

Connect your pfSense firewall to 44net via Wireguard VPN



Mark Phillips, NI2O 072022 V1.2

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Abstract

This document aims to help the reader connect their pfSense firewall to the HamGateXX 44net VPN system using wireguard. If you are interested only in a connection to the 44net to access services then this document is for you. It will describe how all of the machines protected by your pfSense firewall will connect to the HamGateXX 44net network using a single NAT instance. It will NOT enable you to connect your 44net subnet to the greater 44net network via VPN (covered in another document).

Assumptions

This document describes only pfSense V2.5 or later on a 64 bit CPU with AES encryption facilities. A 2 port (WAN & LAN) device is the minimum hardware platform. The reader is familiar with installing the required software modules.

Required modules

Install the Wireguard module from the Package Manager.

Obtain a VPN account

Contact your local HamGateXX 44net VPN administrator for a VPN account. You will be supplied with a configuration file containing all the necessary keys and routing instructions similar to the example below.

The [Interface] section describes your end of the VPN tunnel along with its required key. You may not change this key without consulting your administrator. The IP address will be associated with your end of the tunnel. This will not change for all the time you own the VPN account

The [Peer] section describes the VPN endpoint (or server), its hostname, access port number, required keys and IP addresses that are allowed to traverse the VPN and a keepalive timer to overcome NAT issues with your Internet provider.

[Interface]

Address = 44.56.0.253/26

ListenPort = 51844

PrivateKey = SEK1oHn54EZunvgqNk4MfU5fsAZliw/ycg+ezhuUjHY=

[Peer]

PublicKey = nW9HaYfZeM5opuqizdPM3CkW0Eo42+CKH6SxWvKmlWm=

PresharedKey = XQXEW0Yb6V4AWFjUIPzqUyX6DdkhJFctqEAnPWA1z0c=

AllowedIPs = 44.0.0.0/9, 44.128.0.0/10

Endpoint = hamgatepa.ampr.org:51844

PersistentKeepalive = 25

We are NOT your Internet provider!

You may have noticed in the [Peer] section above that the AllowedIPs line is set to allow access to the 44.x.x.x network only. Whilst it is possible to get from the Internet to the 44net, connecting in the reverse direction is not allowed via the HamGateXX VPN servers.

Configure the VPN connection

Set the routes

Enable NAT

Testing