Subject: [RFC][PATCH 0/4] Object creation with a pre-defined id (v2)
Posted by Nadia Derbey on Fri, 28 Mar 2008 09:53:09 GMT
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Hi,

Here is a second version of what has been proposed 2 weeks ago to create
an object with a pre-defined id (this feature would be used during the
restart operation) - see thread
https://lists.linux-foundation.org/pipermail/containers/2008-March/thread.html#10287

Main changes since last version:
. Pavel's suggestion has been integrated; this makes things more readable:
  alloc_pidmap() is unchanged and a alloc_fixed_pidmap() is added for the
  predefined ids.
. Oren's suggestion has been integrated:
  We now have a single file under /proc/self (/proc/self/next_id).
  When this file is filled, a structure pointed to by the calling task struct
  is filled with the id(s).
  Then, when the object is created, the id(s) present in that structure are
  used, instead of the default ones.
  The syntax is one of:
  . echo "LONG XX" > /proc/self/next_id
    next object to be created will have an id set to XX
  . echo "LONG<n> X0 ... X<n-1>" > /proc/self/next_id
    next object to be created will have its ids set to XX0, ... X<n-1>
    This is particularly useful for processes that may have several ids
    if they belong to nested namespaces.

The objects covered here are ipc objects and processes.

The patches are still against 2.6.25-rc3-mm1, in the following order:

[PATCH 1/4] adds the procfs facility for next object to be created, this
        object being associated to a single id.
[PATCH 2/4] enhances the procfs facility for objects associated to multiple
        ids (like processes).
[PATCH 3/4] makes use of the specified id (if any) to allocate the new IPC
        object (changes the ipc_addid() path).
[PATCH 4/4] uses the specified id(s) (if any) to set the upid nr(s) for a newly
        allocated process (changes the alloc_pid() path).

Any comment and/or suggestions are welcome.

Regards,
Nadia

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Containers@lists.linux-foundation.org
https://lists.linux-foundation.org/mailman/listinfo/containers