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/* ANRC RHKI */
/* Lab20: Networking Lab - No ICMP */
#include <linux/module.h>
#include <linux/kernel.h>
#include <linux/init.h>
#include <linux/netfilter.h>
#include <linux/netfilter_ipv4.h>
#include <linux/ip.h>
#include <linux/in.h>

#define DRIVER_AUTHOR "ANRC"
#define DRIVER_DESC   "Lab20: Prevent Network ICMP Packets from going in/out"

MODULE_LICENSE("GPL");           // Get rid of taint message by declaring code as GPL.

/* Or with defines, like this: */
MODULE_AUTHOR(DRIVER_AUTHOR);    // Who wrote this module?
MODULE_DESCRIPTION(DRIVER_DESC); // What does this module do?

/* IP Hooks */
/* After promisc drops, checksum checks. */
#define NF_IP_PRE_ROUTING        0
/* If the packet is destined for this box. */
#define NF_IP_LOCAL_IN           1
/* If the packet is destined for another interface. */
#define NF_IP_FORWARD            2
/* Packets coming from a local process. */
#define NF_IP_LOCAL_OUT          3
/* Packets about to hit the wire. */
#define NF_IP_POST_ROUTING       4
#define NF_IP_NUMHOOKS          5

static struct nf_hook_ops netfilter_ops_in; /* NF_IP_PRE_ROUTING */
static struct nf_hook_ops netfilter_ops_out; /* NF_IP_POST_ROUTING */

/* Function prototype in <linux/netfilter> */

/*
typedef unsigned int nf_hookfn(unsigned int hooknum,
                                struct sk_buff *skb,
                                const struct net_device *in,
                                const struct net_device *out,
                                int (*okfn)(struct sk_buff *));
*/

unsigned int main_hook(unsigned int hooknum,
                        struct sk_buff *skb,
                        const struct net_device *in,
                        const struct net_device *out,
                        int (*okfn)(struct sk_buff*))
{
    /* Check for ICMP Packet */

    /* Must be non-ICMP, let it through! */
    return NF_ACCEPT;
}

int init(void)
{
    printk(KERN_INFO "init_module() called\n");

    netfilter_ops_in.hook          = main_hook;
    netfilter_ops_in.pf            = PF_INET;
    netfilter_ops_in.hooknum       = NF_IP_PRE_ROUTING;
    netfilter_ops_in.priority      = NF_IP_PRI_FIRST;
    netfilter_ops_out.hook         = main_hook;

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netfilter_ops_out.pf          = PF_INET;
netfilter_ops_out.hooknum     = NF_IP_POST_ROUTING;
netfilter_ops_out.priority    = NF_IP_PRI_FIRST;
nf_register_hook(&netfilter_ops_in); /* register NF_IP_PRE_ROUTING hook */
nf_register_hook(&netfilter_ops_out); /* register NF_IP_POST_ROUTING hook */

return 0;
}

void cleanup(void)
{
    nf_unregister_hook(&netfilter_ops_in); /*unregister NF_IP_PRE_ROUTING hook*/
    nf_unregister_hook(&netfilter_ops_out); /*unregister NF_IP_POST_ROUTING hook*/

    printk(KERN_ALERT "Unloading netdead ...\n");
}

module_init(init);
module_exit(cleanup);
```