

Re: Problem with pic16l_setled

Source: <http://unix.derkeiler.com/Mailing-Lists/FreeBSD/hackers/2005-07/0291.html>

From: Rink Springer (*rink_at_stack.nl*)

Date: 07/27/05

Date: Wed, 27 Jul 2005 15:44:32 +0200
To: Ludvig Strigeus <strigeus@gmail.com>

Hi Ludvig,

* Ludvig Strigeus (strigeus@gmail.com) wrote:

> *Hi!*

>

> *I see this code:*

>

> *+ENTRY(pic16l_setled)*

> *+ push %ebp*

> *+ mov %esp,%ebp*

> *+*

> *+ movl 0x8(%ebp),%ebx*

> *+ orl \$0x800,%ebx*

> *+ call pic16l_ledhlp*

> *+ movl \$0x701,%ebx*

> *+ call pic16l_ledhlp*

> *+*

> *+ leave*

> *+ ret*

>

> *With the standard x86 calling convention, you're not supposed to*

> *modify ebx, esi or edi without saving them first. Try adding a*

> *push/pop ebx around.*

I doubt this is the problem (I've looked at other .s files like i386/i386/support.s, function ssdtosd, and they don't seem to do this).

You see, in C, I call the function like this (for example):

```
void pic16l_setled(unsigned int val);
pic16l_setled (0x1234);
```

And it gets assembled to:

```
pushl $0x1234
call pic16l_setled
```

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But it should be assembled to:

```
    pushl $0x1234
    call pic16l_setled
    add $4,%esp /* ditch the parameter */
```

I don't know why it doesn't do this :(

```
> +ENTRY(pic16l_reboot)
> + pushl $0x01
> + pushl $0x02
> + pushl $0x20
> + call pic16l_setbyte
> + ret
>
> You're forgetting to adjust the stack here.. you should add 12 to esp
> before returning.
> Same thing in pic16l_poweroff.
```

Indeed, very correct! Since these functions plainly reboot / halt, I never noticed this, but you are indeed correct. I'll fix it in a new patchset.

> I've never done any FreeBSD dev, so i could be wrong...but it's worth a try.

Thank you very much for your time! I've CC-ed this discussion to hackers@, perhaps someone knows more about this ?

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Rink P.W. Springer
"God, root, what is difference?"

- <http://rink.nu>
- Pitr, Userfriendly

-
- application/pgp-signature attachment: [stored](#)