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Subject: [patch 0/1] fix veth netif\_carrier\_off  
Posted by [Daniel Lezcano](#) on Tue, 18 Sep 2007 16:56:45 GMT  
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When I tryed the veth driver, I fall into a kernel oops.

qemu login: Oops: 0000 [#1]

Modules linked in:

CPU: 0

EIP: 0060:[<c0265c9e>] Not tainted VLI

EFLAGS: 00000202 (2.6.23-rc6-g754f885d-dirty #33)

EIP is at \_\_linkwatch\_run\_queue+0x6a/0x175

eax: c7fc9550 ebx: 6b6b6b6b ecx: c3360c80 edx: 00000246

esi: 00000001 edi: 6b6b6b6b ebp: c7fd9f7c esp: c7fd9f5c

ds: 007b es: 007b fs: 0000 gs: 0000 ss: 0068

Process events/0 (pid: 5, ti=c7fd8000 task=c7fc9550 task.ti=c7fd8000)

Stack: c7fee5a8 c0387680 c7fd9f74 c02e1aaa 4f732564 c0387684 c7fee5a8 c0387680

c7fd9f84 c0265dc9 c7fd9fac c011fb3c c7fd9f94 c02e277e c7fd9fac c02e1166

c0265da9 c7fee5a8 c0120203 c7fd9fc8 c7fd9fd0 c01202ba 00000000 c7fc9550

Call Trace:

[<c0102c69>] show\_trace\_log\_lvl+0x1a/0x2f

[<c0102d1b>] show\_stack\_log\_lvl+0x9d/0xa5

[<c0102ee1>] show\_registers+0x1be/0x28f

[<c010309a>] die+0xe8/0x208

[<c010d5a1>] do\_page\_fault+0x4ba/0x595

[<c02e2842>] error\_code+0x6a/0x70

[<c0265dc9>] linkwatch\_event+0x20/0x27

[<c011fb3c>] run\_workqueue+0x7c/0x102

[<c01202ba>] worker\_thread+0xb7/0xc5

[<c012270c>] kthread+0x39/0x61

[<c0102913>] kernel\_thread\_helper+0x7/0x10

=====

Code: b8 60 76 38 c0 e8 e3 ca 07 00 b8 60 76 38 c0 8b 1d 78 a7 3d c0 c7 05 78 a7 3d c0 00 00 00 00 e8 df ca 07 00 e9 ed 00 00 00 85 f6 <8b> bb f4 01 00 00 74 17 89 d8 e8 73 fe ff ff 85 c0 75 0c 89 d8

EIP: [<c0265c9e>] \_\_linkwatch\_run\_queue+0x6a/0x175 SS:ESP 0068:c7fd9f5c

Slab corruption: size-2048 start=c473eac8, len=2048

Redzone: 0x9f911029d74e35b/0x9f911029d74e35b.

Last user: [<c025be72>](free\_netdev+0x1f/0x41)

200: 6b c0 e2 73 c4

Prev obj: start=c473e2b0, len=2048

Redzone: 0xd84156c5635688c0/0xd84156c5635688c0.

Last user: [<c025bed0>](alloc\_netdev\_mq+0x3c/0xa1)

000: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

010: 76 65 74 68 30 00 00 00 00 00 00 00 00 00 00 00

Next obj: start=c473f2e0, len=2048

Redzone: 0x9f911029d74e35b/0x9f911029d74e35b.

Last user: [<c0260e69>](neigh\_sysctl\_unregister+0x2b/0x2e)

```
000: 6b  
010: 6b 6b
```

That happens when trying to add the veth driver using the ip command:

```
ip link add veth0
```

which fail.

It appears that the netif\_carrier\_off is placed into the setup function and this one is called before register\_netdevice.

The register\_netdevice function does a lot of initialization to the netdev and if the netif\_carrier\_off is called before the register\_netdev function, it will use and trigger an event for an uninitialized netdev.

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Containers mailing list  
Containers@lists.linux-foundation.org  
<https://lists.linux-foundation.org/mailman/listinfo/containers>

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Subject: [patch 1/1] fix bad netif\_carrier\_off place  
Posted by [Daniel Lezcano](#) on Tue, 18 Sep 2007 16:56:46 GMT  
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From: Daniel Lezcano <[dlezcano@fr.ibm.com](mailto:dlezcano@fr.ibm.com)>

If the netif\_carrier\_off is called before register\_netdev that will use and generate an event for a non initialized network device and that leads to a Oops.

I moved the netif\_carrier\_off from the setup function after each register\_netdev call.

Signed-off-by: Daniel Lezcano <[dlezcano@fr.ibm.com](mailto:dlezcano@fr.ibm.com)>

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```
drivers/net/veth.c |  5 +----  
1 file changed, 4 insertions(+), 1 deletion(-)
```

Index: net-2.6.24/drivers/net/veth.c

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```
--- net-2.6.24.orig/drivers/net/veth.c
```

```
+++ net-2.6.24/drivers/net/veth.c
```

```
@@ -286,7 +286,6 @@ static void veth_setup(struct net_device  
 dev->features |= NETIF_F_LLTX;  
 dev->init = veth_dev_init;
```

```
dev->destructor = veth_dev_free;
- netif_carrier_off(dev);
}

/*
@@ -357,6 +356,8 @@ static int veth_newlink(struct net_device
if (err < 0)
    goto err_register_peer;

+ netif_carrier_off(peer);
+
/*
 * register dev last
 *
@@ -382,6 +383,8 @@ static int veth_newlink(struct net_device
if (err < 0)
    goto err_register_dev;

+ netif_carrier_off(dev);
+
/*
 * tie the devices together
 */
```

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Subject: Re: [patch 1/1] fix bad netif\_carrier\_off place  
Posted by [Pavel Emelianov](#) on Wed, 19 Sep 2007 08:35:43 GMT  
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> From: Daniel Lezcano <[dlezcano@fr.ibm.com](mailto:dlezcano@fr.ibm.com)>  
>  
> If the netif\_carrier\_off is called before register\_netdev  
> that will use and generate an event for a non initialized network  
> device and that leads to a Oops.  
>  
> I moved the netif\_carrier\_off from the setup function after each  
> register\_netdev call.  
>  
> Signed-off-by: Daniel Lezcano <[dlezcano@fr.ibm.com](mailto:dlezcano@fr.ibm.com)>

Acked-by: Pavel Emelyanov <[xemul@openvz.org](mailto:xemul@openvz.org)>

Eric, if you managed to reproduce your oopses, does this patch help?

BTW, this problem exists for some other drivers, no? E.g.  
xpnet\_init() does the same thing and probably oopses as well.

```
> ---
> drivers/net/veth.c |  5 +-----
> 1 file changed, 4 insertions(+), 1 deletion(-)
>
> Index: net-2.6.24/drivers/net/veth.c
> =====
> --- net-2.6.24.orig/drivers/net/veth.c
> +++ net-2.6.24/drivers/net/veth.c
> @@ -286,7 +286,6 @@ static void veth_setup(struct net_device
>   dev->features |= NETIF_F_LLTX;
>   dev->init = veth_dev_init;
>   dev->destructor = veth_dev_free;
> - netif_carrier_off(dev);
> }
>
> /*
> @@ -357,6 +356,8 @@ static int veth_newlink(struct net_device
>   if (err < 0)
>     goto err_register_peer;
>
> + netif_carrier_off(peer);
> +
> /*
>   * register dev last
>   *
> @@ -382,6 +383,8 @@ static int veth_newlink(struct net_device
>   if (err < 0)
>     goto err_register_dev;
>
> + netif_carrier_off(dev);
> +
> /*
>   * tie the devices together
>   */
>
> --
```

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