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Subject: [PATCH][ICMP]: Dst entry leak in icmp\_send host re-lookup code.

Posted by [Pavel Emelianov](#) on Tue, 25 Mar 2008 15:40:00 GMT

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Commit 8b7817f3a959ed99d7443afc12f78a7e1fcc2063 ([IPSEC]: Add ICMP host relookup support) introduced some dst leaks on error paths: the rt pointer can be forgotten to be put. Fix it by going to a proper label.

Found after net namespace's lo refused to unregister :) Many thanks to Den for valuable help during debugging.

Signed-off-by: Pavel Emelyanov <xemul@openvz.org>

Signed-off-by: Denis V. Lunev <den@openvz.org>

```
---
diff --git a/net/ipv4/icmp.c b/net/ipv4/icmp.c
index ff9a8e6..db231cb 100644
--- a/net/ipv4/icmp.c
+++ b/net/ipv4/icmp.c
@@ -594,11 +594,11 @@ void icmp_send(struct sk_buff *skb_in, int type, int code, __be32 info)
     rt = NULL;
     break;
 default:
-    goto out_unlock;
+    goto ende;
 }

 if (xfrm_decode_session_reverse(skb_in, &fl, AF_INET))
-    goto out_unlock;
+    goto ende;

 if (inet_addr_type(net, fl.fl4_src) == RTN_LOCAL)
     err = __ip_route_output_key(net, &rt2, &fl);
@@ -608,7 +608,7 @@ void icmp_send(struct sk_buff *skb_in, int type, int code, __be32 info)

     fl2.fl4_dst = fl.fl4_src;
     if (ip_route_output_key(net, &rt2, &fl2))
-    goto out_unlock;
+    goto ende;

 /* Ugh! */
     odst = skb_in->dst;
@@ -621,7 +621,7 @@ void icmp_send(struct sk_buff *skb_in, int type, int code, __be32 info)
 }

 if (err)
-    goto out_unlock;
```

+ goto ende;

```
err = xfrm_lookup((struct dst_entry **)&rt2, &fl, NULL,
XFRM_LOOKUP_ICMP);
```

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Subject: Re: [PATCH][ICMP]: Dst entry leak in icmp\_send host re-lookup code.  
Posted by [Herbert Xu](#) on Wed, 26 Mar 2008 03:32:00 GMT

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On Tue, Mar 25, 2008 at 06:40:00PM +0300, Pavel Emelyanov wrote:

```
> Commit 8b7817f3a959ed99d7443afc12f78a7e1fcc2063 ([IPSEC]: Add ICMP host
> relookup support) introduced some dst leaks on error paths: the rt
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> Signed-off-by: Pavel Emelyanov <xemul@openvz.org>
> Signed-off-by: Denis V. Lunev <den@openvz.org>
```

Thanks for catching this!

```
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>     break;
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> +     goto ende;
> }
```

I'm not sure about this bit though because xfrm\_lookup is meant  
to free the route on error.

```
> if (xfrm_decode_session_reverse(skb_in, &fl, AF_INET))
> -     goto out_unlock;
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> @@ -608,7 +608,7 @@ void icmp_send(struct sk_buff *skb_in, int type, int code, __be32 info)
>
>     fl2.fl4_dst = fl.fl4_src;
```

```

> if (ip_route_output_key(net, &rt2, &fl2))
> - goto out_unlock;
> + goto ende;
>
> /* Ugh! */
> odst = skb_in->dst;
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> }
>
> if (err)
> - goto out_unlock;
> + goto ende;

```

These ones look good.

Cheers,

--

Visit Openswan at <http://www.openswan.org/>

Email: Herbert Xu ~{PmV>Hl~} <[herbert@gondor.apana.org.au](mailto:herbert@gondor.apana.org.au)>

Home Page: <http://gondor.apana.org.au/~herbert/>

PGP Key: <http://gondor.apana.org.au/~herbert/pubkey.txt>

Subject: Re: [PATCH][ICMP]: Dst entry leak in icmp\_send host re-lookup code.  
 Posted by [den](#) on Wed, 26 Mar 2008 07:46:22 GMT

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On Wed, 2008-03-26 at 11:32 +0800, Herbert Xu wrote:

```

> On Tue, Mar 25, 2008 at 06:40:00PM +0300, Pavel Emelyanov wrote:
> > Commit 8b7817f3a959ed99d7443afc12f78a7e1fcc2063 ([IPSEC]: Add ICMP host
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info)
> >     rt = NULL;

```

```
> > break;
> > default:
> > - goto out_unlock;
> > + goto ende;
> > }
>
> I'm not sure about this bit though because xfrm_lookup is meant
> to free the route on error.
```

This is not a problem, it assigns NULL in this case to a pointer.

---

Subject: Re: [PATCH][ICMP]: Dst entry leak in icmp\_send host re-lookup code.  
Posted by [Pavel Emelianov](#) on Wed, 26 Mar 2008 09:02:34 GMT  
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Herbert Xu wrote:

```
> On Tue, Mar 25, 2008 at 06:40:00PM +0300, Pavel Emelyanov wrote:
>> Commit 8b7817f3a959ed99d7443afc12f78a7e1fcc2063 ([IPSEC]: Add ICMP host
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>>     default:
>> - goto out_unlock;
>> + goto ende;
>> }
>
> I'm not sure about this bit though because xfrm_lookup is meant
> to free the route on error.
```

Well, it indeed does, we've missed that fact. Even though it is set to NULL, as Denis pointed out, this hunk is now needed here.

David, plz, disregard this patch, I'll send a new one in a moment.

```
>> if (xfrm_decode_session_reverse(skb_in, &fl, AF_INET))
>> - goto out_unlock;
>> + goto ende;
>>
>> if (inet_addr_type(net, fl.fl4_src) == RTN_LOCAL)
>>   err = __ip_route_output_key(net, &rt2, &fl);
>> @@ -608,7 +608,7 @@ void icmp_send(struct sk_buff *skb_in, int type, int code, __be32 info)
>>
>>   fl2.fl4_dst = fl.fl4_src;
>>   if (ip_route_output_key(net, &rt2, &fl2))
>> - goto out_unlock;
>> + goto ende;
>>
>>   /* Ugh! */
>>   odst = skb_in->dst;
>> @@ -621,7 +621,7 @@ void icmp_send(struct sk_buff *skb_in, int type, int code, __be32 info)
>>   }
>>
>>   if (err)
>> - goto out_unlock;
>> + goto ende;
>
> These ones look good.
```

Thanks :)

> Cheers,

---

Subject: Re: [PATCH][ICMP]: Dst entry leak in icmp\_send host re-lookup code.  
Posted by [davem](#) on Wed, 26 Mar 2008 09:06:57 GMT  
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From: Pavel Emelyanov <xemul@openvz.org>  
Date: Wed, 26 Mar 2008 12:02:34 +0300

> David, plz, disregard this patch, I'll send a new one in a moment.

Ok, but please fix the net-2.6.26 build regression I just reported first.