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EXP. 22: PERFORM THE BASIC CONFIGURATION SETUP FOR INSTALLINGHADOOP 2.X LIKE CREATING THE HDUSER AND SSH LOCALHOST

AIM: PERFORM THE BASIC CONFIGURATION SETUP FOR INSTALLINGHADOOP 2.X LIKE CREATING THE HDUSER AND SSH LOCALHOST

PROCEDURE:

Step 1 – System Update

$ sudo apt-get update

Step 2 – Install Java and Set JAVA_HOME
//This first thing to do is to setup the webupd8 ppa on your system. Run the following command and proceed.
$ sudo apt-add-repository ppa:webupd8team/java
$ sudo apt-get update
//After setting up the ppa repository, update the package cache as well.
//Install the Java 8 installer
$ sudo apt-get install oracle-java8-installer

// After the installation is finished, Oracle Java is setup. Run the java command again to check the version and vendor.
<div align="center">[or]</div>
$ sudo apt-get install default-jdk
$ java -version

Step 3 – Add a dedicated Hadoop user
$ sudo addgroup hadoop

$ sudo adduser --ingroup hadoop hduser

// Add hduser to sudo user group

$ sudo adduser hduser sudo

Step 4 – Install SSH and Create Certificates
$ sudo apt-get install ssh

$ su hduser

```
$ ssh-keygen -t rsa -P ""
```

```
// Set Environmental variables
$ cat $HOME/.ssh/id_rsa.pub >> $HOME/.ssh/authorized_keys
```

Step 5 – Check if SSH works

```
$ ssh localhost
```

Step 6 – Install Hadoop

```
// Extract Hadoop-2.7.2
$ sudo tar xvzf hadoop-2.7.2.tar.gz
```

```
// Create a folder 'hadoop' in /usr/local
$ sudo mkdir –p /usr/local/hadoop
```
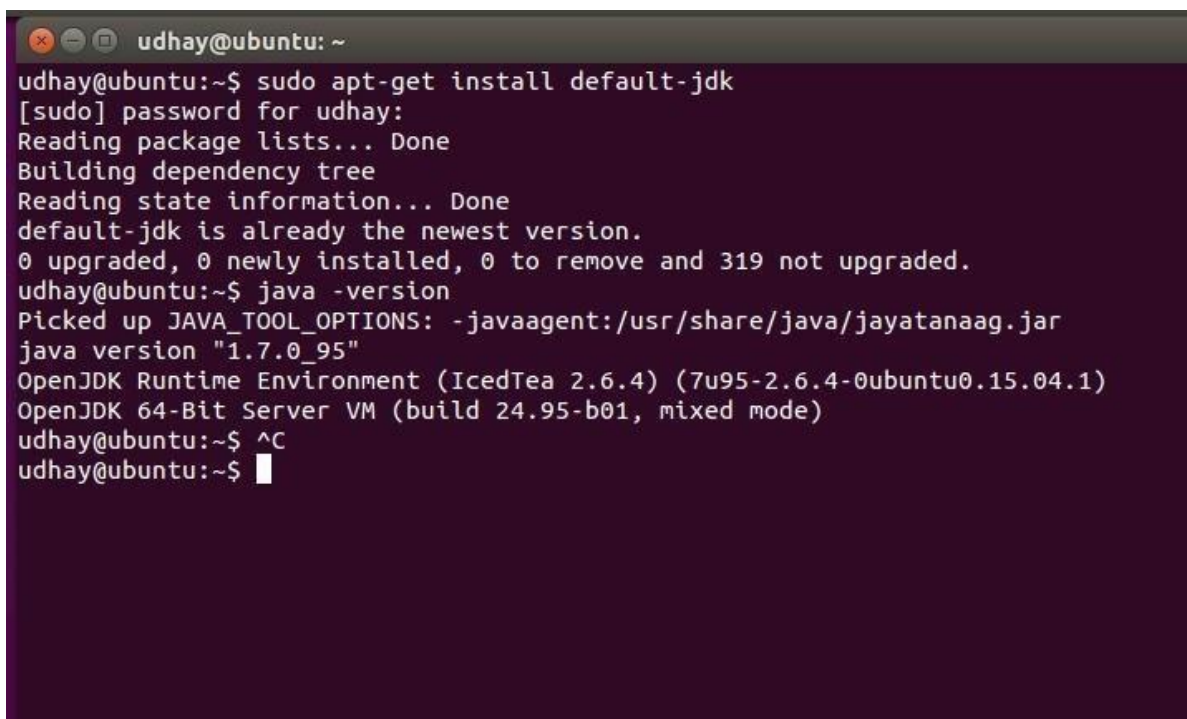
```
// Move the Hadoop folder to /usr/local/hadoop
```

```
$ sudo mv hadoop-2.7.2 /usr/local/hadoop
```

```
// Assigning read and write access to Hadoop folder
```

```
$ sudo chown –R hduser:hadoop /usr/local/hadoop
```

Implementation:

```
udhay@ubuntu:~$ sudo apt-get install ssh
Reading package lists... Done
Building dependency tree
Reading state information... Done
ssh is already the newest version.
0 upgraded, 0 newly installed, 0 to remove and 319 not upgraded.
udhay@ubuntu:~$ su hduser
Password:
hduser@ubuntu:/home/udhay$
```

```
udhay@ubuntu:~$ su hduser
Password:
hduser@ubuntu:/home/udhay$ ssh-keygen -t rsa -P ""
Generating public/private rsa key pair.
Enter file in which to save the key (/home/hduser/.ssh/id_rsa):
/home/hduser/.ssh/id_rsa already exists.
Overwrite (y/n)? y
Your identification has been saved in /home/hduser/.ssh/id_rsa.
Your public key has been saved in /home/hduser/.ssh/id_rsa.pub.
The key fingerprint is:
09:0f:15:f2:b2:b7:5e:11:1a:6c:d3:2f:c3:09:02:15 hduser@ubuntu
The key's randomart image is:
+---[RSA 2048]----+
|     ..E.o.      |
|      . = .      |
|       = B o     |
|        O B +    |
|       . S * .   |
|        . . +    |
|         . .     |
|         . .     |
|          .      |
+-----------------+
hduser@ubuntu:/home/udhay$
```

```
hduser@ubuntu:/home/udhay$ cat $HOME/.ssh/id_rsa.pub >> $HOME/.ssh/authorized_keys
hduser@ubuntu:/home/udhay$ ssh localhost
Welcome to Ubuntu 15.04 (GNU/Linux 3.19.0-84-generic x86_64)

 * Documentation:  https://help.ubuntu.com/


Last login: Thu Jul 15 22:00:14 2021 from localhost
hduser@ubuntu:~$
```

About the Cluster

Cluster Metrics

Apps Submitted	Apps Pending	Apps Running	Apps Completed	Containers Running	Memory Used	Memory Total	Memory Reserved	VCores Used	VCores Total	VCores Reserved	Active Nodes
0	0	0	0	0	0 B	8 GB	0 B	0	8	0	1

Scheduler Metrics

Scheduler Type	Scheduling Resource Type	Minimum Allocation
Capacity Scheduler	[MEMORY]	<memory:1024, vCores:1>

Cluster ID:	1626414170591
ResourceManager state:	STARTED
ResourceManager HA state:	active
ResourceManager HA zookeeper connection state:	ResourceManager HA is not enabled.
ResourceManager RMStateStore:	org.apache.hadoop.yarn.server.resourcemanager.recovery.NullRMStateStore
ResourceManager started on:	Thu Jul 15 22:42:50 -0700 2021
ResourceManager version:	2.7.2 from b165c4fe8a74265c792ce23f546c64604acf0e41 by jenkins source checksum 2016-01-26T00:16Z
Hadoop version:	2.7.2 from b165c4fe8a74265c792ce23f546c64604acf0e41 by jenkins source checksum 2016-01-26T00:08Z

Cluster

About
Nodes
Node Labels
Applications
NEW
NEW_SAVING
SUBMITTED
ACCEPTED
RUNNING
FINISHED
FAILED
KILLED

Scheduler

Tools