

FBDP实验三

standalone版本安装

1. 首先在apache官网查看Hadoop版本与hbase对照表，下载对应合适版本

	HBase-1.4.x	HBase-1.6.x	HBase-2.2.x	HBase-2.3.x
Hadoop-2.7.0	✖	✖	✖	✖
Hadoop-2.7.1+	✔	✖	✖	✖
Hadoop-2.8.[0-2]	✖	✖	✖	✖
Hadoop-2.8.[3-4]	!	✖	✖	✖
Hadoop-2.8.5+	!	✔	✔	✖
Hadoop-2.9.[0-1]	✖	✖	✖	✖
Hadoop-2.9.2+	!	✔	✔	✖
Hadoop-2.10.0	!	✔	!	✔
Hadoop-3.1.0	✖	✖	✖	✖
Hadoop-3.1.1+	✖	✖	✔	✔
Hadoop-3.2.x	✖	✖	✔	✔

```

yuanshan@yuanshan-... x yuanshan@yuanshan-... x yuanshan@yuanshan-... x
-machine.out
/opt/hbase/bin/hbase-daemon.sh: 行 195: /opt/hbase/logs/hbase-yuanshan-master-yu
nshan-virtual-machine.out: 没有那个文件或目录
head: 无法打开 '/opt/hbase/logs/hbase-yuanshan-master-yuanshan-virtual-machine.ou
' 读取数据: 没有那个文件或目录
yuanshan@yuanshan-virtual-machine:/opt/hbase$ hbase version
/usr/local/hadoop/bin/./libexec/hadoop-functions.sh: 行 2366: HADOOP_ORG.APACHE
HADOOP.HBASE.UTIL.GETJAVAPROPERTY_USER: 无效的变量名
/usr/local/hadoop/bin/./libexec/hadoop-functions.sh: 行 2461: HADOOP_ORG.APACHE
HADOOP.HBASE.UTIL.GETJAVAPROPERTY_OPTS: 无效的变量名
LF4J: Class path contains multiple SLF4J bindings.
LF4J: Found binding in [jar:file:/usr/local/hadoop/share/hadoop/common/lib/slf4
-log4j12-1.7.25.jar!/org/slf4j/impl/StaticLoggerBinder.class]
LF4J: Found binding in [jar:file:/opt/hbase/lib/client-facing-thirdparty/slf4j-
og4j12-1.7.30.jar!/org/slf4j/impl/StaticLoggerBinder.class]
LF4J: See http://www.slf4j.org/codes.html#multiple_bindings for an explanation.
LF4J: Actual binding is of type [org.slf4j.impl.Log4jLoggerFactory]
Base 2.3.2
source code repository git://fb6e52cd778c/home/vjasani/hbase-rm/output/hbase rev
sion=8dc7de1c75ab615b8992b928150e8b476cb053e3
compiled by vjasani on Sun Sep 20 13:28:26 UTC 2020
from source with checksum 0f276c1c4db750330be5a0597258c4ceab710813110e0926be2f7b
64a76c61caea7524f0ef2ce3939bc5c035641e0995b1e33b911e066a5a982605312d0540f
yuanshan@yuanshan-virtual-machine:/opt/hbase$

```

出现问题：启动报错，启动shell后无法连接hmaster

2. 在apache官网选择镜像中的stable版本重新下载（2.2.5），并解压，发现同样问题，但是启动hbase后检查jps，正常。构建测试表，正常。虽然运行重复报错相同内容，但是不影响实际操作。

```

yuanshan@yuanshan-virtual-machine:/opt/hbase$ jps
98819 NameNode
98963 DataNode
99175 SecondaryNameNode
99656 Jps
99566 HMaster

```

```
yuanshan@yuanshan-virtual-machine: /opt/hbase
For Reference, please visit: http://hbase.apache.org/2.0/book.html#shell
Version 2.2.5, rf76a601273e834267b55c0cda12474590283fd4c, 2020年 05月 21日 星期
四 18:34:40 CST
Took 0.0151 seconds
hbase(main):001:0> create 'test','cf'
Created table test
Took 4.4661 seconds
=> Hbase::Table - test
hbase(main):002:0> list 'test'
TABLE
test
1 row(s)
Took 0.1200 seconds
=> ["test"]
hbase(main):003:0> describe 'test'
Table test is ENABLED
test
COLUMN FAMILIES DESCRIPTION
{NAME => 'cf', VERSIONS => '1', EVICT_BLOCKS_ON_CLOSE => 'false', NEW_VERSION_BE
HAVIOR => 'false', KEEP_DELETED_CELLS => 'FALSE', CACHE_DATA_ON_WRITE => 'false'
, DATA_BLOCK_ENCODING => 'NONE', TTL => 'FOREVER', MIN_VERSIONS => '0', REPLICAT
ION_SCOPE => '0', BLOOMFILTER => 'ROW', CACHE_INDEX_ON_WRITE => 'false', IN_MEMO
RY => 'false', CACHE_BLOOMS_ON_WRITE => 'false', PREFETCH_BLOCKS_ON_OPEN => 'fal
```

伪分布版本安装

1. 修改配置文件，并重新启动hbase，仍然出现报错，但是不影响jps运行与建立。检查HMaster, HRegionServer, HQuorumPeer均存在。

```
yuanshan@yuanshan-virtual-machine: /opt/hbase
SLF4J: Actual binding is of type [org.slf4j.impl.Log4jLoggerFactory]
localhost: running zookeeper, logging to /opt/hbase/bin/../logs/hbase-yuanshan-z
ookeeper-yuanshan-virtual-machine.out
running master, logging to /opt/hbase/logs/hbase-yuanshan-master-yuanshan-virtua
l-machine.out
/usr/local/hadoop/bin/../libexec/hadoop-functions.sh: 行 2366: HADOOP_ORG.APACHE
.HADOOP.HBASE.UTIL.GETJAVAPROPERTY_USER: 无效的变量名
/usr/local/hadoop/bin/../libexec/hadoop-functions.sh: 行 2461: HADOOP_ORG.APACHE
.HADOOP.HBASE.UTIL.GETJAVAPROPERTY_OPTS: 无效的变量名
: running regionserver, logging to /opt/hbase/logs/hbase-yuanshan-regionserver-y
uanshan-virtual-machine.out
: /usr/local/hadoop/bin/../libexec/hadoop-functions.sh: 行 2366: HADOOP_ORG.APAC
HE.HADOOP.HBASE.UTIL.GETJAVAPROPERTY_USER: 无效的变量名
: /usr/local/hadoop/bin/../libexec/hadoop-functions.sh: 行 2461: HADOOP_ORG.APAC
HE.HADOOP.HBASE.UTIL.GETJAVAPROPERTY_OPTS: 无效的变量名
yuanshan@yuanshan-virtual-machine:/opt/hbase$ jps
98819 NameNode
101539 HMaster
98963 DataNode
99175 SecondaryNameNode
101658 HRegionServer
101485 HQuorumPeer
101757 Jps
```

想重新启动hbase，提示regionserver仍在运行，无法重启。

解决：`bin/hbase-daemon.sh stop regionserver RegionServer`

编写Java程序实现表格创建

详见github仓库：<https://github.com/L-cys/FBDPfile/tree/main/HbaseTest>

shell实现表格创建

```
yuanshan@yuanshan-virtual-machine: /opt/hbase
Took 0.0101 seconds
hbase(main):028:0> scan 'students'
ROW COLUMN+CELL
1 column=Courses:Chinese, timestamp=1605940017016, value=80
1 column=Courses:Math, timestamp=1605940070677, value=90
1 column=Courses:Physics, timestamp=1605940088131, value=95
1 column=Description:Height, timestamp=1605939993490, value=176
1 column=Description:Name, timestamp=1605939973629, value=Li Lei
1 column=Home:Province, timestamp=1605940110250, value=Zhejiang
2 column=Courses:Chinese, timestamp=1605940201632, value=88
2 column=Courses:Math, timestamp=1605940187847, value=77
2 column=Courses:Physics, timestamp=1605940214120, value=66
2 column=Description:Height, timestamp=1605940165580, value=183
2 column=Description:Name, timestamp=1605940147715, value=Han Meimei
2 column=Home:Province, timestamp=1605940230064, value=Beijing
3 column=Courses:Chinese, timestamp=1605940277684, value=90
3 column=Courses:Math, timestamp=1605940294705, value=90

yuanshan@yuanshan-virtual-machine: /opt/hbase
0 row(s)
Took 0.0260 seconds
hbase(main):031:0> get 'students','1'
COLUMN CELL
Courses:Chinese timestamp=1605940017016, value=80
Courses:Math timestamp=1605940070677, value=90
Courses:Physics timestamp=1605940088131, value=95
Description:Height timestamp=1605939993490, value=176
Description:Name timestamp=1605939973629, value=Li Lei
Home:Province timestamp=1605940110250, value=Zhejiang
1 row(s)
Took 0.0876 seconds
hbase(main):032:0> get 'students','1',{COLUMN=>Home:Province}
SyntaxError: (hbase):32: syntax error, unexpected tSYMBEG
get 'students','1',{COLUMN=>Home:Province}

hbase(main):033:0> get 'students','1',{COLUMN=>'Home:Province'}
COLUMN CELL
Home:Province timestamp=1605940110250, value=Zhejiang
1 row(s)
Took 0.0534 seconds
hbase(main):034:0>
```

```
yuanshan@yuanshan-virtual-machine: /opt/hbase
hbase(main):034:0> put 'students','1','Courses:English','95'
Took 0.0281 seconds
hbase(main):035:0> put 'students','2','Courses:English','85'
Took 0.0076 seconds
hbase(main):036:0> put 'students','3','Courses:English','98'
Took 0.0085 seconds
hbase(main):037:0> disable 'students'
Took 2.4212 seconds
hbase(main):038:0> alter 'students','Contact'
Updating all regions with the new schema...
All regions updated.
Done.
Took 2.3412 seconds
hbase(main):039:0> enable 'students'
Took 1.3438 seconds
hbase(main):040:0> put 'students','1','Contact:Email','lilei@qq.com'
Took 0.0195 seconds
hbase(main):041:0> put 'students','2','Contact:Email','hanmeimei@qq.com'
Took 0.0098 seconds
hbase(main):042:0> put 'students','3','Contact:Email','xiaoming@qq.com'
Took 0.0130 seconds
hbase(main):043:0> scan 'students'
ROW                                COLUMN+CELL
```

```
yuanshan@yuanshan-virtual-machine: /opt/hbase
2      column=Description:Name, timestamp=1605940147715, value=Han Meimei
2      column=Home:Province, timestamp=1605940230064, value=Beijing
3      column=Contact:Email, timestamp=1605941408254, value=xiaoming@qq.com
3      column=Courses:Chinese, timestamp=1605940277684, value=90
3      column=Courses:English, timestamp=1605941047045, value=98
3      column=Courses:Math, timestamp=1605940294705, value=90
3      column=Courses:Physics, timestamp=1605940307024, value=90
3      column=Description:Height, timestamp=1605940264810, value=162
3      column=Description:Name, timestamp=1605940251063, value=Xiao Ming
3      column=Home:Province, timestamp=1605940326673, value=Shanghai
3 row(s)
Took 0.1832 seconds
hbase(main):044:0> disable 'students'
Took 1.3149 seconds
hbase(main):045:0> drop 'students'
Took 0.4723 seconds
hbase(main):046:0>
```

完整操作语句

```
create 'students','Description','Courses','Home'
put 'students','1','Description:Name','Li Lei'
put 'students','1','Description:Height','176'
```

```
...  
scan 'students'  
get 'students','1',{COLUMN=>'Home:Province'}  
put 'students','1','Courses:English','95'  
...  
disable 'students'  
alter 'students','Contact'  
enable 'students'  
put 'students','1','Contact:Email','lilei@qq.com'  
scan 'students'  
disable 'students'  
drop 'students'
```