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Subject: [PATCH 2.6.24-rc8-mm1 07/15] IPC: introduce ipc\_update\_perm()  
Posted by [Pierre Peiffer](#) on Tue, 29 Jan 2008 16:02:36 GMT  
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The IPC\_SET command performs the same permission setting for all IPCs.  
This patch introduces a common ipc\_update\_perm() function to update these  
permissions and makes use of it for all IPCs.

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Acked-by: Serge Hallyn <serue@us.ibm.com>

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```
ipc/msg.c |  5 +----  
ipc/sem.c |  5 +----  
ipc/shm.c |  5 +----  
ipc/util.c | 13 ++++++-----  
ipc/util.h |  1 +  
5 files changed, 17 insertions(+), 12 deletions(-)
```

Index: b/IPC/msg.c

```
=====--- a/IPC/msg.c  
+++ b/IPC/msg.c  
@@ -447,10 +447,7 @@ static int msgctl_down(struct ipc_namesp
```

```
    msq->q_qbytes = msqid64.msg_qbytes;  
  
- ipcp->uid = msqid64.msg_perm.uid;  
- ipcp->gid = msqid64.msg_perm.gid;  
- ipcp->mode = (ipcp->mode & ~S_IRWXUGO) |  
-     (S_IRWXUGO & msqid64.msg_perm.mode);  
+ ipc_update_perm(&msqid64.msg_perm, ipcp);  
    msq->q_ctime = get_seconds();  
    /* sleeping receivers might be excluded by  
     * stricter permissions.
```

Index: b/IPC/sem.c

```
=====--- a/IPC/sem.c  
+++ b/IPC/sem.c  
@@ -915,10 +915,7 @@ static int semctl_down(struct ipc_namesp  
    freeary(ns, ipcp);  
    goto out_up;  
  case IPC_SET:  
- ipcp->uid = semid64.sem_perm.uid;  
- ipcp->gid = semid64.sem_perm.gid;  
- ipcp->mode = (ipcp->mode & ~S_IRWXUGO)
```

```
- | (semid64.sem_perm.mode & S_IRWXUGO);
+ ipc_update_perm(&semid64.sem_perm, ipcp);
    sma->sem_ctime = get_seconds();
    break;
default:
```

Index: b/IPC/shm.c

---

```
--- a/IPC/shm.c
+++ b/IPC/shm.c
@@ -665,10 +665,7 @@ static int shmctl_down(struct ipc_namesp
    do_shm_rmid(ns, ipcp);
    goto out_up;
    case IPC_SET:
-    ipcp->uid = shmid64.shm_perm.uid;
-    ipcp->gid = shmid64.shm_perm.gid;
-    ipcp->mode = (ipcp->mode & ~S_IRWXUGO)
-    | (shmid64.shm_perm.mode & S_IRWXUGO);
+    ipc_update_perm(&shmid64.shm_perm, ipcp);
    shp->shm_ctim = get_seconds();
    break;
default:
```

Index: b/IPC/util.c

---

```
--- a/IPC/util.c
+++ b/IPC/util.c
@@ -761,6 +761,19 @@ int ipcget(struct ipc_namespace *ns, str
    return ipcget_public(ns, ids, ops, params);
}
```

```
+/**
+ * ipc_update_perm - update the permissions of an IPC.
+ * @in: the permission given as input.
+ * @out: the permission of the ipc to set.
+ */
+void ipc_update_perm(struct ipc64_perm *in, struct kern_ipc_perm *out)
+{
+    out->uid = in->uid;
+    out->gid = in->gid;
+    out->mode = (out->mode & ~S_IRWXUGO)
+    | (in->mode & S_IRWXUGO);
+}
+
#endif __ARCH_WANT_IPC_PARSE_VERSION
```

Index: b/IPC/util.h

---

```
--- a/IPC/util.h
```

```
+++ b/ipc/util.h
@@ -112,6 +112,7 @@ struct kern_ipc_perm *ipc_lock(struct ip
void kernel_to_ipc64_perm(struct kern_ipc_perm *in, struct ipc64_perm *out);
void ipc64_perm_to_ipc_perm(struct ipc64_perm *in, struct ipc_perm *out);
+void ipc_update_perm(struct ipc64_perm *in, struct kern_ipc_perm *out);

#if defined(__ia64__) || defined(__x86_64__) || defined(__hppa__) || defined(__XTENSA__)
/* On IA-64, we always use the "64-bit version" of the IPC structures. */
```

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