Subject: Re: [PATCH 1/4] net: Dynamically allocate the per cpu counters for the loopback device.
Posted by ebiederm on Thu, 27 Sep 2007 20:44:37 GMT
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David Miller <davem@davemloft.net> writes:

> From: ebiederm@xmission.com (Eric W. Biederman)
> Date: Thu, 27 Sep 2007 01:48:00 -0600
>
>> I'm not doing get_cpu/put_cpu so does the comment make sense
>> in relationship to per_cpu_ptr?
>
> It is possible. But someone would need to go check for
> sure.

Verified.

hard_start_xmit is called inside of a
rcu_read_lock_bh(),rcu_read_unlock_bh() pair. Which means
the code will only run on one cpu.

Therefore we do not need get_cpu/put_cpu.

In addition per_cpu_ptr is valid. As it is just a lookup
into a NR_CPUS sized array by smp_processor_id() to return
the address of the specific cpu.

The only difference between per_cpu_ptr and __get_cpu_var()
are the implementation details between statically allocated
and dynamically allocated per cpu state.

So the comment is still valid, and still interesting it just
should say per_cpu_ptr instead of __get_cpu_var.

Signed-off-by: "Eric W. Biederman" <ebiederm@xmission.com>
---

diff --git a/drivers/net/loopback.c b/drivers/net/loopback.c
index 0f9d8c6..756e267 100644
--- a/drivers/net/loopback.c
+++ b/drivers/net/loopback.c
@@ -154,7 +154,7 @@ static int loopback_xmit(struct sk_buff *skb, struct net_device *dev)
 #endif
  dev->last_rx = jiffies;

- /* it's OK to use __get_cpu_var() because BHs are off */
+ /* it's OK to use per_cpu_ptr() because BHs are off */

```
pcpu_lstats = netdev_priv(dev);
lb_stats = per_cpu_ptr(pcpu_lstats, smp_processor_id());
lb_stats->bytes += skb->len;
```