
Subject: Re: [PATCH v6 04/10] ipc: add new SHM_SET command for sys_shmctl() call

Posted by [Serge E. Hallyn](#) on Tue, 23 Oct 2012 16:27:28 GMT

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Quoting Stanislav Kinsbursky (skinsbursky@parallels.com):

> New SHM_SET command will be interpreted exactly as IPC_SET, but also will
> update key, cuid and cgid values. IOW, it allows to change existent key value.
> The fact, that key is not used is checked before update. Otherwise -EEXIST is
> returned.
>
> Signed-off-by: Stanislav Kinsbursky <skinsbursky@parallels.com>

Looks sane (modulo 'fallsthrough' comment already requested)

Acked-by: Serge E. Hallyn <serge.hallyn@ubuntu.com>

> ---
> include/uapi/linux/shm.h | 1 +
> ipc/compat.c | 1 +
> ipc/shm.c | 13 ++++++++
> security/selinux/hooks.c | 1 +
> security/smack/smack_lsm.c | 1 +
> 5 files changed, 15 insertions(+), 2 deletions(-)
>
> diff --git a/include/uapi/linux/shm.h b/include/uapi/linux/shm.h
> index ec36fa1..d7413fd 100644
> --- a/include/uapi/linux/shm.h
> +++ b/include/uapi/linux/shm.h
> @@ -56,6 +56,7 @@ struct shmid_ds {
> /* ipcctl commands */
> #define SHM_STAT 13
> #define SHM_INFO 14
> +#define SHM_SET 15
>
> /* Obsolete, used only for backwards compatibility */
> struct shminfo {
> diff --git a/ipc/compat.c b/ipc/compat.c
> index af30d13..35c750d 100644
> --- a/ipc/compat.c
> +++ b/ipc/compat.c
> @@ -692,6 +692,7 @@ long compat_sys_shmctl(int first, int second, void __user *uptr)
>
>
> case IPC_SET:
> + case SHM_SET:
> if (version == IPC_64) {
> err = get_compat_shmid64_ds(&s64, uptr);

```

> } else {
> diff --git a/ipc/shm.c b/ipc/shm.c
> index 80b0046..aebc50d 100644
> --- a/ipc/shm.c
> +++ b/ipc/shm.c
> @@ -636,6 +636,9 @@ copy_shmid_from_user(struct shmid64_ds *out, void __user *buf, int
version)
>   out->shm_perm.uid = tbuf_old.shm_perm.uid;
>   out->shm_perm.gid = tbuf_old.shm_perm.gid;
>   out->shm_perm.mode = tbuf_old.shm_perm.mode;
> + out->shm_perm.cuid = tbuf_old.shm_perm.cuid;
> + out->shm_perm.cgid = tbuf_old.shm_perm.cgid;
> + out->shm_perm.key = tbuf_old.shm_perm.key;
>
>   return 0;
> }
> @@ -740,12 +743,13 @@ static int shmctl_down(struct ipc_namespace *ns, int shmid, int cmd,
> struct shmid_kernel *shp;
> int err;
>
> - if (cmd == IPC_SET) {
> + if (cmd == IPC_SET || cmd == SHM_SET) {
>   if (copy_shmid_from_user(&shmid64, buf, version))
>     return -EFAULT;
> }
>
> - ipcp = ipcctl_pre_down(ns, &shm_ids(ns), shmid, cmd,
> + ipcp = ipcctl_pre_down(ns, &shm_ids(ns), shmid,
> + (cmd != SHM_SET) ? cmd : IPC_SET,
>   &shmid64.shm_perm, 0);
> if (IS_ERR(ipcp))
>   return PTR_ERR(ipcp);
> @@ -759,6 +763,10 @@ static int shmctl_down(struct ipc_namespace *ns, int shmid, int cmd,
> case IPC_RMID:
>   do_shm_rmid(ns, ipcp);
>   goto out_up;
> + case SHM_SET:
> +   err = ipc_update_key(&shm_ids(ns), &shmid64.shm_perm, ipcp);
> +   if (err)
> +     break;
> case IPC_SET:
>   err = ipc_update_perm(&shmid64.shm_perm, ipcp);
>   if (err)
> @@ -938,6 +946,7 @@ SYSCALL_DEFINE3(shmctl, int, shmid, int, cmd, struct shmid_ds
__user *, buf)
> }
> case IPC_RMID:
> case IPC_SET:

```

```
> + case SHM_SET:
>   err = shmctl_down(ns, shmid, cmd, buf, version);
>   return err;
>   default:
> diff --git a/security/selinux/hooks.c b/security/selinux/hooks.c
> index 24ab414..62b2447 100644
> --- a/security/selinux/hooks.c
> +++ b/security/selinux/hooks.c
> @@ -5027,6 +5027,7 @@ static int selinux_shm_shmctl(struct shmid_kernel *shp, int cmd)
>   perms = SHM__GETATTR | SHM__ASSOCIATE;
>   break;
>   case IPC_SET:
> + case SHM_SET:
>   perms = SHM__SETATTR;
>   break;
>   case SHM_LOCK:
> diff --git a/security/smack/smack_lsm.c b/security/smack/smack_lsm.c
> index 38be92c..c7eabc9 100644
> --- a/security/smack/smack_lsm.c
> +++ b/security/smack/smack_lsm.c
> @@ -2121,6 +2121,7 @@ static int smack_shm_shmctl(struct shmid_kernel *shp, int cmd)
>   may = MAY_READ;
>   break;
>   case IPC_SET:
> + case SHM_SET:
>   case SHM_LOCK:
>   case SHM_UNLOCK:
>   case IPC_RMID:
>
> --
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