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Subject: Re: \*\*\*SPAM\*\*\* Re: [PATCH v7 00/10] IPC: checkpoint/restore in userspace enhancements

Posted by [Stanislav Kinsbursky](#) on Thu, 18 Oct 2012 11:02:53 GMT

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> Stanislaw,

>

> This patch series is an API change. Could you please make sure that

> all future revisions CC [linux-api@vger.kernel.org](mailto:linux-api@vger.kernel.org), as per

> Documentation/SubmitChecklist.

>

Yes, sure. Thanks.

> Cheers,

>

> Michael

>

>

> On Thu, Oct 18, 2012 at 12:22 PM, Stanislav Kinsbursky

> <[skinsbursky@parallels.com](mailto:skinsbursky@parallels.com)> wrote:

>> v7:

>> 1) Added comments in places, when behaviour is not obvious.

>> 2) Compilation fixed for compat layer

>> 3) test updated to use existent header files (instead of hard-coding new defines in case of absence).

>> 4) comment fixed in qlge driver

>>

>> v6:

>> 1) rebased on 3.7-rc1

>>

>> v5:

>> 1) Several define-dependent compile bugs fixed

>> 2) IPC message copy test updated

>> 3) A couple of minor fixes.

>> 4) Qlogic driver update: rename of its internal SEM\_SET define into SEM\_INIT (compile error).

>>

>> v4:

>> 1) If MSG\_COPY flag is specified, then "mtype" is not a type, but message number to copy.

>> 2) MSG\_SET\_COPY logic for sys\_msgctl() was removed.

>>

>> v3:

>> 1) Copy messages to user-space under spinlock was replaced by allocation of dummy message before queue lock and then copy of desired message to the dummy one instead of unlinking it from queue list.

```

>> I.e. the message queue copy logic was changed: messages can be retrived one by
>> one (instead of receiving of the whole list at once).
>>
>> This patch set is aimed to provide additional functionality for all IPC
>> objects,
>> which is required for migration of these objects by user-space
>> checkpoint/restore utils (CRIU).
>>
>> The main problem here was impossibility to set up object id. This patch set
>> solves the problem in two steps:
>> 1) Makes it possible to create new object (shared memory, semaphores set or
>> messages queue) with ID, equal to passed key.
>> 2) Makes it possible to change existent object key.
>>
>> Another problem was to peek messages from queues without deleting them.
>> This was achived by introducing of new MSG_COPY flag for sys_msgrcv(). If
>> MSG_COPY flag is set, then msgtyp is interpreted as message number.
>>
>> The following series implements...
>>
>> ---
>>
>> Stanislav Kinsbursky (10):
>>     ipc: remove forced assignment of selected message
>>     ipc: "use key as id" functionality for resource get system call introduced
>>     ipc: segment key change helper introduced
>>     ipc: add new SHM_SET command for sys_shmctl() call
>>     ipc: add new MSG_SET command for sys_msgctl() call
>>     qlge driver: rename internal SEM_SET macro to SEM_INIT
>>     ipc: add new SEM_SET command for sys_semctl() call
>>     IPC: message queue receive cleanup
>>     IPC: message queue copy feature introduced
>>     test: IPC message queue copy feture test
>>
>>
>> drivers/net/ethernet/qlogic/qlge/qlge.h      | 4
>> drivers/net/ethernet/qlogic/qlge/qlge_main.c | 16 +-
>> include/linux/msg.h                          | 5 -
>> include/uapi/linux/ipc.h                    | 1
>> include/uapi/linux/msg.h                    | 2
>> include/uapi/linux/sem.h                    | 1
>> include/uapi/linux/shm.h                    | 1
>> ipc/compat.c                                | 54 +++---
>> ipc/msg.c                                    | 117 ++++++++-----
>> ipc/msgutil.c                               | 38 ++++
>> ipc/sem.c                                    | 15 +-
>> ipc/shm.c                                    | 18 ++
>> ipc/util.c                                  | 67 +++++++-

```

```
>> ipc/util.h | 6 +
>> security/selinux/hooks.c | 3
>> security/smack/smack_lsm.c | 3
>> tools/testing/selftests/ipc/Makefile | 25 +++
>> tools/testing/selftests/ipc/msgque.c | 231 +++++
>> 18 files changed, 526 insertions(+), 81 deletions(-)
>> create mode 100644 tools/testing/selftests/ipc/Makefile
>> create mode 100644 tools/testing/selftests/ipc/msgque.c
>>
>
>
>
```

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Best regards,  
Stanislav Kinsbursky

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