

BUG: sometimes UDP packets aren't ...



shandee 2 posts since

Jun 21, 2009

BUG: sometimes UDP packets aren't passed from guest to host machine over vmware network interface

Summary

Since vmware 5.5 DNS resolution under the guest VM randomly stops working. Under version 5.5 I recall this issue occuring every few months, when I upgraded to v6.0 the frequency of the problem increased to every few weeks. Having recently upgraded to v6.5.2-build156735 this issue happens multiple times per day.

Through the use of tcpdump the problem has been tracked down to failure of the UDP packets being passed from the guest machine to host machine, although TCP or ICMP packets pass without issue. This results in DNS lookups to fail, but ping testing (ICMP) directly to an external IP address works, as well as telnet (TCP).

Details

VMware workstation 6.5.2-build156735 is running on host operating system CentOS 5.3 (x86_64), having recently upgraded from v6.0.x The guest VM instances use a combination of various linux distributions, windows XP, and openBSD. This bug affects all guest operating systems, where DNS lookups fail.

To immediately and temporarily fix this problem all guest VM instances are suspended and vmware workstation is quit. Then the vmware service is restarted on the host machine using `"/etc/init.d/vmware restart"`. This has the affect of restarting the vmware virtual network interface.

Once the vmware service has been restarted, vmware workstation application is started again and all suspended guest VM's are resumed. Upon resume DNS resolution under the guest VM's works again.

Note that when DNS resolution fails to work under the guest, it works without issue on the host machine.

System Architechture

A linksys router with IP address 192.168.1.1 acts as the "real" internet gateway.

BUG: sometimes UDP packets aren't ...

The host server is plugged into the linksys router and has IP address 192.168.1.104

The host server has vmnet8 interface with IP address 172.16.237.1

The guest VM instance has IP address 172.16.237.132

On the guest VM instance in /etc/resolv.conf the nameserver is set to 192.168.1.1 for DNS lookups.

NAT networking is using for guest VM's.

Testing

By using tcpdump on both host and guest instances when DNS resolution fails and when it works, it can be clearly seen that when DNS resolution fails the UDP packets and not been transmitted over the vmware network from the guest VM to host machine.

tcpdump is started on both guest and host instances using command "tcpdump udp". then in the guest, command "host ann.lu" is executed to perform a DNS lookup. The following output demonstrates the issue when DNS resolution is NOT working.

1. GUEST MACHINE

```
$ tcpdump udp
```

```
tcpdump: verbose output suppressed, use -v or -vv for full protocol decode
```

```
listening on eth0, link-type EN10MB (Ethernet), capture size 96 bytes
```

```
22:43:20.912071 IP 172.16.237.132.44731 > 192.168.1.1.domain: 32076+ A? ann.lu. (24)
```

```
22:43:25.911861 IP 172.16.237.132.44731 > 192.168.1.1.domain: 32076+ A? ann.lu. (24)
```

```
22:43:37.966990 IP 172.16.237.132.44736 > 192.168.1.1.domain: 21156+ A? ann.lu. (24)
```

```
22:43:42.967224 IP 172.16.237.132.44736 > 192.168.1.1.domain: 21156+ A? ann.lu. (24)
```

```
22:44:21.773888 IP 172.16.237.132.44738 > 192.168.1.1.domain: 33711+ A? ann.lu. (24)
```

```
22:44:26.773992 IP 172.16.237.132.44738 > 192.168.1.1.domain: 33711+ A? ann.lu. (24)
```

1. HOST MACHINE

```
$ tcpdump udp
```

```
tcpdump: verbose output suppressed, use -v or -vv for full protocol decode
```

```
listening on eth0, link-type EN10MB (Ethernet), capture size 96 bytes
```

- NOTHING CAPTURED **

The following output demonstrates when DNS resolution IS working.

BUG: sometimes UDP packets aren't ...

1. GUEST MACHINE

```
$ tcpdump udp
```

```
tcpdump: verbose output suppressed, use -v or -vv for full protocol decode
```

```
listening on eth0, link-type EN10MB (Ethernet), capture size 96 bytes
```

```
22:46:27.267874 IP 172.16.237.132.44750 > 192.168.1.1.domain: 3108+ A? ann.lu. (24)
```

```
22:46:27.401527 IP 192.168.1.1.domain > 172.16.237.132.44750: 3108 1/0/0 A  
apache2-argon.thorin.dreamhost.com (40)
```

```
22:46:27.401809 IP 172.16.237.132.44751 > 192.168.1.1.domain: 32521+ PTR? 251.218.113.208.in-addr.arpa. (46)
```

```
22:46:27.403831 IP 172.16.237.132.44752 > 192.168.1.1.domain: 43254+ AAAA? ann.lu. (24)
```

```
22:46:27.540549 IP 192.168.1.1.domain > 172.16.237.132.44752: 43254 0/1/0 (88)
```

```
22:46:27.540892 IP 172.16.237.132.44753 > 192.168.1.1.domain: 3675+ MX? ann.lu. (24)
```

```
22:46:27.670054 IP 192.168.1.1.domain > 172.16.237.132.44753: 3675 2/0/1 MX domain
```

```
22:46:27.683845 IP 192.168.1.1.domain > 172.16.237.132.44751: 32521 1/0/0 (94)
```

1. HOST MACHINE

```
$ tcpdump udp
```

```
tcpdump: verbose output suppressed, use -v or -vv for full protocol decode
```

```
listening on eth0, link-type EN10MB (Ethernet), capture size 96 bytes
```

```
22:46:27.267992 IP 192.168.1.104.36424 > 192.168.1.1.domain: 3108+ A? ann.lu. (24)
```

```
22:46:27.401318 IP 192.168.1.1.domain > 192.168.1.104.36424: 3108 1/0/0 A apache2-argon.thorin.dreamhost.com  
(40)
```

```
22:46:27.401488 IP 192.168.1.104.54345 > 192.168.1.1.domain: 5305+ PTR? 251.218.113.208.in-addr.arpa. (46)
```

```
22:46:27.401909 IP 192.168.1.104.36304 > 192.168.1.1.domain: 32521+ PTR? 251.218.113.208.in-addr.arpa. (46)
```

```
22:46:27.403943 IP 192.168.1.104.55388 > 192.168.1.1.domain: 43254+ AAAA? ann.lu. (24)
```

```
22:46:27.540421 IP 192.168.1.1.domain > 192.168.1.104.55388: 43254 0/1/0 (88)
```

```
22:46:27.541043 IP 192.168.1.104.49960 > 192.168.1.1.domain: 3675+ MX? ann.lu. (24)
```

```
22:46:27.669933 IP 192.168.1.1.domain > 192.168.1.104.49960: 3675 2/0/1 MX domain
```

```
22:46:27.682846 IP 192.168.1.1.domain > 192.168.1.104.54345: 5305 1/0/0 (94)
```

```
22:46:27.683736 IP 192.168.1.1.domain > 192.168.1.104.36304: 32521 1/0/0 (94)
```

Conclusion

The tcpdump output shows that when DNS resolution fails to work in the guest instances this is due to vmware networking failing to pass UDP packets back to the host machine.

BUG: sometimes UDP packets aren't ...

As mentioned above TCP and ICMP packets pass normally when UDP packets fail. Tags: workstation, 6.5.2, networking, bug, udp, packets



[continuum](#) 12,616 posts since

Dec 18, 2003 1. **Re: BUG: sometimes UDP packets aren't passed from guest to host machine over vmware network interface** Jun 21, 2009 10:24 AM

do you need to use vmnet8 for the VMs ?

There has been several issues reported with unstable NAT-service.

[VMX-parameters- VMware-liveCD - VM-Sickbay](#)



[shandee](#) 2 posts since

Jun 21, 2009 2. **Re: BUG: sometimes UDP packets aren't passed from guest to host machine over vmware network interface** Jun 21, 2009 4:33 PM

👤 in response to: [continuum](#)

Are you suggesting to used bridged networking for guest VM's instead, as bridged mode is not flaky like NAT is?



[continuum](#) 12,616 posts since

Dec 18, 2003 3. **Re: BUG: sometimes UDP packets aren't passed from guest to host machine over vmware network interface** Jun 22, 2009 4:00 AM

👤 in response to: [shandee](#) either that or use a VM like m0n0wall to run a NAT-service

[VMX-parameters- VMware-liveCD - VM-Sickbay](#)