

bios source file

```
int udp_send(int s, int d, size_t len)
{
    ...
}
```

bios.elf

0xe60:

[binary code of
udp_send.constprop.0.isra.o]

Compile/Build

nm

Symbol list

```
...
00000c7c t udp_arp_resolve
00000e60 t udp_send.constprop.0.isra.0
000010d0 t rx_callback_lto_priv.1
0000120c t boot
...
```

tool:
genstubs.jl

stubs.s: generated stub functions

```
...
.size   udp_arp_resolve, .-udp_arp_resolve
.globl  udp_send_constprop_0_isra_0
.type   udp_send_constprop_0_isra_0, @function
udp_send_constprop_0_isra_0:
    li    t0, 3680
    jr    t0
.size   udp_send_constprop_0_isra_0, .-udp_send_constprop_0_isra_0
.globl  rx_callback_lto_priv_1
.type   rx_callback_lto_priv_1, @function
rx_callback_lto_priv_1:
    ...
```

App source

```
...
extern int __attribute__((weak)) udp_send(unsigned short src_port, unsigned short dst_port, unsigned int length);
extern void __attribute__((weak)) udp_start_constprop_0(unsigned int ip, const unsigned char *macaddr);
extern int __attribute__((weak)) udp_send_constprop_0_isra_0(unsigned short dst_port, unsigned int length);

int xudp_send(unsigned short src_port, unsigned short dst_port, unsigned int length)
{
    if (udp_send)
        return udp_send(src_port, dst_port, length);
    else if (udp_send_constprop_0_isra_0)
        // src_port ignored
        return udp_send_constprop_0_isra_0(dst_port, length);
    else {
        printf("no udp_send variants\n");
        return -1;
    }
}
...
```

Compile/Link

App.elf