Redis 持久化

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1.配置aof，并且形成rewrite之前和之后的对比

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AOF默认关闭，开启方法，修改配置文件reds.conf：appendonly yes
##此选项为aof功能的开关，默认为"no"，可以通过"yes"来开启aof功能
##只有在"yes"下，aof重写/文件同步等特性才会生效
appendonly yes

##指定aof文件名称
appendfilename appendonly.aof

##指定aof操作中文件同步策略，有三个合法值：always everysec no,默认为everysec
appendfsync everysec
##在aof-rewrite期间，appendfsync是否暂缓文件同步，"no"表示"不暂缓"，"yes"表示"暂缓"，默认为"no"
no-appendfsync-on-rewrite no

##aof文件rewrite触发的最小文件尺寸(mb,gb),只有大于此aof文件大于此尺寸是才会触发rewrite，默认"64mb"，建议"512mb"
auto-aof-rewrite-min-size 64mb

##相对于"上一次"rewrite，本次rewrite触发时aof文件应该增长的百分比。
##每一次rewrite之后，redis都会记录下此时"新aof"文件的大小(例如A)，那么当aof文件增长到A*(1 + p)之后
##触发下一次rewrite，每一次aof记录的添加，都会检测当前aof文件的尺寸。
auto-aof-rewrite-percentage 100
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root@oraclelinux7:~/redis-3.0.6# cd /etc/redis/
root@oraclelinux7:/etc/redis# ls -ltr
total 44
-rw-r----- 1 root root 41650 Mar  7 15:15 redis.6380.conf
root@oraclelinux7:/etc/redis# cp redis.6380.conf redis.6380.conf.back
root@oraclelinux7:/etc/redis# vi redis.6380.conf
root@oraclelinux7:/etc/redis# diff redis.6380.conf redis.6380.conf.back
512,513c512
< #appendonly no
< appendonly yes
---
> appendonly no
517c516
< appendfilename "appendonly.6380.aof"
---
> appendfilename "appendonly.aof"
root@oraclelinux7:/etc/redis#
root@oraclelinux7:/etc/redis# systemctl stop redis
root@oraclelinux7:/etc/redis# systemctl start redis
root@oraclelinux7:/etc/redis# redis-cli -p 6380
127.0.0.1:6380> config get appendonly
1) "appendonly"
2) "yes"
127.0.0.1:6380>
127.0.0.1:6380> keys *
1) "mytest01"
```

2) "mytest02"

3) "mytest"

127.0.0.1:6380>

127.0.0.1:6380> bgrewriteaof

Background append only file rewriting started

127.0.0.1:6380>

127.0.0.1:6380> config get auto-aof-rewrite-percentage

1) "auto-aof-rewrite-percentage"

2) "100"

127.0.0.1:6380> config get auto-aof-rewrite-min-size

1) "auto-aof-rewrite-min-size"

2) "67108864"

127.0.0.1:6380> config set auto-aof-rewrite-min-size 10485760

OK

127.0.0.1:6380> config get auto-aof-rewrite-min-size

1) "auto-aof-rewrite-min-size"

2) "10485760"

127.0.0.1:6380>

root@oraclelinux7:/# cat appendonly.6380.aof

*2

$6

SELECT

$1

0

*3

$3

SET

$8

mytest01

$3

222

*3

$3

SET

$8

mytest02

$3

333

*3

$3

SET

$6

mytest

$3

111

root@oraclelinux7:/#

root@oraclelinux7:/# strings appendonly.6380.aof

SELECT

mytest01

mytest02

mytest

root@oraclelinux7:/#

测试set数值之后

127.0.0.1:6380> set key1 val1

OK

127.0.0.1:6380> set key2 val2

OK

127.0.0.1:6380> set key3 val3

OK

127.0.0.1:6380>

 /root/redis-3.0.6/log/redis.log和/appendonly.6380.aof 文件大小变化--》redis.log没有变化

root@oraclelinux7:~# ls -l /root/redis-3.0.6/log/redis.log /appendonly.6380.aof

-rw-r--r-- 1 root root   218 Apr 16 02:22 /appendonly.6380.aof

-rw-r--r-- 1 root root 75795 Apr 16 02:15 /root/redis-3.0.6/log/redis.log

root@oraclelinux7:~# ls -l /root/redis-3.0.6/log/redis.log /appendonly.6380.aof

-rw-r--r-- 1 root root   251 Apr 16 02:24 /appendonly.6380.aof

-rw-r--r-- 1 root root 75795 Apr 16 02:15 /root/redis-3.0.6/log/redis.log

root@oraclelinux7:~#

2.配置rdb，手动命令和后台触发，截图对比持久化之前和之后的数据文件的差异

root@oraclelinux7:/etc/redis# vi redis.6380.conf

root@oraclelinux7:/etc/redis#

root@oraclelinux7:/etc/redis# systemctl start redis

root@oraclelinux7:/etc/redis# systemctl status redis

仟 redis.service - Redis

  Loaded: loaded (/usr/lib/systemd/system/redis.service; enabled; vendor preset: disabled)

  Active: active (running) since Mon 2018-04-16 02:30:44 AEST; 5s ago

 Process: 17986 ExecStop=/root/redis-3.0.6/src/redis-cli -h 127.0.0.1 -p 6380 shutdown (code=exited, status=0/SUCCESS)

 Process: 18179 ExecStart=/root/redis-3.0.6/src/redis-server /etc/redis/redis.6380.conf (code=exited, status=0/SUCCESS)

 Main PID: 18181 (redis-server)

  CGroup: /system.slice/redis.service

      剝�22118181 /root/redis-3.0.6/src/redis-server *:6380

Apr 16 02:30:44 oraclelinux7.vagrant.vm systemd[1]: Starting Redis...

Apr 16 02:30:44 oraclelinux7.vagrant.vm systemd[1]: Started Redis.

root@oraclelinux7:/etc/redis# redis-cli -p 6380

127.0.0.1:6380> get key1

"val1"

127.0.0.1:6380> set key4 val4

OK

127.0.0.1:6380> set key5 val5

OK

127.0.0.1:6380> save

OK

127.0.0.1:6380>

执行save命令OK，将redis数据写入磁盘

只执行set命令设置键值，没有保存，数据存放在缓存，没写入磁盘，因此此时dump.rdb文件大小不变

root@oraclelinux7:~/redis-3.0.6# find / -name dump.6380*

/dump.6380.rdb

root@oraclelinux7:~/redis-3.0.6# cd /

root@oraclelinux7:/# strings dump.6380.rdb

REDIS0006

key4

val4

key3

val3

mytest02

mytest

key1

val1

key5

val5

mytest01

key2

val2

root@oraclelinux7:/#

root@oraclelinux7:/# ls -l dump.6380.rdb

-rw-r--r-- 1 root root 111 Apr 16 02:31 dump.6380.rdb

root@oraclelinux7:/# ls -l dump.6380.rdb

-rw-r--r-- 1 root root 133 Apr 16 02:36 dump.6380.rdb

root@oraclelinux7:/#

执行bgsave命令和save命令的返回值不同，save命令是在当前线程下执行，会阻塞客户端其他请求的执行；bgsave返回：Background saving started，是fork一个子进程来执行数据保存，不会阻塞客户端其他请求的执行；

127.0.0.1:6380> set key8 val8

OK

127.0.0.1:6380> bgsave

Background saving started

127.0.0.1:6380>

从redis日志看到：这次bgsave命令作为后台执行的命令，fork一个子进程（进程号为19340）将数据保存到磁盘；

18181:M 16 Apr 02:38:12.664 * Background saving started by pid 19340

19340:C 16 Apr 02:38:12.668 * DB saved on disk

19340:C 16 Apr 02:38:12.668 * RDB: 6 MB of memory used by copy-on-write

18181:M 16 Apr 02:38:12.723 * Background saving terminated with success

默认save的配置：

127.0.0.1:6380> config get save

1) "save"

2) "900 1 300 10 60 10000"

127.0.0.1:6380>

root@oraclelinux7:/etc/redis# cat redis.6380.conf | grep save | grep -v "^#"

save 900 1

save 300 10

save 60 10000

stop-writes-on-bgsave-error yes

root@oraclelinux7:/etc/redis#

Save 900 1 表示在900秒内有一次数据更新操作就触发持久化