
Subject: [PATCH v2 15/15] NFSd: make boot_time variable per network namespace
Posted by [Stanislav Kinsbursky](#) on Wed, 25 Jul 2012 12:57:45 GMT
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NFSd's boot_time represents grace period start point in time.

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

fs/nfsd/netns.h | 1 +
fs/nfsd/nfs4state.c | 39 ++++++-----
fs/nfsd/state.h | 1 +
3 files changed, 25 insertions(+), 16 deletions(-)

diff --git a/fs/nfsd/netns.h b/fs/nfsd/netns.h

index b6deebd..65c2431 100644

--- a/fs/nfsd/netns.h

+++ b/fs/nfsd/netns.h

@@ -37,6 +37,7 @@ struct nfsd_net {

struct lock_manager nfsd4_manager;
bool grace_ended;
+ time_t boot_time;
};

extern int nfsd_net_id;

diff --git a/fs/nfsd/nfs4state.c b/fs/nfsd/nfs4state.c

index 2c53447..d683f32 100644

--- a/fs/nfsd/nfs4state.c

+++ b/fs/nfsd/nfs4state.c

@@ -52,7 +52,6 @@

/* Globals */

time_t nfsd4_lease = 90; /* default lease time */

time_t nfsd4_grace = 90;

-static time_t boot_time;

#define all_ones {{~0,~0},~0}

static const stateid_t one_stateid = {

@@ -1055,12 +1054,12 @@ renew_client(struct nfs4_client *clp)

/* SETCLIENTID and SETCLIENTID_CONFIRM Helper functions */

static int

-STALE_CLIENTID(clientid_t *clid)

+STALE_CLIENTID(clientid_t *clid, struct nfsd_net *nn)

{

- if (clid->cl_boot == boot_time)

+ if (clid->cl_boot == nn->boot_time)

return 0;

dprintk("NFSD stale clientid (%08x/%08x) boot_time %08lx\n",

```
- clid->cl_boot, clid->cl_id, boot_time);
+ clid->cl_boot, clid->cl_id, nn->boot_time);
  return 1;
}
```

```
@@ -1241,8 +1240,9 @@ same_creds(struct svc_cred *cr1, struct svc_cred *cr2)
static void gen_clid(struct nfs4_client *clp)
```

```
{
  static u32 current_clientid = 1;
+ struct nfsd_net *nn = net_generic(&init_net, nfsd_net_id);
```

```
- clp->cl_clientid.cl_boot = boot_time;
+ clp->cl_clientid.cl_boot = nn->boot_time;
  clp->cl_clientid.cl_id = current_clientid++;
}
```

```
@@ -2225,8 +2225,9 @@ nfsd4_setclientid_confirm(struct svc_rqst *rqstp,
nfs4_verifier confirm = setclientid_confirm->sc_confirm;
clientid_t *clid = &setclientid_confirm->sc_clientid;
```

```
__be32 status;
+ struct nfsd_net *nn = net_generic(&init_net, nfsd_net_id);
```

```
- if (STALE_CLIENTID(clid))
+ if (STALE_CLIENTID(clid, nn))
  return nfserr_stale_clientid;
  nfs4_lock_state();
```

```
@@ -2585,8 +2586,9 @@ nfsd4_process_open1(struct nfsd4_compound_state *cstate,
unsigned int strhashval;
```

```
struct nfs4_openowner *oo = NULL;
__be32 status;
+ struct nfsd_net *nn = net_generic(&init_net, nfsd_net_id);
```

```
- if (STALE_CLIENTID(&open->op_clientid))
+ if (STALE_CLIENTID(&open->op_clientid, nn))
  return nfserr_stale_clientid;
```

```
/*
 * In case we need it later, after we've already created the
```

```
@@ -3094,12 +3096,13 @@ nfsd4_renew(struct svc_rqst *rqstp, struct nfsd4_compound_state
*cstate,
```

```
{
  struct nfs4_client *clp;
  __be32 status;
+ struct nfsd_net *nn = net_generic(&init_net, nfsd_net_id);
```

```
  nfs4_lock_state();
  dprintk("process_renew(%08x/%08x): starting\n",
    clid->cl_boot, clid->cl_id);
```

```

    status = nfserr_stale_clientid;
- if (STALE_CLIENTID(clid))
+ if (STALE_CLIENTID(clid, nn))
    goto out;
    clp = find_confirmed_client(clid);
    status = nfserr_expired;
@@ -3129,7 +3132,7 @@ nfsd4_end_grace(struct net *net)

    dprintk("NFSD: end of grace period\n");
    nn->grace_ended = true;
- nfsd4_record_grace_done(net, boot_time);
+ nfsd4_record_grace_done(net, nn->boot_time);
    locks_end_grace(&nn->nfsd4_manager);
/*
    * Now that every NFSv4 client has had the chance to recover and
@@ -3235,9 +3238,9 @@ static inline __be32 nfs4_check_fh(struct svc_fh *fhp, struct
nfs4_op_stateid *s
}

static int
-STATE_STATEID(stateid_t *stateid)
+STATE_STATEID(stateid_t *stateid, struct nfsd_net *nn)
{
- if (stateid->si_opaque.so_clid.cl_boot == boot_time)
+ if (stateid->si_opaque.so_clid.cl_boot == nn->boot_time)
    return 0;
    dprintk("NFSD: stale stateid " STATEID_FMT "!\n",
        STATEID_VAL(stateid));
@@ -3372,10 +3375,11 @@ static __be32 nfsd4_validate_stateid(struct nfs4_client *cl, stateid_t
*stateid)
static __be32 nfsd4_lookup_stateid(stateid_t *stateid, unsigned char typemask, struct nfs4_stid
**s)
{
    struct nfs4_client *cl;
+ struct nfsd_net *nn = net_generic(&init_net, nfsd_net_id);

    if (ZERO_STATEID(stateid) || ONE_STATEID(stateid))
        return nfserr_bad_stateid;
- if (STALE_STATEID(stateid))
+ if (STALE_STATEID(stateid, nn))
    return nfserr_stale_stateid;
    cl = find_confirmed_client(&stateid->si_opaque.so_clid);
    if (!cl)
@@ -4047,6 +4051,7 @@ nfsd4_lock(struct svc_rqst *rqstp, struct nfsd4_compound_state
*cstate,
    bool new_state = false;
    int lkflg;
    int err;

```

```

+ struct nfsd_net *nn = net_generic(&init_net, nfsd_net_id);

    dprintk("NFSD: nfsd4_lock: start=%Ld length=%Ld\n",
        (long long) lock->lk_offset,
@@ -4073,7 +4078,7 @@ nfsd4_lock(struct svc_rqst *rqstp, struct nfsd4_compound_state
*cstate,
    sizeof(clientid_t));

    status = nfserr_stale_clientid;
- if (STALE_CLIENTID(&lock->lk_new_clientid))
+ if (STALE_CLIENTID(&lock->lk_new_clientid, nn))
    goto out;

    /* validate and update open stateid and open seqid */
@@ -4207,6 +4212,7 @@ nfsd4_lockt(struct svc_rqst *rqstp, struct nfsd4_compound_state
*cstate,
    struct file_lock file_lock;
    struct nfs4_lockowner *lo;
    __be32 status;
+ struct nfsd_net *nn = net_generic(&init_net, nfsd_net_id);

    if (locks_in_grace(SVC_NET(rqstp)))
        return nfserr_grace;
@@ -4217,7 +4223,7 @@ nfsd4_lockt(struct svc_rqst *rqstp, struct nfsd4_compound_state
*cstate,
    nfs4_lock_state());

    status = nfserr_stale_clientid;
- if (!nfsd4_has_session(cstate) && STALE_CLIENTID(&lockt->lt_clientid))
+ if (!nfsd4_has_session(cstate) && STALE_CLIENTID(&lockt->lt_clientid, nn))
    goto out;

    if ((status = fh_verify(rqstp, &cstate->current_fh, S_IFREG, 0)))
@@ -4366,6 +4372,7 @@ nfsd4_release_lockowner(struct svc_rqst *rqstp,
    struct list_head matches;
    unsigned int hashval = ownerstr_hashval(clid->cl_id, owner);
    __be32 status;
+ struct nfsd_net *nn = net_generic(&init_net, nfsd_net_id);

    dprintk("nfsd4_release_lockowner clientid: (%08x/%08x):\n",
        clid->cl_boot, clid->cl_id);
@@ -4373,7 +4380,7 @@ nfsd4_release_lockowner(struct svc_rqst *rqstp,
    /* XXX check for lease expiration */

    status = nfserr_stale_clientid;
- if (STALE_CLIENTID(clid))
+ if (STALE_CLIENTID(clid, nn))
    return status;

```

```

nfs4_lock_state();
@@ -4700,7 +4707,7 @@ nfs4_state_start(void)
    */
    get_net(net);
    nfsd4_client_tracking_init(net);
- boot_time = get_seconds();
+ nn->boot_time = get_seconds();
    locks_start_grace(net, &nn->nfsd4_manager);
    nn->grace_ended = false;
    printk(KERN_INFO "NFSD: starting %ld-second grace period\n",
diff --git a/fs/nfsd/state.h b/fs/nfsd/state.h
index 981ef10..e617314 100644
--- a/fs/nfsd/state.h
+++ b/fs/nfsd/state.h
@@ -450,6 +450,7 @@ static inline struct nfs4_ol_stateid *openlockstateid(struct nfs4_stid *s)
#define WR_STATE      0x00000020

struct nfsd4_compound_state;
+struct nfsd_net;

extern __be32 nfs4_preprocess_stateid_op(struct net *net,
    struct nfsd4_compound_state *cstate,

```
