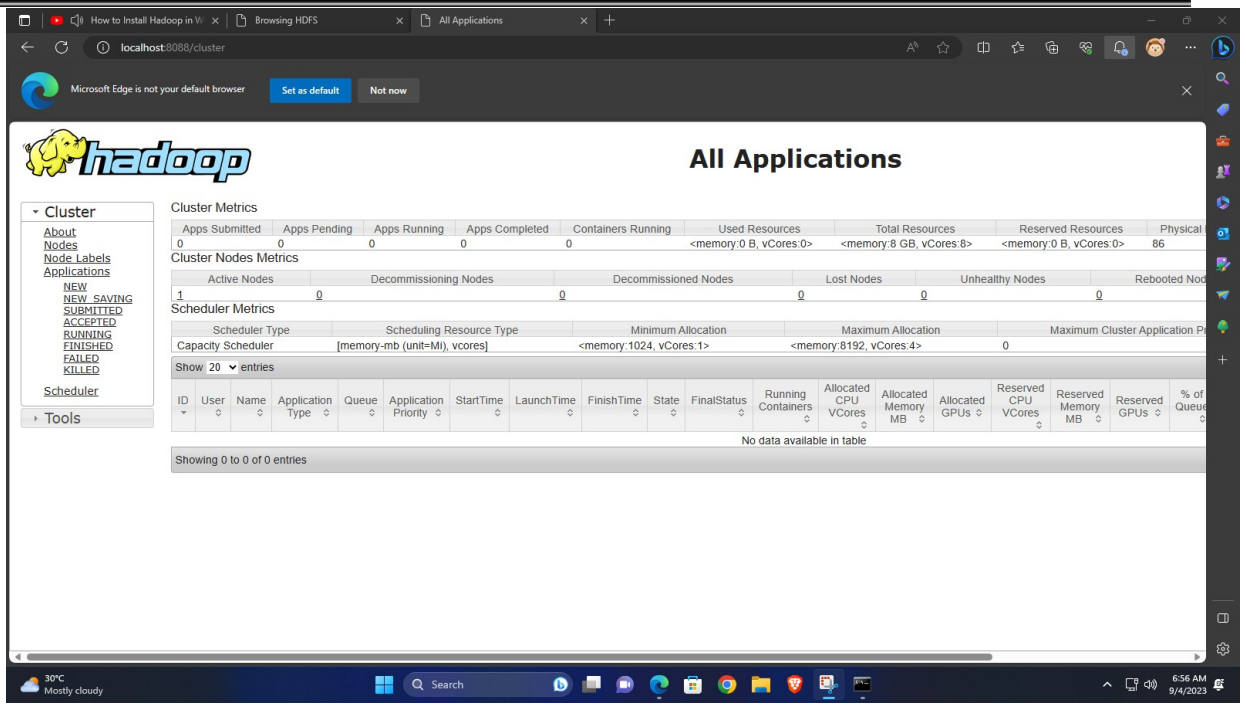
:\hadoop\share\hadoop\common\lib\jetty-server-9.4.43.v20210629.jar;C:\hadoop\share\hadoop\common\lib\jetty-servlet-9.4.43.v20210629.jar;C:\hadoop\share\hadoop\common\lib\jetty-util-9.4.43.v20210629
.jar;C:\hadoop\share\hadoop\common\lib\jetty-util-ajax-9.4.43.v20210629.jar;C:\hadoop\share\hadoop\common\lib\jetty-webapp-9.4.43.v20210629.jar;C:\hadoop\share\hadoop\common\lib\jetty-xml-9.4.43.v2
0210629.jar;C:\hadoop\share\hadoop\common\lib\jsch-0.1.55.jar;C:\hadoop\share\hadoop\common\lib\json-smart-2.4.7.jar;C:\hadoop\share\hadoop\common\lib\jsp-api-2.1.jar;C:\hadoop\share\hadoop\common\
lib\jsr305-3.0.2.jar;C:\hadoop\share\hadoop\common\lib\jsr311-api-1.1.1.jar;C:\hadoop\share\hadoop\common\lib\jul-to-slf4j-1.7.35.jar;C:\hadoop\share\hadoop\common\lib\kerb-admin-1.0.1.jar;C:\hadoo
p\share\hadoop\common\lib\kerb-client-1.0.1.jar;C:\hadoop\share\hadoop\common\lib\kerb-common-1.0.1.jar;C:\hadoop\share\hadoop\common\lib\kerb-core-1.0.1.jar;C:\hadoop\share\hadoop\common\lib\kerb-
crypto-1.0.1.jar;C:\hadoop\share\hadoop\common\lib\kerb-identity-1.0.1.jar;C:\hadoop\share\hadoop\common\lib\kerb-server-1.0.1.jar;C:\hadoop\share\hadoop\common\lib\kerb-simplekdc-1.0.1.jar;C:\hado
op\share\hadoop\common\lib\kerb-util-1.0.1.jar;C:\hadoop\share\hadoop\common\lib\kerby-asn1-1.0.1.jar;C:\hadoop\share\hadoop\common\lib\kerby-config-1.0.1.jar;C:\hadoop\share\hadoop\common\lib\kerb
y-pkix-1.0.1.jar;C:\hadoop\share\hadoop\common\lib\kerby-util-1.0.1.jar;C:\hadoop\share\hadoop\common\lib\kerby-xdr-1.0.1.jar;C:\hadoop\share\hadoop\common\lib\listenablefuture-9999.0-empty-to-avoi
d-conflict-with-guava.jar;C:\hadoop\share\hadoop\common\lib\metrics-core-3.2.4.jar;C:\hadoop\share\hadoop\common\lib\netty-3.10.6.Final.jar;C:\hadoop\share\hadoop\common\lib\nimbus-jose-jwt-9.8.1.j
ar;C:\hadoop\share\hadoop\common\lib\paranamer-2.3.jar;C:\hadoop\share\hadoop\common\lib\protobuf-java-2.5.0.jar;C:\hadoop\share\hadoop\common\lib\re2j-1.1.jar;C:\hadoop\share\hadoop\common\lib\rel
oad4j-1.2.18.3.jar;C:\hadoop\share\hadoop\common\lib\slf4j-api-1.7.35.jar;C:\hadoop\share\hadoop\common\lib\slf4j-reload4j-1.7.35.jar;C:\hadoop\share\hadoop\common\lib\snappy-java-1.0.5.jar;C:\hado
op\share\hadoop\common\lib\spotbugs-annotations-3.1.9.jar;C:\hadoop\share\hadoop\common\lib\stax2-api-4.2.1.jar;C:\hadoop\share\hadoop\common\lib\token-provider-1.0.1.jar;C:\hadoop\share\hadoop\com
mon\lib\woodstox-core-5.3.0.jar;C:\hadoop\share\hadoop\common\lib\zookeeper-3.4.14.jar;C:\hadoop\share\hadoop\common\hadoop-common-3.2.4-tests.jar;C:\hadoop\share\hadoop\common\hadoop-common-3.2.4.
jar;C:\hadoop\share\hadoop\common\hadoop-kms-3.2.4.jar;C:\hadoop\share\hadoop\common\hadoop-nfs-3.2.4.jar;C:\hadoop\share\hadoop\hdfs;C:\hadoop\share\hadoop\hdfs\lib\accessors-smart-2.4.7.jar;C:\ha
doop\share\hadoop\hdfs\lib\animal-sniffer-annotations-1.17.jar;C:\hadoop\share\hadoop\hdfs\lib\asm-5.0.4.jar;C:\hadoop\share\hadoop\hdfs\lib\audience-annotations-0.5.0.jar;C:\hadoop\share\hadoop\hd
fs\lib\avro-1.7.7.jar;C:\hadoop\share\hadoop\hdfs\lib\checker-qual-2.5.2.jar;C:\hadoop\share\hadoop\hdfs\lib\commons-beanutils-1.9.4.jar;C:\hadoop\share\hadoop\hdfs\lib\commons-cli-1.2.jar;C:\hadoo
p\share\hadoop\hdfs\lib\commons-codec-1.11.jar;C:\hadoop\share\hadoop\hdfs\lib\commons-collections-3.2.2.jar;C:\hadoop\share\hadoop\hdfs\lib\commons-compress-1.21.jar;C:\hadoop\share\hadoop\hdfs\li
b\commons-configuration2-2.1.1.jar;C:\hadoop\share\hadoop\hdfs\lib\commons-daemon-1.0.13.jar;C:\hadoop\share\hadoop\hdfs\lib\commons-io-2.8.0.jar;C:\hadoop\share\hadoop\hdfs\lib\commons-lang3-3.7.j
ar;C:\hadoop\share\hadoop\hdfs\lib\commons-logging-1.1.3.jar;C:\hadoop\share\hadoop\hdfs\lib\commons-math3-3.1.1.jar;C:\hadoop\share\hadoop\hdfs\lib\commons-net-3.6.jar;C:\hadoop\share\hadoop\hdfs\
lib\commons-text-1.4.jar;C:\hadoop\share\hadoop\hdfs\lib\curator-client-2.13.0.jar;C:\hadoop\share\hadoop\hdfs\lib\curator-framework-2.13.0.jar;C:\hadoop\share\hadoop\hdfs\lib\curator-recipes-2.13.
0.jar;C:\hadoop\share\hadoop\hdfs\lib\dnsjava-2.1.7.jar;C:\hadoop\share\hadoop\hdfs\lib\error_prone_annotations-2.2.0.jar;C:\hadoop\share\hadoop\hdfs\lib\failureaccess-1.0.jar;C:\hadoop\share\hadoo
p\hdfs\lib\gson-2.9.0.jar;C:\hadoop\share\hadoop\hdfs\lib\guava-27.0-jre.jar;C:\hadoop\share\hadoop\hdfs\lib\hadoop-annotations-3.2.4.jar;C:\hadoop\share\hadoop\hdfs\lib\hadoop-auth-3.2.4.jar;C:\ha
doop\share\hadoop\hdfs\lib\htrace-core4-4.1.0-incubating.jar;C:\hadoop\share\hadoop\hdfs\lib\httpclient-4.5.13.jar;C:\hadoop\share\hadoop\hdfs\lib\httpcore-4.4.13.jar;C:\hadoop\share\hadoop\hdfs\li
b\j2objc-annotations-1.1.jar;C:\hadoop\share\hadoop\hdfs\lib\jackson-annotations-2.10.5.jar;C:\hadoop\share\hadoop\hdfs\lib\jackson-core-2.10.5.jar;C:\hadoop\share\hadoop\hdfs\lib\jackson-core-asl-
1.9.13.jar;C:\hadoop\share\hadoop\hdfs\lib\jackson-databind-2.10.5.1.jar;C:\hadoop\share\hadoop\hdfs\lib\jackson-jaxrs-1.9.13.jar;C:\hadoop\share\hadoop\hdfs\lib\jackson-mapper-asl-1.9.13.jar;C:\ha
30°C
Mostly cloudy
Search
6:52 AM
9/4/2023


Administrator: Command Prompt
2023-09-04 06:52:25,264 INFO namenode.NNStorageRetentionManager: Going to retain 1 images with txid >= 0
2023-09-04 06:52:25,276 INFO namenode.FSNamesystem: Stopping services started for active state
2023-09-04 06:52:25,276 INFO namenode.FSNamesystem: Stopping services started for standby state
2023-09-04 06:52:25,279 INFO namenode.FSImage: FSImageSaver clean checkpoint: txid=0 when meet shutdown.
2023-09-04 06:52:25,279 INFO namenode.NameNode: SHUTDOWN_MSG:
/**
SHUTDOWN_MSG: Shutting down NameNode at DESKTOP-IRCC054/192.168.12.91
**/
C:\Windows\System32>cd \
C:\>cd hadoop
C:\hadoop>cd sbin
C:\hadoop\sbin>start-dfs.cmd
C:\hadoop\sbin>jps
10560 NameNode
8768 DataNode
7812 Jps
C:\hadoop\sbin>start-yarn.cmd
starting yarn daemons
C:\hadoop\sbin>jps
10560 NameNode
8768 DataNode
12324 Jps
12984 ResourceManager
680 NodeManager
C:\hadoop\sbin>
30°C
Mostly cloudy
Search
6:55 AM
9/4/2023


How to Install Hadoop in Windo
Namenode information
localhost:9870/dfshealth.html#tab-overview
Microsoft Edge is not your default browser
Set as default
Not now
Hadoop
Overview
Datanodes
Datanode Volume Failures
Snapshot
Startup Progress
Utilities
Overview 'localhost:9000' (active)
Started: Mon Sep 04 06:53:55 +0530 2023
Version: 3.2.4, r7e5d9983b388e372fe640f21f048f2f2ae6e9eba
Compiled: Tue Jul 12 17:28:00 +0530 2022 by ubuntu from branch-3.2.4
Cluster ID: CID-5f9c6f53-58c4-4ab8-a95e-d5f9160572f4
Block Pool ID: BP-868606044-192.168.12.91-1693790545139
Summary
Security is off.
Safemode is off.
1 files and directories, 0 blocks (0 replicated blocks, 0 erasure coded block groups) = 1 total filesystem object(s).
Heap Memory used 88.73 MB of 269.5 MB Heap Memory. Max Heap Memory is 889 MB.
Non Heap Memory used 49.94 MB of 52.09 MB Commited Non Heap Memory. Max Non Heap Memory is <unbounded>.
Configured Capacity: 417.65 GB
30°C
Mostly cloudy
Search
6:55 AM
9/4/2023


How to Install Hadoop in Windo
Browsing HDFS
localhost:9870/explorer.html#/
Microsoft Edge is not your default browser
Set as default
Not now
Hadoop
Overview
Datanodes
Datanode Volume Failures
Snapshot
Startup Progress
Utilities
Browse Directory
/
Go!
Show 25 entries
Search:
Permission
Owner
Group
Size
Last Modified
Replication
Block Size
Name
No data available in table
Showing 0 to 0 of 0 entries
Previous
Next
Hadoop, 2022.
30°C
Mostly cloudy
Search
6:56 AM
9/4/2023



CONCLUSION :

The installation and configuration of Hadoop lay the foundation for unlocking its immense potential in handling big data. Once successfully implemented, users can seamlessly perform fundamental file management tasks within the Hadoop ecosystem. This includes storing, retrieving, and processing large datasets across distributed clusters, empowering organizations to efficiently manage and analyze their data resources at scale.