

strongSwan - Issue #1189

Installing route failed on Linux kernel 4.3

03.11.2015 09:22 - wu ruxu

Status:	Closed	
Priority:	Normal	
Assignee:	Tobias Brunner	
Category:	kernel	
Affected version:	5.3.3	Resolution: No change required
Description		
strongswan works well on kernel 4.2.5, but after I upgrade to 4.3, a netlink error occur at end of install route.		
<pre>08[KNL] 10.1.51.82 is on interface eth0 08[KNL] installing route: 0.0.0.0/0 via 10.1.50.1 src 10.8.0.8 dev eth0 08[KNL] getting iface index for eth0 08[KNL] sending RTM_NEWROUTE 208: => 60 bytes @ 0xb3c254d0 08[KNL] 0: 3C 00 00 00 18 00 05 06 D0 00 00 00 75 1B 00 00 <.....u... 08[KNL] 16: 02 00 00 00 DC 04 00 01 00 00 00 00 08 00 01 00 08[KNL] 32: 00 00 00 00 08 00 07 00 0A 08 00 08 08 00 05 00 08[KNL] 48: 0A 01 32 01 08 00 04 00 02 00 00 002..... 08[KNL] received (2) 208: => 80 bytes @ 0x8e97910 08[KNL] 0: 50 00 00 00 02 00 00 00 D0 00 00 00 75 1B 00 00 P.....u... 08[KNL] 16: EA FF FF FF 3C 00 00 00 18 00 05 06 D0 00 00 00<..... 08[KNL] 32: 75 1B 00 00 02 00 00 00 DC 04 00 01 00 00 00 00 u..... 08[KNL] 48: 08 00 01 00 00 00 00 08 00 07 00 0A 08 00 08 08[KNL] 64: 08 00 05 00 0A 01 32 01 08 00 04 00 02 00 00 002..... 08[KNL] received netlink error: Invalid argument (22)</pre>		
Related issues:		
Has duplicate Issue #1225: vpn with lubuntu 15.10 under kernel 4.3		Closed 01.12.2015

History

#1 - 03.11.2015 09:27 - wu ruxu

my ipsec.conf

```
conn svpn
    right=x.x.x.x
    rightsubnet=0.0.0.0/0
    rightid="C=CN, O=strongxyz, CN=x.x.x.x"
    #rightid=%x.x.x.x
    rightauth=pubkey
        #ike=aes256gcm128-sha512-modp6144,
        ike=aes256-sha256-modp2048, aes256gcm128-sha256-modp2048, aes256-sha256-modp2048, aes256-sha384-modp2048,
aes256-sha512-modp2048!
    esp=aes256gcm128-sha256-modp2048, aes256-sha256-modp2048, aes256-sha384-modp2048, aes256-sha512-modp2048!
    compress=no
    left=%any
    leftsourceip=%config4
    leftid="C=CN, O=strongxyz, CN=client"
    leftauth=pubkey
    leftca=%same
    leftcert=client.cert.pem
    leftfirewall=yes
    dpdaction=restart
    auto=add
```

#2 - 03.11.2015 18:52 - Tobias Brunner

- Subject changed from installing route failed on kernel 4.3 to Installing route failed on Linux kernel 4.3
- Description updated
- Status changed from New to Feedback
- Priority changed from High to Normal

I was able to reproduce this with the 4.3 kernel. It can also happen if you try to install a route with ip route and specify a source address as well as a routing table with src <ip> and table <table id>, respectively (omitting either of these works).

It is apparently caused by commit [021dd3b8a142](#) ("net: Add routes to the table associated with the device"), which added an extended check that's applied to the source address (in combination with the routing table). This check is not passing with the route we are trying to install.

The experimental patch in the *1189-kernel-netlink-srcroute* branch tries to address this by installing an additional route for the virtual IP in routing table 220. I've currently no idea if that's how it's supposed to be done or if there is a way to avoid this, but at least it seems to work on clients requesting a virtual IP. But on gateways there still won't be a route installed that forces the internal IP as source address for packets sent to virtual IPs of clients.

A possible workaround is to set *charon.routing_table=0* so the routes are installed in the main routing table.

#3 - 04.11.2015 18:32 - Tobias Brunner

Here is a kernel patch by the author of the commit mentioned above that fixes the issue: [\[PATCH\] net: Fix prefsrc lookups](#)

#4 - 24.11.2015 10:51 - volker kempter

[#1189](#):

I'm using strongswan 5.1.2-0ubuntu7 in lubuntu-16.04 (development) with kernel 4.3.

Setting up VPN with the NetworkManager, I get no error, BUT VPN does not work; establishing VPN manually with: `sudo ipsec restart`, `sudo ipsec up` ..., I get the following in the console:

```
received netlink error: invalid argument (22).
Unable to install source route for 139.174.7.....
```

But finally it says: "connection "..." established correctly" (as when using the NetworkManager VPN connection does not work however!!).

No such problem occur when using the kernel 4.2.0.19 instead: VPN works okay.

#5 - 02.12.2015 10:42 - Tobias Brunner

- Has duplicate Issue #1225: vpn with lubuntu 15.10 under kernel 4.3 added

#6 - 02.12.2015 13:49 - volker kempter

at [#4](#) and 5:

please comment whether, at present, there is a workaround or whatever to use strongswan, version 5.1.2, with kernel 4.3! Any help would be appreciated!

#7 - 02.12.2015 14:55 - Tobias Brunner

- Tracker changed from Bug to Issue

- Category set to kernel

please comment whether, at present, there is a workaround or whatever to use strongswan, version 5.1.2, with kernel 4.3!

There is not. You need the kernel patch I referenced in [#1189#note-3](#).

#8 - 04.12.2015 10:36 - volker kempter

at [#7](#):

thanks for the reply!

I am probably not too bad in using linux, also from the command line, but not in patching the kernel. Thus, I decided to stick with kernel 4.2.0-21 under which strongswan works well.

As soon as the kernel 4.3 appears in synaptic, i.e. is recommended officially, I will report the problem to launchpad.

#9 - 13.12.2015 19:31 - volker kempter

ad [#7](#):8:

the problem is fixed with kernel 4.3.0-4: strongswan vpn works again!

#10 - 14.12.2015 10:59 - Tobias Brunner

- Status changed from Feedback to Closed

- Assignee set to Tobias Brunner

- Resolution set to No change required

the problem is fixed with kernel 4.3.0-4: strongswan vpn works again!

I guess that's the Ubuntu kernel version. Upstream the 4.3.1 kernel, released on 2015-12-09, included the fix ([Changelog](#)). Closing the issue.