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Time on Task:

6 hours, 7 minutes

Progress:

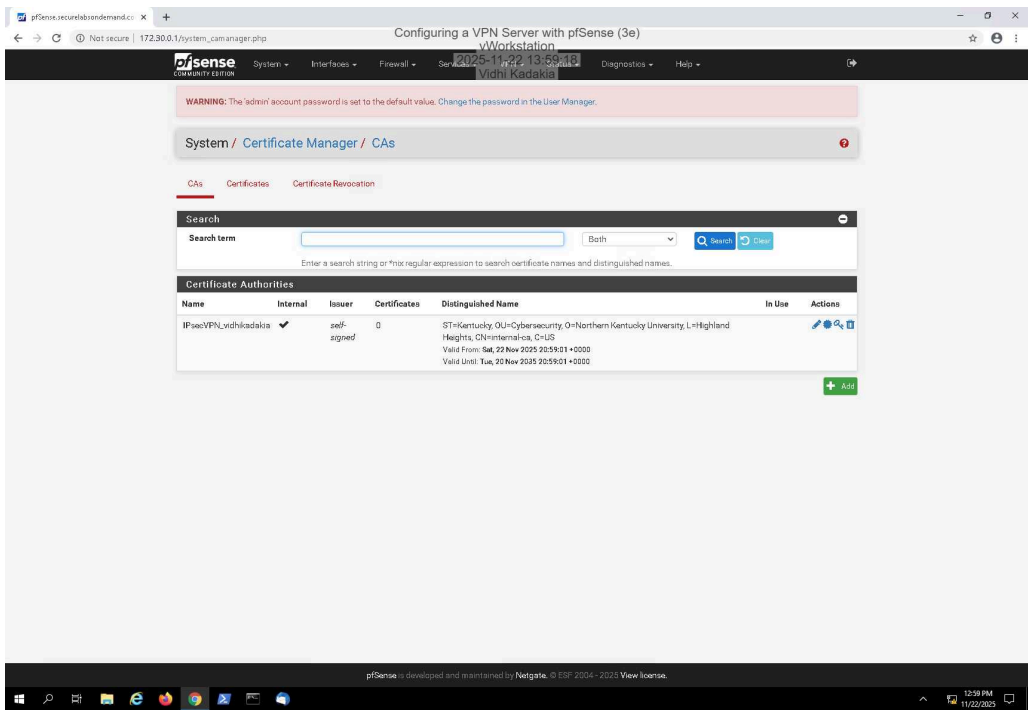
100%

Report Generated: Sunday, November 23, 2025 at 6:37 PM

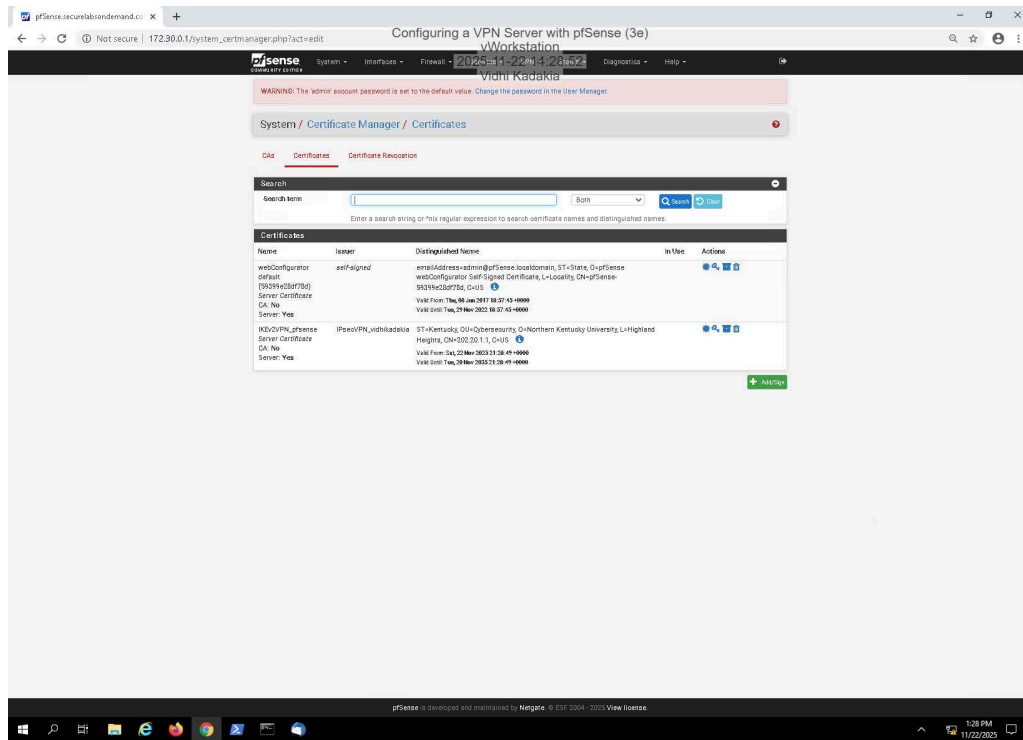
Section 1: Hands-On Demonstration

Part 1: Configure an IPsec VPN Server

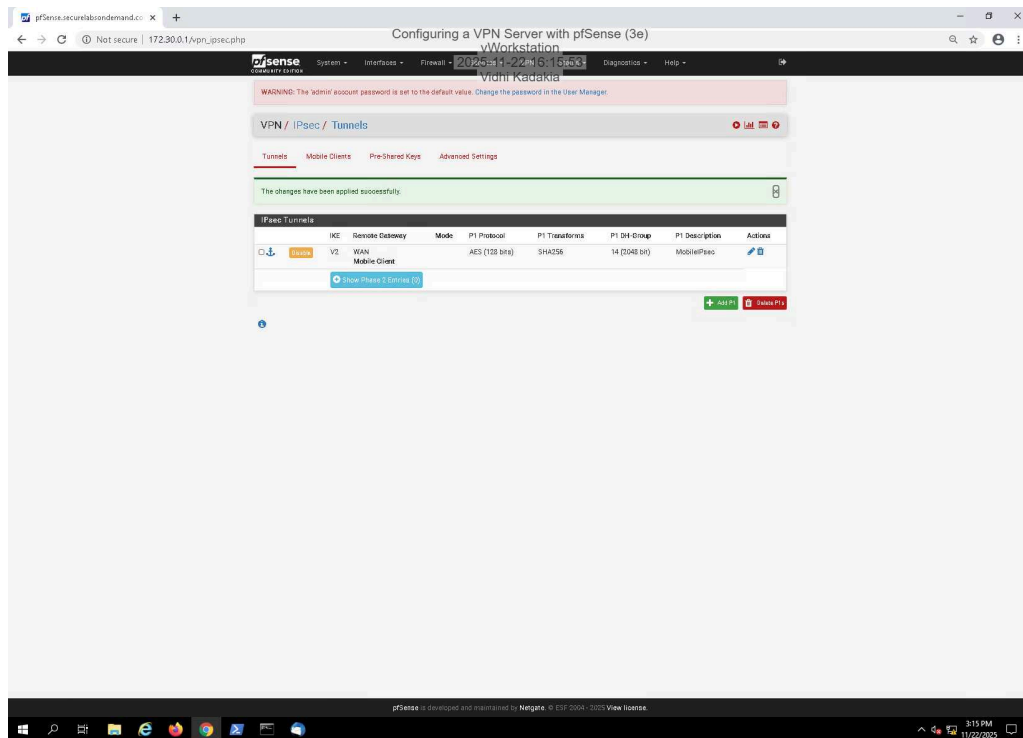
18. Make a screen capture showing the updated Certificate Authorities table.



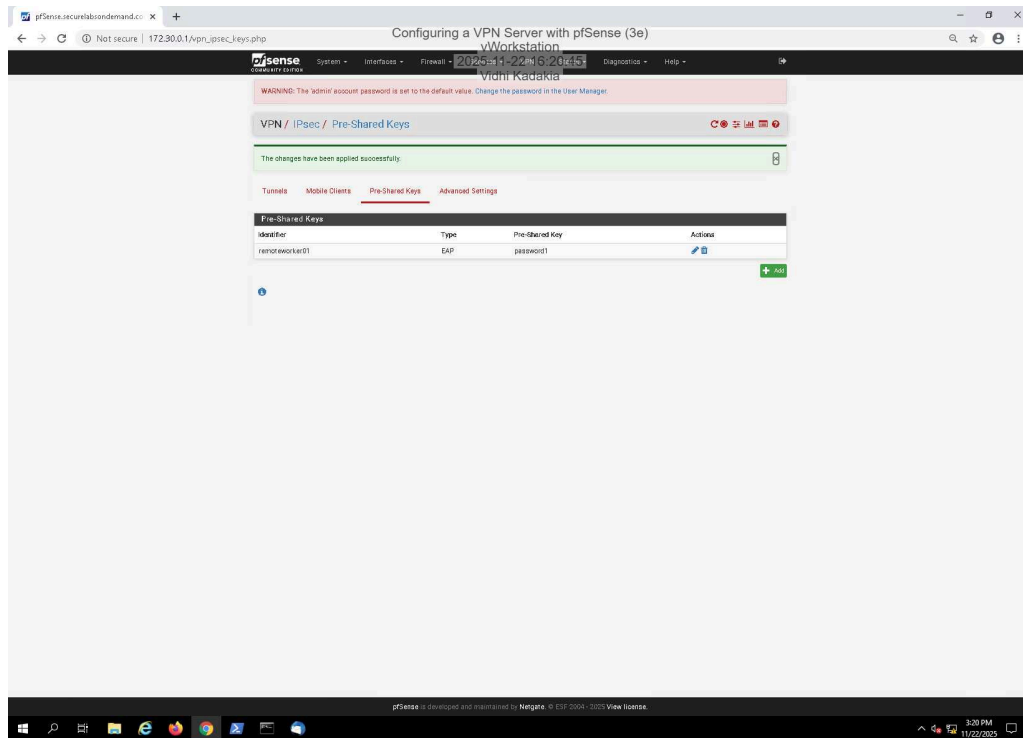
32. Make a screen capture showing the updated Certificates table.



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

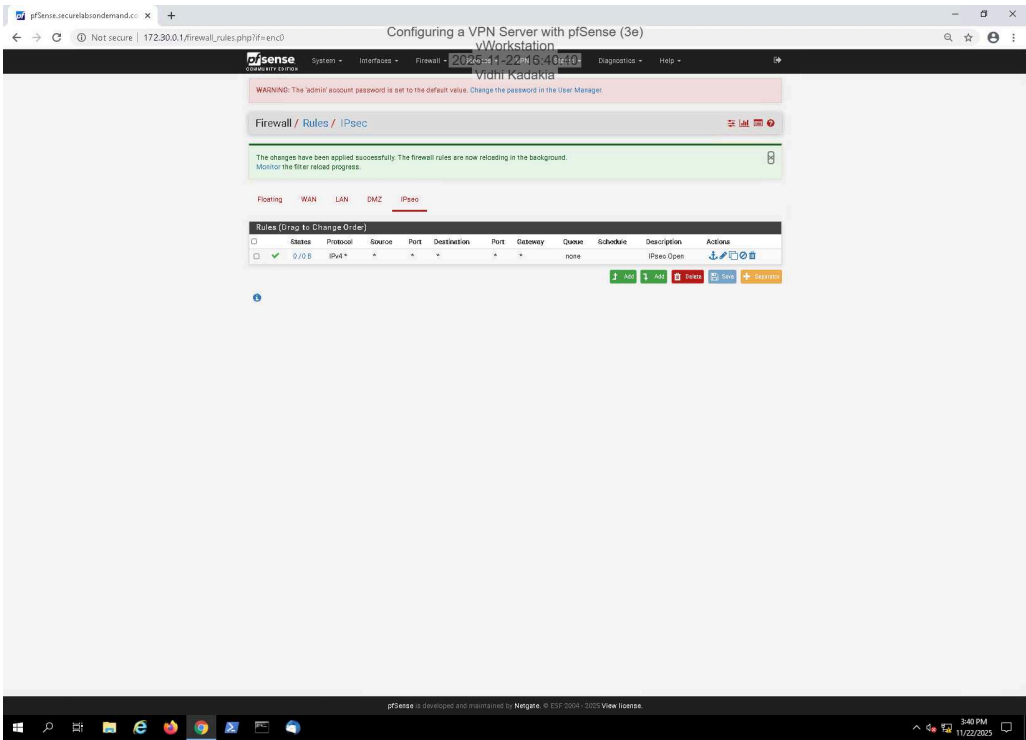


74. Make a screen capture showing the **updated Pre-Shared Keys table**.



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

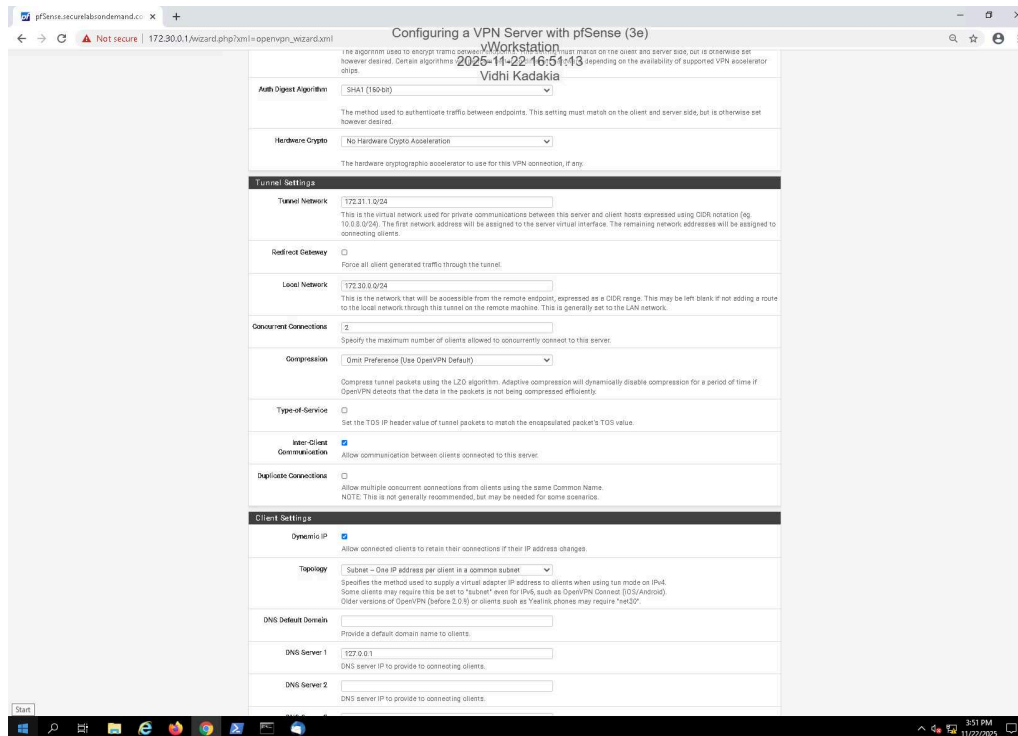
13. Make a screen capture showing the CA configuration form.

The screenshot shows the pfSense web interface for configuring a VPN server. The browser address bar indicates the URL is 172.30.0.1/wizard.php?xml=openvpn_wizard.xml. The page title is "Configuring a VPN Server with pfSense (3e)". The navigation bar includes links for System, Interfaces, Firewall, OpenVPN, Diagnostics, and Help. A warning message at the top states: "WARNING: The 'admin' account password is set to the default value. Change the password in the User Manager." The main content area is titled "Wizard / OpenVPN Remote Access Server Setup / Add Certificate Authority". Below this, there is a progress bar and a section titled "Add Certificate Authority". The "Create a New Certificate Authority (CA) Certificate" form is displayed with the following fields:

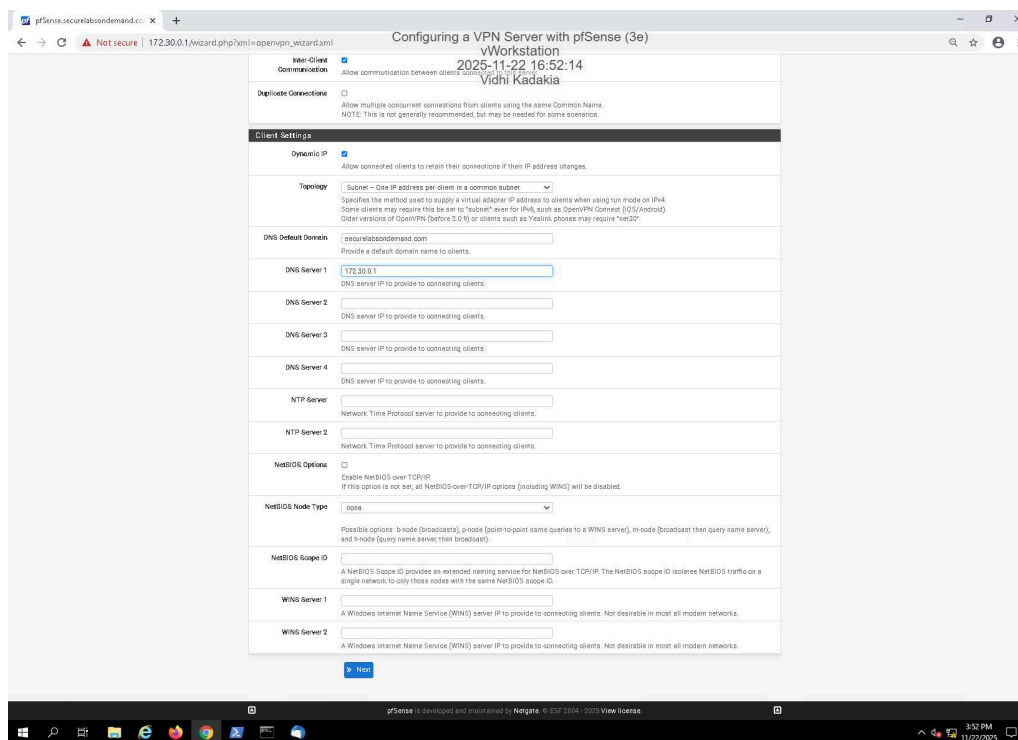
- Descriptive name:** OpenVPN_CA_vhdsuadela (A name for administrative reference, to identify this certificate. This is the same as common-name field for other Certificates.)
- Key length:** 2048 bit (Size of the key which will be generated. The larger the key, the more security it offers, but larger 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)
- 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:** Kentucky (Full State or Province name, not abbreviated (e.g. Kentucky, Indiana, Ontario))
- City:** Highland heights (City or other Locality name (e.g. Louisville, Indianapolis, Toronto))
- Organization:** Northern Kentucky University (Organization name, often the Company or Group name)

At the bottom of the form is a blue button labeled "Add new CA". The footer of the page states "pfSense is developed and maintained by Netgate. © 1999-2023. View license". The system tray at the bottom right shows the time as 3:47 PM on 11/22/2023.

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

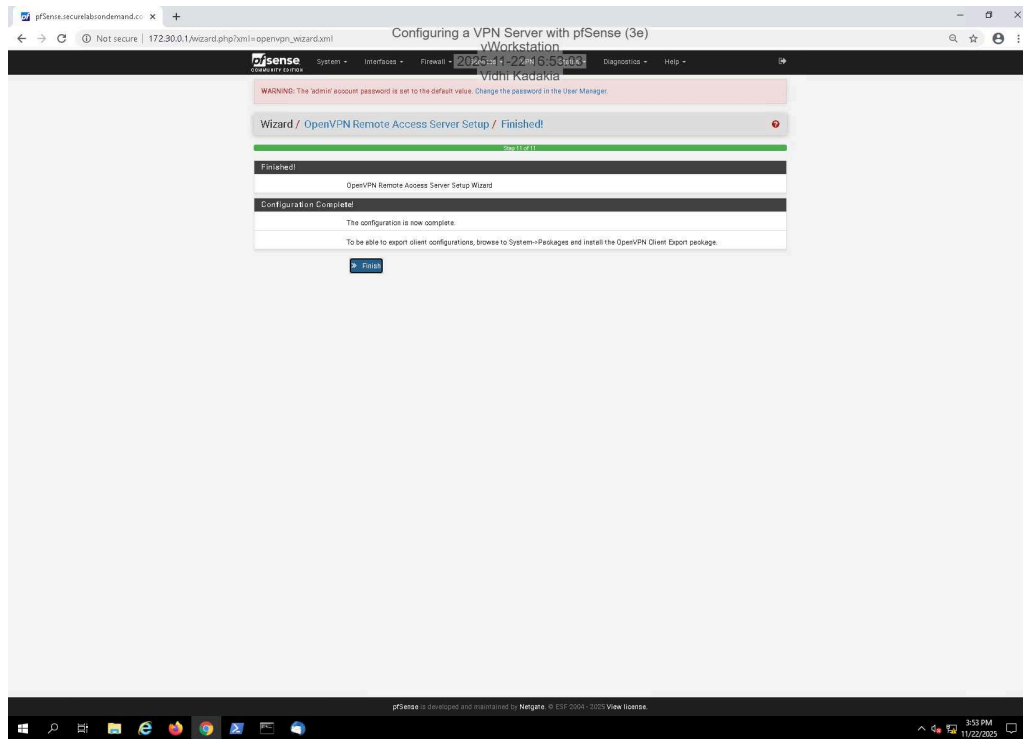


30. Make a screen capture showing the Client Settings section.

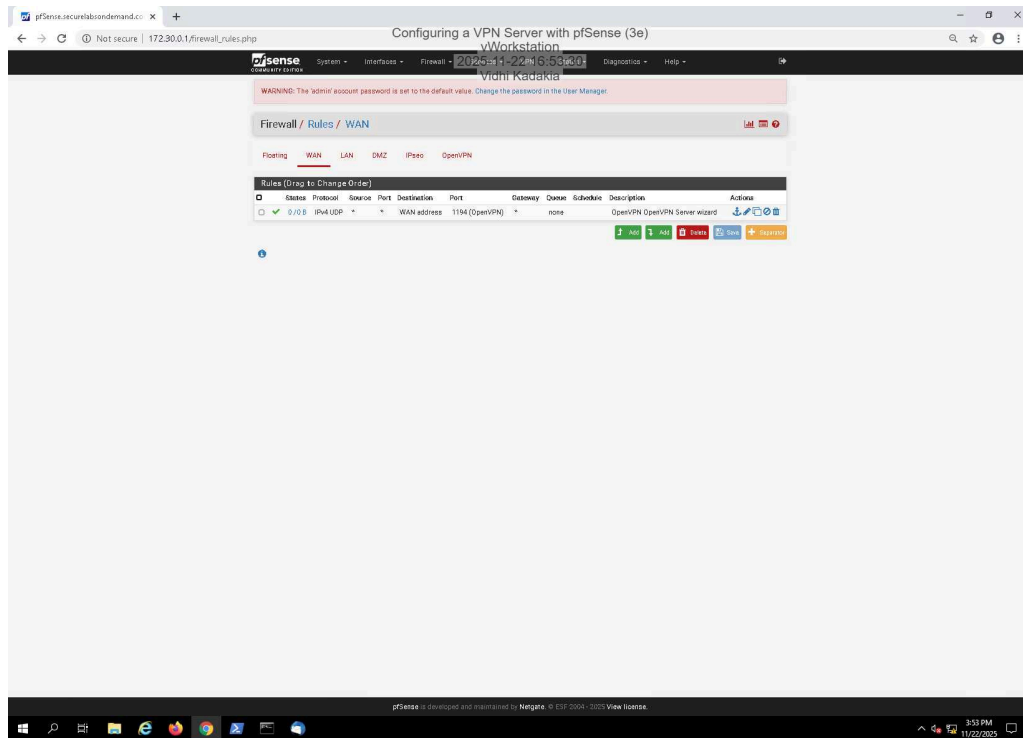


Part 2: Configure a Firewall Rule for VPN Traffic

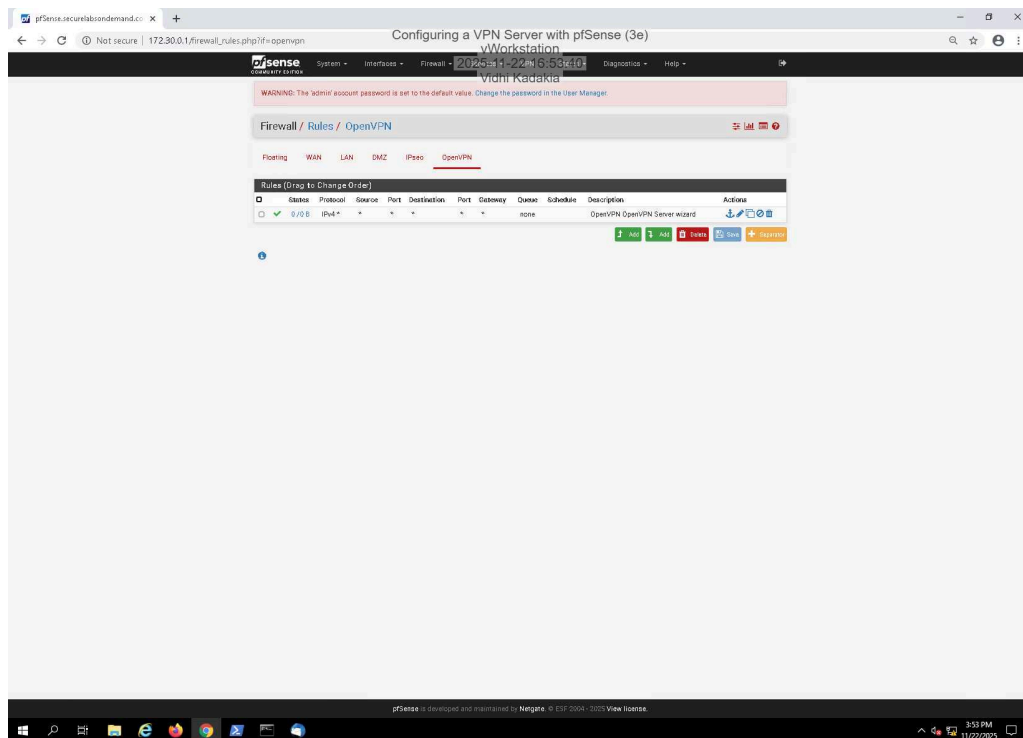
2. Make a screen capture showing the **completed OpenVPN configuration**.



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



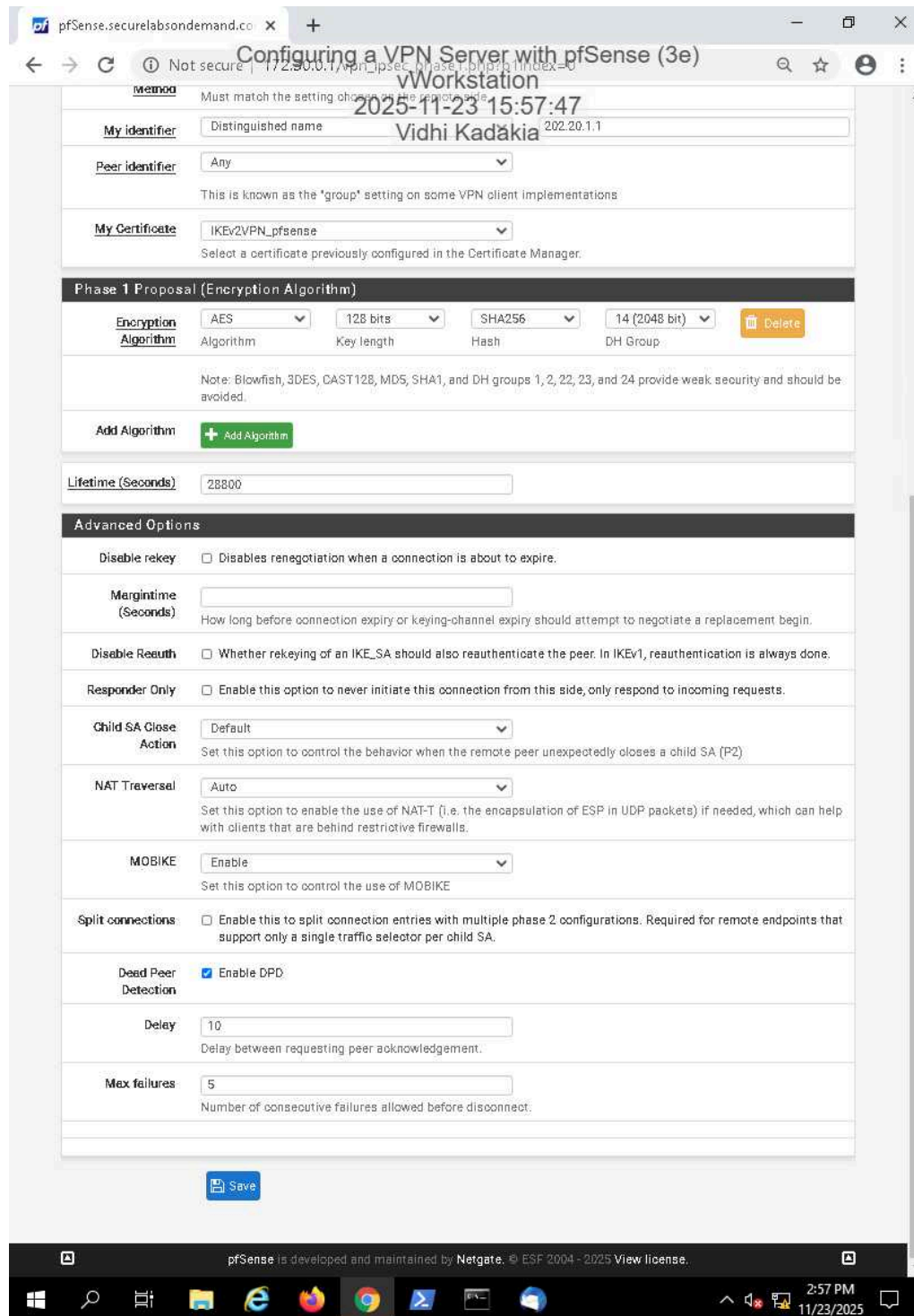
7. Make a screen capture showing the **OpenVPN** rule on the **OpenVPN Rules** table.



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.

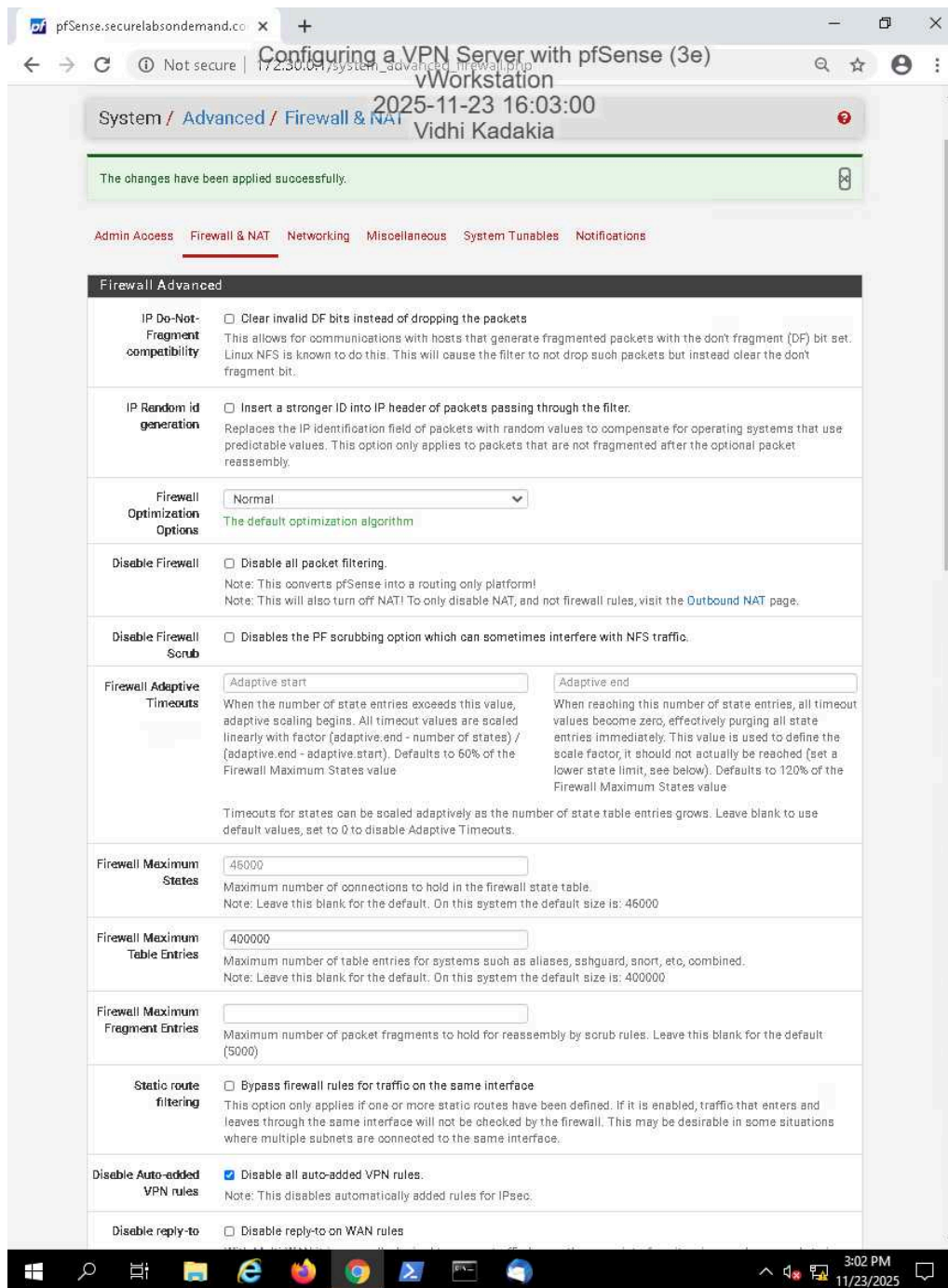


Configuring a VPN Server with pfSense (3e)

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

Part 2: Create Explicit Firewall Rules for an IPsec VPN

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



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

