

HBase3 Shell操作

HBase表操作

进入HBase客户端命令操作界面

```
$ bin/hbase shell
```

查看帮助命令

```
hbase(main):001:0> help
```

查看当前数据库中有哪些表

```
hbase(main):002:0> list
```

HBase数据操作

创建一张表

创建user表，包含info、data两个列族

```
hbase(main):010:0> create 'user', 'info', 'data'
```

添加数据操作

向user表中插入信息，row key为rk0001，列族info中添加name列标示符，值为zhangsan

```
hbase(main):011:0> put 'user', 'rk0001', 'info:name', 'zhangsan'
```

向user表中插入信息，row key为rk0001，列族info中添加gender列标示符，值为female

```
hbase(main):011:0> put 'user', 'rk0001', 'info:gender', 'female'
```

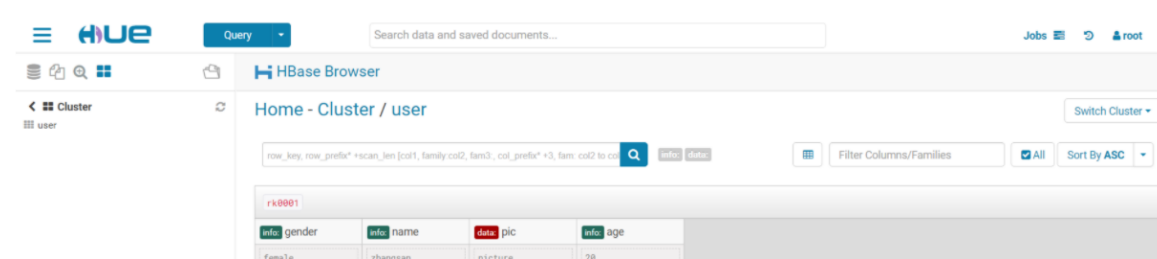
向user表中插入信息，row key为rk0001，列族info中添加age列标示符，值为20

```
hbase(main):011:0> put 'user', 'rk0001', 'info:age', 20
```

向user表中插入信息，row key为rk0001，列族info中添加age列标示符，值为20

```
hbase(main):014:0> put 'user', 'rk0001', 'data:pic', 'picture'
```

到这里我们可以先去HUE上查看我们的HBase中的内容分布情况



查询数据操作

通过rowkey进行查询

获取user表中row key 为 rk0001 的所有信息

```
hbase(main):015:0> get 'user', 'rk0001'
```

```
hbase(main):001:0> get 'user', 'rk0001'
COLUMN                                CELL
data:pic                             timestamp=1576071875517, value=picture
info:age                             timestamp=1576071869638, value=20
info:gender                           timestamp=1575853346007, value=female
info:name                             timestamp=1575846341883, value=zhangsan
4 row(s) in 0.3360 seconds
```

查看rowkey下面的某个列族的信息

获取user表中 row key 为 rk0001， info 列族的所有信息

```
hbase(main):016:0> get 'user', 'rk0001', 'info'
```

```
hbase(main):002:0> get 'user', 'rk0001', 'info'
COLUMN                                CELL
info:age                             timestamp=1576071869638, value=20
info:gender                           timestamp=1575853346007, value=female
info:name                             timestamp=1575846341883, value=zhangsan
3 row(s) in 0.0180 seconds
```

查看rowkey指定列族指定字段的值

获取user表中row key为rk0001， info列族的name、age列标示符的信息

```
hbase(main):017:0> get 'user', 'rk0001', 'info:name', 'info:age'
```

```
hbase(main):003:0> get 'user', 'rk0001', 'info:name', 'info:age'
COLUMN                                CELL
info:age                             timestamp=1576071869638, value=20
info:name                             timestamp=1575846341883, value=zhangsan
2 row(s) in 0.0140 seconds
```

查看rowkey指定多个列族的信息

获取user表中row key为rk0001, info、data列族的信息

```
hbase(main):018:0> get 'user', 'rk0001', 'info', 'data'
```

```
hbase(main):004:0> get 'user', 'rk0001', 'info', 'data'
COLUMN                                CELL
data:pic                             timestamp=1576071875517, value=picture
info:age                             timestamp=1576071869638, value=20
info:gender                          timestamp=1575853346007, value=female
info:name                            timestamp=1575846341883, value=zhangsan
4 row(s) in 0.0180 seconds
```

指定rowkey与列值查询

获取user表中row key为rk0001, cell的值为zhangsan的信息

```
hbase(main):030:0> get 'user', 'rk0001', {FILTER => "ValueFilter(=, 'binary:zhangsan')"}
COLUMN                                CELL
info:name                            timestamp=1575846341883, value=zhangsan
1 row(s) in 0.0620 seconds
```

```
hbase(main):005:0> get 'user', 'rk0001', {FILTER => "ValueFilter(=, 'binary:zhangsan')"}
COLUMN                                CELL
info:name                            timestamp=1575846341883, value=zhangsan
1 row(s) in 0.0620 seconds
```

指定rowkey与列值模糊查询

获取user表中row key为rk0001, 列标示符中含有a的信息

```
hbase(main):031:0> get 'user', 'rk0001', {FILTER => "QualifierFilter(=, 'substring:a')"}
COLUMN                                CELL
info:name                            timestamp=1575846341883, value=zhangsan
1 row(s) in 0.0620 seconds
```

继续插入一批数据

```
hbase(main):032:0> put 'user', 'rk0002', 'info:name', 'fanbingbing'
hbase(main):033:0> put 'user', 'rk0002', 'info:gender', 'female'
hbase(main):034:0> put 'user', 'rk0002', 'info:nationality', '中国'
hbase(main):035:0> get 'user', 'rk0002', {FILTER => "ValueFilter(=, 'binary:中国')"}
COLUMN                                CELL
info:name                            timestamp=1576079595805, value=fanbingbing
info:gender                          timestamp=1576079590163, value=female
info:nationality                     timestamp=1576079600535, value=\xE4\xB8\xAD\xE5\x9B\xBD
3 row(s) in 0.0180 seconds
```

查询所有数据

查询user表中的所有信息

```
scan 'user'
```

```
hbase(main):012:0> scan 'user'
ROW                                  COLUMN+CELL
rk0001                             column=data:pic, timestamp=1576071875517, value=picture
rk0001                             column=info:age, timestamp=1576071869638, value=20
rk0001                             column=info:gender, timestamp=1575853346007, value=female
rk0001                             column=info:name, timestamp=1575846341883, value=zhangsan
rk0002                             column=info:gender, timestamp=1576079595805, value=female
rk0002                             column=info:name, timestamp=1576079590163, value=fanbingbing
rk0002                             column=info:nationality, timestamp=1576079600535, value=\xE4\xB8\xAD\xE5\x9B\xBD
2 row(s) in 0.0240 seconds
```

同样也可以在Hue中进行查看

rk0001			
info: gender	info: name	data: pic	info: age
female	2019/12/9 上午7:05:41	picture	20

rk0002		
info: nationality	info: gender	info: name
中国	female	fanbingbing

列族查询

查询user表中列族为info的信息

```
scan 'user', {COLUMNS => 'info'}
```

```
hbase(main):013:0> scan 'user', {COLUMNS => 'info'}
ROW
rk0001      column=info:age, timestamp=1576071869638, value=20
rk0001      column=info:gender, timestamp=1575853346007, value=female
rk0001      column=info:name, timestamp=1575846341883, value=zhangsan
rk0002      column=info:gender, timestamp=1576079595805, value=female
rk0002      column=info:name, timestamp=1576079590163, value=fanbingbing
rk0002      column=info:nationality, timestamp=1576079600535, value=\xE4\xB8\xAD\xE5\x9B\xBD
2 row(s) in 0.0260 seconds
```

多列族查询

查询user表中列族为info和data的信息

```
scan 'user', {COLUMNS => ['info', 'data']}
```

```
hbase(main):015:0> scan 'user', {COLUMNS => ['info', 'data']}
ROW
rk0001      column=data:pic, timestamp=1576071875517, value=picture
rk0001      column=info:age, timestamp=1576071869638, value=20
rk0001      column=info:gender, timestamp=1575853346007, value=female
rk0001      column=info:name, timestamp=1575846341883, value=zhangsan
rk0002      column=info:gender, timestamp=1576079595805, value=female
rk0002      column=info:name, timestamp=1576079590163, value=fanbingbing
rk0002      column=info:nationality, timestamp=1576079600535, value=\xE4\xB8\xAD\xE5\x9B\xBD
2 row(s) in 0.0270 seconds
```

```
scan 'user', {COLUMNS => ['info:name', 'data:pic']}
```

```
hbase(main):017:0> scan 'user', {COLUMNS => ['info:name', 'data:pic']}
ROW
rk0001      column=data:pic, timestamp=1576071875517, value=picture
rk0001      column=info:name, timestamp=1575846341883, value=zhangsan
rk0002      column=info:name, timestamp=1576079590163, value=fanbingbing
2 row(s) in 0.0230 seconds
```

指定列族与某个列名查询

查询user表中列族为info、列标示符为name的信息

```
scan 'user', {COLUMNS => 'info:name'}
```

```
hbase(main):019:0> scan 'user', {COLUMNS => 'info:name'}
ROW
rk0001      column=info:name, timestamp=1575846341883, value=zhangsan
rk0002      column=info:name, timestamp=1576079590163, value=fanbingbing
2 row(s) in 0.0150 seconds
```

指定列族与列名以及限定版本查询

查询user表中列族为info、列标示符为name的信息,并且版本最新的5个

```
scan 'user', {COLUMNS => 'info:name', VERSIONS => 5}
```

```
hbase(main):020:0> scan 'user', {COLUMNS => 'info:name', VERSIONS => 5}
ROW COLUMN+CELL
rk0001 column=info:name, timestamp=1575846341883, value=zhangsan
rk0002 column=info:name, timestamp=1576079590163, value=fanbingbing
2 row(s) in 0.0120 seconds
```

指定多个列族与按照数据值模糊查询

查询user表中列族为info和data且列标示符中含有a字符的信息

```
scan 'user', {COLUMNS => ['info', 'data'], FILTER => "(QualifierFilter(=,'substring:a'))"}
```

```
hbase(main):022:0> scan 'user', {COLUMNS => ['info', 'data'], FILTER => "(QualifierFilter(=,'substring:a'))"}
```

ROW	COLUMN+CELL
rk0001	column=info:age, timestamp=1576071869638, value=20
rk0001	column=info:name, timestamp=1575846341883, value=zhangsan
rk0002	column=info:name, timestamp=1576079590163, value=fanbingbing
rk0002	column=info:nationality, timestamp=1576079600535, value=\xE4\xB8\xAD\xE5\x9B\xBD

rowkey的范围值查询

查询user表中列族为info, rk范围是[rk0001, rk0003)的数据

```
scan 'user', {COLUMNS => 'info', STARTROW => 'rk0001', ENDROW => 'rk0003'}
1
```

```
hbase(main):021:0> scan 'user', {COLUMNS => 'info', STARTROW => 'rk0001', ENDROW => 'rk0003'}
```

ROW	COLUMN+CELL
rk0001	column=info:age, timestamp=1576071869638, value=20
rk0001	column=info:gender, timestamp=1575853346007, value=female
rk0001	column=info:name, timestamp=1575846341883, value=zhangsan
rk0002	column=info:gender, timestamp=1576079595805, value=female
rk0002	column=info:name, timestamp=1576079590163, value=fanbingbing
rk0002	column=info:nationality, timestamp=1576079600535, value=\xE4\xB8\xAD\xE5\x9B\xBD

2 row(s) in 0.0370 seconds

指定rowkey模糊查询

查询user表中row key以rk字符开头的

```
scan 'user',{FILTER=>"PrefixFilter('rk')"}
1
```

```
hbase(main):023:0> scan 'user',{FILTER=>"PrefixFilter('rk')"}
ROW COLUMN+CELL
rk0001 column=data:pic, timestamp=1576071875517, value=picture
rk0001 column=info:age, timestamp=1576071869638, value=20
rk0001 column=info:gender, timestamp=1575853346007, value=female
rk0001 column=info:name, timestamp=1575846341883, value=zhangsan
rk0002 column=info:gender, timestamp=1576079595805, value=female
rk0002 column=info:name, timestamp=1576079590163, value=fanbingbing
rk0002 column=info:nationality, timestamp=1576079600535, value=\xE4\xB8\xAD\xE5\x9B\xBD
2 row(s) in 0.0270 seconds
```

指定数据范围值查询

查询user表中指定范围的数据

```
scan 'user', {TIMERANGE => [1392368783980, 1576071875517]}
1
```

```
hbase(main):002:0> scan 'user', {TIMERANGE => [1392368783980, 1576071875517]}
ROW                                COLUMN+CELL
rk0001                            column=info:age, timestamp=1576071869638, value=20
rk0001                            column=info:gender, timestamp=1575853346007, value=female
rk0001                            column=info:name, timestamp=1575846341883, value=zhangsan
1 row(s) in 0.0550 seconds
```

更新数据操作

更新数据值

更新操作同插入操作一模一样，只不过有数据就更新，没数据就添加

更新版本号

将user表的f1列族版本号改为5

```
hbase(main):050:0> alter 'user', NAME => 'info', VERSIONS => 5
```

删除数据和表

指定rowkey以及列名进行删除

删除user表row key为rk0001，列标示符为info:name的数据

```
hbase(main):045:0> delete 'user', 'rk0001', 'info:name'
```

指定rowkey列名和字段值进行删除

删除user表row key为rk0001，列标示符为info:name，timestamp为1392383705316的数据

```
delete 'user', 'rk0001', 'info:name', 1392383705316
```

删除一个列族

删除一个列族：

```
alter 'user', NAME => 'info', METHOD => 'delete'
```

或

```
alter 'user', 'delete' => 'info'
```

清空数据

```
hbase(main):017:0> truncate 'user'
```

删除表

首先需要先让该表为disable状态，使用命令：

```
hbase(main):049:0> disable 'user'  
1
```

然后才能drop这个表，使用命令

```
hbase(main):050:0> drop 'user'  
(注意：如果直接drop表，会报错：Drop the named table. Table must first be disabled)
```

统计一张表有多少行数据

```
hbase(main):053:0> count 'user'
```