
Subject: Re: [PATCH 5/12] L2 network namespace: IPv4 routing

Posted by [Daniel Lezcano](#) on Wed, 06 Dec 2006 22:40:29 GMT

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Dmitry Mishin wrote:

> Make FIBs per-namespace and adds additional key (net namespace) to lookups in
> routing cache.

>

> Signed-off-by: Dmitry Mishin <dim@openvz.org>

>

> ---

```
> include/linux/net_namespace.h | 12 ++++
> include/net/flow.h           | 3 +
> include/net/ip_fib.h         | 48 ++++++++-----
> net/core/fib_rules.c         | 43 ++++++++-----
> net/core/net_namespace.c     | 9 +++
> net/ipv4/fib_frontend.c      | 121 ++++++++-----
> net/ipv4/fib_hash.c          | 13 +++-
> net/ipv4/fib_rules.c         | 86 ++++++++-----
> net/ipv4/fib_semantics.c     | 100 ++++++++-----
> net/ipv4/fib_trie.c          | 18 ++++--
> net/ipv4/route.c             | 29 ++++++++--
> 11 files changed, 391 insertions(+), 91 deletions(-)
```

>

> --- linux-2.6.19-rc6-mm2.orig/include/linux/net_namespace.h

> +++ linux-2.6.19-rc6-mm2/include/linux/net_namespace.h

```
> @@ -11,6 +11,18 @@ struct net_namespace {
> struct net_device *dev_base_p, **dev_tail_p;
> struct net_device *loopback_dev_p;
> struct pcpu_lstats *pcpu_lstats_p;
> +#ifndef CONFIG_IP_MULTIPLE_TABLES
> + struct fib_table *fib4_local_table, *fib4_main_table;
> +#else
> + struct list_head fib_rules_ops_list;
> + struct fib_rules_ops *fib4_rules_ops;
> +#endif
> + struct hlist_head *fib4_tables;
> + struct hlist_head *fib4_hash, *fib4_laddrhash;
> + unsigned fib4_hash_size, fib4_info_cnt;
> +#ifdef CONFIG_IP_FIB_TRIE
> + int fib4_trie_last_dflt;
> +#endif
> unsigned int hash;
> };
>
> --- linux-2.6.19-rc6-mm2.orig/include/net/flow.h
> +++ linux-2.6.19-rc6-mm2/include/net/flow.h
> @@ -82,6 +82,9 @@ struct flowi {
```

```

> #define fl_mh_type uli_u.mht.type
> #endif
> __u32 secid; /* used by xfrm; see secid.txt */
> #ifdef CONFIG_NET_NS
> + struct net_namespace *net_ns;
> #endif
> } __attribute__((__aligned__(BITS_PER_LONG/8)));
>
> #define FLOW_DIR_IN 0
> --- linux-2.6.19-rc6-mm2.orig/include/net/ip_fib.h
> +++ linux-2.6.19-rc6-mm2/include/net/ip_fib.h
> @@ -18,6 +18,7 @@
>
> #include <net/flow.h>
> #include <linux/seq_file.h>
> #include <linux/net_namespace.h>
> #include <net/fib_rules.h>
>
> struct fib_config {
> @@ -171,14 +172,21 @@ struct fib_table {
>
> #ifndef CONFIG_IP_MULTIPLE_TABLES
>
> -extern struct fib_table *ip_fib_local_table;
> -extern struct fib_table *ip_fib_main_table;
> #ifdef CONFIG_NET_NS
> +extern struct fib_table *ip_fib_local_table_static;
> +extern struct fib_table *ip_fib_main_table_static;
> #define ip_fib_local_table_ns() ip_fib_local_table_static
> #define ip_fib_main_table_ns() ip_fib_main_table_static
> #else
> #define ip_fib_local_table_ns() (current_net_ns->fib4_local_table)
> #define ip_fib_main_table_ns() (current_net_ns->fib4_main_table)
> #endif

```

Why don't you use :

```

#ifndef CONFIG_NET_NS
extern struct fib_table *ip_fib_local_table
extern struct fib_table *ip_fib_main_table
#else
#define ip_fib_local_table (current_net_ns->fib4_local_table)
#define ip_fib_main_table (current_net_ns->fib4_main_table)
#endif

```

You don't need to replace all `ip_fib_local_table` by `ip_fib_local_table_ns`. It will reduce a lot the code impact, no ?

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