EXERCISE H-4:

AIM:

To Install, deploy & configure Apache Spark cluster. Run Apache Spark applications using Scala.

ALGORITHM:

Step 1: Verify Java Installation

Step 2: Verify Scala installation

Step 3: Download Scala

Step 4: Install Scala

Step 5: Download Apache Spark

Step 6: Install Spark

Step 7: Verify the Spark Installation

CODE:

Step 1: Verifying Java Installation

\$java -version

Step 2: Verifying Scala installation

\$scala -version

Step 3: Downloading Scala

Download: Scala tar file

Step 4: Installing Scala

Extract: Scala tar file

Type: \$ tar xvf scala-2.11.6.tgz

Move Scala software files to directory: /usr/local/scala

\$ su -

Password:

cd /home/Hadoop/Downloads/

mv scala-2.11.6 /usr/local/scala

exit

Set PATH for Scala

Use: \$ export PATH = \$PATH:/usr/local/scala/bin

Verifying Scala Installation

\$scala -version

Step 5: Downloading Apache Spark

Download Spark. spark-1.3.1-bin-hadoop2.6 version.

Spark tar file

Step 6: Installing Spark

Extracting Spark tar

\$ tar xvf spark-1.3.1-bin-hadoop2.6.tgz

Moving Spark software files to directory:/usr/local/spark

\$ su -

Password:

cd /home/Hadoop/Downloads/

mv spark-1.3.1-bin-hadoop2.6 /usr/local/spark

exit

Setting up the environment for Spark

Add:~/.bashrc file.

export PATH=\$PATH:/usr/local/spark/bin

\$ source ~/.bashrc

Step 7: Verifying the Spark Installation

opening Spark shell.

\$spark-shell

RESULT:

Thus, Apache Spark Cluster is installed, deployed & configured for running Apache Spark applications using Scala.

OUTPUT:

If spark is installed successfully then you will find the following output.

Spark assembly has been built with Hive, including Datanucleus jars on classpath

Using Spark's default log4j profile: org/apache/spark/log4j-defaults.properties

15/06/04 15:25:22 INFO SecurityManager: Changing view acls to: hadoop

15/06/04 15:25:22 INFO SecurityManager: Changing modify acls to: hadoop

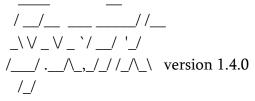
15/06/04 15:25:22 INFO SecurityManager: SecurityManager: authentication disabled;

ui acls disabled; users with view permissions: Set(hadoop); users with modify permissions: Set(hadoop)

15/06/04 15:25:22 INFO HttpServer: Starting HTTP Server

15/06/04 15:25:23 INFO Utils: Successfully started service 'HTTP class server' on port 43292.

Welcome to



Using Scala version 2.10.4 (Java HotSpot(TM) 64-Bit Server VM, Java 1.7.0_71)

Type in expressions to have them evaluated.

Spark context available as sc

scala>