

大数据技术-第七章：HBase数据库 HBase安装与配置



CONTENTS

01. HBase安装与配置



01

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» HBase安装与配置

(1) 解压缩HBase安装包

```
[hadoop@master staging]# tar zxvf hbase-1.2.1-bin.tar.gz -C /usr/
```

(2) 重命名HBase安装文件夹

```
[hadoop@master staging]# cd /usr/local/src/
```

```
[hadoop@master usr]# mv hbase-1.2.1 hbase
```

(3) 在所有节点添加环境变量

```
[root@master ~]# vi /etc/profile
```

```
# set hbase environment
```

```
export HBASE_HOME=/usr/local/src/hbase
```

```
export PATH=$HBASE_HOME/bin:$PATH
```

(4) 在所有节点使环境变量生效

```
[hadoop@master ~]# source /etc/profile
```

(5) 在master节点进入配置文件目录

```
[root@master ~]# cd /usr/local/src/hbase/conf/
```

(6) 在master节点配置hbase-env.sh文件

```
[root @master conf]# vi hbase-env.sh #在文件中修改
```

```
export JAVA_HOME=/usr/local/src/java/jdk8 #Java安装位置
```

```
export HBASE_MANAGES_ZK=false #值为true使用HBase自带的ZooKeeper,值为false使用在Hadoop上装的ZooKeeper
```

```
export HBASE_CLASSPATH=/usr/local/src/hadoop/etc/hadoop/ #Hbase类路径
```

>> HBase安装与配置

(7) 在master节点配置hbase-site.xml

```
[hadoop @master conf]# vi hbase-site.xml
```

```
<property>
```

```
  <name>hbase.rootdir</name>
```

```
  <value>hdfs://master:9000/hbase</value>          # 使用9000端口
```

```
  <description>The directory shared by region servers.</description>
```

```
</property>
```

```
<property>
```

```
  <name>hbase.master.info.port</name>
```

```
  <value>60010</value>          # 使用master节点60010端口
```

```
</property>
```

```
<property>
```

```
  <name>hbase.zookeeper.property.clientPort</name>
```

```
  <value>2181</value>          # 使用master节点2181端口
```

```
  <description>Property from ZooKeeper's config zoo.cfg. The port at which the clients will  
connect.
```

```
  </description>
```

```
</property>
```

(7) 在master节点配置hbase-site.xml

```
[hadoop @master conf]# vi hbase-site.xml
```

```
<property>
  <name>hbase.rootdir</name>
  <value>hdfs://master:9000/hbase</value>
  <description>The directory shared by region
servers.</description>
</property>
<property>
  <name>hbase.master.info.port</name>
  <value>60010</value>#用master节点60010端口
</property>
<property>
  <name>hbase.zookeeper.property.clientPort</name>
  <value>2181</value> # 使用master节点2181端口
  <description>Property from ZooKeeper's config
zoo.cfg. The port at which the clients will connect.
</description>
</property>
```

```
<property>
  <name>zookeeper.session.timeout</name>
  <value>120000</value># ZooKeeper超时时间
</property>
<property>
  <name>hbase.zookeeper.quorum</name>
  <value>master,slave1,slave2</value>
  # ZooKeeper管理节点
</property>
<property>
  <name>hbase.tmp.dir</name>
  <value>/usr/local/src/hbase/tmp</value>
  # HBase临时文件路径
</property>
<property>
  <name>hbase.cluster.distributed</name>
  <value>true</value> # 使用分布式HBase
</property>
```

» HBase安装与配置

(8) 在master节点修改regionservers文件

```
[hadoop@master conf]$ vi regionservers
```

```
#删除localhost, 每一行写一个slave节点主机机器名
```

```
slave1
```

```
slave2
```

(9) 在master节点创建hbase.tmp.dir目录

```
[hadoop@master usr]# mkdir /usr/local/src/hbase/tmp
```

(10) 将master上的hbase安装文件同步到slave1 slave2

```
[root @master ~]# scp -r /usr/local/src/hbase/root@slave1:/usr/local/src/
```

```
[root @master ~]# scp -r /usr/local/src/hbase/root@slave2:/usr/local/src/
```

(11) 在所有节点修改hbase目录权限

```
[root @master ~]# chown -R hadoop:hadoop /usr/local/src/hbase/
```

(12) 在所有节点切换到hadoop用户

```
[hadoop@master ~]# su - hadoop
```

(13) 启动HBase

先启动Hadoop，然后启动ZooKeeper，最后启动HBase。

首先在master节点启动Hadoop。

```
[hadoop@master ~]$ start-all.sh
```

```
[hadoop@master ~]$ jps
```

master节点

```
[hadoop@master ~]$ jps
```

```
10288 ResourceManager
```

```
9939 NameNode
```

```
10547 Jps
```

```
10136 SecondaryNameNode
```

slave1节点

```
[hadoop@slave1 ~]$ start-all.sh
```

```
[hadoop@slave1 ~]$ jps
```

```
4465 NodeManager
```

```
4356 DataNode
```

```
4584 Jps
```

slave2节点

```
[hadoop@slave2 ~]$ jps
```

```
3714 DataNode
```

```
3942 Jps
```

```
3823 NodeManager
```

» HBase安装与配置

(15) 在master节点启动HBase

```
[hadoop@master ~]$ start-hbase.sh
```

```
[hadoop@master ~]$ jps
```

master节点

1669 ResourceManager

2327 Jps

1322 NameNode

2107 HMaster

1948 QuorumPeerMain

1517 SecondaryNameNode

slave1节点

```
[hadoop@slave1 ~]$ jps
```

1473 QuorumPeerMain

1557 HRegionServer

1702 Jps

1302 NodeManager

1226 DataNode

slave2节点

```
[hadoop@slave2 ~]$ jps
```

1296 NodeManager

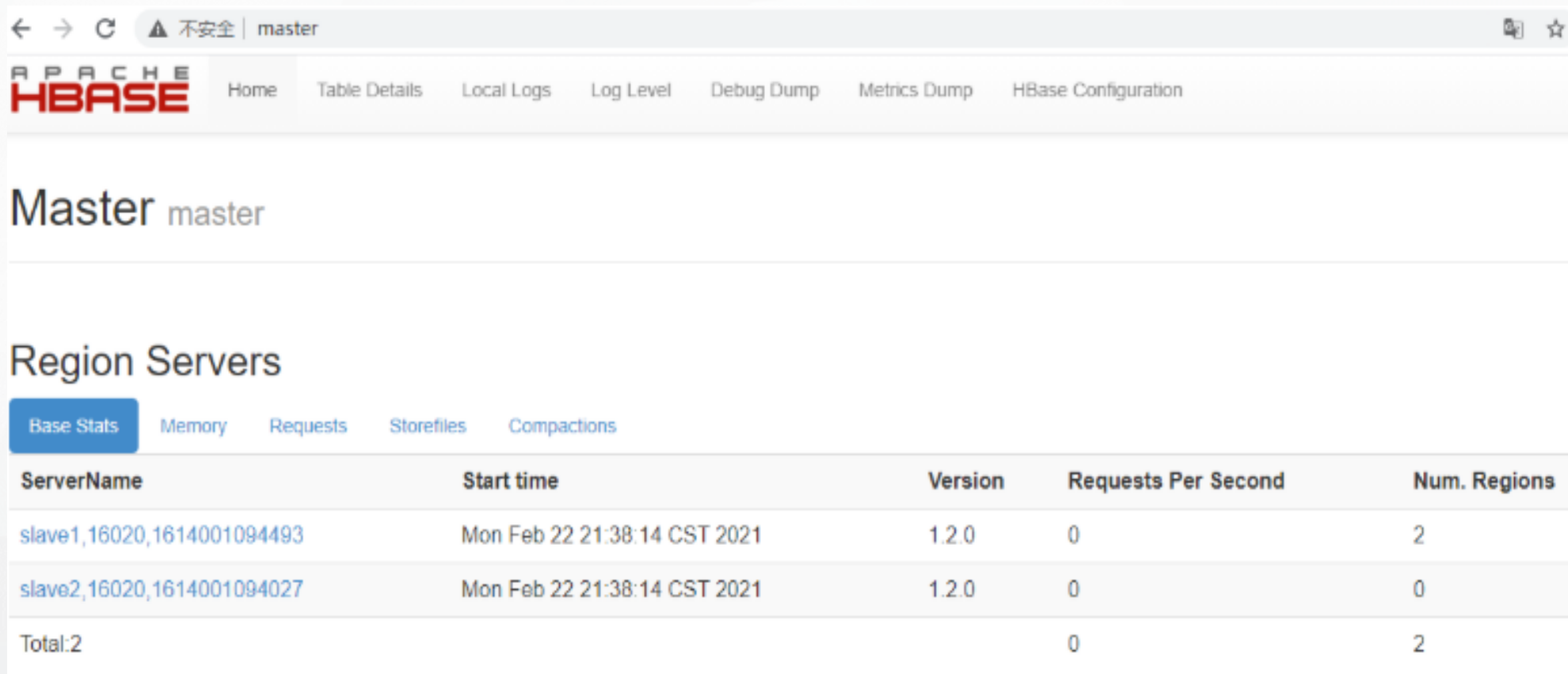
1222 DataNode

1545 HRegionServer

1725 Jps

1469 QuorumPeerMain

(16) 在浏览器输入192.168.56.101:60010出现如图界面:



ServerName	Start time	Version	Requests Per Second	Num. Regions
slave1,16020,1614001094493	Mon Feb 22 21:38:14 CST 2021	1.2.0	0	2
slave2,16020,1614001094027	Mon Feb 22 21:38:14 CST 2021	1.2.0	0	0
Total:2			0	2

» HBase安装与配置

(17) 关闭HBase

在master节点关闭HBase。

```
[hadoop@master ~]$ stop-hbase.sh
```

在所有节点关闭ZooKeeper。

```
[hadoop@master ~]$ zkServer.sh stop
```

```
[hadoop@slave1 ~]$ zkServer.sh stop
```

```
[hadoop@slave2 ~]$ zkServer.sh stop
```

在master节点关闭Hadoop。

```
[hadoop@master ~]$ stop-all.sh
```

注意：各节点之间时间必须同步，否则Hbase无法启动。

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