MongoDB 命令

帮助help 命令

查看当前MongoDB 版本

version()

创建数据库 & 切换数据库

use DATABASE_NAME

如果数据库不存在,则创建数据库,否则切换到指定数据库。

查看当前数据库

db

删除数据库

db.dropDatabase()

删除当前数据库

删除集合

db. collection. drop()

```
> use person;
switched to db person
> db
person
> show tables;
> db.user.insert(("id":1001, "name":"qingjaing li")>
WriteResult(( "nInserted" : 1 >>
> show tables;
system.indexes
user
> db.user.drop()
true
> show tables;
system.indexes
> system.indexes
```

插入文档

- 3.2 版本后还有以下几种语法可用于插入文档:
 - db.collection.insertOne():向指定集合中插入一条文档数据
 - db.collection.insertMany():向指定集合中插入多条文档数据

删除文档

在执行remove()函数前先执行find()命令来判断执行的条件是否正确,这是一个比较好的习惯。

```
)
 MongoDB 2.6 版本以后的语法格式如下:
 db. collection. remove (
            <query>,
            {
                   justOne: <boolean>,
                  writeConcern: <document>
           }
 )
 参数说明:
                     • query:(可选)删除的文档的条件。
                     • justOne: (可选)如果设为 true 或 1,则只删除一个文档。
                     • writeConcern : (可选) 抛出异常的级别。
 > db.user.find({username:"Qingjiang Li"}).count()
       db.user.find({username:"Qingjiang Li"}).pretty()
                   "_id" : ObjectId("598bcab332b7f86bf4643e6a"),
"username" : "Qingjiang Li",
"password" : "liqingjiang",
"age" : 26,
"gender" : 1,
"createTime" : "2017-08-10 10:51:30"
                  "_id" : ObjectId("598be6a732b7f86bf4643e72"),
"username" : "Qingjiang Li",
"password" : "liqingjiang",
"age" : 26,
                   "age" : 26,
"gender" : 1,
"createTime" : "2017-08-10 10:51:30"
        "_id" : ObjectId("598be6b332b7f86bf4643e73"), "username" : "Qingjiang Li" }
                  "_id" : ObjectId("598be6cb32b7f86bf4643e74"),
"username" : "Qingjiang Li",
"password" : "liqingjiang",
"age" : 26,
                   "age" : 26,
"gender" : 1,
"createTime" : "2017-08-10 10:51:30"
db.user.remove({username:"Qingjiang Li"}, 1)
writeResult({ "nRemoved" : 1 })
> db.user.find({username:"Qingjiang Li"}).count()
3
       db.user.find({username:"Qingjiang Li"}).pretty()
                   "_id" : ObjectId("598be6a732b7f86bf4643e72"),
"username" : "Qingjiang Li",
"password" : "liqingjiang",
"age" : 26,
"gender" : 1,
"createTime" : "2017-08-10 10:51:30"
        "_id" : ObjectId("598be6b332b7f86bf4643e73"), "username" : "Qingjiang Li" }
                   "_id" : ObjectId("598be6cb32b7f86bf4643e74"),
"username" : "Qingjiang Li",
"password" : "liqingjiang",
"age" : 26,
"""" | """" | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """ | """
                   "age": 26,
"gender": 1,
"createTime": "2017-08-10 10:51:30"
 | db.user.remove({username:"Qingjiang Li"})
| writekesult({ "nkemoved" : 3 })
| db.user.find({username:"Qingjiang Li"}).count()
```

0

```
db.user.find({username:"Qingjiang Li"}).pretty()
{ "_id" : ObjectId("598be8ae32b7f86bf4643e79"), "username" : "Qingjiang Li" }
{ "_id" : ObjectId("598be8b332b7f86bf4643e7a"), "username" : "Qingjiang Li" }
{ "_id" : ObjectId("598be8b432b7f86bf4643e7b"), "username" : "Qingjiang Li" }
{ "_id" : ObjectId("598be8b532b7f86bf4643e7c"), "username" : "Qingjiang Li" }
} > db.user.remove({username:"Qingjiang Li"}, {justOne:1})
WriteResult({ "nRemoved" : 1 })
> db.user.find({username:"Qingjiang Li"}).pretty()
{ "_id" : ObjectId("598be8b332b7f86bf4643e7a"), "username" : "Qingjiang Li" }
{ "_id" : ObjectId("598be8b432b7f86bf4643e7b"), "username" : "Qingjiang Li" }
{ "_id" : ObjectId("598be8b532b7f86bf4643e7c"), "username" : "Qingjiang Li" }
> db.user.remove({username:"Qingjiang Li"})
WriteResult({ "nRemoved" : 3 })
> db.user.find({username:"Qingjiang Li"}).pretty()
> db.user.find({username:"Qingjiang Li"}).pretty()
```

更新文档

MongoDB 使用 update() 和 save() 方法来更新集合中的文档。update() 方法用于更新已存在的文档。语法格式如下:

参数说明:

- query: update的查询条件
- update: update的对象和一些更新的操作符(如\$,\$inc...)等
- upsert:可选,这个参数的意思是,如果不存在update的记录,是否插入objNew,true为插入,默认是false,不插入。
- **multi**:可选,mongodb 默认是false,只更新找到的第一条记录,如果这个参数为true,就把按条件查出来多条记录全部更新。
- writeConcern:可选,抛出异常的级别。

```
db.user.find({username:"liyujie"}).pretty();
          "_id" : ObjectId("598bfc5d32b7f86bf4643e7f"),
"sid" : 1001,
"username" : "liyujie"
}
db.user.update(
... {username:"liyujie"},
... {$set:{ "username":"Yujie Li",
... "password":"liqingjiang",
... "age":25,
... "gender":1,
... "createTime" : "2017-08-10 12:12:12",
... "updateTime" : "2017-08-10 12:23:34",
... "birthday" : "1991-12-06 00:00:00"}
... }.
        },
{upsert:true, multi:true}
 . . .
 writeResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
> db.user.update({username:"Yujie li"},{$unset:{sid:1}},false,true)
writeResult({ "nMatched" : 0, "nUpserted" : 0, "nModified" : 0 })
     db.user.find({username:"Yujie Li"}).pretty()
          "_id" : ObjectId("598bfc5d32b7f86bf4643e7f"),
"sid" : 1001,
"username" : "Yujie Li",
"password" : "liqingjiang",
"age" : 25,
"gender" : 1,
"createTime" : "2017-08-10 12:12:12",
"updateTime" : "2017-08-10 12:23:34",
"birthday" : "1991-12-06 00:00:00"
> db.user.update({username:"Yujie Li"},{$unset:{sid:1}},false,true)
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
    db.user.find({username:"Yujie Li"}).pretty()
          "_id" : ObjectId("598bfc5d32b7f86bf4643e7f"),
"username" : "Yujie Li",
"password" : "liqingjiang",
"age" : 25,
          password : Trigring rang ,
"age" : 25,
"gender" : 1,
"createTime" : "2017-08-10 12:12:12",
"updateTime" : "2017-08-10 12:23:34",
"birthday" : "1991-12-06 00:00:00"
 save() 方法通过传入的文档来替换已有文档。语法格式如下:
 db.collection.save(
  <document>,
 writeConcern: <document>
 }
 )
 参数说明:
```

- document: 文档数据。
- writeConcern:可选,抛出异常的级别。

查询文档

MongoDB 查询文档使用 find() 方法。

find()方法以非结构化的方式来显示所有文档。

MongoDB 查询数据的语法格式如下:

db. collection. find (query, projection)

- query: 可选,使用查询操作符指定查询条件
- projection : 可选,使用投影操作符指定返回的键。查询时返回文档中所有键值, 只需省略该参数即可(默认省略)。

如果你需要以易读的方式来读取数据,可以使用 pretty() 方法,语法格式如下: >db. col. find(). pretty()

pretty() 方法以格式化的方式来显示所有文档。

除了 find() 方法之外,还有一个 findOne() 方法,它只返回一个文档。

MongoDB 与 RDBMS Where 语句比较

大于,小于,等于及其组合

操作	格式	范例	RDBMS中的类似 语句
等于	{ <key>:<value>}</value></key>	db.col.find({"name":"jiang"}).pretty()	where name = 'jian g'
小于	{ <key>:{\$lt:<value>}}</value></key>	db.col.find({"likes":{\$lt:50}}).pretty(where likes < 50
小于或 等于	{ <key>:{\$lte:<value> }}</value></key>	db.col.find({"likes":{\$lte:50}}).prett y()	where likes <= 50
大于	{ <key>:{\$gt:<value>} }</value></key>	db.col.find({"likes":{\$gt:50}}).pretty ()	where likes > 50
大于或 等于	{ <key>:{\$gte:<value >}}</value </key>	db.col.find({"likes":{\$gte:50}}).prett y()	where likes >= 50
不等于	{ <key>:{\$ne:<value> }}</value></key>	db.col.find({"likes":{\$ne:50}}).prett y()	where likes != 50

and 条件

```
db.col.find({key1:value1, key2:value2}).pretty()
```

or 条件

and & or

eg:

```
db.user.find({age:25, $or:[{gender:1}, {gender:2}]}).pretty()
{
    "_id": objectId("598bd8b032b7f86bf4643e6c"),
    "username": "Penghua Liu",
    "password": "liupenghua",
    "age": 25,
    "gender": 1,
    "createrime": "2017-08-10 12:12:12",
    "updaterime": "2017-08-10 12:23:34",
    "birthday": "1992-7-18 00:00:00"

{
    "_id": objectId("598bd8b032b7f86bf4643e6d"),
    "username": "Yanhui Zhang",
    "password": "zhangyanhui",
    "age": 25,
    "gender": 1,
    "createrime": "2017-08-10 12:12:12",
    "updaterime": "2017-08-10 12:23:34",
    "birthday": "1992-8-15 00:00:00"

{
    "_id": objectId("598bfb8f32b7f86bf4643e7d"),
    "username": "Qingjiang Li",
    "password": "liqingjiang",
    "age": 25,
    "gender": 1,
    "createrime": "2017-08-10 12:12:12",
    "updaterime": "2017-08-10 12:23:34",
    "birthday": "1991-12-23 00:00:00"

{
    "_id": objectId("598bfc5d32b7f86bf4643e7f"),
    "username": "Yujie Li",
    "password": "liqingjiang",
    "age": 25,
    "gender": 2,
    "createrime": "2017-08-10 12:12:12",
    "updaterime": "2017-08-10 12:12:12",
    "updaterime
```

\$in 条件

db. user. find({age: {\$in: [24, 25, 26]}}). pretty();

```
> db.user.find({age:{$in:[24,25,26]}}).pretty();
{
                               "_id" : ObjectId("598bd73432b7f86bf4643e6b"),
"username" : "Keqiang Du",
"password" : "dukeqiang",
"age" : 26,
                              password : "dukeqiang",
"age" : 26,
"gender" : 1,
"createTime" : "2017-08-10 12:12:12",
"updateTime" : "2017-08-10 12:23:34",
"birthday" : "1991-12-18 00:00:00",
"uid" : 1005
                              "_id" : ObjectId("598bd8b032b7f86bf4643e6c"),
"username" : "Penghua Liu",
"password" : "liupenghua",
"age" : 25,
"gender" : 1,
"createTime" : "2017-08-10 12:12:12",
"updateTime" : "2017-08-10 12:23:34",
"birthday" : "1992-7-18 00:00:00",
"uid" : 1002
                              "_id" : ObjectId("598bd8b032b7f86bf4643e6d"),
"username" : "Yanhui Zhang",
"password" : "zhangyanhui",
"age" : 25,
"gender" : 1,
"createTime" : "2017-08-10 12:12:12",
"updateTime" : "2017-08-10 12:23:34",
"birthday" : "1992-8-15 00:00:00",
"uid" : 1003
                               "_id" : ObjectId("598bfb8f32b7f86bf4643e7d"),
"username" : "Qingjiang Li",
"password" : "liqingjiang",
"age" : 25,
                              password": "liqingjiang",
"age": 25,
"gender": 1,
"createTime": "2017-08-10 12:12:12",
"updateTime": "2017-08-10 12:23:34",
"birthday": "1991-12-23 00:00:00",
"uid": 1001
                              "_id" : ObjectId("598bfc5d32b7f86bf4643e7f"),
"username" : "Yujie Li",
"password" : "liqingjiang",
"age" : 25,
"gender" : 2,
"createTime" : "2017-08-10 12:12:12",
"updateTime" : "2017-08-10 12:23:34",
"birthday" : "1994-12-06 12:12:12",
"uid" : 1004
}
```

在两个数之间

```
db.user.find({age:{$gte:20, $1te:25}}).pretty();
             "_id" : ObjectId("598bd8b032b7f86bf4643e6c"),
"username" : "Penghua Liu",
"password" : "liupenghua",
"age" : 25,
"gender" : 1,
"createTime" : "2017-08-10 12:12:12",
"updateTime" : "2017-08-10 12:23:34",
"birthday" : "1992-7-18 00:00:00"
              "_id" : ObjectId("598bd8b032b7f86bf4643e6d"),
"username" : "Yanhui Zhang",
"password" : "zhangyanhui",
              password : 21angyarmur,
"age" : 25,
"gender" : 1,
"createTime" : "2017-08-10 12:12:12",
"updateTime" : "2017-08-10 12:23:34",
"birthday" : "1992-8-15 00:00:00"
             "_id" : ObjectId("598bfb8f32b7f86bf4643e7d"),
"username" : "Qingjiang Li",
"password" : "liqingjiang",
"age" : 25,
              password : Inqingjiang ,
"age" : 25,
"gender" : 1,
"createTime" : "2017-08-10 12:12:12",
"updateTime" : "2017-08-10 12:23:34",
"birthday" : "1991-12-23 00:00:00"
             "_id" : ObjectId("598bfc5d32b7f86bf4643e7f"),
"username" : "Yujie Li",
"password" : "liqingjiang",
"age" : 25,
              password : Triqring rang ,
"age" : 25,
"gender" : 2,
"createTime" : "2017-08-10 12:12:12",
"updateTime" : "2017-08-10 12:23:34",
"birthday" : "1994-12-06 12:12:12"
}
数据类型匹配查询
> db.user.find({gender:{$type:1}, age:{$lt:25}}).pretty();
              "_id" : ObjectId("598bd8b032b7f86bf4643e6c"),
"username" : "Penghua Liu",
"password" : "liupenghua",
"age" : 25,
"age" : 25,
      db.user.find({gender:{$type:1}, age:{$lte:25}}).pretty();
               | даве" : 25,
| "gender" : 1,
| "createTime" : "2017-08-10 12:12:12"
| "updateTime" : "2017-08-10 12:23:34"
| "birthday" : "1992-7-18 00:00:00"
              "_id" : objectId("598bd8b032b7f86bf4643e6d"),
"username" : "Yanhui Zhang",
"password" : "zhangyanhui",
"age" : 25,
"gender" : 1,
"createTime" : "2017-08-10 12:12:12",
"updateTime" : "2017-08-10 12:23:34",
"birthday" : "1992-8-15 00:00:00"
               "_id" : ObjectId("598bfb8f32b7f86bf4643e7d"),
"username" : "Qingjiang Li",
"password" : "liqingjiang",
"age" : 25,
               password : Indingitary,
"age": 25,
"gender": 1,
"createTime": "2017-08-10 12:12:12",
"updateTime": "2017-08-10 12:23:34",
"birthday": "1991-12-23 00:00:00"
              "_id" : ObjectId("598bfc5d32b7f86bf4643e7f"),
"username" : "Yujie Li",
"password" : "liqingjiang",
"age" : 25,
"gender" : 2,
"createTime" : "2017-08-10 12:12:12",
"updateTime" : "2017-08-10 12:23:34",
"birthday" : "1994-12-06 12:12:12"
分页查询
```

skip() , limit()

```
"_id" : ObjectId("598bd8b032b7f86bf4643e6d"),
"username" : "Yanhui Zhang",
"password" : "zhangyanhui",
"age" : 25,
          password : 21angyarmur,
"age" : 25,
"gender" : 1,
"createTime" : "2017-08-10 12:12:12",
"updateTime" : "2017-08-10 12:23:34",
"birthday" : "1992-8-15 00:00:00"
          "_id" : ObjectId("598bdaab32b7f86bf4643e6e"),
"username" : "wuji Zhang",
"password" : "zhangwuji",
"agge" : 88,
"agge" : 88,
          password . 2nangwuji,

"age" : 88,

"gender" : 1,

"createTime" : "2017-08-10 12:12:12",

"updateTime" : "2017-08-10 12:23:34",

"birthday" : "1929-07-18 00:00:00"
          | давумого : yangungtran , | "age" : 116, | "gender" : 1, | "createTime" : "2017-08-10 12:12:12", | "updateTime" : "2017-08-10 12:23:34", | "birthday" : "1901-07-18 00:00:00"
}
> |
当查询时同时使用sort, skip, limit, 无论位置先后, 最先执行顺序 sort再skip再limit。
排序
> db.user.find({},{"_id":-1,username:1,gender:1,age:1}).sort({gender:1, age:-1}).limit(5).pretty()
{
          "_id" : ObjectId("598bdace32b7f86bf4643e71"),
"username" : "Sanfeng Zhang",
"age" : 117,
          "username":
"age": 117,
"gender": 1
          "_id" : ObjectId("598bdabb32b7f86bf4643e6f"),
"username" : "Dingtian Yang",
"age" : 116,
"gender" : 1
          "_id" : ObjectId("598bdaab32b7f86bf4643e6e"),
"username" : "wuji Zhang",
"age" : 88,
"gender" : 1
          "_id" : ObjectId("598bd73432b7f86bf4643e6b"),
"username" : "Keqiang Du",
"age" : 26,
"gender" : 1
          "_id" : ObjectId("598bd8b032b7f86bf4643e6c"),
"username" : "Penghua Liu",
"age" : 25,
"gender" : 1
}
   db.user.find({age:25},{"_id":-1,username:1,gender:1,age:1}).sort({username:1}).limit(5).pretty()
          "_id" : ObjectId("598bd8b032b7f86bf4643e6c"),
"username" : "Penghua Liu",
"age" : 25,
"gender" : 1
          "_id" : ObjectId("598bfb8f32b7f86bf4643e7d"),
"username" : "Qingjiang Li",
"age" : 25,
"gender" : 1
          "_id" : ObjectId("598bd8b032b7f86bf4643e6d"),
"username" : "Yanhui Zhang",
"age" : 25,
"gender" : 1
          "_id" : ObjectId("598bfc5d32b7f86bf4643e7f"),
"username" : "Yujie Li",
"age" : 25,
"gender" : 2
}
```

db.user.find().skip(2).limit(3).pretty()

MongoDB 监控

MongoDB中提供了mongostat 和 mongotop 两个命令来监控MongoDB的运行情况。

```
        command dirty
        used flushes
        res
        qrw
        arw
        net_out
        conn
        time

        2|0
        0.1%
        79.9%
        0
        1.15G
        297M
        0|0
        0|0
        210b
        46.4k
        9
        Aug
        11
        14:06:07.620

        1|0
        0.1%
        79.9%
        0
        1.15G
        297M
        0|0
        0|0
        207b
        45.9k
        9
        Aug
        11
        14:06:08.620

        1|0
        0.1%
        79.9%
        0
        1.15G
        297M
        0|0
        0
        207b
        45.9k
        9
        Aug
        11
        14:06:09.620

        1|0
        0.1%
        79.9%
        0
        1.15G
        297M
        0|0
        0|0
        207b
        45.9k
        9
        Aug
        11
        14:06:10.621

        1|0
        0.1%
        79.9%
        0
        1.15G
        297M
        0|0
        0|0
        207b
        45.9k
        9
        Aug
        11
        14:06:11.621

        2|0
        0.1%
        79.9%
        0
        1.15G
        297M
        0|0
        0|0
        207b

                                                                                                                                                            1
0
0
0
0
1
0
0
0
0
                    *0
*0
*0
*0
*0
*0
*0
*0
                                                                                  *0
*0
*0
                                                  *0
                                                                                                                   *0
*0
*0
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  *0 *0 *0 *0 *0

*0 *0 *0 *0 *0

^C2017-08-11T14:06:17.007+0800

[root@localhost bin]#

[root@localhost bin]# ./mongotop

2017-08-11T14:06:22.516+0800
                                                                                                                                                      signal
                                                                                                                                                       connected to: 127.0.0.1
                                                                                                                  total
Oms
Oms
Oms
Oms
                                                                                                                                                            read
Oms
Oms
Oms
Oms
                                                                                                                                                                                                  write
                                                                                                                                                                                                                                              2017-08-11T14:06:23+08:00
admin.system.roles
admin.system.users
admin.system.version
local.me
                                                                                                                                                                                                            Oms
Oms
Oms
Oms
local.me
local.oplog.$main
local.oplog.rs
local.startup_log
local.system.replset
river.person
river.user
                                                                                                                           Oms
Oms
Oms
Oms
Oms
                                                                                                                                                                                                            Oms
Oms
Oms
                                                                                                                                                                  Oms
Oms
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Oms
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Oms
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                                                                                                                                                                  0ms
                                                                                                                                                                                                            0ms
                                                                                                                   total
                                                                                                                                                                                                  write
                                                                                                                                                                                                                                             2017-08-11T14:06:24+08:00
                                                                                                                                                             read
admin.system.roles
admin.system.users
admin.system.version
local.me
local.oplog.$main
local.oplog.rs
local.startup_log
local.system.replset
                                                                                                                           Oms
Oms
Oms
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Oms
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Oms
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Oms
Oms
                                                                                                                           Oms
Oms
                                                                                                                                                                  Oms
Oms
                                     river.person
river.user
                                                                                                                            Oms
                                                                                                                                                                  0ms
```

 $^{\text{C2017-08-11T14:06:24.831+0800}}$ signal 'interrupt' received; forcefully terminating [root@localhost bin]#