
Subject: [RFC][PATCH 2/5] Define helper functions
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From: Sukadev Bhattiprolu <sukadev@us.ibm.com>
Subject: [RFC][PATCH 2/5] Define helper functions

Define some helper functions that will be used in subsequent patches to move pid namespace out of nsproxy and into pid->pid_nrs list.

Changelog:

- Remove set_pid_ns() as its no longer needed.
- Remove set_pid_ns_child_reaper() from use-pid-ns-from-struct-pid-nr patch and moved it into this patch
- Add priv_check_pid_ns()

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kernel/fork.c | 29 +++++++++++++++++++++++++++++++++++++
kernel/pid.c | 30 +++++++++++++++++++++++++++++++++++++
2 files changed, 59 insertions(+)

Index: lx26-20-mm2b/kernel/pid.c

```
=====
--- lx26-20-mm2b.orig/kernel/pid.c 2007-03-09 19:00:12.000000000 -0800
+++ lx26-20-mm2b/kernel/pid.c 2007-03-09 19:00:42.000000000 -0800
@@ -327,6 +327,36 @@ static struct pid_namespace *clone_pid_n
    return ns;
}

+/*
+ * Return the clone-pid-namespace of this pid.
+ *
+ * Clone-pid-namespace of a process is the namespace that the process
+ * did the most recent unshare or clone of CLONE_NEWPID into. If the
+ * process never unshared its pid namespace, then its clone-pid-namespace
+ * is the same as its parent's clone-pid-namespace.
+ */
+struct pid_namespace *pid_ns(struct pid *pid)
+{
+ struct pid_nr* pid_nr;
+ struct pid_namespace *ns;
+ struct hlist_node *head;
+
+

```

```

+ if (!pid)
+ return 0;
+
+ rcu_read_lock();
+ /*
+  * Our clone-pid-ns is simply the pid_ns of the first pid_nr
+  * on our pid_nrs list
+  */
+ head = pid->pid_nrs.first;
+ pid_nr = hlist_entry(head, struct pid_nr, node);
+ ns = pid_nr->pid_ns;
+
+ rcu_read_unlock();
+ return ns;
+}
+

```

```

struct pid *alloc_pid(void)
{
    struct pid *pid;

```

Index: lx26-20-mm2b/kernel/fork.c

```

=====
--- lx26-20-mm2b.orig/kernel/fork.c 2007-03-09 19:00:14.000000000 -0800
+++ lx26-20-mm2b/kernel/fork.c 2007-03-09 19:00:42.000000000 -0800
@@ -953,6 +953,35 @@ static inline void rcu_task_init(struct
 static inline void rcu_task_init(struct task_struct *p) {}
#endif

```

```

+static inline int priv_check_pid_ns(unsigned long clone_flags)
+{
+ if (clone_flags & CLONE_NEWPID)
+ if (!capable(CAP_SYS_ADMIN))
+ return -EPERM;
+ return 0;
+}
+
+/*
+ * Make @tsk the child reaper for the clone-pid-ns of the process
+ * identified by @pid
+ */
+static void set_pid_ns_child_reaper(unsigned long clone_flags, struct pid *pid,
+ struct task_struct *tsk)
+{
+ struct pid_namespace *lpid_ns;
+
+ if (!(clone_flags & CLONE_NEWPID))
+ return;
+
+ lpid_ns = pid_ns(pid);

```

```
+ BUG_ON(lpid_ns == &init_pid_ns);  
+  
+ /* don't need to lock here since we just created the pid ns */  
+ lpid_ns->child_reaper = tsk;  
+  
+ return;  
+}  
+  
/*  
 * This creates a new process as a copy of the old one,  
 * but does not actually start it yet.
```

Containers mailing list
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<https://lists.osdl.org/mailman/listinfo/containers>
