



- Pentest and security services focused on network infrastructure and reviewing
- Getting your network online, from procurement of connections and devices to full BGP configuration
- We provide performance, penetration testing and DDoS testing – port scans are free
- Network security consulting, network design, routers, loadbalancing, ask
- Need an Intrusion Detection System (IDS) – we recommend and run Suricata IDS and Zeek

## DDoS script: Lua, MoonGen and DPDK

```
local txStats = stats:newDevTxCounter(queue, "plain")
while mg.running() do
    -- fill packets and set their size
    bufs:alloc(packetLen)
    for i, buf in ipairs(bufs) do
        local pkt = buf:getIcmpPacket(ipv4)
        if ipv4 then
            pkt.ip4.src:set(minIP)
        else
            pkt.ip6.src:set(minIP)
        end
    end
    --offload checksums to NIC
    bufs:offloadTcpChecksums(ipv4)
    queue:send(bufs)
    txStats:update()
end
```

Figure 1: penguinping-02.lua

## PenguinPing uses hping3 DDoS options

```
description("Generates TCP SYN flood from varying source IPs, supports both IPv4 and IPv6")
argument("host", "Destination IP (IPv4 or IPv6).")
option("-I --interface", "interface name"):default(0):convert(tonumber)
option("-r --rate", "Transmit rate in Mbit/s."):default(10000):convert(tonumber)
option("-c --count", "Packet count"):default(10000):convert(tonumber)
option("-a --spooft", "Spoof source address (IPv4 or IPv6)."):default("10.0.0.1")
option("-s --baseport", "TCP/UDP source port (default random)":default(-1):convert(tonumber)
option("-p --destport", "TCP/UDP destination port"):default(80):convert(tonumber)
flag("-1 --icmp", "ICMP mode")
flag("-2 --udp", "UDP mode")

flag("-L --setack", "Set TCP ack")
flag("-F --fin", "Set TCP FIN flag")
flag("-S --syn", "Set TCP SYN flag")
flag("-R --rst", "Set TCP RST flag")
flag("-A --ack", "Set TCP ACK flag")
```

Figure 2: PenguinPing parser example  
See more at <https://penguinping.org/>

♡ love internet packets ♡

