Subject: "Connection refused" when connecting from VE to host's public IP
Posted by Ventzy on Sun, 15 Dec 2013 00:44:41 GMT

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Hello,

I have my network config like this - single public IP address, assigned to the host (eth0) and multiple VEs in private network with IPs like 10.0.X.X. I have apache in one VE, mysql in other and so on. I have port forwarding on host for apache like this:
iptables -t nat -A PREROUTING -p TCP -i eth0 --dport 80 -j DNAT --to 10.0.0.3:80

This works as expected - I can access web sites hosted in 10.0.0.3 from outside through host's public IP and 10.0.0.3 connects successfully to Internet. The problem is that I cannot connect from VE to the public IP of the host. Let's say my public IP is 1.1.1.1, then I get this from 10.0.0.3
root@apache:/# telnet 1.1.1.1 80
Trying 1.1.1.1...
telnet: Unable to connect to remote host: Connection refused

What in the end I want to do is to load a web page from withing 10.0.0.3 that is hosted on 10.0.0.3. I have domain mydomain.com which resolves to 1.1.1.1 and when I try to load http ://mydomain.com/ from 10.0.0.3, domain is resolved to 1.1.1.1 and connection is refused as with telnet example.

I can workaround the problem if in the 10.0.0.3 /etc/hosts add

10.0.0.3 mydomain.com

I don't like that solution, because I have hundreds of sites and on new site I must alter hosts file. Besides, if some other software needs to create connection to the 1.1.1.1 it will fail.

I use Proxmox 3.1 and here are my /etc/network/interfaces on the host

auto lo
iface lo inet loopback

auto eth0
iface eth0 inet static
        address 1.1.1.1
        netmask 255.255.255.240
        gateway 2.2.2.2
        post-up echo 1 > /proc/sys/net/ipv4/conf/eth0/proxy_arp

auto vmbr0
iface vmbr0 inet static
        address 10.0.0.1
        netmask 255.255.255.0
        bridge_ports none

```
        bridge_stp off
        bridge_fd 0

        post-up echo 1 > /proc/sys/net/ipv4/ip_forward
        post-up   iptables -t nat -A POSTROUTING -s '10.0.0.0/16' -o eth0 -j MASQUERADE
        post-down iptables -t nat -D POSTROUTING -s '10.0.0.0/16' -o eth0 -j MASQUERADE
```

And on container

```
auto lo
iface lo inet loopback


# Auto generated venet0 interface
auto venet0
iface venet0 inet manual
        up ifconfig venet0 up
        up ifconfig venet0 127.0.0.2
        up route add default dev venet0
        down route del default dev venet0
        down ifconfig venet0 down

iface venet0 inet6 manual
        up route -A inet6 add default dev venet0
        down route -A inet6 del default dev venet0

auto venet0:0
iface venet0:0 inet static
        address 10.0.0.3
        netmask 255.255.255.255
```

Here is the output of iptables -t nat -L && iptables -t filter -L && iptables -t mangle -L command

```
Chain PREROUTING (policy ACCEPT)
target     prot opt source          destination
DNAT       tcp  -- anywhere         anywhere         tcp dpt:mysql to:10.0.0.2:3306
DNAT       tcp  -- anywhere         anywhere         tcp dpt:https to:10.0.0.3:443
DNAT       tcp  -- anywhere         anywhere         tcp dpt:http to:10.0.0.3:80

Chain POSTROUTING (policy ACCEPT)
target     prot opt source          destination
MASQUERADE  all -- 10.0.0.0/16        anywhere

Chain OUTPUT (policy ACCEPT)
target     prot opt source          destination
Chain INPUT (policy ACCEPT)
target     prot opt source          destination
```

Chain FORWARD (policy ACCEPT)
target   prot opt source   destination

Chain OUTPUT (policy ACCEPT)
target   prot opt source   destination
Chain PREROUTING (policy ACCEPT)
target   prot opt source   destination

Chain INPUT (policy ACCEPT)
target   prot opt source   destination

Chain FORWARD (policy ACCEPT)
target   prot opt source   destination

Chain OUTPUT (policy ACCEPT)
target   prot opt source   destination

Chain POSTROUTING (policy ACCEPT)
target   prot opt source   destination

How can I solve the problem?