
Subject: Re: [PATCH]: Factor out PTY index allocation
Posted by [Matt Helsley](#) on Thu, 17 Apr 2008 23:53:49 GMT
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On Thu, 2008-04-17 at 14:17 -0700, Andrew Morton wrote:

```
> On Wed, 16 Apr 2008 15:17:23 -0700
> sukadev@us.ibm.com wrote:
>
> > Factor out the code used to allocate/free a pts index into new interfaces,
> > devpts_new_index() and devpts_kill_index(). This localizes the external
> > data structures used in managing the pts indices.
>
> err...
>
> > - mutex_lock(&allocated_ptys_lock);
> > + down(&allocated_ptys_lock);
>
> Why the mutex-to-semaphore conversion?
```

The patch series was originally developed for 2.6.22 -- prior to the semaphore -> mutex migration. This appears to be a mistake in forward-porting the series.

Acked-by: Matt Helsley <matthltc@us.ibm.com>

```
>
> --- a/fs/devpts/inode.c~devpts-factor-out-pty-index-allocation-fix
> +++ a/fs/devpts/inode.c
> @@ -17,6 +17,7 @@
> #include <linux/namei.h>
> #include <linux/mount.h>
> #include <linux/tty.h>
> +#include <linux/mutex.h>
> #include <linux/idr.h>
> #include <linux/devpts_fs.h>
> #include <linux/parser.h>
> @@ -29,7 +30,7 @@
>
> extern int pty_limit; /* Config limit on Unix98 ptys */
> static DEFINE_IDR(allocated_ptys);
> -static DECLARE_MUTEX(allocated_ptys_lock);
> +static DEFINE_MUTEX(allocated_ptys_lock);
>
> static struct vfsmount *devpts_mnt;
> static struct dentry *devpts_root;
> @@ -186,10 +187,10 @@ retry:
>     return -ENOMEM;
> }
```

```

>
> - down(&allocated_ptys_lock);
> + mutex_lock(&allocated_ptys_lock);
> idr_ret = idr_get_new(&allocated_ptys, NULL, &index);
> if (idr_ret < 0) {
> - up(&allocated_ptys_lock);
> + mutex_unlock(&allocated_ptys_lock);
> if (idr_ret == -EAGAIN)
> goto retry;
> return -EIO;
> @@ -197,18 +198,18 @@ retry:
>
> if (index >= pty_limit) {
> idr_remove(&allocated_ptys, index);
> - up(&allocated_ptys_lock);
> + mutex_unlock(&allocated_ptys_lock);
> return -EIO;
> }
> - up(&allocated_ptys_lock);
> + mutex_unlock(&allocated_ptys_lock);
> return index;
> }
>
> void devpts_kill_index(int idx)
> {
> - down(&allocated_ptys_lock);
> + mutex_lock(&allocated_ptys_lock);
> idr_remove(&allocated_ptys, idx);
> - up(&allocated_ptys_lock);
> + mutex_unlock(&allocated_ptys_lock);
> }
>
> int devpts_pty_new(struct tty_struct *tty)
> _
>
> --
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>

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