Subject: [PATCH 2.6.24-rc8-mm1 00/15] IPC: code rewrite + new functionalities
Posted by Pierre Peiffer on Tue, 29 Jan 2008 16:02:29 GMT
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Hi,

Here is a patchset about the IPC, which proposes to consolidate some part of the existing code and to add some functionalities.

* Patches 1 to 8 don't change the existing behavior, but propose to rewrite some parts of the existing code. In fact, the three kinds of IPC (semaphores, message queues and shared memory) have some common commands (IPC_SET, IPC_RMID, etc...) but they are mainly handled in three different ways. These patches propose to consolidate this, by handling these commands the same way and try to use, as much as possible, some common code. This should increase readability and maintainability of the code, making them probably good candidate for the -mm tree, I think.

* Patches 9 to 15 propose to add some functionalities, and thus are submitted here for RFC, about both the interest and their implementation. These functionalities are:
- Two new control-commands:
. IPC_SETID: to change an IPC's id.
. IPC_SETALL: behaves as IPC_SET, except that it also sets all time and pid values)
- add a /proc/<pid>/semundo file to read and write the undo values of some semaphores for a given process.

As the namespaces and the "containers" are being integrated in the kernel, these functionalities may be a first step to implement the checkpoint/restart of an application: in fact the existing API does not allow to specify or to change an ID when creating an IPC, when restarting an application, and the times/pids values of each IPCs are also altered. May be someone may find another interest about this ?

So again, comments are welcome.

Thanks.

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Pierre

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