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Subject: [PATCH] SUNRPC: make SUNRPC clients list per network namespace context

Posted by [Stanislav Kinsbursky](#) on Wed, 14 Dec 2011 08:20:34 GMT

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This patch moves static SUNRPC clients list and it's lock to sunrpc\_net structure.

Currently this list is used only for debug purposes. But later it will be used also for selecting clients by networks namespace on PipeFS mount/umount events. Per-network namespace lists will make this faster and simpler.

Note: client list is taken from "init\_net" network namespace context in rpc\_show\_tasks(). This will be changed with making SUNRPC sysctl's per network namespace context.

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```
include/linux/sunrpc/sched.h | 3 +-
net/sunrpc/clnt.c            | 26 ++++++++-----
net/sunrpc/netns.h          | 3 +++
net/sunrpc/sunrpc_syms.c    | 3 +++
net/sunrpc/sysctl.c         | 4 +++-
5 files changed, 26 insertions(+), 13 deletions(-)
```

```
diff --git a/include/linux/sunrpc/sched.h b/include/linux/sunrpc/sched.h
```

```
index e775689..b16243a 100644
```

```
--- a/include/linux/sunrpc/sched.h
```

```
+++ b/include/linux/sunrpc/sched.h
```

```
@@ -244,7 +244,8 @@ int rpciod_up(void);
```

```
void rpciod_down(void);
```

```
int __rpc_wait_for_completion_task(struct rpc_task *task, int (*)(void *));
```

```
#ifdef RPC_DEBUG
```

```
-void rpc_show_tasks(void);
```

```
+struct net;
```

```
+void rpc_show_tasks(struct net *);
```

```
#endif
```

```
int rpc_init_mempool(void);
```

```
void rpc_destroy_mempool(void);
```

```
diff --git a/net/sunrpc/clnt.c b/net/sunrpc/clnt.c
```

```
index f0268ea..c5f04aa 100644
```

```
--- a/net/sunrpc/clnt.c
```

```
+++ b/net/sunrpc/clnt.c
```

```
@@ -38,6 +38,7 @@
```

```
#include <linux/sunrpc/bc_xprt.h>
```

```
#include "sunrpc.h"
```

```
+#include "netns.h"
```

```

#ifdef RPC_DEBUG
# define RPCDBG_FACILITY RPCDBG_CALL
@@ -50,8 +51,6 @@
/*
 * All RPC clients are linked into this list
 */
-static LIST_HEAD(all_clients);
-static DEFINE_SPINLOCK(rpc_client_lock);

static DECLARE_WAIT_QUEUE_HEAD(destroy_wait);

@@ -81,16 +80,20 @@ static int rpc_ping(struct rpc_clnt *clnt);

static void rpc_register_client(struct rpc_clnt *clnt)
{
- spin_lock(&rpc_client_lock);
- list_add(&clnt->cl_clients, &all_clients);
- spin_unlock(&rpc_client_lock);
+ struct sunrpc_net *sn = net_generic(clnt->cl_xprt->xprt_net, sunrpc_net_id);
+
+ spin_lock(&sn->rpc_client_lock);
+ list_add(&clnt->cl_clients, &sn->all_clients);
+ spin_unlock(&sn->rpc_client_lock);
}

static void rpc_unregister_client(struct rpc_clnt *clnt)
{
- spin_lock(&rpc_client_lock);
+ struct sunrpc_net *sn = net_generic(clnt->cl_xprt->xprt_net, sunrpc_net_id);
+
+ spin_lock(&sn->rpc_client_lock);
  list_del(&clnt->cl_clients);
- spin_unlock(&rpc_client_lock);
+ spin_unlock(&sn->rpc_client_lock);
}

static int
@@ -1852,14 +1855,15 @@ static void rpc_show_task(const struct rpc_clnt *clnt,
  task->tk_action, rpc_waitq);
}

-void rpc_show_tasks(void)
+void rpc_show_tasks(struct net *net)
{
  struct rpc_clnt *clnt;
  struct rpc_task *task;
  int header = 0;

```

```

+ struct sunrpc_net *sn = net_generic(net, sunrpc_net_id);

- spin_lock(&rpc_client_lock);
- list_for_each_entry(clnt, &all_clients, cl_clients) {
+ spin_lock(&sn->rpc_client_lock);
+ list_for_each_entry(clnt, &sn->all_clients, cl_clients) {
    spin_lock(&clnt->cl_lock);
    list_for_each_entry(task, &clnt->cl_tasks, tk_task) {
        if (!header) {
@@ -1870,6 +1874,6 @@ void rpc_show_tasks(void)
    }
    spin_unlock(&clnt->cl_lock);
}
- spin_unlock(&rpc_client_lock);
+ spin_unlock(&sn->rpc_client_lock);
}
#endif
diff --git a/net/sunrpc/netns.h b/net/sunrpc/netns.h
index d013bf2..6010c46 100644
--- a/net/sunrpc/netns.h
+++ b/net/sunrpc/netns.h
@@ -9,6 +9,9 @@ struct cache_detail;
struct sunrpc_net {
    struct proc_dir_entry *proc_net_rpc;
    struct cache_detail *ip_map_cache;
+
+ struct list_head all_clients;
+ spinlock_t rpc_client_lock;
};

extern int sunrpc_net_id;
diff --git a/net/sunrpc/sunrpc_syms.c b/net/sunrpc/sunrpc_syms.c
index 8ec9778..e57aa10 100644
--- a/net/sunrpc/sunrpc_syms.c
+++ b/net/sunrpc/sunrpc_syms.c
@@ -29,6 +29,7 @@ int sunrpc_net_id;
static __net_init int sunrpc_init_net(struct net *net)
{
    int err;
+ struct sunrpc_net *sn = net_generic(net, sunrpc_net_id);

    err = rpc_proc_init(net);
    if (err)
@@ -38,6 +39,8 @@ static __net_init int sunrpc_init_net(struct net *net)
    if (err)
        goto err_ipmap;

+ INIT_LIST_HEAD(&sn->all_clients);

```

```

+ spin_lock_init(&sn->rpc_client_lock);
  return 0;

err_ipmap:
diff --git a/net/sunrpc/sysctl.c b/net/sunrpc/sysctl.c
index e65dcc6..af7d339 100644
--- a/net/sunrpc/sysctl.c
+++ b/net/sunrpc/sysctl.c
@@ -20,6 +20,8 @@
#include <linux/sunrpc/stats.h>
#include <linux/sunrpc/svc_xprt.h>

+#include "netns.h"
+
+/*
+ * Declare the debug flags here
+ */
@@ -110,7 +112,7 @@ proc_dodebug(ctl_table *table, int write,
    *(unsigned int *) table->data = value;
    /* Display the RPC tasks on writing to rpc_debug */
    if (strcmp(table->procname, "rpc_debug") == 0)
-   rpc_show_tasks();
+   rpc_show_tasks(&init_net);
  } else {
    if (!access_ok(VERIFY_WRITE, buffer, left))
      return -EFAULT;

```

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