Subject: [PATCH] Consolidate the ip6_pol_route_(input|output) pair
Posted by Pavel Emelianov on Mon, 15 Oct 2007 11:55:21 GMT
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The difference in both functions is in the "id" passed to
the rt6_select, so just pass it as an extra argument from
two outer helpers.

This is minus 60 lines of code and 360 bytes of .text

Signed-off-by: Pavel Emelyanov <xemul@openvz.org>

```
 net/ipv6/route.c |   77 ++++++----------------------------------------------
 1 files changed, 9 insertions(+), 68 deletions(-)

diff --git a/net/ipv6/route.c b/net/ipv6/route.c
index 6ff19f9..cce9941 100644
--- a/net/ipv6/route.c
+++ b/net/ipv6/route.c
@@ -663,7 +663,7 @@ static struct rt6_info *rt6_alloc_clone(struct rt6_info *ort, struct in6_addr
*d
  return rt;
 }

-static struct rt6_info *ip6_pol_route_input(struct fib6_table *table,
+static struct rt6_info *ip6_pol_route(struct fib6_table *table, int oif,
         struct flowi *fl, int flags)
 {
  struct fib6_node *fn;
@@ -682,7 +682,7 @@ restart_2:
  fn = fib6_lookup(&table->tb6_root, &fl->fl6_dst, &fl->fl6_src);

 restart:
- rt = rt6_select(fn, fl->iif, strict | reachable);
+ rt = rt6_select(fn, oif, strict | reachable);
  BACKTRACK(&fl->fl6_src);
  if (rt == &ip6_null_entry ||
      rt->rt6i_flags & RTF_CACHE)
@@ -735,6 +735,12 @@ out2:
  return rt;
 }

+static struct rt6_info *ip6_pol_route_input(struct fib6_table *table,
+         struct flowi *fl, int flags)
+{
+ return ip6_pol_route(table, fl->iif, fl, flags);
```

```
+}
+
 void ip6_route_input(struct sk_buff *skb)
 {
  struct ipv6hdr *iph = ipv6_hdr(skb);
@@ -761,72 +767,7 @@ void ip6_route_input(struct sk_buff *skb)
 static struct rt6_info *ip6_pol_route_output(struct fib6_table *table,
          struct flowi *fl, int flags)
 {
- struct fib6_node *fn;
- struct rt6_info *rt, *nrt;
- int strict = 0;
- int attempts = 3;
- int err;
- int reachable = ipv6_devconf.forwarding ? 0 : RT6_LOOKUP_F_REACHABLE;
-
- strict |= flags & RT6_LOOKUP_F_IFACE;
-
-relookup:
- read_lock_bh(&table->tb6_lock);
-
-restart_2:
- fn = fib6_lookup(&table->tb6_root, &fl->fl6_dst, &fl->fl6_src);
-
-restart:
- rt = rt6_select(fn, fl->oif, strict | reachable);
- BACKTRACK(&fl->fl6_src);
- if (rt == &ip6_null_entry ||
-     rt->rt6i_flags & RTF_CACHE)
-  goto out;
-
- dst_hold(&rt->u.dst);
- read_unlock_bh(&table->tb6_lock);
-
- if (!rt->rt6i_nexthop && !(rt->rt6i_flags & RTF_NONEXTHOP))
-  nrt = rt6_alloc_cow(rt, &fl->fl6_dst, &fl->fl6_src);
- else {
-#if CLONE_OFFLINK_ROUTE
-  nrt = rt6_alloc_clone(rt, &fl->fl6_dst);
-#else
-  goto out2;
-#endif
- }
-
- dst_release(&rt->u.dst);
- rt = nrt ? : &ip6_null_entry;
-
- dst_hold(&rt->u.dst);
```

```
- if (nrt) {
-  err = ip6_ins_rt(nrt);
-  if (!err)
-   goto out2;
- }
-
- if (--attempts <= 0)
-  goto out2;
-
- /*
-  * Race condition! In the gap, when table->tb6_lock was
-  * released someone could insert this route.  Relookup.
-  */
- dst_release(&rt->u.dst);
- goto relookup;
-
-out:
- if (reachable) {
-  reachable = 0;
-  goto restart_2;
- }
- dst_hold(&rt->u.dst);
- read_unlock_bh(&table->tb6_lock);
-out2:
- rt->u.dst.lastuse = jiffies;
- rt->u.dst.__use++;
- return rt;
+ return ip6_pol_route(table, fl->oif, fl, flags);
 }

 struct dst_entry * ip6_route_output(struct sock *sk, struct flowi *fl)
```