Subject: [PATCH 1/2][NETFILTER] Consolidate nf_sockopt and compat_nf_sockopt
Posted by Pavel Emelianov on Thu, 01 Nov 2007 15:55:35 GMT
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Both lookup the nf_sockopt_ops object to call the get/set callbacks
from, but they perform it in a completely similar way.

Introduce the helper for finding the ops.

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```
diff --git a/net/netfilter/nf_sockopt.c b/net/netfilter/nf_sockopt.c
index aa28315..a5e5e30 100644
--- a/net/netfilter/nf_sockopt.c
+++ b/net/netfilter/nf_sockopt.c
@@ -61,48 +61,59 @@ void nf_unregister_sockopt(struct nf_sockopt_ops *reg)
 }
 EXPORT_SYMBOL(nf_unregister_sockopt);

-/* Call get/setsockopt() */
-static int nf_sockopt(struct sock *sk, int pf, int val,
-       char __user *opt, int *len, int get)
+static struct nf_sockopt_ops *nf_sockopt_find(struct sock *sk, int pf,
+  int val, int get)
 {
  struct list_head *i;
  struct nf_sockopt_ops *ops;
- int ret;

  if (sk->sk_net != &init_net)
-  return -ENOPROTOOPT;
+  return ERR_PTR(-ENOPROTOOPT);

  if (mutex_lock_interruptible(&nf_sockopt_mutex) != 0)
-  return -EINTR;
+  return ERR_PTR(-EINTR);

  list_for_each(i, &nf_sockopts) {
   ops = (struct nf_sockopt_ops *)i;
   if (ops->pf == pf) {
    if (!try_module_get(ops->owner))
     goto out_nosup;
+
    if (get) {
-    if (val >= ops->get_optmin
-        && val < ops->get_optmax) {
```

```
-     mutex_unlock(&nf_sockopt_mutex);
-     ret = ops->get(sk, val, opt, len);
+     if (val >= ops->get_optmin &&
+       val < ops->get_optmax)
       goto out;
-    }
     } else {
-     if (val >= ops->set_optmin
-         && val < ops->set_optmax) {
-     mutex_unlock(&nf_sockopt_mutex);
-     ret = ops->set(sk, val, opt, *len);
+     if (val >= ops->set_optmin &&
+       val < ops->set_optmax)
       goto out;
-    }
     }
     module_put(ops->owner);
   }
  }
- out_nosup:
+out_nosup:
+ ops = ERR_PTR(-ENOPROTOOPT);
+out:
  mutex_unlock(&nf_sockopt_mutex);
- return -ENOPROTOOPT;
+ return ops;
+}
+
+/* Call get/setsockopt() */
+static int nf_sockopt(struct sock *sk, int pf, int val,
+        char __user *opt, int *len, int get)
+{
+ struct nf_sockopt_ops *ops;
+ int ret;
+
+ ops = nf_sockopt_find(sk, pf, val, get);
+ if (IS_ERR(ops))
+  return PTR_ERR(ops);
+
+ if (get)
+  ret = ops->get(sk, val, opt, len);
+ else
+  ret = ops->set(sk, val, opt, *len);

- out:
  module_put(ops->owner);
  return ret;
 }
```

```
@@ -124,56 +135,25 @@ EXPORT_SYMBOL(nf_getsockopt);
 static int compat_nf_sockopt(struct sock *sk, int pf, int val,
         char __user *opt, int *len, int get)
 {
- struct list_head *i;
  struct nf_sockopt_ops *ops;
  int ret;

- if (sk->sk_net != &init_net)
-  return -ENOPROTOOPT;
-
-
- if (mutex_lock_interruptible(&nf_sockopt_mutex) != 0)
-  return -EINTR;
-
- list_for_each(i, &nf_sockopts) {
-  ops = (struct nf_sockopt_ops *)i;
-  if (ops->pf == pf) {
-   if (!try_module_get(ops->owner))
-    goto out_nosup;
-
-   if (get) {
-    if (val >= ops->get_optmin
-        && val < ops->get_optmax) {
-     mutex_unlock(&nf_sockopt_mutex);
-     if (ops->compat_get)
-      ret = ops->compat_get(sk,
-       val, opt, len);
-     else
-      ret = ops->get(sk,
-       val, opt, len);
-     goto out;
-    }
-   } else {
-    if (val >= ops->set_optmin
-        && val < ops->set_optmax) {
-     mutex_unlock(&nf_sockopt_mutex);
-     if (ops->compat_set)
-      ret = ops->compat_set(sk,
-       val, opt, *len);
-     else
-      ret = ops->set(sk,
-       val, opt, *len);
-     goto out;
-    }
-   }
-   module_put(ops->owner);
-  }
```

```
+ ops = nf_sockopt_find(sk, pf, val, get);
+ if (IS_ERR(ops))
+  return PTR_ERR(ops);
+
+ if (get) {
+  if (ops->compat_get)
+   ret = ops->compat_get(sk, val, opt, len);
+  else
+   ret = ops->get(sk, val, ops, len);
+ } else {
+  if (ops->compat_set)
+   ret = ops->compat_set(sk, val, ops, *len);
+  else
+   ret = ops->set(sk, val, ops, *len);
  }
- out_nosup:
- mutex_unlock(&nf_sockopt_mutex);
- return -ENOPROTOOPT;

- out:
  module_put(ops->owner);
  return ret;
 }
--
1.5.3.4
```