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;
}
}
```