v3: Rebased on Bruce's tree, "for-3.6" branch

v2: Rebased on Bruce's tree, "for-3.5" branch

This patch set depends on "SUNRPC: separate per-net data creation from service creation" patch set sent earlier.

The following series implements...

---

Stanislav Kinsbursky (11):
  NFS: pass net to nfs_callback_down()
  NFS: callback service creation function introduced
  NFS: move per-net callback thread initialization to nfs_callback_up_net()
  NFS: callback up - transport backchannel cleanup
  NFS: callback service start function introduced
  NFS: callback up - users counting cleanup
  NFS: make nfs_callback_tcpport per network context
  NFS: make nfs_callback_tcpport6 per network context
  NFS: callback per-net usage counting introduced
  NFS: add debug messages to callback down function
  NFS: get net after idr allocation

fs/nfs/callback.c | 288 ++++++++++++++++++++++++++++++++++------------------
fs/nfs/callback.h |    4 -
fs/nfs/client.c   |    5 +
fs/nfs/netns.h    |    3 +
fs/nfs/nfsstate.c |    6 +
5 files changed, 202 insertions(+), 104 deletions(-)

---

Subject: [PATCH v3 01/11] NFS: pass net to nfs_callback_down()
Posted by Stanislav Kinsbursky on Tue, 03 Jul 2012 16:19:32 GMT
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Signed-off-by: Stanislav Kinsbursky <skinsbursky@parallels.com>
---

fs/nfs/callback.c |  4 +++-
fs/nfs/callback.h |  2 +-.
fs/nfs/client.c   |  2 +-.
3 files changed, 4 insertions(+), 4 deletions(-)
diff --git a/fs/nfs/callback.c b/fs/nfs/callback.c
index 23ff18f..2d3019d 100644
--- a/fs/nfs/callback.c
+++ b/fs/nfs/callback.c
@@ -321,7 +321,7 @@ out_err:
 /*
  * Kill the callback thread if it's no longer being used.
  */
-void nfs_callback_down(int minorversion)
+void nfs_callback_down(int minorversion, struct net *net)
{
  struct nfs_callback_data *cb_info = &nfs_callback_info[minorversion];

@@ -329,7 +329,7 @@ void nfs_callback_down(int minorversion)
  cb_info->users--;
  if (cb_info->users == 0 && cb_info->task != NULL) {
    kthread_stop(cb_info->task);
-  svc_shutdown_net(cb_info->serv, &init_net);
+  svc_shutdown_net(cb_info->serv, net);
  svc_exit_thread(cb_info->rqst);
  cb_info->serv = NULL;
  cb_info->rqst = NULL;

diff --git a/fs/nfs/callback.h b/fs/nfs/callback.h
index a5527c9..6d900cf 100644
--- a/fs/nfs/callback.h
+++ b/fs/nfs/callback.h
@@ -194,7 +194,7 @@ extern __be32 nfs4_callback_recall(struct cb_recallargs *args, void *
dummy,
  struct cb_process_state *cps);
#elifdef CONFIG_NFS_V4
  extern int nfs_callback_up(u32 minorversion, struct rpc_xprt *xprt);
-extern void nfs_callback_down(int minorversion);
+extern void nfs_callback_down(int minorversion, struct net *net);
  extern int nfs4_validate_delegation_stateid(struct nfs_delegation *delegation,
    const nfs4_stateid *stateid);
  extern int nfs4_set_callback_sessionid(struct nfs_client *clp);

diff --git a/fs/nfs/client.c b/fs/nfs/client.c
index 17ba6b9..28bc770 100644
--- a/fs/nfs/client.c
+++ b/fs/nfs/client.c
@@ -225,7 +225,7 @@ static void nfs4_shutdown_session(struct nfs_client *clp)
 static void nfs4_destroy_callback(struct nfs_client *clp)
{
  if (__test_and_clear_bit(NFS_CS_CALLBACK, &clp->cl_res_state))
-    nfs_callback_down(clp->cl_mvops->minor_version);
+    nfs_callback_down(clp->cl_mvops->minor_version, &init_net);
  }
static void nfs4_shutdown_client(struct nfs_client *clp)

Subject: [PATCH v3 02/11] NFS: callback service creation function introduced
Posted by Stanislav Kinsbursky on Tue, 03 Jul 2012 16:19:39 GMT
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This function creates service if it's not exist, or increase usage counter of
the existent, and returns pointer to it.
Usage counter will be dropped by svc_destroy() later in nfs_callback_up().

Signed-off-by: Stanislav Kinsbursky <skinsbursky@parallels.com>
---
fs/nfs/callback.c | 55 +++++++++++++++++++++++++++++++++++++++++++----------
1 files changed, 45 insertions(+), 10 deletions(-)
diff --git a/fs/nfs/callback.c b/fs/nfs/callback.c
index 2d3019d..f8d0c21 100644
--- a/fs/nfs/callback.c
+++ b/fs/nfs/callback.c
@@ -241,12 +241,46 @@ static inline void nfs_callback_bc_serv(u32 minorversion, struct
crpc_xprt *xprt,
}#endif /* CONFIG_NFS_V4_1 */

+static struct svc_serv *nfs_callback_create_svc(int minorversion)
+{
+struct nfs_callback_data *cb_info = &nfs_callback_info[minorversion];
+struct svc_serv *serv;
+/*
+ * Check whether we're already up and running.
+ */
+if (cb_info->task) {
+/*
+ * Note: increase service usage, because later in case of error
+ * svc_destroy() will be called.
+ */
+ssvc_get(cb_info->serv);
+return cb_info->serv;
+}
+/*
+ * Sanity check: if there's no task,
+ * we should be the first user ... *
+ */
+if (cb_info->users)
printk(KERN_WARNING "nfs_callback_up: no kthread, %d users??\n",
+cb_info->users);
+
serv = svc_create(&nfs4_callback_program, NFS4_CALLBACK_BUFSIZE, NULL);
+if (!serv) {
+printk(KERN_ERR "lockd_up: create service failed\n");
+return ERR_PTR(-ENOMEM);
+}
+dprintk("nfs_callback_up: service created\n");
+return serv;
+}
+
/*
 * Bring up the callback thread if it is not already up.
 */
int nfs_callback_up(u32 minorversion, struct rpc_xprt *xprt)
{
-struct svc_serv *serv = NULL;
+struct svc_serv *serv;
 struct svc_rqst *rqstp;
+int (*callback_svc)(void *vrqstp);
 struct nfs_callback_data *cb_info = &nfs_callback_info[minorversion];
@@ -256,15 +290,17 @@ int nfs_callback_up(u32 minorversion, struct rpc_xprt *xprt)
 struct net *net = &init_net;

 mutex_lock(&nfs_callback_mutex);
+
+serv = nfs_callback_create_svc(minorversion);
+if (IS_ERR(serv)) {
+ret = PTR_ERR(serv);
+goto err_create;
+}
+if (cb_info->users++ || cb_info->task != NULL) {
+nfs_callback_bc_serv(minorversion, xprt, cb_info);
+goto out;
+}
-serv = svc_create(&nfs4_callback_program, NFS4_CALLBACK_BUFSIZE, NULL);
-if (!serv) {
- ret = -ENOMEM;
- goto out_err;
-}
+
 ret = svc_bind(serv, net);
 if (ret < 0) {
@@ -305,16 +341,15 @@ out:
 * on both success and failure so that the refcount is 1 when the
 * thread exits.

Subject: [PATCH v3 03/11] NFS: move per-net callback thread initialization to
nfs_callback_up_net()
Posted by Stanislav Kinsbursky on Tue, 03 Jul 2012 16:19:46 GMT
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This new function in now called before nfs_minorversion_callback_svc_setup()).

Also few small changes:
1) current network namespace in nfs_callback_up() was replaced by transport net.
2) svc_shutdown_net() was moved prior to callback usage counter decrement
   (because in case of per-net data allocation faulure svc_shutdown_net() have to
   be skipped).

Signed-off-by: Stanislav Kinsbursky <skinsbursky@parallels.com>

---
fs/nfs/callback.c | 125 +++++++++++++++++++++++++++++++++--------------------
fs/nfs/client.c   |    2 -
2 files changed, 79 insertions(+), 48 deletions(-)

diff --git a/fs/nfs/callback.c b/fs/nfs/callback.c
index f8d0c21..b61ed61 100644
--- a/fs/nfs/callback.c
+++ b/fs/nfs/callback.c
@@ -63,6 +63,32 @@ static struct kernel_param_ops param_ops_portnr = {

module_param_named(callback_tcpport, nfs_callback_set_tcpport, portnr, 0644);

+static int nfs4_callback_up_net(struct svc_serv *serv, struct net *net)
+{
+    int ret;
+ret = svc_create_xprt(serv, "tcp", net, PF_INET,
+nfs_callback_set_tcpport, SVC_SOCK_ANONYMOUS);
+if (ret <= 0)
+goto out_err;
+nfs_callback_tcpport = ret;
+dprintf("NFS: Callback listener port = %u (af %u)\n",
+nfs_callback_tcpport, PF_INET, net);
+
+ret = svc_create_xprt(serv, "tcp", net, PF_INET6,
+nfs_callback_set_tcpport, SVC_SOCK_ANONYMOUS);
+if (ret > 0) {
+nfs_callback_tcpport6 = ret;
+dprintf("NFS: Callback listener port = %u (af %u)\n",
+nfs_callback_tcpport6, PF_INET6, net);
+} else if (ret != -EAFNOSUPPORT)
+goto out_err;
+return 0;
+
+out_err:
+return (ret) ? ret : -ENOMEM;
+
+/*
 * This is the NFSv4 callback kernel thread.
 */
@@ -104,36 +130,21 @@ nfs4_callback_svc(void *vrqstp)
 static struct svc_rqst *
 nfs4_callback_up(struct svc_serv *serv, struct rpc_xprt *xprt)
 {
- int ret;
- 
- ret = svc_create_xprt(serv, "tcp", &init_net, PF_INET,
- nfs_callback_set_tcpport, SVC_SOCK_ANONYMOUS);
- if (ret <= 0)
- goto out_err;
- nfs_callback_tcpport = ret;
- dprintf("NFS: Callback listener port = %u (af %u)\n",
- nfs_callback_tcpport, PF_INET);
- 
- ret = svc_create_xprt(serv, "tcp", &init_net, PF_INET6,
- nfs_callback_set_tcpport, SVC_SOCK_ANONYMOUS);
- if (ret > 0) {
- nfs_callback_tcpport6 = ret;
- dprintf("NFS: Callback listener port = %u (af %u)\n",
- nfs_callback_tcpport6, PF_INET6);
- } else if (ret == -EAFNOSUPPORT)
- ret = 0;
-
-else
-goto out_err;
-
return svc_prepare_thread(serv, &serv->sv_pools[0], NUMA_NO_NODE);
-
-out_err:
-if (ret == 0)
-ret = -ENOMEM;
-return ERR_PTR(ret);
-
#endif

#ifdef(CONFIG_NFS_V4_1)
+static int nfs41_callback_up_net(struct svc_serv *serv, struct net *net)
+{
+/*
 + * Create an svc_sock for the back channel service that shares the
 + * fore channel connection.
 + * Returns the input port (0) and sets the svc_serv bc_xprt on success
 + */
+return svc_create_xprt(serv, "tcp-bc", net, PF_INET, 0,
+ SVC.SOCK_ANONYMOUS);
+
+}
+/*
 * The callback service for NFSv4.1 callbacks
 */
@@ -176,19 +187,6 @@ static struct svc_rqst *
nfs41_callback_up(struct svc_serv *serv, struct rpc_xprt *xprt)
{
 struct svc_rqst *rqstp;
-int ret;
-
-/*
- * Create an svc_sock for the back channel service that shares the
- * fore channel connection.
- * Returns the input port (0) and sets the svc_serv bc_xprt on success
- */
-ret = svc_create_xprt(serv, "tcp-bc", &init_net, PF_INET, 0,
- SVC.SOCK_ANONYMOUS);
-if (ret < 0) {
-rqstp = ERR_PTR(ret);
-goto out;
-}
-
/*
 * Save the svc_serv in the transport so that it can
@@ -204,7 +202,6 @@ nfs41_callback_up(struct svc_serv *serv, struct rpc_xprt *xprt)
svc_xprt_put(serv->sv_bc_xprt);
serv->sv_bc_xprt = NULL;
}
-out:
dprintf("---> %s return %ld\n", __func__,
IS_ERR(rqstp) ? PTR_ERR(rqstp) : 0);
return rqstp;
@@ -228,6 +225,11 @@ static inline void nfs_callback_bc_serv(u32 minorversion, struct rpc_xprt
*xprt,
xprt->bc_serv = cb_info->serv;
}
#else
+static int nfs41_callback_up_net(struct svc_serv *serv, struct net *net)
+{
+    return 0;
+
+}

static inline int nfs_minorversion_callback_svc_setup(u32 minorversion,
struct svc_serv *serv, struct rpc_xprt *xprt,
struct svc_rqst **rqstpp, int (**callback_svc)(void *vrqstp))
@@ -241,6 +243,36 @@ static inline void nfs_callback_bc_serv(u32 minorversion, struct rpc_xprt
*xprt,
}
#endif /* CONFIG_NFS_V4_1 */

+static int nfs_callback_up_net(int minorversion, struct svc_serv *serv, struct net *net)
+{
+    int ret;
+
+dprintf("NFS: create per-net callback data; net=%p\n", net);
+
+ret = svc_bind(serv, net);
+if (ret < 0) {
+    printk(KERN_WARNING "NFS: bind callback service failed\n");
+    goto err_bind;
+}
+
+if (minorversion) {
+    ret = nfs41_callback_up_net(serv, net);
+if (ret < 0)
+    goto err_socks;
+}
+
+if (ret == 0)
+    ret = nfs4_callback_up_net(serv, net);
+if (ret < 0)
+    goto err_socks;
+return 0;
+
+err_socks:
+svc_rpcb_cleanup(serv, net);
+err_bind:
+return ret;
+
static struct svc_serv *nfs_callback_create_svc(int minorversion)
{
    struct nfs_callback_data *cb_info = &nfs_callback_info[minorversion];
    @-287,7 +319,7 @@ int nfs_callback_up(u32 minorversion, struct rpc_xprt *xprt)
char svc_name[12];
int ret = 0;
int minorversion_setup;
-struct net *net = &init_net;
+struct net *net = xprt->xprt_net;
+
mutex_lock(&nfs_callback_mutex);

@@ -302,11 +334,9 @@ int nfs_callback_up(u32 minorversion, struct rpc_xprt *xprt)
    goto out;
}

-ret = svc_bind(serv, net);
-if (ret < 0) {
-printk(KERN_WARNING "NFS: bind callback service failed\n");
    goto out_err;
-
+ret = nfs_callback_up_net(minorversion, serv, net);
+if (ret < 0)
+    goto err_net;

    minorversion_setup = nfs_minorversion_callback_svc_setup(minorversion, serv, xprt, &rqstp, &callback_svc);
@@ -346,10 +376,11 @@ err_create:
    mutex_unlock(&nfs_callback_mutex);
    return ret;
    out_err:
+svc_shutdown_net(serv, net);
+err_net:
    dprintk("NFS: Couldn't create callback socket or server thread; 
" "err = %d\n", ret);
    cb_info->users--;
    -svc_shutdown_net(serv, net);
    goto out;
}

diff --git a/fs/nfs/client.c b/fs/nfs/client.c
index 28bc770..d8c918b 100644
--- a/fs/nfs/client.c
+++ b/fs/nfs/client.c
@@ -225,7 +225,7 @@ static void nfs4_shutdown_session(struct nfs_client *clp)
 static void nfs4_destroy_callback(struct nfs_client *clp)
 {
  if (__test_and_clear_bit(NFS_CS_CALLBACK, &clp->cl_res_state))
-+  nfs_callback_down(clp->cl_mvops->minor_version, &init_net);
  +nfscallback_down(clp->cl_mvops->minor_version, clp->cl_net);
 }

 static void nfs4_shutdown_client(struct nfs_client *clp)

Subject: [PATCH v3 04/11] NFS: callback up - transport backchannel cleanup
Posted by Stanislav Kinsbursky on Tue, 03 Jul 2012 16:19:54 GMT

No need to assign transports backchannel server explicitly in
nfs4_callback_up() - there is nfs_callback_bc_serv() function for this.
By using it, nfs4_callback_up() and nfs41_callback_up() can be called without
transport argument.

Note: service have to be passed to nfs_callback_bc_serv() instead of callback,
since callback link can be uninitialized.

Signed-off-by: Stanislav Kinsbursky <skinsbursky@parallels.com>

---
fs/nfs/callback.c | 34 +++++++++++++++++-----------------
1 files changed, 17 insertions(+), 17 deletions(-)

diff --git a/fs/nfs/callback.c b/fs/nfs/callback.c
index b61ed61..41150ef 100644
--- a/fs/nfs/callback.c
+++ b/fs/nfs/callback.c
@@ -128,7 +128,7 @@ nfs4_callback_svc(void *vrqstp)
-  * Prepare to bring up the NFSv4 callback service
+  * Prepare to bring up the NFSv4 callback service
-  */
+  */
   static struct svc_rqst *
   nfs4_callback_up(struct svc_serv *serv, struct rpc_xprt *xprt)
   +nfs4_callback_up(struct svc_serv *serv)
   {
    return svc_prepare_thread(serv, &serv->sv_pools[0], NUMA_NO_NODE);
   }
@@ -184,16 +184,10 @@ nfs41_callback_svc(void *vrqstp)
-  * Bring up the NFSv4.1 callback service
+  * Bring up the NFSv4.1 callback service
-  */
+  */
   static struct svc_rqst *
   nfs41_callback_up(struct svc_serv *serv, struct rpc_xprt *xprt)
+nfs41_callback_up(struct svc_serv *serv)
{
    struct svc_rqst *rqstp;

    /*
    - * Save the svc_serv in the transport so that it can
    - * be referenced when the session backchannel is initialized
    - */
    -xprt->bc_serv = serv;
    -
    INIT_LIST_HEAD(&serv->sv_cb_list);
    spin_lock_init(&serv->sv_cb_lock);
    init_waitqueue_head(&serv->sv_cb_waitq);
    @ @ -208,21 +202,25 @ @ nfs41_callback_up(struct svc_serv *serv, struct rpc_xprt *xprt)
}  

static inline int nfs_minorversion_callback_svc_setup(u32 minorversion,
    -struct svc_serv *serv, struct rpc_xprt *xprt,
    +struct svc_serv *serv,
    struct svc_rqst **rqstpp, int (**callback_svc)(void *vrqstp))
{
    if (minorversion) {
        -*rqstpp = nfs41_callback_up(serv, xprt);
        +*rqstpp = nfs41_callback_up(serv);
        *callback_svc = nfs41_callback_svc;
    }
    return minorversion;
}

static inline void nfs_callback_bc_serv(u32 minorversion, struct rpc_xprt *xprt,
    -struct nfs_callback_data *cb_info)
    +struct svc_serv *serv)
{
    if (minorversion)
        -xprt->bc_serv = cb_info->serv;
    +/*
    + * Save the svc_serv in the transport so that it can
    + * be referenced when the session backchannel is initialized
    + */
    +xprt->bc_serv = serv;
}

#define nfs_minorversion_callback_svc_setup(u32 minorversion,
    -struct svc_serv *serv, struct rpc_xprt *xprt,
    +struct svc_serv *serv,
    struct svc_rqst **rqstpp, int (**callback_svc)(void *vrqstp))
{
    if (minorversion) {
        -*rqstpp = nfs41_callback_up(serv, xprt);
        +*rqstpp = nfs41_callback_up(serv);
        *callback_svc = nfs41_callback_svc;
    }
    return minorversion;
}

static inline int nfs_callback_bc_serv(u32 minorversion, struct rpc_xprt *xprt,
    -struct nfs_callback_data *cb_info)
    +struct svc_serv *serv)
{
    if (minorversion)
        -xprt->bc_serv = cb_info->serv;
    +/*
    + * Save the svc_serv in the transport so that it can
    + * be referenced when the session backchannel is initialized
    + */
    +xprt->bc_serv = serv;
}

static int nfs41_callback_up_net(struct svc_serv *serv, struct net *net)
@@ -231,14 +229,14 @@ static int nfs41_callback_up_net(struct svc_serv *serv, struct net *net)
}
This is just a code move, which from my POW makes code looks better.

I.e. now on start we have 3 different stages:

1) Service creation.
2) Service per-net data allocation.
3) Service start.
Patch also renames goto label "out_err:" into "err_start:" to reflect new changes.

Signed-off-by: Stanislav Kinsbursky <skinsbursky@parallels.com>

---

fs/nfs/callback.c | 77 ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++----------------------
1 files changed, 45 insertions(+), 32 deletions(-)

diff --git a/fs/nfs/callback.c b/fs/nfs/callback.c
index 41150ef..550d2a2 100644
--- a/fs/nfs/callback.c
+++ b/fs/nfs/callback.c
@@ -241,6 +241,46 @@ static inline void nfs_callback_bc_serv(u32 minorversion, struct rpc_xprt *
xprt,
}  
#endif /* CONFIG_NFS_V4_1 */

+static int nfs_callback_start_svc(int minorversion, struct rpc_xprt *xprt,
+  struct svc_serv *serv)
+{
+  struct svc_rqst *rqstp;
+  int (*callback_svc)(void *vrqstp);
+  struct nfs_callback_data *cb_info = &nfs_callback_info[minorversion];
+  char svc_name[12];
+  int ret;
+  int minorversion_setup;
+  nfs_callback_bc_serv(minorversion, xprt, serv);
+  
+  minorversion_setup = nfs_minorversion_callback_svc_setup(minorversion,
+    serv, &rqstp, &callback_svc);
+  if (!minorversion_setup) {
+    /* v4.0 callback setup */
+    rqstp = nfs4_callback_up(serv);
+    callback_svc = nfs4_callback_svc;
+  }
+  if (IS_ERR(rqstp))
+    return PTR_ERR(rqstp);
+  svc_sock_update_bufs(serv);
+  
+  sprintf(svc_name, "nfsv4.%u-svc", minorversion);
+  cb_info->serv = serv;
+  cb_info->rqst = rqstp;
+  cb_info->task = kthread_run(callback_svc, cb_info->rqst, svc_name);
+  if (IS_ERR(cb_info->task)) {
+    ret = PTR_ERR(cb_info->task);
+  }
+svc_exit_thread(cb_info->rqst);
+cb_info->rqst = NULL;
+cb_info->task = NULL;
+return PTR_ERR(cb_info->task);
+}
+dprintf("nfs_callback_up: service started\n");
+return 0;
+
+static int nfs_callback_up_net(int minorversion, struct svc_serv *serv, struct net *net)
+
{ int ret;
@@ -311,12 +351,8 @@ static struct svc_serv *nfs_callback_create_svc(int minorversion)
 int nfs_callback_up(u32 minorversion, struct rpc_xprt *xprt)
 { struct svc_serv *serv;
-struct svc_rqst *rqstp;
-int (*callback_svc)(void *vrqstp);
 struct nfs_callback_data *cb_info = &nfs_callback_info[minorversion];
- char svc_name[12];
 int ret = 0;
-int minorversion_setup;
 struct net *net = xprt->xprt_net;

 mutex_lock(&nfs_callback_mutex);
@@ -336,34 +372,10 @@ int nfs_callback_up(u32 minorversion, struct rpc_xprt *xprt)
 if (ret < 0)
 goto err_net;

 -nfs_callback_bc_serv(minorversion, xprt, serv);
-
 -minorversion_setup = nfs_minorversion_callback_svc_setup(minorversion,
 -serv, &rqstp, &callback_svc);
 -if (!minorversion_setup) {
-/* v4.0 callback setup */
 -rqstp = nfs4_callback_up(serv);
 -callback_svc = nfs4_callback_svc;
-}
 -
 -if (IS_ERR(rqstp)) {
 -ret = PTR_ERR(rqstp);
 -goto out_err;
 -}
 -
 -svc_sock_update_bufs(serv);
 +ret = nfs_callback_start_svc(minorversion, xprt, serv);
 +if (ret < 0)
 +goto err_start;

-sprintf(svc_name, "nfsv4.%u-svc", minorversion);
-cb_info->serv = serv;
-cb_info->rqst = rqstp;
-cb_info->task = kthread_run(callback_svc, cb_info->rqst, svc_name);
-if (IS_ERR(cb_info->task)) {
  ret = PTR_ERR(cb_info->task);
  svc_exit_thread(cb_info->rqst);
  cb_info->rqst = NULL;
  cb_info->task = NULL;
  goto out_err;
}
out:
/*
 * svc_create creates the svc_serv with sv_nrthreads == 1, and then
@@ -375,7 +387,8 @@ out:
    mutex_unlock(&nfs_callback_mutex);
    return ret;
  -out_err:
+  +err_start:
+    svc_shutdown_net(serv, net);
  +err_net:
    dprintk("NFS: Couldn’t create callback socket or server thread; ")

---
Subject: [PATCH v3 06/11] NFS: callback up - users counting cleanup
Posted by Stanislav Kinsbursky on Tue, 03 Jul 2012 16:20:08 GMT
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With this patch code looks clearer.

Signed-off-by: Stanislav Kinsbursky <skinsbursky@parallels.com>
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Signed-off-by: Stanislav Kinsbursky <skinsbursky@parallels.com>
+if (cb_info->task)
+return 0;
+
+minorversion_setup = nfs_minorversion_callback_svc_setup(minorversion, serv, &rqstp, &callback_svc);
+if (!minorversion_setup) {
+    if (cb_info->users++ || cb_info->task != NULL) {
+        nfs_callback_bc_serv(minorversion, xprt, serv);
+        goto out;
+    }
+
+    ret = nfs_callback_up_net(minorversion, serv, net);
+    if (ret < 0)
+        goto err_net;
+
+out:
+    cb_info->users++;
+
-err_start:
+
out:
+cb_info->users++;
*/
/*
 * svc_create creates the svc_serv with sv_nrthreads == 1, and then
 * svc_prepare_thread increments that. So we need to call svc_destroy
 * on both success and failure so that the refcount is 1 when the
Subject: [PATCH v3 07/11] NFS: make nfs_callback_tcpport per network context
Posted by Stanislav Kinsbursky on Tue, 03 Jul 2012 16:20:15 GMT

---
Signed-off-by: Stanislav Kinsbursky <skinsbursky@parallels.com>
---

diff --git a/fs/nfs/callback.c b/fs/nfs/callback.c
index f2a7605..80032fc 100644
--- a/fs/nfs/callback.c
+++ b/fs/nfs/callback.c
@@ -23,6 +23,7 @@
 #include "nfs4_fs.h"
 #include "callback.h"
 #include "internal.h"
+#include "netns.h"

 #define NFSDBG_FACILITY NFSDBG_CALLBACK

@@ -38,7 +39,6 @@
   /*
      * thread exits.
      */
-err_net:
+err_net:
   svc_destroy(serv);
   err_create:
   mutex_unlock(&nfs_callback_mutex);
@@ -390,11 +391,8 @@
       dprintk("NFS: Couldn't create callback socket or server thread; "
           "err = %d\n", ret);
       cb_info->users--;
-      goto out;
+      goto err_net;
   }

/*
unsigned int nfs_callback_set_tcpport;
-unsigned short nfs_callback_tcpport;
unsigned short nfs_callback_tcpport6;
#define NFS_CALLBACK_MAXPORTNR (65535U)

@@ -66,14 +66,15 @@ module_param_named(callback_tcpport, nfs_callback_set_tcpport,
portnr, 0644);
 static int nfs4_callback_up_net(struct svc_serv *serv, struct net *net)
 {
  int ret;
+struct nfs_net *nn = net_generic(net, nfs_net_id);

  ret = svc_create_xprt(serv, "tcp", net, PF_INET,
   nfs_callback_set_tcpport, SVC_SOCK_ANONYMOUS);
  if (ret <= 0)
     goto out_err;
-   nfs_callback_tcpport = ret;
+   nn->nfs_callback_tcpport = ret;
   dprintk("NFS: Callback listener port = %u (af %u, net %p)\n",
-   nfs_callback_tcpport, PF_INET, net);
+   nn->nfs_callback_tcpport, PF_INET, net);
   ret = svc_create_xprt(serv, "tcp", net, PF_INET6,
   nfs_callback_set_tcpport, SVC_SOCK_ANONYMOUS);

diff --git a/fs/nfs/callback.h b/fs/nfs/callback.h
index 6d900cf..8006959 100644
--- a/fs/nfs/callback.h
+++ b/fs/nfs/callback.h
@@ -208,7 +208,6 @@ extern int nfs4_set_callback_sessionid(struct nfs_client *clp);
 #define NFS41_BC_MAX_CALLBACKS 1

 extern unsigned int nfs_callback_set_tcpport;
-extern unsigned short nfs_callback_tcpport;
 extern unsigned short nfs_callback_tcpport6;

 #endif /* __LINUX_FS_NFS_CALLBACK_H */
diff --git a/fs/nfs/netns.h b/fs/nfs/netns.h
index 8a6394e..06a23fc 100644
--- a/fs/nfs/netns.h
+++ b/fs/nfs/netns.h
@@ -22,6 +22,7 @@ struct nfs_net {
   struct list_head nfs_volume_list;
 #ifdef CONFIG_NFS_V4
   struct idr cb_ident_idr; /* Protected by nfs_client_lock */
+  unsigned short nfs_callback_tcpport;
 #endif
   spinlock_t nfs_client_lock;
struct timespec boot_time;
diff --git a/fs/nfs/nfs4state.c b/fs/nfs/nfs4state.c
index f38300e..bc0ddf8 100644
--- a/fs/nfs/nfs4state.c
+++ b/fs/nfs/nfs4state.c
@@ -56,6 +56,7 @@
 #include "delegation.h"
 #include "internal.h"
 #include "pnfs.h"
+#include "netns.h"

 #define NFSDBG_FACILITY	NFSDBG_STATE

@@ -73,10 +74,11 @@ int nfs4_init_clientid(struct nfs_client *clp, struct rpc_cred *cred)
 
    unsigned short port;
    int status;
+    struct nfs_net *nn = net_generic(clp->cl_net, nfs_net_id);

    if (test_bit(NFS4CLNT_LEASE_CONFIRM, &clp->cl_state))
        goto do_confirm;
-    port = nfs_callback_tcpport;
+    port = nn->nfs_callback_tcpport;
    if (clp->cl_addr.ss_family == AF_INET6)
        port = nfs_callback_tcpport6;

Subject: [PATCH v3 08/11] NFS: make nfs_callback_tcpport6 per network context
Posted by Stanislav Kinsbursky on Tue, 03 Jul 2012 16:20:22 GMT
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Signed-off-by: Stanislav Kinsbursky <skinsbursky@parallels.com>
---
fs/nfs/callback.c | 5 ++---
fs/nfs/callback.h | 1 -
fs/nfs/netns.h | 1 +
fs/nfs/nfs4state.c | 2 +- 4 files changed, 4 insertions(+), 5 deletions(-)

diff --git a/fs/nfs/callback.c b/fs/nfs/callback.c
index 80032fc..97bccb1 100644
--- a/fs/nfs/callback.c
+++ b/fs/nfs/callback.c
@@ -39,7 +39,6 @@ static DEFINE_MUTEX(nfs_callback_mutex);
 static struct svc_program nfs4_callback_program;
 static unsigned int nfs_callback_set_tcpport;
-unsigned short nfs_callback_tcpport6;


#define NFS_CALLBACK_MAXPORTNR (65535U)

static int param_set_portnr(const char *val, const struct kernel_param *kp)
@@ -79,9 +78,9 @@ static int nfs4_callback_up_net(struct svc_serv *serv, struct net *net)
 ret = svc_create_xprt(serv, "tcp", net, PF_INET6,
 nfs_callback_set_tcpport, SVC.SOCK_ANONYMOUS);
 if (ret > 0) {
-    nfs_callback_tcpport6 = ret;
+    nn->nfs_callback_tcpport6 = ret;
    dprintk("NFS: Callback listener port = %u (af %u, net %p)\n",
-    nfs_callback_tcpport6, PF_INET6, net);
+    nn->nfs_callback_tcpport6, PF_INET6, net);
 } else if (ret != -EAFNOSUPPORT)
 goto out_err;
 return 0;
diff --git a/fs/nfs/callback.h b/fs/nfs/callback.h
index 8006959..86b5671 100644
--- a/fs/nfs/callback.h
+++ b/fs/nfs/callback.h
@@ -208,6 +208,5 @@ extern int nfs4_set_callback_sessionid(struct nfs_client *clp);
#define NFS41_BC_MAX_CALLBACKS 1

extern unsigned int nfs_callback_set_tcpport;
-extern unsigned short nfs_callback_tcpport6;
+extern unsigned short nfs_callback_tcpport6;

#endif /* __LINUX_FS_NFS_CALLBACK_H */
diff --git a/fs/nfs/netns.h b/fs/nfs/netns.h
index 06a23fc..097dae1 100644
--- a/fs/nfs/netns.h
+++ b/fs/nfs/netns.h
@@ -23,6 +23,7 @@ struct nfs_net {
 #ifdef CONFIG_NFS_V4
 struct idr cb_ident_idr; /* Protected by nfs_client_lock */
 unsigned short nfs_callback_tcpport;
+unsigned short nfs_callback_tcpport6;
 #endif
 spinlock_t nfs_client_lock;
 struct timespec boot_time;
diff --git a/fs/nfs/nfs4state.c b/fs/nfs/nfs4state.c
index bc0ddf8..9313249 100644
--- a/fs/nfs/nfs4state.c
+++ b/fs/nfs/nfs4state.c
@@ -80,7 +80,7 @@ int nfs4_init_clientid(struct nfs_client *clp, struct rpc_cred *cred)
 goto do_confirm;
 port = nn->nfs_callback_tcpport;
 if (clp->cl_addr.ss_family == AF_INET6)
-    port = nfs_callback_tcpport6;
+    port = nn->nfs_callback_tcpport6;

status = nfs4_proc_setclientid(clp, NFS4_CALLBACK, port, cred, &clid);
if (status != 0)

Subject: [PATCH v3 09/11] NFS; callback per-net usage counting introduced
Posted by Stanislav Kinsbursky on Tue, 03 Jul 2012 16:20:29 GMT
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This patch also introduces refcount-aware nfs_callback_down_net() wrapper for svc_shutdown_net().

Signed-off-by: Stanislav Kinsbursky <skinsbursky@parallels.com>
---
fs/nfs/callback.c |   19 +++++++++++++++++--
fs/nfs/netns.h    |    1 +
2 files changed, 18 insertions(+), 2 deletions(-)
diff --git a/fs/nfs/callback.c b/fs/nfs/callback.c
index 97bccb1..35ccd2a 100644
--- a/fs/nfs/callback.c
+++ b/fs/nfs/callback.c
@@ -284,10 +284,25 @@ static int nfs_callback_start_svc(int minorversion, struct rpc_xprt *xprt,
return 0;
}
+static void nfs_callback_down_net(u32 minorversion, struct svc_serv *serv, struct net *net)
+{
+struct nfs_net *nn = net_generic(net, nfs_net_id);
+if (--nn->cb_users[minorversion])
+return;
+
+dprintk("NFS: destroy per-net callback data; net=%p\n", net);
+svc_shutdown_net(serv, net);
+
+static int nfs_callback_up_net(int minorversion, struct svc_serv *serv, struct net *net)
+{
+struct nfs_net *nn = net_generic(net, nfs_net_id);
+int ret;
+
+if (nn->cb_users[minorversion]++)
+return 0;
+
+dprintk("NFS: create per-net callback data; net=%p\n", net);
ret = svc_bind(serv, net);
@@ -390,7 +405,7 @@ err_create:
    return ret;

 err_start:
-svc_shutdown_net(serv, net);
+nfs_callback_down_net(minorversion, serv, net);
 dprintk("NFS: Couldn't create server thread; err = %d\n", ret);
 goto err_net;
 }
@@ -403,10 +418,10 @@ void nfs_callback_down(int minorversion, struct net *net)
 struct nfs_callback_data *cb_info = &nfs_callback_info[minorversion];

 mutex_lock(&nfs_callback_mutex);
+nfs_callback_down_net(minorversion, cb_info->serv, net);
 cb_info->users--;
 if (cb_info->users == 0 && cb_info->task != NULL) {
     kthread_stop(cb_info->task);
-svc_shutdown_net(cb_info->serv, net);
 svc_exit_thread(cb_info->rqst);
 cb_info->serv = NULL;
 cb_info->rqst = NULL;

diff --git a/fs/nfs/netns.h b/fs/nfs/netns.h
index 097dae1..b015ab8 100644
--- a/fs/nfs/netns.h
+++ b/fs/nfs/netns.h
@@ -24,6 +24,7 @@ struct nfs_net {
         struct idr cb_ident_idr; /* Protected by nfs_client_lock */
         unsigned short nfs_callback_tcpport;
         unsigned short nfs_callback_tcpport6;
+        int cb_users[NFS4_MAX_MINOR_VERSION + 1];
     #endif
     spinlock_t nfs_client_lock;
     struct timespec boot_time;

Subject: [PATCH v3 10/11] NFS: add debug messages to callback down function
Posted by Stanislav Kinsbursky on Tue, 03 Jul 2012 16:20:36 GMT
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Signed-off-by: Stanislav Kinsbursky <skinsbursky@parallels.com>
---
fs/nfs/callback.c |  2 ++
1 files changed, 2 insertions(+), 0 deletions(-)

diff --git a/fs/nfs/callback.c b/fs/nfs/callback.c
index 35ccd2a..b4e76e9 100644
--- a/fs/nfs/callback.c
+++ b/fs/nfs/callback.c
void nfs_callback_down(int minorversion, struct net *net)
    cb_info->users--;
    if (cb_info->users == 0 && cb_info->task != NULL) {
        kthread_stop(cb_info->task);
        dprintk("nfs_callback_down: service stopped\n");
        svc_exit_thread(cb_info->rqst);
        dprintk("nfs_callback_down: service destroyed\n");
        cb_info->serv = NULL;
        cb_info->rqst = NULL;
        cb_info->task = NULL;
    }
}

Allocation can fail. So instead of put net in case of failure, get net after allocation.

Signed-off-by: Stanislav Kinsbursky <skinsbursky@parallels.com>

---

diff --git a/fs/nfs/client.c b/fs/nfs/client.c
index d8c918b..d17aa10 100644
--- a/fs/nfs/client.c
+++ b/fs/nfs/client.c
@@ -267,6 +267,7 @@ static struct nfs_client *nfs_alloc_client(const struct nfs_client_initdata
   
   clp->cl_proto = cl_init->proto;
-  clp->cl_net = get_net(cl_init->net);
+  clp->cl_net = cl_init->net;
   #ifdef CONFIG_NFS_V4
   err = nfs_get_cb_ident_idr(clp, cl_init->minorversion);
   @@ -271,6 +271,7 @@ static struct nfs_client *nfs_alloc_client(const struct nfs_client_initdata
   
   clp->cl_net = get_net(cl_init->net);
   +get_net(clp->cl_net);
+  cred = rpc_lookup_machine_cred("*");
   if (!IS_ERR(cred))
   clp->cl_machine_cred = cred;
On Tue, Jul 03, 2012 at 08:19:46PM +0400, Stanislav Kinsbursky wrote:
> This new function in now called before nfs_minorversion_callback_svc_setup().
>
> Also few small changes:
> 1) current network namespace in nfs_callback_up() was replaced by transport net.
> 2) svc_shutdown_net() was moved prior to callback usage counter decrement
> (because in case of per-net data allocation faulture svc_shutdown_net() have to
> be skipped).
>
> Signed-off-by: Stanislav Kinsbursky <skinsbursky@parallels.com>

---

    fs/nfs/callback.c |  125 +++++++++++++++++++++++++++++++++-------------------
    fs/nfs/client.c   |    2 -
  2 files changed, 79 insertions(+), 48 deletions(-)

diff --git a/fs/nfs/callback.c b/fs/nfs/callback.c
index f8d0c21..b61ed61 100644
--- a/fs/nfs/callback.c
+++ b/fs/nfs/callback.c
@@ -63,6 +63,32 @@ static struct kernel_param_ops param_ops_portnr = {

    module_param_named(callback_tcpport, nfs_callback_set_tcpport, portnr, 0644);
>
    +static int nfs4_callback_up_net(struct svc_serv *serv, struct net *net)
    +{
    +   int ret;
    +   +
    +   +ret = svc_create_xprt(serv, "tcp", net, PF_INET,
    +   +nfs_callback_set_tcpport, SVC.SOCK_ANONYMOUS);
    +   +if (ret <= 0)
    +   +goto out_err;
    +   +nfs_callback_tcpport = ret;
    +   +dprintk("NFS: Callback listener port = %u (af %u, net %p)\n",
    +   +nfs_callback_tcpport, PF_INET, net);
    +   +
    +   +ret = svc_create_xprt(serv, "tcp", net, PF_INET6,
    +   +nfs_callback_set_tcpport, SVC.SOCK_ANONYMOUS);
    +   +if (ret > 0) {
    +   +nfs_callback_tcpport6 = ret;
    +   +dprintk("NFS: Callback listener port = %u (af %u, net %p)\n",
    +   +nfs_callback_tcpport6, PF_INET6, net);
    +   +} else if (ret != -EAFNOSUPPORT)
    +   +goto out_err;
    +   +return 0;
This is the NFSv4 callback kernel thread.

```
static struct svc_rqst *
nfs4_callback_up(struct svc_serv *serv, struct rpc_xprt *xprt)
{
  int ret;
  
  ret = svc_create_xprt(serv, "tcp", &init_net, PF_INET,
    nfs_callback_set_tcpport, SVC_SOCK_ANONYMOUS);
  if (ret <= 0)
    goto out_err;
  nfs_callback_tcpport = ret;
  dprintf("NFS: Callback listener port = %u (af %u)\n",
    nfs_callback_tcpport, PF_INET);
  
  ret = svc_create_xprt(serv, "tcp", &init_net, PF_INET6,
    nfs_callback_set_tcpport, SVC_SOCK_ANONYMOUS);
  if (ret > 0) {
    nfs_callback_tcpport6 = ret;
    dprintf("NFS: Callback listener port = %u (af %u)\n",
      nfs_callback_tcpport6, PF_INET6);
    } else if (ret == -EAFNOSUPPORT)
      ret = 0;
  else
    goto out_err;
  
  return svc_prepare_thread(serv, &serv->sv_pools[0], NUMA_NO_NODE);

out_err:
  if (ret == 0)
    ret = -ENOMEM;
  return ERR_PTR(ret);
```

#if defined(CONFIG_NFS_V4_1)
+static int nfs41_callback_up_net(struct svc_serv *serv, struct net *net)
+{
+ /*
+ * Create an svc_sock for the back channel service that shares the
+ * fore channel connection.
+ * Returns the input port (0) and sets the svc_serv bc_xprt on success
+ */
+ * The callback service for NFSv4.1 callbacks
+ */
@@ -176,19 +187,6 @@ static struct svc_rqst *
    nfs41_callback_up(struct svc_serv *serv, struct rpc_xprt *xprt)
  {
    struct svc_rqst *rqstp;
-   int ret;
-   
-   /* Create an svc_sock for the back channel service that shares the
-    * fore channel connection.
-    * Returns the input port (0) and sets the svc_serv bc_xprt on success
-    */
-    ret = svc_create_xprt(serv, "tcp-bc", &init_net, PF_INET, 0,
-      SVC_SOCK_ANONYMOUS);
-    if (ret < 0) {
-      rqstp = ERR_PTR(ret);
-      goto out;
-    }
    
    /* Save the svc_serv in the transport so that it can
    */
@@ -204,7 +202,6 @@ nfs41_callback_up(struct svc_serv *serv, struct rpc_xprt *xprt)
    svc_xprt_put(serv->sv_bc_xprt);
    serv->sv_bc_xprt = NULL;
  }
-out:
  dprintk("--> %s return %ld\n", __func__,
    IS_ERR(rqstp) ? PTR_ERR(rqstp) : 0);
  return rqstp;
@@ -228,6 +225,11 @@ static inline void nfs_callback_bc_serv(u32 minorversion, struct
    xprt->bc_serv = cb_info->serv;
  }
  #else
+static int nfs41_callback_up_net(struct svc_serv *serv, struct net *net)
+{
+  return 0;
+
+ static inline int nfs_minorversion_callback_svc_setup(u32 minorversion,
> struct svc_serv *serv, struct rpc_xprt *xprt,
So in the minorversion 1 case, and in the absence of errors, you set up both the 4.1 and 4.0 callback xprts?

That doesn't look right. You should need only one or the other.

--b.
char svc_name[12];
int ret = 0;
int minorversion_setup;
-struct net *net = &init_net;
+struct net *net = xprt->xprt_net;

mutex_lock(&nfs_callback_mutex);

@@ -302,11 +334,9 @@ int nfs_callback_up(u32 minorversion, struct rpc_xprt *xprt)
  goto out;
 }

- ret = svc_bind(serv, net);
- if (ret < 0) {
- printk(KERN_WARNING "NFS: bind callback service failed\n");
- goto out_err;
- }
+ ret = nfs_callback_up_net(minorversion, serv, net);
+ if (ret < 0)
+ goto err_net;

 minorversion_setup = nfs_minorversion_callback_svc_setup(minorversion,
  serv, xprt, &rqstp, &callback_svc);
@@ -346,10 +376,11 @@ err_create:
  mutex_unlock(&nfs_callback_mutex);
  return ret;
  out_err:
+ svc_shutdown_net(serv, net);
+ err_net:
  dprintk("NFS: Couldn't create callback socket or server thread; 
  "err = %d\n", ret);
  cb_info->users--;
  -svc_shutdown_net(serv, net);
  goto out;
 }

diff --git a/fs/nfs/client.c b/fs/nfs/client.c
index 28bc770..d8c918b 100644
--- a/fs/nfs/client.c
+++ b/fs/nfs/client.c
@@ -225,7 +225,7 @@ static void nfs4_shutdown_session(struct nfs_client *clp)
  static void nfs4_destroy_callback(struct nfs_client *clp)
  {
    if (__test_and_clear_bit(NFS_CS_CALLBACK, &clp->cl_res_state))
-    nfs_callback_down(clp->cl_mvops->minor_version, &init_net);
+    nfs_callback_down(clp->cl_mvops->minor_version, clp->cl_net);
Subject: Re: [PATCH v3 00/11] Series short description
Posted by bfields on Tue, 24 Jul 2012 22:36:17 GMT

On Tue, Jul 03, 2012 at 08:19:23PM +0400, Stanislav Kinsbursky wrote:

> v3: Rebased on Bruce's tree, "for-3.6" branch
> v2: Rebased on Bruce’s tree, "for-3.5" branch

Aside from the one question, this looks OK to me.

I seem to recall this needed to go through my tree for some reason, but
does Trond still want a chance to ACK/NACK it?

--b.

> This patch set depeneds on "SUNRPC: separate per-net data creation from
> service
> creation" patch set sent earlier.
> The following series implements...
> ---
>
> Stanislav Kinsbursky (11):
>   NFS: pass net to nfs_callback_down()
>   NFS: callback service creation function introduced
>   NFS: move per-net callback thread initialization to nfs_callback_up_net()
>   NFS: callback up - transport backchannel cleanup
>   NFS: callback service start function introduced
>   NFS: callback up - users counting cleanup
>   NFS: make nfs_callback_tcpport per network context
>   NFS: make nfs_callback_tcpport6 per network context
>   NFS: callback per-net usage counting introduced
>   NFS: add debug messages to callback down function
>   NFS: get net after idr allocation
>
> fs/nfs/callback.c | 288 ++++++++++++++++++++++++++++++++++------------------
> fs/nfs/callback.h |  4 -
> fs/nfs/client.c |  5 +
> fs/nfs/netns.h |  3 +
> fs/nfs/nfs4state.c |  6 +
Subject: Re: [PATCH v3 03/11] NFS: move per-net callback thread initialization to nfs_callback_up_net()


25.07.2012 01:47, J. Bruce Fields

> On Tue, Jul 03, 2012 at 08:19:46PM +0400, Stanislav Kinsbursky wrote:
>> This new function in now called before nfs_minorversion_callback_svc_setup()).
>>
>> Also few small changes:
>> 1) current network namespace in nfs_callback_up() was replaced by transport net.
>> 2) svc_shutdown_net() was moved prior to callback usage counter decrement
>> (because in case of per-net data allocation faulure svc_shutdown_net() have to
>> be skipped).
>>
>> Signed-off-by: Stanislav Kinsbursky <skinsbursky@parallels.com>

file changes, 79 insertions(+), 48 deletions(-)

diff --git a/fs/nfs/callback.c b/fs/nfs/callback.c
index f8d0c21..b61ed61 100644
--- a/fs/nfs/callback.c
+++ b/fs/nfs/callback.c
@@ -63,6 +63,32 @@ static struct kernel_param_ops param_ops_portnr = {
>
+static int nfs4_callback_up_net(struct svc_serv *serv, struct net *net)
+{
+ret = svc_create_xprt(serv, "tcp", net, PF_INET,
+nfs_callback_set_tcpport, SVC_SOCKET_ANONYMOUS);
+nfs_callback_tcpport = ret;
+dprintk("NFS: Callback listener port = %u (af %u, net %p)\n",
+nfs_callback_tcpport, PF_INET, net);
++
+ret = svc_create_xprt(serv, "tcp", net, PF_INET6, 
+nfs_callback_set_tcpport, SVC_SOCKET_ANONYMOUS);
+if (ret > 0) {

---

> 5 files changed, 202 insertions(+), 104 deletions(-)
>
---

Subject: Re: [PATCH v3 03/11] NFS: move per-net callback thread initialization to nfs_callback_up_net()
+nfs_callback_tcpport6 = ret;
+nfs_callback_tcpport6, PF_INET6, net);
+} else if (ret != -EAFNOSUPPORT)
+goto out_err;
+return 0;
+
+out_err:
+return (ret) ? ret : -ENOMEM;
+
+static struct svc_rqst *
+nfs4_callback_up(struct svc_serv *serv, struct rpc_xprt *xprt)
+
-{ int ret;
-
- ret = svc_create_xprt(serv, "tcp", &init_net, PF_INET,
- nfs_callback_set_tcpport, SVC.SOCK_ANONYMOUS);
- if (ret <= 0)
- goto out_err;
- nfs_callback_tcpport = ret;
- dprintk("NFS: Callback listener port = %u (af %u)\n",
- nfs_callback_tcpport, PF_INET);
-
- ret = svc_create_xprt(serv, "tcp", &init_net, PF_INET6,
- nfs_callback_set_tcpport, SVC.SOCK_ANONYMOUS);
- if (ret > 0) {
- nfs_callback_tcpport6 = ret;
- dprintk("NFS: Callback listener port = %u (af %u)\n",
- nfs_callback_tcpport6, PF_INET6);
- } else if (ret == -EAFNOSUPPORT)
- ret = 0;
- else
- goto out_err;
-
- return svc_prepare_thread(serv, &serv->sv_pools[0], NUMA_NO_NODE);
-
- out_err:
- if (ret == 0)
- ret = -ENOMEM;
- return ERR_PTR(ret);
-
-}
-
#if defined(CONFIG_NFS_V4_1)
static int nfs41_callback_up_net(struct svc_serv *serv, struct net *net)
{
    /*
    * Create an svc_sock for the back channel service that shares the
    * fore channel connection.
    * Returns the input port (0) and sets the svc_serv bc_xprt on success
    */
    return svc_create_xprt(serv, "tcp-bc", net, PF_INET, 0,
SVC_SOCK_ANONYMOUS);
}

The callback service for NFSv4.1 callbacks
*/

static struct svc_rqst *
ns41_callback_up(struct svc_serv *serv, struct rpc_xprt *xprt)
{
    struct svc_rqst *rqstp;
    int ret;

    /*
    * Create an svc_sock for the back channel service that shares the
    */
    ret = svc_create_xprt(serv, "tcp-bc", &init_net, PF_INET, 0,
SVC_SOCK_ANONYMOUS);
    if (ret < 0) {
        rqstp = ERR_PTR(ret);
        goto out;
    }

    /*
    * Save the svc_serv in the transport so that it can
    */
    svc_xprt_put(serv->sv_bc_xprt);
    serv->sv_bc_xprt = NULL;
}

/*
* Save the svc_serv in the transport so that it can
*/

svc_xprt_put(serv->sv_bc_xprt);
    serv->sv_bc_xprt = NULL;
}
static inline int nfs_minorversion_callback_svc_setup(u32 minorversion,
    struct svc_serv *serv, struct rpc_xprt *xprt,
    struct svc_rqst **rqstp, int (**callback_svc)(void *vrqstp))
{
    @-241,6 +243,36 static inline void nfs_callback_bc_serv(u32 minorversion, struct
    rpc_xprt *xprt,
    }
    #endif /* CONFIG_NFS_V4_1 */
>
+static int nfs_callback_up_net(int minorversion, struct svc_serv *serv, struct net *net)
+{
  int ret;
  
  +dprintf("NFS: create per-net callback data; net=%p\n", net);
  
  +ret = svc_bind(serv, net);
  +if (ret < 0) {
    +dprintf(KERN_WARNING "NFS: bind callback service failed\n");
    +goto err_bind;
    +}
  
  +if (minorversion) {
    +ret = nfs41_callback_up_net(serv, net);
    +if (ret < 0)
      +goto err_socks;
    +}
  
  +if (ret == 0)
    +ret = nfs4_callback_up_net(serv, net);
>
> So in the minorversion 1 case, and in the absence of errors, you set up
> both the 4.1 and 4.0 callback xprts?
>
> That doesn't look right. You should need only one or the other.
>
Thanks for the catch, Bruce.
I'll fix it and resend.
But currently I'm thinking, that for 3.6 kernel probably it's better to push
this code through Trond's tree.

--
Best regards,
Stanislav Kinsbursky
25.07.2012 02:36, J. Bruce Fields
> On Tue, Jul 03, 2012 at 08:19:23PM +0400, Stanislav Kinsbursky wrote:
>> v3: Rebased on Bruce's tree, "for-3.6" branch
>>
>> v2: Rebased on Bruce's tree, "for-3.5" branch
>
> Aside from the one question, this looks OK to me.
>
> I seem to recall this needed to go through my tree for some reason, but
> does Trond still want a chance to ACK/NACK it?
>
Agreed.
Trond, could you, please, review this patch set?
And maybe it's better to push this code through your tree to simplify further
merging?

> --b.
>
>> This patch set depended on "SUNRPC: separate per-net data creation from
>> service
>> creation" patch set sent earlier.
>
>> The following series implements...
>
>> ---
>
>> Stanislav Kinsbursky (11):
>>    NFS: pass net to nfs_callback_down()
>>    NFS: callback service creation function introduced
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>
><
>
> fs/nfs/callback.c |  288 ++++++++++++++++++++++++++++++++++------------------
> fs/nfs/callback.h |    4 -
> fs/nfs/client.c |    5 +
Subject: Re: [PATCH v3 03/11] NFS: move per-net callback thread initialization to 
nfs_callback_up_net()  
Posted by Stanislav Kinsbursky on Wed, 25 Jul 2012 10:46:12 GMT

25.07.2012 14:18, Stanislav Kinsbursky
> 25.07.2012 01:47, J. Bruce Fields
>> On Tue, Jul 03, 2012 at 08:19:46PM +0400, Stanislav Kinsbursky wrote:
>> This new function in now called before nfs_minorversion_callback_svc_setup().
>>>
>>> Also few small changes:
>>> 1) current network namespace in nfs_callback_up() was replaced by transport net.
>>> 2) svc_shutdown_net() was moved prior to callback usage counter decrement
>>> (because in case of per-net data allocation failure svc_shutdown_net() have to
>>> be skipped).
>>>>
>>> Signed-off-by: Stanislav Kinsbursky <skinsbursky@parallels.com>

---

> diff --git a/fs/nfs/callback.c b/fs/nfs/callback.c
> index f8d0c21..b61ed61 100644
> --- a/fs/nfs/callback.c
> +++ b/fs/nfs/callback.c
> @@ -63,6 +63,32 @@ static struct kernel_param_ops param_ops_portnr = {
>  
>     module_param_named(callback_tcpport, nfs_callback_set_tcpport, portnr, 0644);
> >>>
> >>+static int nfs4_callback_up_net(struct svc_serv *serv, struct net *net)
> >>+{
> >>+    int ret;
> >>+    
> >>+    +ret = svc_create_xprt(serv, "tcp", net, PF_INET, 
> >>+    +nfs_callback_set_tcpport, SVC_SOCKET_ANONYMOUS);
> >>+    +if (ret <= 0)
    /* This is the NFSv4 callback kernel thread. */
    */
@@ -104,36 +130,21 @@ nfs4_callback_svc(void *vrqstp)
        struct svc_rqst  *svc_rqst;
    static struct svc_rqst *
    nfs4_callback_up(struct svc_serv *serv, struct rpc_xprt *xprt)
    {
        int ret;
        -
        -ret = svc_create_xprt(serv, "tcp", &init_net, PF_INET,
        -nfs_callback_set_tcpport, SVC_SOCK_ANONYMOUS);
        -if (ret <= 0) {
        -goto out_err;
        -nfs_callback_tcpport = ret;
        -dprintf("NFS: Callback listener port = %u (af %u)\n",
        -nfs_callback_tcpport, PF_INET);
        -}
        -ret = svc_create_xprt(serv, "tcp", &init_net, PF_INET6,
        -nfs_callback_set_tcpport, SVC_SOCK_ANONYMOUS);
        -if (ret <= 0) {
        -goto out_err;
        -nfs_callback_tcpport6 = ret;
        -dprintf("NFS: Callback listener port = %u (af %u)\n",
        -nfs_callback_tcpport6, PF_INET6);
        -} else if (ret != -EAFNOSUPPORT)
        -goto out_err;
        +return 0;
        +
        +out_err:
        +return (ret) ? ret : -ENOMEM;
        +
    return svc_prepare_thread(serv, &serv->sv_pools[0], NUMA_NO_NODE);
```c
#if defined(CONFIG_NFS_V4_1)
+static int nfs41_callback_up_net(struct svc_serv *serv, struct net *net)
+{
+    int ret;
+
    /*
    * Create an svc_sock for the back channel service that shares the
    * fore channel connection.
    * Returns the input port (0) and sets the svc_serv bc_xprt on success
    */
+    ret = svc_create_xprt(serv, "tcp-bc", net, PF_INET, 0,
+                         SVC_SOCK_ANONYMOUS);
+
    /*
    * The callback service for NFSv4.1 callbacks
    */
    @@ -176,19 +187,6 @@ static struct svc_rqst *
    nfs41_callback_up(struct svc_serv *serv, struct rpc_xprt *xprt)
    {  
        struct svc_rqst *rqstp;
        int ret;
        -
        -*/
        -* Create an svc_sock for the back channel service that shares the
        -* fore channel connection.
        -* Returns the input port (0) and sets the svc_serv bc_xprt on success
        -*/
        -ret = svc_create_xprt(serv, "tcp-bc", &init_net, PF_INET, 0,
        -SVC_SOCK_ANONYMOUS);
        -if (ret < 0) {
        -    rqstp = ERR_PTR(ret);
        -    goto out;
        -}
        -}
        -
        /*
        * Save the svc_serv in the transport so that it can
        */
    @@ -204,7 +202,6 @@ nfs41_callback_up(struct svc_serv *serv, struct rpc_xprt *xprt)
            svc_xprt_put(serv->sv_bc_xprt);
        serv->sv_bc_xprt = NULL;
    }
    -out:
    dprintf("---> %s return %ld\n", __func__,
```
IS_ERR(rqstp) ? PTR_ERR(rqstp) : 0);
return rqstp;

static inline void nfs_callback_bc_serv(u32 minorversion, struct rpc_xprt *xprt,
xprt->bc_serv = cb_info->serv;
}
}
#else
+static int nfs41_callback_up_net(struct svc_serv *serv, struct net *net)
+{
+return 0;
+
+static inline int nfs_minorversion_callback_svc_setup(u32 minorversion,
+struct svc_serv *serv, struct rpc_xprt *xprt,
+struct svc_rqst **rqstp, int (**callback_svc)(void *vrqstp))
+@
+static int nfs41_callback_up_net(int minorversion, struct svc_serv *serv, struct net *net)
+{
+int ret;
+
+dprintf("NFS: create per-net callback data; net=%p
", net);
+
+ret = svc_bind(serv, net);
+if (ret < 0) {
+printk(KERN_WARNING "NFS: bind callback service failed\n");
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+if (ret == 0)
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That doesn't look right. You should need only one or the other.
>
Thanks for the catch, Bruce.
> I'll fix it and resend.
> But currently I'm thinking, that for 3.6 kernel probably it's better to push
> this code through Trond's tree.
>
> No, Bruce. It works fine. nfs41_callback_up_net() will return either negative
value of port number. I.e. nfs4_callback_up_net() won't be called.
But this looks confusing.
I'll rewrite this part.

--
Best regards,
Stanislav Kinsbursky

Subject: Re: [PATCH v3 00/11] Series short description
Posted by Stanislav Kinsbursky on Mon, 20 Aug 2012 12:57:10 GMT

25.07.2012 02:36, J. Bruce Fields
> On Tue, Jul 03, 2012 at 08:19:23PM +0400, Stanislav Kinsbursky wrote:
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>
> I seem to recall this needed to go through my tree for some reason, but
> does Trond still want a chance to ACK/NACK it?
>
> --b.
>
Bruce, I'll send this patch set once more to Trond.
Thanks for your time.

--
Best regards,
Stanislav Kinsbursky