NSD NOSQL DAY05

1. 案例1:配置MongoDB副本集

2. 案例2: 文档管理

1案例1:配置MongoDB副本集

1.1 问题

具体要求:

• 准备3台mongodb服务器

• 配置副本集服务

• 验证副本集配置

1.2 方案

准备三台虚拟机,配置mongodb副本集,ip分别为192.158.4.51,192.168.4.52, 192.168.4.53其中一个是主节点,负责处理客户端请求,其余的都是从节点,负责复制主节点上的数据,实现存储数据副本,提高了数据的可用性,具体分配如表-1所示:

表-1

主机名	IP 地址	端口
mongodb51	192.158.4.51	27077
mongodb51	192.158.4.52	27078
mongodb53	192.158.4.53	27079

1.3 步骤

实现此案例需要按照如下步骤进行。

步骤一: 创建mongodb副本集

1)三台主机安装mongodb(以4.51为例)

- 01. [root@mongodb51~]#cd mongodb/
- 02. [root@mongodb51 mongodb] # mkdir /usr/local/mongodb
- 03. [root@mongodb51 mongodb] # cd /usr/local/mongodb
- 04. [root@mongodb51 mongodb] # cp r \
- 05. /root/mongodb/mongodb-linux-x86_64-rhel70-3.6.3/bin/.
- 06. [root@mongodb51 mongodb] # Is
- 07. bin
- 08. [root@mongodb51 mongodb] # mkdir etc
- 09. [root@mongodb51 mongodb] # mkdir log

10. [root@mongodb51 mongodb] # mkdir - p data/db

11. [root@mongodb51 mongodb] # v im etc/mongodb.conf

- 12. dbpath=/usr/local/mongodb/data/db/
- 13. logpath=/usr/local/mongodb/log/mongodb.log
- 14. logappend=true
- 15. fork=true
- 16. bind_ip=192.168.4.51
- 17. port=27077
- 18. replSet=rs1
- 19. //加入到副本集,rs1名字随便起,想知道谁和我在一个副本集里,三台机器的名字一样

2)设置PATH变量

- 01. [root@mongodb51 mongodb] # v im /etc/profile
- 02. export PATH=/usr/local/mongodb/bin: \$PATH
- 03. [root@mongodb51 mongodb] # source /etc/profile

3)由于启动和停止服务名字太长,可以起一个别名给停止服务起一个别名

01. [root@mongodb51 mongodb] # alias cmdb='mongod -- dbpath=/usr/local/mongodb/data/

←

给启动服务起一个别名

01. [root@mongodb51 mongodb] # alias smdb='mongod - f /usr/local/mongodb/etc/mongodb

→

4)启动服务并连接

- 01. [root@mongodb51~] # smdb
- 02. about to fork child process, waiting until server is ready for connections.
- 03. forked process: 5656
- 04. child process started successfully, parent exiting
- 05. [root@mongodb51 ~] # mongo -- host 192.168.4.51 -- port 27077
- 06. Mongo DB shell version v 3.6.3
- 07. connecting to: mongodb: //192.168.4.51: 27077/
- 08. Mongo DB server version: 3.6.3

09. ... 10. >

5)配置集群信息,任意一台都可以,在这里在51上面操作

```
01.
     > rs1_config = { //rs1_config随便起变量名,要记住
02.
      _id: "rs1", //必须为rs1这个, 三台主机集群名, 配置文件里面写的是这个
03.
     members:
     {_id: 0, host: "192.168.4.51: 27077"}, //_id值随意, host值固定
04.
05.
     { _id: 1, host: "192. 168. 4. 52: 27078"},
06.
     { _id: 2, host: "192.168.4.53: 27079"}
07.
08.
     };
           //回车,出现下面情况为成功
09.
10.
      "_id" : "rs1",
11.
       "members": [
12.
         {
           " id" : 0,
13.
            "host": "192,168,4,51;27077"
14.
15.
         },
16.
           " id": 1,
17.
18.
            "host": "192.168.4.52:27078"
19.
         },
20.
21.
            " id": 2,
            "host": "192,168,4,53;27079"
22.
23.
24.
25. }
26. >
```

6)初始化Replica Sets环境

```
06.
           "clusterTime": Timestamp(1538187475, 1),
07.
           "signature": {
08.
             "hash": BinData(0, "AAAAAAAAAAAAAAAAAAAAAAAAAAA
09.
             "key Id": NumberLong(0)
10.
          }
11.
        }
12.
13.
14.
      rs1: SECONDARY>
15.
                    //提示PRIMARY,51为主
      rs1: PRIMARY>
```

7) 在52和53上面查看

```
01.
      [root@mongodb52 ~] # mongo -- host 192.168.4.52 -- port 27078
02.
      Mongo DB shell version v 3.6.3
03.
      connecting to: mongodb: //192.168.4.52: 27078/
04.
      Mongo DB server version: 3.6.3
05.
      ...
06.
07.
      rs1: SECONDARY>
                          //提示SECONDARY,52为从
08.
      rs1: SECONDA RY>
09.
      rs1: SECONDA RY>
10.
11.
      [root@192 ~] # mongo -- host 192.168.4.53 -- port 27079
12.
      Mongo DB shell version v 3.6.3
13.
      connecting to: mongodb: //192.168.4.53: 27079/
14.
      Mongo DB server version: 3.6.3
15.
16.
17.
      rs1: SECONDARY > //提示SECONDARY , 53为从
18.
      rs1: SECONDARY>
```

注意:如果初始化错误,重启服务登陆之后重新设置变量,之后再重新初始化8)查看状态信息

```
05.
              "_id": 0,
06.
              "name": "192.168.4.51:27077",
07.
             "health": 1
08.
              "state": 1,
09.
              "stateStr": "PRIMARY",
              "uptime": 2295,
10.
11.
12. ...
13.
          },
14.
15.
              " id": 1,
              "name": "192.168.4.52:27078",
16.
17.
             "health": 1,
18.
             "state": 2,
19.
             "stateStr": "SECONDARY",
20.
             "uptime": 384,
21.
22.
            ...
23.
           },
24.
25.
              "_id": 2,
26.
              "name": "192.168.4.53:27079",
27.
             "health": 1,
28.
             "state": 2,
29.
             "stateStr": "SECONDARY",
30.
31.
```

9) 查看是否是master库

```
rs1: PRIMARY> rs.isMaster()
01.
02.
03.
         "hosts":[
04.
           "192.168.4.51:27077",
05.
           "192.168.4.52:27078",
06.
           "192.168.4.53:27079"
07.
        1,
08.
         "setName": "rs1",
                                                                            Top
09.
         "setVersion": 1,
10.
         "ismaster": true,
                            //主库
```

```
11. "secondary": false,
12. "primary": "192.168.4.51:27077",
13. "me": "192.168.4.51:27077",
14. ...
15. ...
```

10)验证副本集,同步数据验证(51上面写数据)

```
01. rs1: PRIMARY> use gamedb2
02. switched to db gamedb2
03. rs1: PRIMARY> db. a. sav e({ name: "y ay a", age: 75, em: "p@.com"})
04. WriteResult({ "nInserted": 1})
```

52上面查看

```
01.
      [root@mongodb52 ~] # mongo -- host 192.168.4.52 -- port 27078
02.
      rs1: SECONDARY> db.getMongo().setSlaveOk()
03.
      rs1: SECONDARY> show dbs
                                  //有gamedb2库
04.
      admin 0.000GB
05.
      config 0.000GB
06.
      ddsdb 0.000GB
07.
      gamedb2 0.000GB
08.
      local 0.000GB
09.
      test 0.000GB
```

步骤三:切换主库验证

1)自动切换主库验证

关闭51

```
01. [root@mongodb51~]#cmdb //之前设置的别名
```

02. killing process with pid: 5656

查看52和53

- 01. [root@mongodb52 ~] # mongo -- host 192.168.4.52 -- port 27078
- 02. Mongo DB shell version v 3.6.3

```
03.
      connecting to: mongodb: //192.168.4.52: 27078/
04.
      Mongo DB server version: 3.6.3
05.
06.
07.
      rs1: PRIMARY>
                       //52为主
08.
      rs1: PRIMARY>
09.
10.
      [root@mongodb53 ~] # mongo -- host 192.168.4.53 -- port 27079
11.
      Mongo DB shell version v 3.6.3
12.
      connecting to: mongodb: //192.168.4.53: 27079/
13.
      Mongo DB server version: 3.6.3
14.
15.
16.
      rs1: SECONDA RY> //53为从
```

启动51,启动后不会再变为主,会成为52的从

```
01.
      [root@mongodb51~]#smdb
02.
       about to fork child process, waiting until server is ready for connections.
03.
       forked process: 6598
04.
       child process started successfully, parent exiting
05.
       rs1: SECONDA RY > rs. isMaster()
06.
07.
         "hosts":[
08.
            "192.168.4.51:27077",
09.
            "192.168.4.52:27078",
            "192, 168, 4, 53; 27079"
10.
11.
         ],
12.
         "setName": "rs1",
13.
         "setVersion": 1,
14.
         "ismaster": false,
15.
         "secondary": true,
16.
         "primary": "192.168.4.52:27078",
17.
         "me": "192.168.4.51:27077",
18.
```

2 案例2: 文档管理

2.1 问题

- 基于MongoDB环境完成下列练习:
- 插入文档
- 查询文档
- 更新文档
- 删除文档

2.2 步骤

实现此案例需要按照如下步骤进行。

步骤一:管理文档

1) 把系统用户信息/etc/passwd存储到mdb库下的user集合里

```
01.
       rs1: PRIMARY> use mdb
02.
       switched to db mdb
03.
       rs1: PRIMARY> db. user. sav e( { name: "y ay a", password: "x", uid: 9999, gid: 9999, comment: "",
04.
       WriteResult({ "nInserted": 1})
05.
       rs1: PRIMARY> exit
06.
       by e
07.
08.
       [root@mongodb52 ~] # mongoexport -- host 192.168.4.52 -- port 27078 - d mdb - c user -
09.
       2018- 09- 29T 11: 04: 14. 967+0800 connected to: 192. 168. 4. 52: 27078
10.
       2018- 09- 29T 11: 04: 14.968+0800 exported 1 record
11.
12.
      [root@mongodb52~]# cp/etc/passwd/tmp
      [root@mongodb52 \sim] # sed - i 's/:/,/g' /tmp/passwd
13.
14.
      [root@mongodb52 ~] # sed - i '$r /tmp/passwd' /tmp/user.csv
15.
      [root@mongodb52 ~] # mongoimport -- host 192.168.4.52 -- port 27078 - d mdb - c user --
16.
       2018- 09- 29T 11: 06: 08. 355+0800 connected to: 192. 168. 4. 52: 27078
17.
       2018- 09- 29T 11: 06: 08. 363+0800 imported 41 documents
```

2) 查看

```
01
       [root@mongodb52 ~] # mongo - - host 192.168.4.52 - - port 27078
02.
       rs1: PRIMARY> use mdb
03.
       switched to db mdb
04.
       rs1: PRIMARY> db. user.findOne()
05.
06.
         "_id": ObjectId( "5baeeb37ce3cc5539aa21f38"),
                                                                                 Top
07.
         "name": "y ay a",
08.
         "password": "x",
```

```
09. "uid": 9999,
10. "gid": 9999,
11. "comment": "",
12. "homdir": "/home",
13. "shell": "/bin/bash"
14. }
```

db.user.find({条件},{定义显示的字段})#指定查询条件并指定显示的字段

```
01. rs1: PRIMARY> db. user.find()
02. { "_id": ObjectId( "5baeeb37ce3cc5539aa21f38"), "name": "y ay a", "password": "x", "ui
03. ...
04. Type "it" for more //出现这个按it,默认出现20行
```

查看每行的name字段

```
01. rs1: PRIMARY> db. user.find({},{name: 1})
02. { "_id" : ObjectId( "5baeeb37ce3cc5539aa21f38") , "name" : "y ay a" }
03. ...
04. ...
05. { "_id" : ObjectId( "5baeec2001805180a1011843") , "name" : "rpc" }
06. Ty pe "it" for more
```

不看 id字段

```
01. rs1: PRIMARY> db. user.find({},{_id: 0})
02. { "name": "y ay a", "password": "x", "uid": 9999, "gid": 9999, "comment": "", "homdir
03. ...
04. ...
05. { "name": "rpc", "password": "x", "uid": 32, "gid": 32, "comment": "Rpcbind Daemon"
06. Ty pe "it" for more
```

不看 id那一列,看name那一列

Top

01. rs1: PRIMARY> db. user.find({},{_id:0,name:1})

```
02. { "name" : "y ay a" }
03. ...
04. ...
05. { "name" : "rpc" }
06. Ty pe "it" for more
```

查看以a开头的name字段

```
01. rs1: PRIMARY> db. user.find( { name: /^a/} ,{ _id: 0} )

02. { "name" : "adm", "password" : "x", "uid" : 3, "gid" : 4, "comment" : "adm", "homdir" : '

03. { "name" : "abrt", "password" : "x", "uid" : 173, "gid" : 173, "comment" : "", "homdir" : '

04. { "name" : "av ahi", "password" : "x", "uid" : 70, "gid" : 70, "comment" : "Av ahi mDNS/D
```

显示查询结果的前一行

limit 数字

```
01. rs1: PRIMARY> db. user.find( { name: /^a/} ,{ _id: 0} ) . limit ( 1)
02. { "name": "adm", "password": "x", "uid": 3, "gid": 4, "comment": "adm", "homdir": '
```

显示name字段以a开头的第一行

```
01. rs1: PRIMARY> db. user.findOne( { name: /^a/} ,{ _id: 0, name: 1, shell: 1, uid: 1} )
02. { "name": "adm", "uid": 3, "shell": "/sbin/nologin" }
```

跳过几行显示 (2行)

skip 数字

```
01. rs1: PRIMARY> db. user.find( { name: /^a/} ,{ _id: 0, name: 1, shell: 1} ) . skip ( 2)  
02. { "name" : "av ahi", "shell" : "/sbin/nologin" }
```

默认升序排序

sort 字段名

<u>Top</u>

```
01. rs1: PRIMARY> db. user.find( { name: /^a/}, { _id: 0, name: 1, shell: 1, uid: 1} ) . sort( { uid: 1} )
02. { "name" : "adm", "uid" : 3, "shell" : "/sbin/nologin" }
03. { "name" : "av ahi", "uid" : 70, "shell" : "/sbin/nologin" }
04. { "name" : "abrt", "uid" : 173, "shell" : "/sbin/nologin" }
```

降序排序

```
    01. rs1: PRIMARY> db. user.find( { name: /^a/} ,{ _id: 0, name: 1, shell: 1, uid: 1} ) . sort( { uid: - 1} )
    02. { "name": "abrt", "uid": 173, "shell": "/sbin/nologin" }
    03. { "name": "av ahi", "uid": 70, "shell": "/sbin/nologin" }
    04. { "name": "adm", "uid": 3, "shell": "/sbin/nologin" }
```

显示name字段以a开头和uid为3的所有行

```
01. rs1: PRIMARY> db. user.find( { name: /^a/, uid: 3} ,{ _id: 0, name: 1, shell: 1, uid: 1} )
02. { "name": "adm", "uid": 3, "shell": "/sbin/nologin" }
```

3)条件判断的表示方式

\$in 在...里

```
01. rs1: PRIMARY> db. user.find({ uid:{$in:[1,6,9]}}) //uid的为1或者6或者9的匹配
02. { "_id": ObjectId("5baeec2001805180a1011833"), "name": "bin", "password": "x", "uid"
03. { "_id": ObjectId("5baeec2001805180a1011838"), "name": "shutdown", "password": "x"
```

\$nin 不在...里

Top

\$or 条件满足任意其中一个即可

```
    O1. rs1: PRIMARY> db. user.find( { $or:[ { name: "root"}, { uid: 1} ] }, { _id: 0, name: 1, uid: 1} )
    O2. { "name": "root", "uid": 0 }
    O3. { "name": "bin", "uid": 1}
```

4)正则匹配,以a开头的name字段

```
01     rs1: PRIMARY> db. user.find( { name: /^a/} , { _id: 0, name: 1, uid: 1} )
02.     { "name" : "adm", "uid" : 3 }
03.     { "name" : "abrt", "uid" : 173 }
04.     { "name" : "av ahi", "uid" : 70 }
```

5)数值比较

\$lt(小于) \$lte(小于等于) \$gt(大于) \$gte(大于等于) \$ne(不等于)

匹配null:可以匹配没有的字段,也可以检查这个字段有没有

```
01. rs1: PRIMARY > db. user.save({name: null, uid: null})
02. WriteResult({ "nInserted": 1})
03. rs1: PRIMARY > db. user.find({name: null})
04. { "_id": ObjectId("5baef 385f 9f 3bf 625ea1dbd6"), "name": null, "uid": null}
05.
06. rs1: PRIMARY > db. user.find({shell: null}) //表示此条文档没有shell字段
07. { "_id": ObjectId("5baef 385f 9f 3bf 625ea1dbd6"), "name": null, "uid": null}
08. rs1: PRIMARY >
```

6) save和insert的区别

<u>Top</u>

相同点: 当集合不存在时创建集合, 并插入记录

不同点:save()_id字段值已经存在时,修改文档字段值insert()_id字段值已经存在时,放弃修改文档字段值

```
01.
       rs1: PRIMARY> db.t1.save({ name: "bob", age: 19})
02.
       WriteResult({ "nInserted": 1})
03.
       rs1: PRIMARY> db.t1 insert( { name: "bob", age: 19})
04.
       WriteResult({ "nInserted": 1})
05.
06.
       rs1: PRIMARY> db.t1.save( { _id: 7, name: "bob", age: 19})
07.
       WriteResult({ "nMatched": 0, "nUpserted": 1, "nModified": 0, "_id": 7})
       rs1: PRIMARY> db.t1.find()
08.
09.
10.
      { "_id" : 7, "name" : "bob", "age" : 19}
11.
12.
       rs1: PRIMARY > db.t1 save({ id: 7, name: "tom", age: 19}) //把上一条的记录直接修改
13.
       WriteResult({ "nVatched": 1, "nUpserted": 0, "nVbdified": 1})
14.
       rs1: PRIMARY> db.t1.find()
15.
       ...
16.
17.
      { "_id" : 7, "name" : "tom", "age" : 19 }
18.
       rs1: PRIMARY>
19.
20.
21.
       rs1: PRIMARY>
22.
       rs1: PRIMARY> db.t1.insert({ id: 8, name: "tom", age: 19}) //可以存上
23.
       WriteResult({ "nInserted": 1})
24.
       rs1: PRIMARY> db.t1 insert( { _id: 8, name: "tom", age: 19})
                                                                 //存不上
25.
       WriteResult({
26.
         "nInserted": 0.
         "writeError": {
27.
28.
            "code": 11000,
29.
            "errmsg": "E11000 duplicate key error collection: mdb.t1 index: _id_ dup key: { : 8.0
30.
        }
31.
      })
```

7)插入多行文档

```
Top
```

```
O1. rs1: PRIMARY> db.t1 insertMany([{ name: "xiaojiu"},{ name: "laoshi"}])
O2. {
```

```
03.
          "acknowledged": true,
04.
          "insertedIds":[
             ObjectId( "5baef 526f 9f 3bf 625ea1dbd9"),
05.
06.
             ObjectId( "5baef 526f 9f 3bf 625ea1dbda")
07.
          ]
08.
09.
10.
       rs1: PRIMARY> db.t1.find()
11.
12.
13.
      { " id" : ObjectId( "5baef 526f 9f 3bf 625ea1dbd9") , "name" : "xiaojiu" }
14.
      { "_id" : ObjectId( "5baef 526f 9f 3bf 625ea1dbda") , "name" : "lao shi" }
```

8) update修改

```
01. rs1: PRIMARY> db. user.update({ name: "root"},{ password: "XXX"})
02. //如果这一列不写完整,这一行除了password这一行,这一列的其他值都没有了相当于
03. WriteResult({ "nMatched": 1, "nUpserted": 0, "nModified": 1})
04. rs1: PRIMARY> db.t1find({ name: "root"})
05. rs1: PRIMARY> db. user.find({ name: "root"}) //没有东西,除了password: "XXX"
```

9) \$set 条件匹配时,修改指定字段的值(局部修改)

```
01.
      rs1: PRIMARY> db. user. update( { name: "adm"} , { $set: { password: "AAA"} } )
      WriteResult({ "nVatched": 1, "nUpserted": 0, "nVbdified": 1})
02.
03.
      rs1: PRIMARY> db. user.find( { name: "adm"})
                                                   //还存在
      { "id": ObjectId( "5baeec2001805180a1011835"), "name": "adm", "password": "AAA",
04.
05.
06.
07.
      rs1: PRIMARY> db. user. update( { name: /^r/}, { $set: { password: "FFF"} } )
08.
       //默认修改匹配条件的第一行
      WriteResult({ "nMatched": 1, "nUpserted": 0, "nModified": 1})
09.
10.
      rs1: PRIMARY> db. user. update( { name: /^a/}, { $set: { password: "FFF"}}, false, true)
      //改匹配到的所有
11.
12.
      WriteResult({ "nMatched": 3, "nUpserted": 0, "nModified": 3})
```

10) \$unset 删除与条件匹配文档的字段

```
01.
              rs1: PRIMARY> db. user. update({ name: "sy nc"}, { $unset: { password: 1}})
        02.
              //删除password字段
        03.
              WriteResult({ "nMatched": 1, "nUpserted": 0, "nModified": 1})
11)数组
        01.
              rs1: PRIMARY> db. user.insert( { name: "bob", like: [ "a", "b", "c", "d", "e", "f", ]})
        02.
              WriteResult({ "nInserted": 1})
$pop 删除数组末尾一个元素,1删除最后一个,-1删除第一个
        01.
              rs1: PRIMARY> db. user. update( { name: "bob"}, { $pop: { like: 1} })
        02.
              //删除匹配的第一条的最后一个
        03.
              WriteResult({ "nMatched": 1, "nUpserted": 0, "nModified": 1})
        04.
              rs1: PRIMARY> db. user. update( { name: "bob"}, { $pop: { like: - 1} })
        05.
              //删除匹配的第一条的第一个
        06.
              WriteResult({ "nMatched": 1, "nUpserted": 0, "nModified": 1})
$push 向数组中添加新元素
        01.
              rs1: PRIMARY> db. user. update( { name: "bob"}, { $push: { like: "Z"} })
                                                                             //默认添加到最后
        02.
              WriteResult({ "nMatched": 1, "nUpserted": 0, "nMbdified": 1})
        03.
              rs1: PRIMARY> db. user. update( { name: "bob"}, { $push: { like: "W"} })
        04.
              WriteResult({ "nMatched": 1, "nUpserted": 0, "nModified": 1})
        05.
              rs1: PRIMARY> db. user.find( { name: "bob"})
        06.
              { "_id" : ObjectId( "5baef 7b2034891a205de2959") , "name" : "bob", "like" : [ "b", "c", "d"
$addToSet 避免重复添加
        01.
              rs1: PRIMARY> db. user. update( { name: "bob"}, { $addToSet: { like: "W"}})
        02.
              WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 0})
        03.
              rs1: PRIMARY > db. user.find( { name: "bob"})
              04.
```

\$pull 删除数组里的指定元素,若有两个bob可以用 id值定义把name:"bob"换成id值

```
01     rs1: PRIMARY> db. user. update( { name: "bob"} , { $pull: { like: "c"} } )
02.     WriteResult( { "nl/atched" : 1, "nUpserted" : 0, "nl/bdified" : 1 } )
03.     rs1: PRIMARY> db. user. f ind( { name: "bob"} )
04.     { "_id" : ObjectId( "5baef 7b2034891a205de2959") , "name" : "bob", "like" : [ "b", "d", "e"
05.     rs1: PRIMARY> db. user. update( { "_id": ObjectId( "5afc1a717eff 45e9cfc57ed3") } , { $push: { lik
06.     WriteResult( { "nl/atched" : 0, "nl/pserted" : 0, "nl/bdified" : 0 } )
07.     rs1: PRIMARY>
```

\$inc 条件匹配时,字段值自加或自减

```
01.
       rs1: PRIMARY> db. user. update( { uid: { $lte: 10} } , { $inc: { uid: 2} } )
02.
       //设置字段值自加2,默认改第一行
03.
       WriteResult({ "nMatched": 1, "nUpserted": 0, "nModified": 1})
04.
05.
       rs1: PRIMARY> db. user. update( { uid: { $lte: 10} } , { $inc: { uid: 2} } , false, true)
06.
       //设置字段值自加2, false, true改全部
07.
       WriteResult({ "nMatched": 8, "nUpserted": 0, "nModified": 8})
08.
       rs1: PRIMARY>
09.
10.
       rs1: PRIMARY> db. user. update( { uid: { $lte: 10} } , { $inc: { uid: - 1} } )
11.
       //负数时是自减1,默认改第一行
12.
       WriteResult({ "nMatched": 1, "nUpserted": 0, "nModified": 1})
```

12)删除文档

remove()与drop()的区别 remove()删除文档时不删除索引 drop()删除集合的时候同时删除索引

```
01. rs1: PRIMARY > db.t1.remove({})
02. WriteResult({ "nRemoved": 6})
03.
04. rs1: PRIMARY > db.user.remove({name: "/^a/"}) //删除以a开头的记录
05. WriteResult({ "nRemoved": 0})
06.
07. rs1: PRIMARY > db.t1.drop() //删除集合t1
```

08. true

09. rs1: PRIMARY>