

Re: can a kmalloc be both GFP_ATOMIC and GFP_KERNEL at the same time?

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- *From:* Andrew Morton <akpm@xxxxxxxxxxxxxxxxxxxxxx>
 - *Date:* Mon, 30 Apr 2007 10:02:25 -0700
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On Mon, 30 Apr 2007 04:46:54 -0400 (EDT) "Robert P. J. Day" <rpjday@xxxxxxxxxxxxxxxxxx> wrote:

On Mon, 30 Apr 2007, Andrew Morton wrote:

On Sat, 28 Apr 2007 09:40:39 -0400 (EDT) "Robert P. J. Day" <rpjday@xxxxxxxxxxxxxxxxxx> wrote:

i'd always assumed that the type flags of GFP_ATOMIC and GFP_KERNEL were mutually exclusive when it came to calling kmalloc(), at least based on everything i'd read. so i'm not sure how to interpret the following:

```
drivers/scsi/aic7xxx_old.c: aic_dev = kmalloc(sizeof(struct
aic_dev_data), GFP_ATOMIC | GFP_KERNEL);
drivers/message/i2o/device.c: resblk = kmalloc(buflen + 8,
GFP_KERNEL | GFP_ATOMIC);
```

clarification?

GFP_ATOMIC implies that the memory comes from the zones which GFP_KERNEL also uses. So the above usage of GFP_KERNEL is redundant and should be removed.

hang on ... based on an email i just got, is that reference to GFP_KERNEL "redundant" or "conflicting"? big difference there. and is the proper fix to remove "GFP_KERNEL" in both cases?

Re: can a kmalloc be both GFP_ATOMIC and GFP_KERNEL at the same time?

umm, yeah, oops. GFP_KERNEL|GFP_ATOMIC is not a redundant combination. It's GFP_KERNEL plus "is able to access emergency pools". We'd normally represent that as GFP_KERNEL|__GFP_HIGH.

However it's questionable whether that was the intent in those two drivers. `git-blame` might tell.

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