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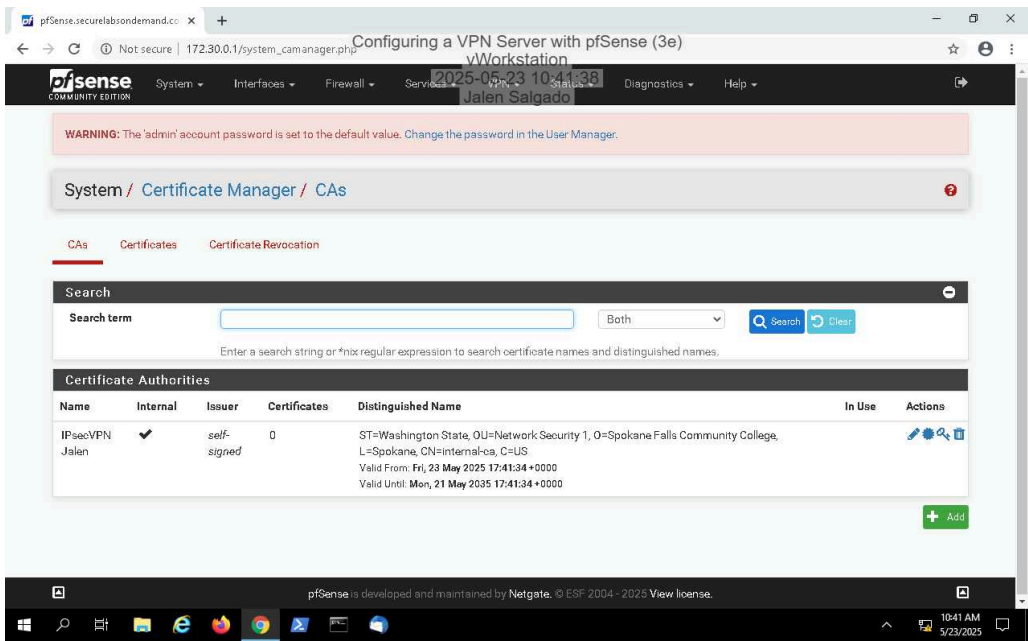
Time on Task:	Progress:
1 hour, 54 minutes	100%

Report Generated: Saturday, July 26, 2025 at 2:12 PM

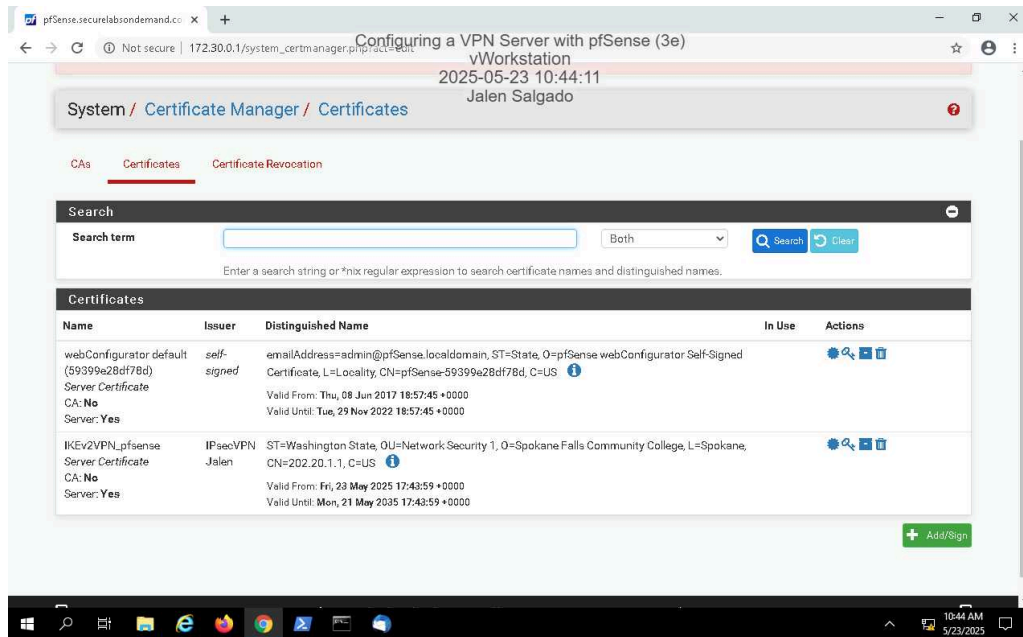
Section 1: Hands-On Demonstration

Part 1: Configure an IPsec VPN Server

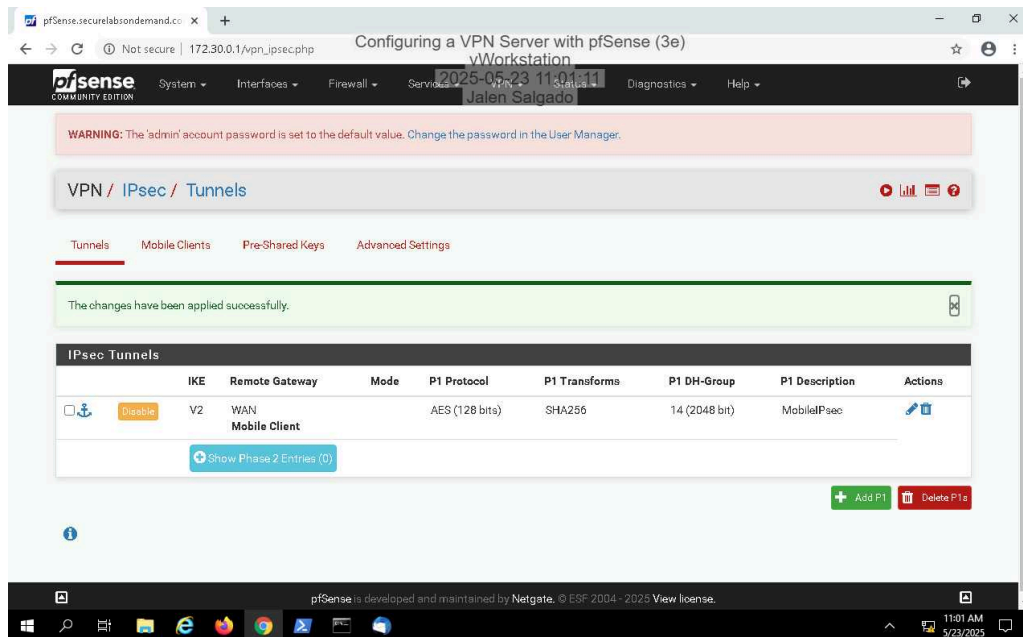
18. Make a screen capture showing the updated Certificate Authorities table.



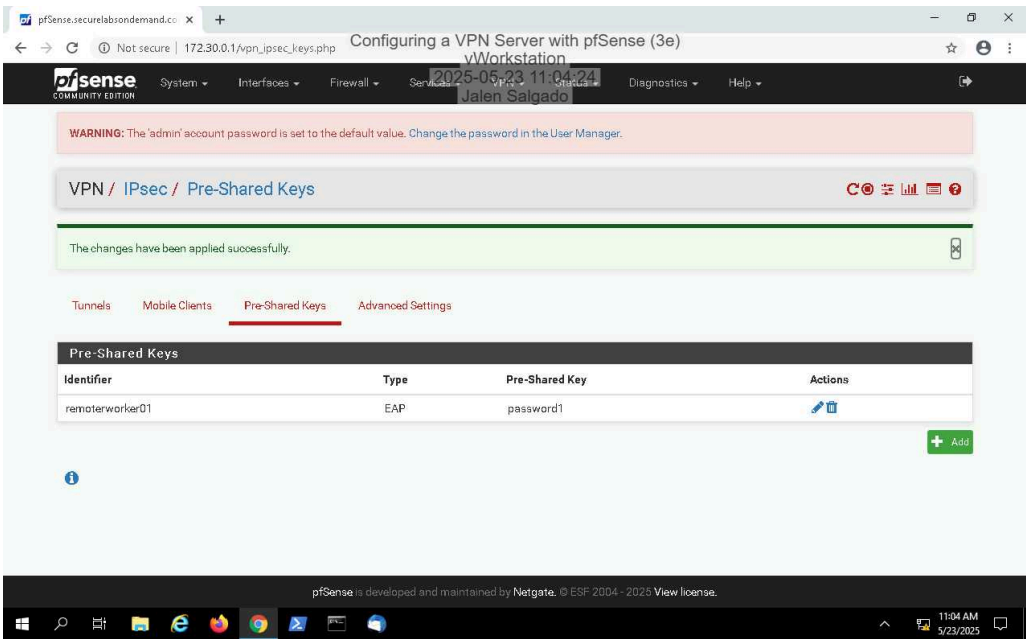
## 32. Make a screen capture showing the updated Certificates table.



## 56. Make a screen capture showing the updated IPsec Tunnels table.

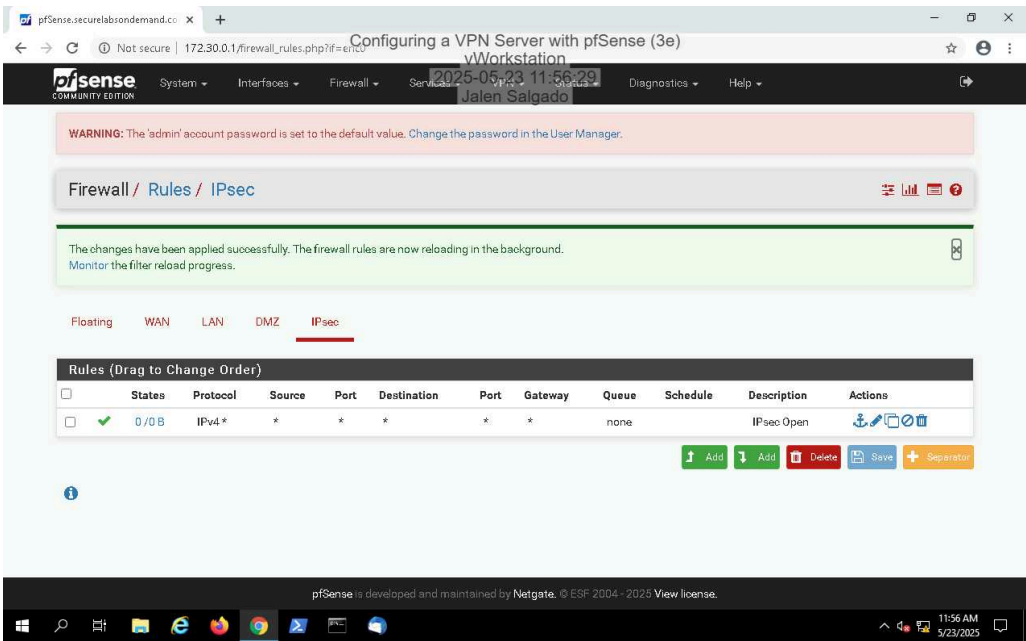


74. Make a screen capture showing the updated Pre-Shared Keys table.



Part 2: Configure a Firewall Rule for VPN Traffic

9. Make a screen capture showing the updated IPsec Rules table.



## Section 2: Applied Learning

### Part 1: Configure an OpenVPN VPN Server

13. Make a screen capture showing the CA configuration form.

The screenshot shows the 'Add Certificate Authority' step of the 'OpenVPN Remote Access Server Setup Wizard'. The title is 'Create a New Certificate Authority (CA) Certificate'. The form contains the following fields:

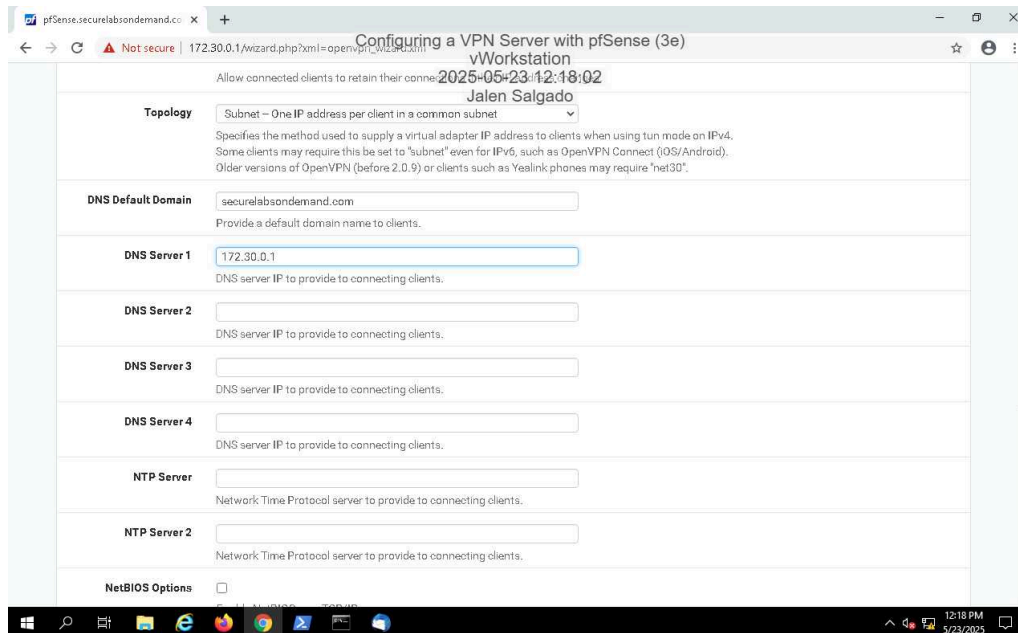
- Descriptive name:** OpenVPN\_CA\_Jalen (A name for administrative reference; to identify this certificate. This is the same as common-name field for other Certificates.)
- Key length:** 2048 bit (Size of the key which will be generated. The larger the key, the more security it offers, but larger keys take considerably more time to generate, and take slightly longer to validate leading to a slight slowdown in setting up new sessions (not always noticeable). As of 2016, 2048 bit is the minimum and most common selection and 4096 is the maximum in common use. For more information see [keylength.com](http://keylength.com).)
- Lifetime:** 3650 (Lifetime in days. This is commonly set to 3650 (Approximately 10 years).)
- Country Code:** US (Two-letter ISO country code (e.g. US, AU, CA))
- State or Province:** Washington State (Full State or Province name, not abbreviated (e.g. Kentucky, Indiana, Ontario).)
- City:** Spokane (City or other Locality name (e.g. Louisville, Indianapolis, Toronto).)
- Organization:** Spokane Falls Community College (Organization name, often the Company or Group name.)

27. Make a screen capture showing the Tunnel Settings section.

The screenshot shows the 'Tunnel Settings' section of the 'OpenVPN Remote Access Server Setup Wizard'. The title is 'Tunnel Settings'. The form contains the following fields:

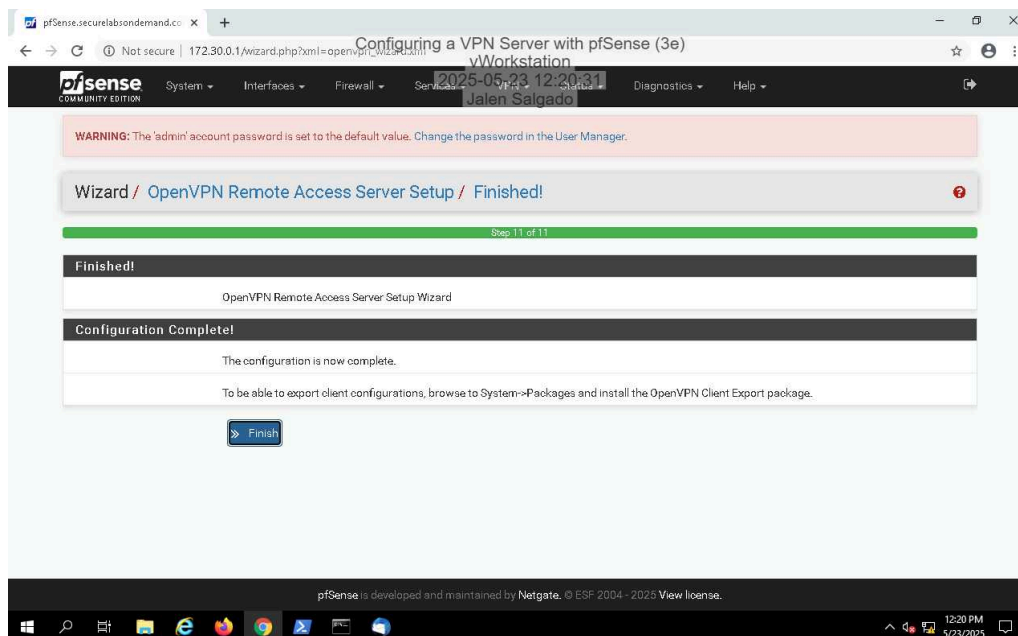
- Tunnel Network:** 172.31.1.0/24 (This is the virtual network used for private communication between the server and client hosts expressed using CIDR notation (eg. 10.0.8.0/24). The first network address will be assigned to the server virtual interface. The remaining network addresses will be assigned to connecting clients.)
- Redirect Gateway:** ☐ (Force all client generated traffic through the tunnel.)
- Local Network:** 172.30.0.0/24 (This is the network that will be accessible from the remote endpoint, expressed as a CIDR range. This may be left blank if not adding a route to the local network through this tunnel on the remote machine. This is generally set to the LAN network.)
- Concurrent Connections:** 2 (Specify the maximum number of clients allowed to concurrently connect to this server.)
- Compression:** Omit Preference (Use OpenVPN Default) (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.)
- Type-of-Service:** ☐ (Set the TOS IP header value of tunnel packets to match the encapsulated packet's TOS value.)
- Inter-Client Communication:** ☒ (Allow communication between clients connected to this server.)
- Duplicate Connections:** ☐ (Allow multiple concurrent connections from clients using the same Common Name. NOTE: This is not generally recommended, but may be needed for some scenarios.)

## 30. Make a screen capture showing the **Client Settings** section.

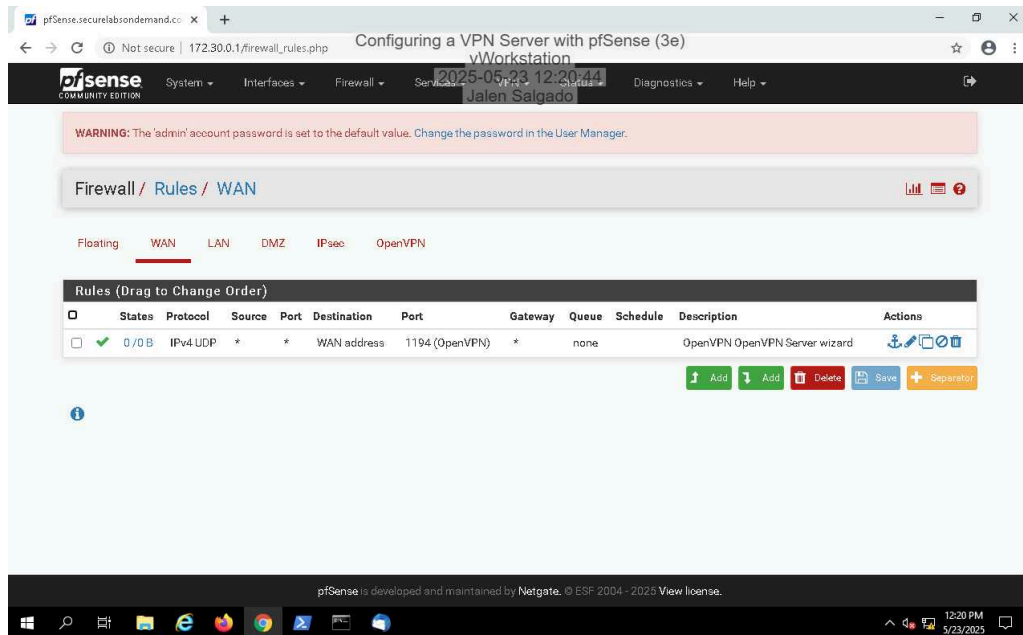


## Part 2: Configure a Firewall Rule for VPN Traffic

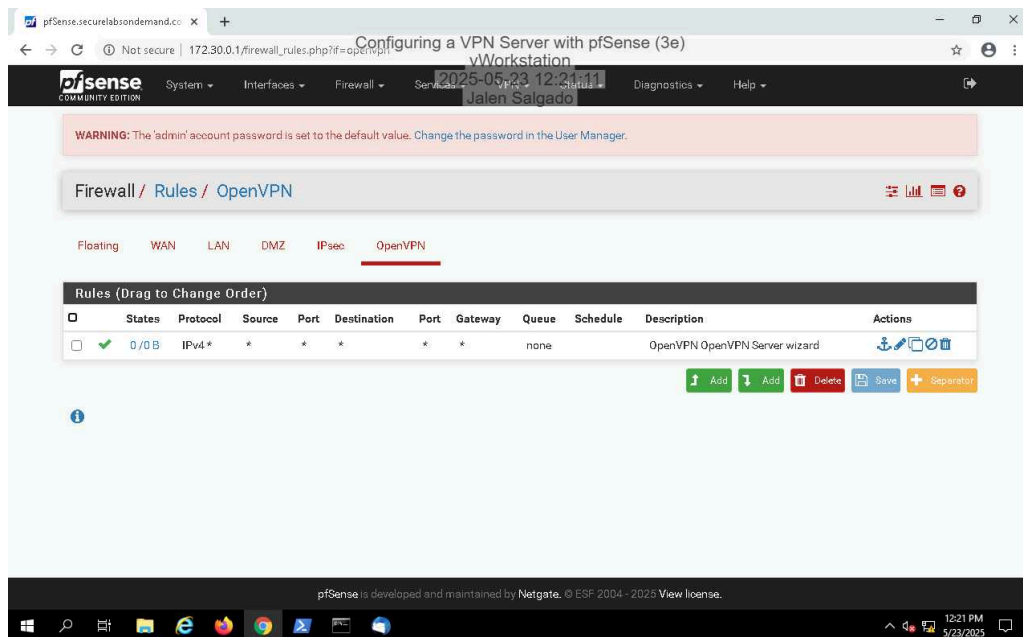
## 2. Make a screen capture showing the **completed OpenVPN configuration**.



## 5. Make a screen capture showing the OpenVPN rule on the WAN Rules table.



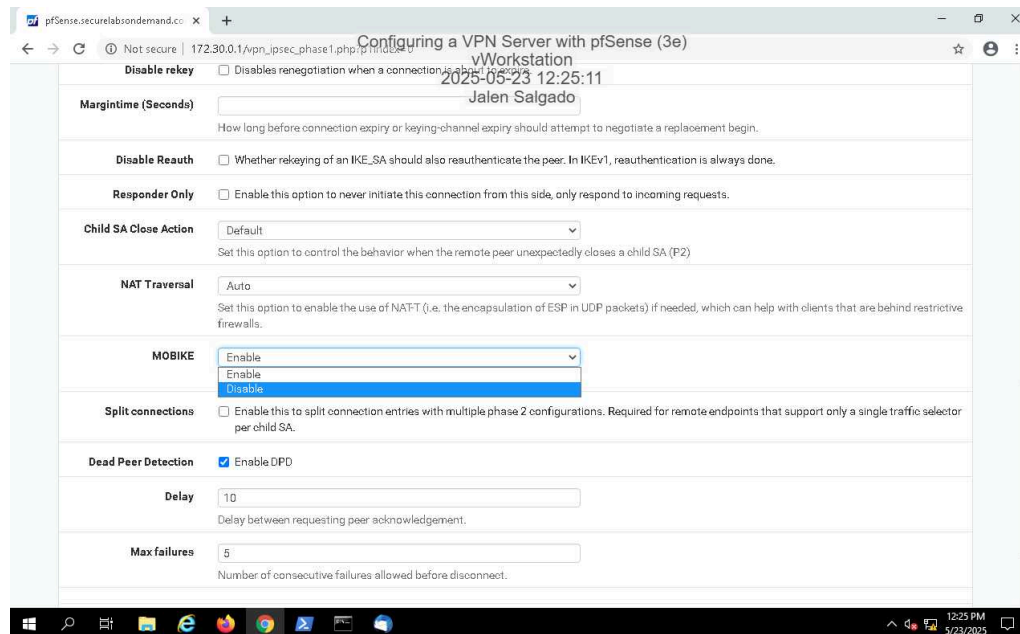
## 7. Make a screen capture showing the OpenVPN rule on the OpenVPN Rules table.



## Section 3: Challenge and Analysis

### Part 1: Enable IP Roaming for Remote VPN Clients

Make a screen capture showing the enabled **MOBIKE** option in the IPsec tunnel configuration.

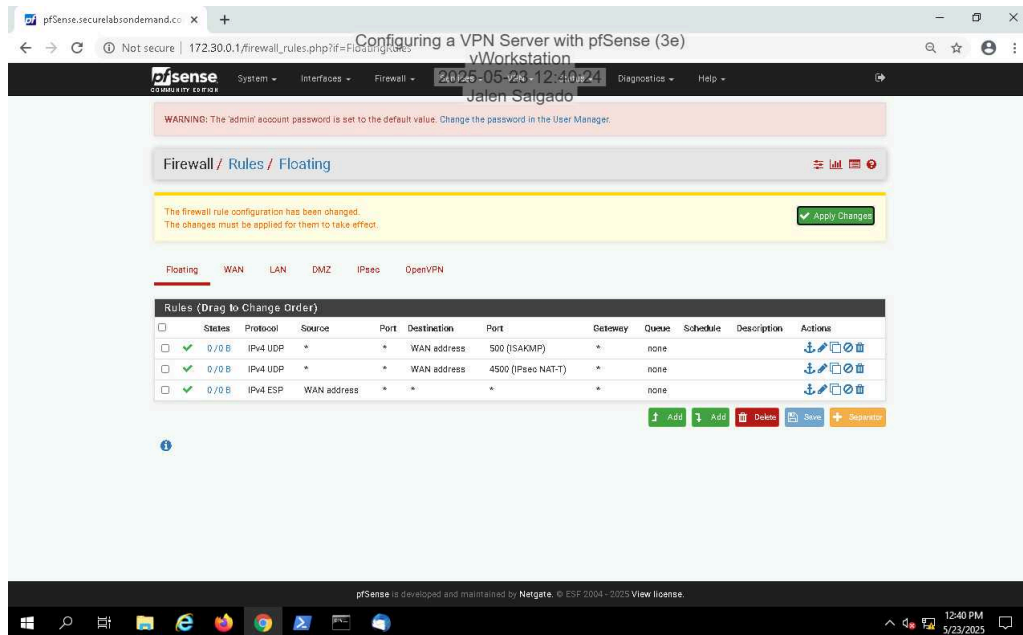


### Part 2: Create Explicit Firewall Rules for an IPsec VPN

# Configuring a VPN Server with pfSense (3e)

## Network Security, Firewalls, and VPNs, Third Edition - Lab 08

Make a screen capture showing the **disabled automatic IPsec rule creation option**.



Make a screen capture showing your firewall rules that permit IPsec traffic.

