
Subject: Re: [PATCH 4/16] Change data structures for pid namespaces

Posted by [Sukadev Bhattiprolu](#) on Tue, 10 Jul 2007 04:32:50 GMT

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Cedric Le Goater [clg@fr.ibm.com] wrote:

| Pavel Emelianov wrote:

| > struct pid_namespace will have the kmem_cache to allocate

| > the pids from, the parent, as they are hierarchical, and

| > the level of nesting value.

| >

| > struct pid will have a variable length array of pid_number-s

| > one for each namespace this pid lives in. The level value

| > shows the level of the namespace this pid lives in and thus -

| > the number of elements in the numbers array.

| >

| > Signed-off-by: Pavel Emelianov <xemul@openvz.org>

| >

| > ---

| >

| > include/linux/init_task.h | 6 ++++++

| > include/linux/pid.h | 9 ++++++++

| > include/linux/pid_namespace.h | 3 +++

| > kernel/pid.c | 3 ++-

| > 4 files changed, 20 insertions(+), 1 deletion(-)

| >

| > diff -upr linux-2.6.22-rc4-mm2.orig/include/linux/pid.h

linux-2.6.22-rc4-mm2-2/include/linux/pid.h

| > --- linux-2.6.22-rc4-mm2.orig/include/linux/pid.h 2007-06-14 12:14:29.000000000 +0400

| > +++ linux-2.6.22-rc4-mm2-2/include/linux/pid.h 2007-07-04 19:00:38.000000000 +0400

| > @@ -40,6 +40,13 @@ enum pid_type

| > * processes.

| > */

| >

| > +struct pid_number {

| > + /* Try to keep pid_chain in the same cacheline as nr for find_pid */

| > + int nr;

| > + struct pid_namespace *ns;

| > + struct hlist_node pid_chain;

| > +};

We meant to go back and look at removing the extra 'struct pid *' we had here. Looks like you did that. Cool.

| > +

| > struct pid

| > {

| > atomic_t count;

| > @@ -40,6 +40,8 @@ enum pid_type

```

| > /* lists of tasks that use this pid */
| > struct hlist_head tasks[PIDTYPE_MAX];
| > struct rcu_head rcu;
| > + int level;
| > + struct pid_number numbers[1];
| > };
| >
| > extern struct pid init_struct_pid;
| > diff -upr linux-2.6.22-rc4-mm2.orig/include/linux/pid_namespace.h
linux-2.6.22-rc4-mm2-2/include/linux/pid_namespace.h
| > --- linux-2.6.22-rc4-mm2.orig/include/linux/pid_namespace.h 2007-06-14 12:14:29.000000000
+0400
| > +++ linux-2.6.22-rc4-mm2-2/include/linux/pid_namespace.h 2007-07-04 19:00:39.000000000
+0400
| > @@ -16,7 +15,10 @@ struct pidmap {
| > struct kref kref;
| > struct pidmap pidmap[PIDMAP_ENTRIES];
| > int last_pid;
| > + int level;
| > struct task_struct *child_reaper;
| > + struct kmem_cache *pid_cachep;
|
| so, that looks like a good idea to have the cache in the pidmap. could you
| push that independently to see how it all fits together ?

```

Yes. I like this idea too.

```

|
| thanks,
|
| C.

```

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Containers@lists.linux-foundation.org
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