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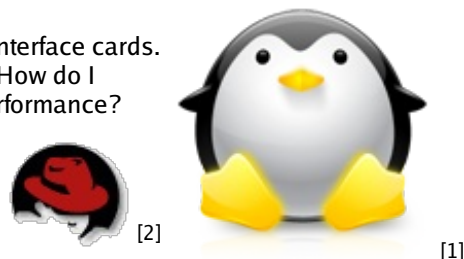
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Linux: Configuring RX POLLING (NAPI)

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My CentOS / RHEL based server is configured with Intel PRO/1000 network interface cards. NAPI (Rx polling mode) is supported in the e1000 driver. I've multiple CPUs. How do I configure NAPI, decreasing interrupts and improve overall server network performance?

NAPI is enabled or disabled based on the configuration of the kernel. e1000 driver does supports NAPI.



Enable NAPI

Download the latest driver version by visiting the following url:

1. [Linux kernel driver for the Intel\(R\) PRO/100](#) ^[3] Ethernet devices, Intel(R) PRO/1000 gigabit Ethernet devices, and Intel(R) PRO/10GbE devices.

To enable NAPI, compile the driver module, passing in a configuration option:

```
make CFLAGS_EXTRA=-DE1000_NAPI install
```

Once done simply install new drivers.

Decreasing Interrupts

If you've multiprocessor systems, consider binding the interrupts of the network interface cards to a physical CPU to gain additional performance. Find out IRQ of the network card, run:

```
# ifconfig eth0
```

OR

```
# ifconfig eth0 | grep -i Interrupt
```

Sample outputs:

```
Interrupt:179
```

To set the `smp_affinity` i.e. bound interrupt 179 of eth0 to the third processor in the system, enter:

```
# echo 03 > /proc/irq/179/smp_affinity
```

Add above command to `/etc/rc.local`. See Intel [e1000 documentation](#) ^[4] for more information (Kernel v2.6.26 or above turns on NAPI support by default). Broadcom tg3 drives also support NAPI and the latest version comes with built in NAPI support.

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[1] Image: <http://www.cyberciti.biz/faq/category/linux/>

[2] Image: <http://www.cyberciti.biz/faq/category/redhat-and-friends/>

[3] Linux kernel driver for the Intel(R) PRO/100: <http://sourceforge.net/projects/e1000/>

[4] e1000 documentation: <http://www.cyberciti.biz/files/linux-kernel/Documentation/networking/e1000.txt>

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