

Subject: [patch 37/38][IPv6] ndisc - dynamically allocate default neigh_parms for ndisc

Posted by [Daniel Lezcano](#) on Mon, 03 Dec 2007 16:17:13 GMT

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This patch dynamically allocates default neigh_parms for IPv6 network discovery and store them in struct net. That provides the basic changes needed to support ndisc for multiple network namespaces.

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```
include/net/net_namespace.h | 3 +++
net/ipv6/ndisc.c             | 38 +++++++++++++++++++++++++++++++++++++-----
2 files changed, 34 insertions(+), 7 deletions(-)
```

Index: linux-2.6-netns/include/net/net_namespace.h

=====

--- linux-2.6-netns.orig/include/net/net_namespace.h

+++ linux-2.6-netns/include/net/net_namespace.h

```
@@ -83,6 +83,9 @@ struct net {
    unsigned int fib_info_hash_size;
    unsigned int fib_info_cnt;
    struct hlist_head *fib_info_devhash;
+
+ /* IPv6 ndisc.c */
+ struct neigh_parms *ndisc_neigh_parms_default;
};
```

#ifdef CONFIG_NET

Index: linux-2.6-netns/net/ipv6/ndisc.c

=====

--- linux-2.6-netns.orig/net/ipv6/ndisc.c

+++ linux-2.6-netns/net/ipv6/ndisc.c

```
@@ -1764,23 +1764,47 @@ int __init ndisc_init(struct net_proto_f
```

```
    neigh_table_init(&nd_tbl);
```

```
+ init_net.ndisc_neigh_parms_default =
+ neigh_parms_alloc_default(&nd_tbl, &init_net);
+ if (!init_net.ndisc_neigh_parms_default) {
+   err = -ENOMEM;
+   goto out_neigh_parms;
+ }
```

+

#ifdef CONFIG_SYSCTL

```
- neigh_sysctl_register(NULL, &nd_tbl.parms, NET_IPV6, NET_IPV6_NEIGH,
-   "ipv6",
```

```

-     &ndisc_ifinfo_sysctl_change,
-     &ndisc_ifinfo_sysctl_strategy);
+ if ((err = neigh_sysctl_register(NULL,
+   init_net.ndisc_neigh_parms_default,
+   NET_IPV6, NET_IPV6_NEIGH,
+   "ipv6",
+   &ndisc_ifinfo_sysctl_change,
+   &ndisc_ifinfo_sysctl_strategy)))
+   goto out_sysctl;
#endif
-
-   register_netdevice_notifier(&ndisc_netdev_notifier);
- return 0;
+out:
+ return err;
#ifdef CONFIG_SYSCTL
+out_sysctl:
+ neigh_parms_release(&nd_tbl, init_net.ndisc_neigh_parms_default);
#endif
+out_neigh_parms:
+ sock_release(ndisc_socket);
+ goto out;
}

void ndisc_cleanup(void)
{
+ struct neigh_parms *parms = init_net.ndisc_neigh_parms_default;
+
+   unregister_netdevice_notifier(&ndisc_netdev_notifier);
+
+   if (parms) {
+       #ifdef CONFIG_SYSCTL
-       neigh_sysctl_unregister(&nd_tbl.parms);
+       neigh_sysctl_unregister(parms);
+       #endif
+       neigh_parms_release(&nd_tbl, parms);
+       init_net.ndisc_neigh_parms_default = NULL;
+   }
+   neigh_table_clear(&nd_tbl);
+   sock_release(ndisc_socket);
+   ndisc_socket = NULL; /* For safety. */
}

--

```

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