

Exp No: 1 Downloading and installing Hadoop, Understanding different Hadoop modes, Startup scripts, Configuration files.

\$ nano ~/.bashrc

```

hadoop@kali: ~
File Actions Edit View Help
GNU nano 7.2 ~/.bashrc

# Alias definitions.
# You may want to put all your additions into a separate file like
# ~/.bash_aliases, instead of adding them here directly.
# See /usr/share/doc/bash-doc/examples in the bash-doc package.

if [ -f ~/.bash_aliases ]; then
    . ~/.bash_aliases
fi

# enable programmable completion features (you don't need to enable
# this, if it's already enabled in /etc/bash.bashrc and /etc/profile
# sources /etc/bash.bashrc).
if ! shopt -oq posix; then
    if [ -f /usr/share/bash-completion/bash_completion ]; then
        . /usr/share/bash-completion/bash_completion
    elif [ -f /etc/bash_completion ]; then
        . /etc/bash_completion
    fi
fi

export JAVA_HOME=/usr/lib/jvm/jdk1.8.0_202
export PATH=$PATH:$JAVA_HOME/bin
export HADOOP_HOME=~/.hadoop
export PATH=$PATH:$HADOOP_HOME/bin
export PATH=$PATH:$HADOOP_HOME/sbin
export HADOOP_MAPRED_HOME=$HADOOP_HOME
export YARN_HOME=$HADOOP_HOME
export HADOOP_CONF_DIR=$HADOOP_HOME/etc/hadoop
export HADOOP_STREAMING=$HADOOP_HOME/share/hadoop/tools/lib/hadoop-streaming-3.4.0.jar
export HADOOP_LOG_DIR=$HADOOP_HOME/logs
export PDSH_RCMD_TYPE=ssh
export HADOOP_COMMON_LIB_NATIVE_DIR=~/.hadoop/lib/native
export HADOOP_OPTS="-Djava.library.path=~/.hadoop/lib/native"

```

\$ nano \$HADOOP_HOME/etc/hadoop/hadoop-env.sh

```

kali-linux-2023.4-vmware-amd64 - VMware Workstation 17 Player (Non-commercial use only)
Player
hadoop@kali: ~
File Actions Edit View Help
GNU nano 7.2 /home/hadoop/hadoop/etc/hadoop/hadoop-env.sh

##
## Precedence rules:
## (yarn-env.sh|hdfs-env.sh) > hadoop-env.sh > hard-coded defaults
## (YARN_?_HDFS_?) > HADOOP_? > hard-coded defaults
##
# Many of the options here are built from the perspective that users
# may want to provide OVERRIDING values on the command line.
# For example:
# JAVA_HOME=/usr/java/testing/hdfs dfs -ls
#
# Therefore, the vast majority (BUT NOT ALL) of these defaults
# are configured for substitution and not append. If append
# is preferable, modify this file accordingly.
##
## Generic settings for HADOOP
##
# Technically, the only required environment variable is JAVA_HOME.
# All others are optional. However, the defaults are probably not
# preferred. Many sites configure these options outside of Hadoop,
# such as in /etc/profile.d
#
# The java implementation to use. By default, this environment
# variable is REQUIRED on all platforms except OS X:
export JAVA_HOME=/usr/lib/jvm/jdk1.8.0_202
#
# The language environment in which Hadoop runs. Use the English
# environment to ensure that logs are printed as expected.
export LANG=en_US.UTF-8
#
# Location of Hadoop. By default, Hadoop will attempt to determine
# this location based upon its execution path.
# export HADOOP_HOME=
#
# Location of Hadoop's configuration information, i.e., where this
# file is living. If this is not defined, Hadoop will attempt to
# locate it based upon its execution path.
#
# NOTE: It is recommended that this variable not be set here but in
# /etc/profile.d or equivalent. Some options (such as
# --config) may react strangely otherwise.
# export HADOOP_CONF_DIR=$HADOOP_HOME/etc/hadoop

```

\$nano \$HADOOP_HOME/etc/hadoop/core-site.xml

```

File Actions Edit View Help
GNU nano 7.2 /home/hac
<?xml version="1.0" encoding="UTF-8"?>
<?xml-stylesheet type="text/xsl" href="configuration.xsl"?>
<!--
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-->

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

<configuration>
<property>
<name>fs.defaultFS</name>
<value>hdfs://localhost:9000</value> </property>
</property>
<name>hadoop.proxyuser.dataflair.groups</name> <value>*</value>
</property>
<name>hadoop.proxyuser.dataflair.hosts</name> <value>*</value>
</property>
<name>hadoop.proxyuser.server.hosts</name> <value>*</value>
</property>
<name>hadoop.proxyuser.server.groups</name> <value>*</value>
</property>
</configuration>

```

\$nano \$HADOOP_HOME/etc/hadoop/hdfs-site.xml

```

hadoop@kali: ~
File Actions Edit View Help
GNU nano 7.2 /home/hadoop/hadoop/etc/hadoop
<?xml version="1.0" encoding="UTF-8"?>
<?xml-stylesheet type="text/xsl" href="configuration.xsl"?>
<!--
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WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
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limitations under the License. See accompanying LICENSE file.
-->

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

<configuration>
<property>
<name>dfs.replication</name>
<value>1</value>
</property>
<property>
<name>dfs.name.dir</name>
<value>file:///home/hadoop/hadoopdata/hdfs/namenode</value>
</property>
<property>
<name>dfs.datanode.data.dir</name>
<value>file:///home/hadoop/hadoopdata/hdfs/datanode</value>
</property>
</configuration>

```

\$nano \$HADOOP_HOME/etc/hadoop/mapred-site.xml

```

hadoop@kali: ~
File Actions Edit View Help
GNU nano 7.2 /home/hadoop/hadoop/etc/hadoop/mapre

<?xml version="1.0"?>
<?xml-stylesheet type="text/xsl" href="configuration.xsl"?>
<!--
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WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
See the License for the specific language governing permissions and
limitations under the License. See accompanying LICENSE file.
-->

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

<configuration>
<property>
<name>mapreduce.framework.name</name> <value>yarn</value>
</property>
<property>
<name>mapreduce.application.classpath</name>

<value>${HADOOP_MAPRED_HOME}/share/hadoop/mapreduce/*:${HADOOP_MAPRED_HOME}/share/hadoop/mapreduce/lib/*</value>
</property>
</configuration>

```

\$nano \$HADOOP_HOME/etc/hadoop/yarn-site.xml

```

hadoop@kali: ~
File Actions Edit View Help
GNU nano 7.2 /home/hadoop/hadoop/etc/hadoop/yarn-site.xml
<?xml version="1.0"?>
<!--
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distributed under the License is distributed on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
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limitations under the License. See accompanying LICENSE file.
-->
<configuration>
<!-- Site specific YARN configuration properties -->
<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_PREP_END_DISTCACHE,HADOOP_YARN_HOME,HADOOP_MAPRED_HOME</value>
</property>
</configuration>

```

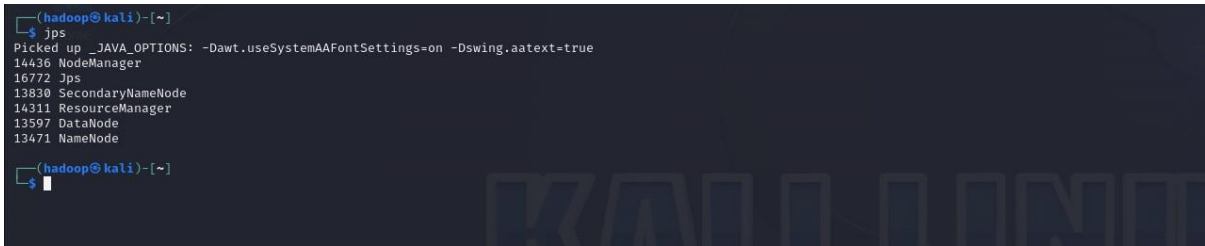
\$ start-all.sh

```

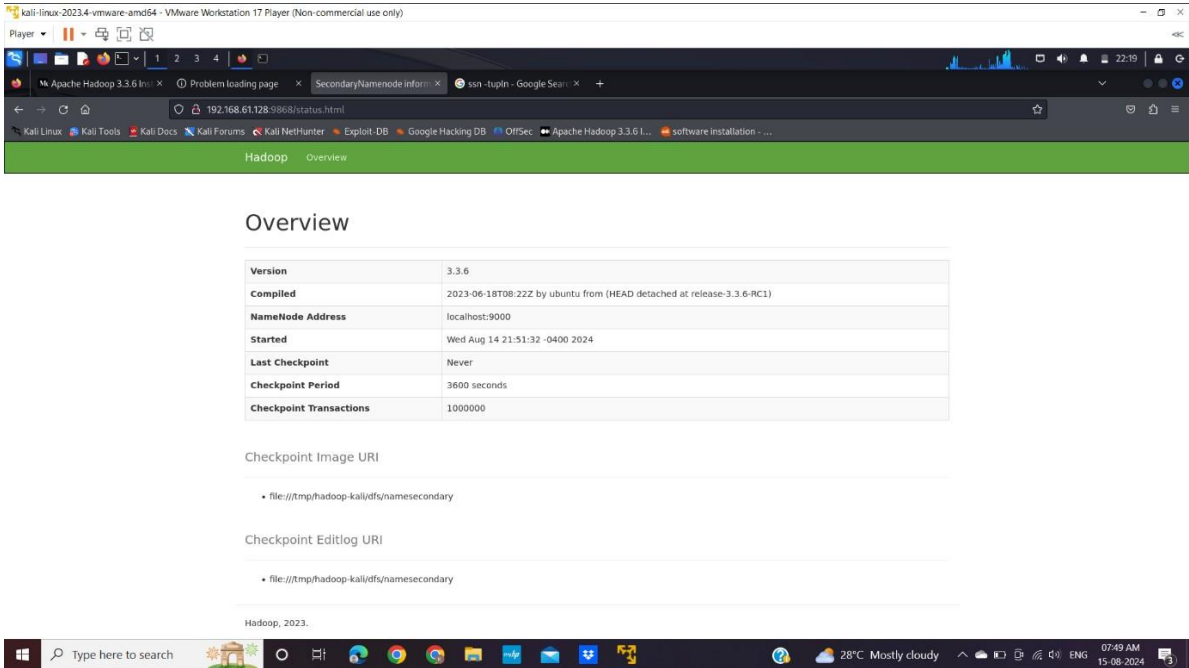
hadoop@kali: ~
File Actions Edit View Help
(hadoop@kali)~[~]
$ start-all.sh
WARNING: Attempting to start all Apache Hadoop daemons as hadoop in 10 seconds.
WARNING: This is not a recommended production deployment configuration.
WARNING: Use CTRL-C to abort.
Starting namenodes on [localhost]
Starting datanodes
Starting secondary namenodes [kali]
Picked up _JAVA_OPTIONS: -Dawt.useSystemAAFontSettings=on -Dswing.aatext=true
2024-09-11 04:59:16,429 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using builtin-java classes where applicable
Starting resourcemanager
Starting nodemanagers

```

\$ jps



localhost:9870



localhost:8088

