LVS搭建(注意红色字体)

环境：

LVS VIP: 10.101. 6.200

LVS master: 10.101.6.93

LVS slave: 10.101. 6.94

Nginx-01: 10.101.6.103

Nginx-02: 10.101.6.104

Centos 7/3.10.0-229.14.1

ipvsadm-1.26

keepalived-1.2.4

yum install gcc gcc-c++ vim kernel-devel openssl-devel wget lftplibnl\* popt\* libnl\* libpopt\*

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以下可直接粘贴复制

LVS 上面的配置

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*tar zxvf ipvsadm-1.26.tar.gz*

*cd ipvsadm-1.26*

*make && make install*

*cd ..*

*tar zxvf keepalived-1.2.4.tar.gz*

*cd keepalived-1.2.4*

*ln -s /usr/src/kernels/2.6.32-573.3.1.el6.x86\_64/ /usr/src/linux*

*./configure*

*make && make install*

*cp /usr/local/etc/rc.d/init.d/keepalived /etc/init.d/*

*cp /usr/local/etc/sysconfig/keepalived /etc/sysconfig/*

*mkdir /etc/keepalived/*

*cp /usr/local/etc/keepalived/keepalived.conf /etc/keepalived/*

*cp /usr/local/sbin/keepalived /usr/sbin/*

*sysctl -p*

*vim /etc/sysctl.conf*

*----------------------------------*

*net.ipv4.ip\_forward = 1*

*net.ipv4.conf.lo.arp\_ignore = 1*

*net.ipv4.conf.lo.arp\_announce = 2*

*net.ipv4.conf.all.arp\_ignore = 1*

*net.ipv4.conf.all.arp\_announce = 2*

*----------------------------------*

*sysctl –p*

*sysctl –f*

*service keepalived start*

*ps -ef | grep keepalived*

*cp /etc/keepalived/keepalived.conf /etc/keepalived/bak.keepalived.conf*

*vim /etc/keepalived/keepalived.conf*

*----------------------------------*

*! Configuration File for keepalived*

*global\_defs {*

*notification\_email {*

*huwei150914@credithc.com*

*}*

*notification\_email\_from huwei150914@credithc.com*

*smtp\_server smtp.exmail.com*

*# smtp\_connect\_timeout 30*

*router\_id LVS\_DEVEL*

*}*

*# VIP1*

*vrrp\_instance VI\_1 {*

*state MASTER #名称*

*interface eno16777984*

*lvs\_sync\_daemon\_inteface eno16777984*

*virtual\_router\_id 51*

*priority 150 #优先级*

*advert\_int 5*

*authentication {*

*auth\_type PASS*

*auth\_pass 1111*

*}*

*virtual\_ipaddress {*

10.101. 6.200 *#LVS-vip IP地址*

*}*

*}*

*virtual\_server* 10.101. 6.200*80 {*

*delay\_loop 6 #查询realserver状态*

*lb\_algo wlc*

*lb\_kind DR #Direct Route*

*persistence\_timeout 60 #同一IP的连接60秒内被分配到同一台realserver*

*protocol TCP #用TCP协议检查realserver状态*

*real\_server 10.101.6.103 80 {*

*weight 100*

*TCP\_CHECK {*

*connect\_timeout 10 #10秒无响应超时*

*nb\_get\_retry 3*

*delay\_before\_retry 3*

*connect\_port 80*

*}*

*}*

*real\_server 10.101.6.104 80 {*

*weight 100*

*TCP\_CHECK {*

*connect\_timeout 10*

*nb\_get\_retry 3*

*delay\_before\_retry 3*

*connect\_port 80*

*}*

*}*

*}*

*----------------------------------*

*/etc/init.d/keepalived restart*

*Ipvsadm*

*ipvsadm -L –n*

*ip a*

*tail -f /var/log/messages*

*Slave和 master* 所需的关系包，安装方式一致，唯一不同的是keepalive主配置文件

SSH SLAVE

*vim /etc/keepalived/keepalived.conf*

*----------------------------------*

*! Configuration File for keepalived*

*global\_defs {*

*notification\_email {*

*huwei150914@credithc.com*

*}*

*notification\_email\_from huwei150914@credithc.com*

*smtp\_server smtp.exmail.com*

*# smtp\_connect\_timeout 30*

*router\_id LVS\_DEVEL*

*}*

*# VIP1*

*vrrp\_instance VI\_1 {*

*state SLVAE #名称*

*interface eno16777984*

*lvs\_sync\_daemon\_inteface eno16777984*

*virtual\_router\_id 51 同一个网段只能有一个相同ID*

*priority 100 #优先级*

*advert\_int 5*

*authentication {*

*auth\_type PASS*

*auth\_pass 1111*

*}*

*virtual\_ipaddress {*

10.101. 6.200 *#LVS-vip IP地址*

*}*

*}*

*virtual\_server* 10.101. 6.200*80 {*

*delay\_loop 6 #查询realserver状态*

*lb\_algo wlc*

*lb\_kind DR #Direct Route*

*persistence\_timeout 60 #同一IP的连接60秒内被分配到同一台realserver*

*protocol TCP #用TCP协议检查realserver状态*

*real\_server 10.101.6.103 80 {*

*weight 100*

*TCP\_CHECK {*

*connect\_timeout 10 #10秒无响应超时*

*nb\_get\_retry 3*

*delay\_before\_retry 3*

*connect\_port 80*

*}*

*}*

*real\_server 10.101.6.104 80 {*

*weight 100*

*TCP\_CHECK {*

*connect\_timeout 10*

*nb\_get\_retry 3*

*delay\_before\_retry 3*

*connect\_port 80*

*}*

*}*

*}*

*----------------------------------*

*/etc/init.d/keepalived restart*

*---------*

以上操作完成全部配置的90%

Nginx 01和02上面的配置(分别执行,可以理解为心跳线)

*---------*

ifconfig lo:0 10.101.6.200 netmask 255.255.255.255 broadcast 10.101.6.200

route add -host 10.101.6.200 dev lo:0

*---------*

*LVS添加命令*

ifconfig eno16777984:0 10.101.6.200 broadcast 10.101.6.200 netmask 255.255.255.255 broadcast 10.101.6.200 up

route add -host 10.101.6.200 dev eno16777984:0

*---------*

默认情况下，完成以上操作应该可以通过VIP地址访问，操作完成。如果有问题：

1：检查路由

Ipvsadm

2：检查日志

tail -f /var/log/messages

如果有问题，可在主从LVS手动执行下列操作(因为下面三条在keeplived配置文件中已配置)

ipvsadm -A -t 10.101.6.200:80 -s wlc

ipvsadm -a -t 10.101.6.200:80 -r 10.101.6.103:80

ipvsadm -a -t 10.101.6.200:80 -r 10.101.6.103:80

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信息扩展：

一：熟悉nopreempt  非抢占命令，可实现无主从关系的lvs配置

二：LVS Scheduling Method LVS的调度方法：

1.Fixed Scheduling Method  静态调服方法

(1).RR     轮询

(2).WRR    加权轮询

(3).DH     目标地址hash

(4).SH     源地址hash

2.Dynamic Scheduling Method 动态调服方法

(1).LC     最少连接

(2).WLC    加权最少连接

(3).SED    最少期望延迟

(4).NQ     从不排队调度方法

(5).LBLC   基于本地的最少连接

(6).LBLCR  带复制的基于本地的最少连接

三：ARP抑制

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

四：组播地址

224.0.0.0 基准地址（保留）

224.0.0.1 所有主机的地址 （包括所有[路由器](http://baike.baidu.com/view/1360.htm)地址）

224.0.0.2 所有[组播](http://baike.baidu.com/view/492256.htm)[路由器](http://baike.baidu.com/view/1360.htm)的地址

224.0.0.3 不分配

224.0.0.4 dvmrp[路由器](http://baike.baidu.com/view/1360.htm)

224.0.0.5 所有ospf路由器

224.0.0.6 ospf DR/BDR

224.0.0.7 st[路由器](http://baike.baidu.com/view/1360.htm)

224.0.0.8 st[主机](http://baike.baidu.com/view/23880.htm)

224.0.0.9 rip-2[路由器](http://baike.baidu.com/view/1360.htm)

224.0.0.10 Eigrp[路由器](http://baike.baidu.com/view/1360.htm)

224.0.0.11 活动代理

224.0.0.12 dhcp 服务器/中继代理

224.0.0.13 所有pim[路由器](http://baike.baidu.com/view/1360.htm)

224.0.0.14 rsvp[封装](http://baike.baidu.com/view/154910.htm)

224.0.0.15 所有cbt[路由器](http://baike.baidu.com/view/1360.htm)

224.0.0.16 指定sbm

224.0.0.17 所有sbms

224.0.0.18 vrrp