Subject: [PATCH 2/6] NFS: make NFS client allocated per network namespace context
Posted by Stanislav Kinsbursky on Mon, 28 Nov 2011 13:38:38 GMT
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This patch adds new net variable to nfs_client structure. This variable is set
on NFS client creation and cheched during matching NFS client search.
Initially current->nsproxy->net_ns is used as network namespace owner for new
NFS client to create. This network namespace pointer is set during mount
options parsing and thus can be passed from user-spave utils in future if will
be necessary.

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```
---
 fs/nfs/client.c          |   16 +++++++++++---
 fs/nfs/internal.h        |    1 +
 fs/nfs/super.c           |    3 +++
 include/linux/nfs_fs_sb.h |    1 +
 4 files changed, 18 insertions(+), 3 deletions(-)

diff --git a/fs/nfs/client.c b/fs/nfs/client.c
index 5833fbb..47a8cd6 100644
--- a/fs/nfs/client.c
+++ b/fs/nfs/client.c
@@ -135,6 +135,7 @@ struct nfs_client_initdata {
  const struct nfs_rpc_ops *rpc_ops;
  int proto;
  u32 minorversion;
+ struct net *net;
 };

 /*
@@ -189,6 +190,7 @@ static struct nfs_client *nfs_alloc_client(const struct nfs_client_initdata
*cl_
  if (!IS_ERR(cred))
   clp->cl_machine_cred = cred;
  nfs_fscache_get_client_cookie(clp);
+ clp->net = cl_init->net;

  return clp;

@@ -475,6 +477,9 @@ static struct nfs_client *nfs_match_client(const struct nfs_client_initdata
*dat
   /* Match the full socket address */
   if (!nfs_sockaddr_cmp(sap, clap))
    continue;
+  /* Match network namespace */
```

```
+  if (clp->net != data->net)
+   continue;

   atomic_inc(&clp->cl_count);
   return clp;
@@ -825,6 +830,7 @@ static int nfs_init_server(struct nfs_server *server,
   .addrlen = data->nfs_server.addrlen,
   .rpc_ops = &nfs_v2_clientops,
   .proto = data->nfs_server.protocol,
+  .net = data->net,
  };
  struct rpc_timeout timeparms;
  struct nfs_client *clp;
@@ -1386,7 +1392,7 @@ static int nfs4_set_client(struct nfs_server *server,
   const char *ip_addr,
   rpc_authflavor_t authflavour,
   int proto, const struct rpc_timeout *timeparms,
-  u32 minorversion)
+  u32 minorversion, struct net *net)
 {
  struct nfs_client_initdata cl_init = {
   .hostname = hostname,
@@ -1395,6 +1401,7 @@ static int nfs4_set_client(struct nfs_server *server,
   .rpc_ops = &nfs_v4_clientops,
   .proto = proto,
   .minorversion = minorversion,
+  .net = net,
  };
  struct nfs_client *clp;
  int error;
@@ -1446,6 +1453,7 @@ struct nfs_client *nfs4_set_ds_client(struct nfs_client* mds_clp,
   .rpc_ops = &nfs_v4_clientops,
   .proto = ds_proto,
   .minorversion = mds_clp->cl_minorversion,
+  .net = mds_clp->net,
  };
  struct rpc_timeout ds_timeout = {
   .to_initval = 15 * HZ,
@@ -1572,7 +1580,8 @@ static int nfs4_init_server(struct nfs_server *server,
    data->auth_flavors[0],
    data->nfs_server.protocol,
    &timeparms,
-   data->minorversion);
+   data->minorversion,
+   data->net);
  if (error < 0)
   goto error;
```

```
@@ -1669,7 +1678,8 @@ struct nfs_server *nfs4_create_referral_server(struct nfs_clone_mount
*data,
      data->authflavor,
      parent_server->client->cl_xprt->prot,
      parent_server->client->cl_timeout,
-     parent_client->cl_mvops->minor_version);
+     parent_client->cl_mvops->minor_version,
+     parent_client->net);
   if (error < 0)
    goto error;

diff --git a/fs/nfs/internal.h b/fs/nfs/internal.h
index ab12913..4565e76 100644
--- a/fs/nfs/internal.h
+++ b/fs/nfs/internal.h
@@ -123,6 +123,7 @@ struct nfs_parsed_mount_data {
  } nfs_server;

  struct security_mnt_opts lsm_opts;
+ struct net  *net;
 };

 /* mount_clnt.c */
diff --git a/fs/nfs/super.c b/fs/nfs/super.c
index 5b19b6a..782260d 100644
--- a/fs/nfs/super.c
+++ b/fs/nfs/super.c
@@ -53,6 +53,7 @@
 #include <linux/nfs_xdr.h>
 #include <linux/magic.h>
 #include <linux/parser.h>
+#include <linux/nsproxy.h>

 #include <asm/system.h>
 #include <asm/uaccess.h>
@@ -1089,6 +1090,8 @@ static int nfs_parse_mount_options(char *raw,

  free_secdata(secdata);

+ mnt->net = current->nsproxy->net_ns;
+
  while ((p = strsep(&raw, ",")) != NULL) {
   substring_t args[MAX_OPT_ARGS];
   unsigned long option;
diff --git a/include/linux/nfs_fs_sb.h b/include/linux/nfs_fs_sb.h
index b5479df..71fd605 100644
--- a/include/linux/nfs_fs_sb.h
+++ b/include/linux/nfs_fs_sb.h
```

```
@@ -85,6 +85,7 @@ struct nfs_client {
 #endif

   struct server_scope *server_scope; /* from exchange_id */
+ struct net  *net;
 };

 /*
```