Implement the basic helper function that walks all of the processes in a pid namespace and sends them all a signal.

Both locations that could use this functions are also updated to use this function.

I use find_ge_pid instead of for_each_process because it has a chance of not touching every process in the system.

[daniel@hozac.com: Optimize away nr <= 1 check, against latest Linus tree]
Signed-off-by: Eric W. Biederman <ebiederm@xmission.com>
Signed-off-by: Daniel Hokka Zakrisson <daniel@hozac.com>

diff --git a/include/linux/sched.h b/include/linux/sched.h
index ba2f859..83597f8 100644
--- a/include/linux/sched.h
+++ b/include/linux/sched.h
@@ -1778,6 +1778,8 @@ extern void release_task(struct task_struct * p);
 extern int send_sig_info(int, struct siginfo *, struct task_struct *);
 extern int force_sigsegv(int, struct task_struct *);
 extern int force_sig_info(int, struct siginfo *, struct task_struct *);
+extern int __kill_pid_ns_info(int sig, struct siginfo *, struct pid_namespace *ns);
+extern int kill_pid_ns_info(int sig, struct siginfo *, struct pid_namespace *ns);
 extern int __kill_pgrp_info(int sig, struct siginfo *, struct pid *pgrp);
 extern int kill_pid_info(int sig, struct siginfo *info, struct pid *pid);
 extern int kill_pid_info_as_uid(int, struct siginfo *, struct pid *,
 uid_t, uid_t, u32);
 diff --git a/kernel/pid_namespace.c b/kernel/pid_namespace.c
index 98702b4..9226423 100644
--- a/kernel/pid_namespace.c
+++ b/kernel/pid_namespace.c
@@ -153,29 +153,14 @@ void free_pid_ns(struct kref *kref)

 void zap_pid_ns_processes(struct pid_namespace * pid_ns)
 {
- int nr;
+ int rc;

 /*
* The last thread in the cgroup-init thread group is terminating.*
Find remaining pid_ts in the namespace, signal and wait for them * to exit.
- *
- * Note: This signals each threads in the namespace - even those that*
- * belong to the same thread group, To avoid this, we would have - *
to walk the entire tasklist looking a processes in this
- * namespace, but that could be unnecessarily expensive if the - *
pid namespace has just a few processes. Or we need to
- * maintain a tasklist for each pid namespace.
- *
* /
-read_lock(&tasklist_lock);
-nr = next_pidmap(pid_ns, 1);
-while (nr > 0) {
- kill_proc_info(SIGKILL, SEND_SIG_PRIV, nr);
- nr = next_pidmap(pid_ns, nr);
- }
-read_unlock(&tasklist_lock);
+ kill_pid_ns_info(SIGKILL, SEND_SIG_PRIV, pid_ns);

 do {
 clear_thread_flag(TIF_SIGPENDING);
 diff --git a/kernel/signal.c b/kernel/signal.c
 index 6c0958e..fc42428 100644
 --- a/kernel/signal.c
 +++ b/kernel/signal.c
 @@ -1118,6 +1118,45 @@ out_unlock:
 }
 EXPORT_SYMBOL_GPL(kill_pid_info_as_uid);

+int __kill_pid_ns_info(int sig, struct siginfo *info, struct
+ pid_namespace *ns)
+{
+ int retval = 0, count = 0;
+ struct task_struct *p;
+ struct pid *pid;
+ int nr;
+ /* Since there isn't a pid namespace list of tasks use the closest + *
 approximation we have: find_ge_pid.
+ */
+ nr = 1;
+ while ((pid = find_ge_pid(nr + 1, ns))) {
+ int err;
+ nr = pid_nr_ns(pid, ns);
+ p = pid_task(pid, PIDTYPE_PID);
if (!p || (nr <= 1) || !thread_group_leader(p) ||
    same_thread_group(p, current))
continue;
+
+err = group_send_sig_info(sig, info, p);
+++count;
+if (err != -EPERM)
+retval = err;
+
+return count ? retval : -ESRCH;
+
+int kill_pid_ns_info(int sig, struct siginfo *info, struct pid_namespace *ns)
+{
+int retval;
+
+read_lock(&tasklist_lock);
+retval = __kill_pid_ns_info(sig, info, ns);
+read_unlock(&tasklist_lock);
+
+return retval;
+
+/*
 * kill_something_info() interprets pid in interesting ways just like
 * kill(2).
 */

@@ -1141,18 +1180,7 @@ static int kill_something_info(int sig, struct
 siginfo *info, int pid)
    ret = __kill_pgrp_info(sig, info,
    pid ? find_vpid(-pid) : task_pgrp(current));
 } else {
-    int retval = 0, count = 0;
-    struct task_struct * p;
-    
-    for_each_process(p) {
-        if (p->pid > 1 && !same_thread_group(p, current)) {
-            int err = group_send_sig_info(sig, info, p);
-            ++count;
-            if (err != -EPERM)
-                retval = err;
-        }
-    }
-    ret = count ? retval : -ESRCH;
+    ret = __kill_pid_ns_info(sig, info, task_active_pid_ns(current));
 } 
 read_unlock(&tasklist_lock);