# Hive 1.2.1源码编译

　　Hive 1.2.1源码编译依赖的Hadoop版本必须最少是2.6.0，因为里面用到了Hadoop的org.apache.hadoop.crypto.key.KeyProvider和org.apache.hadoop.crypto.key.KeyProviderFactory两个类，而这两个类在Hadoop 2.6.0才出现，否者会出现以下编译错误：

[ERROR] /home/q/spark/apache-hive-1.2.1-src/shims/0.23/src/main/java/org/apache/hadoop/hive/shims/Hadoop23Shims.java:[43,36] package org.apache.hadoop.crypto.key does not exis
[ERROR] /home/q/spark/apache-hive-1.2.1-src/shims/0.23/src/main/java/org/apache/hadoop/hive/shims/Hadoop23Shims.java:[41,36] package org.apache.hadoop.crypto.key does not exist
[ERROR] /home/q/spark/apache-hive-1.2.1-src/shims/0.23/src/main/java/org/apache/hadoop/hive/shims/Hadoop23Shims.java:[42,48] package org.apache.hadoop.crypto.key.KeyProvider does not exist

　　Hive 1.2.1默认的Hadoop版本是2.6.0（2.6.0），不修改就行。

　　Hive 1.2.1依赖的Spark版本最高只能是Spark 1.4.1，如果你修改到Spark 1.5.x版本编译的时候会出现以下错误：

[ERROR] /home/q/spark/apache-hive-1.2.1-src/spark-client/src/main/java/org/apache/hive/spark/client/RemoteDriver.java:[441,11] org.apache.hive.spark.client.RemoteDriver.ClientListener is not abstract and does not override abstract method onBlockUpdated(org.apache.spark.scheduler.SparkListenerBlockUpdated) in org.apache.spark.scheduler.SparkListener

spark 1.2.1默认的Spark版本是1.3.1，1.3.1。如果没有特殊情况，不修改pom.xml文件即可一次性编译成功。

编译的时候需要按照配置好Maven，如果在编译时出现类似的内存不够问题，请设置如下配置

export MAVEN_OPTS="-Xmx2g -XX:MaxPermSize=512M -XX:ReservedCodeCacheSize=512m"

上面弄完之后，我们可以用下面命令编译：

mvn clean package -Phadoop-2 -DskipTests

如果一切顺利的话，可以得到以下的编译结果：

```
[INFO] Reactor Summary:
[INFO]
[INFO] Hive ........................................ SUCCESS [ 3.227 s]
[INFO] Hive Shims Common ................................ SUCCESS [ 1.923 s]
[INFO] Hive Shims 0.20S ................................ SUCCESS [ 0.797 s]
[INFO] Hive Shims 0.23 .................................. SUCCESS [ 3.250 s]
[INFO] Hive Shims Scheduler ............................. SUCCESS [ 0.967 s]
[INFO] Hive Shims ...................................... SUCCESS [ 0.916 s]
[INFO] Hive Common ..................................... SUCCESS [ 2.660 s]
[INFO] Hive Serde ...................................... SUCCESS [ 1.846 s]
[INFO] Hive Metastore .................................. SUCCESS [ 3.906 s]
[INFO] Hive Ant Utilities .............................. SUCCESS [ 0.320 s]
[INFO] Spark Remote Client ............................. SUCCESS [ 5.191 s]
[INFO] Hive Query Language ............................. SUCCESS [ 25.649 s]
[INFO] Hive Service .................................... SUCCESS [ 1.492 s]
[INFO] Hive Accumulo Handler ........................... SUCCESS [ 2.095 s]
[INFO] Hive JDBC ....................................... SUCCESS [ 6.638 s]
[INFO] Hive Beeline .................................... SUCCESS [ 0.865 s]
[INFO] Hive CLI ........................................ SUCCESS [ 0.928 s]
[INFO] Hive Contrib .................................... SUCCESS [ 0.725 s]
[INFO] Hive HBase Handler .............................. SUCCESS [ 2.840 s]
[INFO] Hive HCatalog ................................... SUCCESS [ 0.489 s]
[INFO] Hive HCatalog Core .............................. SUCCESS [ 1.226 s]
[INFO] Hive HCatalog Pig Adapter ....................... SUCCESS [ 1.003 s]
[INFO] Hive HCatalog Server Extensions ................. SUCCESS [ 0.847 s]
[INFO] Hive HCatalog Webhcat Java Client ............... SUCCESS [ 0.820 s]
[INFO] Hive HCatalog Webhcat ........................... SUCCESS [ 3.950 s]
[INFO] Hive HCatalog Streaming ......................... SUCCESS [ 0.803 s]
[INFO] Hive HWI ........................................ SUCCESS [ 0.709 s]
[INFO] Hive ODBC ....................................... SUCCESS [ 0.584 s]
[INFO] Hive Shims Aggregator ........................... SUCCESS [ 0.060 s]
[INFO] Hive TestUtils .................................. SUCCESS [ 0.090 s]
[INFO] Hive Packaging .................................. SUCCESS [ 1.220 s]
[INFO] ------------------------------------------------------------------------
[INFO] BUILD SUCCESS
[INFO] ------------------------------------------------------------------------
[INFO] Total time: 11:19 min
[INFO] Finished at: 2015-11-09T19:33:33+08:00
[INFO] Final Memory: 99M/881M
[INFO] ------------------------------------------------------------------------
```

编译时长根据你网络环境，最好配置成公司的Maven仓库。当然，如果你需要将编译好的文件进行打包，可以运行下面的命令：

mvn clean package -Phadoop-2 -DskipTests -Pdist

上面的命令运行完成之后，会在$HIVE_SRC/packaging/target目录下产生以下几个文件：

drwxr-xr-x 2 iteblog iteblog     4096 May  9 13:13 antrun
drwxr-xr-x 3 iteblog iteblog     4096 May  9 13:14 apache-hive-1.2.1-bin
-rw-r--r-- 1 iteblog iteblog 92836488 May  9 13:14 apache-hive-1.2.1-bin.tar.gz
-rw-r--r-- 1 iteblog iteblog 17360091 May  9 13:14 apache-hive-1.2.1-jdbc.jar
-rw-r--r-- 1 iteblog iteblog 14318686 May  9 13:14 apache-hive-1.2.1-src.tar.gz
drwxr-xr-x 4 iteblog iteblog     4096 May  9 13:14 archive-tmp
drwxr-xr-x 3 iteblog iteblog     4096 May  9 13:13 maven-shared-archive-resources
drwxr-xr-x 3 iteblog iteblog     4096 May  9 13:13 tmp
drwxr-xr-x 2 iteblog iteblog     4096 May  9 13:13 warehouse