Subject: Re: [RFC PATCH 0/5] SUNRPC: "RPC pipefs per network namespace" preparations
Posted by Stanislav Kinsbursky on Thu, 20 Oct 2011 11:06:46 GMT
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Guys, please, spend some of your expensive time to review this patch-set briefly.
This is not for commit, but just an idea representation.
I really need some opinions about it, since all my further work aroud RPC pipefs depends on it.
IOW I need to now, does anyone has something against this idea.
Trond, please, respond, does this idea suits you in general or not?

> Hello to everyone.
> RPC pipefs file system have to work per network namespace context is required
> prior to any NFS modifications.
> This is a way how to do it. I'll really appreciate for any comments.
>
> There are several statements about how to make RPC pipefs working per network
> namespace context.
> Here they are:
> 1) RPC pipefs should be mounted per network namespace context.
> 2) RPC pipefs superblock should holds network namespace while active.
> 3) RPC pipefs lookup and readir should be perfomed in network namespace context
> it was mounted. IOW, user-space process, working in another network namespace
> context, should see RPC pipefs dentries from network namespace context this
> mount-point was created (like it was done for sysfs).
>
> These statement leads to some restrictions which we must follow during
> implementation. Here are they:
> 1) RPC pipefs mount can't be performed in kernel context since new super block
> will holds networks namespace reference and it's impossible to recognize, when
> and how we have to release this mount point. IOW rpc_get_mount() and
> rpc_put_mount() have to be removed.
> 2) RPC pipefs should provide some new helpers to lookup directory dentry for
> those modules which creates pipes, because without RPC pipefs mount point
> general lookup can't be performed.
> 3) These methods must garantee, that pipefs superblock will be active during
> pipes creation and destruction.
>
> So, here is the idea of making RPC pipefs works per network namespace context:
> 1) RPC pipefs superblock should holds network namespcae context while active.
> 2) RPC pipefs should send notification events on superblock creation and
> destruction.
> 3) RPC pipefs should provide "lookup dentry by name" method for notification
> subscribers.
> 4) RPC pipefs should place superblock reference on current network namespace
> context on creation and remove it on destruction.

> 5) RPC pipefs should provide safe "lookup dentry by name" method for per-net
> operations, which garantees, that superblock is active, while
> per-net-operations are performing.
> 6) Client and cache directories creation and destruction should be performed
> also on superblock creation and destruction notification events. Note: generic
> creation (like now) can fail (if no superblock is not created yet).
> 7) Pipes creation and destruction should be performed on superblock creation
> and destruction events. Also pipes operations should be performed during
> per-net operation and in this case they could fail (due to the same reason as
> in statement above).
>
> This patch-set implements first 5 points and thus doesn't affects current RPC
> pipefs logic.
>
> The only problem about I'm not sure how to solve properly yet, is auth gss
> pipes creations operations. Hoping for some help with it.
>
>
> The following series consists of:
>
> ---
>
> Stanislav Kinsbursky (5):
>   SUNRPC: hold current network namespace while pipefs superblock is active
>   SUNRPC: send notification events on pipefs sb creation and destruction
>   SUNRPC: pipefs dentry lookup helper introduced
>   SUNRPC: put pipefs superblock link on network namespace
>   SUNRPC: pipefs per-net operations helper introduced
>
>
> include/linux/sunrpc/rpc_pipe_fs.h | 16 ++++++
> net/sunrpc/netns.h | 3 +
> net/sunrpc/rpc_pipe.c | 103 ++++++++++++++++++++++++++++++++++++++
> net/sunrpc/sunrpc_syms.c | 1
> 4 files changed, 122 insertions(+), 1 deletions(-)
>

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Best regards,
Stanislav Kinsbursky