

pfSense - Bug #2627

Old delegated prefixes are not removed from the LAN interface

09/07/2012 03:51 PM - Anonymous

Status:	Resolved	Start date:	09/07/2012
Priority:	Normal	Due date:	
Assignee:		% Done:	100%
Category:	DHCP (IPv6)	Estimated time:	0.00 hour
Target version:		Affected Version:	2.1-IPv6
Plus Target Version:		Affected	All
Release Notes:	Default	Architecture:	

Description

When the LAN tracks the WAN via DHCPv6 Prefix Delegation and the WAN bounces, thus receiving a new delegated prefix, the old prefix is not removed from the LAN interface. Also, radvd still advertises the old delegated prefix.

In the example below, the newly-delegated IPv6 prefix is x:y:1014:408e::/64.

Destination	Gateway	Flags	Refs	Use	Mtu	Netif	Expire
default	fe80::1%pppoe1	UGS	0	207	1492	pppoe1	
::1	::1	UH	0	0	16384	lo0	
x:y:1014:124::/64	link#1	U	0	0	1500	em0	
x:y:1014:124::1	link#1	UHS	0	0	16384	lo0	
x:y:1014:408e::/64	link#1	U	0	0	1500	em0	
x:y:1014:408e:222:4dff:fe6b:73fc	link#1	UHS	0	0	16384	lo0	
x:y:1014:52c7::/64	link#1	U	0	156	1500	em0	
x:y:1014:52c7::1	link#1	UHS	0	0	16384	lo0	
x:y:1015:f005::/64	link#14	U	0	0	1492	pppoe1	
x:y:1015:f005::bc1b:b403	link#14	UHS	0	0	16384	lo0	

The radvd.conf file after reconnection is:

```
# Generated for DHCPv6 Server lan
interface em0 {
    AdvSendAdvert on;
    MinRtrAdvInterval 5;
    MaxRtrAdvInterval 20;
    AdvLinkMTU 1280;
    AdvDefaultPreference medium;
    prefix x:y:1014:124:0:0:0:0/64 {
        DeprecatePrefix on;
        AdvOnLink on;
        AdvAutonomous on;
        AdvRouterAddr on;
    };
    route ::/0 {
        RemoveRoute on;
    };
    RDNSS x:y:1014:124::1 { };
    DNSSL localdomain { };
};
```

Associated revisions

Revision afe4f2da - 03/05/2013 01:53 PM - Ermal Luçi

Remove old ip information so that track6 config does not get confused. Fixes #2627

Revision 1fad9d1 - 03/05/2013 01:57 PM - Ermal Luçi

Remove old ip information even from the tracking interface as well so that track6 config code does not get confused. Fixes #2627

Revision 90af1b8b - 08/16/2013 09:33 AM - Ermal Luçi

Resolves #2627. When WANv4 is PPP and v6 is DHCP but the option get v6 info from v4 is ticked the real interface is different. For WANv4 is pppXX and for v6 is the real underlying interface. Take this into consideration during interface_bring_down to properly cleanup things

Revision 45c07f16 - 08/16/2013 09:34 AM - Ermal Luçi

Resolves #2627. When WANv4 is PPP and v6 is DHCP but the option get v6 info from v4 is ticked the real interface is different. For WANv4 is pppXX and for v6 is the real underlying interface. Take this into consideration during interface_bring_down to properly cleanup things

Revision 92977616 - 02/21/2014 07:23 AM - Ermal Luçi

Fixes #2627. When an interface goes down try to shut the RAs and dhcpd6 service on that interface

Revision 080fd00b - 02/21/2014 07:28 AM - Ermal Luçi

Fixes #2627. When an interface goes down try to shut the RAs and dhcpd6 service on that interface

Revision 34340c56 - 02/21/2014 07:45 AM - Ermal Luçi

Ticket #2627. Just pass the array over no need to traverse it

Revision 11aa4666 - 02/21/2014 07:45 AM - Ermal Luçi

Ticket #2627. Just pass the array over no need to traverse it

History

#1 - 02/12/2013 03:15 PM - Jim Pingle

- Target version set to 2.1
- Affected Version set to 2.1-IPv6

#2 - 02/12/2013 03:16 PM - Jim Pingle

- Status changed from New to Feedback

Can you try this again on a recent 2.1 snapshot? Several changes to prefix delegation have happened recently.

#3 - 02/13/2013 02:17 PM - Anonymous

Running this build:
2.1-BETA1 (amd64)
built on Tue Feb 12 10:20:45 EST 2013
FreeBSD 8.3-RELEASE-p5

Whenever the WAN receives a delegated prefix, no radvd.conf is generated and no prefix is received by LAN hosts.

1st attempt:

```
[2.1-BETA1][admin@buh-pfsense.localdomain]/root (20): cat /var/etc/radvd.conf
# Automatically Generated, do not edit
[2.1-BETA1][admin@buh-pfsense.localdomain]/root (27): netstat -rnf inet6
Routing tables
```

```
Internet6:
Destination      Gateway          Flags    Netif Expire
default          fe80::1%pppoe1  UGS      pppoe1
```

```

::1                ::1                UH          lo0
xxxx:yyyy:3040:1e7::/64    link#10          U          bridge0
xxxx:yyyy:3040:1e7:d:3aff:fe2d:8a00 link#10          UHS         lo0
xxxx:yyyy:304f:ffff::/64    link#9           U          pppoe1
xxxx:yyyy:304f:ffff::bclb:b766 link#9           UHS         lo0

```

2nd attempt:

```
[2.1-BETA1][admin@buh-pfsense.localdomain]/root (1): cat /var/etc/radvd.conf
```

```
# Automatically Generated, do not edit
```

```
[2.1-BETA1][admin@buh-pfsense.localdomain]/root (2): netstat -rnf inet6
```

Routing tables

Internet6:

Destination	Gateway	Flags	Netif	Expire
default	fe80::1%pppoe1	UGS	pppoe1	
::1	::1	UH	lo0	
xxxx:yyyy:3030:1e4::/64	link#10	U	bridge0	
xxxx:yyyy:3030:1e4:d:3aff:fe2d:8a00 link#10		UHS	lo0	
xxxx:yyyy:303f:ffff::/64	link#9	U	pppoe1	
xxxx:yyyy:303f:ffff::567f:969a link#9		UHS	lo0	

#4 - 02/13/2013 02:19 PM - Jim Pingle

Can you gitsync and try again, or wait for the next new snap? It may be that the last snap doesn't have the changes in it. There will be a new snap later this evening.

#5 - 02/13/2013 02:49 PM - Anonymous

I will wait for the updated snapshot. In the meantime I went on to disable the DHCPv6 client on the WAN interface (IPv6 Configuration Type: None). This resulted in prefixes being distributed on the LAN and a radvd.conf file being generated.

```

# Automatically Generated, do not edit
# Generated for DHCPv6 Server lan
interface bridge0 {
    AdvSendAdvert on;
    MinRtrAdvInterval 5;
    MaxRtrAdvInterval 20;
    AdvLinkMTU 1500;
    AdvDefaultPreference medium;
    prefix xxxx:yyyy:3020:40d::/64 {
        DeprecatePrefix on;
        AdvOnLink on;
        AdvAutonomous on;
        AdvRouterAddr on;
    }
}

```

```
};  
route ::/0 {  
    RemoveRoute on;  
};  
RDNSS xxxx:yyyy:3020:40d:d:3aff:fe2d:8a00 { };  
DNSSSL localdomain { };  
};
```

#6 - 02/14/2013 10:56 AM - Anonymous

I am using the build below:

```
2.1-BETA1 (amd64)  
built on Thu Feb 14 04:54:28 EST 2013  
FreeBSD 8.3-RELEASE-p5
```

The problem is still there. No radvd.conf is being generated, although an IPv6 address is being bound to the LAN interface from the delegated prefix.

#7 - 02/16/2013 12:45 AM - Jim Pingle

- Status changed from Feedback to New

#8 - 03/05/2013 02:00 PM - Ermal Luçi

- Status changed from New to Feedback

- % Done changed from 0 to 100

Applied in changeset [afe4f2da5079fc68cd0fcd8d5ba65b173dd5726](#).

#9 - 03/05/2013 02:00 PM - Ermal Luçi

Applied in changeset [1fad9d1129b68572e04c3fd7b12fe4bd0098519](#).

#10 - 03/07/2013 12:34 AM - Anonymous

Testing was performed on:

```
2.1-BETA1 (amd64)  
built on Wed Mar 6 15:11:09 EST 2013  
FreeBSD 8.3-RELEASE-p6
```

Freshly booted pfSense box, LAN clients do not receive IPv6 addresses.

```
[2.1-BETA1][admin@localdomain]/root(2): cat /var/etc/radvd.conf  
# Automatically Generated, do not edit
```

```
[2.1-BETA1][admin@localdomain]/root(3): netstat -rnf inet6  
Routing tables
```

```
Internet6:
Destination          Gateway          Flags    Netif  Expire
default              fe80::1%pppoe1 UGS      pppoe1
::1                  ::1             UH       lo0
xxxx:yyyy:3020:11a::/64 link#10         U        bridge0
xxxx:yyyy:3020:11a:d:3aff:fe2d:8a00 link#10         UHS      lo0
xxxx:yyyy:302f:ffff::/64 link#9          U        pppoe1
xxxx:yyyy:302f:ffff::50c:d0f7 link#9          UHS      lo0
```

Disconnected from pppoe1, still nothing happens on LAN side. Delegated prefix is not removed from LAN interface.

```
[2.1-BETA1][admin@buh-pfsense.localdomain]/root(8): ifconfig bridge0 | grep inet6
inet6 fe80::1:1%bridge0 prefixlen 64 scopeid 0xa
inet6 xxxx:yyyy:3020:11a:d:3aff:fe2d:8a00 prefixlen 64
```

```
[2.1-BETA1][admin@localdomain]/root(9): cat /var/etc/radvd.conf
# Automatically Generated, do not edit
```

```
[2.1-BETA1][admin@localdomain]/root(10): netstat -rnf inet6
Routing tables
```

```
Internet6:
Destination          Gateway          Flags    Netif  Expire
::1                  ::1             UH       lo0
xxxx:yyyy:3020:11a::/64 link#10         U        bridge0
xxxx:yyyy:3020:11a:d:3aff:fe2d:8a00 link#10         UHS      lo0
```

Reconnected to pppoe1, LAN interface has no IPv6 prefix installed. Starts handing out IPv6 addresses from the old IPv6 delegated prefix (xxxx:yyyy:3020:11a::/64) that is now invalid.

```
[2.1-BETA1][admin@localdomain]/root(11): ifconfig bridge0 | grep inet6
inet6 fe80::1:1%bridge0 prefixlen 64 scopeid 0xa
inet6 fe80::20d:3aff:fe2d:8a00%bridge0 prefixlen 64 scopeid 0xa
```

```
[2.1-BETA1][admin@localdomain]/root(12): cat /var/etc/radvd.conf
# Automatically Generated, do not edit
# Generated for DHCPv6 Server lan
interface bridge0 {
    AdvSendAdvert on;
    MinRtrAdvInterval 5;
    MaxRtrAdvInterval 20;
    AdvLinkMTU 1500;
    AdvDefaultPreference medium;
    prefix xxxx:yyyy:3020:11a::/64 {
        DeprecatePrefix on;
        AdvOnLink on;
        AdvAutonomous on;
        AdvRouterAddr on;
    };
    route ::/0 {
        RemoveRoute on;
    };
    RDNSS xxxx:yyyy:3020:11a:d:3aff:fe2d:8a00 { };
    DNSSL localdomain { };
};
```

```
[2.1-BETA1][admin@localdomain]/root(13): netstat -rnf inet6
Routing tables
```

```
Internet6:
Destination          Gateway          Flags    Netif  Expire
default              fe80::1%pppoe1 UGS      pppoe1
::1                  ::1             UH       lo0
xxxx:zzzz:1015:f001::/64 link#9          U        pppoe1
xxxx:zzzz:1015:f001:222:4dff:fe6b:73fc link#9          UHS      lo0
```

#11 - 03/13/2013 08:42 AM - Renato Botelho

- Status changed from Feedback to New

#12 - 05/08/2013 01:53 PM - Renato Botelho

- Status changed from New to Feedback

Please test it again with tomorrow's (May 9) snapshots.

#13 - 05/09/2013 11:42 AM - Anonymous

Freshly booted pfSense box:

Has IPv6 on WAN interface, has no IPv6 on LAN interface, does not give out any IPv6 addresses on LAN interface:

```

cat /var/etc/radvd.conf
# Automatically Generated, do not edit

netstat -rnf inet6
Routing tables

Internet6:
Destination          Gateway              Flags      Netif Expire
default              fe80::1%pppoe1      UGS        pppoe1
::1                  ::1                  UH         lo0
xxxx:zzzz:305f:ffff::/64  link#9              U          pppoe1
xxxx:zzzz:305f:ffff:222:4dff:fe6b:73fc link#9              UHS        lo0

```

Manually disconnected PPPoE WAN:

```

cat /var/etc/radvd.conf
# Automatically Generated, do not edit

netstat -rnf inet6
Only link local IPv6 addresses present.

```

Manually reconnect PPPoE WAN, WAN interface gets IPv6, LAN interface gets IPv6, LAN clients get IPv6 addresses. IPv6 ping from Internet to LAN client works.

```

cat /var/etc/radvd.conf
# Automatically Generated, do not edit
# Generated for DHCPv6 Server lan
interface bridge0 {
    AdvSendAdvert on;
    MinRtrAdvInterval 5;
    MaxRtrAdvInterval 20;
    AdvLinkMTU 1500;
    AdvDefaultPreference medium;
    prefix xxxx:zzzz:3020:3dc::/64 {
        DeprecatePrefix on;
        AdvOnLink on;
        AdvAutonomous on;
        AdvRouterAddr on;
    };
    route ::/0 {
        RemoveRoute on;
    };
    RDNSS xxxx:zzzz:3020:3dc:d:3aff:fe2d:8a00 { };
    DNSSL localdomain { };
};

netstat -rnf inet6
Routing tables

Internet6:
Destination          Gateway              Flags      Netif Expire

```

```

default                fe80::1%pppoe1          UGS    pppoe1
::1                    ::1                     UH     lo0
xxxx:zzzz:3020:3dc::/64 link#10                    U      bridge0
xxxx:zzzz:3020:3dc:d:3aff:fe2d:8a00 link#10 UHS    lo0
xxxx:zzzz:302f:ffff::/64 link#9                      U      pppoe1
xxxx:zzzz:302f:ffff::bc1a:b85c link#9                 UHS    lo0
xxxx:zzzz:302f:ffff:222:4dff:fe6b:73fc link#9          UHS    lo0

```

Manually disconnect PPPoE WAN, LAN clients still receive old IPv6 delegated prefix addresses, LAN interface has only link-local address:

```

cat /var/etc/radvd.conf
# Automatically Generated, do not edit
# Generated for DHCPv6 Server lan
interface bridge0 {
    AdvSendAdvert on;
    MinRtrAdvInterval 5;
    MaxRtrAdvInterval 20;
    AdvLinkMTU 1500;
    AdvDefaultPreference medium;
    prefix xxxx:zzzz:3020:3dc::/64 {
        DeprecatePrefix on;
        AdvOnLink on;
        AdvAutonomous on;
        AdvRouterAddr on;
    };
    route ::/0 {
        RemoveRoute on;
    };
    RDNSS xxxx:zzzz:3020:3dc:d:3aff:fe2d:8a00 { };
    DNSSL localdomain { };
};

```

```

netstat -rnf inet6
Only link local IPv6 addresses present.

```

Manually connect PPPoE WAN, WAN interface receives IPv6 address, LAN interface has only link-local address, still sends out old delegated prefix to LAN clients:

```

cat /var/etc/radvd.conf
# Automatically Generated, do not edit
# Generated for DHCPv6 Server lan
interface bridge0 {
    AdvSendAdvert on;
    MinRtrAdvInterval 5;
    MaxRtrAdvInterval 20;
    AdvLinkMTU 1500;
    AdvDefaultPreference medium;
    prefix xxxx:zzzz:3020:3dc::/64 {
        DeprecatePrefix on;
        AdvOnLink on;
        AdvAutonomous on;
        AdvRouterAddr on;
    };
    route ::/0 {
        RemoveRoute on;
    };
    RDNSS xxxx:zzzz:3020:3dc:d:3aff:fe2d:8a00 { };
    DNSSL localdomain { };
};

```

```

netstat -rnf inet6
Routing tables

```

```

Internet6:
Destination          Gateway              Flags    Netif Expire
default              fe80::1%pppoe1     UGS     pppoe1
::1                  ::1                 UH      lo0
xxxx:zzzz:304f:ffff::/64 link#9              U       pppoe1
xxxx:zzzz:304f:ffff:222:4dff:fe6b:73fc link#9              UHS     lo0

```

Manually disconnect PPPoE WAN, only link-local addresses on LAN interface, still sending old delegated prefix:

```
cat /var/etc/radvd.conf
# Automatically Generated, do not edit
# Generated for DHCPv6 Server lan
interface bridge0 {
    AdvSendAdvert on;
    MinRtrAdvInterval 5;
    MaxRtrAdvInterval 20;
    AdvLinkMTU 1500;
    AdvDefaultPreference medium;
    prefix xxxx:zzzz:3020:3dc::/64 {
        DeprecatePrefix on;
        AdvOnLink on;
        AdvAutonomous on;
        AdvRouterAddr on;
    };
    route ::/0 {
        RemoveRoute on;
    };
    RDNSS xxxx:zzzz:3020:3dc:d:3aff:fe2d:8a00 { };
    DNSSL localdomain { };
};
```

```
netstat -rnf inet6
Only link local IPv6 addresses present.
```

Manually reconnect PPPoE WAN, WAN interface receives IPv6 address, LAN interface has only link-local address, still sends out old delegated prefix to LAN clients:

```
cat /var/etc/radvd.conf
# Automatically Generated, do not edit
# Generated for DHCPv6 Server lan
interface bridge0 {
    AdvSendAdvert on;
    MinRtrAdvInterval 5;
    MaxRtrAdvInterval 20;
    AdvLinkMTU 1500;
    AdvDefaultPreference medium;
    prefix xxxx:zzzz:3020:3dc::/64 {
        DeprecatePrefix on;
        AdvOnLink on;
        AdvAutonomous on;
        AdvRouterAddr on;
    };
    route ::/0 {
        RemoveRoute on;
    };
    RDNSS xxxx:zzzz:3020:3dc:d:3aff:fe2d:8a00 { };
    DNSSL localdomain { };
};
```

```
netstat -rnf inet6
Routing tables
```

```
Internet6:
Destination      Gateway          Flags    Netif  Expire
default          fe80::1%ppoe1  UGS     ppoe1
::1              ::1             UH      lo0
xxxx:zzzz:303f:ffff::/64  link#9         U       ppoe1
xxxx:zzzz:303f:ffff:222:4dff:fe6b:73fc link#9         UHS     lo0
```


#14 - 05/09/2013 11:43 AM - Anonymous

Forgot to add, this test was performed on:
2.1-BETA1 (amd64)
built on Thu May 9 07:06:51 EDT 2013

#15 - 05/09/2013 11:50 AM - Renato Botelho

Could you please share <interfaces> section from config.xml and the content of /var/etc/dhcp6c*.conf with me?

#16 - 05/09/2013 12:07 PM - Anonymous

As a note, the value configured for "DHCPv6 Prefix Delegation size" is 64, but shows up as 0 in the config below:

```
<interfaces>
  <wan>
    <if>pppoe1</if>
    <disableftpproxy/>
    <bandwidth>100</bandwidth>
    <bandwidthhtype>Mb</bandwidthhtype>
    <spoofmac/>
    <descr><![CDATA[WAN1]]></descr>
    <blockbogons/>
    <enable/>
    <ipaddr>pppoe</ipaddr>
    <ipaddrv6>dhcp6</ipaddrv6>
    <dhcp6-duid/>
    <dhcp6-ia-pd-len>0</dhcp6-ia-pd-len>
  </wan>
  <lan>
    <if>bridge0</if>
    <bandwidth>100</bandwidth>
    <bandwidthhtype>Mb</bandwidthhtype>
    <enable/>
    <descr><![CDATA[BRIDGE0]]></descr>
    <spoofmac/>
    <ipaddr>192.168.x.y</ipaddr>
    <subnet>24</subnet>
    <ipaddrv6>track6</ipaddrv6>
    <track6-interface>wan</track6-interface>
    <track6-prefix-id>0</track6-prefix-id>
  </lan>
  <opt2>
    <descr><![CDATA[WAN2]]></descr>
    <if>em3</if>
    <alias-address>192.168.a.a</alias-address>
    <alias-subnet>24</alias-subnet>
    <blockbogons/>
    <spoofmac>aa:bb:cc:dd:ee:ff</spoofmac>
    <enable/>
    <ipaddr>dhcp</ipaddr>
    <dhcphostname/>
  </opt2>
  <opt3>
    <descr><![CDATA[OVPN]]></descr>
    <if>ovpns2</if>
    <enable/>
    <spoofmac/>
  </opt3>
  <opt4>
    <descr><![CDATA[DMZ]]></descr>
    <if>em1</if>
    <enable/>
    <spoofmac/>
    <blockbogons/>
    <ipaddr>192.168.c.d</ipaddr>
    <subnet>24</subnet>
  </opt4>
  <opt5>
    <descr><![CDATA[LAN_IF0]]></descr>
    <if>em0</if>
    <enable/>
  </opt5>
</interfaces>
```

```
<spoofmac/>
</opt5>
</interfaces>
```

```
cat dhcp6c_wan.conf
interface pppoel {
    send ia-na 0; # request stateful address
    send ia-pd 0; # request prefix delegation
request domain-name-servers;
request domain-name;
script "/var/etc/dhcp6c_wan_script.sh"; # we'd like some nameservers please
};
id-assoc na 0 { };
id-assoc pd 0 {
    prefix-interface bridge0 {
        sla-id 0;
        sla-len 0;
    };
};
```

#17 - 05/29/2013 10:07 AM - Renato Botelho

- Status changed from Feedback to New

#18 - 06/24/2013 12:55 PM - Renato Botelho

- Status changed from New to Feedback

Could you please check a recent snapshot?

#19 - 06/24/2013 02:09 PM - Anonymous

Tried with:
2.1-RC0 (amd64)
built on Mon Jun 24 04:05:41 EDT 2013
FreeBSD 8.3-RELEASE-p8

Boot up. WAN & LAN get correct IPv6 addresses, radvd works. LAN clients receive correct IPv6 addresses. LAN hosts are reachable from the Internet. All is working well.

Manually disconnect the PPPoE WAN (Disconnect button in Status -> Interfaces). IPv6 address not removed from LAN interface. Still handing out IPv6 addresses on LAN.

```
/root(1): cat /var/etc/radvd.conf
# Automatically Generated, do not edit
# Generated for DHCPv6 Server lan
interface em0 {
```

```

AdvSendAdvert on;
MinRtrAdvInterval 5;
MaxRtrAdvInterval 20;
AdvLinkMTU 1500;
AdvDefaultPreference medium;
prefix xxxx:yyyy:3080:76::/64 {
    DeprecatePrefix on;
    AdvOnLink on;
    AdvAutonomous on;
    AdvRouterAddr on;
};
route ::/0 {
    RemoveRoute on;
};
RDNSS xxxx:yyyy:3080:76:222:4dff:fe6b:73fc { };
DNSSL localdomain { };
};

```

```

/root(2): ps aux | grep radvd
root 94137 0.0 0.1 6828 1524 ?? SN 9:35PM 0:00.01 /usr/local/sbin/radvd -p /var/run/radvd.pid -C
/var/etc/radvd.conf -m syslog
root 57076 0.0 0.1 9068 1468 1 S+ 9:46PM 0:00.00 grep radvd

```

```

/root(3): netstat -rnf inet6
Routing tables

```

Internet6:				
Destination	Gateway	Flags	Netif	Expire
::1	::1	UH	lo0	
xxxx:yyyy:3080:76::/64	link#1	U	em0	
xxxx:yyyy:3080:76:222:4dff:fe6b:73fc	link#1	UHS	lo0	

Manually connect the PPPoE WAN (Connect button in Status -> Interfaces). WAN gets different IPv6 address. LAN still has the same old IPv6 address and is still handing out IPv6 addresses from the old delegated prefix. LAN clients are not reachable from the Internet.

```

/root(4): cat /var/etc/radvd.conf
# Automatically Generated, do not edit
# Generated for DHCPv6 Server lan
interface em0 {
    AdvSendAdvert on;
    MinRtrAdvInterval 5;
    MaxRtrAdvInterval 20;
    AdvLinkMTU 1500;
    AdvDefaultPreference medium;
    prefix xxxx:yyyy:3080:76::/64 {
        DeprecatePrefix on;
        AdvOnLink on;
        AdvAutonomous on;
        AdvRouterAddr on;
    };
    route ::/0 {
        RemoveRoute on;
    };
    RDNSS xxxx:yyyy:3080:76:222:4dff:fe6b:73fc { };
    DNSSL localdomain { };
};

```

```

/root(5): ps aux | grep radvd
root 94137 0.0 0.1 6828 1524 ?? SN 9:35PM 0:00.02 /usr/local/sbin/radvd -p /var/run/radvd.pid -C
/var/etc/radvd.conf -m syslog
root 37031 0.0 0.1 9068 1468 1 S+ 9:51PM 0:00.00 grep radvd

```

```

/root(6): netstat -rnf inet6
Routing tables

```

Internet6:				
Destination	Gateway	Flags	Netif	Expire
default	fe80::1%pppoe1	UGS	pppoe1	
::1	::1	UH	lo0	
xxxx:yyyy:3080:76::/64	link#1	U	em0	
xxxx:yyyy:3080:76:222:4dff:fe6b:73fc	link#1	UHS	lo0	
xxxx:yyyy:308f:ffff::/64	link#9	U	pppoe1	
xxxx:yyyy:308f:ffff:222:4dff:fe6b:73fc	link#9	UHS	lo0	

Manually disconnect the WAN interface (physical disconnect). IPv6 addresses not removed from LAN & WAN. Still handing out IPv6 addresses on LAN. The Status -> Interfaces page shows the WAN interface as "down" with no other details.

```
/root(10): cat /var/etc/radvd.conf
# Automatically Generated, do not edit
# Generated for DHCPv6 Server lan
interface em0 {
    AdvSendAdvert on;
    MinRtrAdvInterval 5;
    MaxRtrAdvInterval 20;
    AdvLinkMTU 1500;
    AdvDefaultPreference medium;
    prefix xxxx:yyyy:3080:76::/64 {
        DeprecatePrefix on;
        AdvOnLink on;
        AdvAutonomous on;
        AdvRouterAddr on;
    };
    route ::/0 {
        RemoveRoute on;
    };
    RDNSS xxxx:yyyy:3080:76:222:4dff:fe6b:73fc { };
    DNSSL localdomain { };
};
```

```
/root(11): ps aux | grep radvd
root 94137 0.0 0.1 6828 1524 ?? SN 9:35PM 0:00.03 /usr/local/sbin/radvd -p /var/run/radvd.pid -C
/var/etc/radvd.conf -m syslog
root 40782 0.0 0.1 9068 1468 1 S+ 9:57PM 0:00.00 grep radvd
```

```
/root(12): netstat -rnf inet6
```

Routing tables

Internet6:

Destination	Gateway	Flags	Netif	Expire
default	fe80::1%pppoe1	UGS	pppoe1	
::1	::1	UH	lo0	
xxxx:yyyy:3080:76::/64	link#1	U	em0	
xxxx:yyyy:3080:76:222:4dff:fe6b:73fc link#1		UHS	lo0	
xxxx:yyyy:308f:ffff::/64	link#9	U	pppoe1	
xxxx:yyyy:308f:ffff:222:4dff:fe6b:73fc link#9		UHS	lo0	

Manually reconnect the WAN interface (physical reconnect). Status -> Interfaces for WAN shows the old IPv6 address, although you can see below it also received a different one. LAN interface still has the old IPv6 address. Still handing out IPv6 addresses from the old delegated prefix, which is not valid any more. LAN hosts are not reachable from the Internet. WAN is not reachable from the Internet on any of the two IPv6 addresses below.

```
/root(13): cat /var/etc/radvd.conf
# Automatically Generated, do not edit
# Generated for DHCPv6 Server lan
interface em0 {
    AdvSendAdvert on;
    MinRtrAdvInterval 5;
    MaxRtrAdvInterval 20;
    AdvLinkMTU 1500;
    AdvDefaultPreference medium;
    prefix xxxx:yyyy:3080:76::/64 {
        DeprecatePrefix on;
        AdvOnLink on;
        AdvAutonomous on;
        AdvRouterAddr on;
    };
    route ::/0 {
        RemoveRoute on;
    };
    RDNSS xxxx:yyyy:3080:76:222:4dff:fe6b:73fc { };
    DNSSL localdomain { };
};
```

```
/root(14): ps aux | grep radvd
root 94137 0.0 0.1 6828 1524 ?? SN 9:35PM 0:00.05 /usr/local/sbin/radvd -p /var/run/radvd.pid -C
/var/etc/radvd.conf -m syslog
root 44703 0.0 0.1 9068 1468 1 S+ 10:02PM 0:00.00 grep radvd
```

```
/root(15): netstat -rnf inet6
```

Routing tables

```

Internet6:
Destination          Gateway                Flags      Netif  Expire
default              fe80::1%pppoe1       UGS        pppoe1
::1                  ::1                   UH         lo0
xxxx:yyyy:302f:ffff::/64  link#9               U          pppoe1
xxxx:yyyy:302f:ffff:222:4dff:fe6b:73fc link#9               UHS        em0      lo0
xxxx:yyyy:3080:76::/64  link#1                U          em0
xxxx:yyyy:3080:76:222:4dff:fe6b:73fc link#1               UHS        lo0
xxxx:yyyy:308f:ffff::/64  link#9                U          pppoe1
xxxx:yyyy:308f:ffff:222:4dff:fe6b:73fc link#9               UHS        lo0

```

#20 - 07/09/2013 07:35 AM - Renato Botelho

- Status changed from Feedback to New

#21 - 07/16/2013 02:08 PM - Renato Botelho

- Status changed from New to Feedback

It should be better on last snapshots

#22 - 07/16/2013 03:30 PM - Renato Botelho

- Status changed from Feedback to New

Not fixed yet

#23 - 08/16/2013 09:40 AM - Ermal Luçi

- Status changed from New to Feedback

Applied in changeset [90af1b8bee63ceabb5e1e11e2eb02b3b7b20f5ad](#).

#24 - 08/16/2013 09:40 AM - Ermal Luçi

Applied in changeset [45c07f167399a5fc900e54ea97d346a05cf23573](#).

#25 - 08/18/2013 02:55 PM - Anonymous

Tested using:

2.1-RC1 (amd64)

built on Sat Aug 17 21:32:08 EDT 2013

FreeBSD 8.3-RELEASE-p9

Step 1

Freshly booted pfSense. WAN & LAN get correct IPv6 addresses, radvd works. LAN clients receive correct IPv6 addresses. LAN hosts are reachable from the Internet. All is OK.

As a side note, WAN IPv6 is not shown on the Status -> Interfaces page, but can be found in the routing table (below).

```

cat /var/etc/radvd.conf
# Automatically Generated, do not edit
# Generated for DHCPv6 Server lan
interface em0 {
    AdvSendAdvert on;
    MinRtrAdvInterval 5;
    MaxRtrAdvInterval 20;
    AdvLinkMTU 1500;
    AdvDefaultPreference medium;

```

```

prefix xxxx:yyyy:3071:e300::/64 {
    DeprecatePrefix on;
    AdvOnLink on;
    AdvAutonomous on;
    AdvRouterAddr on;
};
route ::/0 {
    RemoveRoute on;
};
RDNSS xxxx:yyyy:3071:e300:222:4dff:fe6b:73fc { };
DNSSL localdomain { };
};

```

```

ps aux | grep radvd
root 61665 0.0 0.1 6828 1524 ?? S 9:49PM 0:00.01 /usr/local/sbin/radvd -p /var/run/radvd.pid -C /var/etc/radvd.conf -m syslog
root 9808 0.0 0.1 9068 1464 0 S+ 9:56PM 0:00.00 grep radvd

```

```

netstat -rnf inet6
Routing tables

```

```

Internet6:
Destination Gateway Flags Netif Expire
default fe80::1%ppoe1 UGS pppoe1
::1 ::1 UH lo0
xxxx:yyyy:3071:e300::/64 link#1 U em0
xxxx:yyyy:3071:e300:222:4dff:fe6b:73fc link#1 UHS lo0
xxxx:yyyy:307f:ffff::bclb:b466 link#9 UHS lo0

```

Step 2

Manually disconnected the PPPoE WAN via Status -> Interfaces -> Disconnect button. IPv6 address is removed from LAN interface. Still handing out IPv6 addresses on LAN from a subnet (step 1) that is not connected any more. radvd is still running. radvd has the same PID, so radvd is never killed/refreshed.

```

cat /var/etc/radvd.conf
# Automatically Generated, do not edit
# Generated for DHCPv6 Server lan
interface em0 {
    AdvSendAdvert on;
    MinRtrAdvInterval 5;
    MaxRtrAdvInterval 20;
    AdvLinkMTU 1500;
    AdvDefaultPreference medium;
    prefix xxxx:yyyy:3071:e300::/64 {
        DeprecatePrefix on;
        AdvOnLink on;
        AdvAutonomous on;
        AdvRouterAddr on;
    };
    route ::/0 {
        RemoveRoute on;
    };
    RDNSS xxxx:yyyy:3071:e300:222:4dff:fe6b:73fc { };
    DNSSL localdomain { };
};

```

```

ps aux | grep radvd
root 61665 0.0 0.1 6828 1524 ?? S 9:49PM 0:00.02 /usr/local/sbin/radvd -p /var/run/radvd.pid -C /var/etc/radvd.conf -m syslog
root 69437 0.0 0.1 9068 1464 0 S+ 10:00PM 0:00.00 grep radvd

```

```

netstat -rnf inet6
Routing tables

```

```

Internet6:
Destination Gateway Flags Netif Expire
::1 ::1 UH lo0

```

Step 3

Manually connect the PPPoE WAN via Status -> Interfaces -> Connect button. New IPv6 address (WAN) & prefix (LAN) are received. WAN IPv6 address correctly bound to WAN interface. LAN IPv6 address is from the new IPv6 prefix. The radvd config contains the old prefix (step 1). Still handing out IPv6 addresses on LAN from the old subnet (step 1) that is not assigned to us any more. radvd is still running. radvd has the same PID, so radvd is never killed/refreshed.

```
cat /var/etc/radvd.conf
# Automatically Generated, do not edit
# Generated for DHCPv6 Server lan
interface em0 {
    AdvSendAdvert on;
    MinRtrAdvInterval 5;
    MaxRtrAdvInterval 20;
    AdvLinkMTU 1500;
    AdvDefaultPreference medium;
    prefix xxxx:yyyy:3071:e300::/64 {
        DeprecatePrefix on;
        AdvOnLink on;
        AdvAutonomous on;
        AdvRouterAddr on;
    };
    route ::/0 {
        RemoveRoute on;
    };
    RDNSS xxxx:yyyy:3071:e300:222:4dff:fe6b:73fc { };
    DNSSL localdomain { };
};
```

```
ps aux | grep radvd
root 61665 0.0 0.1 6828 1524 ?? S 9:49PM 0:00.03 /usr/local/sbin/radvd -p /var/run/radvd.pid -C /var/etc/radvd.conf -m syslog
root 81381 0.0 0.1 9068 1464 1 S+ 10:11PM 0:00.00 grep radvd
```

```
netstat -rnf inet6
Routing tables
```

```
Internet6:
Destination          Gateway              Flags      Netif Expire
default              fe80::1%ppoe1      UGS        ppoe1
::1                  ::1                 UH         lo0
xxxx:yyyy:3032:3a00::/64 link#1              U          em0
xxxx:yyyy:3032:3a00:222:4dff:fe6b:73fc link#1              UHS        lo0
xxxx:yyyy:303f:ffff::bc1b:b6b6 link#9              UHS        lo0
```

Step 4
 Physically disconnect PPPoE WAN cable. Sensing the physical disconnect takes more than 30 seconds, but the gateway goes down long before that. LAN IPv6 address obtained at step 3 is not removed from the LAN interface. WAN IPv6 address obtained at step 3 is still in the routing table and bound to the PPPoE interface although physical interface was disconnected and interface appears down in the webGUI. Still handing out IPv6 addresses on LAN from the original prefix (step 1) that is not connected any more. radvd is still running. radvd has the same PID, so radvd is never killed/refreshed.
 On a side note, why is the LAN MAC address used to build the link-local address of the WAN PPPoE interface instead of the WAN MAC address?

```
ifconfig em2
em2: flags=8843<UP,BROADCAST,RUNNING,SIMPLEX,MULTICAST> metric 0 mtu 1500
    options=9b<RXCSUM, TXCSUM, VLAN_MTU, VLAN_HWTAGGING, VLAN_HWCSUM>
    ether 00:0e:0c:68:c9:9c
    inet6 fe80::20e:cff:fe68:c99c%em2 prefixlen 64 scopeid 0x3
    nd6 options=3<PERFORMNUD,ACCEPT_RTADV>
    media: Ethernet autoselect
    status: no carrier
```

```
ifconfig ppoe1
ppoe1: flags=8890<POINTOPOINT,NOARP,SIMPLEX,MULTICAST> metric 0 mtu 1500
    inet6 fe80::222:4dff:fe6b:73fc%ppoe1 prefixlen 64 scopeid 0x9
    inet6 xxxx:yyyy:303f:ffff::bc1b:b6b6 prefixlen 128
    nd6 options=3<PERFORMNUD,ACCEPT_RTADV>
```

```
cat /var/etc/radvd.conf
# Automatically Generated, do not edit
# Generated for DHCPv6 Server lan
interface em0 {
    AdvSendAdvert on;
    MinRtrAdvInterval 5;
```

```

MaxRtrAdvInterval 20;
AdvLinkMTU 1500;
AdvDefaultPreference medium;
prefix xxxx:yyyy:3071:e300::/64 {
    DeprecatePrefix on;
    AdvOnLink on;
    AdvAutonomous on;
    AdvRouterAddr on;
};
route ::/0 {
    RemoveRoute on;
};
RDNSS xxxx:yyyy:3071:e300:222:4dff:fe6b:73fc { };
DNSSL localdomain { };
};

```

```

ps aux | grep radvd
root 61665 0.0 0.1 6828 1524 ?? S 9:49PM 0:00.04 /usr/local/sbin/radvd -p /var/run/radvd.pid -C /var/etc/radvd.conf -m syslog
root 10492 0.0 0.1 9068 1464 1 S+ 10:17PM 0:00.00 grep radvd

```

```

netstat -rnf inet6
Routing tables

```

```

Internet6:
Destination Gateway Flags Netif Expire
default fe80::1%pppoe1 UGS pppoe1
::1 ::1 UH lo0
xxxx:yyyy:3032:3a00::/64 link#1 U em0
xxxx:yyyy:3032:3a00:222:4dff:fe6b:73fc link#1 UHS lo0
xxxx:yyyy:303f:ffff::bclb:b6b6 link#9 UHS lo0

```

Step 5

Physically reconnect PPPoE WAN cable. PPPoE reconnects instantly. No new WAN IPv6 address is obtained. The old WAN IPv6 address (step 3) appears bound to pppoe1 but is not reachable from the Internet. LAN interface still has the old IPv6 address (step 3). Still handing out IPv6 from the initial prefix (step 1) on LAN. No IPv6 connectivity for LAN clients. radvd is still running. radvd has the same PID, so radvd is never killed/refreshed.

```

ifconfig pppoe1
pppoe1: flags=88d1<UP,POINTOPOINT,RUNNING,NOARP,SIMPLEX,MULTICAST> metric 0 mtu 1492
    inet6 fe80::222:4dff:fe6b:73fc%pppoe1 prefixlen 64 scopeid 0x9
    inet6 xxxx:yyyy:303f:ffff::bclb:b6b6 prefixlen 128
    inet6 fe80::bcla:b899%pppoe1 prefixlen 64 scopeid 0x9
    inet aaa.bbb.ccc.157 --> aaa.bbb.ccc.1 netmask 0xffffffff
    nd6 options=3<PERFORMNUD,ACCEPT_RTADV>

```

```

cat /var/etc/radvd.conf
# Automatically Generated, do not edit
# Generated for DHCPv6 Server lan
interface em0 {
    AdvSendAdvert on;
    MinRtrAdvInterval 5;
    MaxRtrAdvInterval 20;
    AdvLinkMTU 1500;
    AdvDefaultPreference medium;
    prefix xxxx:yyyy:3071:e300::/64 {
        DeprecatePrefix on;
        AdvOnLink on;
        AdvAutonomous on;
        AdvRouterAddr on;
    };
    route ::/0 {
        RemoveRoute on;
    };
    RDNSS xxxx:yyyy:3071:e300:222:4dff:fe6b:73fc { };
    DNSSL localdomain { };
};

```

```

ps aux | grep radvd
root 61665 0.0 0.1 6828 1524 ?? S 9:49PM 0:00.05 /usr/local/sbin/radvd -p /var/run/radvd.pid -C /var/etc/radvd.conf -m syslog
root 16538 0.0 0.1 9068 1464 0 S+ 10:23PM 0:00.00 grep radvd

```



```
netstat -rnf inet6
Routing tables
```

Internet6:

Destination	Gateway	Flags	Netif	Expire
default	fe80::1%pppoe1	UGS	pppoe1	
::1	::1	UH	lo0	
xxxx:yyyy:3032:3a00::/64	link#1	U	em0	
xxxx:yyyy:3032:3a00:222:4dff:fe6b:73fc link#1			UHS	lo0
xxxx:yyyy:303f:ffff::bc1b:b6b6	link#9	UHS	lo0	

#26 - 09/04/2013 07:46 AM - Ermal Luçi

Is this still an issue for new snapshots of september?

#27 - 09/04/2013 10:06 AM - Ermal Luçi

I just pushed a commit for this as well <https://github.com/pfsense/pfsense/commit/d6df2c4c71678b5edd98892ca40facbb80f4ed1c>

#28 - 09/06/2013 12:48 PM - Anonymous

No improvement with:

2.1-RC2 (amd64)

built on Thu Sep 5 21:38:32 EDT 2013

What's different from the previous build is this:

- at step 3, no new WAN or LAN addresses are obtained
- at step 5, even though physical connection is restored, PPPoE will not reconnect.

#29 - 09/06/2013 01:14 PM - Renato Botelho

is the option "Use IPv4 connectivity as parent interface" set on WAN interface?

#30 - 09/06/2013 01:15 PM - Anonymous

Yes, otherwise it would not receive any kind of IPv6 address at all.

#31 - 09/09/2013 01:14 PM - Ermal Luçi

Can you show system log for this?

#32 - 09/09/2013 03:02 PM - Anonymous

I have sent you the system log and the config description.

#33 - 09/09/2013 04:48 PM - Chris Buechler

- Target version changed from 2.1 to 2.1.1

#34 - 09/21/2013 12:29 PM - Renato Botelho

- Status changed from Feedback to New

#35 - 02/17/2014 04:34 AM - Ermal Luçi

Can you please confirm this happens with latest 2.1.1?
If yes can you post your config.xml?

#36 - 02/21/2014 07:24 AM - Ermal Luçi

I put a fix which should handle properly all cases to this.

Can you try tomorrows snapshots of 2.1.1?

#37 - 02/21/2014 07:30 AM - Ermal Luçi

- Status changed from New to Feedback

Applied in changeset [929776169f0f36b99ef62f7bfe633f8d02db2c43](#).

#38 - 02/21/2014 07:30 AM - Ermal Luçi

Applied in changeset [080fd00bac29b736a5e1e8e91b9efbb3c3ea8305](#).

#39 - 02/23/2014 12:16 PM - Anonymous

Tested this on:
2.1.1-PRERELEASE (amd64)
built on Sat Feb 22 05:12:28 EST 2014
FreeBSD 8.3-RELEASE-p14

1. Freshly booted pfSense box. All looks OK.
NOTE: WAN IPv6 address is not shown anywhere in the WebGUI or console. Maybe this is just a cosmetic bug...

```
cat /var/etc/radvd.conf
# Automatically Generated, do not edit
# Generated config for dhcp6 delegation from wan on lan
interface igb0 {
    AdvSendAdvert on;
    MinRtrAdvInterval 3;
    MaxRtrAdvInterval 10;
    AdvLinkMTU 1500;
    AdvOtherConfigFlag on;
    prefix aaaa:bbbb:3066:ae00::/64 {
        AdvOnLink on;
        AdvAutonomous on;
        AdvRouterAddr on;
    };
    RDNSS aaaa:bbbb:3066:ae00:21b:21ff:fea6:3ab4 { };
    DNSSL localdomain { };
};
```

```
ps aux | grep radvd
root 95983 0.0 0.0 6828 1476 ?? S 7:26PM 0:00.00 /usr/local/sbin/radvd -p /var/run/radvd.pid -C /var/etc/radvd.conf -m syslog
root 80507 0.0 0.0 9068 1468 0 S+ 7:28PM 0:00.00 grep radvd
```

```
netstat -rnf inet6
Routing tables
```

Destination	Gateway	Flags	Netif	Expire
default	fe80::1%ppoe1	UGS	ppoe1	
::1	::1	UH	lo0	
aaaa:bbbb:3066:ae00::/64	link#1	U	igb0	
aaaa:bbbb:3066:ae00:21b:21ff:fea6:3ab4	link#1	UHS		lo0
aaaa:bbbb:306f:ffff::54e8:c7f4	link#11	UHS		lo0

2. Manually disconnect WAN from Status -> Interfaces -> Disconnect. IPv6 prefix not being advertised on LAN any more. radvd is no longer running.

Everything looks OK.

```
cat /var/etc/radvd.conf
# Automatically Generated, do not edit
```

```
ps aux | grep radvd
root 58519 0.0 0.0 9068 1468 1 S+ 7:31PM 0:00.00 grep radvd
```

```
netstat -rnf inet6
Routing tables
```

```
Internet6:
Destination Gateway Flags Netif Expire
::1 ::1 UH lo0
```

3. Manually connect WAN from Status -> Interfaces -> Connect. LAN interface has an IPv6 address, but the IPv6 prefix is not being advertised on the LAN interface. radvd is NOT running. IPv6 connectivity broken for LAN clients.
NOTE: WAN IPv6 address is not shown anywhere in the WebGUI or console.

```
cat /var/etc/radvd.conf
# Automatically Generated, do not edit
```

```
ps aux | grep radvd
root 14458 0.0 0.0 6088 1188 1 RL+ 7:32PM 0:00.00 grep radvd
```

```
netstat -rnf inet6
Routing tables
```

```
Internet6:
Destination Gateway Flags Netif Expire
default fe80::1%pppoe1 UGS pppoe1
::1 ::1 UH lo0
aaaa:bbbb:3084:9d00::/64 link#1 U igb0
aaaa:bbbb:3084:9d00:21b:21ff:fea6:3ab4 link#1 UHS lo0
aaaa:bbbb:308f:ffff::54e8:c7f4 link#11 UHS lo0
```

I have also sent you my anonymized config at the email address listed under your profile.

#40 - 03/06/2014 12:50 AM - Chris Buechler

- *Target version deleted (2.1.1)*

#41 - 02/01/2016 04:26 PM - Chris Buechler

- *Status changed from Feedback to Resolved*

resolved some time ago, not an issue at least on 2.2.x and newer.