Subject: [PATCH 1/2] virtualized ipt_REDIRECT
Posted by Jason Stubbs on Fri, 03 Mar 2006 06:00:46 GMT
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Hi all,

I'm not exactly sure on the format I'm supposed to submit patches in, so
I'll just follow what everybody else is doing.

Patch from Jason (jstubbs@work-at.co.jp):
This patch virtualizes the ipt_REDIRECT iptables module.

--
Jason Stubbs

```
diff -uNr linux-2.6.15-openvz-025.014.orig/include/linux/nfcalls.h
linux-2.6.15-openvz-025.014/include/linux/nfcalls.h
--- linux-2.6.15-openvz-025.014.orig/include/linux/nfcalls.h 2006-03-03 14:36:32.560909760
+0900
+++ linux-2.6.15-openvz-025.014/include/linux/nfcalls.h 2006-03-03 14:37:38.401900408 +0900
@@ -143,6 +143,7 @@
 DECL_KSYM_MODULE(iptable_nat);
 DECL_KSYM_MODULE(ip_nat_ftp);
 DECL_KSYM_MODULE(ip_nat_irc);
+DECL_KSYM_MODULE(ipt_REDIRECT);

 struct sk_buff;

diff -uNr linux-2.6.15-openvz-025.014.orig/include/linux/ve_proto.h
linux-2.6.15-openvz-025.014/include/linux/ve_proto.h
--- linux-2.6.15-openvz-025.014.orig/include/linux/ve_proto.h 2006-03-03 14:36:32.560909760
+0900
+++ linux-2.6.15-openvz-025.014/include/linux/ve_proto.h 2006-03-03 14:38:42.914093064 +0900
@@ -55,6 +55,7 @@
 extern int init_iptable_multiport(void);
 extern int init_iptable_tos(void);
 extern int init_iptable_REJECT(void);
+extern int init_iptable_REDIRECT(void);
 extern void fini_netfilter(void);
 extern int fini_iptables(void);
 extern int fini_iptable_filter(void);
@@ -62,6 +63,7 @@
 extern int fini_iptable_multiport(void);
 extern int fini_iptable_tos(void);
 extern int fini_iptable_REJECT(void);
+extern int fini_iptable_REDIRECT(void);
 #endif
```

```
 #define VE_HOOK_INIT 0
diff -uNr linux-2.6.15-openvz-025.014.orig/include/linux/vzcalluser.h
linux-2.6.15-openvz-025.014/include/linux/vzcalluser.h
--- linux-2.6.15-openvz-025.014.orig/include/linux/vzcalluser.h 2006-03-03 14:36:32.561909608
+0900
+++ linux-2.6.15-openvz-025.014/include/linux/vzcalluser.h 2006-03-03 14:39:39.544483936
+0900
@@ -80,6 +80,7 @@
 #define VE_IP_NAT_MOD   (1U<<20)
 #define VE_IP_NAT_FTP_MOD  (1U<<21)
 #define VE_IP_NAT_IRC_MOD  (1U<<22)
+#define VE_IP_TARGET_REDIRECT_MOD (1U<<23)

 /* these masks represent modules with their dependences */
 #define VE_IP_IPTABLES  (VE_IP_IPTABLES_MOD)
@@ -125,6 +126,8 @@
     | VE_IP_NAT | VE_IP_CONNTRACK_FTP)
 #define VE_IP_NAT_IRC  (VE_IP_NAT_IRC_MOD  \
     | VE_IP_NAT | VE_IP_CONNTRACK_IRC)
+#define VE_IP_TARGET_REDIRECT (VE_IP_TARGET_REDIRECT_MOD \
+    | VE_IP_NAT)

 /* safe iptables mask to be used by default */
 #define VE_IP_DEFAULT     \
diff -uNr linux-2.6.15-openvz-025.014.orig/kernel/ve.c linux-2.6.15-openvz-025.014/kernel/ve.c
--- linux-2.6.15-openvz-025.014.orig/kernel/ve.c 2006-03-03 14:36:33.253804424 +0900
+++ linux-2.6.15-openvz-025.014/kernel/ve.c 2006-03-03 14:41:02.759833280 +0900
@@ -75,6 +75,7 @@
 INIT_KSYM_MODULE(iptable_nat);
 INIT_KSYM_MODULE(ip_nat_ftp);
 INIT_KSYM_MODULE(ip_nat_irc);
+INIT_KSYM_MODULE(ipt_REDIRECT);

 INIT_KSYM_CALL(int, init_netfilter, (void));
 INIT_KSYM_CALL(int, init_iptables, (void));
@@ -100,6 +101,7 @@
 INIT_KSYM_CALL(int, init_iptable_nat, (void));
 INIT_KSYM_CALL(int, init_iptable_nat_ftp, (void));
 INIT_KSYM_CALL(int, init_iptable_nat_irc, (void));
+INIT_KSYM_CALL(int, init_iptable_REDIRECT, (void));
 INIT_KSYM_CALL(void, fini_iptable_nat_irc, (void));
 INIT_KSYM_CALL(void, fini_iptable_nat_ftp, (void));
 INIT_KSYM_CALL(void, fini_iptable_nat, (void));
@@ -124,6 +126,7 @@
 INIT_KSYM_CALL(void, fini_iptable_mangle, (void));
 INIT_KSYM_CALL(void, fini_iptables, (void));
 INIT_KSYM_CALL(void, fini_netfilter, (void));
+INIT_KSYM_CALL(void, fini_iptable_REDIRECT, (void));
```

```
 INIT_KSYM_CALL(void, ipt_flush_table, (struct ipt_table *table));
 #endif
diff -uNr linux-2.6.15-openvz-025.014.orig/kernel/vecalls.c
linux-2.6.15-openvz-025.014/kernel/vecalls.c
--- linux-2.6.15-openvz-025.014.orig/kernel/vecalls.c 2006-03-03 14:36:33.253804424 +0900
+++ linux-2.6.15-openvz-025.014/kernel/vecalls.c 2006-03-03 14:42:35.671708528 +0900
@@ -1592,6 +1592,13 @@
  if (err < 0)
   goto err_iptable_length;
 #endif
+#if defined(CONFIG_IP_NF_TARGET_REDIRECT) || \
+    defined(CONFIG_IP_NF_TARGET_REDIRECT_MODULE)
+ err = KSYMIPTINIT(init_mask, ve, VE_IP_TARGET_REDIRECT,
+   ipt_REDIRECT, init_iptable_REDIRECT, ());
+ if (err < 0)
+  goto err_iptable_REDIRECT;
+#endif
  return 0;

 /*  ---------------------------------------------------------- ------------- */
@@ -1732,6 +1739,12 @@
    ip_tables, fini_iptables, ());
 err_iptables:
 #endif
+#if defined(CONFIG_IP_NF_TARGET_REDIRECT) || \
+    defined(CONFIG_IP_NF_TARGET_REDIRECT_MODULE)
+ KSYMIPTFINI(ve->_iptables_modules, VE_IP_TARGET_REDIRECT,
+   ipt_REDIRECT, fini_iptable_REDIRECT, ());
+err_iptable_REDIRECT:
+#endif
  ve->_iptables_modules = 0;

  return err;
diff -uNr  linux-2.6.15-openvz-025.014.orig/net/ipv4/netfilter/ipt_REDI RECT.c
linux-2.6.15-openvz-025.014/net/ipv4/netfilter/ipt_REDIRECT. c
---  linux-2.6.15-openvz-025.014.orig/net/ipv4/netfilter/ipt_REDI RECT.c 2006-03-03
14:36:33.952698176 +0900
+++  linux-2.6.15-openvz-025.014/net/ipv4/netfilter/ipt_REDIRECT. c 2006-03-03
14:47:44.502759072 +0900
@@ -17,6 +17,7 @@
 #include <linux/inetdevice.h>
 #include <net/protocol.h>
 #include <net/checksum.h>
+#include <linux/nfcalls.h>
 #include <linux/netfilter_ipv4.h>
 #include <linux/netfilter_ipv4/ip_nat_rule.h>
```

```
@@ -25,7 +26,7 @@
 MODULE_DESCRIPTION("iptables REDIRECT target module");

 #if 0
-#define DEBUGP printk
+#define DEBUGP ve_printk
 #else
 #define DEBUGP(format, args...)
 #endif
@@ -119,14 +120,36 @@
  .me  = THIS_MODULE,
 };

+int init_iptable_REDIRECT(void)
+{
+ return virt_ipt_register_target(&redirect_reg);
+}
+
+void fini_iptable_REDIRECT(void)
+{
+ virt_ipt_unregister_target(&redirect_reg);
+}
+
 static int __init init(void)
 {
- return ipt_register_target(&redirect_reg);
+ int err;
+
+ err = init_iptable_REDIRECT();
+ if (err < 0)
+  return err;
+
+ KSYMRESOLVE(init_iptable_REDIRECT);
+ KSYMRESOLVE(fini_iptable_REDIRECT);
+ KSYMMODRESOLVE(ipt_REDIRECT);
+ return 0;
 }

 static void __exit fini(void)
 {
- ipt_unregister_target(&redirect_reg);
+ KSYMMODUNRESOLVE(ipt_REDIRECT);
+ KSYMUNRESOLVE(init_iptable_REDIRECT);
+ KSYMUNRESOLVE(fini_iptable_REDIRECT);
+ fini_iptable_REDIRECT();
 }

 module_init(init);
```

Subject: Re: [PATCH 2/2] virtualized ipt_REDIRECT
Posted by Jason Stubbs on Fri, 03 Mar 2006 06:04:53 GMT
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Patch from Jason (jstubbs@work-at.co.jp):
This patch adds support for ipt_REDIRECT to bzctl.

--
Jason Stubbs

```
diff -uNr vzctl-3.0.0-2.orig/man/vzctl.8 vzctl-3.0.0-2/man/vzctl.8
--- vzctl-3.0.0-2.orig/man/vzctl.8 2006-03-03 14:56:41.933057248 +0900
+++ vzctl-3.0.0-2/man/vzctl.8 2006-03-03 14:58:47.395983984 +0900
@@ -256,7 +256,8 @@
 \fIpt_TCPMSS\fR, \fIpt_tcpmss\fR, \fIpt_ttl\fR, \fIpt_LOG\fR,
 \fIpt_length\fR, \fIp_conntrack\fR, \fIp_conntrack_ftp\fR,
 \fIp_conntrack_irc\fR, \fIpt_conntrack\fR, \fIpt_state\fR,
-\fIpt_helper\fR, \fIptable_nat\fR, \fIp_nat_ftp\fR, \fIp_nat_irc\fR.
+\fIpt_helper\fR, \fIptable_nat\fR, \fIp_nat_ftp\fR, \fIp_nat_irc\fR,
+\fIpt_REDIRECT\fR.
 .TP
 \fBNetwork devices control parameters\fR
 .IP "\fB--netdev_add\fR \fIname\fR"
diff -uNr vzctl-3.0.0-2.orig/src/lib/config.c vzctl-3.0.0-2/src/lib/config.c
--- vzctl-3.0.0-2.orig/src/lib/config.c 2006-03-03 14:56:41.942055880 +0900
+++ vzctl-3.0.0-2/src/lib/config.c 2006-03-03 14:57:14.238146128 +0900
@@ -62,6 +62,7 @@
  {"iptable_nat", VE_IP_NAT},
  {"ip_nat_ftp", VE_IP_NAT_FTP},
  {"ip_nat_irc", VE_IP_NAT_IRC},
+ {"ipt_REDIRECT", VE_IP_TARGET_REDIRECT},
 #endif
  {NULL, 0}
 };
```

Subject: Re: [PATCH 1/2] virtualized ipt_REDIRECT
Posted by Jason Stubbs on Fri, 03 Mar 2006 06:14:10 GMT
View Forum Message <> Reply to Message

Missed two defines when bringing the patch forward from 2.6.8.
How embarrassing...

Patch from Jason (jstubbs@work-at.co.jp):
This patch virtualizes the ipt_REDIRECT iptables module.

--

Jason Stubbs

```
diff -ur linux-2.6.15-openvz-025.014.orig/include/linux/nfcalls.h
linux-2.6.15-openvz-025.014/include/linux/nfcalls.h
--- linux-2.6.15-openvz-025.014.orig/include/linux/nfcalls.h 2006-03-03 14:36:32.560909760
+0900
+++ linux-2.6.15-openvz-025.014/include/linux/nfcalls.h 2006-03-03 15:20:12.223660488 +0900
@@ -143,6 +143,7 @@
 DECL_KSYM_MODULE(iptable_nat);
 DECL_KSYM_MODULE(ip_nat_ftp);
 DECL_KSYM_MODULE(ip_nat_irc);
+DECL_KSYM_MODULE(ipt_REDIRECT);

 struct sk_buff;

@@ -170,6 +171,7 @@
 DECL_KSYM_CALL(int, init_iptable_nat, (void));
 DECL_KSYM_CALL(int, init_iptable_nat_ftp, (void));
 DECL_KSYM_CALL(int, init_iptable_nat_irc, (void));
+DECL_KSYM_CALL(int, init_iptable_REDIRECT, (void));
 DECL_KSYM_CALL(void, fini_iptable_nat_irc, (void));
 DECL_KSYM_CALL(void, fini_iptable_nat_ftp, (void));
 DECL_KSYM_CALL(void, fini_iptable_nat, (void));
@@ -194,6 +196,7 @@
 DECL_KSYM_CALL(void, fini_iptable_mangle, (void));
 DECL_KSYM_CALL(void, fini_iptables, (void));
 DECL_KSYM_CALL(void, fini_netfilter, (void));
+DECL_KSYM_CALL(void, fini_iptable_REDIRECT, (void));

 DECL_KSYM_CALL(void, ipt_flush_table, (struct ipt_table *table));
 #endif /* CONFIG_VE_IPTABLES */
diff -ur linux-2.6.15-openvz-025.014.orig/include/linux/ve_proto.h
linux-2.6.15-openvz-025.014/include/linux/ve_proto.h
--- linux-2.6.15-openvz-025.014.orig/include/linux/ve_proto.h 2006-03-03 14:36:32.560909760
+0900
+++ linux-2.6.15-openvz-025.014/include/linux/ve_proto.h 2006-03-03 14:38:42.914093064 +0900
@@ -55,6 +55,7 @@
 extern int init_iptable_multiport(void);
 extern int init_iptable_tos(void);
 extern int init_iptable_REJECT(void);
+extern int init_iptable_REDIRECT(void);
 extern void fini_netfilter(void);
 extern int fini_iptables(void);
 extern int fini_iptable_filter(void);
@@ -62,6 +63,7 @@
 extern int fini_iptable_multiport(void);
 extern int fini_iptable_tos(void);
```

```
 extern int fini_iptable_REJECT(void);
+extern int fini_iptable_REDIRECT(void);
 #endif

 #define VE_HOOK_INIT 0
diff -ur linux-2.6.15-openvz-025.014.orig/include/linux/vzcalluser.h
linux-2.6.15-openvz-025.014/include/linux/vzcalluser.h
--- linux-2.6.15-openvz-025.014.orig/include/linux/vzcalluser.h 2006-03-03 14:36:32.561909608
+0900
+++ linux-2.6.15-openvz-025.014/include/linux/vzcalluser.h 2006-03-03 14:39:39.544483936
+0900
@@ -80,6 +80,7 @@
 #define VE_IP_NAT_MOD   (1U<<20)
 #define VE_IP_NAT_FTP_MOD  (1U<<21)
 #define VE_IP_NAT_IRC_MOD  (1U<<22)
+#define VE_IP_TARGET_REDIRECT_MOD (1U<<23)

 /* these masks represent modules with their dependences */
 #define VE_IP_IPTABLES  (VE_IP_IPTABLES_MOD)
@@ -125,6 +126,8 @@
     | VE_IP_NAT | VE_IP_CONNTRACK_FTP)
 #define VE_IP_NAT_IRC  (VE_IP_NAT_IRC_MOD  \
     | VE_IP_NAT | VE_IP_CONNTRACK_IRC)
+#define VE_IP_TARGET_REDIRECT (VE_IP_TARGET_REDIRECT_MOD \
+     | VE_IP_NAT)

 /* safe iptables mask to be used by default */
 #define VE_IP_DEFAULT     \
diff -ur linux-2.6.15-openvz-025.014.orig/kernel/ve.c linux-2.6.15-openvz-025.014/kernel/ve.c
--- linux-2.6.15-openvz-025.014.orig/kernel/ve.c 2006-03-03 14:36:33.253804424 +0900
+++ linux-2.6.15-openvz-025.014/kernel/ve.c 2006-03-03 14:41:02.759833280 +0900
@@ -75,6 +75,7 @@
 INIT_KSYM_MODULE(iptable_nat);
 INIT_KSYM_MODULE(ip_nat_ftp);
 INIT_KSYM_MODULE(ip_nat_irc);
+INIT_KSYM_MODULE(ipt_REDIRECT);

 INIT_KSYM_CALL(int, init_netfilter, (void));
 INIT_KSYM_CALL(int, init_iptables, (void));
@@ -100,6 +101,7 @@
 INIT_KSYM_CALL(int, init_iptable_nat, (void));
 INIT_KSYM_CALL(int, init_iptable_nat_ftp, (void));
 INIT_KSYM_CALL(int, init_iptable_nat_irc, (void));
+INIT_KSYM_CALL(int, init_iptable_REDIRECT, (void));
 INIT_KSYM_CALL(void, fini_iptable_nat_irc, (void));
 INIT_KSYM_CALL(void, fini_iptable_nat_ftp, (void));
 INIT_KSYM_CALL(void, fini_iptable_nat, (void));
@@ -124,6 +126,7 @@
```

```
 INIT_KSYM_CALL(void, fini_iptable_mangle, (void));
 INIT_KSYM_CALL(void, fini_iptables, (void));
 INIT_KSYM_CALL(void, fini_netfilter, (void));
+INIT_KSYM_CALL(void, fini_iptable_REDIRECT, (void));

 INIT_KSYM_CALL(void, ipt_flush_table, (struct ipt_table *table));
 #endif
diff -ur linux-2.6.15-openvz-025.014.orig/kernel/vecalls.c
linux-2.6.15-openvz-025.014/kernel/vecalls.c
--- linux-2.6.15-openvz-025.014.orig/kernel/vecalls.c 2006-03-03 14:36:33.253804424 +0900
+++ linux-2.6.15-openvz-025.014/kernel/vecalls.c 2006-03-03 14:42:35.671708528 +0900
@@ -1592,6 +1592,13 @@
  if (err < 0)
   goto err_iptable_length;
 #endif
+#if defined(CONFIG_IP_NF_TARGET_REDIRECT) || \
+    defined(CONFIG_IP_NF_TARGET_REDIRECT_MODULE)
+ err = KSYMIPTINIT(init_mask, ve, VE_IP_TARGET_REDIRECT,
+   ipt_REDIRECT, init_iptable_REDIRECT, ());
+ if (err < 0)
+  goto err_iptable_REDIRECT;
+#endif
  return 0;

 /*  ---------------------------------------------------------- ------------- */
@@ -1732,6 +1739,12 @@
    ip_tables, fini_iptables, ());
 err_iptables:
 #endif
+#if defined(CONFIG_IP_NF_TARGET_REDIRECT) || \
+    defined(CONFIG_IP_NF_TARGET_REDIRECT_MODULE)
+ KSYMIPTFINI(ve->_iptables_modules, VE_IP_TARGET_REDIRECT,
+   ipt_REDIRECT, fini_iptable_REDIRECT, ());
+err_iptable_REDIRECT:
+#endif
  ve->_iptables_modules = 0;

  return err;
diff -ur  linux-2.6.15-openvz-025.014.orig/net/ipv4/netfilter/ipt_REDI RECT.c
linux-2.6.15-openvz-025.014/net/ipv4/netfilter/ipt_REDIRECT. c
---  linux-2.6.15-openvz-025.014.orig/net/ipv4/netfilter/ipt_REDI RECT.c 2006-03-03
14:36:33.952698176 +0900
+++  linux-2.6.15-openvz-025.014/net/ipv4/netfilter/ipt_REDIRECT. c 2006-03-03
14:47:44.502759072 +0900
@@ -17,6 +17,7 @@
 #include <linux/inetdevice.h>
 #include <net/protocol.h>
 #include <net/checksum.h>
```

```
+#include <linux/nfcalls.h>
 #include <linux/netfilter_ipv4.h>
 #include <linux/netfilter_ipv4/ip_nat_rule.h>

@@ -25,7 +26,7 @@
 MODULE_DESCRIPTION("iptables REDIRECT target module");

 #if 0
-#define DEBUGP printk
+#define DEBUGP ve_printk
 #else
 #define DEBUGP(format, args...)
 #endif
@@ -119,14 +120,36 @@
  .me  = THIS_MODULE,
 };

+int init_iptable_REDIRECT(void)
+{
+ return virt_ipt_register_target(&redirect_reg);
+}
+
+void fini_iptable_REDIRECT(void)
+{
+ virt_ipt_unregister_target(&redirect_reg);
+}
+
 static int __init init(void)
 {
- return ipt_register_target(&redirect_reg);
+ int err;
+
+ err = init_iptable_REDIRECT();
+ if (err < 0)
+  return err;
+
+ KSYMRESOLVE(init_iptable_REDIRECT);
+ KSYMRESOLVE(fini_iptable_REDIRECT);
+ KSYMMODRESOLVE(ipt_REDIRECT);
+ return 0;
 }

 static void __exit fini(void)
 {
- ipt_unregister_target(&redirect_reg);
+ KSYMMODUNRESOLVE(ipt_REDIRECT);
+ KSYMUNRESOLVE(init_iptable_REDIRECT);
+ KSYMUNRESOLVE(fini_iptable_REDIRECT);
```

+ fini_iptable_REDIRECT();
 }

 module_init(init);

Subject: Re: [PATCH 1/2] virtualized ipt_REDIRECT
Posted by dev on Thu, 16 Mar 2006 13:07:02 GMT
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Jason,

I fixed error path in do_ve_iptables().
Here is the patch which is commited in 2.6.8.
It will be also commited in coming 2.6.16.

Thanks,
Kirill

> Missed two defines when bringing the patch forward from 2.6.8.
> How embarrassing...
>
> Patch from Jason (jstubbs@work-at.co.jp):
> This patch virtualizes the ipt_REDIRECT iptables module.
>
> --
> Jason Stubbs
>
>
> -- ------------
>
> diff -ur linux-2.6.15-openvz-025.014.orig/include/linux/nfcalls.h
linux-2.6.15-openvz-025.014/include/linux/nfcalls.h
> --- linux-2.6.15-openvz-025.014.orig/include/linux/nfcalls.h 2006-03-03 14:36:32.560909760
+0900
> +++ linux-2.6.15-openvz-025.014/include/linux/nfcalls.h 2006-03-03 15:20:12.223660488 +0900
> @@ -143,6 +143,7 @@
> DECL_KSYM_MODULE(iptable_nat);
> DECL_KSYM_MODULE(ip_nat_ftp);
> DECL_KSYM_MODULE(ip_nat_irc);
> +DECL_KSYM_MODULE(ipt_REDIRECT);
>
> struct sk_buff;
>
> @@ -170,6 +171,7 @@
> DECL_KSYM_CALL(int, init_iptable_nat, (void));
> DECL_KSYM_CALL(int, init_iptable_nat_ftp, (void));
> DECL_KSYM_CALL(int, init_iptable_nat_irc, (void));

> +DECL_KSYM_CALL(int, init_iptable_REDIRECT, (void));
> DECL_KSYM_CALL(void, fini_iptable_nat_irc, (void));
> DECL_KSYM_CALL(void, fini_iptable_nat_ftp, (void));
> DECL_KSYM_CALL(void, fini_iptable_nat, (void));
> @@ -194,6 +196,7 @@
> DECL_KSYM_CALL(void, fini_iptable_mangle, (void));
> DECL_KSYM_CALL(void, fini_iptables, (void));
> DECL_KSYM_CALL(void, fini_netfilter, (void));
> +DECL_KSYM_CALL(void, fini_iptable_REDIRECT, (void));
>
> DECL_KSYM_CALL(void, ipt_flush_table, (struct ipt_table *table));
> #endif /* CONFIG_VE_IPTABLES */
> diff -ur linux-2.6.15-openvz-025.014.orig/include/linux/ve_proto.h
linux-2.6.15-openvz-025.014/include/linux/ve_proto.h
> --- linux-2.6.15-openvz-025.014.orig/include/linux/ve_proto.h 2006-03-03 14:36:32.560909760
+0900
> +++ linux-2.6.15-openvz-025.014/include/linux/ve_proto.h 2006-03-03 14:38:42.914093064
+0900
> @@ -55,6 +55,7 @@
> extern int init_iptable_multiport(void);
> extern int init_iptable_tos(void);
> extern int init_iptable_REJECT(void);
> +extern int init_iptable_REDIRECT(void);
> extern void fini_netfilter(void);
> extern int fini_iptables(void);
> extern int fini_iptable_filter(void);
> @@ -62,6 +63,7 @@
> extern int fini_iptable_multiport(void);
> extern int fini_iptable_tos(void);
> extern int fini_iptable_REJECT(void);
> +extern int fini_iptable_REDIRECT(void);
> #endif
>
> #define VE_HOOK_INIT 0
> diff -ur linux-2.6.15-openvz-025.014.orig/include/linux/vzcalluser.h
linux-2.6.15-openvz-025.014/include/linux/vzcalluser.h
> --- linux-2.6.15-openvz-025.014.orig/include/linux/vzcalluser.h 2006-03-03 14:36:32.561909608
+0900
> +++ linux-2.6.15-openvz-025.014/include/linux/vzcalluser.h 2006-03-03 14:39:39.544483936
+0900
> @@ -80,6 +80,7 @@
> #define VE_IP_NAT_MOD   (1U<<20)
> #define VE_IP_NAT_FTP_MOD (1U<<21)
> #define VE_IP_NAT_IRC_MOD (1U<<22)
> +#define VE_IP_TARGET_REDIRECT_MOD (1U<<23)
>
> /* these masks represent modules with their dependences */
> #define VE_IP_IPTABLES (VE_IP_IPTABLES_MOD)

> @@ -125,6 +126,8 @@
> | VE_IP_NAT | VE_IP_CONNTRACK_FTP)
> #define VE_IP_NAT_IRC (VE_IP_NAT_IRC_MOD \
> | VE_IP_NAT | VE_IP_CONNTRACK_IRC)
> +#define VE_IP_TARGET_REDIRECT (VE_IP_TARGET_REDIRECT_MOD \
> + | VE_IP_NAT)
>
> /* safe iptables mask to be used by default */
> #define VE_IP_DEFAULT   \
> diff -ur linux-2.6.15-openvz-025.014.orig/kernel/ve.c linux-2.6.15-openvz-025.014/kernel/ve.c
> --- linux-2.6.15-openvz-025.014.orig/kernel/ve.c 2006-03-03 14:36:33.253804424 +0900
> +++ linux-2.6.15-openvz-025.014/kernel/ve.c 2006-03-03 14:41:02.759833280 +0900
> @@ -75,6 +75,7 @@
> INIT_KSYM_MODULE(iptable_nat);
> INIT_KSYM_MODULE(ip_nat_ftp);
> INIT_KSYM_MODULE(ip_nat_irc);
> +INIT_KSYM_MODULE(ipt_REDIRECT);
>
> INIT_KSYM_CALL(int, init_netfilter, (void));
> INIT_KSYM_CALL(int, init_iptables, (void));
> @@ -100,6 +101,7 @@
> INIT_KSYM_CALL(int, init_iptable_nat, (void));
> INIT_KSYM_CALL(int, init_iptable_nat_ftp, (void));
> INIT_KSYM_CALL(int, init_iptable_nat_irc, (void));
> +INIT_KSYM_CALL(int, init_iptable_REDIRECT, (void));
> INIT_KSYM_CALL(void, fini_iptable_nat_irc, (void));
> INIT_KSYM_CALL(void, fini_iptable_nat_ftp, (void));
> INIT_KSYM_CALL(void, fini_iptable_nat, (void));
> @@ -124,6 +126,7 @@
> INIT_KSYM_CALL(void, fini_iptable_mangle, (void));
> INIT_KSYM_CALL(void, fini_iptables, (void));
> INIT_KSYM_CALL(void, fini_netfilter, (void));
> +INIT_KSYM_CALL(void, fini_iptable_REDIRECT, (void));
>
> INIT_KSYM_CALL(void, ipt_flush_table, (struct ipt_table *table));
> #endif
> diff -ur linux-2.6.15-openvz-025.014.orig/kernel/vecalls.c
linux-2.6.15-openvz-025.014/kernel/vecalls.c
> --- linux-2.6.15-openvz-025.014.orig/kernel/vecalls.c 2006-03-03 14:36:33.253804424 +0900
> +++ linux-2.6.15-openvz-025.014/kernel/vecalls.c 2006-03-03 14:42:35.671708528 +0900
> @@ -1592,6 +1592,13 @@
>   if (err < 0)
>   goto err_iptable_length;
> #endif
> +#if defined(CONFIG_IP_NF_TARGET_REDIRECT) || \
> +   defined(CONFIG_IP_NF_TARGET_REDIRECT_MODULE)
> + err = KSYMIPTINIT(init_mask, ve, VE_IP_TARGET_REDIRECT,
> +   ipt_REDIRECT, init_iptable_REDIRECT, ());

```
> + if (err < 0)
> +  goto err_iptable_REDIRECT;
> +#endif
>   return 0;
>
>  /*  ---------------------------------------------------------- ------------- */
> @@ -1732,6 +1739,12 @@
>     ip_tables, fini_iptables, ());
>  err_iptables:
>  #endif
> +#if defined(CONFIG_IP_NF_TARGET_REDIRECT) || \
> +    defined(CONFIG_IP_NF_TARGET_REDIRECT_MODULE)
> + KSYMIPTFINI(ve->_iptables_modules, VE_IP_TARGET_REDIRECT,
> +   ipt_REDIRECT, fini_iptable_REDIRECT, ());
> +err_iptable_REDIRECT:
> +#endif
>   ve->_iptables_modules = 0;
>
>   return err;
> diff -ur  linux-2.6.15-openvz-025.014.orig/net/ipv4/netfilter/ipt_REDI RECT.c
linux-2.6.15-openvz-025.014/net/ipv4/netfilter/ipt_REDIRECT. c
> ---  linux-2.6.15-openvz-025.014.orig/net/ipv4/netfilter/ipt_REDI RECT.c 2006-03-03
14:36:33.952698176 +0900
> +++  linux-2.6.15-openvz-025.014/net/ipv4/netfilter/ipt_REDIRECT. c 2006-03-03
14:47:44.502759072 +0900
> @@ -17,6 +17,7 @@
>  #include <linux/inetdevice.h>
>  #include <net/protocol.h>
>  #include <net/checksum.h>
> +#include <linux/nfcalls.h>
>  #include <linux/netfilter_ipv4.h>
>  #include <linux/netfilter_ipv4/ip_nat_rule.h>
>
> @@ -25,7 +26,7 @@
>  MODULE_DESCRIPTION("iptables REDIRECT target module");
>
>  #if 0
> -#define DEBUGP printk
> +#define DEBUGP ve_printk
>  #else
>  #define DEBUGP(format, args...)
>  #endif
> @@ -119,14 +120,36 @@
>   .me  = THIS_MODULE,
>  };
>
> +int init_iptable_REDIRECT(void)
> +{
```

```
> + return virt_ipt_register_target(&redirect_reg);
> +}
> +
> +void fini_iptable_REDIRECT(void)
> +{
> + virt_ipt_unregister_target(&redirect_reg);
> +}
> +
>  static int __init init(void)
>  {
> - return ipt_register_target(&redirect_reg);
> + int err;
> +
> + err = init_iptable_REDIRECT();
> + if (err < 0)
> +  return err;
> +
> + KSYMRESOLVE(init_iptable_REDIRECT);
> + KSYMRESOLVE(fini_iptable_REDIRECT);
> + KSYMMODRESOLVE(ipt_REDIRECT);
> + return 0;
>  }
>
>  static void __exit fini(void)
>  {
> - ipt_unregister_target(&redirect_reg);
> + KSYMMODUNRESOLVE(ipt_REDIRECT);
> + KSYMUNRESOLVE(init_iptable_REDIRECT);
> + KSYMUNRESOLVE(fini_iptable_REDIRECT);
> + fini_iptable_REDIRECT();
>  }
>
>  module_init(init);
>
>
>  ---------------------------------------------------------- ------------
>
--- ./include/linux/nfcalls.h.iptredir 2006-03-03 14:43:05.000000000 +0300
+++ ./include/linux/nfcalls.h 2006-03-16 16:06:33.000000000 +0300
@@ -155,6 +155,7 @@ DECL_KSYM_MODULE(ipt_helper);
 DECL_KSYM_MODULE(iptable_nat);
 DECL_KSYM_MODULE(ip_nat_ftp);
 DECL_KSYM_MODULE(ip_nat_irc);
+DECL_KSYM_MODULE(ipt_REDIRECT);
 #endif

 struct sk_buff;
@@ -182,6 +183,7 @@ DECL_KSYM_CALL(int, init_iptable_helper,
```

```
 DECL_KSYM_CALL(int, init_iptable_nat, (void));
 DECL_KSYM_CALL(int, init_iptable_nat_ftp, (void));
 DECL_KSYM_CALL(int, init_iptable_nat_irc, (void));
+DECL_KSYM_CALL(int, init_iptable_REDIRECT, (void));
 DECL_KSYM_CALL(void, fini_iptable_nat_irc, (void));
 DECL_KSYM_CALL(void, fini_iptable_nat_ftp, (void));
 DECL_KSYM_CALL(void, fini_iptable_nat, (void));
@@ -205,6 +207,7 @@ DECL_KSYM_CALL(void, fini_iptable_filter
 DECL_KSYM_CALL(void, fini_iptable_mangle, (void));
 DECL_KSYM_CALL(void, fini_iptables, (void));
 DECL_KSYM_CALL(void, fini_netfilter, (void));
+DECL_KSYM_CALL(void, fini_iptable_REDIRECT, (void));

 DECL_KSYM_CALL(void, ipt_flush_table, (struct ipt_table *table));
 #endif /* CONFIG_VE_IPTABLES */
--- ./include/linux/vzcalluser.h.iptredir 2006-03-03 14:43:11.000000000 +0300
+++ ./include/linux/vzcalluser.h 2006-03-16 16:05:46.000000000 +0300
@@ -82,6 +82,7 @@ struct vzctl_ve_netdev {
 #define VE_IP_NAT_MOD   (1U<<20)
 #define VE_IP_NAT_FTP_MOD  (1U<<21)
 #define VE_IP_NAT_IRC_MOD  (1U<<22)
+#define VE_IP_TARGET_REDIRECT_MOD (1U<<23)

 /* these masks represent modules with their dependences */
 #define VE_IP_IPTABLES  (VE_IP_IPTABLES_MOD)
@@ -127,6 +128,8 @@ struct vzctl_ve_netdev {
     | VE_IP_NAT | VE_IP_CONNTRACK_FTP)
 #define VE_IP_NAT_IRC  (VE_IP_NAT_IRC_MOD  \
     | VE_IP_NAT | VE_IP_CONNTRACK_IRC)
+#define VE_IP_TARGET_REDIRECT (VE_IP_TARGET_REDIRECT_MOD \
+    | VE_IP_NAT)

 /* safe iptables mask to be used by default */
 #define VE_IP_DEFAULT     \
--- ./kernel/ve.c.iptredir 2006-03-03 14:43:05.000000000 +0300
+++ ./kernel/ve.c 2006-03-16 16:05:46.000000000 +0300
@@ -75,6 +75,7 @@ INIT_KSYM_MODULE(ipt_helper);
 INIT_KSYM_MODULE(iptable_nat);
 INIT_KSYM_MODULE(ip_nat_ftp);
 INIT_KSYM_MODULE(ip_nat_irc);
+INIT_KSYM_MODULE(ipt_REDIRECT);

 INIT_KSYM_CALL(int, init_netfilter, (void));
 INIT_KSYM_CALL(int, init_iptables, (void));
@@ -99,6 +100,7 @@ INIT_KSYM_CALL(int, init_iptable_helper,
 INIT_KSYM_CALL(int, init_iptable_nat, (void));
 INIT_KSYM_CALL(int, init_iptable_nat_ftp, (void));
 INIT_KSYM_CALL(int, init_iptable_nat_irc, (void));
```

```
+INIT_KSYM_CALL(int, init_iptable_REDIRECT, (void));
 INIT_KSYM_CALL(void, fini_iptable_nat_irc, (void));
 INIT_KSYM_CALL(void, fini_iptable_nat_ftp, (void));
 INIT_KSYM_CALL(void, fini_iptable_nat, (void));
@@ -122,6 +124,7 @@ INIT_KSYM_CALL(void, fini_iptable_filter
 INIT_KSYM_CALL(void, fini_iptable_mangle, (void));
 INIT_KSYM_CALL(void, fini_iptables, (void));
 INIT_KSYM_CALL(void, fini_netfilter, (void));
+INIT_KSYM_CALL(void, fini_iptable_REDIRECT, (void));

 INIT_KSYM_CALL(void, ipt_flush_table, (struct ipt_table *table));
 #endif
--- ./kernel/vecalls.c.iptredir 2006-03-03 16:16:06.000000000 +0300
+++ ./kernel/vecalls.c 2006-03-16 16:07:25.000000000 +0300
@@ -1577,11 +1577,24 @@ static int do_ve_iptables(struct ve_stru
  if (err < 0)
   goto err_iptable_length;
 #endif
+#if defined(CONFIG_IP_NF_TARGET_REDIRECT) || \
+    defined(CONFIG_IP_NF_TARGET_REDIRECT_MODULE)
+ err = KSYMIPTINIT(init_mask, ve, VE_IP_TARGET_REDIRECT,
+   ipt_REDIRECT, init_iptable_REDIRECT, ());
+ if (err < 0)
+  goto err_iptable_REDIRECT;
+#endif
  return 0;

 /*  ------------------------------------------------------------ ------------- */

 cleanup:
+#if defined(CONFIG_IP_NF_TARGET_REDIRECT) || \
+    defined(CONFIG_IP_NF_TARGET_REDIRECT_MODULE)
+ KSYMIPTFINI(ve->_iptables_modules, VE_IP_TARGET_REDIRECT,
+   ipt_REDIRECT, fini_iptable_REDIRECT, ());
+err_iptable_REDIRECT:
+#endif
 #if defined(CONFIG_IP_NF_MATCH_LENGTH) || \
     defined(CONFIG_IP_NF_MATCH_LENGTH_MODULE)
  KSYMIPTFINI(ve->_iptables_modules, VE_IP_MATCH_LENGTH,
--- ./net/ipv4/netfilter/ipt_REDIRECT.c.iptredir 2004-08-14 14:55:10.000000000 +0400
+++ ./net/ipv4/netfilter/ipt_REDIRECT.c 2006-03-16 16:11:10.000000000 +0300
@@ -17,6 +17,7 @@
 #include <linux/inetdevice.h>
 #include <net/protocol.h>
 #include <net/checksum.h>
+#include <linux/nfcalls.h>
 #include <linux/netfilter_ipv4.h>
 #include <linux/netfilter_ipv4/ip_nat_rule.h>
```

```
@@ -25,7 +26,7 @@ MODULE_AUTHOR("Netfilter Core Team <core
 MODULE_DESCRIPTION("iptables REDIRECT target module");

 #if 0
-#define DEBUGP printk
+#define DEBUGP ve_printk
 #else
 #define DEBUGP(format, args...)
 #endif
@@ -115,14 +116,36 @@ static struct ipt_target redirect_reg =
   .me  = THIS_MODULE,
 };

+int init_iptable_REDIRECT(void)
+{
+ return visible_ipt_register_target(&redirect_reg);
+}
+
+void fini_iptable_REDIRECT(void)
+{
+ visible_ipt_unregister_target(&redirect_reg);
+}
+
 static int __init init(void)
 {
- return ipt_register_target(&redirect_reg);
+ int err;
+
+ err = init_iptable_REDIRECT();
+ if (err < 0)
+  return err;
+
+ KSYMRESOLVE(init_iptable_REDIRECT);
+ KSYMRESOLVE(fini_iptable_REDIRECT);
+ KSYMMODRESOLVE(ipt_REDIRECT);
+ return 0;
 }

 static void __exit fini(void)
 {
- ipt_unregister_target(&redirect_reg);
+ KSYMMODUNRESOLVE(ipt_REDIRECT);
+ KSYMUNRESOLVE(init_iptable_REDIRECT);
+ KSYMUNRESOLVE(fini_iptable_REDIRECT);
+ fini_iptable_REDIRECT();
 }
```

```
module_init(init);
```