

Open Source Router Software

Software for building your own router/firewall/IDS/IPS appliance.

- [OPNsense](#)

OPNsense



<https://opnsense.org/>

OPNsense is an open source, FreeBSD-based firewall and routing software.

Installed on appropriate hardware, it replaces SOHO routers with a much more robust, effective and powerful appliance to protect your home network. Using built-in and available add-ons, you can build a feature set as simple or complex as you require. Integrations such as intrusion detection/prevention, DHCP and DNS services, VPN services, Firewall with aliasing just to name a few, come standard with OPNsense. Add-ons, both free and subscription-based are available. Using the add-ons, referred to as plug-ins in OPNsense, you can setup proxys, reverse-proxys, web caching, and much more.

As an example, I have my OPNsense appliance setup with extra security measures using Crowdsec, Maltrail, Country Blocking and Zen Armor (Formerly Suricata). I also have a Wireguard VPN setup to permit secure access to my internal devices and servers should I need to access them remotely. I utilize OPNsense's built-in Unbound DNS application to manage and secure my domain name services.

Frankly, I had been using consumer routers (NetGear, ASUS, etc) with custom firmware (DD-WRT, Fresh Tomato, etc) for years. They just couldn't keep up with the demands placed on them and they had very little in the way of firewall and no intrusion detection/prevention ability. Using OPNsense, I have essentially future-proofed my home network from most bad actors and have noticed a SIGNIFICANT improvement in throughput as well. You are really only limited by the hardware you choose to run it, which, even on low end hardware, is substantially more powerful than any high-end consumer (SOHO) router.

While OPNsense's default Lobby dashboard is pretty good, I'd recommend using a combination dashboard that utilizes InfluxDB, Grafana and Telegraph or Ansible. A really good example of this is Brendan Smith's implementation shown in the pic below and instructions for this dashboard can be found on his website ["How to Configure an OPNsense Dashboard"](#)

General / OPNsense

InfluxDBInfluxDBElasticSearchElasticsearchOPNsenseAllDiskAllSensorAllLANAllGatewayAllWANAllFW_InterfaceAllFW_Destination PortAllFW_Source IPAll

Hardware

Active Users1

Uptime9 days, 23:37

CPU Total5.59%

CPU

Process Information

PF Information

Load

Disk Utilization

Ram

Temperature Sensors

Firewall

Network Stats

WAN Interface - igb0

LAN Interface - igb1_vlan5

LAN Interface - igb1_vlan2

LAN Interface - igb1_vlan3

LAN Interface - igb1_vlan4

LAN Interface - igb1_vlan6

LAN Interface - igb1_vlan7

LAN Interface - igb1_vlan8

Firewall Blocked Events on igb0

Firewall Blocked Event Locations on igb0

Top IP Blocked on igb0

Firewall Blocked Destination Ports on igb0

Firewall Blocked Protocols on igb0

Gateway RTT - All

Gateway Loss - All

Interface summary

Gateway Summary - All

Interface Summary

WAN Traffic - igb0 (Bits/sec)

WAN Traffic - igb0 (Bits/sec)

WAN igb0

WAN Throughput - igb0

Interface Summary

LAN Traffic - igb1_vlan5 (Bits/sec)

LAN Traffic - igb1_vlan5 (Bits/sec)

LAN igb1_vlan5

LAN Throughput - igb1_vlan5

