
Subject: Re: [patch 08/12] net namespace : find namespace by addr

Posted by [Herbert Poetzl](#) on Sat, 20 Jan 2007 04:56:13 GMT

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On Fri, Jan 19, 2007 at 04:47:22PM +0100, dlezcano@fr.ibm.com wrote:

> From: Daniel Lezcano <dlezcano@fr.ibm.com>

>

> Switch to the the I3 namespace using the destination address.

>

> Signed-off-by: Daniel Lezcano <dlezcano@fr.ibm.com>

>

> ---

> include/linux/net_namespace.h | 7 +++++++

> net/core/net_namespace.c | 35 ++++++++++++++++++++++++++++++++++++++

> net/ipv4/ip_input.c | 16 ++++++++--

> 3 files changed, 57 insertions(+), 1 deletion(-)

>

> Index: 2.6.20-rc4-mm1/net/ipv4/ip_input.c

> =====

> --- 2.6.20-rc4-mm1.orig/net/ipv4/ip_input.c

> +++ 2.6.20-rc4-mm1/net/ipv4/ip_input.c

> @@ -374,6 +374,9 @@

> {

> struct iphdr *iph;

> u32 len;

> + int err;

> + struct net_namespace *net_ns = current_net_ns;

> + struct net_namespace *dst_net_ns = NULL;

>

> /* When the interface is in promisc. mode, drop all the crap

> * that it receives, do not try to analyse it.

> @@ -393,6 +396,9 @@

>

> iph = skb->nh.iph;

>

> + dst_net_ns = net_ns_find_from_dest_addr(iph->daddr);

> + if (dst_net_ns && !net_ns_match(net_ns, dst_net_ns))

> + push_net_ns(dst_net_ns);

> /*

> * RFC1122: 3.1.2.2 MUST silently discard any IP frame that fails the checksum.

> *

> @@ -431,10 +437,18 @@

> /* Remove any debris in the socket control block */

> memset(IPCB(skb), 0, sizeof(struct inet_skb_parm));

>

> - return NF_HOOK(PF_INET, NF_IP_PRE_ROUTING, skb, dev, NULL,

> + err = NF_HOOK(PF_INET, NF_IP_PRE_ROUTING, skb, dev, NULL,

> ip_rcv_finish);

```

>
> + if (dst_net_ns && !net_ns_match(net_ns, dst_net_ns))
> + pop_net_ns(net_ns);
> +
> + return err;
> +
> inhdr_error:
> + if (dst_net_ns && !net_ns_match(net_ns, dst_net_ns))
> + pop_net_ns(net_ns);
> +
> IP_INC_STATS_BH(IPSTATS_MIB_INHDRERRORS);
> drop:
>     kfree_skb(skb);
> Index: 2.6.20-rc4-mm1/include/linux/net_namespace.h
> =====
> --- 2.6.20-rc4-mm1.orig/include/linux/net_namespace.h
> +++ 2.6.20-rc4-mm1/include/linux/net_namespace.h
> @@ -99,6 +99,8 @@
> extern __be32 net_ns_select_source_address(const struct net_device *dev,
>     u32 dst, int scope);
>
> +extern struct net_namespace *net_ns_find_from_dest_addr(u32 daddr);
> +
> #define SELECT_SRC_ADDR net_ns_select_source_address
>
> #else /* CONFIG_NET_NS */
> @@ -167,6 +169,11 @@
>     return 0;
> }
>
> +static inline struct net_namespace *net_ns_find_from_dest_addr(u32 daddr)
> +{
> + return NULL;
> +}
> +
> #define SELECT_SRC_ADDR inet_select_addr
>
> #endif /* !CONFIG_NET_NS */
> Index: 2.6.20-rc4-mm1/net/core/net_namespace.c
> =====
> --- 2.6.20-rc4-mm1.orig/net/core/net_namespace.c
> +++ 2.6.20-rc4-mm1/net/core/net_namespace.c
> @@ -385,4 +385,39 @@
> out:
>     return addr;
> }
> +
> +/*

```

> + * This function finds the network namespace destination deduced from
> + * the destination address. The network namespace is retrieved from
> + * the ifaddr owned by a network namespace

this basically disallows to 'share' IPs between namespaces, as it is permitted in Linux-VServer right now, or am I misinterpreting this?

TIA,
Herbert

```
> + * @daddr : destination
> + * Returns : the network namespace destination or NULL if not found
> + */
> +struct net_namespace *net_ns_find_from_dest_addr(u32 daddr)
> +{
> + struct net_namespace *net_ns = NULL;
> + struct net_device *dev;
> + struct in_device *in_dev;
> +
> + if (LOOPBACK(daddr))
> + return current_net_ns;
> +
> + read_lock(&dev_base_lock);
> + rcu_read_lock();
> + for (dev = dev_base; dev; dev = dev->next) {
> + if ((in_dev = __in_dev_get_rcu(dev)) == NULL)
> + continue;
> + for_ifa(in_dev) {
> + if (ifa->ifa_local == daddr) {
> + net_ns = ifa->ifa_net_ns;
> + goto out_unlock_both;
> + }
> + } endfor_ifa(in_dev);
> + }
> +out_unlock_both:
> + read_unlock(&dev_base_lock);
> + rcu_read_unlock();
> +
> + return net_ns;
> +}
> #endif /* CONFIG_NET_NS */
>
> --
> _____
> Containers mailing list
> Containers@lists.osdl.org
> https://lists.osdl.org/mailman/listinfo/containers
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