Subject: [PATCH][NETNS] Make ifindex generation per-namespace
Posted by Pavel Emelianov on Tue, 09 Oct 2007 12:19:25 GMT
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Currently indexes for netdevices come sequentially one by
one, and the same stays true even for devices that are
created for namespaces.

Side effects of this are:
 * lo device has not 1 index in a namespace. This may break
   some userspace that relies on it (and AFAIR something
   really broke in OpenVZ VEs without this);
 * after some time namespaces will have devices with indexes
   like 1000000 os similar. This might be confusing for a
   human (tools will not mind).

So move the (currently "global" and static) ifindex variable
on the struct net, making the indexes allocation look more
like on a standalone machine.

Moreover - when we have indexes intersect between namespaces,
we may catch more BUGs in the future related to "wrong device
was found for a given index".

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

```
diff --git a/include/net/net_namespace.h b/include/net/net_namespace.h
index 93aa87d..83a18d0 100644
--- a/include/net/net_namespace.h
+++ b/include/net/net_namespace.h
@@ -29,6 +29,8 @@ struct net {
  struct list_head  dev_base_head;
  struct hlist_head  *dev_name_head;
  struct hlist_head *dev_index_head;
+
+ int   ifindex;
 };

 #ifdef CONFIG_NET
diff --git a/net/core/dev.c b/net/core/dev.c
index e7e728a..a08ed8c 100644
--- a/net/core/dev.c
+++ b/net/core/dev.c
@@ -3443,12 +3443,11 @@ int dev_ioctl(struct net *net, unsigned
  */
 static int dev_new_index(struct net *net)
```

```
 {
- static int ifindex;
  for (;;) {
-  if (++ifindex <= 0)
-   ifindex = 1;
-  if (!__dev_get_by_index(net, ifindex))
-   return ifindex;
+  if (++net->ifindex <= 0)
+   net->ifindex = 1;
+  if (!__dev_get_by_index(net, net->ifindex))
+   return net->ifindex;
  }
 }
```