Subject: *SOLVED* [NOAPIC] OVZ Kernels and e1000 nic
Posted by devonblzx on Thu, 22 Mar 2007 22:42:28 GMT
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I don't know if anyone else has run into problems but I cannot seem to get any OpenVZ kernels working with my network interface. I am using built in Intel Gigabit NICs using the e1000 module.

I have tried the following kernels with the following errors:

2.6.18-023 (brand new kernel) - when booting eth0 in the initscript it gives me an error that it is trying to ping 192.168.1.1 and it times out with a [failed].

2.6.18-023 custom build - told me that it could not find raid5 module or ahci module and gave me a sync error when trying to load either my hard drives or my RAID. (I am using a Software RAID and I had CONFIG_MD_RAID456=m and CONFIG_SCSI_SATA_AHCI=m)

2.6.16 - when booting the nic in initscripts it gave me an error about having the wrong MAC address and returned [failed].

2.6.9 custom build - gave me the same error as 2.6.18-023 default (1st above).

2.6.9 - hung on bootup, did not go far...

As you can see I have had a lot of issues with this system and trying to get OpenVZ to work. I have tried much but nothing seems to be fixing it.

The specs of my system are below:

Tyan S5372
Dual Intel GIG NIC (e1000)
Software RAID5 (5x250GB WD RE SATAII)
Dual Intel E5310 (8x1.6ghz)
CentOS 4.4 (x86_64)

Thanks in advance

Subject: Re: OVZ Kernels and e1000 nic
Posted by dev on Fri, 23 Mar 2007 08:41:34 GMT
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Can you please provide an output of:
lspci
lspci -n

Is your NIC works fine with CentOS4 kernel?
actually OVZ 2.6.9 kernel is almost the same... So I wonder, what's the problem you face...

Subject: Re: OVZ Kernels and e1000 nic
Posted by khorenko on Fri, 23 Mar 2007 09:33:05 GMT
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dev wrote on Fri, 23 March 2007 03:41
Is your NIC works fine with CentOS4 kernel?
actually OVZ 2.6.9 kernel is almost the same... So I wonder, what's the problem you face...

And considering this: do you know if any additional drivers were installed on the node to make CentOS working? Might be a newer e1000 driver?
You can check this by commands:
rpm -q kernel
kernel-2.6.9-34.EL
rpm -V kernel-2.6.9-34.EL
...
if some modules were changed rpm should determine this.

Subject: Re: OVZ Kernels and e1000 nic
Posted by devonblzx on Fri, 23 Mar 2007 15:43:36 GMT
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lspci:

lspci
00:00.0 Host bridge: Intel Corporation 5000V Chipset Memory Controller Hub (rev 92)
00:02.0 PCI bridge: Intel Corporation 5000 Series Chipset PCI Express x8 Port 2-3 (rev 92)
00:03.0 PCI bridge: Intel Corporation 5000 Series Chipset PCI Express x4 Port 3 (rev 92)
00:08.0 System peripheral: Intel Corporation 5000 Series Chipset DMA Engine (rev 92)
00:10.0 Host bridge: Intel Corporation 5000 Series Chipset Error Reporting Registers (rev 92)
00:10.1 Host bridge: Intel Corporation 5000 Series Chipset Error Reporting Registers (rev 92)
00:10.2 Host bridge: Intel Corporation 5000 Series Chipset Error Reporting Registers (rev 92)
00:11.0 Host bridge: Intel Corporation 5000 Series Chipset Reserved Registers (rev 92)
00:13.0 Host bridge: Intel Corporation 5000 Series Chipset Reserved Registers (rev 92)
00:15.0 Host bridge: Intel Corporation 5000 Series Chipset FBD Registers (rev 92)
00:16.0 Host bridge: Intel Corporation 5000 Series Chipset FBD Registers (rev 92)

00:1e.0 PCI bridge: Intel Corporation 82801 PCI Bridge (rev d9)
00:1f.0 ISA bridge: Intel Corporation 631xESB/632xESB/3100 Chipset LPC Interface Controller (rev 09)
00:1f.1 IDE interface: Intel Corporation 631xESB/632xESB IDE Controller (rev 09)
00:1f.2 SATA controller: Intel Corporation 631xESB/632xESB SATA Storage Controller AHCI (rev 09)
00:1f.3 SMBus: Intel Corporation 631xESB/632xESB/3100 Chipset SMBus Controller (rev 09)
01:00.0 PCI bridge: Intel Corporation 6311ESB/6321ESB PCI Express Upstream Port (rev 01)
01:00.3 PCI bridge: Intel Corporation 6311ESB/6321ESB PCI Express to PCI-X Bridge (rev 01)
02:00.0 PCI bridge: Intel Corporation 6311ESB/6321ESB PCI Express Downstream Port E1 (rev 01)
02:02.0 PCI bridge: Intel Corporation 6311ESB/6321ESB PCI Express Downstream Port E3 (rev 01)
04:00.0 Ethernet controller: Intel Corporation 631xESB/632xESB DPT LAN Controller Copper (rev 01)
04:00.1 Ethernet controller: Intel Corporation 631xESB/632xESB DPT LAN Controller Copper (rev 01)
07:01.0 VGA compatible controller: XGI - Xabre Graphics Inc Volari Z7
07:02.0 Ethernet controller: Intel Corporation 82557/8/9 [Ethernet Pro 100] (rev 10)

lspci -n :
00:00.0 Class 0600: 8086:25d4 (rev 92)
00:02.0 Class 0604: 8086:25f7 (rev 92)
00:03.0 Class 0604: 8086:25e3 (rev 92)
00:08.0 Class 0880: 8086:1a38 (rev 92)
00:10.0 Class 0600: 8086:25f0 (rev 92)
00:10.1 Class 0600: 8086:25f0 (rev 92)
00:10.2 Class 0600: 8086:25f0 (rev 92)
00:11.0 Class 0600: 8086:25f1 (rev 92)
00:13.0 Class 0600: 8086:25f3 (rev 92)
00:15.0 Class 0600: 8086:25f5 (rev 92)
00:16.0 Class 0600: 8086:25f6 (rev 92)
00:1e.0 Class 0604: 8086:244e (rev d9)
00:1f.0 Class 0601: 8086:2670 (rev 09)
00:1f.1 Class 0101: 8086:269e (rev 09)
00:1f.2 Class 0106: 8086:2681 (rev 09)
00:1f.3 Class 0c05: 8086:269b (rev 09)
01:00.0 Class 0604: 8086:3500 (rev 01)
01:00.3 Class 0604: 8086:350c (rev 01)
02:00.0 Class 0604: 8086:3510 (rev 01)
02:02.0 Class 0604: 8086:3518 (rev 01)
04:00.0 Class 0200: 8086:1096 (rev 01)
04:00.1 Class 0200: 8086:1096 (rev 01)
07:01.0 Class 0300: 18ca:0020

07:02.0 Class 0200: 8086:1229 (rev 10)

Subject: Re: OVZ Kernels and e1000 nic
Posted by devonblzx on Fri, 23 Mar 2007 15:49:03 GMT
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[root@localhost ~]# rpm -q kernel
kernel-2.6.9-42.EL
[root@localhost ~]# rpm -V kernel-2.6.9-42.EL
[root@localhost ~]#

Doesn't look like anything is changed...

cat /etc/modprobe.conf:
alias scsi_hostadapter ahci
alias eth0 e100
alias eth1 e1000
alias eth2 e1000

if that helps you, I have tried both the e100 port and the e1000 port and neither one works.

I have also had problems installing the newer operating systems on this system (FC6/CentOS 5 Beta gave me Python errors during install based on 2.6.18 kernel) to so I wonder if something is wrong with the compatibility? You'd think that this would work better with the newer OS since it is the newest technology (quad core) but who knows.

Subject: Re: OVZ Kernels and e1000 nic
Posted by devonblzx on Fri, 23 Mar 2007 16:12:14 GMT
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Just to keep you updated....

I installed a fresh install of CentOS4 and installed just the plain ovzkernel (not SMP) and it actually booted up but I am still running into the problem when it is trying to start the NIC and it gives me the 192.168.1.1 ping timeouts.

It looks like:

Starting eth1: [failed] PING 192.168.1.1 (192.168.1.1) 56(84) bytes of data.

--- 192.168.1.1 ping statistics ---

4 packets transmitted, 0 received, 100% packet loss, time 3000ms

192.168.1.1 is my router IP, but I've never seen an error like this when booting up a NIC until this system.

Subject: Re: OVZ Kernels and e1000 nic
Posted by khorenko on Fri, 23 Mar 2007 16:19:52 GMT
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it's strange, it looks like the e1000 driver does have the support for your devices...

Can you please send us the /var/log/messages file with the boot logs of both CentOS and OVZ kernels?

Subject: Re: OVZ Kernels and e1000 nic
Posted by devonblzx on Fri, 23 Mar 2007 16:46:24 GMT
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Where do I find the boot logs?

Thank you

Subject: Re: OVZ Kernels and e1000 nic
Posted by dev on Fri, 23 Mar 2007 17:45:10 GMT
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/var/log/messages

Subject: Re: OVZ Kernels and e1000 nic
Posted by devonblzx on Fri, 23 Mar 2007 18:20:28 GMT
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Here is my messages...

The first boot up in the messages is the OVZ Kernel, the second boot up is the CentOS Kernel...

Thanks in advance

P.S. After looking at the messages myself, it looks more like a DHCP error than an NIC error...could it be that the DHCP module isn't working for OVZ?

File Attachments
1) messages, downloaded 865 times

Subject: Re: OVZ Kernels and e1000 nic
Posted by dev on Fri, 23 Mar 2007 18:43:57 GMT
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though it is unlikely to have something to do with it, but you install UP (for 1 CPU) OVZ kernel. You have to install SMP kernel.
but it would be more correct comparison if SMP kernel is used.

according to boot log, kernel found the device, detected link, but DHCP client failed to get IP address.

Do you have an access to the machine when it is booted to OVZ kernel? If yes, please do some actions:
ip a l
/etc/init.d/network restart

Subject: Re: OVZ Kernels and e1000 nic
Posted by devonblzx on Fri, 23 Mar 2007 19:45:27 GMT
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I realize it wasn't the SMP kernel, I just did a fresh install and just installed the regular kernel, the SMP kernel in my last CentOS setup failed to start at all.

I have local access to the box right now, as it is setup at my home for now.

That command did nothing different for me when i restarted the network, but it did list all the network devices with their mac addresses, they were all listed correctly...

Subject: Re: OVZ Kernels and e1000 nic
Posted by devonblzx on Fri, 23 Mar 2007 20:20:58 GMT
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I don't think the problem is DHCP related after all, I disabled DHCP on the server and put in the actual address in the ifcfg-eth1 file.

It now boots up the device saying...

Bringing up interface eth1: [OK]

but I still have no remote access to the server on the OVZ kernel, while using the CentOS kernel I have remote access through my switch but I cannot access the internet (probably because my home router requires DHCP use to access the internet).

Now I'm just as lost as ever :-/

Subject: Re: OVZ Kernels and e1000 nic
Posted by dev on Fri, 23 Mar 2007 20:23:23 GMT
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Does any other device of your 3 working fine?
eth0/eth2?

Subject: Re: OVZ Kernels and e1000 nic
Posted by devonblzx on Fri, 23 Mar 2007 20:46:28 GMT
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Interesting... I had tried this last night (I can't remember which kernel because I had about 6 on the machine) but my e100 didn't work.

Now with the default OVZ kernel my e100 does boot up with DHCP and without DHCP so my 100mbit port does work.

I am going to try my eth2 (other GIG) and an SMP kernel and let you know how everything goes with that. I would like to have a working gigabit ethernet device because I am going to have an NFS on this server and 100mbit might make that pretty slow.

Thanks for your help so far on this.

Subject: Re: OVZ Kernels and e1000 nic
Posted by dev on Fri, 23 Mar 2007 20:49:15 GMT
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You are welcome!
I will be absent on the weekend, but on Monday eager to help you all my best!
See you on Monday.

Subject: Re: OVZ Kernels and e1000 nic
Posted by devonblzx on Mon, 26 Mar 2007 15:26:44 GMT
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To let you know, now that it is Monday, I have been working on this all weekend, the regular OpenVZ SMP kernel hangs on the start up and when I installed a custom kernel of the 2.6.9 and then 2.6.16 I received the same new error when I bootup.

"Device eth0 has different MAC address than expected"

I am having too many problems with this system and I think I'm going to return the Tyan mobo and go for a Supermicro, I tried even installing a vanilla 2.6.16 and received problems.

If you know anything about how to fix that error, please let me know.

Thank you,
Devon

Subject: Re: OVZ Kernels and e1000 nic
Posted by dev on Mon, 26 Mar 2007 15:34:33 GMT
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i.e. you think it is problems in motherboard?

Subject: Re: OVZ Kernels and e1000 nic
Posted by devonblzx on Mon, 26 Mar 2007 15:41:16 GMT
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Well I cannot customize any kernels, the only kernel that works is the one included in the operating systems.

Do you have any other ideas?

Subject: Re: OVZ Kernels and e1000 nic
Posted by devonblzx on Mon, 26 Mar 2007 16:27:12 GMT
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What do you think? I am planning on buying a Supermicro board but it has the same chipset in it, do you think I will run into the same issues, have you had anyone else with this problem?

Subject: Re: OVZ Kernels and e1000 nic
Posted by dev on Mon, 26 Mar 2007 16:56:35 GMT
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No, looks like you are the first.

I'm pretty sure, it is possible to fix this somehow, since the same CentOS kernel runs fine... Maybe downgrading e1000 driver version would help...

Can I get an access to the node via e100 ethernet adapter, while being able to play with e1000 eth adapters?

Subject: Re: OVZ Kernels and e1000 nic
Posted by devonblzx on Mon, 26 Mar 2007 17:09:33 GMT
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I might be able to set that up, it is on my local router tho so right now I just login through 192.XX but I can setup a forwarding port, let me get that for you.

Subject: Re: OVZ Kernels and e1000 nic
Posted by dev on Mon, 26 Mar 2007 17:13:12 GMT
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Ok, let's setup it.
please send me a private email to 'dev at openvz dot org' with instructions on how to login and how to check whether other interfaces are working.

I will login tomorrow morning and will check.
I will also be able to compile custom kernel with centos 4.4 driver version.

thank you!

Subject: Re: OVZ Kernels and e1000 nic
Posted by arpad on Mon, 26 Mar 2007 19:50:12 GMT
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I think it's a stupid question but do yout tried to boot with noapic kernel option? I had some trouble with especially Intel and NVidia NIC's when apic was enabled which is the default on SMP systems.

Subject: Re: OVZ Kernels and e1000 nic
Posted by devonblzx on Mon, 26 Mar 2007 20:48:34 GMT
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I will certainly try it, where do I put the noapic in my grub.conf?

Subject: Re: OVZ Kernels and e1000 nic
Posted by arpad on Mon, 26 Mar 2007 23:00:39 GMT
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In the end of the kernel line. In my case:

kernel /vmlinuz-2.6.19-gentoo-r5-syrius ro root=/dev/ram0 real_root=/dev/main/root dolvm2 noapic

You need only to add noapic of course.
And if the interface didn't come up at the boot time - wrong the MAC_ADDRESS in the /etc/sysconfig/network-scripts/ifcfg-$IFACE file or something else configuration error - try to configure it later manually with ifconfig.
I hope it helps you.

Subject: Re: OVZ Kernels and e1000 nic
Posted by devonblzx on Tue, 27 Mar 2007 00:28:59 GMT
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Your a life save, this fixed it for me!

But once thing I noticed with the new kernel, I tried running Unixbench, a performance benchmark, with my regular system I received around 520-550 score on average, now with the OVZ kernel I receive only 320... Any ideas on why my performance would be degraded so much?

Subject: Re: OVZ Kernels and e1000 nic
Posted by dev on Tue, 27 Mar 2007 08:05:48 GMT
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the fix for benchmark scores will be available soon

Subject: [SOLUTION]: OVZ Kernels and e1000 nic
Posted by dev on Fri, 06 Apr 2007 13:01:31 GMT
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According to another OVZ user (http://bugzilla.openvz.org/show_bug.cgi?id=530) e1000 driver update helps as well.