# 1.下载

- 可以从官网上下载与HBase版本对应的Phoenix版本。对应到HBase 2.1，应该使用版本「5.0.0-HBase-2.0」。

- http://phoenix.apache.org/download.html

# 2.安装

## • 1.上传安装包到liunx系统，并解压

```
1  cd /export/software
2  tar -xvzf apache-phoenix-5.0.0-HBase-2.0-bin.tar.gz -C /export/server/
```

## • 2.将Phoenix的所有jar包添加到HBase Regionserver和Master的复制到HBase的lib目录

```
1  #   拷贝jar包到hbase lib目录
2  cp /export/server/apache-phoenix-5.0.0-HBase-2.0-bin/phoenix-*.jar /export/server/hbase-
   2.1.0/lib/
3  #   进入到hbase lib   目录
4  cd /export/server/hbase-2.1.0/lib/
5  # 分发jar包到每个HBase 节点
6  scp phoenix-*.jar node2.itcast.cn:$PWD
7  scp phoenix-*.jar node3.itcast.cn:$PWD
```

## • 3.修改配置文件

```
1  cd /export/server/hbase-2.1.0/conf/
2  vim hbase-site.xml
3  ------
4  # 1. 将以下配置添加到 hbase-site.xml 后边
5  <!-- 支持HBase命名空间映射 -->
6  <property>
7      <name>phoenix.schema.isNamespaceMappingEnabled</name>
8      <value>true</value>
9  </property>
10 <!-- 支持索引预写日志编码 -->
11 <property>
12   <name>hbase.regionserver.wal.codec</name>
13   <value>org.apache.hadoop.hbase.regionserver.wal.IndexedWALEditCodec</value>
14 </property>
```

```
15  # 2. 将hbase-site.xml分发到每个节点
16  scp hbase-site.xml node2.itcast.cn:$PWD
17  scp hbase-site.xml node3.itcast.cn:$PWD
```

- ## 4.将配置后的hbase-site.xml拷贝到Phoenix的bin目录

```
1  cp /export/server/hbase-2.1.0/conf/hbase-site.xml /export/server/apache-phoenix-5.0.0-
   HBase-2.0-bin/bin/
```

- ## 5.重新启动HBase

```
1  stop-hbase.sh
2  start-hbase.sh
```

- ## 6.启动Phoenix客户端，链接Phoenix server
  - 注意：第一次启动Phoenix连接HBase会稍微慢一点

```
1  cd /export/server/apache-phoenix-5.0.0-HBase-2.0-bin/
2  bin/python2 sqlline.py node1:2181
3  # 输入!table查看Phoenix中的表
4  !table
```

- ## 7.查看HBase的webui，可以看到Phoenix在system命名空间下创建了一些表，而且该系统表加载了大量的协处理器

```
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'|org.apache.phoenix.coprocessor.UngroupedAggregateRegionObserver|805306366|', coprocessor$3 =>
'|org.apache.phoenix.coprocessor.GroupedAggregateRegionObserver|805306366|', coprocessor$4 =>
'|org.apache.phoenix.coprocessor.ServerCachingEndpointImpl|805306366|', coprocessor$5 =>
'|org.apache.hadoop.hbase.coprocessor.MultiRowMutationEndpoint|805306366|', coprocessor$6 =>
'|org.apache.phoenix.coprocessor.MetaDataEndpointImpl|805306366|', coprocessor$7 =>
'|org.apache.phoenix.coprocessor.MetaDataRegionObserver|805306367|', METADATA => {'SPLIT_POLICY' =>
'org.apache.phoenix.schema.MetaDataSplitPolicy'}}}, {NAME => '0', DATA_BLOCK_ENCODING => 'FAST_DIFF', BLOOMFILTER => 'NONE'}
```

| SYSTEM | CATALOG | 1 | 0 | 0 | 0 | 0 | 'SYSTEM:CATALOG', {TABLE_ATTRIBUTES => {PRIORITY => '2000', coprocessor$1 => '|org.apache.phoenix.coprocessor.ScanRegionObserver|80 '|org.apache.phoenix.coprocessor.UngroupedAggregateRegionObserver|805306366|', coprocessor$3 => '|org.apache.phoenix.coprocessor.GroupedA '|org.apache.phoenix.coprocessor.ServerCachingEndpointImpl|805306366|', coprocessor$5 => '|org.apache.hadoop.hbase.coprocessor.MultiRowMut '|org.apache.phoenix.coprocessor.MetaDataEndpointImpl|805306366|', coprocessor$7 => '|org.apache.phoenix.coprocessor.MetaDataRegionObserve 'org.apache.phoenix.schema.MetaDataSplitPolicy'}}, {NAME => '0', DATA_BLOCK_ENCODING => 'FAST_DIFF', BLOOMFILTER => 'NONE'} |
| SYSTEM | FUNCTION | 1 | 0 | 0 | 0 | 0 | 'SYSTEM:FUNCTION', {TABLE_ATTRIBUTES => {PRIORITY => '2000', coprocessor$1 => '|org.apache.phoenix.coprocessor.ScanRegionObserver|9 '|org.apache.phoenix.coprocessor.UngroupedAggregateRegionObserver|805306366|', coprocessor$3 => '|org.apache.phoenix.coprocessor.GroupedA '|org.apache.phoenix.coprocessor.ServerCachingEndpointImpl|805306366|', coprocessor$5 => '|org.apache.phoenix.hbase.index.Indexer|805306366|index.builder=org.apache.phoenix.index.PhoenixIndexBuilder,org.apache.hadoop.hbase.index.c coprocessor$6 => '|org.apache.phoenix.coprocessor.MetaDataEndpointImpl|805306366|', METADATA => {'SPLIT_POLICY' => 'org.apache.phoenix.s DATA_BLOCK_ENCODING => 'FAST_DIFF', BLOOMFILTER => 'NONE'} |
| SYSTEM | LOG | 32 | 0 | 0 | 0 | 0 | 'SYSTEM:LOG', {TABLE_ATTRIBUTES => {PRIORITY => '2007', coprocessor$1 => '|org.apache.phoenix.coprocessor.ScanRegionObserver|80530f '|org.apache.phoenix.coprocessor.UngroupedAggregateRegionObserver|805306366|', coprocessor$3 => '|org.apache.phoenix.coprocessor.GroupedA '|org.apache.phoenix.coprocessor.ServerCachingEndpointImpl|805306366|', coprocessor$5 => '|org.apache.phoenix.hbase.index.Indexer|805306366|index.builder=org.apache.phoenix.index.PhoenixIndexBuilder,org.apache.hadoop.hbase.index.c {NAME => '0', DATA_BLOCK_ENCODING => 'FAST_DIFF', TTL => '604800 SECONDS (7 DAYS)', BLOOMFILTER => 'NONE'} |
| SYSTEM | MUTEX | 1 | 0 | 0 | 0 | 0 | 'SYSTEM:MUTEX', {NAME => '0', TTL => '900 SECONDS (15 MINUTES)'} |
| SYSTEM | SEQUENCE | 1 | 0 | 0 | 0 | 0 | 'SYSTEM:SEQUENCE', {TABLE_ATTRIBUTES => {PRIORITY => '2007', coprocessor$1 => '|org.apache.phoenix.coprocessor.ScanRegionObserver|80 '|org.apache.phoenix.coprocessor.UngroupedAggregateRegionObserver|805306366|', coprocessor$3 => '|org.apache.phoenix.coprocessor.GroupedA '|org.apache.phoenix.coprocessor.ServerCachingEndpointImpl|805306366|', coprocessor$5 => '|org.apache.phoenix.hbase.index.Indexer|805306366|index.builder=org.apache.phoenix.index.PhoenixIndexBuilder,org.apache.hadoop.hbase.index.c coprocessor$6 => '|org.apache.phoenix.coprocessor.SequenceRegionObserver|805306366|', {NAME => '0', DATA_BLOCK_ENCODING => 'FAST_D |
| SYSTEM | STATS | 1 | 0 | 0 | 0 | 0 | 'SYSTEM:STATS', {TABLE_ATTRIBUTES => {PRIORITY => '2007', coprocessor$1 => '|org.apache.phoenix.coprocessor.ScanRegionObserver|80530 '|org.apache.phoenix.coprocessor.UngroupedAggregateRegionObserver|805306366|', coprocessor$3 => '|org.apache.phoenix.coprocessor.GroupedA '|org.apache.phoenix.coprocessor.ServerCachingEndpointImpl|805306366|', coprocessor$5 => '|org.apache.hadoop.hbase.coprocessor.MultiRowMut => 'org.apache.phoenix.schema.SystemStatsSplitPolicy'}}, {NAME => '0', DATA_BLOCK_ENCODING => 'FAST_DIFF', BLOOMFILTER => 'NONE'} |