

# Flowtables

Bypass the network stack (fastpath) / HW offloading

```
ip link add dummy0 type dummy
ip link add dummy1 type dummy
```

```
nft add table inet flow_table
nft add chain inet flow_table forward '{ type filter hook forward priority filter; }'
```

```
nft add flowtable inet flow_table f_t "{ hook ingress priority 0; devices = { dummy0, dummy1 }; }"
```

```
nft add rule inet flow_table forward ip protocol { tcp, udp } flow offload @f_t
nft add rule inet flow_table forward ip6 nexthdr { tcp, udp } flow offload @f_t
```

```
nft add rule inet flow_table forward ct state established,related counter return
nft add rule inet flow_table forward ip protocol { tcp, udp } return
nft add rule inet flow_table forward ip6 nexthdr { tcp, udp } return
```

# Key/value maps and verdict maps

- Anonymous maps
- Named maps
- Anonymous vmaps
- Named vmaps

```
nft add chain inet firewall prerouting '{type nat hook prerouting priority 0; policy accept; }'  
nft add rule inet firewall prerouting dnat ip to tcp dport map '{ 80: 192.168.1.100, 8888: 192.168.1.101 }'
```

```
nft add chain inet firewall postrouting '{type nat hook postrouting priority 0; policy accept; }'  
nft add map inet firewall named_map '{ type inet_service: ipv4_addr; }'  
nft add element inet firewall named_map '{ 81: 192.168.1.102, 8080: 192.168.1.103 }'  
nft add rule inet firewall postrouting snat ip to tcp dport map @named_map
```

```
nft add chain inet firewall icmp-chain  
nft add chain inet firewall tcp-chain  
nft add chain inet firewall udp-chain  
nft add rule inet firewall icmp-chain counter  
nft add rule inet firewall tcp-chain counter  
nft add rule inet firewall udp-chain counter  
nft insert rule inet firewall input handle 7 ip protocol vmap '{ tcp: jump tcp-chain, udp: jump udp-chain, icmp: jump icmp-chain }'
```

```
nft add map inet firewall named_vmap '{ type ipv4_addr: verdict; }'  
nft add element inet firewall named_vmap '{ 192.168.0.10: drop, 192.168.0.11: accept }'  
nft insert rule inet firewall input handle 8 ip saddr vmap @named_vmap
```