

EXP NO: 6(A)	Installation of HBase, Installing thrift along with Practice examples
DATE:	

**AIM: -**

**BACKGROUND THEORY: -**

## PROCEDURE: -

- Switch to superuser mode using `sudo su`.
- Update all system packages to ensure you have the latest versions.
- Install `wget` to download files from the internet.
- Use `wget` to download the HBase binary tarball from the official website.
- Extract the HBase binary tarball using the `tar` command.
- Move the extracted HBase directory to `/usr/local/hbase` for proper management.
- Open the `.bashrc` file to set the necessary environment variables for HBase.
- After editing the `.bashrc` file, apply the changes by sourcing it.
- Navigate to the HBase configuration directory.
- Open and edit the `hbase-env.sh` file to configure the environment variables for HBase.
- Open the `hbase-site.xml` file to configure HBase's storage mode.
- Finally, start the HBase services using the following command.
- You can verify if HBase has started correctly by running the HBase shell

## CODING: -

- `sudo su`
- **Update the system**
  - `sudo yum update -y`
- **Install wget**
  - `sudo yum install wget -y`
- **Download HBase**
  - `wget https://downloads.apache.org/hbase/2.4.15/hbase-2.4.15-bin.tar.gz`
- **Extract the HBase tarball**
  - `tar -xzf hbase-2.4.15-bin.tar.gz`
- **Move to root directory**
  - `sudo mv hbase-2.4.15 /usr/local/hbase`
- **Configure Hbase Environment Variables**
  - `nano ~/.bashrc`
  - Add the following in that file as #HBase Variables
    - `export HBASE_HOME=/usr/local/hbase`
    - `export PATH=$PATH:$HBASE_HOME/bin`
    - `export JAVA_HOME=/usr/lib/jvm/java-1.8.0`
  - `source ~/.bashrc`
- **Configure HBase**
  - `cd /usr/local/hbase/conf`
  - `sudo nano hbase-env.sh`
  - `export JAVA_HOME=/usr/lib/jvm/java-1.8.0`
- **Configure HBase storage mode**
  - `sudo nano hbase-site.xml`
    - `<configuration>`
    - `<property>`
    - `<name>hbase.rootdir</name>`

- <value>file:///usr/local/hbase/data</value>
- </property>
- <property>
- <name>hbase.zookeeper.property.dataDir</name>
- <value>/usr/local/hbase/zookeeper</value>
- </property>
- </configuration>
- start-hbase.sh

## OUTPUT: -

```
aws | Services | Search [Alt+S]
GNU nano 5.8 /root/.bashrc

# Java variables
export JAVA_HOME=$(readlink -f /usr/bin/java | sed "s:/bin/java::")
export PATH=$PATH:$JAVA_HOME/bin

#Hive variables
export HIVE_HOME=/usr/local/hive
export PATH=$PATH:$HIVE_HOME/bin
export HADOOP_HOME=/usr/local/hadoop # Adjust this to match your Hadoop installation path
export PATH=$PATH:$HADOOP_HOME/bin:$HADOOP_HOME/sbin

#MySQL variables
export PATH=$PATH:/usr/local/mysql/bin

#Sqoop Variables
export SQOOP_HOME=/home/ec2-user/sqoop
export PATH=$PATH:$SQOOP_HOME/bin

#Hbase Variable
export HBASE_HOME=/usr/local/hbase
export PATH=$PATH:$HBASE_HOME/bin
export JAVA_HOME=/usr/lib/jvm/java-1.8.0

^G Help      ^O Write Out  ^W Where Is   ^K Cut        ^I Execute    ^C Location   M-U Undo
^X Exit      ^R Read File  ^N Replace    ^U Paste      ^J Justify    ^_ Go To Line  M-E Redo
```

```
ubuntu: ~/hbase-1.1.1/bin
hduser@ubuntu:~/hbase-1.1.1/bin$ hbase shell
SLF4J: Class path contains multiple SLF4J bindings.
SLF4J: Found binding in [jar:file:/home/hduser/hbase-1.1.1/
SLF4J: Found binding in [jar:file:/home/hduser/hadoop-2.2.0
SLF4J: See http://www.slf4j.org/codes.html#multiple_binding
SLF4J: Actual binding is of type [org.slf4j.impl.Log4jLogge
2015-09-11 17:01:42,907 WARN [main] util.NativeCodeLoader:
HBase Shell; enter 'help<RETURN>' for list of supported com
Type "exit<RETURN>" to leave the HBase Shell
Version 1.1.1, rd0a115a7267f54e01c72c603ec53e91ec418292f, T
hbase(main):001:0> status
```