# strongSwan - Bug #1199

## virtual ip assignment sequence when use %radius

10.11.2015 07:17 - richard hu

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|---|---|---|---|
| **Status:** | Closed | **Start date:** | 10.11.2015 |
| **Priority:** | Normal | **Due date:** | |
| **Assignee:** | Tobias Brunner | **Estimated time:** | 0.00 hour |
| **Category:** | libcharon | | |
| **Target version:** | 5.3.4 | | |
| **Affected version:** | 5.3.3 | **Resolution:** | Fixed |

**Description**

when use ikev2 and eap-radius, set rightsourceip=%radius,172.16.0.0/16
found strongswan will use 172.16.0.x although radius response a valid Framed-IP-Address
if set rightsourceip=%radius, then strongswan can get radius response ip.
is this by design? I think radius should be first because it write in front of 172.16

### Associated revisions

**Revision fdfbd401 - 12.11.2015 14:32 - Tobias Brunner**

eap-radius: Compare address family when handing out virtual IPs

This also ensures that the actually released virtual IP is removed from
the list of claimed IPs.

Fixes #1199.

### History

**#1 - 10.11.2015 08:09 - richard hu**

log shows assign two ip, but finally client use 172.16.x.x
Nov 10 07:07:41 07[CFG] <IOS8_IKEV2i_MSCHAP|2> reassigning offline lease to 'aaa'
Nov 10 07:07:41 07[IKE] <IOS8_IKEV2i_MSCHAP|2> assigning virtual IP 172.16.0.1 to peer 'aaa'
Nov 10 07:07:41 07[IKE] <IOS8_IKEV2i_MSCHAP|2> peer requested virtual IP %any6
Nov 10 07:07:41 07[IKE] <IOS8_IKEV2i_MSCHAP|2> assigning virtual IP 172.26.11.20 to peer 'aaa'
Nov 10 07:07:41 07[IKE] <IOS8_IKEV2i_MSCHAP|2> building INTERNAL_IP4_DNS attribute
Nov 10 07:07:41 07[IKE] <IOS8_IKEV2i_MSCHAP|2> building INTERNAL_IP4_NETMASK attribute
Nov 10 07:07:41 07[IKE] <IOS8_IKEV2i_MSCHAP|2> CHILD_SA IOS8_IKEV2i_MSCHAP{2} established with SPIs c30b630f_i 0a5413bf_o and TS 0.0.0.0/0 === 172.16.0.1/32 172.26.11.20/32

**#2 - 10.11.2015 09:56 - Tobias Brunner**

*- Status changed from New to Feedback*

There is definitely a problem with the address assignment in the RADIUS plugin as there is no comparison of the IP address family. So this should never happen:

```
Nov 10 07:07:41 07[IKE] <IOS8_IKEV2i_MSCHAP|2> peer requested virtual IP %any6
Nov 10 07:07:41 07[IKE] <IOS8_IKEV2i_MSCHAP|2> assigning virtual IP 172.26.11.20 to peer 'aaa'
```

I pushed a fix for this to the *1199-radius-vip-family* branch.

> I think radius should be first because it write in front of 172.16

That depends on the order in which attribute providers register themselves, basically the plugin load order. If the *stroke* plugin (which provides the in-memory pools defined in ipsec.conf) is loaded before the *eap-radius* plugin it will be queried first for a virtual IP. The order within the *rightsourceip* option is irrelevant (unless you define multiple in-memory pools). I've added a note to VirtualIP.

**#3 - 11.11.2015 02:24 - richard hu**

Tobias Brunner wrote:
If I want get %radius ip first, I need apply the fix and change plugin order?

> There is definitely a problem with the address assignment in the RADIUS plugin as there is no comparison of the IP address family. So this should never happen:

> [...]

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#### #4 - 11.11.2015 11:07 - Tobias Brunner

> If I want get %radius ip first, I need apply the fix and change plugin order?

Just change the plugin order. As long as the client requests an IPv4 address first that should work fine without the patch.

#### #5 - 12.11.2015 02:29 - richard hu

Tobias Brunner wrote:

> > If I want get %radius ip first, I need apply the fix and change plugin order?
>
> Just change the plugin order. As long as the client requests an IPv4 address first that should work fine without the patch.

then what the patch fixed?

#### #6 - 12.11.2015 14:35 - Tobias Brunner

*- Tracker changed from Issue to Bug*

*- Category set to libcharon*

*- Target version set to 5.3.4*

*- Resolution set to Fixed*

> > Just change the plugin order. As long as the client requests an IPv4 address first that should work fine without the patch.
>
> then what the patch fixed?

It prevents the *eap-radius* plugin from handing out IPv4 addresses if the client requested an IPv6 address and vice versa (as can be seen in your log). If you only assign one Framed-IP-Address attribute, let the *eap-radius* assign IPs first (by changing the plugin order) and the client sends the IPv4 attribute request first then the current code does not cause problems.

#### #7 - 16.11.2015 11:36 - Tobias Brunner

*- Status changed from Feedback to Closed*