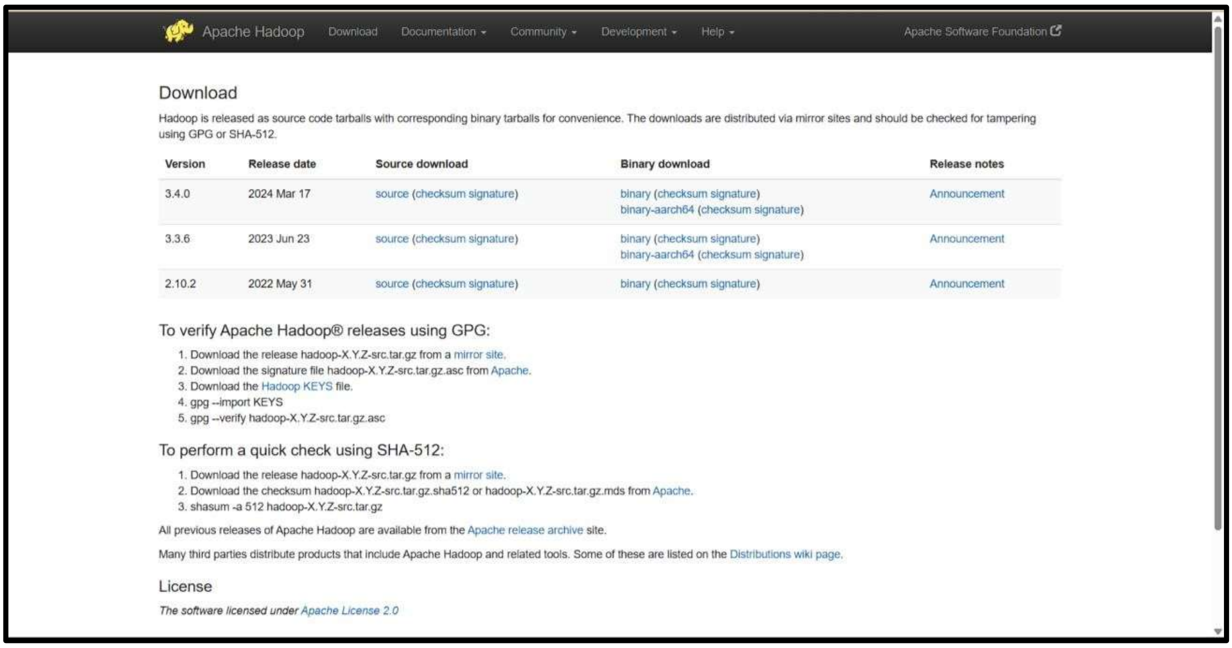
Index:

Practical 1: Installation of Hadoop on Windows.

1. Download the latest Hadoop Binary version from here.



Download

Hadoop is released as source code tarballs with corresponding binary tarballs for convenience. The downloads are distributed via mirror sites and should be checked for tampering using GPG or SHA-512.

Version	Release date	Source download	Binary download	Release notes
3.4.0	2024 Mar 17	source (checksum signature)	binary (checksum signature) binary-aarch64 (checksum signature)	Announcement
3.3.6	2023 Jun 23	source (checksum signature)	binary (checksum signature) binary-aarch64 (checksum signature)	Announcement
2.10.2	2022 May 31	source (checksum signature)	binary (checksum signature)	Announcement

To verify Apache Hadoop® releases using GPG:

1. Download the release hadoop-X.Y.Z-src.tar.gz from a mirror site.
2. Download the signature file hadoop-X.Y.Z-src.tar.gz.asc from Apache.
3. Download the Hadoop KEYS file.
4. gpg --import KEYS
5. gpg --verify hadoop-X.Y.Z-src.tar.gz.asc

To perform a quick check using SHA-512:

1. Download the release hadoop-X.Y.Z-src.tar.gz from a mirror site.
2. Download the checksum hadoop-X.Y.Z-src.tar.gz.sha512 or hadoop-X.Y.Z-src.tar.gz.mds from Apache.
3. shasum -a 512 hadoop-X.Y.Z-src.tar.gz

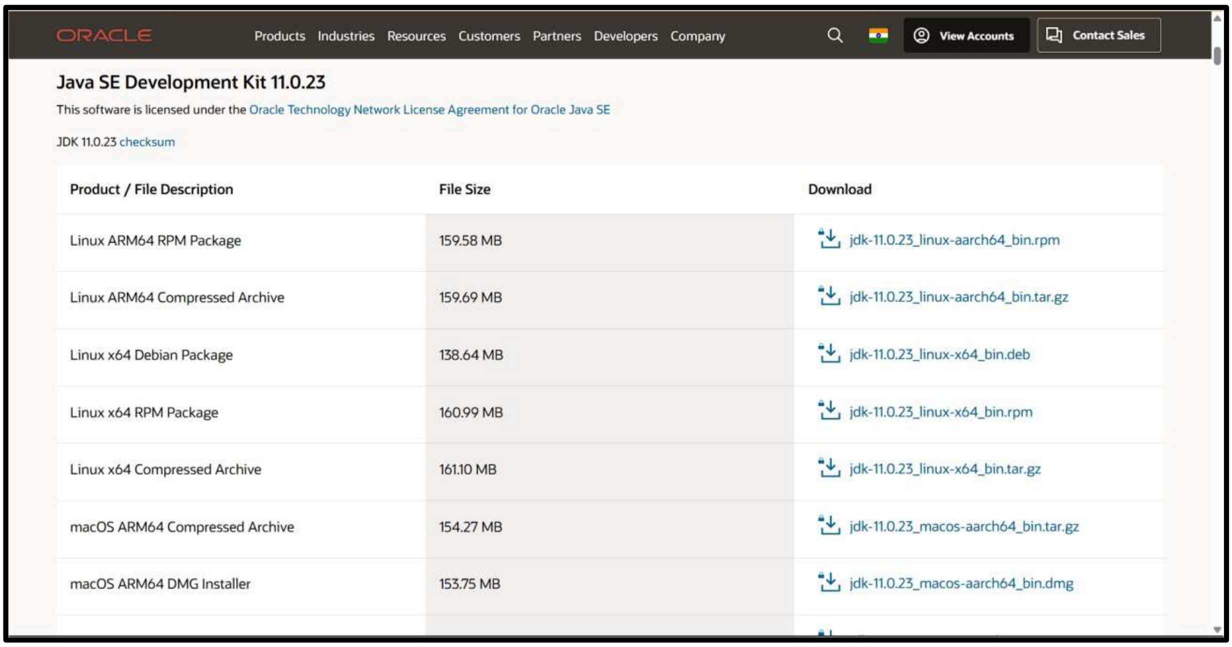
All previous releases of Apache Hadoop are available from the Apache release archive site.

Many third parties distribute products that include Apache Hadoop and related tools. Some of these are listed on the Distributions wiki page.

License

The software licensed under Apache License 2.0

2. Download Java version 11.0.23 from here.



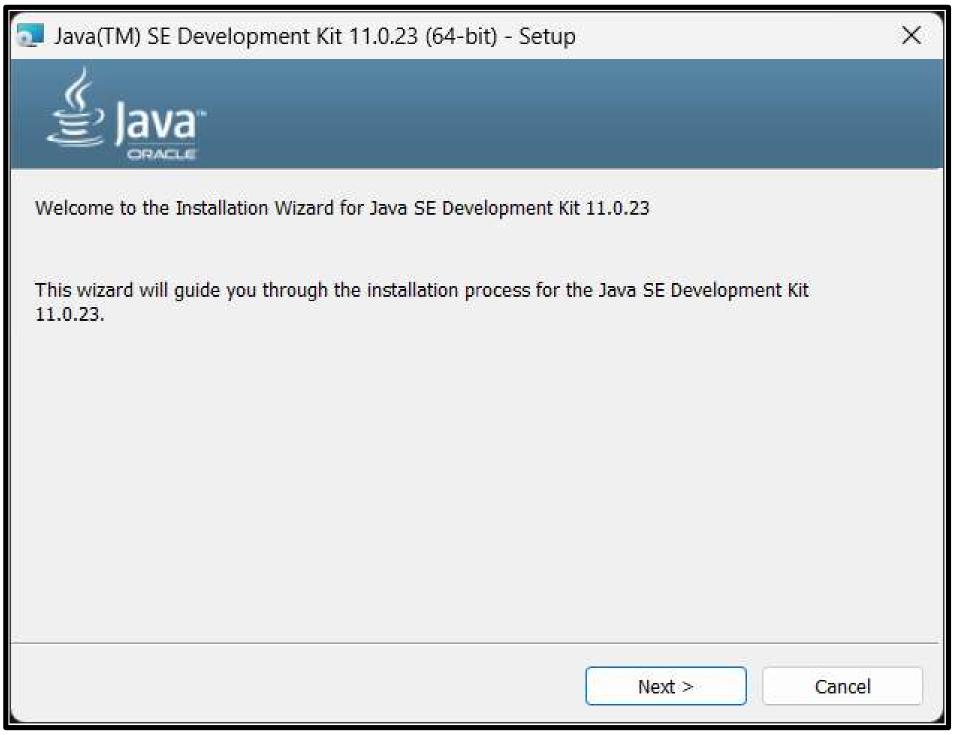
Java SE Development Kit 11.0.23

This software is licensed under the Oracle Technology Network License Agreement for Oracle Java SE

JDK 11.0.23 checksum

Product / File Description	File Size	Download
Linux ARM64 RPM Package	159.58 MB	jdk-11.0.23_linux-aarch64_bin.rpm
Linux ARM64 Compressed Archive	159.69 MB	jdk-11.0.23_linux-aarch64_bin.tar.gz
Linux x64 Debian Package	138.64 MB	jdk-11.0.23_linux-x64_bin.deb
Linux x64 RPM Package	160.99 MB	jdk-11.0.23_linux-x64_bin.rpm
Linux x64 Compressed Archive	161.10 MB	jdk-11.0.23_linux-x64_bin.tar.gz
macOS ARM64 Compressed Archive	154.27 MB	jdk-11.0.23_macos-aarch64_bin.tar.gz
macOS ARM64 DMG Installer	153.75 MB	jdk-11.0.23_macos-aarch64_bin.dmg

3. Run the installer and follow the steps to install Java.

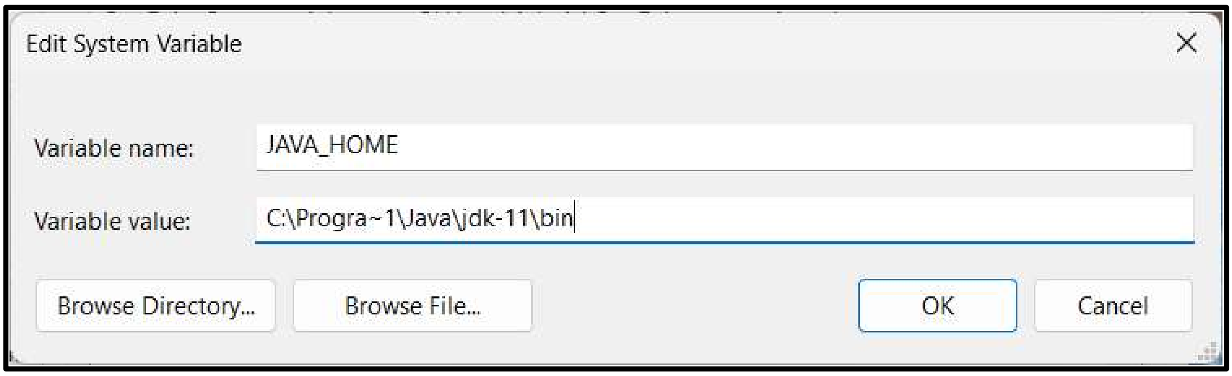


Java(TM) SE Development Kit 11.0.23 (64-bit) - Setup

Welcome to the Installation Wizard for Java SE Development Kit 11.0.23

This wizard will guide you through the installation process for the Java SE Development Kit 11.0.23.

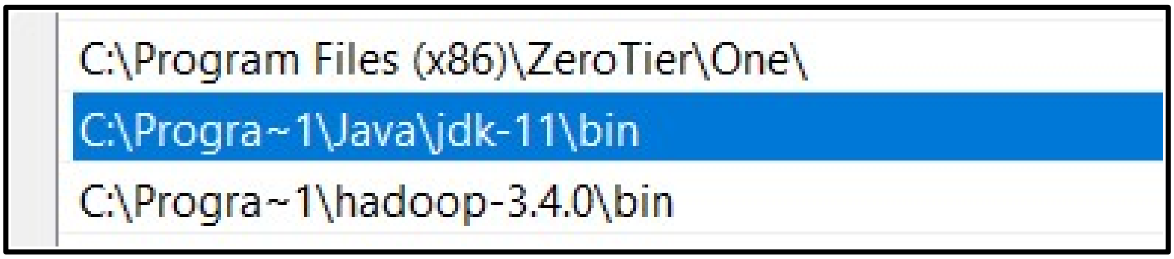
4: Make sure to set the Java Environment Variables by creating a new variable and also adding it to the path variable.



Edit System Variable

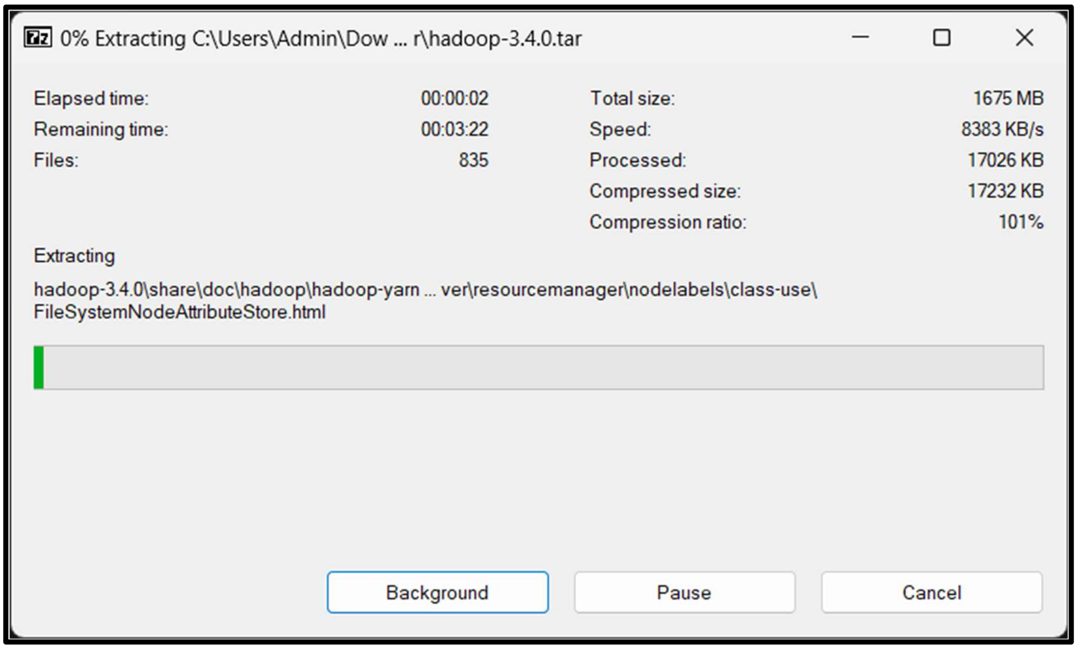
Variable name: JAVA_HOME

Variable value: C:\Progra~1\Java\jdk-11\bin



```
C:\Program Files (x86)\ZeroTier\One\
C:\Progra~1\Java\jdk-11\bin
C:\Progra~1\hadoop-3.4.0\bin
```

5. Extract the previously downloaded Hadoop archive and copy the contents to your desired location.



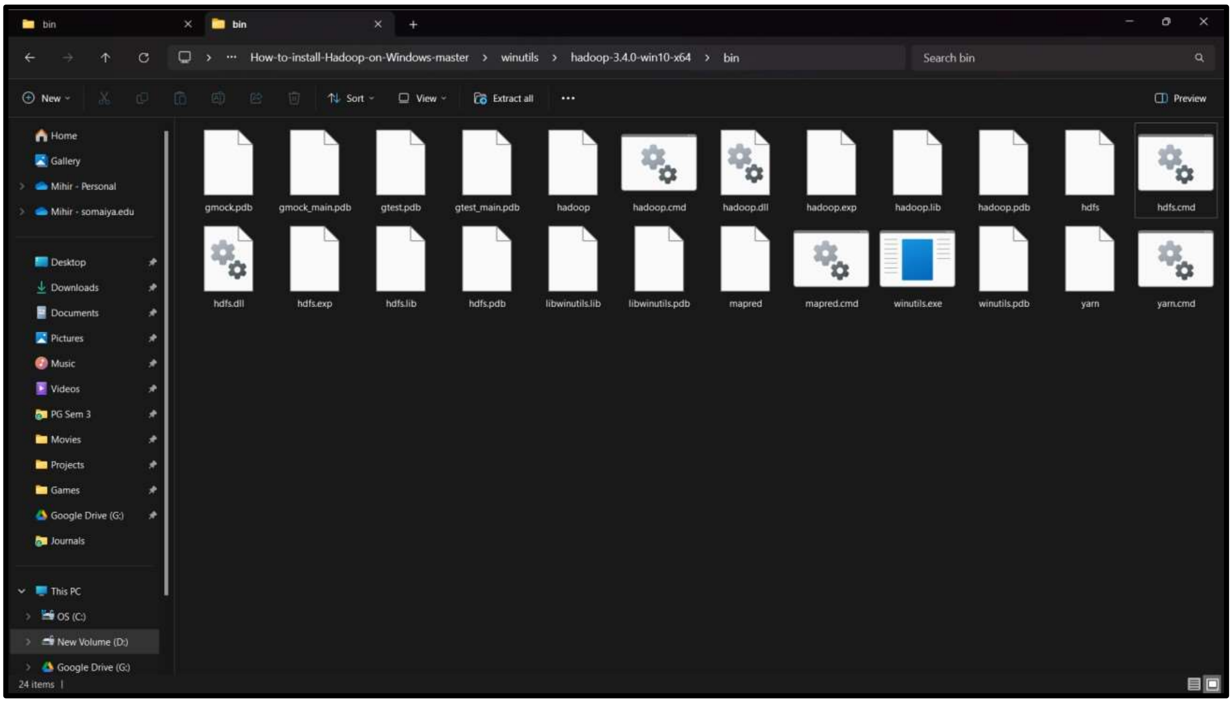
0% Extracting C:\Users\Admin\Dow ... r\hadoop-3.4.0.tar

```
Elapsed time:        00:00:02      Total size:           1675 MB
Remaining time:      00:03:22      Speed:              8383 KB/s
Files:                    835      Processed:           17026 KB
                                   Compressed size:     17232 KB
                                   Compression ratio:       101%
```

Extracting

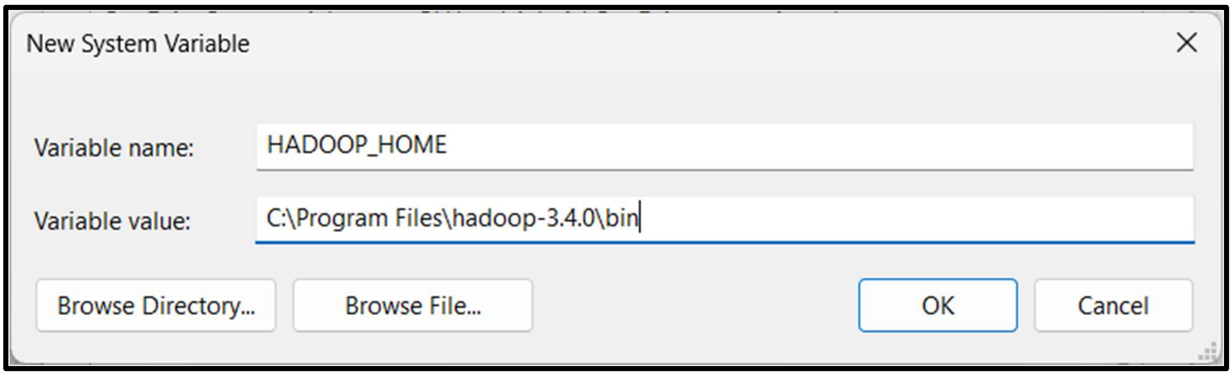
hadoop-3.4.0\share\doc\hadoop\hadoop-yarn ... ver\resourcemanager\nodelabels\class-use\
FileSystemNodeAttributeStore.html

6. Download and Install Hadoop native IO binary from here. To install copy all the contents of the archive to the bin folder of your Hadoop.



How-to-install-Hadoop-on-Windows-master > winutils > hadoop-3.4.0-win10-x64 > bin

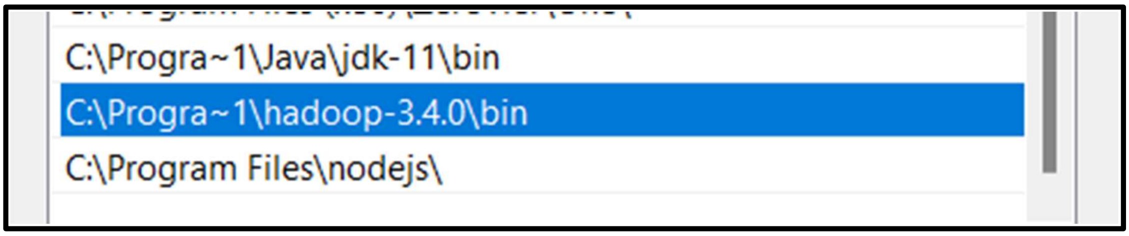
7. Set up the Hadoop Environment Variables.



New System Variable

Variable name: HADOOP_HOME

Variable value: C:\Program Files\hadoop-3.4.0\bin

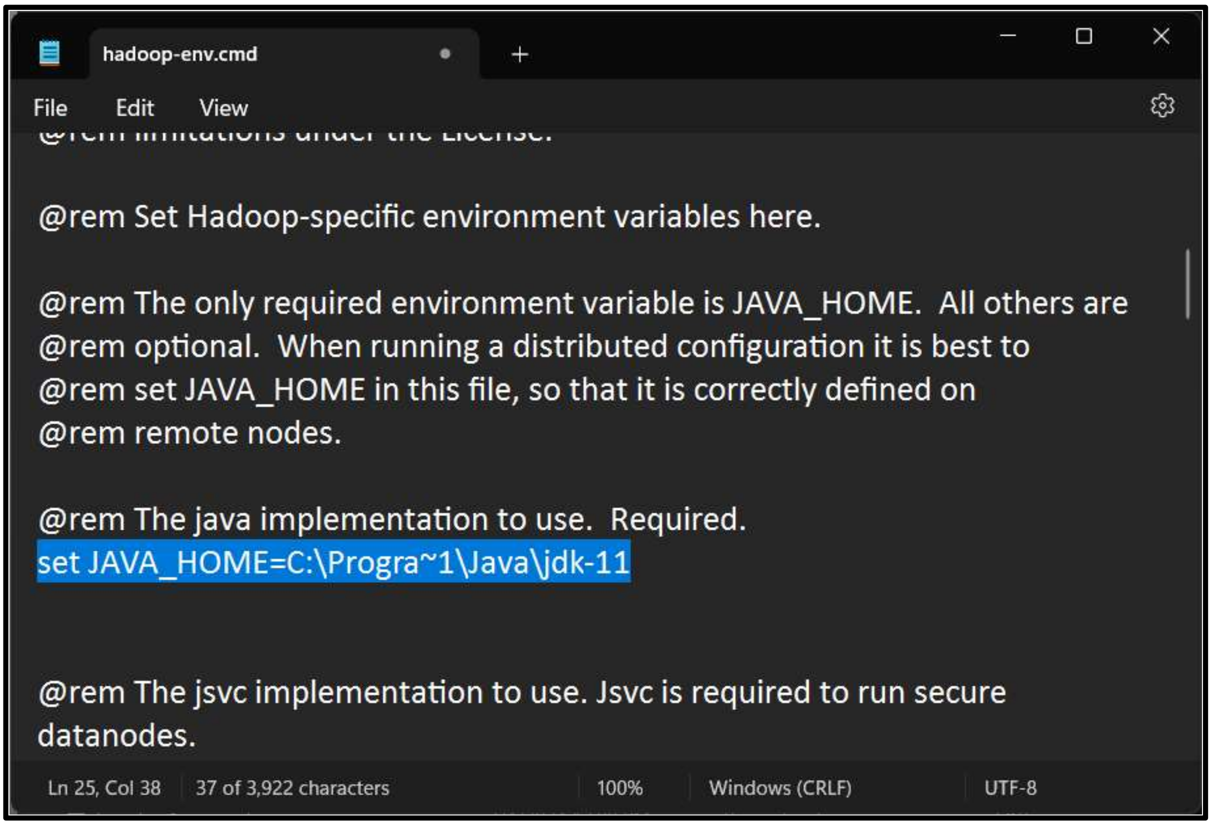


C:\Progra~1\Java\jdk-11\bin

C:\Progra~1\hadoop-3.4.0\bin

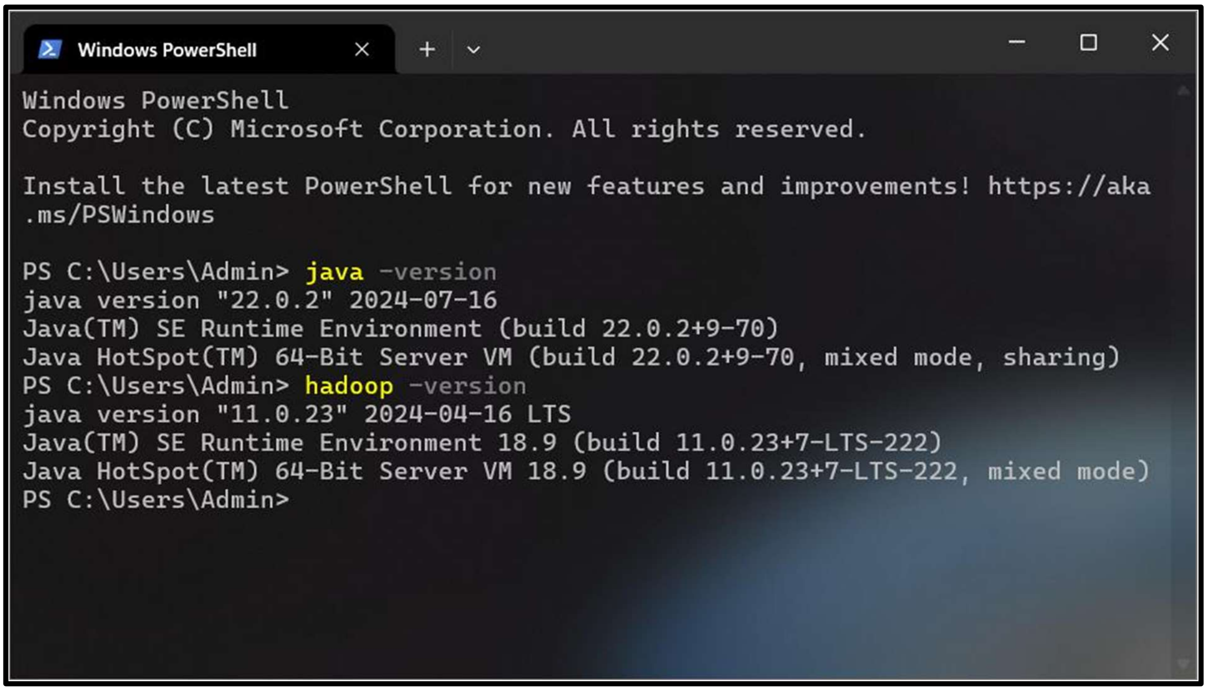
C:\Program Files\nodejs\

8. Set the JAVA_HOME in the hadoop_env.cmd file located inside the etc folder.



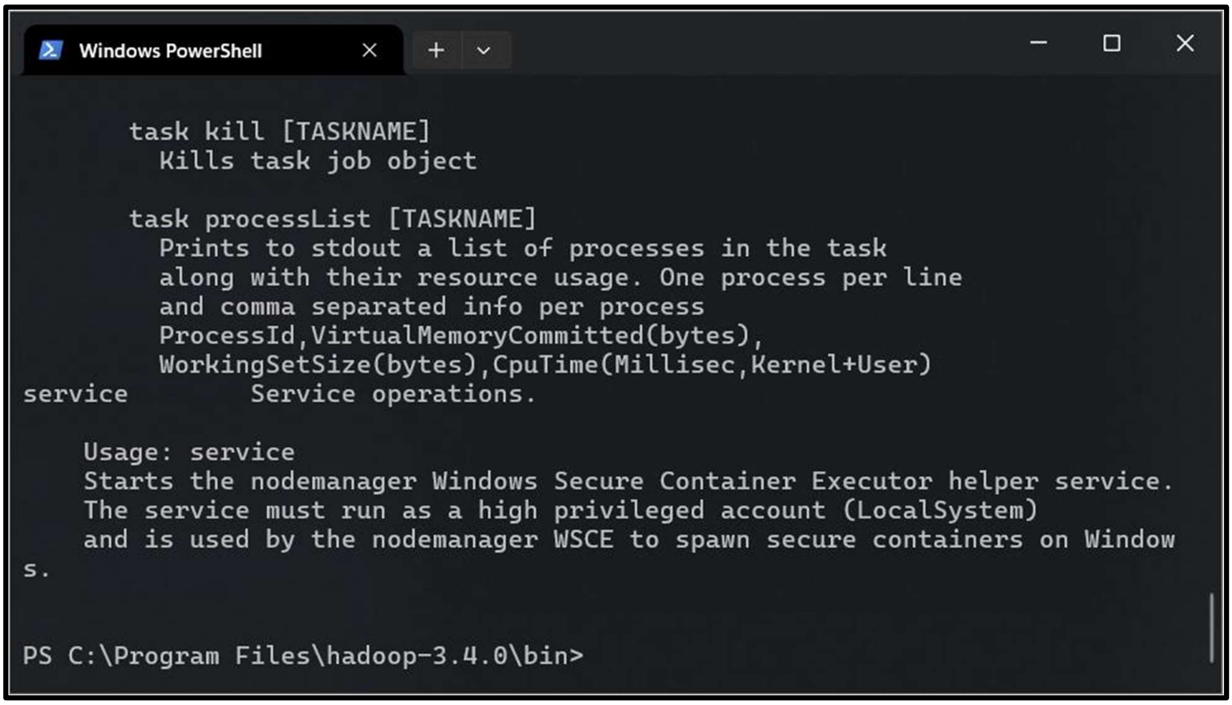
```
@rem limitations under the License.

@rem Set Hadoop-specific environment variables here.

@rem The only required environment variable is JAVA_HOME.  All others are
@rem optional.  When running a distributed configuration it is best to
@rem set JAVA_HOME in this file, so that it is correctly defined on
@rem remote nodes.

@rem The java implementation to use.  Required.
set JAVA_HOME=C:\Progra~1\Java\jdk-11


@rem The jsvc implementation to use. Jsvc is required to run secure
datanodes.
```

9. Check the versions of both Java and Hadoop.



```
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

Install the latest PowerShell for new features and improvements! https://aka
.ms/PSWindows

PS C:\Users\Admin> java -version
java version "22.0.2" 2024-07-16
Java(TM) SE Runtime Environment (build 22.0.2+9-70)
Java HotSpot(TM) 64-Bit Server VM (build 22.0.2+9-70, mixed mode, sharing)
PS C:\Users\Admin> hadoop -version
java version "11.0.23" 2024-04-16 LTS
Java(TM) SE Runtime Environment 18.9 (build 11.0.23+7-LTS-222)
Java HotSpot(TM) 64-Bit Server VM 18.9 (build 11.0.23+7-LTS-222, mixed mode)
PS C:\Users\Admin>
```

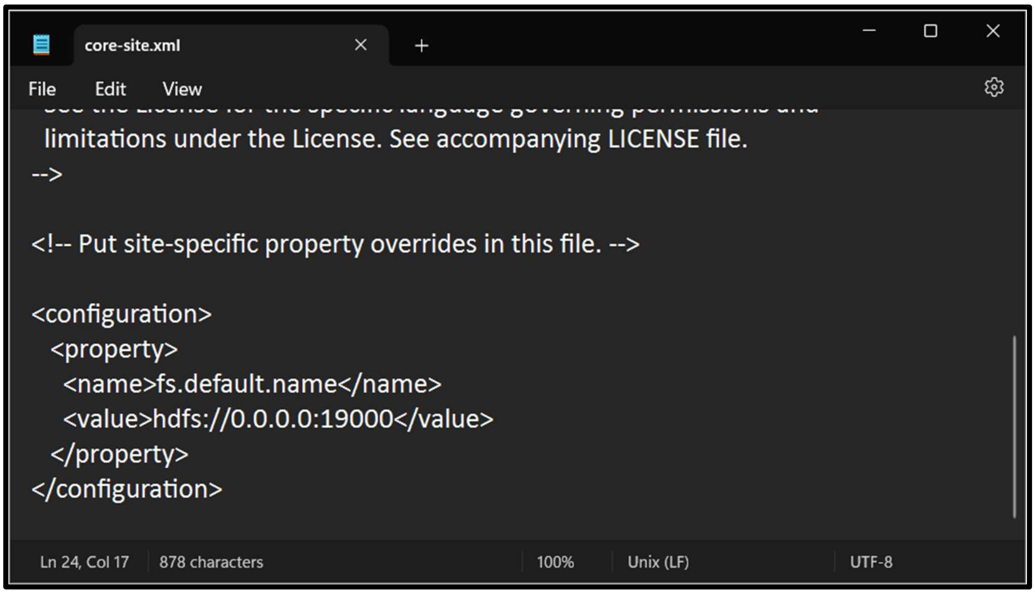
10. To verify all the above steps are completed successfully, open the bin folder in terminal and run the command winutils.exe



```
       task kill [TASKNAME]
         Kills task job object

       task processList [TASKNAME]
         Prints to stdout a list of processes in the task
         along with their resource usage. One process per line
         and comma separated info per process
         ProcessId,VirtualMemoryCommitted(bytes),
         WorkingSetSize(bytes),CpuTime(Millisec,Kernel+User)
service         Service operations.

    Usage: service
    Starts the nodemanager Windows Secure Container Executor helper service.
    The service must run as a high privileged account (LocalSystem)
    and is used by the nodemanager WSCE to spawn secure containers on Window
s.


PS C:\Program Files\hadoop-3.4.0\bin>
```

11. Hadoop Configurations. All the files will be located in the etc folder of your Hadoop installation.

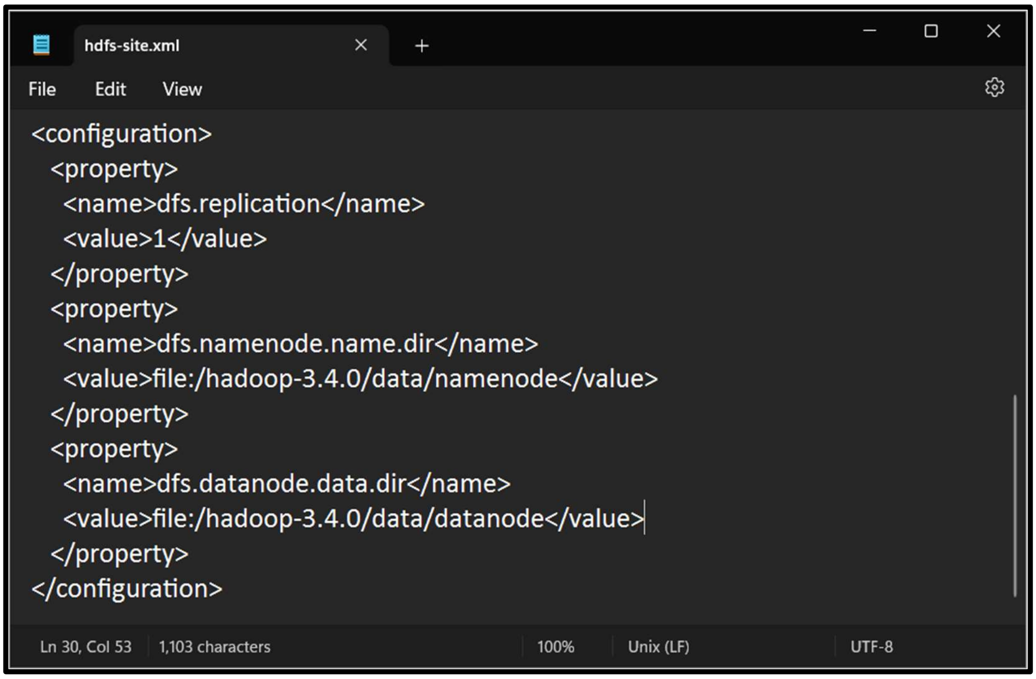
11a. Configure core-site (core-site.xml)



```
  limitations under the License. See accompanying LICENSE file.
-->

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

<configuration>
  <property>
    <name>fs.default.name</name>
    <value>hdfs://0.0.0.0:19000</value>
  </property>
</configuration>
```

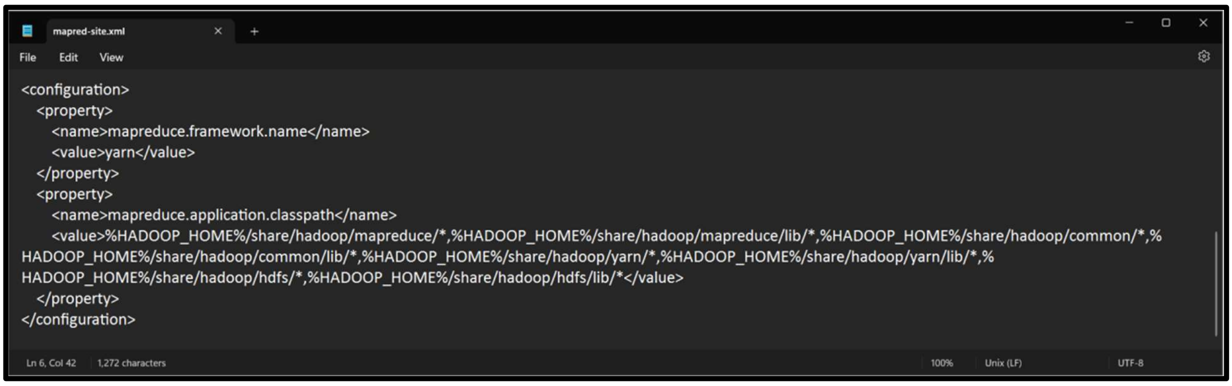
11b. Configure HDFS (hdfs-site.xml)

Before configuring HDFS, make a folder called as data in your Hadoop installation. Make two subfolders named as namenode and datanode.



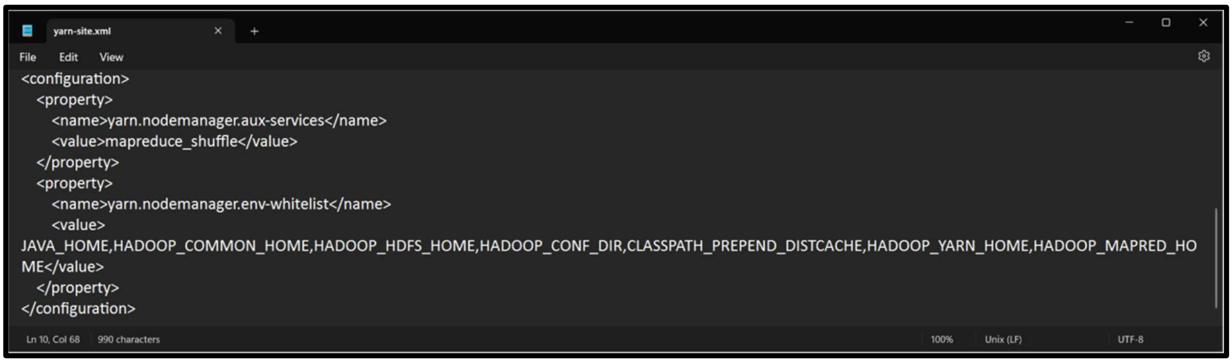
```
<configuration>
  <property>
    <name>dfs.replication</name>
    <value>1</value>
  </property>
  <property>
    <name>dfs.namenode.name.dir</name>
    <value>file:/hadoop-3.4.0/data/namenode</value>
  </property>
  <property>
    <name>dfs.datanode.data.dir</name>
    <value>file:/hadoop-3.4.0/data/datanode</value>
  </property>
</configuration>
```

11c. Configure MapReduce (mapred-site.xml)



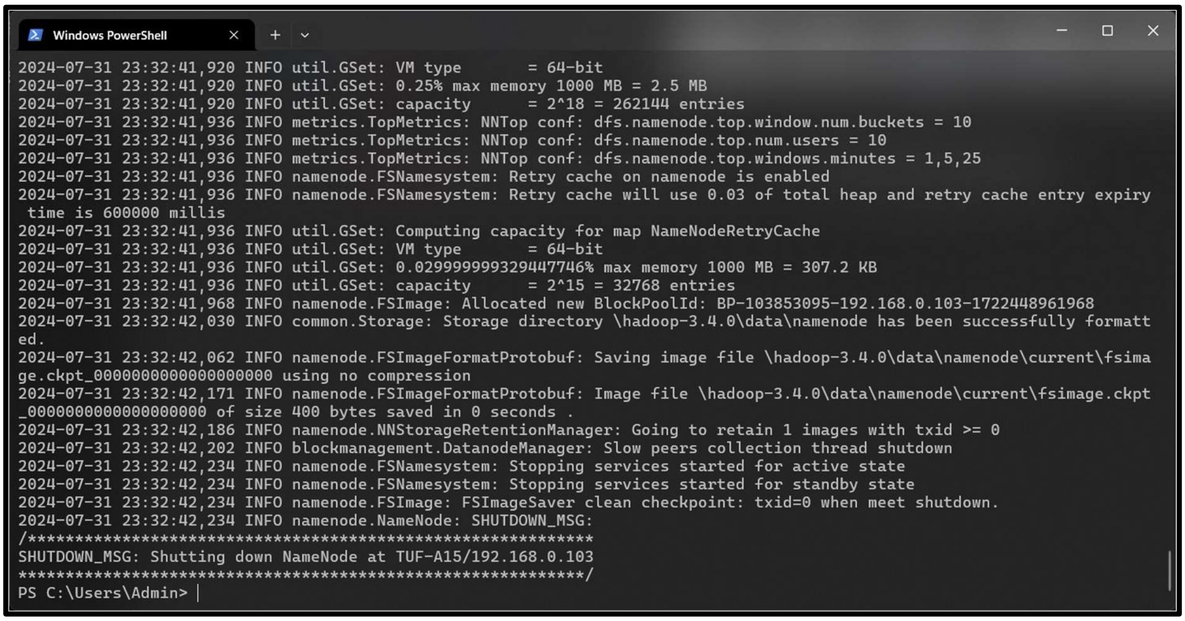
```
<configuration>
  <property>
    <name>mapreduce.framework.name</name>
    <value>yarn</value>
  </property>
  <property>
    <name>mapreduce.application.classpath</name>
    <value>%HADOOP_HOME%/share/hadoop/mapreduce/*,%HADOOP_HOME%/share/hadoop/mapreduce/lib/*,%HADOOP_HOME%/share/hadoop/common/*,%
HADOOP_HOME%/share/hadoop/common/lib/*,%HADOOP_HOME%/share/hadoop/yarn/*,%HADOOP_HOME%/share/hadoop/yarn/lib/*,%
HADOOP_HOME%/share/hadoop/hdfs/*,%HADOOP_HOME%/share/hadoop/hdfs/lib/*</value>
  </property>
</configuration>
```

11d. Configure YARN (yarn-site.xml)



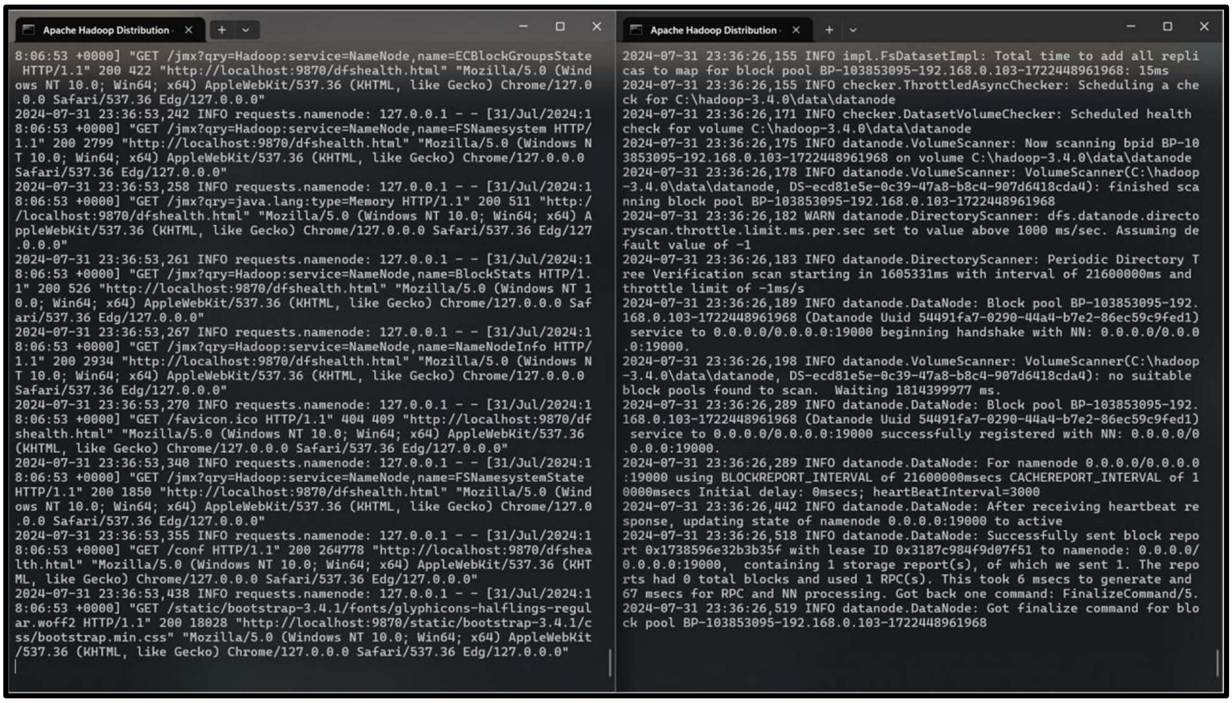
```
<configuration>
  <property>
    <name>yarn.nodemanager.aux-services</name>
    <value>mapreduce_shuffle</value>
  </property>
  <property>
    <name>yarn.nodemanager.env-whitelist</name>
    <value>
JAVA_HOME,HADOOP_COMMON_HOME,HADOOP_HDFS_HOME,HADOOP_CONF_DIR,CLASSPATH_PREPEND_DISTCACHE,HADOOP_YARN_HOME,HADOOP_MAPRED_HO
ME</value>
  </property>
</configuration>
```

12. Initialise HDFS using the following command hdfs namenode -format



```
2024-07-31 23:32:41,920 INFO util.GSet: VM type       = 64-bit
2024-07-31 23:32:41,920 INFO util.GSet: 0.25% max memory 1000 MB = 2.5 MB
2024-07-31 23:32:41,920 INFO util.GSet: capacity      = 2^18 = 262144 entries
2024-07-31 23:32:41,936 INFO metrics.TopMetrics: NNTop conf: dfs.namenode.top.window.num.buckets = 10
2024-07-31 23:32:41,936 INFO metrics.TopMetrics: NNTop conf: dfs.namenode.top.num.users = 10
2024-07-31 23:32:41,936 INFO metrics.TopMetrics: NNTop conf: dfs.namenode.top.windows.minutes = 1,5,25
2024-07-31 23:32:41,936 INFO namenode.FSNamesystem: Retry cache on namenode is enabled
2024-07-31 23:32:41,936 INFO namenode.FSNamesystem: Retry cache will use 0.03 of total heap and retry cache entry expiry
 time is 600000 millis
2024-07-31 23:32:41,936 INFO util.GSet: Computing capacity for map NameNodeRetryCache
2024-07-31 23:32:41,936 INFO util.GSet: VM type       = 64-bit
2024-07-31 23:32:41,936 INFO util.GSet: 0.029999999329447746% max memory 1000 MB = 307.2 KB
2024-07-31 23:32:41,936 INFO util.GSet: capacity      = 2^15 = 32768 entries
2024-07-31 23:32:41,968 INFO namenode.FSImage: Allocated new BlockPoolId: BP-103853095-192.168.0.103-1722448961968
2024-07-31 23:32:42,030 INFO common.Storage: Storage directory \hadoop-3.4.0\data\namenode has been successfully formatt
ed.
2024-07-31 23:32:42,062 INFO namenode.FSImageFormatProtobuf: Saving image file \hadoop-3.4.0\data\namenode\current\fsima
ge.ckpt_0000000000000000000 using no compression
2024-07-31 23:32:42,171 INFO namenode.FSImageFormatProtobuf: Image file \hadoop-3.4.0\data\namenode\current\fsimage.ckpt
_0000000000000000000 of size 400 bytes saved in 0 seconds .
2024-07-31 23:32:42,186 INFO namenode.NNStorageRetentionManager: Going to retain 1 images with txid >= 0
2024-07-31 23:32:42,202 INFO blockmanagement.DatanodeManager: Slow peers collection thread shutdown
2024-07-31 23:32:42,234 INFO namenode.FSNamesystem: Stopping services started for active state
2024-07-31 23:32:42,234 INFO namenode.FSNamesystem: Stopping services started for standby state
2024-07-31 23:32:42,234 INFO namenode.FSImage: FSImageSaver clean checkpoint: txid=0 when meet shutdown.
2024-07-31 23:32:42,234 INFO namenode.NameNode: SHUTDOWN_MSG:
/************************************************************
SHUTDOWN_MSG: Shutting down NameNode at TUF-A15/192.168.0.103
************************************************************/
PS C:\Users\Admin> |
```

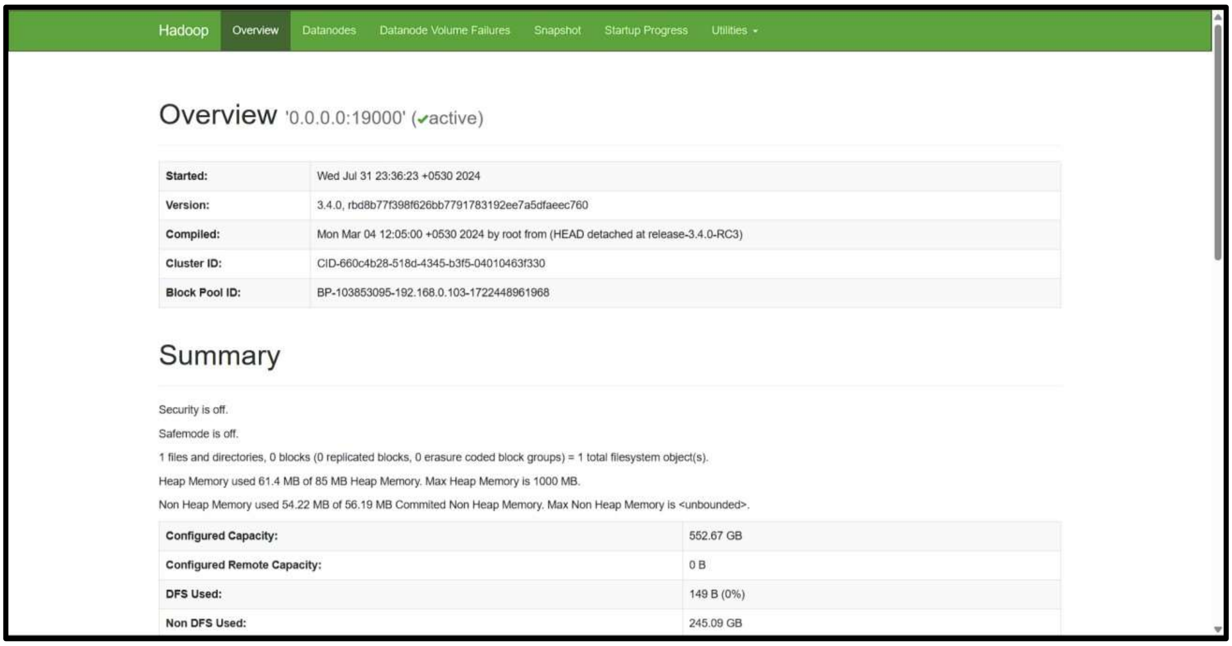
13. Start HDFS Daemons by going to the sbin folder of Hadoop installation and running the command start-dfs.cmd. Processes will start running.



```
8:06:53 +0000] "GET /jmx?qry=Hadoop:service=NameNode,name=ECBlockGroupsState
 HTTP/1.1" 200 422 "http://localhost:9870/dfshealth.html" "Mozilla/5.0 (Wind
ows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/127.0
.0.0 Safari/537.36 Edg/127.0.0.0"
2024-07-31 23:36:53,242 INFO requests.namenode: 127.0.0.1 - - [31/Jul/2024:1
8:06:53 +0000] "GET /jmx?qry=Hadoop:service=NameNode,name=FSNamesystem HTTP/
1.1" 200 2799 "http://localhost:9870/dfshealth.html" "Mozilla/5.0 (Windows N
T 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/127.0.0.0
Safari/537.36 Edg/127.0.0.0"
2024-07-31 23:36:53,258 INFO requests.namenode: 127.0.0.1 - - [31/Jul/2024:1
8:06:53 +0000] "GET /jmx?qry=java.lang:type=Memory HTTP/1.1" 200 511 "http:/
/localhost:9870/dfshealth.html" "Mozilla/5.0 (Windows NT 10.0; Win64; x64) A
ppleWebKit/537.36 (KHTML, like Gecko) Chrome/127.0.0.0 Safari/537.36 Edg/127
.0.0.0"
2024-07-31 23:36:53,261 INFO requests.namenode: 127.0.0.1 - - [31/Jul/2024:1
8:06:53 +0000] "GET /jmx?qry=Hadoop:service=NameNode,name=BlockStats HTTP/1.
1" 200 526 "http://localhost:9870/dfshealth.html" "Mozilla/5.0 (Windows NT 1
0.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/127.0.0.0 Saf
ari/537.36 Edg/127.0.0.0"
2024-07-31 23:36:53,267 INFO requests.namenode: 127.0.0.1 - - [31/Jul/2024:1
8:06:53 +0000] "GET /jmx?qry=Hadoop:service=NameNode,name=NameNodeInfo HTTP/
1.1" 200 2934 "http://localhost:9870/dfshealth.html" "Mozilla/5.0 (Windows N
T 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/127.0.0.0
Safari/537.36 Edg/127.0.0.0"
2024-07-31 23:36:53,270 INFO requests.namenode: 127.0.0.1 - - [31/Jul/2024:1
8:06:53 +0000] "GET /favicon.ico HTTP/1.1" 404 409 "http://localhost:9870/df
shealth.html" "Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36
(KHTML, like Gecko) Chrome/127.0.0.0 Safari/537.36 Edg/127.0.0.0"
2024-07-31 23:36:53,340 INFO requests.namenode: 127.0.0.1 - - [31/Jul/2024:1
8:06:53 +0000] "GET /jmx?qry=Hadoop:service=NameNode,name=FSNamesystemState
HTTP/1.1" 200 1850 "http://localhost:9870/dfshealth.html" "Mozilla/5.0 (Wind
ows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/127.0
.0.0 Safari/537.36 Edg/127.0.0.0"
2024-07-31 23:36:53,355 INFO requests.namenode: 127.0.0.1 - - [31/Jul/2024:1
8:06:53 +0000] "GET /conf HTTP/1.1" 200 264778 "http://localhost:9870/dfshea
lth.html" "Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHT
ML, like Gecko) Chrome/127.0.0.0 Safari/537.36 Edg/127.0.0.0"
2024-07-31 23:36:53,438 INFO requests.namenode: 127.0.0.1 - - [31/Jul/2024:1
8:06:53 +0000] "GET /static/bootstrap-3.4.1/fonts/glyphicons-halflings-regul
ar.woff2 HTTP/1.1" 200 18028 "http://localhost:9870/static/bootstrap-3.4.1/c
ss/bootstrap.min.css" "Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit
/537.36 (KHTML, like Gecko) Chrome/127.0.0.0 Safari/537.36 Edg/127.0.0.0"
```

```
2024-07-31 23:36:26,155 INFO impl.FsDatasetImpl: Total time to add all repli
cas to map for block pool BP-103853095-192.168.0.103-1722448961968: 15ms
2024-07-31 23:36:26,155 INFO checker.ThrottledAsyncChecker: Scheduling a che
ck for C:\hadoop-3.4.0\data\datanode
2024-07-31 23:36:26,171 INFO checker.DatasetVolumeChecker: Scheduled health
check for volume C:\hadoop-3.4.0\data\datanode
2024-07-31 23:36:26,175 INFO datanode.VolumeScanner: Now scanning bpid BP-10
3853095-192.168.0.103-1722448961968 on volume C:\hadoop-3.4.0\data\datanode
2024-07-31 23:36:26,178 INFO datanode.VolumeScanner: VolumeScanner(C:\hadoop
-3.4.0\data\datanode, DS-ecd81e5e-0c39-47a8-b8c4-907d6418cda4): finished sca
nning block pool BP-103853095-192.168.0.103-1722448961968
2024-07-31 23:36:26,182 WARN datanode.DirectoryScanner: dfs.datanode.directo
ryscan.throttle.limit.ms.per.sec set to value above 1000 ms/sec. Assuming de
fault value of -1
2024-07-31 23:36:26,183 INFO datanode.DirectoryScanner: Periodic Directory T
ree Verification scan starting in 1605331ms with interval of 21600000ms and
throttle limit of -1ms/s
2024-07-31 23:36:26,189 INFO datanode.DataNode: Block pool BP-103853095-192.
168.0.103-1722448961968 (Datanode Uuid 54491fa7-0290-44a4-b7e2-86ec59c9fed1)
 service to 0.0.0.0/0.0.0.0:19000 beginning handshake with NN: 0.0.0.0/0.0.0
.0:19000.
2024-07-31 23:36:26,198 INFO datanode.VolumeScanner: VolumeScanner(C:\hadoop
-3.4.0\data\datanode, DS-ecd81e5e-0c39-47a8-b8c4-907d6418cda4): no suitable
block pools found to scan.  Waiting 1814399977 ms.
2024-07-31 23:36:26,289 INFO datanode.DataNode: Block pool BP-103853095-192.
168.0.103-1722448961968 (Datanode Uuid 54491fa7-0290-44a4-b7e2-86ec59c9fed1)
 service to 0.0.0.0/0.0.0.0:19000 successfully registered with NN: 0.0.0.0/0
.0.0.0:19000.
2024-07-31 23:36:26,289 INFO datanode.DataNode: For namenode 0.0.0.0/0.0.0.0
:19000 using BLOCKREPORT_INTERVAL of 21600000msecs CACHEREPORT_INTERVAL of 1
0000msecs Initial delay: 0msecs; heartBeatInterval=3000
2024-07-31 23:36:26,442 INFO datanode.DataNode: After receiving heartbeat re
sponse, updating state of namenode 0.0.0.0:19000 to active
2024-07-31 23:36:26,518 INFO datanode.DataNode: Successfully sent block repo
rt 0x1738596e32b3b35f with lease ID 0x3187c984f9d07f51 to namenode: 0.0.0.0/
0.0.0.0:19000,  containing 1 storage report(s), of which we sent 1. The repo
rts had 0 total blocks and used 1 RPC(s). This took 6 msecs to generate and
67 msecs for RPC and NN processing. Got back one command: FinalizeCommand/5.
2024-07-31 23:36:26,519 INFO datanode.DataNode: Got finalize command for blo
ck pool BP-103853095-192.168.0.103-1722448961968
```

14. Verify HDFS web portal UI through this link.



Overview '0.0.0.0:19000' (✓active)

Started:	Wed Jul 31 23:36:23 +0530 2024
Version:	3.4.0, rbd8b77f398f626bb7791783192ee7a5dfaeec760
Compiled:	Mon Mar 04 12:05:00 +0530 2024 by root from (HEAD detached at release-3.4.0-RC3)
Cluster ID:	CID-660c4b28-518d-4345-b3f5-04010463f330
Block Pool ID:	BP-103853095-192.168.0.103-1722448961968

Summary

Security is off.

Safemode is off.

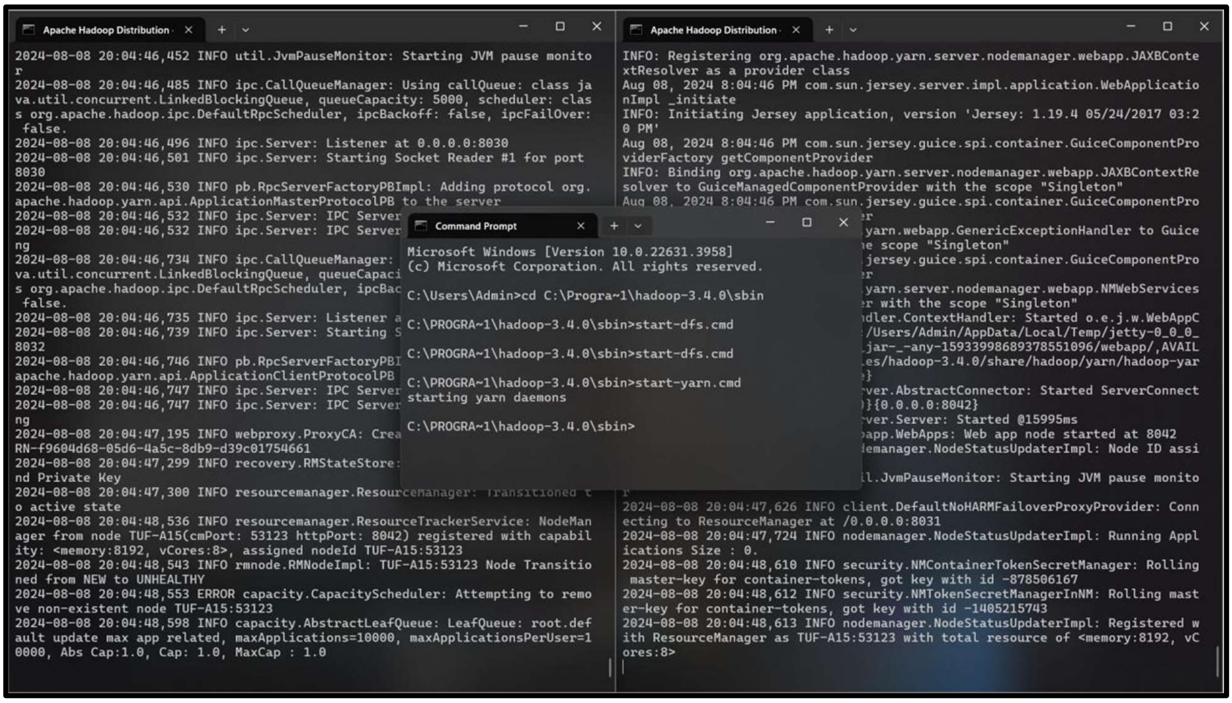
1 files and directories, 0 blocks (0 replicated blocks, 0 erasure coded block groups) = 1 total filesystem object(s).

Heap Memory used 61.4 MB of 85 MB Heap Memory. Max Heap Memory is 1000 MB.

Non Heap Memory used 54.22 MB of 56.19 MB Commited Non Heap Memory. Max Non Heap Memory is <unbounded>.

Configured Capacity:	552.67 GB
Configured Remote Capacity:	0 B
DFS Used:	149 B (0%)
Non DFS Used:	245.09 GB

15. Start YARN Daemons by using the following command start-yarn.cmd.



Apache Hadoop Distribution

```
2024-08-08 20:04:46,452 INFO util.JvmPauseMonitor: Starting JVM pause monito
r
2024-08-08 20:04:46,485 INFO ipc.CallQueueManager: Using callQueue: class ja
va.util.concurrent.LinkedBlockingQueue, queueCapacity: 5000, scheduler: clas
s org.apache.hadoop.ipc.DefaultRpcScheduler, ipcBackoff: false, ipcFailOver:
 false.
2024-08-08 20:04:46,496 INFO ipc.Server: Listener at 0.0.0.0:8030
2024-08-08 20:04:46,501 INFO ipc.Server: Starting Socket Reader #1 for port
8030
2024-08-08 20:04:46,530 INFO pb.RpcServerFactoryPBImpl: Adding protocol org.
apache.hadoop.yarn.api.ApplicationMasterProtocolPB to the server
2024-08-08 20:04:46,532 INFO ipc.Server: IPC Server
2024-08-08 20:04:46,532 INFO ipc.Server: IPC Server
ng
2024-08-08 20:04:46,734 INFO ipc.CallQueueManager:
va.util.concurrent.LinkedBlockingQueue, queueCapaci
s org.apache.hadoop.ipc.DefaultRpcScheduler, ipcBac
 false.
2024-08-08 20:04:46,735 INFO ipc.Server: Listener a
2024-08-08 20:04:46,739 INFO ipc.Server: Starting S
8032
2024-08-08 20:04:46,746 INFO pb.RpcServerFactoryPBI
apache.hadoop.yarn.api.ApplicationClientProtocolPB
2024-08-08 20:04:46,747 INFO ipc.Server: IPC Server
2024-08-08 20:04:46,747 INFO ipc.Server: IPC Server
ng
2024-08-08 20:04:47,195 INFO webproxy.ProxyCA: Crea
RN-f9604d68-05d6-4a5c-8db9-d39c01754661
2024-08-08 20:04:47,299 INFO recovery.RMStateStore:
nd Private Key
2024-08-08 20:04:47,300 INFO resourcemanager.ResourceManager: Transitioned t
o active state
2024-08-08 20:04:48,536 INFO resourcemanager.ResourceTrackerService: NodeMan
ager from node TUF-A15(cmPort: 53123 httpPort: 8042) registered with capabil
ity: <memory:8192, vCores:8>, assigned nodeId TUF-A15:53123
2024-08-08 20:04:48,543 INFO rmnode.RMNodeImpl: TUF-A15:53123 Node Transitio
ned from NEW to UNHEALTHY
2024-08-08 20:04:48,553 ERROR capacity.CapacityScheduler: Attempting to remo
ve non-existent node TUF-A15:53123
2024-08-08 20:04:48,598 INFO capacity.AbstractLeafQueue: LeafQueue: root.def
ault update max app related, maxApplications=10000, maxApplicationsPerUser=1
0000, Abs Cap:1.0, Cap: 1.0, MaxCap : 1.0
```

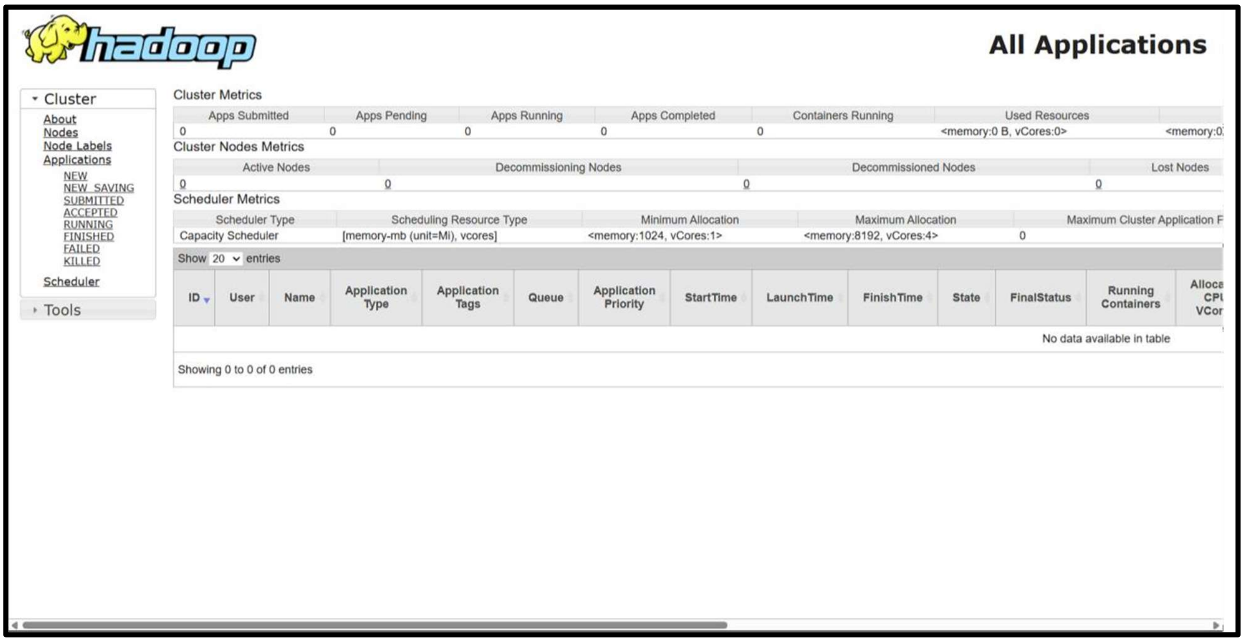
Command Prompt

```
Microsoft Windows [Version 10.0.22631.3958]
(c) Microsoft Corporation. All rights reserved.

C:\Users\Admin>cd C:\Progra~1\hadoop-3.4.0\sbin

C:\PROGRA~1\hadoop-3.4.0\sbin>start-dfs.cmd

C:\PROGRA~1\hadoop-3.4.0\sbin>start-dfs.cmd

C:\PROGRA~1\hadoop-3.4.0\sbin>start-yarn.cmd
starting yarn daemons

C:\PROGRA~1\hadoop-3.4.0\sbin>
```

Apache Hadoop Distribution

```
INFO: Registering org.apache.hadoop.yarn.server.nodemanager.webapp.JAXBConte
xtResolver as a provider class
Aug 08, 2024 8:04:46 PM com.sun.jersey.server.impl.application.WebApplicatio
nImpl _initiate
INFO: Initiating Jersey application, version 'Jersey: 1.19.4 05/24/2017 03:2
0 PM'
Aug 08, 2024 8:04:46 PM com.sun.jersey.guice.spi.container.GuiceComponentPro
viderFactory getComponentProvider
INFO: Binding org.apache.hadoop.yarn.server.nodemanager.webapp.JAXBContextRe
solver to GuiceManagedComponentProvider with the scope "Singleton"
Aug 08, 2024 8:04:46 PM com.sun.jersey.guice.spi.container.GuiceComponentPro
er
yarn.webapp.GenericExceptionHandler to Guice
e scope "Singleton"
jersey.guice.spi.container.GuiceComponentPro
er
yarn.server.nodemanager.webapp.NMWebServices
r with the scope "Singleton"
dler.ContextHandler: Started o.e.j.w.WebAppC
/Users/Admin/AppData/Local/Temp/jetty-0_0_0_
jar-_-any-15933998689378551096/webapp/,AVAIL
es/hadoop-3.4.0/share/hadoop/yarn/hadoop-yar
}
ver.AbstractConnector: Started ServerConnect
}{0.0.0.0:8042}
ver.Server: Started @15995ms
app.WebApps: Web app node started at 8042
emanager.NodeStatusUpdaterImpl: Node ID assi

l.JvmPauseMonitor: Starting JVM pause monito
r
2024-08-08 20:04:47,626 INFO client.DefaultNoHARMFailoverProxyProvider: Conn
ecting to ResourceManager at /0.0.0.0:8031
2024-08-08 20:04:47,724 INFO nodemanager.NodeStatusUpdaterImpl: Running Appl
ications Size : 0.
2024-08-08 20:04:48,610 INFO security.NMContainerTokenSecretManager: Rolling
 master-key for container-tokens, got key with id -878506167
2024-08-08 20:04:48,612 INFO security.NMTokenSecretManagerInNM: Rolling mast
er-key for container-tokens, got key with id -1405215743
2024-08-08 20:04:48,613 INFO nodemanager.NodeStatusUpdaterImpl: Registered w
ith ResourceManager as TUF-A15:53123 with total resource of <memory:8192, vC
ores:8>
```

16. Verify YARN resource manager through this link.



All Applications

- Cluster
  - About
  - Nodes
  - Node Labels
  - Applications
    - NEW
    - NEW_SAVING
    - SUBMITTED
    - ACCEPTED
    - RUNNING
    - FINISHED
    - FAILED
    - KILLED
  - Scheduler
- Tools

Cluster Metrics

Apps Submitted	Apps Pending	Apps Running	Apps Completed	Containers Running	Used Resources	
0	0	0	0	0	<memory:0 B, vCores:0>	<memory:0

Cluster Nodes Metrics

Active Nodes	Decommissioning Nodes	Decommissioned Nodes	Lost Nodes
0	0	0	0

Scheduler Metrics

Scheduler Type	Scheduling Resource Type	Minimum Allocation	Maximum Allocation	Maximum Cluster Application F
Capacity Scheduler	[memory-mb (unit=Mi), vcores]	<memory:1024, vCores:1>	<memory:8192, vCores:4>	0

Show 20 entries

ID	User	Name	Application Type	Application Tags	Queue	Application Priority	StartTime	LaunchTime	FinishTime	State	FinalStatus	Running Containers	Alloca CPU VCor
No data available in table													

Showing 0 to 0 of 0 entries