

pfSense - Bug #8815

IPv4 addresses disappear from interfaces when link is lost

08/20/2018 12:02 PM - Jim Pingle

Status:	New	Start date:	08/20/2018
Priority:	Very High	Due date:	
Assignee:	Luiz Souza	% Done:	0%
Category:	Interfaces	Estimated time:	0.00 hour
Target version:	2.5.0		
Affected Version:	2.4.x	Affected Architecture:	All

Description

When an interface loses link the IPv4 addresses, including VIPs, can disappear from the interface. If the link is down when the interface settings are applied, the address is present, but plugging in the interface and then removing the link again can make the addresses disappear.

The behavior is not consistent across all configurations and hardware. For example, it appears to happen predictably on igb(4) interfaces but not vmx(4) interfaces, and in some cases re(4) is OK and fails for others.

The main consequence is that anything bound to or relying on those addresses will fail when they disappear. The highest impact is from HA/CARP. The VIPs disappear from the interface, so the OS does not trigger demotion as expected with link loss.

IPv6 addresses, if any exist, are still present on the interfaces after link is lost.

For example, on an SG-5100. LAN is unplugged before the test:

```
igb1: flags=8843<UP,BROADCAST,RUNNING,SIMPLEX,MULTICAST> metric 0 mtu 1500
  options=6400bb<RXCSUM, TXCSUM, VLAN_MTU, VLAN_HWTAGGING, JUMBO_MTU, VLAN_HWCSUM, VLAN_HWTSO, RXCSUM_I
PV6, TXCSUM_IPV6>
  ether 00:90:0b:7a:8a:66
  hwaddr 00:90:0b:7a:8a:66
  inet 10.23.0.1 netmask 0xffffffff broadcast 10.23.0.255
  inet6 2001:db8:1:ee10:290:bff:fe7a:8a66 prefixlen 60
  inet6 fe80::1:1%igb1 prefixlen 64 scopeid 0x2
  nd6 options=21<PERFORMNUD,AUTO_LINKLOCAL>
  media: Ethernet autoselect
  status: no carrier
```

Plug in LAN, then unplug LAN:

```
igb1: flags=8843<UP,BROADCAST,RUNNING,SIMPLEX,MULTICAST> metric 0 mtu 1500
  options=6400bb<RXCSUM, TXCSUM, VLAN_MTU, VLAN_HWTAGGING, JUMBO_MTU, VLAN_HWCSUM, VLAN_HWTSO, RXCSUM_I
PV6, TXCSUM_IPV6>
  ether 00:90:0b:7a:8a:66
  hwaddr 00:90:0b:7a:8a:66
  inet6 2001:db8:1:ee10:290:bff:fe7a:8a66 prefixlen 60
  inet6 fe80::1:1%igb1 prefixlen 64 scopeid 0x2
  nd6 options=21<PERFORMNUD,AUTO_LINKLOCAL>
  media: Ethernet autoselect
  status: no carrier
```

Logs for igb1 during the transition:

```
Aug 20 11:54:29 missy kernel: igb1: link state changed to UP
Aug 20 11:54:29 missy check_reload_status: Linkup starting igb1
Aug 20 11:54:29 missy check_reload_status: Reloading filter
Aug 20 11:54:30 missy php-fpm[585]: /rc.linkup: DEVD Ethernet attached event for lan
Aug 20 11:54:30 missy php-fpm[585]: /rc.linkup: HOTPLUG: Configuring interface lan
Aug 20 11:54:30 missy check_reload_status: Restarting ipsec tunnels
Aug 20 11:54:33 missy check_reload_status: Linkup starting igb1
Aug 20 11:54:33 missy kernel: igb1: link state changed to DOWN
Aug 20 11:54:34 missy php-fpm[584]: /rc.newwanip: The command '/usr/local/sbin/unbound -c /var/unbound/unbound.conf' returned exit code '1', the output was '[1534780474] unbound[62993:0] error: bind: address already in use [1534780474] unbound[62993:0] fatal error: could not open ports'
Aug 20 11:54:34 missy check_reload_status: updating dyndns lan
Aug 20 11:54:34 missy php-fpm[39495]: /rc.linkup: DEVD Ethernet detached event for lan
Aug 20 11:54:35 missy check_reload_status: Reloading filter
```

History

#1 - 08/20/2018 01:01 PM - Steve Wheeler

I have replicated this in em(4) and re(4) (on an APU) but not on mvneta(4).
All on the latest 2.4.4 snapshot.

#2 - 08/27/2018 01:43 PM - Steve Beaver

- Assignee set to Luiz Souza

#3 - 09/10/2018 01:21 PM - Steve Beaver

- Status changed from New to This Sprint

#4 - 09/10/2018 01:21 PM - Steve Beaver

- Status changed from This Sprint to In Progress

#5 - 09/11/2018 02:33 PM - Steve Beaver

- Target version changed from 2.4.4 to 2.4.4-GS

#6 - 09/11/2018 02:37 PM - Luiz Souza

- Status changed from In Progress to This Sprint

#7 - 09/11/2018 02:37 PM - Luiz Souza

- Status changed from This Sprint to New

#8 - 10/03/2018 08:39 AM - Steve Beaver

- Target version changed from 2.4.4-GS to 2.4.4-p1

#9 - 11/20/2018 11:32 AM - Steve Beaver

- Target version changed from 2.4.4-p1 to 48

#10 - 03/12/2019 10:54 AM - Jim Pingle

- Target version changed from 48 to 2.5.0