

>>>> A naive question, because I have not followed C/R closely. How do you  
>>>> deal with the case that other processes may be reading from the queue?  
>>>> (Or is that disabled during checkpointing?)  
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>>>  
>>> To be honest, in this case behaviour in user-space is unpredictable.  
>>> I.e. if you have, for example, 5 messages in queue and going to peek them  
>>> all, and another process is reading the queue in the same time, then,  
>>> most  
>>> probably, you won't peek all the 5 and receive ENOMSG.  
>>> But this case can be easily handled by user-space application (number of  
>>> messages in queue can be discovered before peeking).  
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>>> Note, that in CRIU IPC resources will be collected when all processes to  
>>> migrate are frozen.  
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>>  
>> Perhaps I am missing something fundamental, but how can C/R sanely do  
>> anything at all here?  
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>> For example, suppose a process reads and processes a message after you  
>> read it with MSG\_COPY. Then the remaining messages are all shifted by  
>> one position, and you are going to miss reading one of them. IIUC the  
>> idea of MSG\_COPY is to allow you to retrieve a copy of all messages in  
>> the list. It sounds like there's no way this can be done reliably. So,  
>> what possible use does the operation have?  
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> First of all, this problem exist as is regardless to C/R feature or this  
> patch set. If you share some resource (like message queue in this particular  
> case) system-wide, then any process A can read out a message, which was send  
> by process B to process C. So, when processes uses IPC message queues, they  
> should be designed to handle such failures.  
>  
> Second, it's up to user-space how to handle such things. It's implied, that  
> user, trying to migrate some process, holding one end of queue, will also  
> migrate another process, holding second end.  
>  
> Third, there is IPC namespace, which isolates IPC objects. It can be used  
> for safe migration of process tree.

Is there somewhere a \*detailed\* description of how this feature would be used? Lacking that, it's really hard to see how anything sane and reliable can be done with MSG\_COPY.

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