

修改配置文件：

cd /etc/keepalived

vi keepalived.conf

版本一：未显示vip

...

```
1 ! Configuration File for keepalived
2
3 global_defs {
4     router_id lvs-node01
5 }
6
7 local_address_group laddr_g1 {
8     10.2.1.221
9 }
10
11 virtual_server_group shanks1 {
12     10.2.1.110
13 }
14 vrrp_instance VI_1 {
15     state MASTER
16     interface eth2
17     virtual_router_id 66
18     priority 150
19     advert_int 1
20     authentication {
21         auth_type PASS
22         auth_pass 1111
23     }
24     virtual_ipaddress {
25         10.2.1.110 80
26     }
27 }
28
29 virtual_server 10.2.1.110 80 {
30     delay_loop 6
31     lb_algo rr
32     lb_kind FNAT
```

```

33     protocol TCP
34     syn_proxy
35     laddr_group_name laddr_g1
36     real_server 10.2.1.214 80 {
37         weight 10
38         TCP_CHECK {
39             connect_timeout 3
40             nb_get_retry 3
41             delay_before_retry 3
42             connect_prot 80
43         }
44     }
45
46 virtual_server 10.2.1.110 80 {
47     delay_loop 6
48     lb_algo rr
49     lb_kind FNAT
50     protocol TCP
51     syn_proxy
52     laddr_group_name laddr_g1
53     real_server 10.2.1.215 80 {
54         weight 10
55         TCP_CHECK {
56             connect_timeout 3
57             nb_get_retry 3
58             delay_before_retry 3
59             connect_prot 80
60         }
61     }
62
63 }
64
65

```

版本二：显示vip，可访问，需要在RS上加上路由

```

1 ! Configuration File for keepalived
2
3 global_defs {

```

```
4     router_id lvs-node01
5 }
6
7 local_address_group laddr_g1 {
8     10.2.1.221
9 }
10
11 virtual_server_group shanks1 {
12     10.2.1.112 80
13 }
14
15 vrrp_instance VI_1 {
16     state MASTER
17     interface eth2
18     virtual_router_id 51
19     priority 150
20     advert_int 1
21     authentication {
22         auth_type PASS
23         auth_pass 1111
24     }
25     virtual_ipaddress {
26         10.2.1.112/24
27     }
28 }
29
30 virtual_server 10.2.1.112 80 {
31     delay_loop 6
32     lb_algo rr
33     lb_kind FNAT
34     protocol TCP
35     syn_proxy
36     real_server 10.2.1.215 80
37     {
38         weight 1
39     }
40 }
41 virtual_server 10.2.1.112 80 {
42     delay_loop 6
43     lb_algo rr
```

```

44     lb_kind FNAT
45     protocol TCP
46     syn_proxy
47     real_server 10.2.1.214 80
48     {
49         weight 1
50     }
51 }
52

```

在RS: 214,215上加路由(配置正确后在keepalived主机上执行systemctl restart keepalived.service。从client上执行curl 10.2.1.112发现还是无法访问。这是由于real\_server在接收到请求包后找不到路由进行数据返回，此时需要将keepalived主机作为网关，在real\_server上添加回程路由route add default gw 10.2.1.112。10.2.1.112即为keepalived主机。考虑keepalived主机一般双机，因此此处可以用keepalived主机的虚拟IP。现在再执行就可以正常返回。

```

1 route add default gw 10.2.1.112

```

Host解析修改:

```

1 [root@lvs-node01 ~]# vim /etc/hosts
2 127.0.0.1    localhost localhost.localdomain localhost4
   localhost4.localdomain4
3 ::1         localhost localhost.localdomain localhost6
   localhost6.localdomain6
4 10.2.1.221  lvs-node01
5 10.2.1.220  lvs-node02

```

修改防火墙设置:

```

1 vi /etc/selinux/config
2 将enforcing改为Disabled
3 重启:
4 reboot

```

```
5 [root@lvs-node01 ~]# /etc/init.d/iptables status
6 iptables: Firewall is not running.
```

```
1 [root@localhost keepalived]# service keepalived stop
2 Stopping keepalived: [ OK ]
3 [root@localhost keepalived]# vi keepalived.conf
4 [root@localhost keepalived]# service keepalived start
5 Starting keepalived: [ OK ]
6 [root@localhost keepalived]# ipvsadm -l
7 IP Virtual Server version 1.2.1 (size=1048576)
8 Prot LocalAddress:Port Scheduler Flags
9   -> RemoteAddress:Port Forward Weight ActiveConn InActConn
10 TCP 10.2.1.110:http rr synproxy
11   -> 10.2.1.214:http FullNat 10 0 0
12   -> 10.2.1.215:http FullNat 10 0 0
13 [root@localhost keepalived]# ping 10.2.1.110
14 PING 10.2.1.110 (10.2.1.110) 56(84) bytes of data.
15 From 10.2.1.221 icmp_seq=2 Destination Host Unreachable
16 From 10.2.1.221 icmp_seq=3 Destination Host Unreachable
17 From 10.2.1.221 icmp_seq=4 Destination Host Unreachable
18 ^C
19 --- 10.2.1.110 ping statistics ---
20 4 packets transmitted, 0 received, +3 errors, 100% packet loss, time
21 3833ms
22 pipe 3
23 [root@localhost keepalived]# ip addr
24 1: lo: <LOOPBACK,UP,LOWER_UP> mtu 16436 qdisc noqueue state UNKNOWN
25     link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
26     inet 127.0.0.1/8 scope host lo
27     inet6 ::1/128 scope host
28         valid_lft forever preferred_lft forever
29 2: eth2: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc mq state UNKNOWN
30     qlen 1000
31     link/ether 00:50:56:84:32:25 brd ff:ff:ff:ff:ff:ff
32     inet 10.2.1.221/24 brd 10.2.1.255 scope global eth2
33     inet6 fe80::250:56ff:fe84:3225/64 scope link
34         valid_lft forever preferred_lft forever
```

```

33 3: eth3: <BROADCAST,MULTICAST> mtu 1500 qdisc noop state DOWN qlen 1000
34     link/ether 00:50:56:84:3d:49 brd ff:ff:ff:ff:ff:ff
35 [root@localhost keepalived]# vi /etc/selinux/config

```

## 配置文件配置完成启动keepalived

```

1 [root@lvs-node03 ~]# /etc/init.d/keepalived start
2 Starting keepalived: [ OK ]
3 [root@lvs-node03 ~]# chkconfig keepalived on
4 [root@lvs-node03 ~]# chkconfig --list keepalived
5 keepalived    0:off    1:off    2:on    3:on    4:on
6              5:on    6:off

```

## 检查fullnat模式效果

```

1 [root@lvs-node01 ipvsadm]# ipvsadm -L
2 IP Virtual Server version 1.2.1 (size=4194304)
3 Prot LocalAddress:Port Scheduler Flags
4   -> RemoteAddress:Port          Forward Weight ActiveConn InActConn
5 TCP  10.2.1.221:http rr synproxy
6   -> lvs-node02:http              FullNat 10      0          0
7   -> lvs-node03:http              FullNat 10      0          0

```

```

1 root@lvs-node01 ~]# ip a
2 1: lo: <LOOPBACK,UP,LOWER_UP> mtu 16436 qdisc noqueue state UNKNOWN
3     link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
4     inet 127.0.0.1/8 scope host lo
5     inet6 ::1/128 scope host
6         valid_lft forever preferred_lft forever
7 2: eth2: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc mq state UP qlen 1000
8     link/ether 00:50:56:84:32:25 brd ff:ff:ff:ff:ff:ff
9     inet 10.2.1.221/24 brd 10.2.1.255 scope global eth2

```

```
10      inet 10.2.1.112/32 scope global eth2
11      inet6 fe80::250:56ff:fe84:3225/64 scope link
12          valid_lft forever preferred_lft forever
13 3: eth3: <BROADCAST,MULTICAST> mtu 1500 qdisc noop state DOWN qlen 1000
14      link/ether 00:50:56:84:3d:49 brd ff:ff:ff:ff:ff:ff
15
16 查看进程，正常情况下keepalived应该有三个进程：
17 [root@lvs-node01 ~]# ps -e|grep keepalived
18 31989 ?          00:00:00 keepalived
19 31991 ?          00:00:00 keepalived
20 31992 ?          00:00:00 keepalived
21
```