Subject: [PATCH 0/5] Diet struct net_device a bit
Posted by Pavel Emelianov on Mon, 22 Oct 2007 12:31:44 GMT
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There are some pointers, that are used in protocols/drivers/etc
in this struct. E.g. br_port, macvlan_port, ec_ptr, etc. Some of
them can be simply compile out with ifdefs, some require a bit
closer look.

Here's the summary:
Compiled out in this set with appropriate ifdef:
 * br_port
 * macvlan_port
 * dn_ptr
 * ec_ptr
 * ax25_ptr

Require a closer look:
 * atalk_ptr is shared with irda with "should we get our own
   field?" comment;
 * ip_ptr and
 * ip6_ptr are used in headers and gcc complains when trying
   to compile net/socket.c that these fields are unreclared;
 * ieee80211_ptr is used in many wireless drivers. Need time
   to check for the config dependencies.

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

Subject: [PATCH 1/5] Cut off br_port fied from net_device
Posted by Pavel Emelianov on Mon, 22 Oct 2007 12:33:33 GMT
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And add the forward declaration for br_handle_frame_hook in
include/linux/if_bridge.h

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

---

diff --git a/include/linux/if_bridge.h b/include/linux/if_bridge.h
index 58e43e5..a718586 100644
--- a/include/linux/if_bridge.h
+++ b/include/linux/if_bridge.h
@@ -104,6 +104,8 @@ struct __fdb_entry

 #include <linux/netdevice.h>

```
+struct net_bridge_port;
+
 extern void brioctl_set(int (*ioctl_hook)(struct net *, unsigned int, void __user *));
 extern struct sk_buff *(*br_handle_frame_hook)(struct net_bridge_port *p,
            struct sk_buff *skb);
diff --git a/include/linux/netdevice.h b/include/linux/netdevice.h
index 4a3f54e..469e04f 100644
--- a/include/linux/netdevice.h
+++ b/include/linux/netdevice.h
@@ -699,8 +699,10 @@ struct net_device
  /* Network namespace this network device is inside */
  struct net  *nd_net;

+#if defined(CONFIG_BRIDGE) || defined(CONFIG_BRIDGE_MODULE)
  /* bridge stuff */
  struct net_bridge_port *br_port;
+#endif
  /* macvlan */
  struct macvlan_port *macvlan_port;

--
1.5.3.4
```

Subject: [PATCH 2/5] Cut off macvlan_port from net_device
Posted by Pavel Emelianov on Mon, 22 Oct 2007 12:34:35 GMT
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```
Signed-off-by: Pavel Emelyanov <xemul@openvz.org>

---

diff --git a/include/linux/netdevice.h b/include/linux/netdevice.h
index 469e04f..c41a5c4 100644
--- a/include/linux/netdevice.h
+++ b/include/linux/netdevice.h
@@ -703,8 +703,10 @@ struct net_device
  /* bridge stuff */
  struct net_bridge_port *br_port;
 #endif
+#if defined(CONFIG_MACVLAN) || defined(CONFIG_MACVLAN_MODULE)
  /* macvlan */
  struct macvlan_port *macvlan_port;
+#endif

  /* class/net/name entry */
  struct device  dev;
--
```

1.5.3.4

Subject: [PATCH 3/5] Cut off ax25_ptr from net_device
Posted by Pavel Emelianov on Mon, 22 Oct 2007 12:35:39 GMT
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Signed-off-by: Pavel Emelyanov <xemul@openvz.org>

```
diff --git a/include/linux/netdevice.h b/include/linux/netdevice.h
index c41a5c4..504f843 100644
--- a/include/linux/netdevice.h
+++ b/include/linux/netdevice.h
@@ -580,7 +580,9 @@ struct net_device
  void                  *dn_ptr;        /* DECnet specific data */
  void                  *ip6_ptr;       /* IPv6 specific data */
  void   *ec_ptr; /* Econet specific data */
+#if defined(CONFIG_AX25) || defined(CONFIG_AX25_MODULE)
  void   *ax25_ptr; /* AX.25 specific data */
+#endif
  struct wireless_dev *ieee80211_ptr; /* IEEE 802.11 specific data,
         assign before registering */

--
1.5.3.4
```

Subject: [PATCH 4/5] Cut off ec_ptr from net_device
Posted by Pavel Emelianov on Mon, 22 Oct 2007 12:36:43 GMT
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Signed-off-by: Pavel Emelyanov <xemul@openvz.org>

```
diff --git a/include/linux/netdevice.h b/include/linux/netdevice.h
index 504f843..472d9cc 100644
--- a/include/linux/netdevice.h
+++ b/include/linux/netdevice.h
@@ -579,7 +579,9 @@ struct net_device
  void   *ip_ptr; /* IPv4 specific data */
  void                  *dn_ptr;        /* DECnet specific data */
  void                  *ip6_ptr;       /* IPv6 specific data */
+#if defined(CONFIG_ECONET) || defined(CONFIG_ECONET_MODULE)
  void   *ec_ptr; /* Econet specific data */
```

```
+#endif
 #if defined(CONFIG_AX25) || defined(CONFIG_AX25_MODULE)
  void   *ax25_ptr; /* AX.25 specific data */
 #endif
--
1.5.3.4
```

Subject: [PATCH 5/5] Cut off dn_ptr from net_device
Posted by Pavel Emelianov on Mon, 22 Oct 2007 12:37:53 GMT
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And remove a BUG_TRAP from netdev_run_todo as well.

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

```
diff --git a/include/linux/netdevice.h b/include/linux/netdevice.h
index 472d9cc..e94c636 100644
--- a/include/linux/netdevice.h
+++ b/include/linux/netdevice.h
@@ -577,7 +577,9 @@ struct net_device

  void    *atalk_ptr; /* AppleTalk link  */
  void   *ip_ptr; /* IPv4 specific data */
+#if defined(CONFIG_DECNET) || defined(CONFIG_DECNET_MODULE)
  void                  *dn_ptr;        /* DECnet specific data */
+#endif
  void                  *ip6_ptr;       /* IPv6 specific data */
 #if defined(CONFIG_ECONET) || defined(CONFIG_ECONET_MODULE)
  void   *ec_ptr; /* Econet specific data */
diff --git a/net/core/dev.c b/net/core/dev.c
index 8726589..3ac35fe 100644
--- a/net/core/dev.c
+++ b/net/core/dev.c
@@ -3781,7 +3781,9 @@ void netdev_run_todo(void)
   BUG_ON(atomic_read(&dev->refcnt));
   BUG_TRAP(!dev->ip_ptr);
   BUG_TRAP(!dev->ip6_ptr);
+#if defined(CONFIG_DECNET) || defined(CONFIG_DECNET_MODULE)
   BUG_TRAP(!dev->dn_ptr);
+#endif

   if (dev->destructor)
    dev->destructor(dev);
--
1.5.3.4
```

Subject: Re: [PATCH 1/5] Cut off br_port fied from net_device
Posted by Alexey Dobriyan on Mon, 22 Oct 2007 12:49:15 GMT
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On Mon, Oct 22, 2007 at 04:33:33PM +0400, Pavel Emelyanov wrote:
> And add the forward declaration for br_handle_frame_hook in
> include/linux/if_bridge.h

> --- a/include/linux/netdevice.h
> +++ b/include/linux/netdevice.h
> @@ -699,8 +699,10 @@ struct net_device
> /* Network namespace this network device is inside */
> struct net *nd_net;
>
> +#if defined(CONFIG_BRIDGE) || defined(CONFIG_BRIDGE_MODULE)
> /* bridge stuff */
> struct net_bridge_port *br_port;
> +#endif

Such ifdefs are troublesome, because one can compile kernel with
CONFIG_BRIDGE=n and later decide he needs BRIDGE=m and go boom.

IPv6 -- the biggest violator of this rule should not be taken as
example. :^)

Subject: Re: [PATCH 1/5] Cut off br_port fied from net_device
Posted by Pavel Emelianov on Mon, 22 Oct 2007 13:02:49 GMT
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Alexey Dobriyan wrote:
> On Mon, Oct 22, 2007 at 04:33:33PM +0400, Pavel Emelyanov wrote:
>> And add the forward declaration for br_handle_frame_hook in
>> include/linux/if_bridge.h
>
>> --- a/include/linux/netdevice.h
>> +++ b/include/linux/netdevice.h
>> @@ -699,8 +699,10 @@ struct net_device
>> /* Network namespace this network device is inside */
>> struct net *nd_net;
>>
>> +#if defined(CONFIG_BRIDGE) || defined(CONFIG_BRIDGE_MODULE)
>> /* bridge stuff */
>> struct net_bridge_port *br_port;
>> +#endif
>
> Such ifdefs are troublesome, because one can compile kernel with
> CONFIG_BRIDGE=n and later decide he needs BRIDGE=m and go boom.

You will have to recompile the whole kernel when this config
is on. Look at netif_receive_skb() ;)

> IPv6 -- the biggest violator of this rule should not be taken as
> example. :^)
>
>

Subject: Re: [PATCH 0/5] Diet struct net_device a bit
Posted by Johannes Berg on Tue, 23 Oct 2007 17:07:12 GMT
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On Mon, 2007-10-22 at 16:31 +0400, Pavel Emelyanov wrote:

> * ieee80211_ptr is used in many wireless drivers. Need time
> to check for the config dependencies.

Depending on CFG80211 should be fine, if not that's a bug elsewhere.

johannes
