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# Purpose

The purpose of this lab was to learn how to initialize, configure, and access the IPSec VPN using a Fortigate firewall and its GUI. We aimed to learn more about IPSec VPNs and VPNs as a whole. We wanted to figure out how the IPSec VPN interacts with the SSL VPN, and how to use Forticlient for an IPSec VPN.

# Background

## VPN

VPN stands for virtual private network. It establishes a digital connection between your computer and a remote device, often referred to as a tunnel.

## IPSec

Commonly used to secure VPNs, IPSec is used for confidentiality and data integrity. A VPN creates a private tunnel between a user’s device and the VPN device, and the IPsec protocols implement a secure tunnel that protects the VPN data from outside access.

## Forticlient

Forticlient can be used as a VPN client with IPSec. Forticlient is Fortinet’s proprietary client-based software that has many extra security features for VPN connections, in addition to increased flexibility and reduced latency. It is designed for desktops and laptops.

# Lab Summary

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Go to User & Authentication > User Definition.

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Make a new local user.

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Set a known username and password.

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Go to User Groups.

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Make a new user group, name it, set it to be a Firewall type, and add the member.

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Go to addresses.

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Make a new address, set a name, IP address, and make it use the LAN interface. Press OK.

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Go to VPN > IPSec Wizard

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Create a new VPN, name it, and configure it as shown.

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Assign the incoming interface to WAN. Give it a pre-shared key, and make it use the user group you made.

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Make it use the LAN local interface, the previously set local address, and assign it a client address range and subnet mask. Configure the rest as shown.

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Enable save password.

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Click create.

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Go to Policy & Objects > Firewall Policy

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Make a new policy, use the VPN as the incoming interface, use WAN as the outgoing interface, and configure the rest as shown.

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Go to your SSL VPN and find the listening URL.

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Open lusrmgr.msc and make a new user.

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Add it to the administrators group.

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On the other PC, go the listening URL.

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Enter the credentials, for the SSL user, and download forticlient.

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Go to files and launch it.

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Click configure VPN.

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Add a name, and configure VPN as shown.

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Input the credentials from earlier. Make sure remote desktop is turned on for the target PC.

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An IPSec connection has been established.

## Proving connectivity

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On VPN > IPSec Tunnels,

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# Conclusion

We successfully configured and used an IPSec VPN tunnel. In addition, we learned how to install and use Forticlient. We learned how IPSec is used to connect remote devices together securely, with authentication. We had to use the SSL VPN to install Forticlient, showing a relationship between the SSL VPN and the IPSec VPN that possibly reveals a potential use-case of the SSL VPN as a tool to facilitate the IPSec VPN’s set up. In a corporate setting, the IPSec VPN would be very useful to make a secure tunnel between two devices with data integrity and data confidentiality.

A close-up of a document

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