
Subject: Re: debuginfo for kernel

Posted by [amorsen](#) on Thu, 10 Jan 2008 18:39:01 GMT

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I tried with gdb, but it is a bit difficult to figure out which bit in the assembly corresponds to which bit of the source code.

(gdb) disassemble dev_hard_start_xmit

Dump of assembler code for function dev_hard_start_xmit:

```
0xffffffff811e83a2 <dev_hard_start_xmit+0>:  push  %r13
0xffffffff811e83a4 <dev_hard_start_xmit+2>:  push  %r12
0xffffffff811e83a6 <dev_hard_start_xmit+4>:  push  %rbp
0xffffffff811e83a7 <dev_hard_start_xmit+5>:  mov   %rdi,%rbp
0xffffffff811e83aa <dev_hard_start_xmit+8>:  push  %rbx
0xffffffff811e83ab <dev_hard_start_xmit+9>:  push  %r13
0xffffffff811e83ad <dev_hard_start_xmit+11>: cmpq  $0x0,(%rdi)
0xffffffff811e83b1 <dev_hard_start_xmit+15>:  mov   %rsi,%r13
0xffffffff811e83b4 <dev_hard_start_xmit+18>:  jne   0xffffffff811e85ad
<dev_hard_start_xmit+523>
0xffffffff811e83ba <dev_hard_start_xmit+24>: cmpq  $0xffffffff8169b160,4926875(%rip)    #
0xffffffff8169b160 <ptype_all>
0xffffffff811e83c5 <dev_hard_start_xmit+35>:  je    0xffffffff811e84ed
<dev_hard_start_xmit+331>
0xffffffff811e83cb <dev_hard_start_xmit+41>:  cmpl  $0x0,6474374(%rip)    #
0xffffffff81814e58 <netstamp_needed>
0xffffffff811e83d2 <dev_hard_start_xmit+48>:  je    0xffffffff811e83df <dev_hard_start_xmit+61>
0xffffffff811e83d4 <dev_hard_start_xmit+50>:  callq 0xffffffff81045b0c <ktime_get_real>
0xffffffff811e83d9 <dev_hard_start_xmit+55>:  mov   %rax,0x18(%rbp)
0xffffffff811e83dd <dev_hard_start_xmit+59>:  jmp   0xffffffff811e83e7
<dev_hard_start_xmit+69>
0xffffffff811e83df <dev_hard_start_xmit+61>:  movq  $0x0,0x18(%rdi)
0xffffffff811e83e7 <dev_hard_start_xmit+69>:  mov   4926834(%rip),%rdx    #
0xffffffff8169b160 <ptype_all>
0xffffffff811e83ee <dev_hard_start_xmit+76>:  lea   0xffffffffffffffd0(%rdx),%r12
0xffffffff811e83f2 <dev_hard_start_xmit+80>:  mov   0x30(%r12),%rax
0xffffffff811e83f7 <dev_hard_start_xmit+85>:  prefetcht0 (%rax)
0xffffffff811e83fa <dev_hard_start_xmit+88>:  cmp   $0xffffffff8169b160,%rdx
0xffffffff811e8401 <dev_hard_start_xmit+95>:  je    0xffffffff811e84ed
<dev_hard_start_xmit+331>
[.]
```

I guess I will have to build the kernel myself. The problematic instruction is at dev_hard_start_xmit+80.

The performance problem is dropped packets when routing more than about 8000 packets/s.
