Subject: [PATCH net-2.6.25 2/3] Uninline the __inet_lookup_established function
Posted by Pavel Emelianov on Wed, 19 Dec 2007 10:53:40 GMT
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This is -700 bytes from the net/ipv4/built-in.o

add/remove: 1/0 grow/shrink: 1/3 up/down: 340/-1040 (-700)
function old new delta
__inet_lookup_established - 339 +339
tcp_sacktag_write_queue 2254 2255 +1
tcp_v4_err 1304 973 -331
tcp_v4_rcv 2089 1744 -345
tcp_v4_do_rcv 826 462 -364

Exporting is for dccp module (used via e.g. inet_lookup).

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

---
include/net/inet_hashtables.h | 40 +++----------
net/ipv4/inet_hashtables.c | 38 ++++++++++++++++++++++++++++++++++++++
2 files changed, 41 insertions(+), 37 deletions(-)

diff --git a/include/net/inet_hashtables.h b/include/net/inet_hashtables.h
index 1a43125..a33eab7 100644
--- a/include/net/inet_hashtables.h
+++ b/include/net/inet_hashtables.h
@@ -374,43 +374,9 @@ typedef __u64 __bitwise __addrpair;
*
* Local BH must be disabled here.
*/
-static inline struct sock *
- __inet_lookup_established(struct inet_hashinfo *hashinfo,
- const __be32 saddr, const __be16 sport,
- const __be32 daddr, const u16 hnum,
- const int dif)
-{
- INET_ADDR_COOKIE(acookie, saddr, daddr)
- const __portpair ports = INET_COMBINED_PORTS(sport, hnum);
- struct sock *sk;
- const struct hlist_node *node;
- /* Optimize here for direct hit, only listening connections can
- * have wildcards anyways.
- */
- unsigned int hash = inet_ehashfn(daddr, hnum, saddr, sport);
- struct inet_ehash_bucket *head = inet_ehash_bucket(hashinfo, hash);
- rwlock_t *lock = inet_ehash_lockp(hashinfo, hash);
-

```
- prefetch(head->chain.first);
- read_lock(lock);
- sk_for_each(sk, node, &head->chain) {
-  if (INET_MATCH(sk, hash, acookie, saddr, daddr, ports, dif))
-   goto hit; /* You sunk my battleship! */
- }
-
- /* Must check for a TIME_WAIT'er before going to listener hash. */
- sk_for_each(sk, node, &head->twchain) {
-  if (INET_TW_MATCH(sk, hash, acookie, saddr, daddr, ports, dif))
-   goto hit;
- }
- sk = NULL;
-out:
- read_unlock(lock);
- return sk;
-hit:
- sock_hold(sk);
- goto out;
-}
+extern struct sock * __inet_lookup_established(struct inet_hashinfo *hashinfo,
+  const __be32 saddr, const __be16 sport,
+  const __be32 daddr, const u16 hnum, const int dif);

 static inline struct sock *
  inet_lookup_established(struct inet_hashinfo *hashinfo,
diff --git a/net/ipv4/inet_hashtables.c b/net/ipv4/inet_hashtables.c
index 46f899b..db43ddd 100644
--- a/net/ipv4/inet_hashtables.c
+++ b/net/ipv4/inet_hashtables.c
@@ -190,6 +190,44 @@ sherry_cache:
 }
 EXPORT_SYMBOL_GPL(__inet_lookup_listener);

+struct sock * __inet_lookup_established(struct inet_hashinfo *hashinfo,
+      const __be32 saddr, const __be16 sport,
+      const __be32 daddr, const u16 hnum,
+      const int dif)
+{
+ INET_ADDR_COOKIE(acookie, saddr, daddr)
+ const __portpair ports = INET_COMBINED_PORTS(sport, hnum);
+ struct sock *sk;
+ const struct hlist_node *node;
+ /* Optimize here for direct hit, only listening connections can
+  * have wildcards anyways.
+  */
+ unsigned int hash = inet_ehashfn(daddr, hnum, saddr, sport);
+ struct inet_ehash_bucket *head = inet_ehash_bucket(hashinfo, hash);
```

```
+ rwlock_t *lock = inet_ehash_lockp(hashinfo, hash);
+
+ prefetch(head->chain.first);
+ read_lock(lock);
+ sk_for_each(sk, node, &head->chain) {
+  if (INET_MATCH(sk, hash, acookie, saddr, daddr, ports, dif))
+   goto hit; /* You sunk my battleship! */
+ }
+
+ /* Must check for a TIME_WAIT'er before going to listener hash. */
+ sk_for_each(sk, node, &head->twchain) {
+  if (INET_TW_MATCH(sk, hash, acookie, saddr, daddr, ports, dif))
+   goto hit;
+ }
+ sk = NULL;
+out:
+ read_unlock(lock);
+ return sk;
+hit:
+ sock_hold(sk);
+ goto out;
+}
+EXPORT_SYMBOL_GPL(__inet_lookup_established);
+
 /* called with local bh disabled */
 static int __inet_check_established(struct inet_timewait_death_row *death_row,
        struct sock *sk, __u16 lport,
--
1.5.3.4
```

Subject: Re: [PATCH net-2.6.25 2/3] Uninline the __inet_lookup_established function

Posted by davem on Thu, 20 Dec 2007 23:32:24 GMT

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From: Pavel Emelyanov <xemul@openvz.org>
Date: Wed, 19 Dec 2007 13:53:40 +0300

> This is -700 bytes from the net/ipv4/built-in.o
>
> add/remove: 1/0 grow/shrink: 1/3 up/down: 340/-1040 (-700)
> function   old   new   delta
> __inet_lookup_established   -   339   +339
> tcp_sacktag_write_queue   2254   2255   +1
> tcp_v4_err   1304   973   -331
> tcp_v4_rcv   2089   1744   -345
> tcp_v4_do_rcv   826   462   -364

>
> Exporting is for dccp module (used via e.g. inet_lookup).
>
> Signed-off-by: Pavel Emelyanov <xemul@openvz.org>

Applied.
