Vip:192.168.4.253

客户端

keepalived+DR2

192.168.4.167

keepalived+DR1

192.168.4.166

Web\_2

192.168.4.165

Maxscale读写分离

192.168.4.163

Web\_1

192.168.4.164

Mysql-slave

192.168.4.161

Mysql-master

192.168.4.160

**一、配置mysql主从同步[192.168.4.160、192.168.4.161]**

**一[ 01 ]安装nysql软件[192.168.4.160、192.168.4.161]**

1、下载mysql软件包或源码包安装： mysql-5.7.17.tar

2、tar -xzvf mysql-5.7.17.tar

3、rpm -ivh mysql-community-\*.rpm 或 yum -y install mysql-community-\*.rpm

4、systemctl start mysqld 或 service mysqld start 、chkconfig mysqld off

5、 grep "password" /var/log/mysqld.log

6、mysql -uroot -p"初始密码"

7、alter user root@"localhost" identified by "AA12..aa" ---->修改初始密码

**一[ 02 ]mysql-master[192.168.4.160]配置：**

1、vim /etc/my.cnf

[mysqld]

server-id=160

log\_bin=mysql160

binlog-format="mixed"

2、systemctl restart mysqld 或 service mysqld restart

3、ls /var/lib/mysql/mysql160.\* ----------->查看是否有binlog日志

4、授权定义slave用户: mysql -uroot -pAA12..aa

grant replication slave on \*.\* to userslave@"%" identified by "AA12..aa"

5、授权测试用户:

grant select,insert,update on mysqldb.\* to admin@"%" identified by "AA12..aa"

6、creater database mysqldb; create table mysqldb.user(name char(20),password char(20));

**一[ 03 ]mysql-slave[192.168.4.161]配置：**

1、vim /etc/my.cnf

[mysqld]

server-id=161

2、systemctl mysqld restart 或 service mysqld restart

3、mysql -uroot -pAA12..aa

4、show slave status\G;

5、show master status; ------>在192.168.4.160主机查，mysql -uroot -pAA12..aa

6、change master to master\_host="192.168.4.160",master\_user="userslave", \

master\_password="AA12..aa",master\_log\_file="在192.168.4.160主机查；File下：mysql160.000000", \

master\_log\_pod=在192.168.4.160主机查;Position下：1033;

7、start slave; show slave status\G;

8、在客户端访问测试：mysql -h192.168.4.160 -uadmin -pAA12..aa

use mysqldb;

insert into user values("lisi",28);

注意:提前是:客户端要安装mysql软件

9、在192.168.4.160主机查看是否有记录：mysql -uroot -pAA12..aa

select \* from mysqldb.user;

**二、配置maxscale读写分离[192.168.4.162]**

**二[ 01 ]安装maxscale软件**

1、下载 maxscale-2.1.2-1.rhel.7.x86\_64.rpm

2、rpm ivh maxscale-2.1.2-1.rhel.7.x86\_64.rpm

3、cp /etc/maxscale.cnf /etc/maxscale.cnf.bak ------------>备份

4、vim /etc/maxscale.cnf

9 [maxscale]--------------------->#定义服务启动线程的数量

10 threads=auto

18 [server1]--------------------->#指定第1台数据库服务

19 type=server

20 address=192.168.4.160--------->#指定数据库服务ip地址

21 port=3306 -------------------->#端口号

22 protocol=MySQLBackend

24 [server2]

25 type=server

26 address=192.168.4.161

27 port=3306

28 protocol=MySQLBackend

36 [MySQL Monitor]--------------------->#定义监控的数据库服务器

37 type=monitor ----------------------->#监视器

38 module=mysqlmon -------------------->#模块= mysqlmon

39 servers=server1,server2 ------------>//服务器列表

40 user=scalemon ---------------------->//用户名

41 passwd=AA12..aa -------------------->//密码

42 monitor\_interval=10000

53 #[Read-Only Service]---------------->#不定义只读服务

54 #type=service

55 #router=readconnroute

56 #servers=server1,server

57 #user=myuser

58 #passwd=mypwd

59 #router\_options=slave

64 [Read-Write Service]---------------->#定义读写分离服务

65 type=service

66 router=readwritesplit -------------->#路由器= readwritesplit

67 servers=server1,server2 ------------>#数据库服务器列表

68 user=maxscale ---------------------->//用户名

69 passwd=AA12..aa -------------------->//密码

70 max\_slave\_connections=100%

76 [MaxAdmin Service]------------------>定义管理服务

77 type=service

78 router=cli

86 #[Read-Only Listener]-------------->#不定义只读服务

87 #type=listener

88 #service=Read-Only Service

89 #protocol=MySQLClient

90 #port=4008

92 [Read-Write Listener]-------------->#定义读写分离服务使用的端口

93 type=listener

94 service=Read-Write Service

95 protocol=MySQLClient

96 port=4006

98 [MaxAdmin Listener]--------------->#定义管理服务使用的端口

99 type=listener

100 service=MaxAdmin Service

101 protocol=maxscaled

102 socket=default

103 port=4016

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1. **在mysql-master主机上授权监控用户、读写用户：**

**mysql -uroot -pAA12..aa[192.168.4.160]**

grant replication slave,replication client on \*.\* to scalemon@"%" identified by "AA12..aa";

grant select on mysql.\* to maxscale@"%" identified by "AA12..aa";

**6、在本机[192.168.4.162]启服务：**

maxscale -f /etc/maxscale.cnf

netstat -nutlp | grep :4006 , netstat -nutlp | grep :4016

**7、maxadmin -uadmin -pmariadb -p4016**

lisi servers

**8、在客户端测试读写：**

mysql -h192.168.4.162 -P4006 -uadmin -pAA12..aa

执行select 或 insert 操作

**三、配置web\_1、web\_2[192.168.4.164、192.168.4.165]: LNMP**

1、下载 nginx-1.12.2.tar.gz lnmp\_soft.tar.gz

2、tar -xzvf nginx-1.12.2.tar.gz tar -xzvf lnmp\_soft.tar.gz

3、netstat -nutlp | grep :80 ------->如果是apache的http; systemctl stop httpd

4、yum -y install gcc openssl-devel pcre-devel

5、useradd -s /sbin/nologin nginx

6、cd nginx-1.12.2

./configure --prcfix=/usr/local/nginx

7、make $$ make install

8、/usr/local/nginx/sbin/nginx --------------->启服务

9、echo "<html>

<form action="reg.php" method="post">

<h1> reg login user info :</h1>

<h3>LoginName: </h3><input type="text" name="name" size="20" maxlength="255"/>

<br />

<br />

<h3>LoginPass: </h3><input type="text" name="password" size="20" maxlength="255"/>

<br />

<br />

<h3><input type="submit" name="submit" value="SUBMIT" /></h3></p>

</form>

</html> " > /usr/local/nginx/html/index.html

10、echo "<?php

$servername = "192.168.4.162";

$serverport = "4006"

$username = "admin";

$password = "AA12..aa";

$dbname = "mysqldb";

$conn = new mysqli($servername,$username, $password, $dbname,$serverport);

if ($conn->connect\_error) {

die("link fail: " . $conn->connect\_error);

}else{echo "link mysql Ok"; echo " ";}

$username=$\_POST['name'];

$userpassword=$\_POST['password'];

$sql="insert into user (name,password) values ('$username','$userpassword')";

if($conn->query($sql)){echo "insert data ok"; }

$conn->close();

?>" > /usr/local/nginx/html/reg.php

11、在客户端测试： curl http://192.168.4.164 \192.168.4.165

四、配置keepalived+DR集群[192.168.4.166]:

1、yum -y install ipvsadm keepalived

2、cp /etc/keepalived/keepalived.conf /etc/keepalived/keepalived.conf.bak -->备份

3、vim /etc/keepalived/keepalived.conf

1 ! Configuration File for keepalived

2

3 global\_defs {

4 notification\_email {

5 acassen@firewall.loc

6 failover@firewall.loc

7 sysadmin@firewall.loc

8 }

9 notification\_email\_from Alexandre.Cassen@firewall.loc

10 smtp\_server 192.168.200.1

11 smtp\_connect\_timeout 30

12 router\_id LVS\_DEVEL

13 vrrp\_skip\_check\_adv\_addr

14 #vrrp\_strict

15 vrrp\_garp\_interval 0

16 vrrp\_gna\_interval 0

17 }

18

19 vrrp\_instance lvsha {

20 state MASTER

21 interface eth0

22 virtual\_router\_id 51

23 priority 150

24 advert\_int 1

25 authentication {

26 auth\_type PASS

27 auth\_pass 123456

28 }

29 virtual\_ipaddress {

30 192.168.4.253

31 }

32 }

33

34 virtual\_server 192.168.4.253 80 {

35 delay\_loop 6

36 lb\_algo rr

37 lb\_kind DR

38 #persistence\_timeout 50

39 protocol TCP

40 connect\_timeout 3

41 nb\_get\_retry 3

42 delay\_before\_retry 3

43

44 real\_server 192.168.4.162 80 {

45 weight 1

46 }

47 real\_server 192.168.4.165 80 {

48 weight 1

49 }

50 }

**五、配置keepalived+DR集群[192.168.4.167]:**

1、yum -y install ipvsadm keepalived

2、cp /etc/keepalived/keepalived.conf /etc/keepalived/keepalived.conf.bak -->备份

3、vim /etc/keepalived/keepalived.conf

1 ! Configuration File for keepalived

2

3 global\_defs {

4 notification\_email {

5 acassen@firewall.loc

6 failover@firewall.loc

7 sysadmin@firewall.loc

8 }

9 notification\_email\_from Alexandre.Cassen@firewall.loc

10 smtp\_server 192.168.200.1

11 smtp\_connect\_timeout 30

12 router\_id LVS\_DEVEL

13 vrrp\_skip\_check\_adv\_addr

14 #vrrp\_strict

15 vrrp\_garp\_interval 0

16 vrrp\_gna\_interval 0

17 }

18

19 vrrp\_instance lvsha {

20 state BACKUP

21 interface eth0

22 virtual\_router\_id 51

23 priority 100

24 advert\_int 1

25 authentication {

26 auth\_type PASS

27 auth\_pass 123456

28 }

29 virtual\_ipaddress {

30 192.168.4.253

31 }

32 }

33

34 virtual\_server 192.168.4.253 80 {

35 delay\_loop 6

36 lb\_algo rr

37 lb\_kind DR

38 #persistence\_timeout 50

39 protocol TCP

40 connect\_timeout 3

41 nb\_get\_retry 3

42 delay\_before\_retry 3

43

44 real\_server 192.168.4.162 80 {

45 weight 1

46 }

47 real\_server 192.168.4.165 80 {

48 weight 1

49 }

50 }

######################################################################################

**六、在【192.168.4.166、192.168.4.167】**

1、# ipvsadm -Ln

IP Virtual Server version 1.2.1 (size=4096)

Prot LocalAddress:Port Scheduler Flags

-> RemoteAddress:Port Forward Weight ActiveConn InActConn

TCP 192.168.4.253:80 rr

-> 192.168.4.162:80 Route 1 0 0

-> 192.168.4.165:80 Route 1 0 0

2、ip addr show | grep 192.168.4.253

inet 192.168.4.253/32 scope global eth0

**七、在【192.168.4.164、192.168.4.165】**

1、

echo 1 > /proc/sys/net/ipv4/conf/lo/arp\_ignore

echo 2 > /proc/sys/net/ipv4/conf/lo/arp\_announce

echo 1 > /proc/sys/net/ipv4/conf/all/arp\_ignore

echo 2 > /proc/sys/net/ipv4/conf/all/arp\_announce

2、

ifconfig lo:1 192.168.4.253

3、vim /etc/rc.local

echo 1 > /proc/sys/net/ipv4/conf/lo/arp\_ignore

echo 2 > /proc/sys/net/ipv4/conf/lo/arp\_announce

echo 1 > /proc/sys/net/ipv4/conf/all/arp\_ignore

echo 2 > /proc/sys/net/ipv4/conf/all/arp\_announce

ifconfig lo:1 192.168.4.253

4、chmod +x /etc/rc.local

**八、在客户端测试： firefox http://192.168.4.253**

然后在192.168.4.160、192.168.4.161主机: 查看 mysqldb.user是否插入你刚刚的用户及密码