
Subject: [PATCH] bridge: Reset IPCB on forward non-local packets in
br_handle_frame_finish()

Posted by [Vasily Averin](#) on Wed, 02 Nov 2011 19:08:57 GMT

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if dst is not local br_handle_frame_finish() does not clone original skb and
forgets to reset IPCB before return to IP stack. it can lead to stack corruption
in icmp_send()

Signed-off-by: Vasily Averin <vvs@sw.ru>

net/bridge/br_input.c | 5 +++--

1 files changed, 3 insertions(+), 2 deletions(-)

diff --git a/net/bridge/br_input.c b/net/bridge/br_input.c

index f06ee39..6be8d00 100644

--- a/net/bridge/br_input.c

+++ b/net/bridge/br_input.c

@@ -93,10 +93,11 @@ int br_handle_frame_finish(struct sk_buff *skb)
 skb2 = skb;

br->dev->stats.multicast++;

- } else if ((dst = __br_fdb_get(br, dest)) && dst->is_local) {

+ } else if ((dst = __br_fdb_get(br, dest)) != NULL) {

skb2 = skb;

/* Do not forward the packet since it's local. */

- skb = NULL;

+ if (dst->is_local) {

+ skb = NULL;

}

if (skb) {

-- 1.7.5.4

Subject: Re: [PATCH] bridge: Reset IPCB on forward non-local packets in
br_handle_frame_finish()

Posted by [Vasily Averin](#) on Wed, 02 Nov 2011 19:11:38 GMT

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On 11/02/2011 11:08 PM, Vasily Averin wrote:

> if dst is not local br_handle_frame_finish() does not clone original skb and
> forgets to reset IPCB before return to IP stack. it can lead to stack corruption
> in icmp_send()

example of stack corruption

http://bugzilla.openvz.org/show_bug.cgi?id=2016

```
> Signed-off-by: Vasily Averin <vvs@sw.ru>
> ---
> net/bridge/br_input.c | 5 +++--
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> diff --git a/net/bridge/br_input.c b/net/bridge/br_input.c
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> --- a/net/bridge/br_input.c
> +++ b/net/bridge/br_input.c
> @@ -93,10 +93,11 @@ int br_handle_frame_finish(struct sk_buff *skb)
>     skb2 = skb;
>
>     br->dev->stats.multicast++;
> - } else if ((dst = __br_fdb_get(br, dest)) && dst->is_local) {
> + } else if ((dst = __br_fdb_get(br, dest)) != NULL) {
>     skb2 = skb;
>     /* Do not forward the packet since it's local. */
> - skb = NULL;
> + if (dst->is_local) {
> +     skb = NULL;
> }
>
> if (skb) {
> -- 1.7.5.4
```

Subject: Re: [PATCH] bridge: Reset IPCB on forward non-local packets in
br_handle_frame_finish()

Posted by [Stephen Hemminger](#) on Wed, 02 Nov 2011 19:31:06 GMT

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On Wed, 02 Nov 2011 23:08:57 +0400

Vasily Averin <vvs@parallels.com> wrote:

```
> if dst is not local br_handle_frame_finish() does not clone original skb and
> forgets to reset IPCB before return to IP stack. it can lead to stack corruption
> in icmp_send()
>
```

```
> Signed-off-by: Vasily Averin <vvs@sw.ru>
```

```
> ---
```

```
> net/bridge/br_input.c | 5 +++--
```

```
> 1 files changed, 3 insertions(+), 2 deletions(-)
```

```
>
```

```
> diff --git a/net/bridge/br_input.c b/net/bridge/br_input.c
```

```
> index f06ee39..6be8d00 100644
```

```
> --- a/net/bridge/br_input.c
```

```
> +++ b/net/bridge/br_input.c
```

```
> @@ -93,10 +93,11 @@ int br_handle_frame_finish(struct sk_buff *skb)
```

```

>  skb2 = skb;
>
>  br->dev->stats.multicast++;
> - } else if ((dst = __br_fdb_get(br, dest)) && dst->is_local) {
> + } else if ((dst = __br_fdb_get(br, dest)) != NULL) {
>   skb2 = skb;
>   /* Do not forward the packet since it's local. */
> - skb = NULL;
> + if (dst->is_local) {
> +   skb = NULL;
>   }
>
>   if (skb) {

```

What kernel version are you using? There were several previous fixes in br_netfilter to deal with this type of issue over the last year.

Subject: Re: [PATCH] bridge: Reset IPCB on forward non-local packets in br_handle_frame_finish()

Posted by [Vasily Averin](#) on Wed, 02 Nov 2011 20:03:53 GMT

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On 11/02/2011 11:31 PM, Stephen Hemminger wrote:

> On Wed, 02 Nov 2011 23:08:57 +0400

> Vasily Averin <vvs@parallels.com> wrote:

>

>> if dst is not local br_handle_frame_finish() does not clone original skb and

>> forgets to reset IPCB before return to IP stack. it can lead to stack corruption

>> in icmp_send()

> What kernel version are you using? There were several previous fixes

> in br_netfilter to deal with this type of issue over the last year.

Originally it was noticed on RHEL6-based kernel

You are right, in mainline this issue was fixed in br_nf_forward_ip() long time ago.

thank you,
Vasily Averin

Subject: Re: [PATCH] bridge: Reset IPCB on forward non-local packets in br_handle_frame_finish()

Posted by [davem](#) on Wed, 02 Nov 2011 20:09:05 GMT

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From: Vasily Averin <vvs@parallels.com>

Date: Wed, 02 Nov 2011 23:08:57 +0400

> if dst is not local br_handle_frame_finish() does not clone original skb and
> forgets to reset IPCB before return to IP stack. it can lead to stack corruption
> in icmp_send()
>

> Signed-off-by: Vasily Averin <vvs@sw.ru>

Nothing is worse than posting a patch that doesn't even compile.

And I really mean `_nothing_`.
