
Subject: [PATCH][BRIDGE] Properly dereference the br_should_route_hook
Posted by [Pavel Emelianov](#) on Tue, 27 Nov 2007 16:12:11 GMT

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This hook is protected with the RCU, so simple

```
if (br_should_route_hook)
    br_should_route_hook(...)
```

is not enough on some architectures.

Use the rcu_dereference/rcu_assign_pointer in this case.

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

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

```
index 3cedd4e..b42b192 100644
```

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

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

```
@@ -122,6 +122,7 @@ static inline int is_link_local(const unsigned char *dest)
```

```
struct sk_buff *br_handle_frame(struct net_bridge_port *p, struct sk_buff *skb)
```

```
{
    const unsigned char *dest = eth_hdr(skb)->h_dest;
+   typeof(br_should_route_hook) rhook;
```

```
    if (!is_valid_ether_addr(eth_hdr(skb)->h_source))
        goto drop;
```

```
@@ -147,9 +148,9 @@ struct sk_buff *br_handle_frame(struct net_bridge_port *p, struct sk_buff
*skb)
```

```
    switch (p->state) {
    case BR_STATE_FORWARDING:
```

```
-
-   if (br_should_route_hook) {
-       if (br_should_route_hook(skb))
+       rhook = rcu_dereference(br_should_route_hook);
+       if (rhook != NULL) {
+           if (rhook(skb))
                return skb;
                dest = eth_hdr(skb)->h_dest;
            }
        }
```

```
diff --git a/net/bridge/netfilter/ebtable_broute.c b/net/bridge/netfilter/ebtable_broute.c
```

```
index e44519e..be6f186 100644
```

```
--- a/net/bridge/netfilter/ebtable_broute.c
```

```
+++ b/net/bridge/netfilter/ebtable_broute.c
```

```
@@ -70,13 +70,13 @@ static int __init ebtable_broute_init(void)
```

```

if (ret < 0)
    return ret;
/* see br_input.c */
- br_should_route_hook = ebt_broute;
+ rcu_assign_pointer(br_should_route_hook, ebt_broute);
    return ret;
}

```

```

static void __exit ebtable_broute_fini(void)
{
- br_should_route_hook = NULL;
+ rcu_assign_pointer(br_should_route_hook, NULL);
    synchronize_net();
    ebt_unregister_table(&broute_table);
}

```

Subject: Re: [PATCH][BRIDGE] Properly dereference the br_should_route_hook
 Posted by [Stephen Hemminger](#) on Tue, 27 Nov 2007 16:16:55 GMT
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On Tue, 27 Nov 2007 19:12:11 +0300
 Pavel Emelyanov <xemul@openvz.org> wrote:

```

> This hook is protected with the RCU, so simple
>
> if (br_should_route_hook)
>   br_should_route_hook(...)
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> is not enough on some architectures.
>
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>
> Signed-off-by: Pavel Emelyanov <xemul@openvz.org>
>
> ---
>
> diff --git a/net/bridge/br_input.c b/net/bridge/br_input.c
> index 3cedd4e..b42b192 100644
> --- a/net/bridge/br_input.c
> +++ b/net/bridge/br_input.c
> @@ -122,6 +122,7 @@ static inline int is_link_local(const unsigned char *dest)
> struct sk_buff *br_handle_frame(struct net_bridge_port *p, struct sk_buff *skb)
> {
>   const unsigned char *dest = eth_hdr(skb)->h_dest;
> + typeof(br_should_route_hook) rhook;

```

Okay, but I don't like the typeof() magic. Resubmit with proper declartion.

--

Stephen Hemminger <shemminger@linux-foundation.org>
