

安装

- 1. 下载apache-phoenix-4.11.0-HBase-1.1-bin
- 2. 解压下载文件,将*phoenix-4.11.0-HBase-1.1-server.jar*复制到集群的hbase目录中的lib目录下

```
[root@vrv203 /]# scp /usr/hdp/2.4.0.0-169/hbase/lib/phoenix-4.11.0-HBase-1.1-server.jar root@vrv204://usr/hdp/2.4.0.0-169/hbase/lib/
phoenix-4.11.0-HBase-1.1-server.jar 100% 24MB 24.1MB/s 00:00
[root@vrv203 /]# scp /usr/hdp/2.4.0.0-169/hbase/lib/phoenix-4.11.0-HBase-1.1-server.jar root@vrv205://usr/hdp/2.4.0.0-169/hbase/lib/
phoenix-4.11.0-HBase-1.1-server.jar 100% 24MB 24.1MB/s 00:01
[root@vrv203 /]# scp /usr/hdp/2.4.0.0-169/hbase/lib/phoenix-4.11.0-HBase-1.1-server.jar root@vrv206://usr/hdp/2.4.0.0-169/hbase/lib/
phoenix-4.11.0-HBase-1.1-server.jar 100% 24MB 24.1MB/s 00:00
[root@vrv203 /]# scp /usr/hdp/2.4.0.0-169/hbase/lib/phoenix-4.11.0-HBase-1.1-server.jar root@vrv207://usr/hdp/2.4.0.0-169/hbase/lib/
phoenix-4.11.0-HBase-1.1-server.jar 100% 24MB 24.1MB/s 00:01
```

- 3. 重启hbase
- 4. 将解压出来的文件夹复制到集群的一台机器上去
/usr/hdp/2.4.0.0-169/apache-phoenix-4.11.0-HBase-1.1-bin
- 5. 修改文件执行权限
chmod 755 /usr/hdp/2.4.0.0-169/apache-phoenix-4.11.0-HBase-1.1-bin/bin/*.py

简单使用

- 创建 *us_population.sql*

```
CREATE TABLE IF NOT EXISTS us_population (
    state CHAR(2) NOT NULL,
    city VARCHAR NOT NULL,
    population BIGINT CONSTRAINT my_pk PRIMARY KEY (state,city)
);
```

- 创建 *us_population.csv*

state	city	population
NY	New York	8143197
CA	Los Angeles	3844829
IL	Chicago	2842518
TX	Houston	2016582
PA	Philadelphia	1463281
AZ	Phoenix	1461575
TX	San Antonio	1256509
CA	San Diego	1255540
TX	Dallas	1213825
CA	San Jose	912332

- 创建 *us_population_queries.sql*
SELECT state as "State",count(city) as "City Count",sum(population) as "Population Sum" FROM us_population GROUP BY state ORDER BY sum(population) DESC;
- 切换到phoenix的bin目录下执行以下命令
./psql.py vrv203:2181:/hbase-unsafe ..examples/us_population.sql ../examples/us_population.csv ../examples/us_population_queries.sql
输出

St	City Count	Population Sum
NY	1	8143197
CA	1	3844829
...

命令使用

- 在bin目录下执行,进去phoenix的控制台
`./sqlline.py`
- 输入!help显示命令列表
- 其他数据库、表操作类似mysql

实例 ①

- 原始hbase中的表
`create 'ntf_d','ddv','ddi','ddp'`
- 原始hbase中的数据
`hbase(main):011:0> scan 'ntf_d',{LIMIT=>1}`

```
ROW COLUMN+CELL
20170521_10.66.73.10_0000001 column=ddi:count, timestamp=1495422713784, value=42983
20170521_10.66.73.10_0000001 column=ddi:da, timestamp=1495422713784, value=unknown
20170521_10.66.73.10_0000001 column=ddi:dip, timestamp=1495422713784, value=10.66.73.10
20170521_10.66.73.10_0000001 column=ddi:dp, timestamp=1495422713784, value=42222
20170521_10.66.73.10_0000001 column=ddi:sa, timestamp=1495422713784, value=unknown
20170521_10.66.73.10_0000001 column=ddi:sip, timestamp=1495422713784, value=10.70.147.109
20170521_10.66.73.10_0000001 column=ddp:count, timestamp=1495422716604, value=42983
20170521_10.66.73.10_0000001 column=ddp:da, timestamp=1495422716604, value=unknown
20170521_10.66.73.10_0000001 column=ddp:dip, timestamp=1495422716604, value=10.66.73.10
20170521_10.66.73.10_0000001 column=ddp:dp, timestamp=1495422716604, value=42222
20170521_10.66.73.10_0000001 column=ddp:sa, timestamp=1495422716604, value=unknown
20170521_10.66.73.10_0000001 column=ddp:sip, timestamp=1495422716604, value=10.70.147.109
20170521_10.66.73.10_0000001 column=ddv:count, timestamp=1495422710928, value=42983
20170521_10.66.73.10_0000001 column=ddv:da, timestamp=1495422710928, value=unknown
20170521_10.66.73.10_0000001 column=ddv:dip, timestamp=1495422710928, value=10.66.73.10
20170521_10.66.73.10_0000001 column=ddv:dp, timestamp=1495422710928, value=42222
20170521_10.66.73.10_0000001 column=ddv:sa, timestamp=1495422710928, value=unknown
20170521_10.66.73.10_0000001 column=ddv:sip, timestamp=1495422710928, value=10.70.147.109
```

- 在phoenix中关联hbase中的该表

```
CREATE TABLE IF NOT EXISTS "ntf_d"
(
    "rk" CHAR(4) NOT NULL PRIMARY KEY,
    "ddi"."count" INTEGER,
    "ddi"."da" VARCHAR(32),
    "ddi"."dip" VARCHAR(32),
    "ddi"."dp" VARCHAR(32),
    "ddi"."sa" VARCHAR(32),
    "ddi"."sip" VARCHAR(32),
    "ddi"."sp" VARCHAR(32),
    "ddp"."count" INTEGER,
    "ddp"."da" VARCHAR(32),
    "ddp"."dip" VARCHAR(32),
    "ddp"."dp" VARCHAR(32),
    "ddp"."sa" VARCHAR(32),
    "ddp"."sip" VARCHAR(32),
    "ddp"."sp" VARCHAR(32),
    "ddv"."count" INTEGER,
    "ddv"."da" VARCHAR(32),
    "ddv"."dip" VARCHAR(32),
    "ddv"."dp" VARCHAR(32),
    "ddv"."sa" VARCHAR(32),
    "ddv"."sip" VARCHAR(32),
    "ddv"."sp" VARCHAR(32)
);
```

- 显示创建结果
`!tables`
- 表关联后可对表进行一些类似mysql的查询操作

```
select "ddi"."sa" as areaName,count("ddi"."sa") as count
from "ntf_d" group by "ddi"."sa";
```

AREANAME	COUNT
.	0
abz	16

bzs	9
cds	12
dys	17
dzs	9
gab	13
gas	14
gat	12
gys	11
gzz	13
lss	5
lsz	8
lzs	16
mss	6
mys	9
ncs	11
njs	5
other	10
pzh	14
sns	7
unknown	36904
yas	10
ybs	12
zgs	12
zys	11

实例 ②

java客户端的使用

- 导入依赖jar包

```
<dependency>
  <groupId>org.apache.phoenix</groupId>
  <artifactId>phoenix-core</artifactId>
  <version>4.11.0-HBase-1.1</version>
</dependency>
```

- 编写测试代码

```
public static void main(String[] args) throws ClassNotFoundException, SQLException {
    String driver = "org.apache.phoenix.jdbc.PhoenixDriver";
    String url = "jdbc:phoenix:vr203:2181:/hbase-unsecure";

    Class.forName(driver);

    Connection conn = DriverManager.getConnection(url);

    Statement stmt = conn.createStatement();

    ResultSet rs = stmt.executeQuery(
        "select \"ddi\".\"sa\" as areaName,count(\"ddi\".\"sa\") as count from \"ntf_d\" group by \"ddi\".\"sa\"");

    while(rs.next()){
        System.out.println(rs.getString(1)+"|"+rs.getLong(2));
    }
}
```

```
}  
  
rs.close();  
stmt.close();  
conn.close();  
}
```

- 执行结果

AREANAME	COUNT
null	0
abz	16
bzs	9
cds	12
dys	17
dzs	9
gab	13
gas	14
gat	12
gys	11
gzz	13
lss	5
lsz	8
lzs	16
mss	6
mys	9
ncs	11
njs	5
other	10
pzh	14
sns	7
unknown	36904
yas	10
ybs	12
zgs	12
zys	11

实例 ③

DatabasesScriptsFavorites

Connections

192.168.118.122

192.168.118.124

192.168.119.208

Database Connection

localhost

192.168.137.5

192.168.119.202

192.168.119.203

192.168.137.12

jdbc:phoenix:vrw203:2181:/hbase-unsecure

(null)

INDEX

SEQUENCE

SYSTEM TABLE

TABLE

ntf_d

US_POPULATION

VIEW

Procedures

SYSTEM

1: jdbc:phoenix:vrw203:2181:/hbase-unsecure Untitled*

jdbc:phoenix:vrw203:2181:/hbase-unsecure ntf_d

Database Connection

jdbc:phoenix:vrw203:2181:/hbase-unsecure

1 select "ddi"."sa" as areaname, count("ddi"."sa") as count from "ntf_d" group by "ddi"."sa";

1:91 [91] INS

Log1: ntf_d [26]

*	AREANAME	COUNT
1	(null)	0
2	abz	16
3	bzs	9
4	cds	12
5	dys	17
6	dzs	9
7	gab	13
8	gas	14
9	gat	12
10	gys	11
11	gzz	13
12	lss	5
13	lsz	8
14	lzs	16