

# Guide - How to connect pfSense OpenVPN client to IPVanish

*Disclaimer: This guide is based on pfSense version 2.3.4 and IPVanish as of 5/27/2017. While I don't expect this guide to change much in the meantime, there is always the chance that something can change that can break things. That said, the basic principles should still apply and could even work with other VPN providers who utilize OpenVPN. Your mileage may vary.*

Login to IPVanish and under the server list, all OS section, click the download link for OpenVPN.



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Account

Billing

Subscription

Server List

SOCKS5 Proxy

## Configuration Files

Mac OS

[L2TP XML »](#)  
[PPTP XML »](#)

All OS

[OpenVPN »](#)

Windows

[IPVanish VPN Software »](#)

## Server List

Country	Location	Address	Status
	Johannesburg	jnb-c05.ipvanish.com	7% capacity
	Johannesburg	jnb-c03.ipvanish.com	9% capacity
	Johannesburg	jnb-c04.ipvanish.com	3% capacity
	Johannesburg	jnb-c01.ipvanish.com	12% capacity
	Johannesburg	jnb-c02.ipvanish.com	16% capacity
	Hanoi	han-c01.ipvanish.com	4% capacity
	Ashburn	iad-a12.ipvanish.com	42% capacity
	Ashburn	iad-a11.ipvanish.com	29% capacity
	Ashburn	iad-a05.ipvanish.com	30% capacity
	Ashburn	iad-a13.ipvanish.com	26% capacity
	Ashburn	iad-a20.ipvanish.com	33% capacity

This will give you a zip file which contains the OpenVPN profiles as well as the CA that you will need to create.

re View

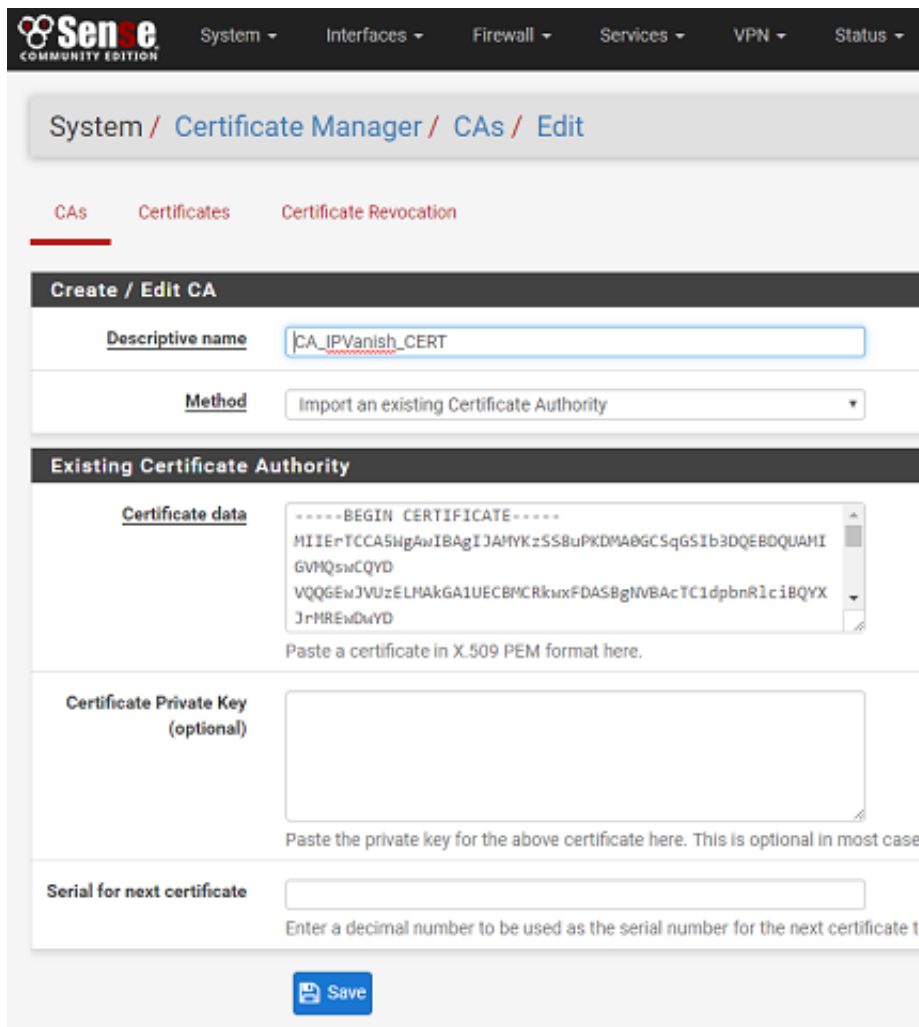
This PC > Downloads > configs

Name	Date modified	Type	Size
ca.ipvanish.com.crt	5/24/2017 6:25 PM	Security Certificate	2 KB
ipvanish-AU-Tirana-tia-c01.ovpn	5/24/2017 6:25 PM	OpenVPN Config ...	1 KB
ipvanish-AR-Buenos-Aires-eze-c01.ovpn	5/24/2017 6:25 PM	OpenVPN Config ...	1 KB
ipvanish-AT-Graz-grz-c01.ovpn	5/24/2017 6:25 PM	OpenVPN Config ...	1 KB
ipvanish-AT-Vienna-vie-c01.ovpn	5/24/2017 6:25 PM	OpenVPN Config ...	1 KB
ipvanish-AT-Vienna-vie-c02.ovpn	5/24/2017 6:25 PM	OpenVPN Config ...	1 KB
ipvanish-AT-Vienna-vie-c03.ovpn	5/24/2017 6:25 PM	OpenVPN Config ...	1 KB
ipvanish-AU-Melbourne-mel-c01.ovpn	5/24/2017 6:25 PM	OpenVPN Config ...	1 KB
ipvanish-AU-Melbourne-mel-c02.ovpn	5/24/2017 6:25 PM	OpenVPN Config ...	1 KB
ipvanish-AU-Sydney-syd-a01.ovpn	5/24/2017 6:25 PM	OpenVPN Config ...	1 KB
ipvanish-AU-Sydney-syd-a02.ovpn	5/24/2017 6:25 PM	OpenVPN Config ...	1 KB
ipvanish-AU-Sydney-syd-a03.ovpn	5/24/2017 6:25 PM	OpenVPN Config ...	1 KB
ipvanish-AU-Sydney-syd-a04.ovpn	5/24/2017 6:25 PM	OpenVPN Config ...	1 KB
ipvanish-AU-Sydney-syd-a05.ovpn	5/24/2017 6:25 PM	OpenVPN Config ...	1 KB
ipvanish-AU-Sydney-syd-a06.ovpn	5/24/2017 6:25 PM	OpenVPN Config ...	1 KB
ipvanish-AU-Sydney-syd-a07.ovpn	5/24/2017 6:25 PM	OpenVPN Config ...	1 KB
ipvanish-AU-Sydney-syd-a08.ovpn	5/24/2017 6:25 PM	OpenVPN Config ...	1 KB
ipvanish-AU-Sydney-syd-a09.ovpn	5/24/2017 6:25 PM	OpenVPN Config ...	1 KB
ipvanish-AU-Sydney-syd-a10.ovpn	5/24/2017 6:25 PM	OpenVPN Config ...	1 KB
ipvanish-AU-Sydney-syd-a11.ovpn	5/24/2017 6:25 PM	OpenVPN Config ...	1 KB
ipvanish-AU-Sydney-syd-a12.ovpn	5/24/2017 6:25 PM	OpenVPN Config ...	1 KB
ipvanish-AU-Sydney-syd-a13.ovpn	5/24/2017 6:25 PM	OpenVPN Config ...	1 KB
ipvanish-AU-Sydney-syd-a14.ovpn	5/24/2017 6:25 PM	OpenVPN Config ...	1 KB
ipvanish-AU-Sydney-syd-a15.ovpn	5/24/2017 6:25 PM	OpenVPN Config ...	1 KB
ipvanish-AU-Sydney-syd-a16.ovpn	5/24/2017 6:25 PM	OpenVPN Config ...	1 KB
ipvanish-AU-Sydney-syd-a17.ovpn	5/24/2017 6:25 PM	OpenVPN Config ...	1 KB
ipvanish-AU-Sydney-syd-a18.ovpn	5/24/2017 6:25 PM	OpenVPN Config ...	1 KB
ipvanish-AU-Sydney-syd-a19.ovpn	5/24/2017 6:25 PM	OpenVPN Config ...	1 KB
ipvanish-AU-Sydney-syd-a20.ovpn	5/24/2017 6:25 PM	OpenVPN Config ...	1 KB
ipvanish-AU-Sydney-syd-a21.ovpn	5/24/2017 6:25 PM	OpenVPN Config ...	1 KB
ipvanish-AU-Sydney-syd-a22.ovpn	5/24/2017 6:25 PM	OpenVPN Config ...	1 KB
ipvanish-AU-Sydney-syd-a23.ovpn	5/24/2017 6:25 PM	OpenVPN Config ...	1 KB
ipvanish-AU-Sydney-syd-a24.ovpn	5/24/2017 6:25 PM	OpenVPN Config ...	1 KB

Login to your pfSense web interface and go to System/Certificate Manager

Click Add to start to create a new certificate authority

Give the CA a name (it can be whatever you want). Chose to Import an existing Certificate Authority. Copy and paste the info from the file you downloaded called: ca.ipvanish.com.crt into the Certificate data field. You can open it with notepad to do this.



Now go to VPN, OpenVPN, and click on the Client tab. Click Add.

This is where things can get a bit tricky. In order to fill out the information in this screenshot, you need to open up one of the OpenVPN profiles that you downloaded. I recommend looking at the first place where you downloaded the list to find a server close to you that has very little load. Once you've identified that server, go back to your OpenVPN files and open the one that corresponds to the name of the server you want to connect to. The URL you want is what comes after "udp remote." Copy and paste this into pfSense under server host or address. After that, copy the rest of the information I have in my screen shots including your IPVanish username and password. In the custom options field, you can actually leave this blank. The settings that I have in there are redundant and not needed.

## General Information

**Disabled**  Disable this client  
Set this option to disable this client without removing it from the list.

**Server mode** Peer to Peer ( SSL/TLS )

**Protocol** UDP

**Device mode** tun

**Interface** WAN

**Local port**  
Set this option to bind to a specific port. Leave this blank or enter 0 for a random dynamic port.

**Server host or address**

**Server port** 1194

**Proxy host or address**

**Proxy port**

**Proxy Auth. - Extra options** none

**Server hostname resolution**  Infinitely resolve server  
Continuously attempt to resolve the server host name. Useful when communicating with a server that is not permanently connected to the Internet.

**Description**  
A description may be entered here for administrative reference (not parsed).

## User Authentication Settings

**Username** .com  
Leave empty when no user name is needed

**Password** ..... Confirm  
Leave empty when no password is needed

## Cryptographic Settings

**TLS authentication**  Enable authentication of TLS packets.

**Peer Certificate Authority** CA\_IPVanish\_CERT

**Client Certificate** None (Username and/or Password required)

**Encryption Algorithm** AES-256-CBC (256 bit key, 128 bit block)

**Auth digest algorithm** SHA256 (256-bit)

Leave this set to SHA1 unless all clients are set to match. SHA1 is the default for OpenVPN.

**Hardware Crypto** No Hardware Crypto Acceleration

Tunnel Settings	
<b>IPv4 Tunnel Network</b>	<input type="text"/> This is the IPv4 virtual network used for private communications between this client and the server expressed using CIDR (e.g. 10.0.8.0/24). The second network address will be assigned to the client virtual interface.
<b>IPv6 Tunnel Network</b>	<input type="text"/> This is the IPv6 virtual network used for private communications between this client and the server expressed using CIDR (e.g. fe80::/64). The second network address will be assigned to the client virtual interface.
<b>IPv4 Remote network(s)</b>	<input type="text"/> IPv4 networks that will be routed through the tunnel, so that a site-to-site VPN can be established without manually changing the routing tables. Expressed as a comma-separated list of one or more CIDR ranges. If this is a site-to-site VPN, enter the remote LAN/s here. May be left blank for non site-to-site VPN.
<b>IPv6 Remote network(s)</b>	<input type="text"/> These are the IPv6 networks that will be routed through the tunnel, so that a site-to-site VPN can be established without manually changing the routing tables. Expressed as a comma-separated list of one or more IP/PREFIX. If this is a site-to-site VPN, enter the remote LAN/s here. May be left blank for non site-to-site VPN.
<b>Limit outgoing bandwidth</b>	<input type="text" value="Between 100 and 100,000,000 bytes/sec"/> Maximum outgoing bandwidth for this tunnel. Leave empty for no limit. The input value has to be something between 100 bytes/sec and 100 Mbytes/sec (entered as bytes per second).
<b>Compression</b>	<input type="text" value="Enabled with Adaptive Compression"/> Compress tunnel packets using the LZO algorithm. Adaptive compression will dynamically disable compression for a period of time if OpenVPN detects that the data in the packets is not being compressed efficiently.
<b>Topology</b>	<input type="text" value="Subnet - One IP address per client in a common subnet"/> Specifies the method used to configure a virtual adapter IP address.
<b>Type-of-Service</b>	<input type="checkbox"/> Set the TOS IP header value of tunnel packets to match the encapsulated packet value.
<b>Disable IPv6</b>	<input type="checkbox"/> Don't forward IPv6 traffic.
<b>Don't pull routes</b>	<input type="checkbox"/> Bars the server from adding routes to the client's routing table This option still allows the server to set the TCP/IP properties of the client's TUN/TAP interface.
<b>Don't add/remove routes</b>	<input type="checkbox"/> Don't add or remove routes automatically Pass routes to --route-upscript using environmental variables.
Advanced Configuration	
<b>Custom options</b>	<input type="text" value="verify-x509-name p[REDACTED]anish.com name&lt;br/&gt;comp-lzo&lt;br/&gt;tls-cipher TLS-DHE-RSA-WITH-AES-256-CBC-SHA:TLS-DHE-DSS-WITH-AES-256-CBC-SHA:TLS-RSA-WITH-AES-256-CBC-SHA"/> Enter any additional options to add to the OpenVPN client configuration here, separated by semicolon.
<b>Verbosity level</b>	<input type="text" value="default"/> Each level shows all info from the previous levels. Level 3 is recommended for a good summary of what's happening without being swamped by output.  None: Only fatal errors Default through 4: Normal usage range 5: Output R and W characters to the console for each packet read and write. Uppercase is used for TCP/UDP packets and lowercase is used for TUN/TAP packets. 6-11: Debug info range

At this point, hit save, and like magic if you did your job right you should be connected and browsing using the OpenVPN client. You can check the status under Status/OpenVPN. If it says UP and has a green check mark you should be good to go! Check to see if your new IP is working by going to a site like [www.ipchicken.com](http://www.ipchicken.com).

## Optional

This section is optional, but I'm including it because quite frankly it took

me a long time to figure out and I could never find any up to date guides that actually worked. This section will cover how to only pass certain traffic over the VPN client. In my case, I only really wanted one computer to use the VPN instead of the whole house. I don't need other things being slower going over a VPN such as my Roku or Media Center PC. While IPVanish is actually quite fast, it still is slower than my normal internet connection.

There may be other (perhaps even better ways) of doing this, but again this is what worked for me.

Start by going to interfaces and assign.

Select opvpnc (it might be called something else similar) under the list of available interfaces and click Add.

Click on the interface you just created and check the box that says Enable Interface. Save and apply.

Now go to Firewall/Rules and click on the LAN tab. Edit your current Default LAN to any rule. Scroll to the bottom and show advanced options. Change the Gateway from default to your ISPs gateway. Click save and apply.

Now create a new rule under the LAN tab. Change protocol from TCP to any. Change your source to either a single host, network range, or an alias (in my case I used an alias list that I can update whenever I want). Go to advanced and this time change the Gateway from default to your OpenVPN gateway. Click save and apply.

**IMPORTANT:** Make sure that you move the OpenVPN rule above the other rule or this won't work as intended.

Finally go to Firewall/NAT and click on outbound. Change your setting from Automatic to Hybrid or Manual. Personally, I prefer Hybrid so I don't have to maintain anything and can just make changes as needed, but this is really just up to you.

Click on Add.

Set your rule to something similarly to this. Remember I'm using an alias here but you can put in a single IP if that's all you need.

The screenshot shows the 'Edit Advanced Outbound NAT Entry' configuration page in Mikrotik WinBox. The breadcrumb navigation at the top reads 'Firewall / NAT / Outbound / Edit'. The page is divided into three main sections: 'Edit Advanced Outbound NAT Entry', 'Translation', and 'Misc'.

**Edit Advanced Outbound NAT Entry**

- Disabled:**  Disable this rule
- Do not NAT:**  Enabling this option will disable NAT for traffic matching this rule and stop processing Outbound NAT rules. In most cases this option is not required.
- Interface:** OpenVPN (dropdown). The interface on which traffic is matched as it exits the firewall. In most cases this is "WAN" or another externally-connected interface.
- Protocol:** any (dropdown). Choose which protocol this rule should match. In most cases "any" is specified.
- Source:** Network (dropdown), VPN\_Clients (text), / 32 (dropdown), (empty text box). Type: Source network for the outbound NAT mapping. Port or Range.
- Destination:** Any (dropdown), (empty text box), / 24 (dropdown), (empty text box). Type: Destination network for the outbound NAT mapping. Port or Range.
- Not. Invert the sense of the destination match.

**Translation**

- Address:** Interface Address (dropdown). Connections matching this rule will be mapped to the specified Address. The Address can be an Interface, a Host-type Alias, or a Virtual IP address.
- Port or Range:** (empty text box). Enter the external source Port or Range used for remapping the original source port on connections matching the rule. Port ranges are a low port and high port number separated by ':'. Leave blank when Static Port is checked.  Static Port

**Misc**

- No XMLRPC Sync:**  Prevents the rule on Master from automatically syncing to other CARP members. This does NOT prevent the rule from being overwritten on Slave.
- Description:** (empty text box). A description may be entered here for administrative reference (not parsed).

Click save and apply.

Now check your clients. Everything except the client you specified should be using the normal WAN and that client or clients should be getting a different IP over the VPN.