
Subject: Re: [PATCH 0/6] SUNRPC: make RPC clients use network-namespace-aware PipeFS routines

Posted by [Stanislav Kinsbursky](#) on Wed, 23 Nov 2011 17:58:25 GMT

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> On Wed, Nov 23, 2011 at 02:51:10PM +0300, Stanislav Kinsbursky wrote:

>> This patch set was created in context of clone of git

>> branch: [git://git.linux-nfs.org/projects/trondmy/nfs-2.6.git](https://git.linux-nfs.org/projects/trondmy/nfs-2.6.git).

>> tag: v3.1

>>

>> This patch set depends on previous patch sets titled:

>> 1) "SUNRPC: initial part of making pipefs work in net ns"

>> 2) "SUNRPC: cleanup PipeFS for network-namespace-aware users"

>>

>> This patch set is a first part of reworking SUNRPC PipeFS users.

>> It makes SUNRPC clients using PipeFS notifications for directory and GSS pipes

>> dentries creation. With this patch set RPC clients and GSS auth creations

>> routines doesn't force SUNRPC PipeFS mount point creation which actually means,

>> that they now can work without PipeFS dentries.

>

> I'm not following very well. (My fault, I haven't been paying

> attention.) Could you summarize the intended behavior of pipefs after

> all this is done?

>

> So there's a separate superblock (and separate dentries) for each

> namespace?

>

Yes, you right.

So, here is a brief summary of what will be at the end:

1) PipeFS superblock will be per net ns.

2) Superblock holds net ns, which is taken from current. Struct net will have link to pipefs superblock (it can be NULL, if PipeFS wasn't mounted yet or already unmounted).

3) Notifications will be send on superblock creation and destruction.

4) All kernel mount point creation and destruction calls (`rpc_get_mount()` and `rpc_put_mount()`) will be removed. I.e. this superblock will be created only from user-space.

5) Kernel pipes and dentries will be created or destroyed:

1. During per-net operations (only for static NFS stuff: `dns_resolve` cache, `pnfs` blocklayout and `idmap` pipes).

2. On notification events (all directories, files and pipes in proper

callbacks). Notification subscribers:

- a. rpc clients (responsible for client dentries and gss pipes creation),
- b. nfs clients (responsible nfs idmap pipes),
- c. nfs dns_resolve cache,
- d. pnfs blocklayout pipes,

6) PipeFS dentries creation logic:

- a) All directories and files creators - will try to create them as usual. But if fail - then no problem here. I.e. dentries will be created on PipeFS mount notification call.
- b) Pipes creators - will create new structure `rpc_pipe` (all pipe stuff from `rpc` inode) nad then try to create pipe dentries. If fail - then, again, no problem. Dentries will be be created on PipeFS mount notification call.

Almost all (exept 5.2.b - forgot about it during debasing and resending) is done and ready to send.

> What decides which clients are visible in which network namespaces?
>

Clients dentries will be created in proper superblock from the beginning. I.e. `rpc` clients transports have struct `net` reference. NFS clients will have such reference too. Struct `net` will have reference to `pipefs` superblock. Currently, for dentry creation all we need is parent dentry. Some of creators (like GSS pipes) takes parent dentry from associated struct (like `rpc_clnt`). For others parent dentry can be found by simple `d_lookup()` starting from `sb->root` (reminder: `sb` can be taken from `net`).

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Best regards,
Stanislav Kinsbursky
