

strongSwan - Bug #2403

Charon doesn't detect interface up event of a renamed interface (and charon.interfaces_use is set)

14.08.2017 10:21 - Luka Logar

Status:	Closed	Start date:	14.08.2017
Priority:	Normal	Due date:	
Assignee:	Tobias Brunner	Estimated time:	0.00 hour
Category:	kernel-interface	Resolution:	Fixed
Target version:	5.6.1		
Affected version:	5.5.3		

Description

I am using strongswan on a linux host that is using *pppoe* on a *wan* interface (interface name is *pppoe-wan*). I have also set `interfaces_use=pppoe-wan`

in `charon.conf`. If the *pppoe* connection is dropped for one reason or another, charon correctly detects it and deactivates and deletes interface and its address:

```
2017-08-12T11:52:01.384013+02:00 swan pppd[14026]: Terminating on signal 15
2017-08-12T11:52:01.384155+02:00 swan pppd[14026]: Connect time 1238.5 minutes.
2017-08-12T11:52:01.384204+02:00 swan pppd[14026]: Sent 3975626 bytes, received 1742734 bytes.
2017-08-12T11:52:01.385009+02:00 swan charon: 01[KNL] interface pppoe-wan deactivated
2017-08-12T11:52:01.391010+02:00 swan charon: 08[KNL] 10.201.0.209 disappeared from pppoe-wan
2017-08-12T11:52:01.398327+02:00 swan pppd[14026]: Connection terminated.
2017-08-12T11:52:01.399265+02:00 swan charon: 13[KNL] interface pppoe-wan deleted
2017-08-12T11:52:01.445182+02:00 swan pppd[14026]: Sent PADT
2017-08-12T11:52:01.465524+02:00 swan pppd[14026]: Exit.
```

However later, when the connection is reestablished charon doesn't detect it and IKE communication is not reestablished:

```
2017-08-12T11:52:39.536333+02:00 swan pppd[3315]: Plugin rp-pppoe.so loaded.
2017-08-12T11:52:39.536550+02:00 swan pppd[3315]: RP-PPPoE plugin version 3.8p compiled against pp
pd 2.4.7
2017-08-12T11:52:39.653610+02:00 swan pppd[3315]: pppd 2.4.7 started by root, uid 0
2017-08-12T11:52:44.696467+02:00 swan pppd[3315]: PPP session is 3
2017-08-12T11:52:44.696552+02:00 swan pppd[3315]: Connected to 6c:3b:7e:62:a9:dc via interface eth
0
2017-08-12T11:52:44.714735+02:00 swan kernel: [79025.853112] pppoe-wan: renamed from ppp0
2017-08-12T11:52:44.745002+02:00 swan pppd[3315]: Using interface pppoe-wan
2017-08-12T11:52:44.745224+02:00 swan pppd[3315]: Connect: pppoe-wan <--> eth0
2017-08-12T11:52:44.856800+02:00 swan pppd[3315]: CHAP authentication succeeded: Welcome.
2017-08-12T11:52:44.856867+02:00 swan pppd[3315]: CHAP authentication succeeded
2017-08-12T11:52:44.856913+02:00 swan pppd[3315]: peer from calling number 6C:3B:6B:62:A9:DC autho
rized
2017-08-12T11:52:44.884029+02:00 swan pppd[3315]: local IP address 10.201.0.209
2017-08-12T11:52:44.884087+02:00 swan pppd[3315]: remote IP address 10.201.0.210
```

This happens because `kernel_netlink` first receives `RTM_NEWLINK` message for *ppp0* interface and since it is not in a `charon.interfaces_use` list marks it as not usable. Later `RTM_NEWLINK` messages with a new/renamed name (*pppoe-wan*) are ignored as interface already exists in `ifaces` list (but is marked as not usable).

The solution is to set `usable` flag in each `RTM_NEWLINK` message processing:

```
--- a/src/libcharon/plugins/kernel_netlink/kernel_netlink_net.c
+++ b/src/libcharon/plugins/kernel_netlink/kernel_netlink_net.c
@@ -1192,6 +1192,8 @@
     }
     strncpy(entry->ifname, name, IFNAMSIZ);
     entry->ifname[IFNAMSIZ-1] = '\0';
```

```

+         if (!entry->usable)
+             entry->usable = charon->kernel->is_interface_usable(charon->kernel, name);
+         if (event && entry->usable)
+         {
+             if (!(entry->flags & IFF_UP) && (msg->ifl_flags & IFF_UP))

```

After applying the patch, charon correctly detects interface up event:

```

2017-08-12T22:23:24.662697+02:00 swan pppd[4022]: Plugin rp-pppoe.so loaded.
2017-08-12T22:23:24.662928+02:00 swan pppd[4022]: RP-PPPoE plugin version 3.8p compiled against pp
pd 2.4.7
2017-08-12T22:23:24.768112+02:00 swan pppd[4022]: pppd 2.4.7 started by root, uid 0
2017-08-12T22:23:29.796954+02:00 swan pppd[4022]: PPP session is 41
2017-08-12T22:23:29.797044+02:00 swan pppd[4022]: Connected to 6c:3b:7e:62:a9:dc via interface eth
0
2017-08-12T22:23:29.819532+02:00 swan kernel: [ 320.251407] pppoe-wan: renamed from ppp0
2017-08-12T22:23:29.850067+02:00 swan pppd[4022]: Using interface pppoe-wan
2017-08-12T22:23:29.850283+02:00 swan pppd[4022]: Connect: pppoe-wan <--> eth0
2017-08-12T22:23:29.958745+02:00 swan pppd[4022]: CHAP authentication succeeded: Welcome.
2017-08-12T22:23:29.958822+02:00 swan pppd[4022]: CHAP authentication succeeded
2017-08-12T22:23:29.958871+02:00 swan pppd[4022]: peer from calling number 6C:3B:6B:62:A9:DC autho
rized
2017-08-12T22:23:29.983180+02:00 swan pppd[4022]: local IP address 10.201.0.209
2017-08-12T22:23:29.983641+02:00 swan pppd[4022]: remote IP address 10.201.0.210
2017-08-12T22:23:29.983699+02:00 swan charon: 13[KNL] 10.201.0.209 appeared on pppoe-wan
2017-08-12T22:23:29.984411+02:00 swan charon: 12[KNL] 10.201.0.209 disappeared from pppoe-wan
2017-08-12T22:23:29.984992+02:00 swan charon: 14[KNL] 10.201.0.209 appeared on pppoe-wan
2017-08-12T22:23:29.985683+02:00 swan charon: 04[KNL] interface pppoe-wan activated

```

Associated revisions

Revision 062a34e7 - 23.08.2017 12:10 - Tobias Brunner

kernel-netlink: Set usable state whenever an interface appears

If an interface is renamed we already have an entry (based on the ifindex) allocated but previously only set the usable state once based on the original name.

Fixes #2403.

History

#1 - 14.08.2017 17:29 - Tobias Brunner

- Category set to kernel-interface
- Status changed from New to Feedback
- Assignee set to Tobias Brunner
- Target version set to 5.6.1

Thanks for the detailed report. Makes sense, I've pushed a fix to the *2403-kernel-netlink-iface-rename* branch.

#2 - 21.08.2017 13:01 - Luka Logar

The patch is working as expected. I guess, you can mark this bug fixed/closed...

#3 - 23.08.2017 12:13 - Tobias Brunner

- Status changed from Feedback to Closed
- Resolution set to Fixed

Applied to master.