
Subject: [patch 20/20] [Network namespace] For debug purpose, used to unshare the network namespace.

Posted by [Daniel Lezcano](#) on Sun, 10 Dec 2006 21:58:37 GMT

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fs/debugfs/net_ns.c | 131 ++++++-----
1 files changed, 127 insertions(+), 4 deletions(-)

Index: 2.6.19-rc6-mm2/fs/debugfs/net_ns.c

```
=====
--- 2.6.19-rc6-mm2.orig/fs/debugfs/net_ns.c
+++ 2.6.19-rc6-mm2/fs/debugfs/net_ns.c
@@ -15,8 +15,10 @@
#include <linux/debugfs.h>
#include <linux/sched.h>
#include <linux/netdevice.h>
+#include <linux/inetdevice.h>
#include <linux/syscalls.h>
#include <linux/net_namespace.h>
+#include <linux/rtnetlink.h>

static struct dentry *net_ns_dentry;
static struct dentry *net_ns_dentry_dev;
@@ -52,8 +54,6 @@ static ssize_t net_ns_start_read_file(st
return 0;
}

-int net_ns_start(void);
-
static ssize_t net_ns_start_write_file(struct file *file,
const char __user *user_buf,
size_t count, loff_t *ppos)
@@ -63,6 +63,8 @@ static ssize_t net_ns_start_write_file(s
const char __user *p;
char c;
unsigned long flags;
+ struct net_namespace *net, *new_net;
+ struct nsproxy *new_nsproxy = NULL, *old_nsproxy = NULL;

if (current_net_ns != &init_net_ns)
return -EBUSY;
@@ -87,10 +89,37 @@ static ssize_t net_ns_start_write_file(s
return -EINVAL;
```

```

    flags = (c=='2'?NS_NET2:NS_NET3);
- err = sys_unshare_ns(flags);
+
+ err = unshare_net_ns(flags, &new_net);
    if (err)
        return err;

+ old_nsproxy = current->nsproxy;
+ new_nsproxy = dup_namespaces(old_nsproxy);
+
+ if (!new_nsproxy) {
+     put_net_ns(new_net);
+     task_unlock(current);
+     return -ENOMEM;
+ }
+
+ task_lock(current);
+
+ if (new_nsproxy) {
+     current->nsproxy = new_nsproxy;
+     new_nsproxy = old_nsproxy;
+ }
+
+ new_net->ns = current->nsproxy;
+ net = current->nsproxy->net_ns;
+ current->nsproxy->net_ns = new_net;
+ new_net = net;
+
+ task_unlock(current);
+
+ put_nsproxy(new_nsproxy);
+ put_net_ns(new_net);
+
    return count;
}

@@ -152,8 +181,102 @@ static ssize_t net_ns_info_write_file(st
    const char __user *user_buf,
    size_t count, loff_t *ppos)
{
+ struct net_namespace *net_ns = current_net_ns;
+ struct net_device *dev;
+ struct in_device *in_dev;
+ struct in_ifaddr **ifap = NULL;
+ struct in_ifaddr *ifa = NULL;
+ char *colon;
+ int err;
+

```

```

+ char buff[1024];
+ char *eth, *addr, *s;
+ __be32 address = 0;
+ __be32 p;
+
+ if (!capable(CAP_NET_ADMIN))
+ return -EPERM;
+
+ if (net_ns->level != NET_NS_LEVEL3)
+ return -EPERM;
+
+ if (count > sizeof(buff))
+ return -EINVAL;
+
+ if (copy_from_user(buff, user_buf, count))
+ return -EFAULT;
+
+ buff[count] = '\0';
+
+     eth = buff;
+     s = strchr(eth, ' ');
+     if (!s)
+         return -EINVAL;
+     *s = 0;
+
+     addr = s + 1;
+     s = strchr(addr, '.');
+     if (!s)
+         return -EINVAL;
+     *s = 0;
+     p = simple_strtoul(addr, NULL, 0);
+     ((char *)&address)[3] = p;
+     addr = s + 1;
+
+     s = strchr(addr, '.');
+     if (!s)
+         return -EINVAL;
+     *s = 0;
+     p = simple_strtoul(addr, NULL, 0);
+     ((char *)&address)[2] = p;
+     addr = s + 1;
+
+     s = strchr(addr, '.');
+     if (!s)
+         return -EINVAL;
+     *s = 0;
+     p = simple_strtoul(addr, NULL, 0);
+     ((char *)&address)[1] = p;

```

```

+   addr = s + 1;
+
+   p = simple_strtoul(addr, NULL, 0);
+   ((char *)&address)[0] = p;
+
+   colon = strchr(eth, ':');
+   if (colon)
+       *colon = 0;
+
+   address = htonl(address);
+
+   rtnl_lock();
+
+   err = -ENODEV;
+   dev = __dev_get_by_name(eth);
+   if (!dev)
+       goto out;
+
+   if (colon)
+       *colon = ':';
+
+   err = -EADDRNOTAVAIL;
+   in_dev = __in_dev_get_rtnl(dev);
+   if (!in_dev)
+       goto out;
+
+   for (ifap = &in_dev->ifa_list; (ifa = *ifap) != NULL;
+        ifap = &ifa->ifa_next)
+       if (!strcmp(eth, ifa->ifa_label) &&
+           address == ifa->ifa_local)
+           break;
+   if (!ifa)
+       goto out;
+
+   ifa->ifa_net_ns = net_ns;

- return -EPERM;
+ err = count;
+out:
+   rtnl_unlock();
+   return err;
}

```

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