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Subject: [PATCH 1/2] signals: kill(-1) should only signal processes in the same namespace

Posted by [Daniel Hokka Zakrisso](#) on Thu, 17 Jul 2008 14:55:39 GMT

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While moving Linux-VServer to using pid namespaces, I noticed that kill(-1) from inside a pid namespace is currently signalling every process in the entire system, including processes that are otherwise unreachable from the current process.

This patch fixes it by making sure that only processes which are in the same pid namespace as current get signalled.

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```
diff --git a/include/linux/pid_namespace.h b/include/linux/pid_namespace.h
index caff528..4cf41bd 100644
--- a/include/linux/pid_namespace.h
+++ b/include/linux/pid_namespace.h
@@ -40,6 +40,8 @@ static inline struct pid_namespace *get_pid_ns(struct
pid_namespace *ns)
    extern struct pid_namespace *copy_pid_ns(unsigned long flags, struct
pid_namespace *ns);
    extern void free_pid_ns(struct kref *kref);
    extern void zap_pid_ns_processes(struct pid_namespace *pid_ns);
+extern int task_in_pid_ns(struct task_struct *tsk,
+    struct pid_namespace *pid_ns);

    static inline void put_pid_ns(struct pid_namespace *ns)
    {
@@ -72,6 +74,12 @@ static inline void zap_pid_ns_processes(struct
pid_namespace *ns)
    {
        BUG();
    }
+
+static inline int task_in_pid_ns(struct task_struct *tsk,
+    struct pid_namespace *ns)
+{
+    return 1;
+}
#endif /* CONFIG_PID_NS */

    static inline struct pid_namespace *task_active_pid_ns(struct
task_struct *tsk)
diff --git a/kernel/pid_namespace.c b/kernel/pid_namespace.c
index 98702b4..3e71011 100644
--- a/kernel/pid_namespace.c
```

```

+++ b/kernel/pid_namespace.c
@@ -188,6 +188,26 @@ void zap_pid_ns_processes(struct pid_namespace *pid_ns)
    return;
}

+/*
+ * Checks whether tsk has a pid in the pid namespace ns.
+ * Must be called with tasklist_lock read-locked or under rcu_read_lock()
+ */
+int task_in_pid_ns(struct task_struct *tsk, struct pid_namespace *ns)
+{
+ struct pid *pid = task_pid(tsk);
+
+ if (!pid)
+ return 0;
+
+ if (pid->level < ns->level)
+ return 0;
+
+ if (pid->numbers[ns->level].ns != ns)
+ return 0;
+
+ return 1;
+}
+
static __init int pid_namespaces_init(void)
{
    pid_ns_cachep = KMEM_CACHE(pid_namespace, SLAB_PANIC);
diff --git a/kernel/signal.c b/kernel/signal.c
index 6c0958e..93713a5 100644
--- a/kernel/signal.c
+++ b/kernel/signal.c
@@ -1145,7 +1145,8 @@ static int kill_something_info(int sig, struct
siginfo *info, int pid)
    struct task_struct * p;

    for_each_process(p) {
- if (p->pid > 1 && !same_thread_group(p, current)) {
+ if (p->pid > 1 && !same_thread_group(p, current) &&
+ task_in_pid_ns(p, current->nsproxy->pid_ns)) {
        int err = group_send_sig_info(sig, info, p);
        ++count;
        if (err != -EPERM)
--
1.5.5.1

```

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