
Subject: Re: [PATCH 3/14][TUN]: Introduce the tun_net structure.

Posted by [paulmck](#) on Fri, 11 Apr 2008 01:01:42 GMT

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On Thu, Apr 10, 2008 at 07:06:24PM +0400, Pavel Emelyanov wrote:

> This is the first step in making tuntap devices work in net
> namespaces. The structure mentioned is pointed by generic
> net pointer with tun_net_id id, and tun driver fills one on
> its load. It will contain only the tun devices list.
>
> So declare this structure and introduce net init and exit hooks.

OK, I have to ask... What prevents someone else from invoking
net_generic() concurrently with a call to tun_exit_net(), potentially
obtaining a pointer to the structure that tun_exit_net() is about
to kfree()?

Thanx, Paul

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

>
> ---
> drivers/net/tun.c | 53 ++++++-----
> 1 files changed, 52 insertions(+), 1 deletions(-)
>
> diff --git a/drivers/net/tun.c b/drivers/net/tun.c
> index 7b816a0..9bfba02 100644
> --- a/drivers/net/tun.c
> +++ b/drivers/net/tun.c
> @@ -63,6 +63,7 @@
> #include <linux/if_tun.h>
> #include <linux/crc32.h>
> #include <net/net_namespace.h>
> +#include <net/netns/generic.h>
>
> #include <asm/system.h>
> #include <asm/uaccess.h>
> @@ -73,6 +74,11 @@ static int debug;
>
> /* Network device part of the driver */
>
> +static unsigned int tun_net_id;
> +struct tun_net {
> + struct list_head dev_list;
> +};
> +
> static LIST_HEAD(tun_dev_list);
> static const struct ethtool_ops tun_ethtool_ops;

```

>
> @@ -873,6 +879,37 @@ static const struct ethtool_ops tun_ethtool_ops = {
>   .set_rx_csum = tun_set_rx_csum
> };
>
> +static int tun_init_net(struct net *net)
> +{
> + struct tun_net *tn;
> +
> + tn = kmalloc(sizeof(*tn), GFP_KERNEL);
> + if (tn == NULL)
> + return -ENOMEM;
> +
> + INIT_LIST_HEAD(&tn->dev_list);
> +
> + if (net_assign_generic(net, tun_net_id, tn)) {
> + kfree(tn);
> + return -ENOMEM;
> + }
> +
> + return 0;
> +}
> +
> +static void tun_exit_net(struct net *net)
> +{
> + struct tun_net *tn;
> +
> + tn = net_generic(net, tun_net_id);
> + kfree(tn);
> +}
> +
> +static struct pernet_operations tun_net_ops = {
> + .init = tun_init_net,
> + .exit = tun_exit_net,
> +};
> +
> static int __init tun_init(void)
> {
> int ret = 0;
> @@ -880,9 +917,22 @@ static int __init tun_init(void)
> printk(KERN_INFO "tun: %s, %s\n", DRV_DESCRIPTION, DRV_VERSION);
> printk(KERN_INFO "tun: %s\n", DRV_COPYRIGHT);
>
> + ret = register_pernet_gen_device(&tun_net_id, &tun_net_ops);
> + if (ret) {
> + printk(KERN_ERR "tun: Can't register pernet ops\n");
> + goto err_pernet;
> + }

```

```

> +
> ret = misc_register(&tun_miscdev);
> - if (ret)
> + if (ret) {
>     printk(KERN_ERR "tun: Can't register misc device %d\n", TUN_MINOR);
> +     goto err_misc;
> + }
> + return 0;
> +
> +err_misc:
> + unregister_pernet_gen_device(tun_net_id, &tun_net_ops);
> +err_pernet:
>     return ret;
> }
>
> @@ -899,6 +949,7 @@ static void tun_cleanup(void)
> }
> rtnl_unlock();
>
> + unregister_pernet_gen_device(tun_net_id, &tun_net_ops);
> }
>
> module_init(tun_init);
> --
> 1.5.3.4
>
> --
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> the body of a message to majordomo@vger.kernel.org
> More majordomo info at http://vger.kernel.org/majordomo-info.html

```

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