1. Describe how you installed Hadoop on the node assigned to you as much as in details.

**Ans:**

First Set:

Setting hostname:

[root@hpc03 centos1]# hostnamectl set-hostname master

[root@hpc03 centos1]# vi /etc/hosts

[root@hpc03 centos1]# hostname

master

[root@hpc03 centos1]# cat /etc/hosts

127.0.0.1 localhost localhost.localdomain localhost4 localhost4.localdomain4

::1 localhost localhost.localdomain localhost6 localhost6.localdomain6

check your system ip using ifconfig command:

[root@hpc03 centos1]# vi /etc/hosts

[root@hpc03 centos1]# cat /etc/hosts

10.0.0.81 master.hadoop.hpc3

127.0.0.1 localhost localhost.localdomain localhost4 localhost4.localdomain4

::1 localhost localhost.localdomain localhost6 localhost6.localdomain6

[root@hpc03 centos1]# cd /opt

[root@hpc03 opt]# cd

[root@hpc03 ~]# cd /home

[root@hpc03 home]# ls -ltr

total 4

drwx------. 18 centos1 centos1 4096 Nov 14 13:27 centos1

[root@hpc03 home]# cd centos1

[root@hpc03 centos1]# ls -ltr

total 0

drwxrwxrwx. 9 centos1 centos1 149 Jun 29 22:05 hadoop-3.0.0-alpha4

drwxr-xr-x. 2 centos1 centos1 6 Nov 7 12:43 Videos

drwxr-xr-x. 2 centos1 centos1 6 Nov 7 12:43 Templates

drwxr-xr-x. 2 centos1 centos1 6 Nov 7 12:43 Public

drwxr-xr-x. 2 centos1 centos1 6 Nov 7 12:43 Pictures

drwxr-xr-x. 2 centos1 centos1 6 Nov 7 12:43 Music

drwxr-xr-x. 2 centos1 centos1 6 Nov 7 12:43 Documents

drwxr-xr-x. 3 centos1 centos1 132 Nov 9 13:10 Downloads

drwxrwxr-x. 3 centos1 centos1 18 Nov 14 12:54 hadoop\_store

drwxr-xr-x. 2 centos1 centos1 119 Nov 15 12:28 Desktop

[root@hpc03 centos1]# cd Desktop

[root@hpc03 Desktop]# ls -ltr

total 170096

-rw-rw-r--. 1 centos1 centos1 10038 Nov 15 12:26 Hadoop Installation Steps.odt

-r--------. 1 centos1 centos1 174163338 Nov 15 12:27 jdk-8u151-linux-x64.rpm

[root@hpc03 Desktop]# rpm -Uvh jdk-8u151-linux-x64.rpm

Preparing... ################################# [100%]

Updating / installing...

1:jdk1.8-2000:1.8.0\_151-fcs ################################# [100%]

Unpacking JAR files...

tools.jar...

plugin.jar...

javaws.jar...

deploy.jar...

rt.jar...

jsse.jar...

charsets.jar...

localedata.jar...

[root@hpc03 Desktop]# cd /opt

[root@hpc03 opt]# useradd -d /opt/hadoop hadoop

Give hadoop user password as : hadoop

[root@hpc03 opt]# passwd hadoop

Changing password for user hadoop.

New password:

BAD PASSWORD: The password is shorter than 8 characters

Retype new password:

passwd: all authentication tokens updated successfully.

[root@hpc03 opt]# cd -

/home/centos1/Desktop

[root@hpc03 Desktop]# pwd

/home/centos1/Desktop

[root@hpc03 Desktop]# ls -ltr

total 467036

-rw-rw-r--. 1 centos1 centos1 304062704 Nov 9 12:38 hadoop-3.0.0-alpha4.tar.gz

-r--------. 1 centos1 centos1 174163338 Nov 15 12:27 jdk-8u151-linux-x64.rpm

-rw-rw-r--. 1 centos1 centos1 10224 Nov 15 12:34 Hadoop Installation Steps.odt

[root@hpc03 Desktop]# tar xfz hadoop-3.0.0-alpha4.tar.gz

[root@hpc03 Desktop]# ls -ltr

total 467036

drwxr-xr-x. 9 centos1 centos1 149 Jun 29 22:05 hadoop-3.0.0-alpha4

-rw-rw-r--. 1 centos1 centos1 304062704 Nov 9 12:38 hadoop-3.0.0-alpha4.tar.gz

-r--------. 1 centos1 centos1 174163338 Nov 15 12:27 jdk-8u151-linux-x64.rpm

-rw-rw-r--. 1 centos1 centos1 10224 Nov 15 12:34 Hadoop Installation Steps.odt

[root@hpc03 Desktop]# cp -rf hadoop-3.0.0-alpha4/\* /opt/hadoop

[root@hpc03 Desktop]# chown -R hadoop:hadoop /opt/hadoop

[root@hpc03 Desktop]# ls -al /opt/hadoop

total 188

drwx------. 10 hadoop hadoop 221 Nov 15 12:35 .

drwxr-xr-x. 4 root root 30 Nov 15 12:31 ..

-rw-r--r--. 1 hadoop hadoop 18 Aug 2 2016 .bash\_logout

-rw-r--r--. 1 hadoop hadoop 193 Aug 2 2016 .bash\_profile

-rw-r--r--. 1 hadoop hadoop 231 Aug 2 2016 .bashrc

drwxr-xr-x. 2 hadoop hadoop 183 Nov 15 12:35 bin

drwxr-xr-x. 3 hadoop hadoop 20 Nov 15 12:35 etc

drwxr-xr-x. 2 hadoop hadoop 106 Nov 15 12:35 include

drwxr-xr-x. 3 hadoop hadoop 20 Nov 15 12:35 lib

drwxr-xr-x. 4 hadoop hadoop 288 Nov 15 12:35 libexec

-rw-r--r--. 1 hadoop hadoop 145819 Nov 15 12:35 LICENSE.txt

drwxr-xr-x. 4 hadoop hadoop 39 Nov 7 12:17 .mozilla

-rw-r--r--. 1 hadoop hadoop 20732 Nov 15 12:35 NOTICE.txt

-rw-r--r--. 1 hadoop hadoop 1366 Nov 15 12:35 README.txt

drwxr-xr-x. 2 hadoop hadoop 4096 Nov 15 12:35 sbin

drwxr-xr-x. 4 hadoop hadoop 31 Nov 15 12:35 share

[root@hpc03 Desktop]# mkdir -p /opt/volume/namenode

[root@hpc03 Desktop]# mkdir -p /opt/volume/datanode

[root@hpc03 Desktop]# chown -R hadoop:hadoop /opt/volume/

[root@hpc03 Desktop]# ls -al /opt/

total 4

drwxr-xr-x. 5 root root 44 Nov 15 12:51 .

dr-xr-xr-x. 18 root root 265 Nov 9 12:55 ..

drwx------. 13 hadoop hadoop 4096 Nov 15 12:50 hadoop

drwxr-xr-x. 2 root root 6 Mar 26 2015 rh

drwxr-xr-x. 4 hadoop hadoop 38 Nov 15 12:51 volume

[root@hpc03 Desktop]# vi /etc/hosts

hostnamectl set-hostname master

tar xfz hadoop-2.7.2.tar.gz

# cp -rf hadoop-2.7.2/\* /opt/hadoop/

# chown -R hadoop:hadoop /opt/hadoop/

# su - hadoop

$ vi .bash\_profile

10.0.0.81 master.hadoop.hpc3

## JAVA env variables

export JAVA\_HOME=/usr/java/default

export PATH=$PATH:$JAVA\_HOME/bin

export CLASSPATH=.:$JAVA\_HOME/jre/lib:$JAVA\_HOME/lib:$JAVA\_HOME/lib/tools.jar

## HADOOP env variables

export HADOOP\_HOME=/opt/hadoop

export HADOOP\_COMMON\_HOME=$HADOOP\_HOME

export HADOOP\_HDFS\_HOME=$HADOOP\_HOME

export HADOOP\_MAPRED\_HOME=$HADOOP\_HOME

export HADOOP\_YARN\_HOME=$HADOOP\_HOME

export HADOOP\_OPTS="-Djava.library.path=$HADOOP\_HOME/lib/native"

export HADOOP\_COMMON\_LIB\_NATIVE\_DIR=$HADOOP\_HOME/lib/native

export PATH=$PATH:$HADOOP\_HOME/sbin:$HADOOP\_HOME/bin

Download Java JDK from oracle website:

<http://www.oracle.com/technetwork/java/javase/downloads/jdk8-downloads-2133151.html>

Under Java SE Development Kit 8u151

File to choose

|  |  |  |
| --- | --- | --- |
| Linux x64 | 166.1 MB | [jdk-8u151-linux-x64.rpm](http://download.oracle.com/otn-pub/java/jdk/8u151-b12/e758a0de34e24606bca991d704f6dcbf/jdk-8u151-linux-x64.rpm) |

/home/centos1/Desktop

[centos1@master ~]$ su - hadoop

Password:

[hadoop@master ~]$ vi .bash\_profile

[hadoop@master ~]$ source .bash\_profile

[hadoop@master ~]$ echo $HADOOP\_HOME

/opt/hadoop

[hadoop@master ~]$ echo $JAVA\_HOME

/usr/java/default

[hadoop@master ~]$ cat /etc/hosts

10.0.0.81 master.hadoop.hpc3

127.0.0.1 localhost localhost.localdomain localhost4 localhost4.localdomain4

::1 localhost localhost.localdomain localhost6 localhost6.localdomain6

[hadoop@master ~]$ ssh-keygen -t rsa

Generating public/private rsa key pair.

Enter file in which to save the key (/opt/hadoop/.ssh/id\_rsa):

Created directory '/opt/hadoop/.ssh'.

Enter passphrase (empty for no passphrase):

Enter same passphrase again:

Your identification has been saved in /opt/hadoop/.ssh/id\_rsa.

Your public key has been saved in /opt/hadoop/.ssh/id\_rsa.pub.

The key fingerprint is:

31:8d:1b:ee:a8:74:a0:c7:f3:d1:e0:22:b8:ad:c9:b9 hadoop@master

The key's randomart image is:

+--[ RSA 2048]----+

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[hadoop@master ~]$ ssh-copy-id master.hadoop.hpc3

The authenticity of host 'master.hadoop.hpc3 (10.0.0.81)' can't be established.

ECDSA key fingerprint is 38:a5:dc:a6:b1:08:09:38:11:02:db:4e:71:c4:d8:77.

Are you sure you want to continue connecting (yes/no)? yes

/bin/ssh-copy-id: INFO: attempting to log in with the new key(s), to filter out any that are already installed

/bin/ssh-copy-id: INFO: 1 key(s) remain to be installed -- if you are prompted now it is to install the new keys

hadoop@master.hadoop.hpc3's password:

Number of key(s) added: 1

Now try logging into the machine, with: "ssh 'master.hadoop.hpc3'"

and check to make sure that only the key(s) you wanted were added.

[hadoop@master ~]$ echo $HADOOP\_HOME

/opt/hadoop

[hadoop@master ~]$ cd $HADOOP\_HOME/etc

[hadoop@master etc]$ ls-ltr

bash: ls-ltr: command not found...

[hadoop@master etc]$ ls -ltr

total 4

drwxr-xr-x. 3 hadoop hadoop 4096 Nov 15 12:35 hadoop

[hadoop@master etc]$ pwd

/opt/hadoop/etc

[hadoop@master etc]$ cd hadoop

[hadoop@master hadoop]$ ls -ltr

total 164

-rw-r--r--. 1 hadoop hadoop 758 Nov 15 12:35 mapred-site.xml

-rw-r--r--. 1 hadoop hadoop 620 Nov 15 12:35 httpfs-site.xml

-rw-r--r--. 1 hadoop hadoop 3414 Nov 15 12:35 hadoop-user-functions.sh.example

-rw-r--r--. 1 hadoop hadoop 1335 Nov 15 12:35 configuration.xsl

-rw-r--r--. 1 hadoop hadoop 690 Nov 15 12:35 yarn-site.xml

-rw-r--r--. 1 hadoop hadoop 2316 Nov 15 12:35 ssl-client.xml.example

-rw-r--r--. 1 hadoop hadoop 13718 Nov 15 12:35 log4j.properties

-rw-r--r--. 1 hadoop hadoop 21 Nov 15 12:35 httpfs-signature.secret

-rw-r--r--. 1 hadoop hadoop 1657 Nov 15 12:35 httpfs-log4j.properties

-rw-r--r--. 1 hadoop hadoop 16004 Nov 15 12:35 hadoop-env.sh

-rw-r--r--. 1 hadoop hadoop 774 Nov 15 12:35 core-site.xml

-rw-r--r--. 1 hadoop hadoop 2250 Nov 15 12:35 yarn-env.cmd

-rw-r--r--. 1 hadoop hadoop 2697 Nov 15 12:35 ssl-server.xml.example

-rw-r--r--. 1 hadoop hadoop 1764 Nov 15 12:35 mapred-env.sh

-rw-r--r--. 1 hadoop hadoop 682 Nov 15 12:35 kms-site.xml

-rw-r--r--. 1 hadoop hadoop 1747 Nov 15 12:35 kms-log4j.properties

-rw-r--r--. 1 hadoop hadoop 1351 Nov 15 12:35 kms-env.sh

-rw-r--r--. 1 hadoop hadoop 3670 Nov 15 12:35 hadoop-env.cmd

-rw-r--r--. 1 hadoop hadoop 5095 Nov 15 12:35 yarn-env.sh

drwxr-xr-x. 2 hadoop hadoop 24 Nov 15 12:35 shellprofile.d

-rw-r--r--. 1 hadoop hadoop 4113 Nov 15 12:35 mapred-queues.xml.template

-rw-r--r--. 1 hadoop hadoop 3518 Nov 15 12:35 kms-acls.xml

-rw-r--r--. 1 hadoop hadoop 9683 Nov 15 12:35 hadoop-policy.xml

-rw-r--r--. 1 hadoop hadoop 318 Nov 15 12:35 container-executor.cfg

-rw-r--r--. 1 hadoop hadoop 6302 Nov 15 12:35 capacity-scheduler.xml

-rw-r--r--. 1 hadoop hadoop 10 Nov 15 12:35 workers

-rw-r--r--. 1 hadoop hadoop 2642 Nov 15 12:35 user\_ec\_policies.xml.template

-rw-r--r--. 1 hadoop hadoop 951 Nov 15 12:35 mapred-env.cmd

-rw-r--r--. 1 hadoop hadoop 1479 Nov 15 12:35 httpfs-env.sh

-rw-r--r--. 1 hadoop hadoop 775 Nov 15 12:35 hdfs-site.xml

-rw-r--r--. 1 hadoop hadoop 3323 Nov 15 12:35 hadoop-metrics2.properties

[hadoop@master hadoop]$ vi core-site.xml

Add below property between <configuration>………………...</configuration>

<property>

<name>fs.defaultFS</name>

<value>hdfs://master.hadoop.hpc3:9000/</value>

</property>

[hadoop@master hadoop]$ vi hdfs-site.xml

Add below property between <configuration>………………...</configuration>

<property>

<name>dfs.datanode.data.dir</name>

<value>file:///opt/volume/datanode</value>

</property>

<property>

<name>dfs.namenode.http-address</name>

<value>master.hadoop.hpc3:50070</value>

</property>

<property>

<name>dfs.namenode.name.dir</name>

<value>file:///opt/volume/namenode</value>

</property>

[hadoop@master hadoop]$ vi mapred-site.xml

Add below property between <configuration>………………...</configuration>

<property>

<name>mapreduce.framework.name</name>

<value>yarn</value>

</property>

[hadoop@master hadoop]$ vi yarn-site.xml

Add below property between <configuration>………………...</configuration>

<property>

<name>yarn.nodemanager.aux-services</name>

<value>mapreduce\_shuffle</value>

</property>

[hadoop@master hadoop]$ vi hadoop-env.sh

vi etc/hadoop/hadoop-env.sh

Edit the following line to point to your java path

export JAVA\_HOME=/usr/java/default/

[hadoop@master hadoop]$ vi slaves

[hadoop@master hadoop]$ vi slaves

[hadoop@master hadoop]$ hdfs namenode -format

WARNING: /opt/hadoop/logs does not exist. Creating.

2017-11-15 12:56:23,349 INFO namenode.NameNode: STARTUP\_MSG:

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

STARTUP\_MSG: Starting NameNode

STARTUP\_MSG: host = master/10.0.0.81

STARTUP\_MSG: args = [-format]

STARTUP\_MSG: version = 3.0.0-alpha4

STARTUP\_MSG: classpath = /opt/hadoop/etc/hadoop:/opt/hadoop/share/hadoop/common/lib/jul-to-slf4j-1.7.25.jar:/opt/hadoop/share/hadoop/common/lib/hadoop-annotations-3.0.0-alpha4.jar:/opt/hadoop/share/hadoop/common/lib/kerby-pkix-1.0.0.jar:/opt/hadoop/share/hadoop/common/lib/nimbus-jose-jwt-3.9.jar:/opt/hadoop/share/hadoop/common/lib/jackson-annotations-2.7.8.jar:/opt/hadoop/share/hadoop/common/lib/log4j-1.2.17.jar:/opt/hadoop/share/hadoop/common/lib/jaxb-api-2.2.11.jar:/opt/hadoop/share/hadoop/common/lib/kerby-asn1-1.0.0.jar:/opt/hadoop/share/hadoop/common/lib/slf4j-log4j12-1.7.25.jar:/opt/hadoop/share/hadoop/common/lib/gson-2.2.4.jar:/opt/hadoop/share/hadoop/common/lib/kerby-xdr-1.0.0.jar:/opt/hadoop/share/hadoop/common/lib/jetty-http-9.3.11.v20160721.jar:/opt/hadoop/share/hadoop/common/lib/kerb-util-1.0.0.jar:/opt/hadoop/share/hadoop/common/lib/commons-codec-1.4.jar:/opt/hadoop/share/hadoop/common/lib/kerb-common-1.0.0.jar:/opt/hadoop/share/hadoop/common/lib/kerb-simplekdc-1.0.0.jar:/opt/hadoop/share/hadoop/common/lib/metrics-core-3.0.1.jar:/opt/hadoop/share/hadoop/common/lib/httpclient-4.5.2.jar:/opt/hadoop/share/hadoop/common/lib/jetty-servlet-9.3.11.v20160721.jar:/opt/hadoop/share/hadoop/common/lib/jaxb-impl-2.2.3-1.jar:/opt/hadoop/share/hadoop/common/lib/curator-framework-2.12.0.jar:/opt/hadoop/share/hadoop/common/lib/jackson-xc-1.9.13.jar:/opt/hadoop/share/hadoop/common/lib/httpcore-4.4.4.jar:/opt/hadoop/share/hadoop/common/lib/re2j-1.0.jar:/opt/hadoop/share/hadoop/common/lib/kerb-crypto-1.0.0.jar:/opt/hadoop/share/hadoop/common/lib/jsp-api-2.1.jar:/opt/hadoop/share/hadoop/common/lib/xz-1.0.jar:/opt/hadoop/share/hadoop/common/lib/commons-lang-2.6.jar:/opt/hadoop/share/hadoop/common/lib/commons-math3-3.1.1.jar:/opt/hadoop/share/hadoop/common/lib/commons-compress-1.4.1.jar:/opt/hadoop/share/hadoop/common/lib/commons-cli-1.2.jar:/opt/hadoop/share/hadoop/common/lib/woodstox-core-5.0.3.jar:/opt/hadoop/share/hadoop/common/lib/jersey-servlet-1.19.jar:/opt/hadoop/share/hadoop/common/lib/junit-4.11.jar:/opt/hadoop/share/hadoop/common/lib/htrace-core4-4.1.0-incubating.jar:/opt/hadoop/share/hadoop/common/lib/commons-logging-1.1.3.jar:/opt/hadoop/share/hadoop/common/lib/jsch-0.1.54.jar:/opt/hadoop/share/hadoop/common/lib/jetty-security-9.3.11.v20160721.jar:/opt/hadoop/share/hadoop/common/lib/stax2-api-3.1.4.jar:/opt/hadoop/share/hadoop/common/lib/kerb-core-1.0.0.jar:/opt/hadoop/share/hadoop/common/lib/commons-collections-3.2.2.jar:/opt/hadoop/share/hadoop/common/lib/avro-1.7.4.jar:/opt/hadoop/share/hadoop/common/lib/jackson-jaxrs-1.9.13.jar:/opt/hadoop/share/hadoop/common/lib/guava-11.0.2.jar:/opt/hadoop/share/hadoop/common/lib/jsr311-api-1.1.1.jar:/opt/hadoop/share/hadoop/common/lib/json-smart-1.1.1.jar:/opt/hadoop/share/hadoop/common/lib/javax.servlet-api-3.1.0.jar:/opt/hadoop/share/hadoop/common/lib/jettison-1.1.jar:/opt/hadoop/share/hadoop/common/lib/kerb-identity-1.0.0.jar:/opt/hadoop/share/hadoop/common/lib/kerb-server-1.0.0.jar:/opt/hadoop/share/hadoop/common/lib/kerb-admin-1.0.0.jar:/opt/hadoop/share/hadoop/common/lib/jackson-mapper-asl-1.9.13.jar:/opt/hadoop/share/hadoop/common/lib/jersey-json-1.19.jar:/opt/hadoop/share/hadoop/common/lib/commons-net-3.1.jar:/opt/hadoop/share/hadoop/common/lib/commons-configuration2-2.1.jar:/opt/hadoop/share/hadoop/common/lib/jackson-core-asl-1.9.13.jar:/opt/hadoop/share/hadoop/common/lib/jcip-annotations-1.0.jar:/opt/hadoop/share/hadoop/common/lib/hamcrest-core-1.3.jar:/opt/hadoop/share/hadoop/common/lib/kerb-client-1.0.0.jar:/opt/hadoop/share/hadoop/common/lib/snappy-java-1.0.4.1.jar:/opt/hadoop/share/hadoop/common/lib/slf4j-api-1.7.25.jar:/opt/hadoop/share/hadoop/common/lib/commons-beanutils-1.9.3.jar:/opt/hadoop/share/hadoop/common/lib/mockito-all-1.8.5.jar:/opt/hadoop/share/hadoop/common/lib/jackson-databind-2.7.8.jar:/opt/hadoop/share/hadoop/common/lib/kerby-config-1.0.0.jar:/opt/hadoop/share/hadoop/common/lib/curator-client-2.12.0.jar:/opt/hadoop/share/hadoop/common/lib/jetty-xml-9.3.11.v20160721.jar:/opt/hadoop/share/hadoop/common/lib/jsr305-3.0.0.jar:/opt/hadoop/share/hadoop/common/lib/jetty-io-9.3.11.v20160721.jar:/opt/hadoop/share/hadoop/common/lib/zookeeper-3.4.9.jar:/opt/hadoop/share/hadoop/common/lib/jetty-util-9.3.11.v20160721.jar:/opt/hadoop/share/hadoop/common/lib/jackson-core-2.7.8.jar:/opt/hadoop/share/hadoop/common/lib/jersey-server-1.19.jar:/opt/hadoop/share/hadoop/common/lib/commons-io-2.4.jar:/opt/hadoop/share/hadoop/common/lib/curator-recipes-2.12.0.jar:/opt/hadoop/share/hadoop/common/lib/hadoop-auth-3.0.0-alpha4.jar:/opt/hadoop/share/hadoop/common/lib/netty-3.10.5.Final.jar:/opt/hadoop/share/hadoop/common/lib/paranamer-2.3.jar:/opt/hadoop/share/hadoop/common/lib/commons-lang3-3.3.2.jar:/opt/hadoop/share/hadoop/common/lib/jersey-core-1.19.jar:/opt/hadoop/share/hadoop/common/lib/jetty-webapp-9.3.11.v20160721.jar:/opt/hadoop/share/hadoop/common/lib/protobuf-java-2.5.0.jar:/opt/hadoop/share/hadoop/common/lib/kerby-util-1.0.0.jar:/opt/hadoop/share/hadoop/common/lib/jline-0.9.94.jar:/opt/hadoop/share/hadoop/common/lib/jetty-server-9.3.11.v20160721.jar:/opt/hadoop/share/hadoop/common/hadoop-nfs-3.0.0-alpha4.jar:/opt/hadoop/share/hadoop/common/hadoop-common-3.0.0-alpha4.jar:/opt/hadoop/share/hadoop/common/hadoop-common-3.0.0-alpha4-tests.jar:/opt/hadoop/share/hadoop/common/hadoop-kms-3.0.0-alpha4.jar:/opt/hadoop/share/hadoop/hdfs:/opt/hadoop/share/hadoop/hdfs/lib/hadoop-annotations-3.0.0-alpha4.jar:/opt/hadoop/share/hadoop/hdfs/lib/kerby-pkix-1.0.0.jar:/opt/hadoop/share/hadoop/hdfs/lib/nimbus-jose-jwt-3.9.jar:/opt/hadoop/share/hadoop/hdfs/lib/jackson-annotations-2.7.8.jar:/opt/hadoop/share/hadoop/hdfs/lib/log4j-1.2.17.jar:/opt/hadoop/share/hadoop/hdfs/lib/jaxb-api-2.2.11.jar:/opt/hadoop/share/hadoop/hdfs/lib/kerby-asn1-1.0.0.jar:/opt/hadoop/share/hadoop/hdfs/lib/gson-2.2.4.jar:/opt/hadoop/share/hadoop/hdfs/lib/kerby-xdr-1.0.0.jar:/opt/hadoop/share/hadoop/hdfs/lib/jetty-util-ajax-9.3.11.v20160721.jar:/opt/hadoop/share/hadoop/hdfs/lib/jetty-http-9.3.11.v20160721.jar:/opt/hadoop/share/hadoop/hdfs/lib/kerb-util-1.0.0.jar:/opt/hadoop/share/hadoop/hdfs/lib/commons-codec-1.4.jar:/opt/hadoop/share/hadoop/hdfs/lib/kerb-common-1.0.0.jar:/opt/hadoop/share/hadoop/hdfs/lib/kerb-simplekdc-1.0.0.jar:/opt/hadoop/share/hadoop/hdfs/lib/httpclient-4.5.2.jar:/opt/hadoop/share/hadoop/hdfs/lib/jetty-servlet-9.3.11.v20160721.jar:/opt/hadoop/share/hadoop/hdfs/lib/jaxb-impl-2.2.3-1.jar:/opt/hadoop/share/hadoop/hdfs/lib/curator-framework-2.12.0.jar:/opt/hadoop/share/hadoop/hdfs/lib/xercesImpl-2.9.1.jar:/opt/hadoop/share/hadoop/hdfs/lib/jackson-xc-1.9.13.jar:/opt/hadoop/share/hadoop/hdfs/lib/httpcore-4.4.4.jar:/opt/hadoop/share/hadoop/hdfs/lib/re2j-1.0.jar:/opt/hadoop/share/hadoop/hdfs/lib/kerb-crypto-1.0.0.jar:/opt/hadoop/share/hadoop/hdfs/lib/xz-1.0.jar:/opt/hadoop/share/hadoop/hdfs/lib/commons-lang-2.6.jar:/opt/hadoop/share/hadoop/hdfs/lib/okio-1.4.0.jar:/opt/hadoop/share/hadoop/hdfs/lib/commons-math3-3.1.1.jar:/opt/hadoop/share/hadoop/hdfs/lib/commons-compress-1.4.1.jar:/opt/hadoop/share/hadoop/hdfs/lib/commons-cli-1.2.jar:/opt/hadoop/share/hadoop/hdfs/lib/woodstox-core-5.0.3.jar:/opt/hadoop/share/hadoop/hdfs/lib/jersey-servlet-1.19.jar:/opt/hadoop/share/hadoop/hdfs/lib/htrace-core4-4.1.0-incubating.jar:/opt/hadoop/share/hadoop/hdfs/lib/xml-apis-1.3.04.jar:/opt/hadoop/share/hadoop/hdfs/lib/commons-logging-1.1.3.jar:/opt/hadoop/share/hadoop/hdfs/lib/jsch-0.1.54.jar:/opt/hadoop/share/hadoop/hdfs/lib/jetty-security-9.3.11.v20160721.jar:/opt/hadoop/share/hadoop/hdfs/lib/stax2-api-3.1.4.jar:/opt/hadoop/share/hadoop/hdfs/lib/kerb-core-1.0.0.jar:/opt/hadoop/share/hadoop/hdfs/lib/commons-collections-3.2.2.jar:/opt/hadoop/share/hadoop/hdfs/lib/avro-1.7.4.jar:/opt/hadoop/share/hadoop/hdfs/lib/jackson-jaxrs-1.9.13.jar:/opt/hadoop/share/hadoop/hdfs/lib/netty-all-4.0.23.Final.jar:/opt/hadoop/share/hadoop/hdfs/lib/guava-11.0.2.jar:/opt/hadoop/share/hadoop/hdfs/lib/jsr311-api-1.1.1.jar:/opt/hadoop/share/hadoop/hdfs/lib/json-smart-1.1.1.jar:/opt/hadoop/share/hadoop/hdfs/lib/javax.servlet-api-3.1.0.jar:/opt/hadoop/share/hadoop/hdfs/lib/jettison-1.1.jar:/opt/hadoop/share/hadoop/hdfs/lib/kerb-identity-1.0.0.jar:/opt/hadoop/share/hadoop/hdfs/lib/kerb-server-1.0.0.jar:/opt/hadoop/share/hadoop/hdfs/lib/kerb-admin-1.0.0.jar:/opt/hadoop/share/hadoop/hdfs/lib/jackson-mapper-asl-1.9.13.jar:/opt/hadoop/share/hadoop/hdfs/lib/jersey-json-1.19.jar:/opt/hadoop/share/hadoop/hdfs/lib/commons-net-3.1.jar:/opt/hadoop/share/hadoop/hdfs/lib/commons-configuration2-2.1.jar:/opt/hadoop/share/hadoop/hdfs/lib/json-simple-1.1.jar:/opt/hadoop/share/hadoop/hdfs/lib/jackson-core-asl-1.9.13.jar:/opt/hadoop/share/hadoop/hdfs/lib/jcip-annotations-1.0.jar:/opt/hadoop/share/hadoop/hdfs/lib/kerb-client-1.0.0.jar:/opt/hadoop/share/hadoop/hdfs/lib/snappy-java-1.0.4.1.jar:/opt/hadoop/share/hadoop/hdfs/lib/commons-beanutils-1.9.3.jar:/opt/hadoop/share/hadoop/hdfs/lib/jackson-databind-2.7.8.jar:/opt/hadoop/share/hadoop/hdfs/lib/kerby-config-1.0.0.jar:/opt/hadoop/share/hadoop/hdfs/lib/curator-client-2.12.0.jar:/opt/hadoop/share/hadoop/hdfs/lib/jetty-xml-9.3.11.v20160721.jar:/opt/hadoop/share/hadoop/hdfs/lib/jsr305-3.0.0.jar:/opt/hadoop/share/hadoop/hdfs/lib/jetty-io-9.3.11.v20160721.jar:/opt/hadoop/share/hadoop/hdfs/lib/zookeeper-3.4.9.jar:/opt/hadoop/share/hadoop/hdfs/lib/jetty-util-9.3.11.v20160721.jar:/opt/hadoop/share/hadoop/hdfs/lib/jackson-core-2.7.8.jar:/opt/hadoop/share/hadoop/hdfs/lib/jersey-server-1.19.jar:/opt/hadoop/share/hadoop/hdfs/lib/okhttp-2.4.0.jar:/opt/hadoop/share/hadoop/hdfs/lib/commons-io-2.4.jar:/opt/hadoop/share/hadoop/hdfs/lib/curator-recipes-2.12.0.jar:/opt/hadoop/share/hadoop/hdfs/lib/hadoop-auth-3.0.0-alpha4.jar:/opt/hadoop/share/hadoop/hdfs/lib/netty-3.10.5.Final.jar:/opt/hadoop/share/hadoop/hdfs/lib/leveldbjni-all-1.8.jar:/opt/hadoop/share/hadoop/hdfs/lib/paranamer-2.3.jar:/opt/hadoop/share/hadoop/hdfs/lib/commons-lang3-3.3.2.jar:/opt/hadoop/share/hadoop/hdfs/lib/jersey-core-1.19.jar:/opt/hadoop/share/had

oop/hdfs/lib/jetty-webapp-9.3.11.v20160721.jar:/opt/hadoop/share/hadoop/hdfs/lib/protobuf-java-2.5.0.jar:/opt/hadoop/share/hadoop/hdfs/lib/kerby-util-1.0.0.jar:/opt/hadoop/share/hadoop/hdfs/lib/jline-0.9.94.jar:/opt/hadoop/share/hadoop/hdfs/lib/jetty-server-9.3.11.v20160721.jar:/opt/hadoop/share/hadoop/hdfs/lib/commons-daemon-1.0.13.jar:/opt/hadoop/share/hadoop/hdfs/hadoop-hdfs-3.0.0-alpha4.jar:/opt/hadoop/share/hadoop/hdfs/hadoop-hdfs-client-3.0.0-alpha4-tests.jar:/opt/hadoop/share/hadoop/hdfs/hadoop-hdfs-native-client-3.0.0-alpha4-tests.jar:/opt/hadoop/share/hadoop/hdfs/hadoop-hdfs-3.0.0-alpha4-tests.jar:/opt/hadoop/share/hadoop/hdfs/hadoop-hdfs-native-client-3.0.0-alpha4.jar:/opt/hadoop/share/hadoop/hdfs/hadoop-hdfs-client-3.0.0-alpha4.jar:/opt/hadoop/share/hadoop/hdfs/hadoop-hdfs-httpfs-3.0.0-alpha4.jar:/opt/hadoop/share/hadoop/hdfs/hadoop-hdfs-nfs-3.0.0-alpha4.jar:/opt/hadoop/share/hadoop/mapreduce/hadoop-mapreduce-client-nativetask-3.0.0-alpha4.jar:/opt/hadoop/share/hadoop/mapreduce/hadoop-mapreduce-client-jobclient-3.0.0-alpha4.jar:/opt/hadoop/share/hadoop/mapreduce/hadoop-mapreduce-client-hs-3.0.0-alpha4.jar:/opt/hadoop/share/hadoop/mapreduce/hadoop-mapreduce-client-core-3.0.0-alpha4.jar:/opt/hadoop/share/hadoop/mapreduce/hadoop-mapreduce-client-shuffle-3.0.0-alpha4.jar:/opt/hadoop/share/hadoop/mapreduce/hadoop-mapreduce-client-common-3.0.0-alpha4.jar:/opt/hadoop/share/hadoop/mapreduce/hadoop-mapreduce-client-app-3.0.0-alpha4.jar:/opt/hadoop/share/hadoop/mapreduce/hadoop-mapreduce-client-jobclient-3.0.0-alpha4-tests.jar:/opt/hadoop/share/hadoop/mapreduce/hadoop-mapreduce-client-hs-plugins-3.0.0-alpha4.jar:/opt/hadoop/share/hadoop/mapreduce/hadoop-mapreduce-examples-3.0.0-alpha4.jar:/opt/hadoop/share/hadoop/yarn:/opt/hadoop/share/hadoop/yarn/lib/htrace-core-3.1.0-incubating.jar:/opt/hadoop/share/hadoop/yarn/lib/jersey-guice-1.19.jar:/opt/hadoop/share/hadoop/yarn/lib/javax.inject-1.jar:/opt/hadoop/share/hadoop/yarn/lib/aopalliance-1.0.jar:/opt/hadoop/share/hadoop/yarn/lib/metrics-core-2.2.0.jar:/opt/hadoop/share/hadoop/yarn/lib/hbase-client-1.2.6.jar:/opt/hadoop/share/hadoop/yarn/lib/hbase-annotations-1.2.6.jar:/opt/hadoop/share/hadoop/yarn/lib/fst-2.50.jar:/opt/hadoop/share/hadoop/yarn/lib/jackson-module-jaxb-annotations-2.7.8.jar:/opt/hadoop/share/hadoop/yarn/lib/metrics-core-3.0.1.jar:/opt/hadoop/share/hadoop/yarn/lib/zookeeper-3.4.9-tests.jar:/opt/hadoop/share/hadoop/yarn/lib/hbase-hadoop-compat-1.2.6.jar:/opt/hadoop/share/hadoop/yarn/lib/java-util-1.9.0.jar:/opt/hadoop/share/hadoop/yarn/lib/curator-test-2.12.0.jar:/opt/hadoop/share/hadoop/yarn/lib/javassist-3.18.1-GA.jar:/opt/hadoop/share/hadoop/yarn/lib/hbase-prefix-tree-1.2.6.jar:/opt/hadoop/share/hadoop/yarn/lib/jsp-api-2.1-6.1.14.jar:/opt/hadoop/share/hadoop/yarn/lib/jasper-runtime-5.5.23.jar:/opt/hadoop/share/hadoop/yarn/lib/json-io-2.5.1.jar:/opt/hadoop/share/hadoop/yarn/lib/commons-httpclient-3.1.jar:/opt/hadoop/share/hadoop/yarn/lib/guice-servlet-4.0.jar:/opt/hadoop/share/hadoop/yarn/lib/jackson-jaxrs-base-2.7.8.jar:/opt/hadoop/share/hadoop/yarn/lib/guice-4.0.jar:/opt/hadoop/share/hadoop/yarn/lib/findbugs-annotations-1.3.9-1.jar:/opt/hadoop/share/hadoop/yarn/lib/hbase-common-1.2.6.jar:/opt/hadoop/share/hadoop/yarn/lib/commons-math-2.2.jar:/opt/hadoop/share/hadoop/yarn/lib/disruptor-3.3.0.jar:/opt/hadoop/share/hadoop/yarn/lib/hbase-protocol-1.2.6.jar:/opt/hadoop/share/hadoop/yarn/lib/commons-csv-1.0.jar:/opt/hadoop/share/hadoop/yarn/lib/jamon-runtime-2.4.1.jar:/opt/hadoop/share/hadoop/yarn/lib/jersey-client-1.19.jar:/opt/hadoop/share/hadoop/yarn/lib/joni-2.1.2.jar:/opt/hadoop/share/hadoop/yarn/lib/jsp-2.1-6.1.14.jar:/opt/hadoop/share/hadoop/yarn/lib/jcodings-1.0.8.jar:/opt/hadoop/share/hadoop/yarn/lib/jasper-compiler-5.5.23.jar:/opt/hadoop/share/hadoop/yarn/lib/jackson-jaxrs-json-provider-2.7.8.jar:/opt/hadoop/share/hadoop/yarn/lib/hbase-server-1.2.6.jar:/opt/hadoop/share/hadoop/yarn/lib/servlet-api-2.5-6.1.14.jar:/opt/hadoop/share/hadoop/yarn/lib/commons-el-1.0.jar:/opt/hadoop/share/hadoop/yarn/lib/hbase-hadoop2-compat-1.2.6.jar:/opt/hadoop/share/hadoop/yarn/lib/hbase-procedure-1.2.6.jar:/opt/hadoop/share/hadoop/yarn/hadoop-yarn-server-applicationhistoryservice-3.0.0-alpha4.jar:/opt/hadoop/share/hadoop/yarn/hadoop-yarn-server-timelineservice-hbase-tests-3.0.0-alpha4.jar:/opt/hadoop/share/hadoop/yarn/hadoop-yarn-applications-distributedshell-3.0.0-alpha4.jar:/opt/hadoop/share/hadoop/yarn/hadoop-yarn-server-common-3.0.0-alpha4.jar:/opt/hadoop/share/hadoop/yarn/hadoop-yarn-server-timelineservice-3.0.0-alpha4.jar:/opt/hadoop/share/hadoop/yarn/hadoop-yarn-api-3.0.0-alpha4.jar:/opt/hadoop/share/hadoop/yarn/hadoop-yarn-applications-unmanaged-am-launcher-3.0.0-alpha4.jar:/opt/hadoop/share/hadoop/yarn/hadoop-yarn-server-web-proxy-3.0.0-alpha4.jar:/opt/hadoop/share/hadoop/yarn/hadoop-yarn-common-3.0.0-alpha4.jar:/opt/hadoop/share/hadoop/yarn/hadoop-yarn-registry-3.0.0-alpha4.jar:/opt/hadoop/share/hadoop/yarn/hadoop-yarn-server-timelineservice-hbase-3.0.0-alpha4.jar:/opt/hadoop/share/hadoop/yarn/hadoop-yarn-server-tests-3.0.0-alpha4.jar:/opt/hadoop/share/hadoop/yarn/hadoop-yarn-server-resourcemanager-3.0.0-alpha4.jar:/opt/hadoop/share/hadoop/yarn/hadoop-yarn-client-3.0.0-alpha4.jar:/opt/hadoop/share/hadoop/yarn/hadoop-yarn-server-timeline-pluginstorage-3.0.0-alpha4.jar:/opt/hadoop/share/hadoop/yarn/hadoop-yarn-server-nodemanager-3.0.0-alpha4.jar:/opt/hadoop/share/hadoop/yarn/hadoop-yarn-server-sharedcachemanager-3.0.0-alpha4.jar

STARTUP\_MSG: build = https://git-wip-us.apache.org/repos/asf/hadoop.git -r e324cf8a2a6e55e996414ff281fee757f09d8172; compiled by 'andrew' on 2017-06-30T01:52Z

STARTUP\_MSG: java = 1.8.0\_151

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

2017-11-15 12:56:23,356 INFO namenode.NameNode: registered UNIX signal handlers for [TERM, HUP, INT]

2017-11-15 12:56:23,360 INFO namenode.NameNode: createNameNode [-format]

Formatting using clusterid: CID-e372b9d5-9fd5-4e40-ba03-4644f35aba5d

2017-11-15 12:56:23,869 INFO namenode.FSEditLog: Edit logging is async:false

2017-11-15 12:56:23,880 INFO namenode.FSNamesystem: KeyProvider: null

2017-11-15 12:56:23,881 INFO namenode.FSNamesystem: fsLock is fair: true

2017-11-15 12:56:23,881 INFO namenode.FSNamesystem: Detailed lock hold time metrics enabled: false

2017-11-15 12:56:23,886 INFO namenode.FSNamesystem: fsOwner = hadoop (auth:SIMPLE)

2017-11-15 12:56:23,886 INFO namenode.FSNamesystem: supergroup = supergroup

2017-11-15 12:56:23,886 INFO namenode.FSNamesystem: isPermissionEnabled = true

2017-11-15 12:56:23,886 INFO namenode.FSNamesystem: HA Enabled: false

2017-11-15 12:56:23,923 INFO common.Util: dfs.datanode.fileio.profiling.sampling.percentage set to 0. Disabling file IO profiling

2017-11-15 12:56:23,938 INFO blockmanagement.DatanodeManager: dfs.block.invalidate.limit=1000

2017-11-15 12:56:23,938 INFO blockmanagement.DatanodeManager: dfs.namenode.datanode.registration.ip-hostname-check=true

2017-11-15 12:56:23,943 INFO blockmanagement.BlockManager: dfs.namenode.startup.delay.block.deletion.sec is set to 000:00:00:00.000

2017-11-15 12:56:23,944 INFO blockmanagement.BlockManager: The block deletion will start around 2017 Nov 15 12:56:23

2017-11-15 12:56:23,952 INFO util.GSet: Computing capacity for map BlocksMap

2017-11-15 12:56:23,952 INFO util.GSet: VM type = 64-bit

2017-11-15 12:56:23,954 INFO util.GSet: 2.0% max memory 6.9 GB = 142.1 MB

2017-11-15 12:56:23,954 INFO util.GSet: capacity = 2^24 = 16777216 entries

2017-11-15 12:56:23,986 INFO blockmanagement.BlockManager: dfs.block.access.token.enable = false

2017-11-15 12:56:23,991 INFO Configuration.deprecation: No unit for dfs.namenode.safemode.extension(30000) assuming MILLISECONDS

2017-11-15 12:56:23,991 INFO blockmanagement.BlockManagerSafeMode: dfs.namenode.safemode.threshold-pct = 0.9990000128746033

2017-11-15 12:56:23,991 INFO blockmanagement.BlockManagerSafeMode: dfs.namenode.safemode.min.datanodes = 0

2017-11-15 12:56:23,991 INFO blockmanagement.BlockManagerSafeMode: dfs.namenode.safemode.extension = 30000

2017-11-15 12:56:23,991 INFO blockmanagement.BlockManager: defaultReplication = 3

2017-11-15 12:56:23,991 INFO blockmanagement.BlockManager: maxReplication = 512

2017-11-15 12:56:23,991 INFO blockmanagement.BlockManager: minReplication = 1

2017-11-15 12:56:23,991 INFO blockmanagement.BlockManager: maxReplicationStreams = 2

2017-11-15 12:56:23,991 INFO blockmanagement.BlockManager: redundancyRecheckInterval = 3000ms

2017-11-15 12:56:23,991 INFO blockmanagement.BlockManager: encryptDataTransfer = false

2017-11-15 12:56:23,991 INFO blockmanagement.BlockManager: maxNumBlocksToLog = 1000

2017-11-15 12:56:24,048 INFO util.GSet: Computing capacity for map INodeMap

2017-11-15 12:56:24,048 INFO util.GSet: VM type = 64-bit

2017-11-15 12:56:24,049 INFO util.GSet: 1.0% max memory 6.9 GB = 71.0 MB

2017-11-15 12:56:24,049 INFO util.GSet: capacity = 2^23 = 8388608 entries

2017-11-15 12:56:24,067 INFO namenode.FSDirectory: ACLs enabled? false

2017-11-15 12:56:24,067 INFO namenode.FSDirectory: POSIX ACL inheritance enabled? false

2017-11-15 12:56:24,067 INFO namenode.FSDirectory: XAttrs enabled? true

2017-11-15 12:56:24,067 INFO namenode.NameNode: Caching file names occurring more than 10 times

2017-11-15 12:56:24,075 INFO util.GSet: Computing capacity for map cachedBlocks

2017-11-15 12:56:24,075 INFO util.GSet: VM type = 64-bit

2017-11-15 12:56:24,075 INFO util.GSet: 0.25% max memory 6.9 GB = 17.8 MB

2017-11-15 12:56:24,075 INFO util.GSet: capacity = 2^21 = 2097152 entries

2017-11-15 12:56:24,080 INFO metrics.TopMetrics: NNTop conf: dfs.namenode.top.window.num.buckets = 10

2017-11-15 12:56:24,080 INFO metrics.TopMetrics: NNTop conf: dfs.namenode.top.num.users = 10

2017-11-15 12:56:24,080 INFO metrics.TopMetrics: NNTop conf: dfs.namenode.top.windows.minutes = 1,5,25

2017-11-15 12:56:24,084 INFO namenode.FSNamesystem: Retry cache on namenode is enabled

2017-11-15 12:56:24,084 INFO namenode.FSNamesystem: Retry cache will use 0.03 of total heap and retry cache entry expiry time is 600000 millis

2017-11-15 12:56:24,086 INFO util.GSet: Computing capacity for map NameNodeRetryCache

2017-11-15 12:56:24,086 INFO util.GSet: VM type = 64-bit

2017-11-15 12:56:24,086 INFO util.GSet: 0.029999999329447746% max memory 6.9 GB = 2.1 MB

2017-11-15 12:56:24,086 INFO util.GSet: capacity = 2^18 = 262144 entries

2017-11-15 12:56:24,111 INFO namenode.FSImage: Allocated new BlockPoolId: BP-1140668222-10.0.0.81-1510768584105

2017-11-15 12:56:24,179 INFO common.Storage: Storage directory /opt/volume/namenode has been successfully formatted.

2017-11-15 12:56:24,189 INFO namenode.FSImageFormatProtobuf: Saving image file /opt/volume/namenode/current/fsimage.ckpt\_0000000000000000000 using no compression

2017-11-15 12:56:24,277 INFO namenode.FSImageFormatProtobuf: Image file /opt/volume/namenode/current/fsimage.ckpt\_0000000000000000000 of size 334 bytes saved in 0 seconds.

2017-11-15 12:56:24,313 INFO namenode.NNStorageRetentionManager: Going to retain 1 images with txid >= 0

2017-11-15 12:56:24,321 INFO namenode.NameNode: SHUTDOWN\_MSG:

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

SHUTDOWN\_MSG: Shutting down NameNode at master/10.0.0.81

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

[hadoop@master hadoop]$ cd $HADOOP\_HOME/sbin

[hadoop@master sbin]$ ls -ltr

total 108

-rwxr-xr-x. 1 hadoop hadoop 1500 Nov 15 12:35 kms.sh

-rwxr-xr-x. 1 hadoop hadoop 1982 Nov 15 12:35 workers.sh

-rwxr-xr-x. 1 hadoop hadoop 1756 Nov 15 12:35 stop-secure-dns.sh

-rwxr-xr-x. 1 hadoop hadoop 1455 Nov 15 12:35 stop-dfs.cmd

-rwxr-xr-x. 1 hadoop hadoop 1571 Nov 15 12:35 start-yarn.cmd

-rwxr-xr-x. 1 hadoop hadoop 1793 Nov 15 12:35 start-secure-dns.sh

-rwxr-xr-x. 1 hadoop hadoop 1401 Nov 15 12:35 start-dfs.cmd

-rwxr-xr-x. 1 hadoop hadoop 2221 Nov 15 12:35 start-all.sh

-rwxr-xr-x. 1 hadoop hadoop 1779 Nov 15 12:35 start-all.cmd

-rwxr-xr-x. 1 hadoop hadoop 1841 Nov 15 12:35 mr-jobhistory-daemon.sh

-rwxr-xr-x. 1 hadoop hadoop 1542 Nov 15 12:35 httpfs.sh

-rwxr-xr-x. 1 hadoop hadoop 2522 Nov 15 12:35 hadoop-daemons.sh

-rwxr-xr-x. 1 hadoop hadoop 2328 Nov 15 12:35 yarn-daemons.sh

-rwxr-xr-x. 1 hadoop hadoop 1814 Nov 15 12:35 yarn-daemon.sh

-rwxr-xr-x. 1 hadoop hadoop 3083 Nov 15 12:35 stop-yarn.sh

-rwxr-xr-x. 1 hadoop hadoop 1642 Nov 15 12:35 stop-yarn.cmd

-rwxr-xr-x. 1 hadoop hadoop 1783 Nov 15 12:35 stop-balancer.sh

-rwxr-xr-x. 1 hadoop hadoop 2166 Nov 15 12:35 stop-all.sh

-rwxr-xr-x. 1 hadoop hadoop 1770 Nov 15 12:35 stop-all.cmd

-rwxr-xr-x. 1 hadoop hadoop 1880 Nov 15 12:35 start-balancer.sh

-rwxr-xr-x. 1 hadoop hadoop 2086 Nov 15 12:35 refresh-namenodes.sh

-rwxr-xr-x. 1 hadoop hadoop 1983 Nov 15 12:35 hadoop-daemon.sh

-rwxr-xr-x. 1 hadoop hadoop 2756 Nov 15 12:35 distribute-exclude.sh

-rwxr-xr-x. 1 hadoop hadoop 4063 Nov 15 12:35 stop-dfs.sh

-rwxr-xr-x. 1 hadoop hadoop 3326 Nov 15 12:35 start-yarn.sh

-rwxr-xr-x. 1 hadoop hadoop 5332 Nov 15 12:35 start-dfs.sh

[hadoop@master sbin]$ start-dfs.sh

Starting namenodes on [master.hadoop.hpc3]

Starting datanodes

localhost: Warning: Permanently added 'localhost' (ECDSA) to the list of known hosts.

Starting secondary namenodes [master]

master: Warning: Permanently added 'master,fe80::42c3:e775:b4d6:cb54%em1' (ECDSA) to the list of known hosts.

[hadoop@master sbin]$ start-yarn.sh

Starting resourcemanager

Starting nodemanagers

[hadoop@master sbin]$ jps

24352 DataNode

25601 Jps

25365 NodeManager

24647 SecondaryNameNode

25016 ResourceManager

24175 NameNode

[hadoop@master sbin]$ ss -tul

Netid State Recv-Q Send-Q Local Address:Port Peer Address:Port

udp UNCONN 0 0 \*:55957 \*:\*

udp UNCONN 0 0 192.168.122.1:domain \*:\*

udp UNCONN 0 0 \*%virbr0:bootps \*:\*

udp UNCONN 0 0 \*:bootpc \*:\*

udp UNCONN 0 0 \*:33065 \*:\*

udp UNCONN 0 0 \*:mdns \*:\*

udp UNCONN 0 0 :::25807 :::\*

tcp LISTEN 0 128 \*:fs-agent \*:\*

tcp LISTEN 0 128 \*:9866 \*:\*

tcp LISTEN 0 128 \*:9867 \*:\*

tcp LISTEN 0 128 \*:9868 \*:\*

tcp LISTEN 0 128 \*:sunrpc \*:\*

tcp LISTEN 0 5 192.168.122.1:domain \*:\*

tcp LISTEN 0 128 10.0.0.81:50070 \*:\*

tcp LISTEN 0 128 \*:ssh \*:\*

tcp LISTEN 0 128 127.0.0.1:ipp \*:\*

tcp LISTEN 0 100 127.0.0.1:smtp \*:\*

tcp LISTEN 0 128 \*:13562 \*:\*

tcp LISTEN 0 128 127.0.0.1:36899 \*:\*

tcp LISTEN 0 128 \*:ampify \*:\*

tcp LISTEN 0 128 \*:9864 \*:\*

tcp LISTEN 0 128 10.0.0.81:cslistener \*:\*

tcp LISTEN 0 128 \*:38985 \*:\*

tcp LISTEN 0 128 :::sunrpc :::\*

tcp LISTEN 0 128 :::ssh :::\*

tcp LISTEN 0 128 ::1:ipp :::\*

tcp LISTEN 0 128 :::radan-http :::\*

tcp LISTEN 0 100 ::1:smtp :::\*

tcp LISTEN 0 128 :::8030 :::\*

tcp LISTEN 0 128 :::8031 :::\*

tcp LISTEN 0 128 :::pro-ed :::\*

tcp LISTEN 0 128 :::mindprint :::\*

[hadoop@master sbin]$ hdfs dfs -mkdir /my\_storage

[hadoop@master sbin]$ cd Desktop

-bash: cd: Desktop: No such file or directory

[hadoop@master sbin]$ cd

[hadoop@master ~]$ ls -ltr

total 180

drwxr-xr-x. 3 hadoop hadoop 20 Nov 15 12:35 etc

drwxr-xr-x. 2 hadoop hadoop 183 Nov 15 12:35 bin

drwxr-xr-x. 3 hadoop hadoop 20 Nov 15 12:35 lib

drwxr-xr-x. 2 hadoop hadoop 106 Nov 15 12:35 include

-rw-r--r--. 1 hadoop hadoop 1366 Nov 15 12:35 README.txt

-rw-r--r--. 1 hadoop hadoop 20732 Nov 15 12:35 NOTICE.txt

-rw-r--r--. 1 hadoop hadoop 145819 Nov 15 12:35 LICENSE.txt

drwxr-xr-x. 4 hadoop hadoop 288 Nov 15 12:35 libexec

drwxr-xr-x. 2 hadoop hadoop 4096 Nov 15 12:35 sbin

drwxr-xr-x. 4 hadoop hadoop 31 Nov 15 12:35 share

drwxrwxr-x. 3 hadoop hadoop 4096 Nov 15 12:58 logs

[hadoop@master ~]$ hdfs dfs -put LICENSE.txt /my\_storage

[hadoop@master ~]$ hdfs dfs -cat /my\_storage/LICENSE.txt

[hadoop@master ~]$ hdfs dfs -ls /my\_storage

Found 1 items

-rw-r--r-- 3 hadoop supergroup 145819 2017-11-15 12:59 /my\_storage/LICENSE.txt

[hadoop@master ~]$ hdfs dfs -get /my\_storage/ ./

[hadoop@master ~]$ ls my\_storage/

LICENSE.txt

[hadoop@master ~]$ ls-ltr

bash: ls-ltr: command not found...

[hadoop@master ~]$ ls -ltr

total 180

drwxr-xr-x. 3 hadoop hadoop 20 Nov 15 12:35 etc

drwxr-xr-x. 2 hadoop hadoop 183 Nov 15 12:35 bin

drwxr-xr-x. 3 hadoop hadoop 20 Nov 15 12:35 lib

drwxr-xr-x. 2 hadoop hadoop 106 Nov 15 12:35 include

-rw-r--r--. 1 hadoop hadoop 1366 Nov 15 12:35 README.txt

-rw-r--r--. 1 hadoop hadoop 20732 Nov 15 12:35 NOTICE.txt

-rw-r--r--. 1 hadoop hadoop 145819 Nov 15 12:35 LICENSE.txt

drwxr-xr-x. 4 hadoop hadoop 288 Nov 15 12:35 libexec

drwxr-xr-x. 2 hadoop hadoop 4096 Nov 15 12:35 sbin

drwxr-xr-x. 4 hadoop hadoop 31 Nov 15 12:35 share

drwxrwxr-x. 3 hadoop hadoop 4096 Nov 15 12:58 logs

drwxr-xr-x. 2 hadoop hadoop 25 Nov 15 13:01 my\_storage

2) Write a  pages  summary (at least 5 pages, single spacing) of MapReduce framework.

**Ans**: Hadoop MapReduce is a product framework for primary composing applications which process huge measures of information (multi-terabyte informational indexes) in-parallel on large clusters (many nodes) of ware equipment in a dependable, fault-tolerant way.

A MapReduce work frequently splits the informational collection into autonomous portions which are prepared by the map tasks in a completely parallel way. The framework sorts the outputs of the maps, which are then input to the diminish tasks. Typically, both the input and the output of the activity are stored in a document framework. The framework deals with scheduling tasks, checking them and re-executes the failed assignments.

Normally the process nodes and the capacity nodes are the same, that is, the MapReduce framework and the Hadoop Distributed File Framework (see HDFS Engineering Guide) are running on a similar arrangement of nodes. This arrangement allows the framework to plan tasks on the nodes where information is already present, bringing about high total data transmission over the cluster.

The MapReduce framework consists of a single master ResourceManager, one laborer NodeManager per cluster-node, and MRAppMaster per application (see YARN Engineering Guide).

Insignificantly, applications indicate the input/output areas and supply map and reduce capacities by means of executions of fitting interfaces and additionally unique classes. These, and other occupation parameters, include the activity setup.

The Hadoop job client at that point presents the job (jar/executable and so forth.) and design to the ResourceManager which at that point accepts the accountability of dispersing the product/setup to the workers, scheduling tasks and checking them, giving status and indicative data to the job-client.

Even however the Hadoop framework is actualized in Java™, MapReduce applications require not be composed in Java.

Hadoop Streaming is a utility which enables clients to make and run jobs with any executables (e.g. shell utilities) as the mapper as well as the reducer.

Hadoop Funnels is a SWIG-compatible C++ API to implement MapReduce applications (non JNI™ based).

**Input & Output:**

The MapReduce framework operates exclusively on <key, value> sets, that is, the framework views the input to the job as a set of <key, value> combines and delivers a set of <key, value> matches as the output of the job, possibly of various sorts.

The key and value classes must be serializable by the framework and hence need to execute the Writable interface. Furthermore, the key classes need to actualize the WritableComparable interface to encourage arranging by the framework.

Input and Output types of a MapReduce job:

(input) <k1, v1> -> map -> <k2, v2> -> combine -> <k2, v2> -> reduce -> <k3, v3> (output)

**MapReduce - User Interfaces:**

**Mapper:**

Mapper maps input key/value sets to an arrangement of moderate key/value sets.

Maps are the individual tasks that change input records into intermediate records. The transformed intermediate records don't should be of same type as the information records. A given input combine may map to zero or many output sets.

The Hadoop MapReduce framework brings forth one map task for each InputSplit produced by the InputFormat for the activity.

General, mapper usage is passed to the activity by means of Job.setMapperClass(Class) method. The framework at that point calls map (WritableComparable, Writable, Context) for each key/value match in the InputSplit for that task. Applications would then be able to override the cleanup(Context) strategy to play out any required cleanup.

Output sets don't should be of an indistinguishable sort from input sets. A given input combine may guide to zero or many output sets. Output sets are gathered with calls to context. Write (WritableComparable, Writable).

Applications can utilize the Counter to report its measurements.

Every single halfway value related with a given output key are in this way gathered by the framework, and go to the Reducer(s) to decide the last output. Clients can control the gathering by indicating a Comparator by means of Job.setGroupingComparatorClass(Class).

The Mapper output are arranged and after that divided per Reducer. The aggregate number of segments is the same as the quantity of reduce tasks for the job. Clients can control which keys (and subsequently records) go to which Reducer by executing a custom Partitioner.

Clients can alternatively determine a combiner, through Job.setCombinerClass(Class), to perform neighborhood conglomeration of the middle of the road output, which helps down the measure of information exchanged from the Mapper to the Reducer.

The intermediate, arranged output are constantly stored in a basic (key-len, key, value len, value) organize. Applications can control if, and how, the intermediate outputs are to be compressed and the CompressionCodec to be utilized through the Setup.

The quantity of maps is normally determined by the aggregate size of the data sources, that is, the aggregate number of pieces of the information documents.

The correct level of parallelism for maps is by all accounts around 10-100 maps for each node, even though it has been set up to 300 maps for exceptionally cpu-light map tasks. Task setup takes a while, so it is ideal if the maps take at least a moment to execute.

In this manner, if you expect 10TB of information and have a block size of 128MB, you'll wind up with 82,000 maps, unless Configuration.Set(MRJobConfig.NUM\_MAPS, int) (which just gives a clue to the structure) is utilized to set it considerably higher.

**Reducer:**

Reducer reduces an arrangement of intermediate values which share a key to a smaller arrangement of values.

The quantity of reduces for the job is set by the client through Job.setNumReduceTasks(int).

Overall, Reducer executions are passed the job for the activity by means of the Job.setReducerClass(Class) method and can override it to instate themselves. The framework at that point calls reduce (WritableComparable, Iterable<Writable>, Setting) strategy for each <key, (rundown of values)> combine in the assembled inputs. Applications would then be able to abrogate the cleanup(Context) strategy to play out any required cleanup. Reducer has 3 essential stages: rearrange, sort and decrease.

The correct number of reduces seems to be 0.95 or 1.75 multiplied by (<no. of nodes> \* <no. of maximum containers per node>).

With 0.95 the majority of the reduce can dispatch promptly and begin exchanging map output as the maps wrap up. With 1.75 the quicker nodes will complete their first round of decreases and dispatch a moment wave of lessens improving occupation of load adjusting. Expanding the quantity of decreases builds the system overhead, yet builds stack adjusting and brings down the cost of disappointments.

The scaling factors above are somewhat not as much as entire numbers to hold a couple of lessen openings in the system for theoretical undertakings and fizzled assignments. It is lawful to set the quantity of diminish errands to zero if no lessening is wanted.

For this situation the output of the map assignments goes straightforwardly to the FileSystem, into the output way set by FileOutputFormat.setOutputPath(Job, Way). The system does not sort the map outputs before thinking of them out to the FileSystem.

Job represents to a MapReduce work setup.

Job is the essential interface for a client to depict a MapReduce job to the Hadoop framework for execution. The framework tries to steadfastly execute the activity as described by job, in any case:

1. Some design parameters may have been set apart as last by executives (see Last Parameters) and thus can't be modified.
2. While some activity parameters are straight-forward to set (e.g. Job.setNumReduceTasks(int)), different parameters interface quietly with whatever remains of the framework and additionally work setup and are more intricate to set (e.g. Configuration.Set(JobContext.NUM\_MAPS, int)).

Job is normally used to indicate the Mapper, combiner (assuming any), Partitioner, Reducer, InputFormat, OutputFormat usage. FileInputFormat shows the arrangement of information records (FileInputFormat.setInputPaths(Job, Way…)/FileInputFormat.addInputPath(Job, Way)) and (FileInputFormat.setInputPaths(Job, String…)/FileInputFormat.addInputPaths(Job, String)) and where the output documents ought to be composed (FileOutputFormat.setOutputPath(Path)).

Alternatively, Occupation is utilized to determine other propelled features of the activity, for example, the Comparator to be utilized, records to be placed in the Distributed Cache, regardless of whether middle as well as employment yields are to be compacted (and how), whether work assignments can be executed in a theoretical way (setMapSpeculativeExecution(boolean))/setReduceSpeculativeExecution(boolean)), most extreme number of endeavors per errand (setMaxMapAttempts(int)/setMaxReduceAttempts(int)) and so forth. Obviously, clients can utilize Configuration.set (String, String)/Configuration.Get(String) to set/get discretionary parameters required by applications. In any case, utilize the DistributedCache for a lot of (read-just) data.

The MRAppMaster executes the Mapper/Reducer task as a child procedure in a different jvm.

The youngster task acquires the earth of the parent MRAppMaster. The client can determine extra alternatives to the child-jvm by means of the mapreduce.{map|reduce}.java. opts and setup parameter in the Activity, for example, non-standard ways for the run-time linker to seek shared libraries by means of -Djava.library.path=<> and so on. If the mapreduce.{map|reduce}.java. opts parameters contains the image @tasked@ it is added with estimation of taskid of the MapReduce task.

Here is a case with different contentions and substitutions, demonstrating jvm GC logging, and begin of a passwordless JVM JMX operator so it can associate with jconsole and the likes to watch youngster memory, strings and get string dumps. It likewise sets the greatest stack size of the guide and diminish tyke jvm to 512MB and 1024MB separately. It likewise adds an extra way to the java.library.path of the tyke jvm.

#### **MapReduce Frameset Commands:**

#### [User](https://hadoop.apache.org/docs/r3.0.0-alpha3/hadoop-mapreduce-client/hadoop-mapreduce-client-core/MapredCommands.html#User_Commands) Commands

* 1. [archive](https://hadoop.apache.org/docs/r3.0.0-alpha3/hadoop-mapreduce-client/hadoop-mapreduce-client-core/MapredCommands.html#archive)
  2. [archive-logs](https://hadoop.apache.org/docs/r3.0.0-alpha3/hadoop-mapreduce-client/hadoop-mapreduce-client-core/MapredCommands.html#archive-logs)
  3. [classpath](https://hadoop.apache.org/docs/r3.0.0-alpha3/hadoop-mapreduce-client/hadoop-mapreduce-client-core/MapredCommands.html#classpath)
  4. [distcp](https://hadoop.apache.org/docs/r3.0.0-alpha3/hadoop-mapreduce-client/hadoop-mapreduce-client-core/MapredCommands.html#distcp)
  5. [job](https://hadoop.apache.org/docs/r3.0.0-alpha3/hadoop-mapreduce-client/hadoop-mapreduce-client-core/MapredCommands.html#job)
  6. [pipes](https://hadoop.apache.org/docs/r3.0.0-alpha3/hadoop-mapreduce-client/hadoop-mapreduce-client-core/MapredCommands.html#pipes)
  7. [queue](https://hadoop.apache.org/docs/r3.0.0-alpha3/hadoop-mapreduce-client/hadoop-mapreduce-client-core/MapredCommands.html#queue)
  8. [version](https://hadoop.apache.org/docs/r3.0.0-alpha3/hadoop-mapreduce-client/hadoop-mapreduce-client-core/MapredCommands.html#version)

1. [Administration Commands](https://hadoop.apache.org/docs/r3.0.0-alpha3/hadoop-mapreduce-client/hadoop-mapreduce-client-core/MapredCommands.html#Administration_Commands)
   1. [historyserver](https://hadoop.apache.org/docs/r3.0.0-alpha3/hadoop-mapreduce-client/hadoop-mapreduce-client-core/MapredCommands.html#historyserver)
   2. [hsadmin](https://hadoop.apache.org/docs/r3.0.0-alpha3/hadoop-mapreduce-client/hadoop-mapreduce-client-core/MapredCommands.html#hsadmin)

# **Encrypted Shuffle**

The Encrypted Shuffle capability allows encryption of the MapReduce shuffle using HTTPS and with optional client authentication (also known as bi-directional HTTPS, or HTTPS with client certificates). It comprises:

* A Hadoop configuration setting for toggling the shuffle between HTTP and HTTPS.
* A Hadoop configuration setting for specifying the keystore and truststore properties (location, type, passwords) used by the shuffle service and the reducers tasks fetching shuffle data.
* A way to re-load truststores across the cluster (when a node is added or removed).

The pluggable rearrange and pluggable sort capacities permit replacing the inherent rearrange and sort rationale with interchange usage. Case utilize cases for this are: utilizing an alternate application protocol other than HTTP, for example, RDMA for rearranging information from the Map nodes to the Reducer nodes; or replacing the sort logic with custom calculations that empower Hash aggregation and Farthest Point N query.

Vital: The pluggable rearrange and pluggable sort abilities are trial and unsteady. This implies the gave APIs may change and break similarity in future variants of Hadoop.

**Actualizing a Custom Rearrange and a Custom Sort**

A custom rearrange execution requires an org.apache.hadoop.yarn.server.nodemanager.containermanager.AuxServices.AuxiliaryService usage class running in the NodeManagers and an org.apache.hadoop.mapred.ShuffleConsumerPlugin usage class running in the Reducer errands.

The default executions gave by Hadoop can be utilized as references:

1. org.apache.hadoop.mapred.ShuffleHandler
2. org.apache.hadoop.mapreduce.task.reduce.Shuffle

A custom sort usage requires an org.apache.hadoop.mapred.MapOutputCollector execution class running in the Mapper undertakings and (alternatively, contingent upon the sort execution) an org.apache.hadoop.mapred.ShuffleConsumerPlugin execution class running in the Reducer assignments.

The default usage gave by Hadoop can be utilized as references:

1. org.apache.hadoop.mapred.MapTask$MapOutputBuffer
2. org.apache.hadoop.mapreduce.task.reduce.Shuffle

# **Distributed Cache Deploy:**

The MapReduce application framework has simple help for conveying another adaptation of the MapReduce system by means of the dispersed reserve. By setting the suitable design properties, clients can run an alternate variant of MapReduce than the one at first conveyed to the bunch. For instance, cluster administrators can place different variants of MapReduce in HDFS and design mapred-site.xml to determine which adaptation employments will use as a matter of course. This enables the directors to play out a moving update of the MapReduce structure under specific conditions.

Preconditions and Limitations:

The help for sending the MapReduce system by means of the conveyed store presently does not address the activity customer code used to submit and inquiry occupations. It likewise does not address the ShuffleHandler code that keeps running as an auxilliary benefit inside each NodeManager. Accordingly, the accompanying confinements apply to MapReduce variants that can be effectively sent by means of the disseminated store in a moving update mold:

The MapReduce version must be perfect with the activity customer code used to submit and inquiry occupations. In the event that it is inconsistent then the activity customer must be updated independently on any hub from which occupations utilizing the new MapReduce rendition will be submitted or questioned.

The MapReduce rendition must be perfect with the arrangement records utilized by the activity customer presenting the employments. On the off chance that it is incongruent with that setup (e.g.: another property must be set, or a current property estimation changed) at that point the arrangement must be refreshed first.

The MapReduce adaptation must be good with the ShuffleHandler rendition running on the hubs in the bunch. If it is contrary then the new ShuffleHandler code must be sent to every one of the hubs in the bunch, and the NodeManagers must be restarted to get the new ShuffleHandler code. Sending Another MapReduce Adaptation by means of the Appropriated Store Sending another MapReduce variant comprises of three stages:

1. Transfer the MapReduce document to an area that can be accessed by the activity accommodation customer. Preferably the file ought to be on the group's default filesystem at a publicly-readable way. See the archive area discussion for more subtle elements.
2. Design mapreduce.application.framework.path to point to the area where the archive is found. As while determining conveyed reserve records for a job, this is a URL that additionally bolsters making a false name for the document if a URL piece is indicated. For instance, hdfs:/mapred/system/hadoop-mapreduce-3.0.0-alpha3.tar.gz#mrframework will be confined as mrframework as opposed to hadoop-mapreduce-3.0.0-alpha3.tar.gz.
3. Design mapreduce.application.classpath to set the correct classpath to use with the MapReduce chronicle arranged previously. NOTE: A blunder happens if mapreduce.application.framework.path is designed however mapreduce.application.classpath does not reference the base name of the chronicle way or the nom de plume if an assumed name was determined.

## MapReduce Archives and Classpath Configuration

 Classpath for the MapReduce archive depends upon the composition of the archive and whether it has any additional dependencies. For example, the archive can contain not only the MapReduce jars but also the necessary YARN, HDFS, and Hadoop Common jars and all other dependencies. In that case, mapreduce.application.classpath would be configured to something like the following example, where the archive basename is hadoop-mapreduce-3.0.0-alpha3.tar.gz and the archive is organized internally like the standard Hadoop distribution archive:

$HADOOP\_CONF\_DIR,$PWD/hadoop-mapreduce-3.0.0-alpha3.tar.gz/hadoop-mapreduce-3.0.0-alpha3/share/hadoop/mapreduce/\*,$PWD/hadoop-mapreduce-3.0.0-alpha3.tar.gz/hadoop-mapreduce-3.0.0-alpha3/share/hadoop/mapreduce/lib/\*,$PWD/hadoop-mapreduce-3.0.0-alpha3.tar.gz/hadoop-mapreduce-3.0.0-alpha3/share/hadoop/common/\*,$PWD/hadoop-mapreduce-3.0.0-alpha3.tar.gz/hadoop-mapreduce-3.0.0-alpha3/share/hadoop/common/lib/\*,$PWD/hadoop-mapreduce-3.0.0-alpha3.tar.gz/hadoop-mapreduce-3.0.0-alpha3/share/hadoop/yarn/\*,$PWD/hadoop-mapreduce-3.0.0-alpha3.tar.gz/hadoop-mapreduce-3.0.0-alpha3/share/hadoop/yarn/lib/\*,$PWD/hadoop-mapreduce-3.0.0-alpha3.tar.gz/hadoop-mapreduce-3.0.0-alpha3/share/hadoop/hdfs/\*,$PWD/hadoop-mapreduce-3.0.0-alpha3.tar.gz/hadoop-mapreduce-3.0.0-alpha3/share/hadoop/hdfs/lib/\*

Another possible approach is to have the archive consist of just the MapReduce jars and have the remaining dependencies picked up from the Hadoop distribution installed on the nodes. In that case, the above example would change to something like the following:

$HADOOP\_CONF\_DIR,$PWD/hadoop-mapreduce-3.0.0-alpha3.tar.gz/hadoop-mapreduce-3.0.0-alpha3/share/hadoop/mapreduce/\*,$PWD/hadoop-mapreduce-3.0.0-alpha3.tar.gz/hadoop-mapreduce-3.0.0-alpha3/share/hadoop/mapreduce/lib/\*,$HADOOP\_COMMON\_HOME/share/hadoop/common/\*,$HADOOP\_COMMON\_HOME/share/hadoop/common/lib/\*,$HADOOP\_HDFS\_HOME/share/hadoop/hdfs/\*,$HADOOP\_HDFS\_HOME/share/hadoop/hdfs/lib/\*,$HADOOP\_YARN\_HOME/share/hadoop/yarn/\*,$HADOOP\_YARN\_HOME/share/hadoop/yarn/lib/\*

# MapReduce Application Master REST API’s.

1. [**MapReduce Application Master REST API’s.**](https://hadoop.apache.org/docs/r3.0.0-alpha3/hadoop-mapreduce-client/hadoop-mapreduce-client-core/MapredAppMasterRest.html#MapReduce_Application_Master_REST_APIs.)
2. [**Mapreduce Application Master Info API**](https://hadoop.apache.org/docs/r3.0.0-alpha3/hadoop-mapreduce-client/hadoop-mapreduce-client-core/MapredAppMasterRest.html#Mapreduce_Application_Master_Info_API)
3. [**Jobs API**](https://hadoop.apache.org/docs/r3.0.0-alpha3/hadoop-mapreduce-client/hadoop-mapreduce-client-core/MapredAppMasterRest.html#Jobs_API)
4. [**Job API**](https://hadoop.apache.org/docs/r3.0.0-alpha3/hadoop-mapreduce-client/hadoop-mapreduce-client-core/MapredAppMasterRest.html#Job_API)
5. [**Job Attempts API**](https://hadoop.apache.org/docs/r3.0.0-alpha3/hadoop-mapreduce-client/hadoop-mapreduce-client-core/MapredAppMasterRest.html#Job_Attempts_API)
6. [**Job Counters API**](https://hadoop.apache.org/docs/r3.0.0-alpha3/hadoop-mapreduce-client/hadoop-mapreduce-client-core/MapredAppMasterRest.html#Job_Counters_API)
7. [**Job Conf API**](https://hadoop.apache.org/docs/r3.0.0-alpha3/hadoop-mapreduce-client/hadoop-mapreduce-client-core/MapredAppMasterRest.html#Job_Conf_API)
8. [**Tasks API**](https://hadoop.apache.org/docs/r3.0.0-alpha3/hadoop-mapreduce-client/hadoop-mapreduce-client-core/MapredAppMasterRest.html#Tasks_API)
9. [**Task API**](https://hadoop.apache.org/docs/r3.0.0-alpha3/hadoop-mapreduce-client/hadoop-mapreduce-client-core/MapredAppMasterRest.html#Task_API)
10. [**Task Counters API**](https://hadoop.apache.org/docs/r3.0.0-alpha3/hadoop-mapreduce-client/hadoop-mapreduce-client-core/MapredAppMasterRest.html#Task_Counters_API)
11. [**Task Attempts API**](https://hadoop.apache.org/docs/r3.0.0-alpha3/hadoop-mapreduce-client/hadoop-mapreduce-client-core/MapredAppMasterRest.html#Task_Attempts_API)
12. [**Task Attempt API**](https://hadoop.apache.org/docs/r3.0.0-alpha3/hadoop-mapreduce-client/hadoop-mapreduce-client-core/MapredAppMasterRest.html#Task_Attempt_API)
13. [**Task Attempt State API**](https://hadoop.apache.org/docs/r3.0.0-alpha3/hadoop-mapreduce-client/hadoop-mapreduce-client-core/MapredAppMasterRest.html#Task_Attempt_State_API)
14. [**Task Attempt Counters API**](https://hadoop.apache.org/docs/r3.0.0-alpha3/hadoop-mapreduce-client/hadoop-mapreduce-client-core/MapredAppMasterRest.html#Task_Attempt_Counters_API)

The MapReduce Application Master REST API’s allow the user to get status on the running MapReduce application master. Currently this is the equivalent to a running MapReduce job. The information includes the jobs the app master is running and all the job particulars like tasks, counters, configuration, attempts, etc. The application master should be accessed via the proxy. This proxy is configurable to run either on the resource manager or on a separate host. The proxy URL usually looks like: http://<proxy http address: port>/proxy/appid.

## Mapreduce Application Master Info API

The MapReduce application master information resource provides overall information about that mapreduce application master. This includes application id, time it was started, user, name, etc.