

EXP NO: 07

DATE:

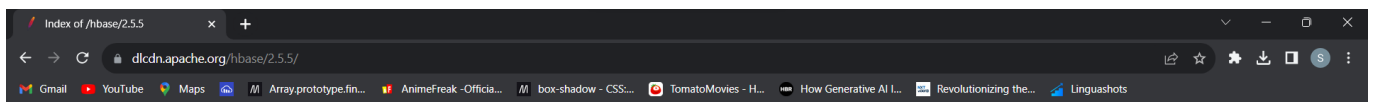
INSTALLATION OF HBASE

AIM : To install Hbase in windows

STEPS :

STEP 1 : Install Hbase from the official Apache Hbase website <https://dlcdn.apache.org/hbase/2.5.5/>,

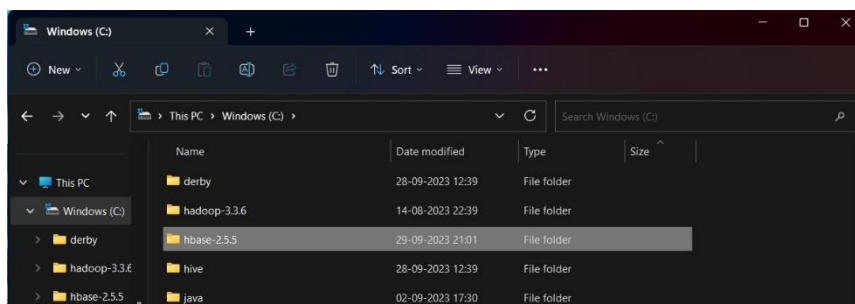
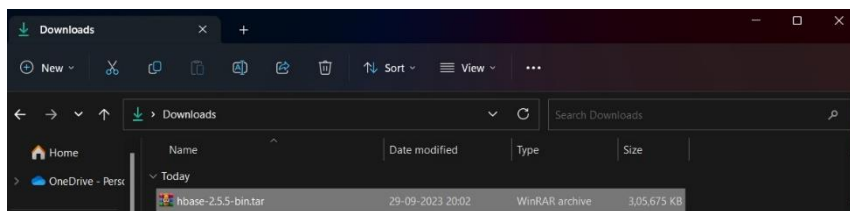
Click on [hbase-2.5.5-bin.tar.gz](#) to download the Hbase



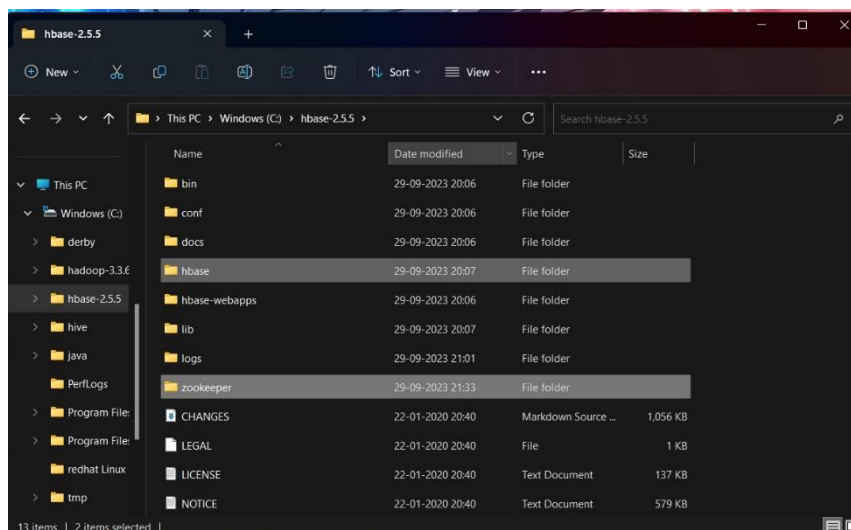
Index of /hbase/2.5.5

Name	Last modified	Size	Description
Parent Directory	-	-	-
CHANGES.md	2023-06-02 01:36	1.0M	
RELEASENOTES.md	2023-06-02 01:36	596K	
api_compare_2.5.4_to_2.5.5RC0.html	2023-06-02 01:36	15K	hbase: rel/2.5.4 to 2.5.5RC0 compatibility report
hbase-2.5.5-bin.tar.gz	2023-06-02 01:36	299M	
hbase-2.5.5-bin.tar.gz.asc	2023-06-02 01:36	833	
hbase-2.5.5-bin.tar.gz.sha512	2023-06-02 01:36	216	
hbase-2.5.5-client-bin.tar.gz	2023-06-02 01:36	287M	
hbase-2.5.5-client-bin.tar.gz.asc	2023-06-02 01:36	833	
hbase-2.5.5-client-bin.tar.gz.sha512	2023-06-02 01:36	268	
hbase-2.5.5-hadoop3-bin.tar.gz	2023-06-02 01:36	317M	
hbase-2.5.5-hadoop3-bin.tar.gz.asc	2023-06-02 01:36	833	
hbase-2.5.5-hadoop3-bin.tar.gz.sha512	2023-06-02 01:36	272	
hbase-2.5.5-hadoop3-client-bin.tar.gz	2023-06-02 01:36	300M	
hbase-2.5.5-hadoop3-client-bin.tar.gz.asc	2023-06-02 01:36	833	
hbase-2.5.5-hadoop3-client-bin.tar.gz.sha512	2023-06-02 01:36	300	
hbase-2.5.5-src.tar.gz	2023-06-02 01:36	36M	
hbase-2.5.5-src.tar.gz.asc	2023-06-02 01:36	833	
hbase-2.5.5-src.tar.gz.sha512	2023-06-02 01:36	216	

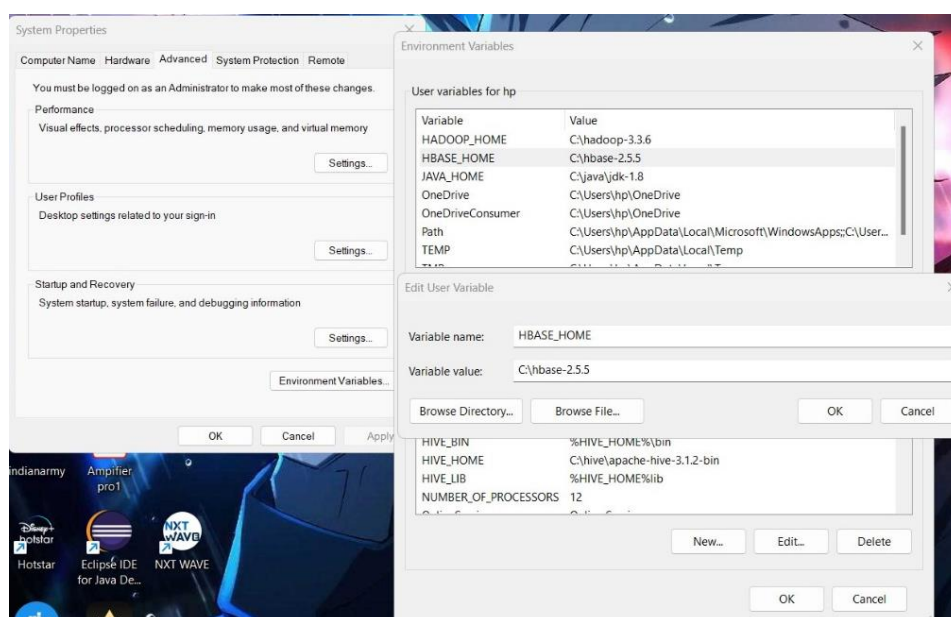
STEP 2 : Extract the downloaded hbase-2.5.5 tar file to the local disk C folder named hbase-2.5.5



STEP 3 : Create two folders in hbase-2.5.5 named hbase and zookeeper



STEP 4 : Create new variable **HBASE_HOME** in user variables and set path as **C:\hbase-2.5.5**



STEP 5 : Add hbase bin path location in System variables path


```

7  @rem * "License"); you may not use this file except in compliance
8  @rem * with the License. You may obtain a copy of the License at
9  @rem *
10 @rem *   http://www.apache.org/licenses/LICENSE-2.0
11 @rem *
12 @rem * Unless required by applicable law or agreed to in writing, software
13 @rem * distributed under the License is distributed on an "AS IS" BASIS,
14 @rem * WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
15 @rem * See the License for the specific language governing permissions and
16 @rem * limitations under the License.
17 @rem */
18
19 @rem Set environment variables here.
20
21 @rem The java implementation to use. Java 1.8+ required.
22 @rem set JAVA_HOME=c:\apps\java
23 set JAVA_HOME=%JAVA_HOME%
24 set HBASE_CLASSPATH=%HBASE_HOME%\lib\client-facing-thirdparty\*
25 set HBASE_HEAPSIZE=6000
26 set HBASE_OPTS="-XX:+UseConcMarkSweepGC" "-Djava.net.preferIPv4Stack=true"
27 set SERVER_GC_OPTS="-verbose:gc" "-XX:+PrintGCDetails" "-XX:+PrintGCDateStamps" %HBASE_GC_OPTS%
28 set HBASE_USE_GC_LOGFILE=true
29
30 set HBASE_JMX_BASE="-Dcom.sun.management.jmxremote.ssl=false" "-Dcom.sun.management.jmxremote.authenticate=false"
31
32 set HBASE_MASTER_OPTS=%HBASE_JMX_BASE% "-Dcom.sun.management.jmxremote.port=10101"
33 set HBASE_REGIONSERVER_OPTS=%HBASE_JMX_BASE% "-Dcom.sun.management.jmxremote.port=10102"
34 set HBASE_THRIFT_OPTS=%HBASE_JMX_BASE% "-Dcom.sun.management.jmxremote.port=10103"
35 set HBASE_ZOOKEEPER_OPTS=%HBASE_JMX_BASE% "-Dcom.sun.management.jmxremote.port=10104"
36 set HBASE_REGIONSERVERS=%HBASE_HOME%\conf\regionserver
37 set HBASE_LOG_DIR=%HBASE_HOME%\logs
38 set HBASE_IDENT_STRING=%USERNAME%
39 set HBASE_MANAGES_ZK=true
40

```

STEP 8 : In hbase conf directory, add following configuration to hbase-site.xml

```

41  -->
42  <property>
43    <name>hbase.cluster.distributed</name>
44    <value>false</value>
45  </property>
46  <property>
47    <name>hbase.tmp.dir</name>
48    <value>./tmp</value>
49  </property>
50  <property>
51    <name>hbase.unsafe.stream.capability.enforce</name>
52    <value>false</value>
53  </property>
54  <property>
55    <name>hbase.rootdir</name>
56    <value>C:\hbase-2.5.5\hbase</value>
57  </property>
58
59  //Here you have to set the path where you want HBase to store its built in zookeeper files.
60  <property>
61    <name>hbase.zookeeper.property.dataDir</name>
62    <value>C:\hbase-2.5.5\zookeeper</value>
63  </property>
64  <property>
65    <name>hbase.zookeeper.quorum</name>
66    <value>localhost</value>
67  </property>
68
69  </configuration>

```

STEP 9 : Start the Hadoop daemons in cmd

```

Administrator: Command Prompt
Microsoft Windows [Version 10.0.22621.2283]
(c) Microsoft Corporation. All rights reserved.

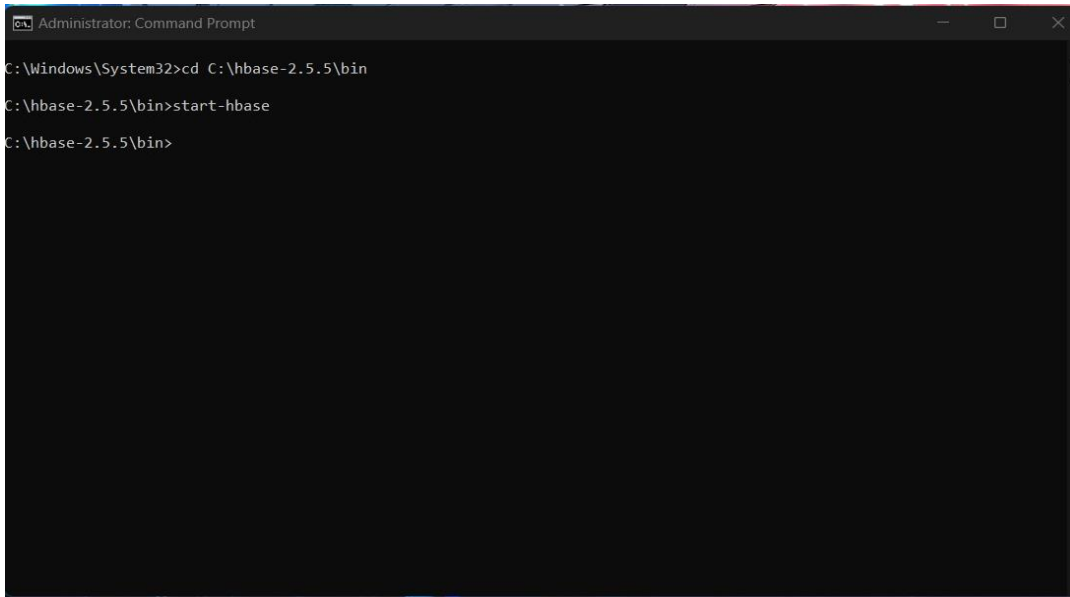
C:\Windows\System32>start-all
This script is deprecated. Instead use start-dfs.cmd and start-yarn.cmd
starting yarn daemons

C:\Windows\System32>jps
21472 NodeManager
27008 DataNode
8128 NodeManager
1588 ResourceManager
11848 Jps
13288 NetworkServerControl
16936 RunJar
2924 NameNode

C:\Windows\System32>

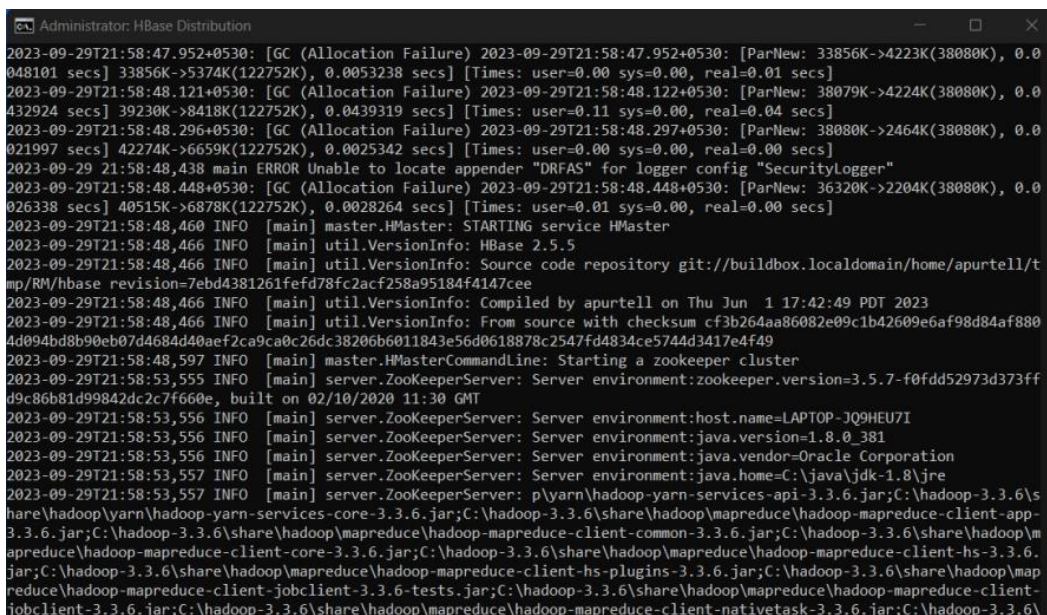
```

STEP 10 : Change directory to hbase bin and run **start-hbase** command



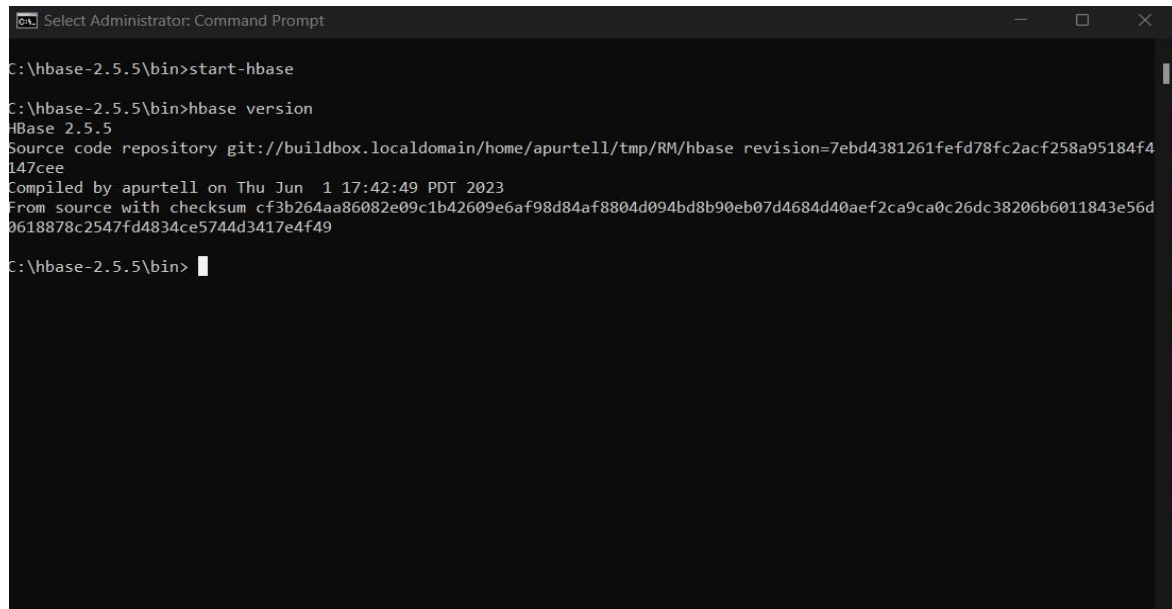
```
Administrator: Command Prompt
C:\Windows\System32>cd C:\hbase-2.5.5\bin
C:\hbase-2.5.5\bin>start-hbase
C:\hbase-2.5.5\bin>
```

STEP 11 : hbase configuration will start running in the windows terminal



```
Administrator: HBase Distribution
2023-09-29T21:58:47.952+0530: [GC (Allocation Failure) 2023-09-29T21:58:47.952+0530: [ParNew: 33856K->4223K(38080K), 0.0048101 secs] 33856K->5374K(122752K), 0.0053238 secs] [Times: user=0.00 sys=0.00, real=0.01 secs]
2023-09-29T21:58:48.121+0530: [GC (Allocation Failure) 2023-09-29T21:58:48.121+0530: [ParNew: 38079K->4224K(38080K), 0.0432924 secs] 39230K->8418K(122752K), 0.0439319 secs] [Times: user=0.11 sys=0.00, real=0.04 secs]
2023-09-29T21:58:48.296+0530: [GC (Allocation Failure) 2023-09-29T21:58:48.296+0530: [ParNew: 38080K->2464K(38080K), 0.0021997 secs] 42274K->6659K(122752K), 0.0025342 secs] [Times: user=0.00 sys=0.00, real=0.00 secs]
2023-09-29 21:58:48.438 main ERROR Unable to locate appender "DRFAS" for logger config "SecurityLogger"
2023-09-29T21:58:48.448+0530: [GC (Allocation Failure) 2023-09-29T21:58:48.448+0530: [ParNew: 36320K->2204K(38080K), 0.0026338 secs] 40515K->6878K(122752K), 0.0028264 secs] [Times: user=0.01 sys=0.00, real=0.00 secs]
2023-09-29T21:58:48.460 INFO [main] master.HMaster: STARTING service HMaster
2023-09-29T21:58:48.466 INFO [main] util.VersionInfo: HBase 2.5.5
2023-09-29T21:58:48.466 INFO [main] util.VersionInfo: Source code repository git://buildbox.localdomain/home/apurtell/t
mp/RM/hbase revision=7ebd4381261fef78fc2acf258a95184f4147cee
2023-09-29T21:58:48.466 INFO [main] util.VersionInfo: Compiled by apurtell on Thu Jun 1 17:42:49 PDT 2023
2023-09-29T21:58:48.466 INFO [main] util.VersionInfo: From source with checksum cf3b264aa86082e09c1b42609e6af98d84af880
4d094bd8b90eb07d4684d40aef2ca9ca0c26dc38206b6011843e56d0618878c2547fd4834ce5744d3417e4f49
2023-09-29T21:58:48.597 INFO [main] master.HMasterCommandLine: Starting a zookeeper cluster
2023-09-29T21:58:53.555 INFO [main] server.ZooKeeperServer: Server environment:zookeeper.version=3.5.7-f0fdd52973d373ff
d9c86b81d99842dc2c7f660e, built on 02/10/2020 11:30 GMT
2023-09-29T21:58:53.556 INFO [main] server.ZooKeeperServer: Server environment:host.name=LAPTOP-JQ9HEU7I
2023-09-29T21:58:53.556 INFO [main] server.ZooKeeperServer: Server environment:java.version=1.8.0_381
2023-09-29T21:58:53.556 INFO [main] server.ZooKeeperServer: Server environment:java.vendor=Oracle Corporation
2023-09-29T21:58:53.557 INFO [main] server.ZooKeeperServer: Server environment:java.home=C:\java\jdk-1.8\jre
2023-09-29T21:58:53.557 INFO [main] server.ZooKeeperServer: p\yarn\hadoop-yarn-services-api-3.3.6.jar;C:\hadoop-3.3.6\s
hare\hadoop\yarn\hadoop-yarn-services-core-3.3.6.jar;C:\hadoop-3.3.6\share\hadoop\mapreduce\hadoop-mapreduce-client-app-
3.3.6.jar;C:\hadoop-3.3.6\share\hadoop\mapreduce\hadoop-mapreduce-client-common-3.3.6.jar;C:\hadoop-3.3.6\share\hadoop\m
apreduce\hadoop-mapreduce-client-core-3.3.6.jar;C:\hadoop-3.3.6\share\hadoop\mapreduce\hadoop-mapreduce-client-hs-3.3.6.
jar;C:\hadoop-3.3.6\share\hadoop\mapreduce\hadoop-mapreduce-client-hs-plugins-3.3.6.jar;C:\hadoop-3.3.6\share\hadoop\map
reduce\hadoop-mapreduce-client-jobclient-3.3.6-tests.jar;C:\hadoop-3.3.6\share\hadoop\mapreduce\hadoop-mapreduce-client-
jobclient-3.3.6.jar;C:\hadoop-3.3.6\share\hadoop\mapreduce\hadoop-mapreduce-client-nativetask-3.3.6.jar;C:\hadoop-3.3.6\
```

STEP 12 : To check whether we have successfully installed hbase run **hbase version** command in the terminal



```
C:\hbase-2.5.5\bin>start-hbase

C:\hbase-2.5.5\bin>hbase version
HBase 2.5.5
Source code repository git://buildbox.localdomain/home/apurtell/tmp/RM/hbase revision=7ebd4381261fef78fc2acf258a95184f4147cee
Compiled by apurtell on Thu Jun  1 17:42:49 PDT 2023
From source with checksum cf3b264aa86082e09c1b42609e6af98d84af8804d094bd8b90eb07d4684d40aef2ca9ca0c26dc38206b6011843e56d0618878c2547fd4834ce5744d3417e4f49

C:\hbase-2.5.5\bin>
```

RESULT : Thus the program to install and setup hbase has been successfully completed.