



Almadar Cloud Portal User Guide

Guide No.	0008
Name	Deploying and Configuring Pfsense for SSL-VPN
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Almadar Aljadid

Address: City sport Gurji

Website: <https://www.almadar.ly>

Email: cloudsupport@almadar.ly

Phone: 0919190544

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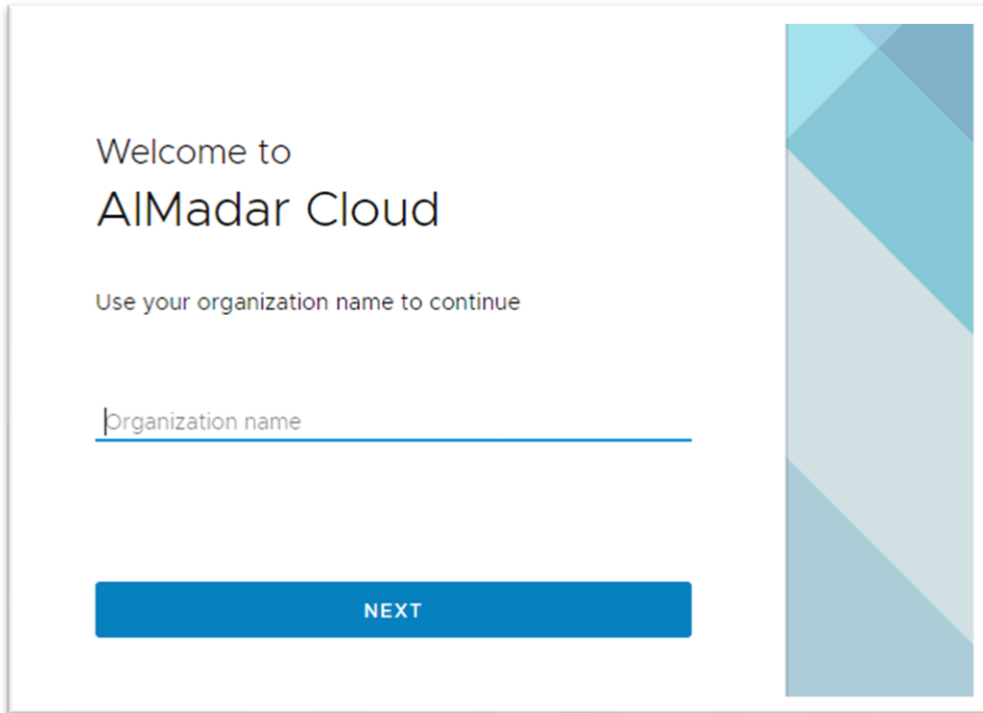
Introduction:

This document is a guide on how to deploy and Configuring Pfsense for SSL-VPN.

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1. Access to Almadar Cloud Portal with the login details that been provided by Almadar Team.

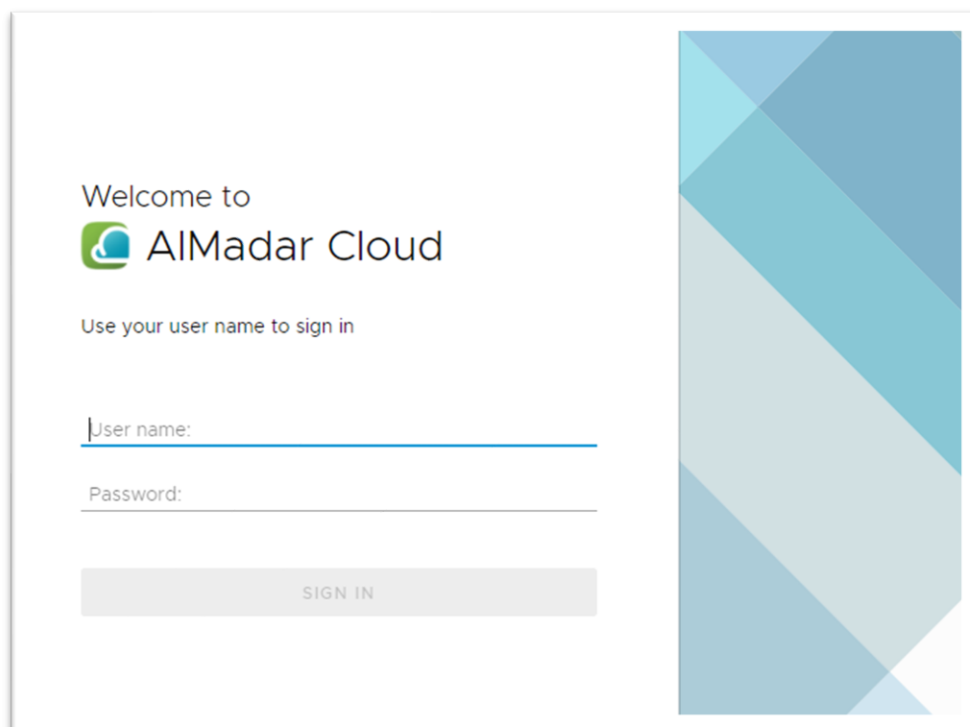



Welcome to
AlMadar Cloud

Use your organization name to continue

NEXT

This screenshot shows the first step of the Almadar Cloud portal login process. It features a white background with a blue and grey geometric pattern on the right side. The text 'Welcome to AlMadar Cloud' is displayed in a sans-serif font. Below this, the instruction 'Use your organization name to continue' is shown. A text input field contains the placeholder 'Organization name'. At the bottom, there is a prominent blue button labeled 'NEXT'.



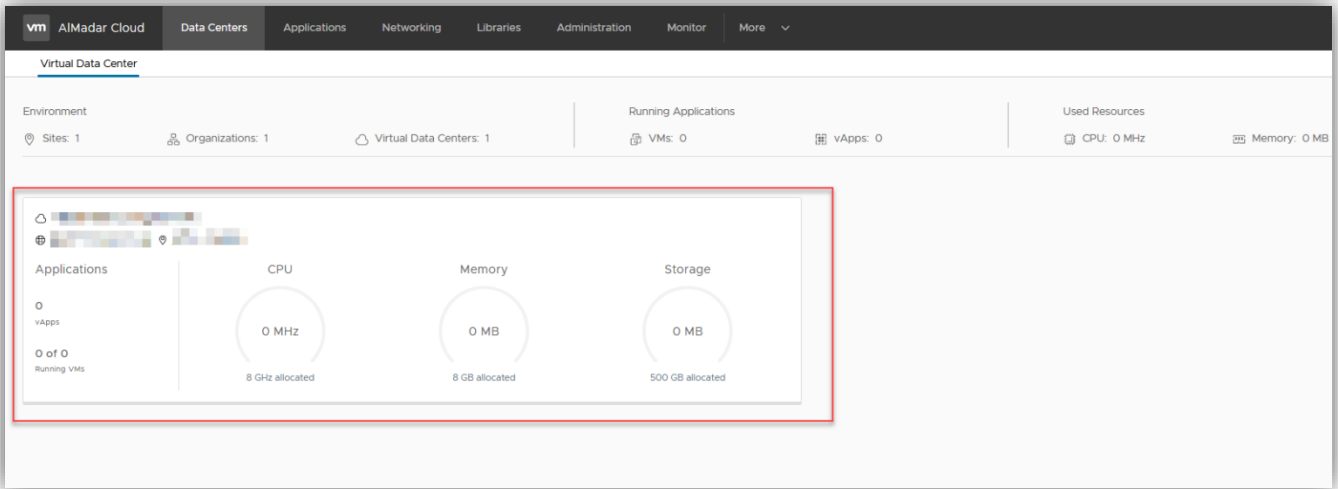
Welcome to
 **AlMadar Cloud**

Use your user name to sign in

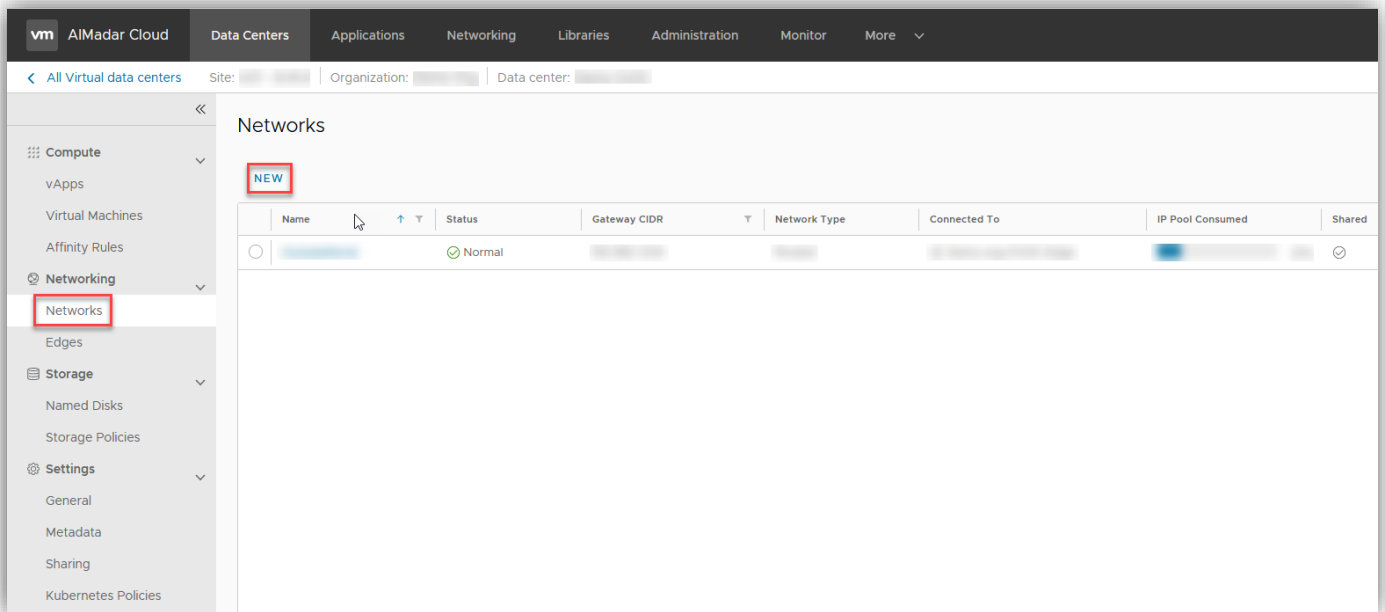
SIGN IN

This screenshot shows the second step of the Almadar Cloud portal login process. It features a white background with a blue and grey geometric pattern on the right side. The text 'Welcome to AlMadar Cloud' is displayed, with the Almadar Cloud logo (a blue circle with a white cloud) to the left of the text. Below this, the instruction 'Use your user name to sign in' is shown. There are two text input fields: the first is labeled 'User name:' and the second is labeled 'Password:'. At the bottom, there is a grey button labeled 'SIGN IN'.

1. Click on OvDC.



2. Create a new Network.



Organization: Demo-Org | Data center: Demo-OvDC

New Organization VDC Network

- 1 Scope
- 2 Network Type
- 3 General
- 4 Static IP Pools
- 5 DNS
- 6 Ready to Complete

Scope

Current Organization Virtual Data Center
 Provides connectivity for VMs in the current VDC only

Data Center Group
 Provides connectivity for VMs from all VDCs participating in the Data Center Group. Available Data Center Groups are the ones where the current VDC - "Demo-OvDC" participates in.

	Name	Status	Type	Participating VDCs
<input checked="" type="checkbox"/>	AZINSX	Normal	Local	1

1 - 1 of 1 eligible VDC group(s)

CANCEL NEXT

New Organization VDC Network

- 1 Scope
- 2 Network Type
- 3 General
- 4 Static IP Pools
- 5 DNS
- 6 Ready to Complete

Network Type

Select the type of network that you are about to create

Routed (through Edge Gateway " ")
 This type of network provides controlled access to machines and networks outside of the VDC or VDC Group through an edge gateway.

Isolated
 This type of network provides a fully isolated environment, which is accessible only by this organization VDC or VDC Group.

Imported
 This type of network uses an existing NSX-T logical switch or Distributed Virtual Port group.

CANCEL PREVIOUS NEXT

In Gateway CIDR field enter this subnet 10.10.11.254/29

The screenshot shows the 'General' configuration page for a 'New Organization VDC Network'. The left sidebar contains a navigation menu with six items: 1 Scope, 2 Network Type, 3 General (selected), 4 Static IP Pools, 5 DNS, and 6 Ready to Complete. The main content area is titled 'General' and includes the following fields:

- Name:** SSL-VPN-Network
- Description:** A large empty text area with a cursor.
- Dual-Stack Mode:** A toggle switch that is currently turned off, with an information icon to its right.
- Gateway CIDR:** A text field containing '10.10.11.254/29', which is highlighted with a dashed red border and an information icon to its right.

At the bottom right of the page, there are three buttons: 'CANCEL', 'PREVIOUS', and 'NEXT'.

In Static IP Pools field enter this rang 10.10.11.249 - 10.10.11.253

The screenshot shows the 'Static IP Pools' configuration page for a 'New Organization VDC Network'. The left sidebar contains a navigation menu with six items: 1 Scope, 2 Network Type, 3 General, 4 Static IP Pools (selected), 5 DNS, and 6 Ready to Complete. The main content area is titled 'Static IP Pools' and includes the following elements:

- Gateway CIDR:** 10.10.11.254/29 with an information icon to its right.
- Static IP Pools:** A section with the instruction 'Enter an IP range (format: 192.168.1.2 - 192.168.1.100)'. Below this is a text input field containing '10.10.11.249 - 10.10.11.253'. To the right of the input field are three buttons: 'ADD', 'MODIFY', and 'REMOVE'.
- Total IP addresses:** 5

At the bottom right of the page, there are three buttons: 'CANCEL', 'PREVIOUS', and 'NEXT'.

Organization: Demo-Org | Data center: Demo-VDC

New Organization VDC Network

- 1 Scope
- 2 Network Type
- 3 General
- 4 Static IP Pools
- 5 DNS**
- 6 Ready to Complete

DNS

Primary DNS	8.8.8.8
Secondary DNS	8.8.4.4
DNS suffix	

CANCEL PREVIOUS NEXT

New Organization VDC Network

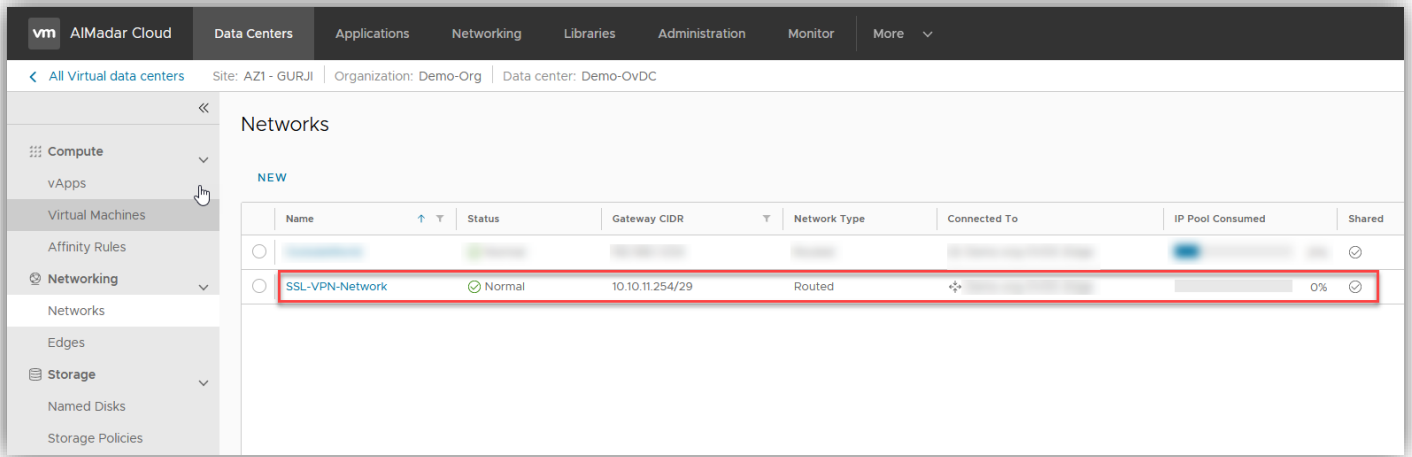
- 1 Scope
- 2 Network Type
- 3 General
- 4 Static IP Pools
- 5 DNS
- 6 Ready to Complete**

Ready to Complete

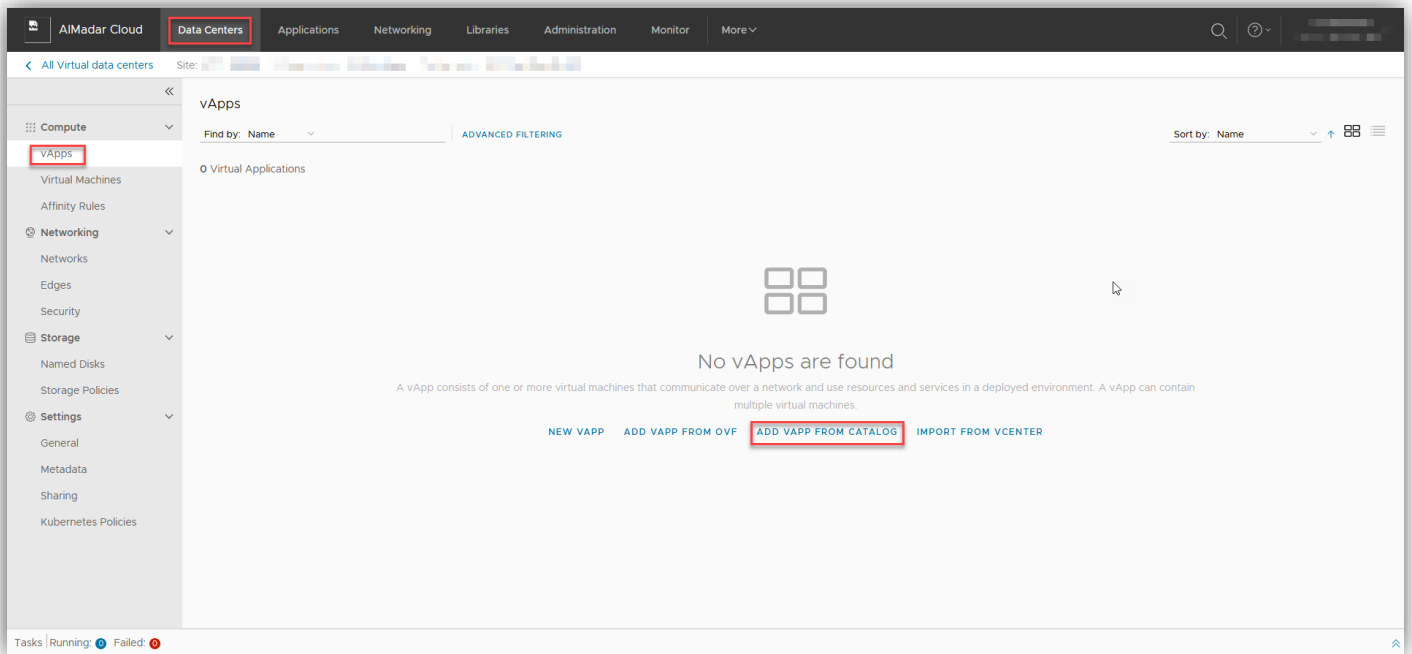
You are about to create an Org VDC Network with these specifications. Review the settings and click Finish.

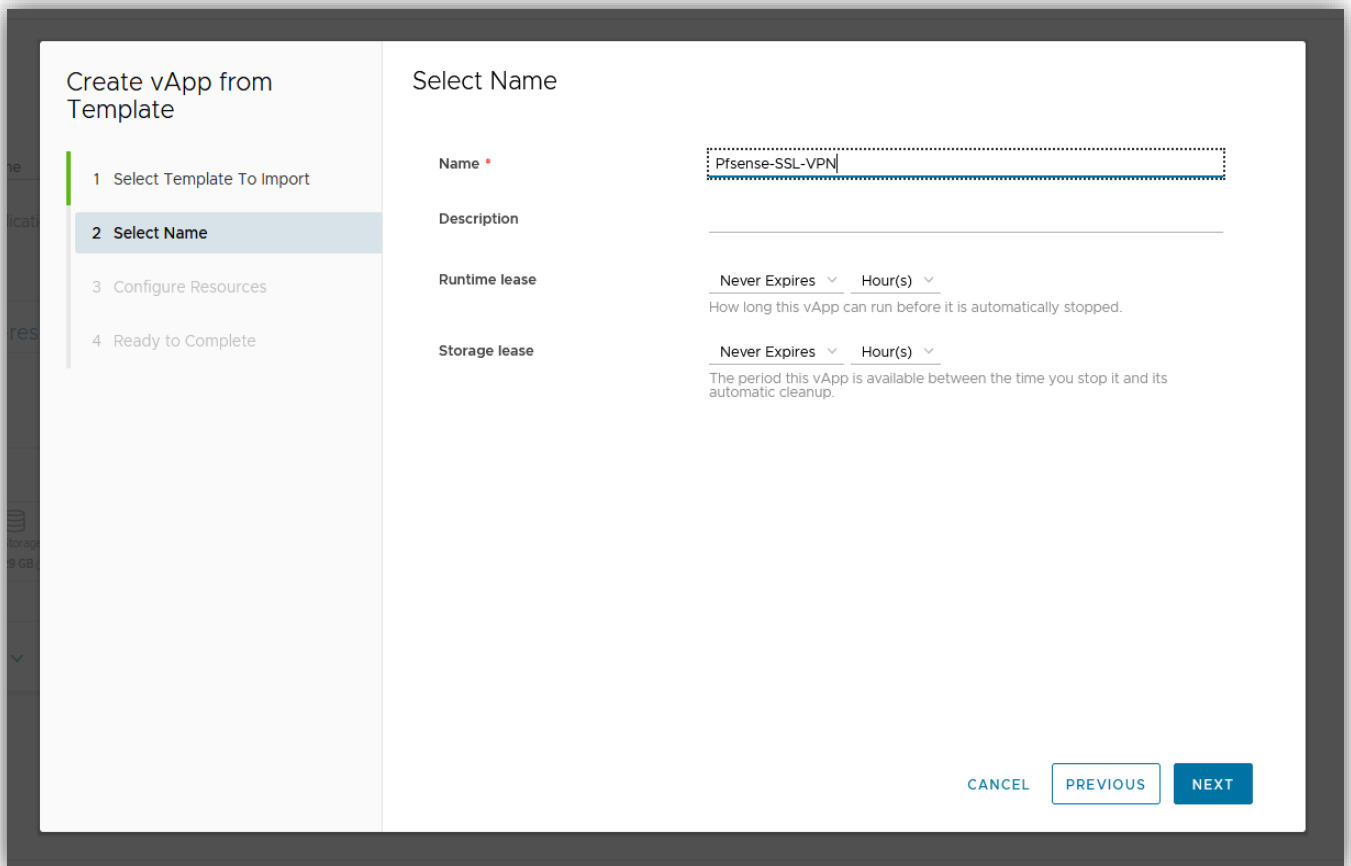
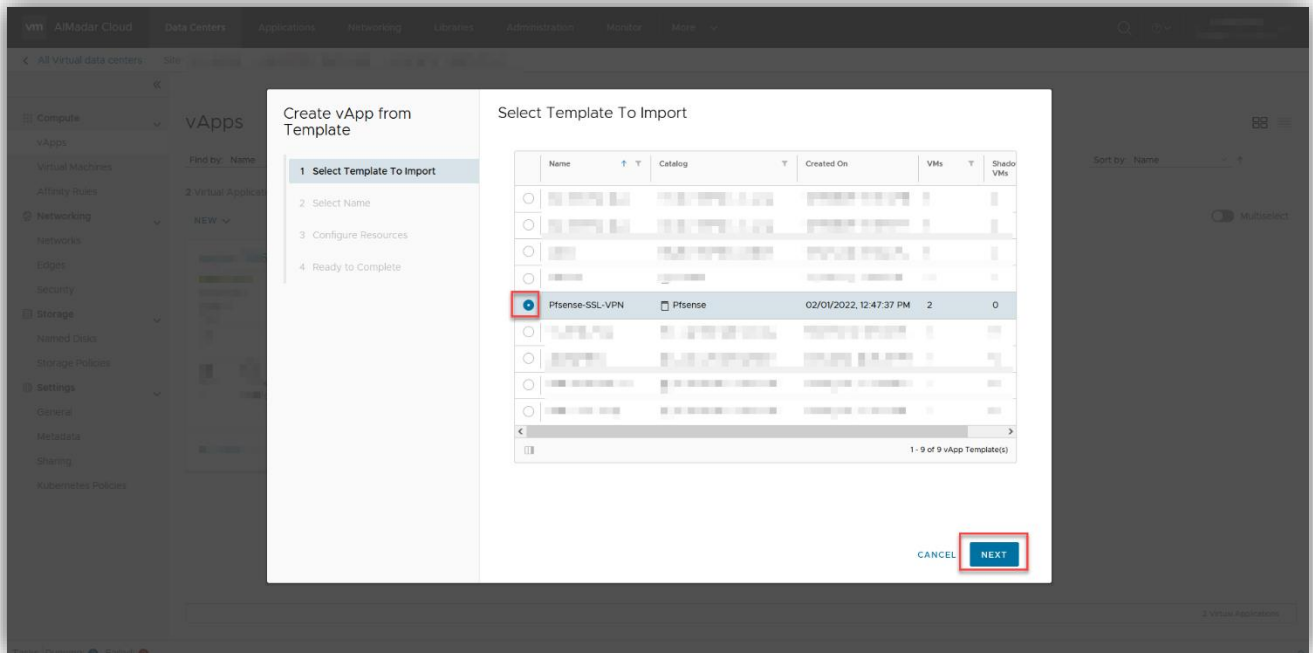
Scope	[Redacted]
Name	SSL-VPN-Network
Description	-
Dual-Stack Mode	No
Gateway CIDR	10.10.11.254/29
Network Type	Routed ⓘ
Connection	[Redacted]
Primary DNS	8.8.8.8
Secondary DNS	8.8.4.4
DNS suffix	-
Static IP Pools	10.10.11.249 - 10.10.11.253

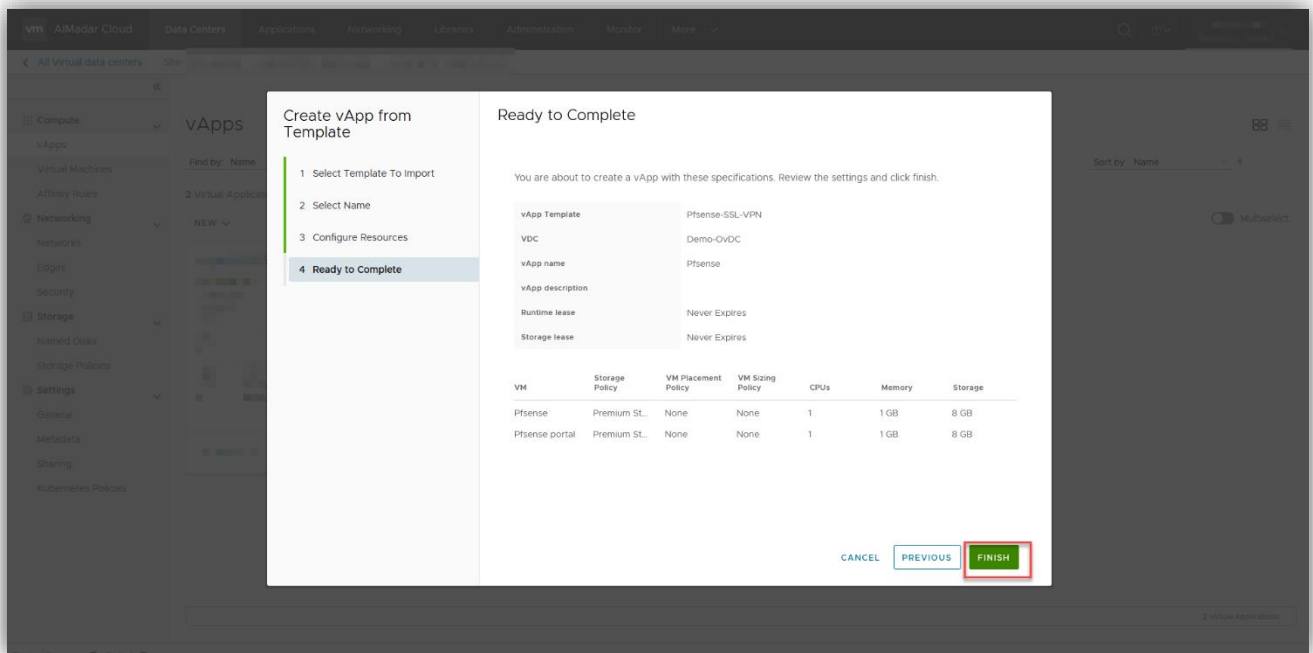
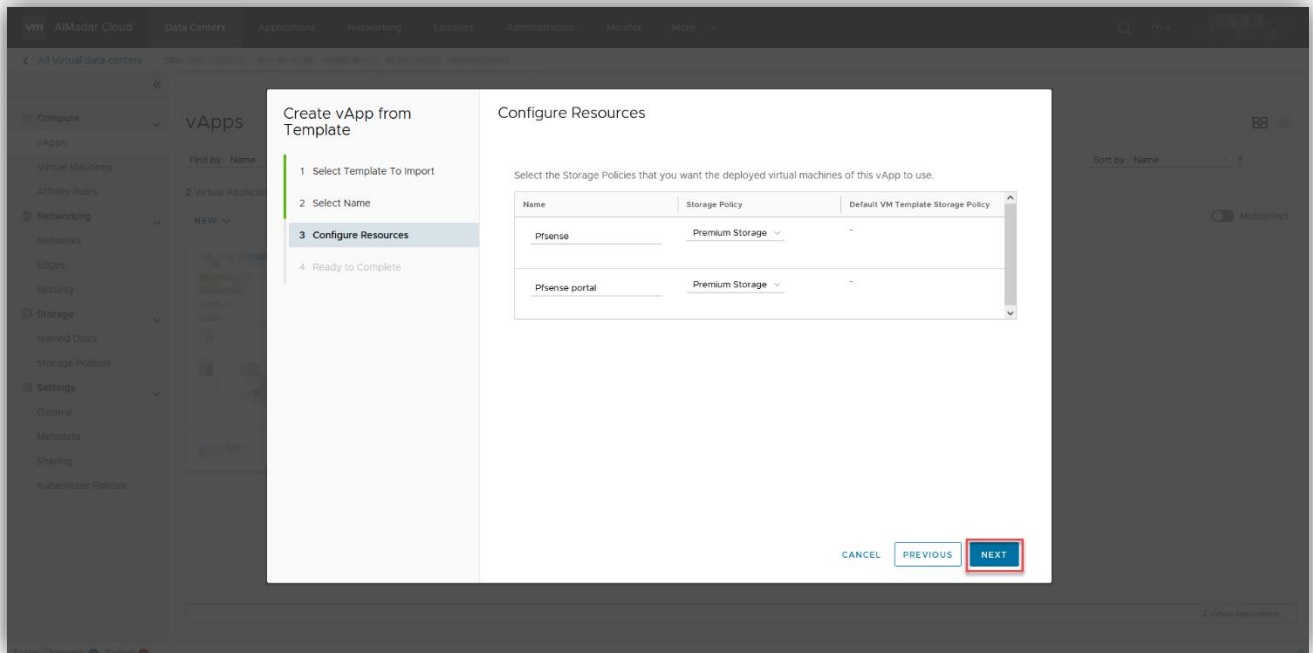
CANCEL PREVIOUS FINISH



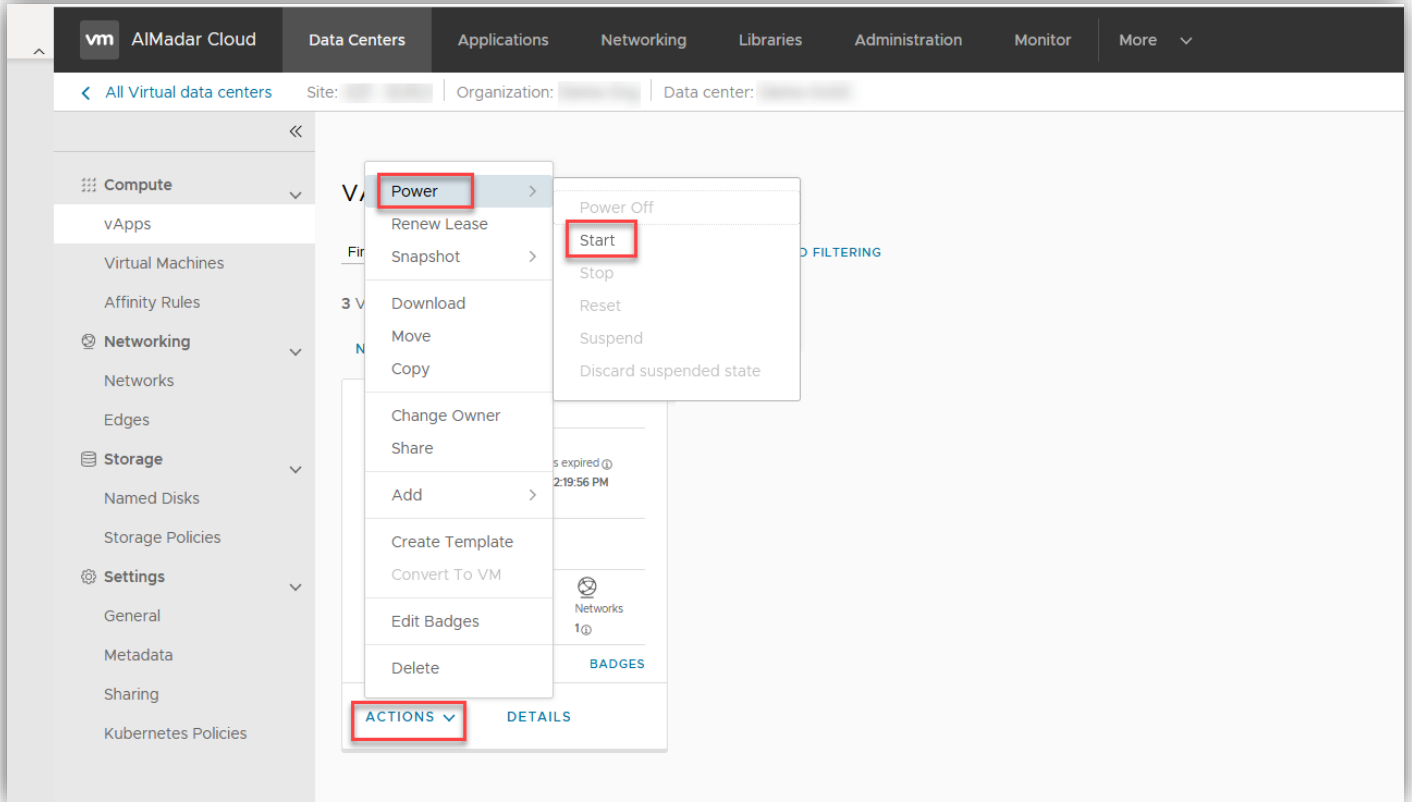
3. Add vApp from catalog by following below steps.



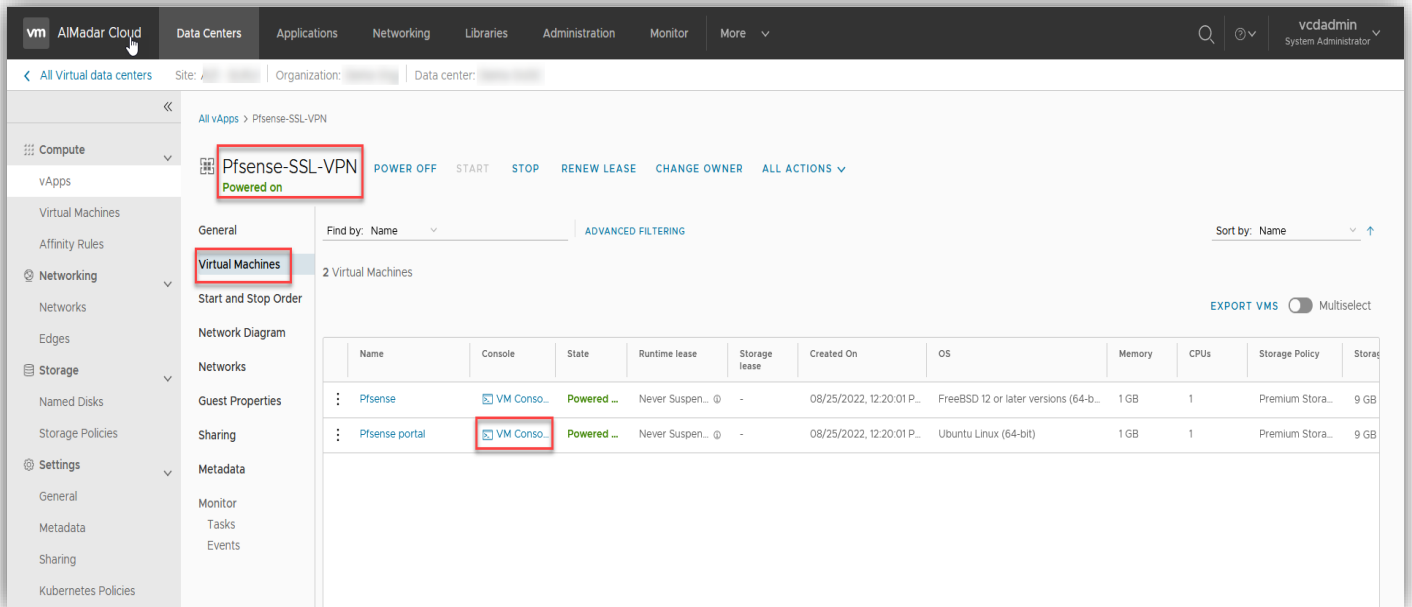




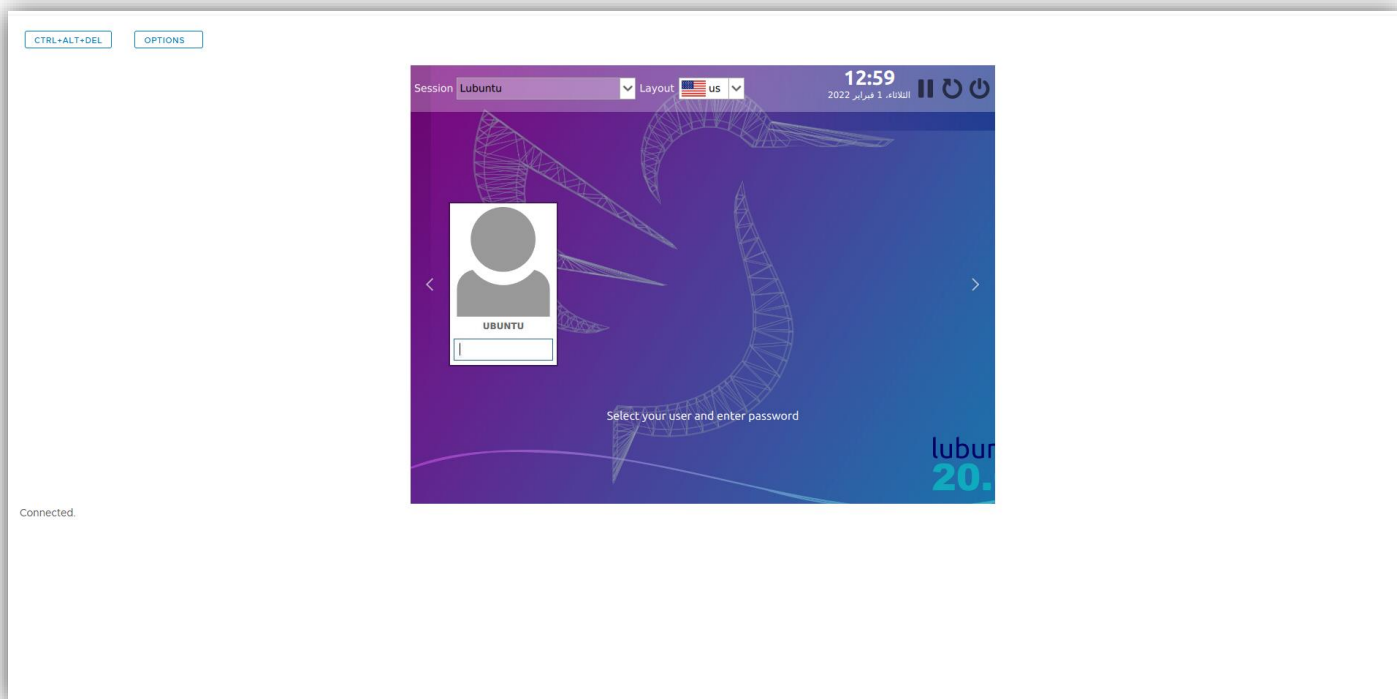
4. Power on the created vApp.



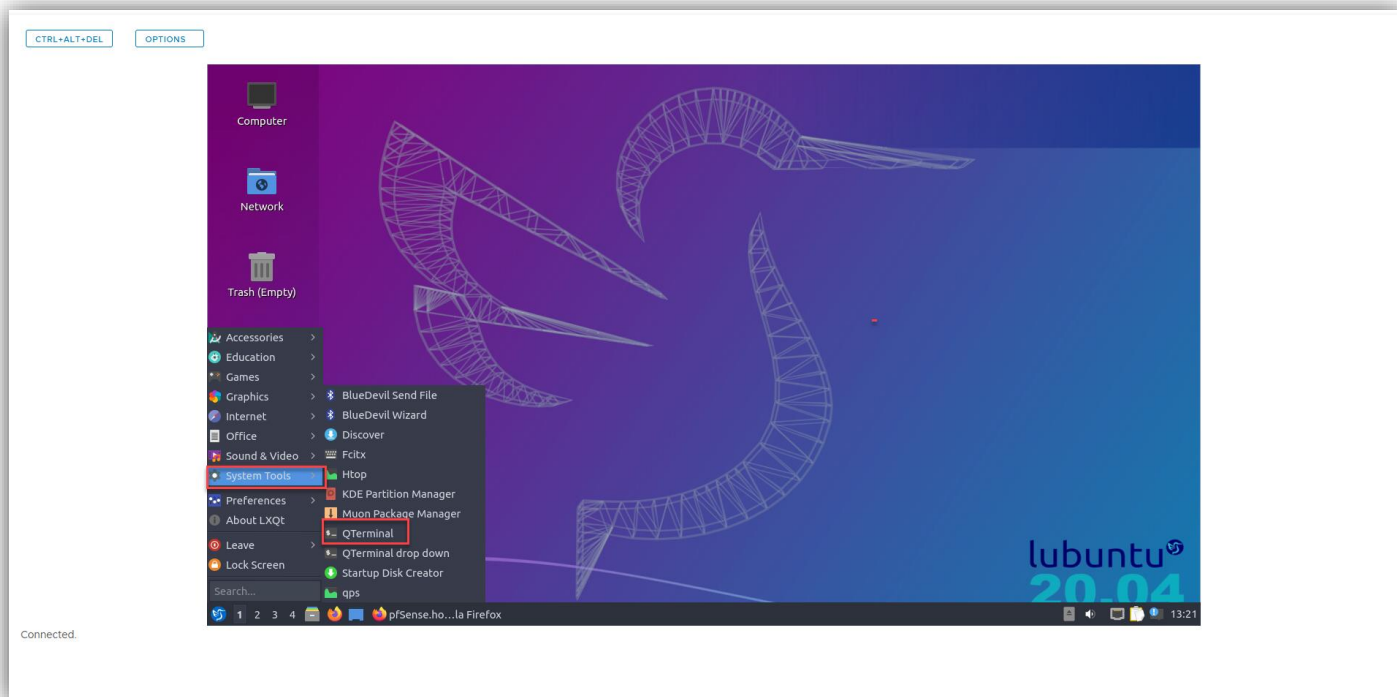
Open the console of “pfsense portal” vm

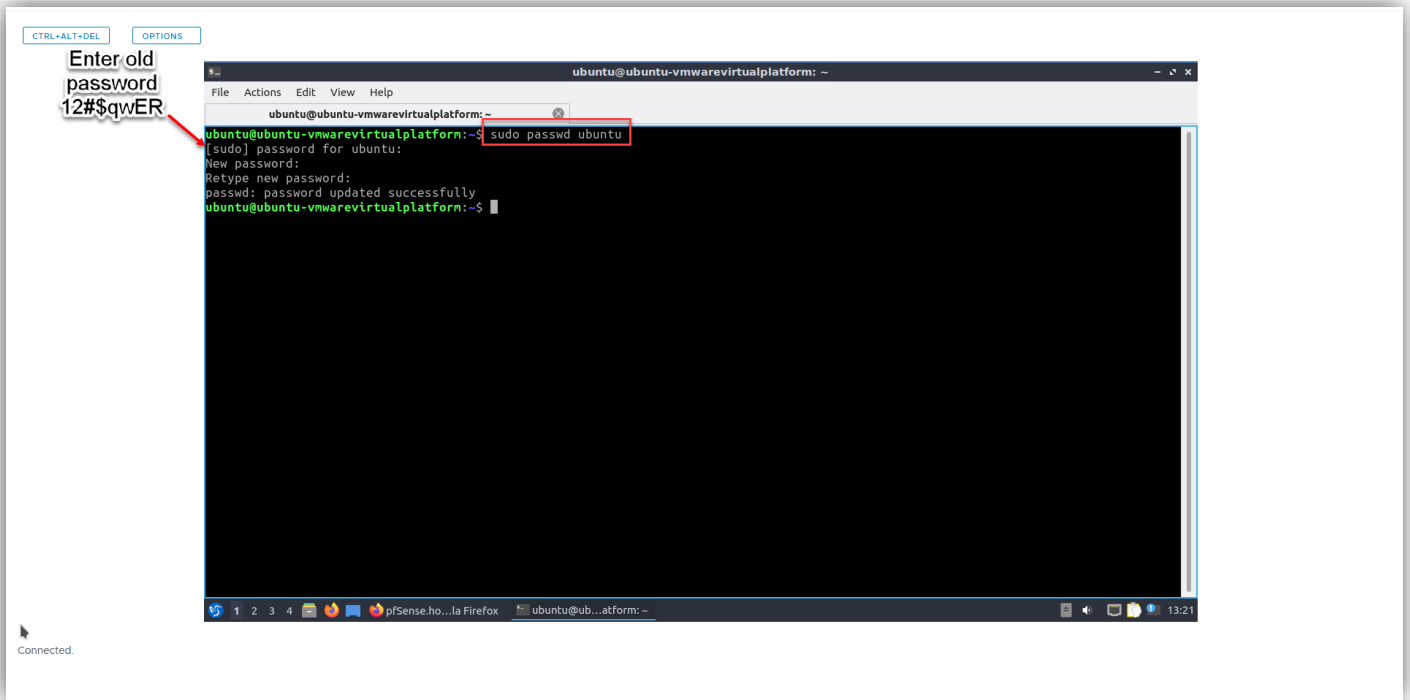


“Pfsense portal” VM access default password: 12#\$qwER



Change the “pfsense portal” vm user password

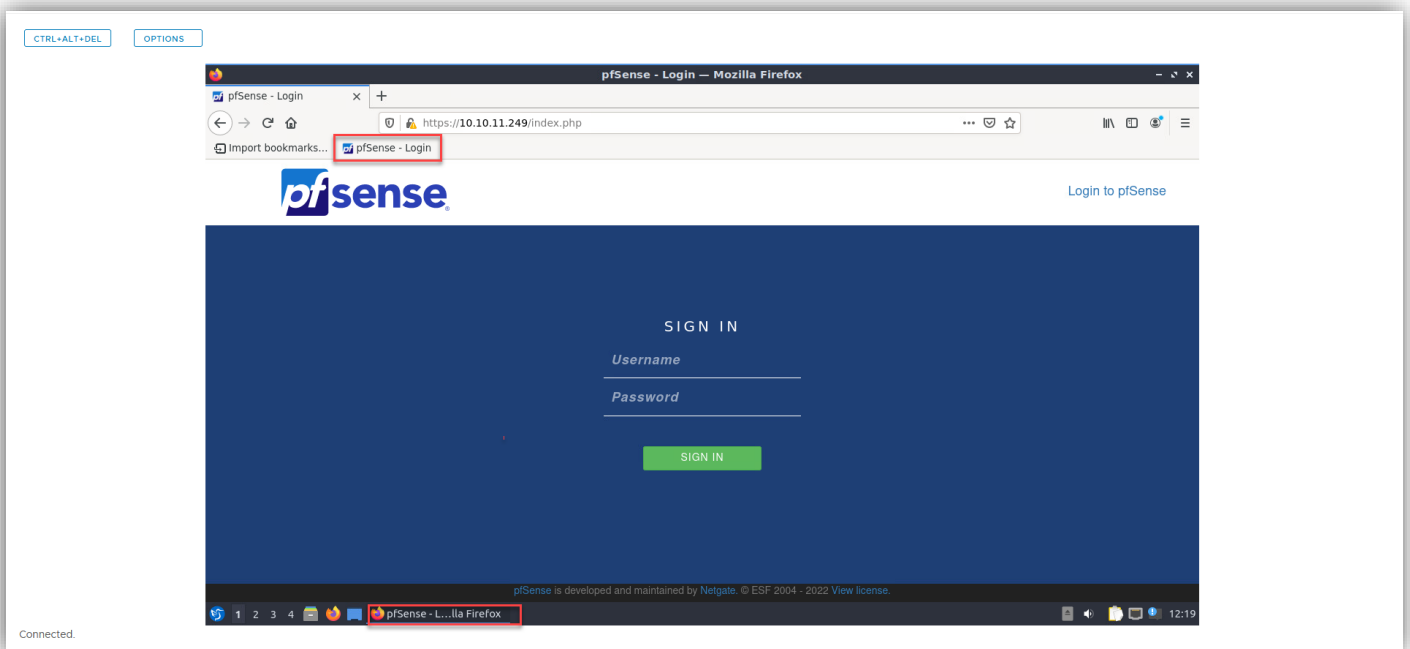




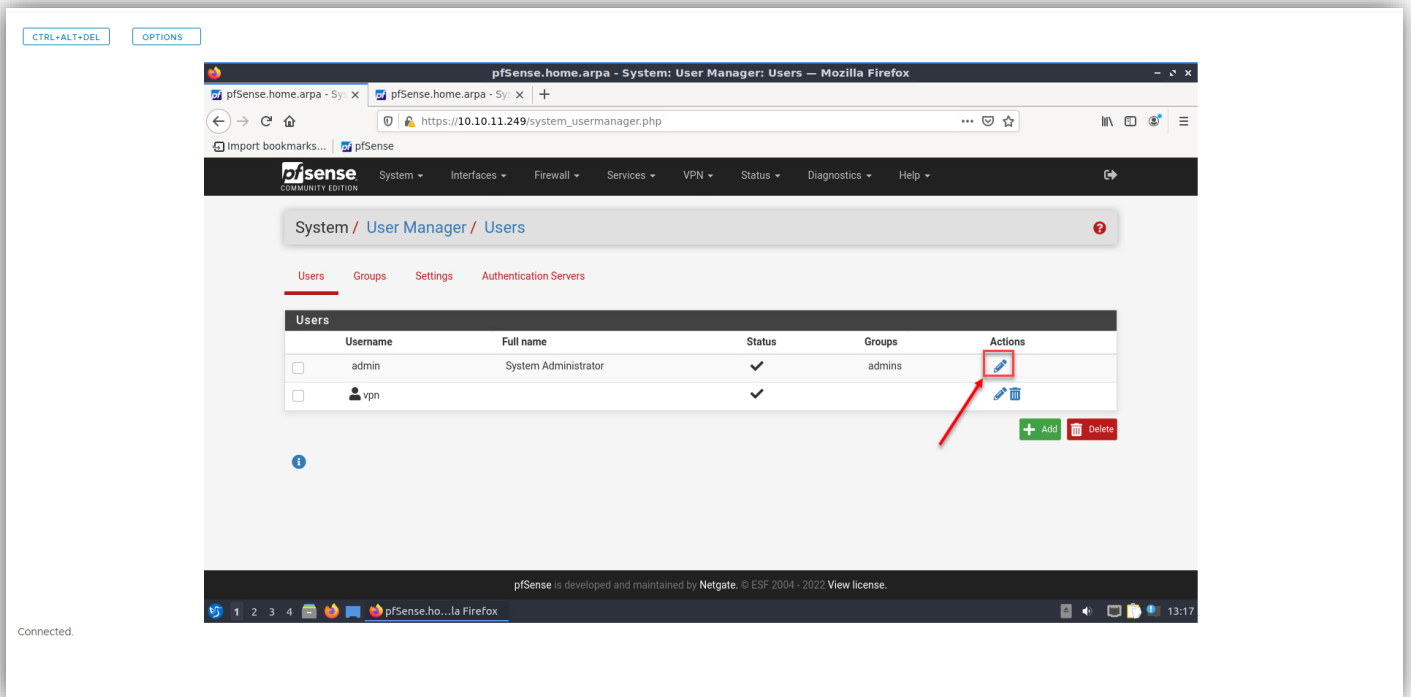
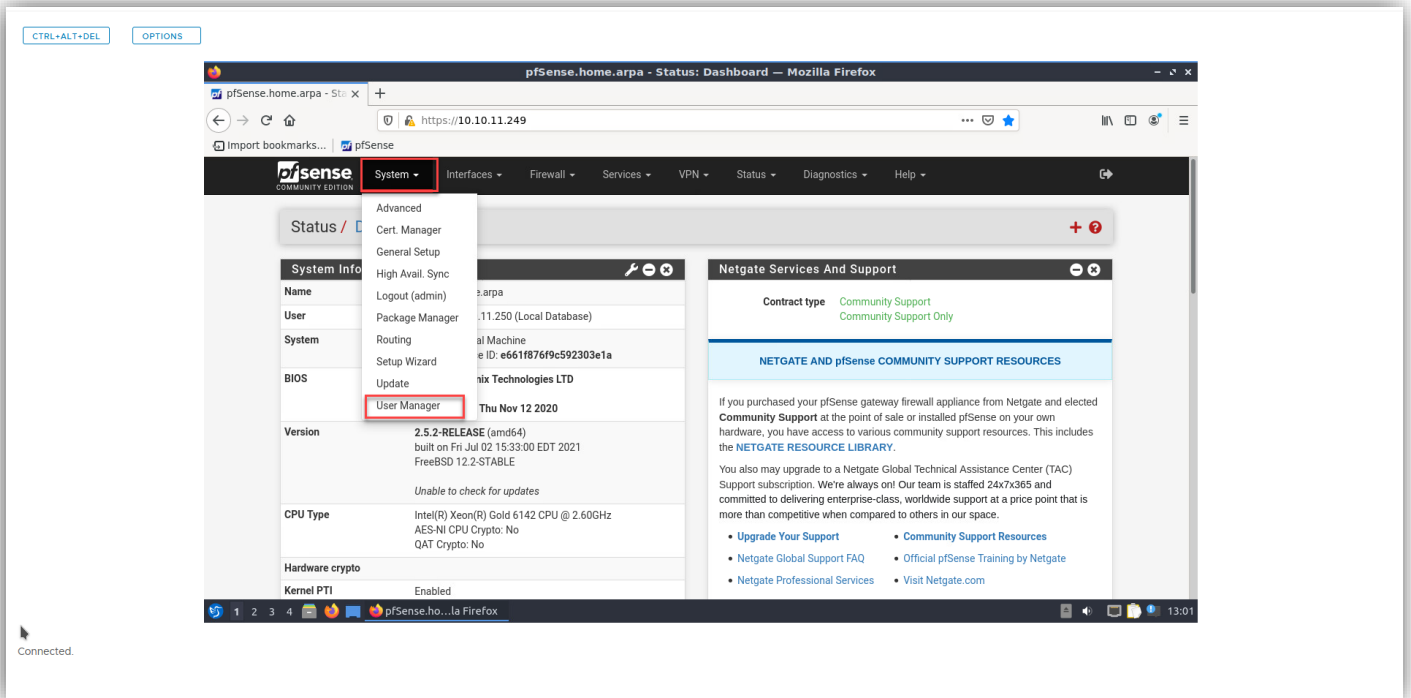
Default pfsense admin user credentials:

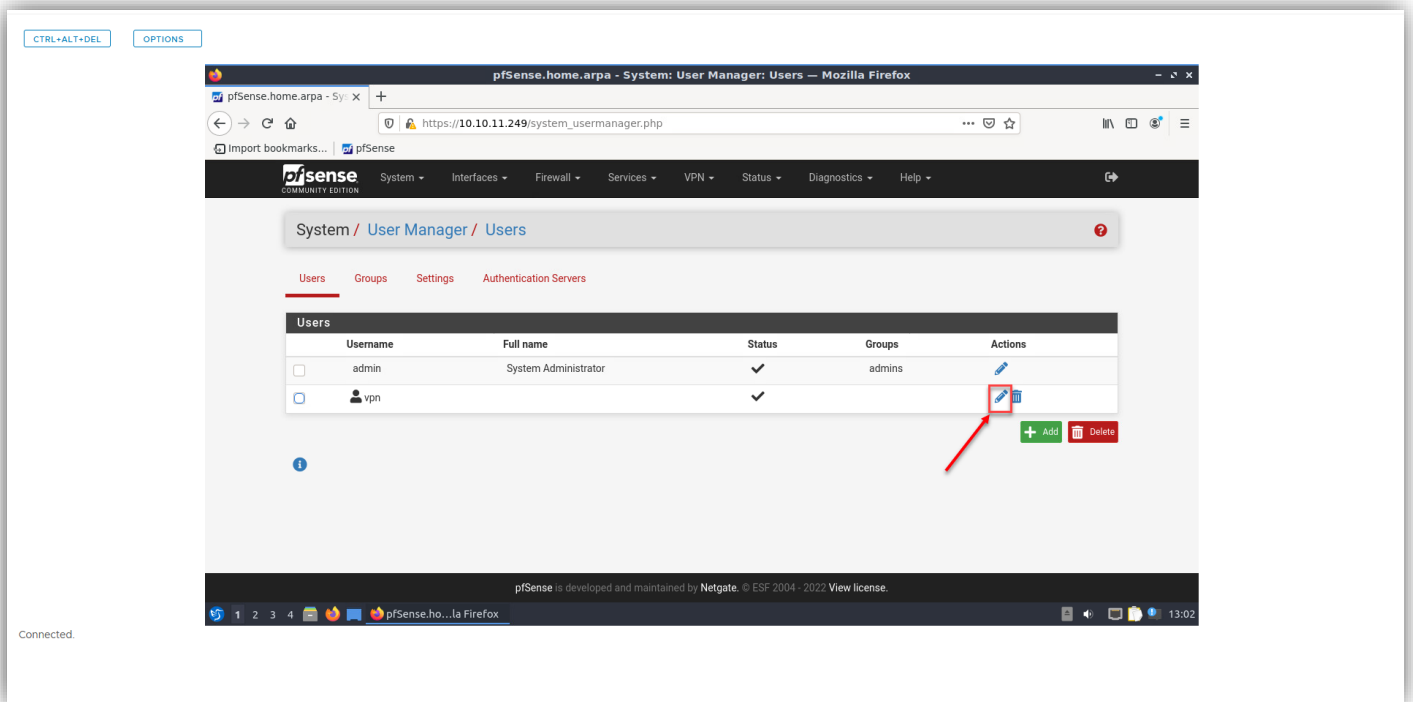
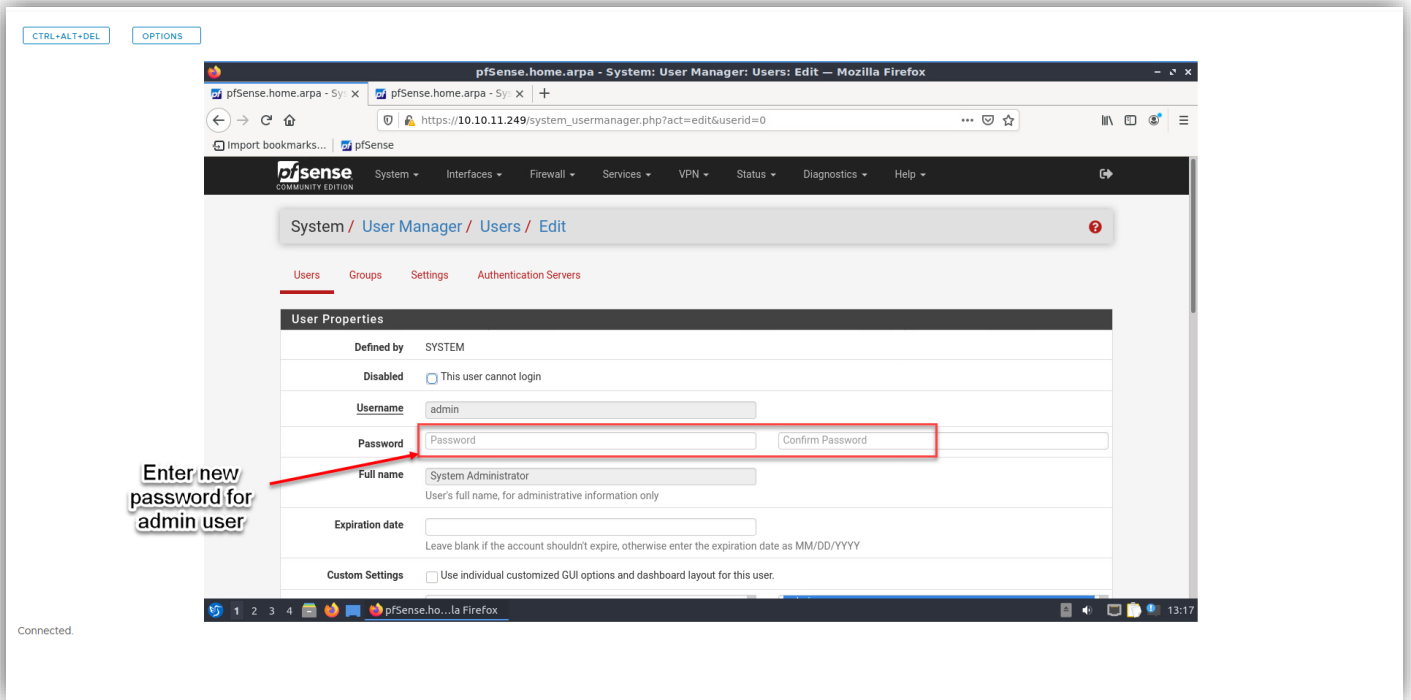
Username: admin

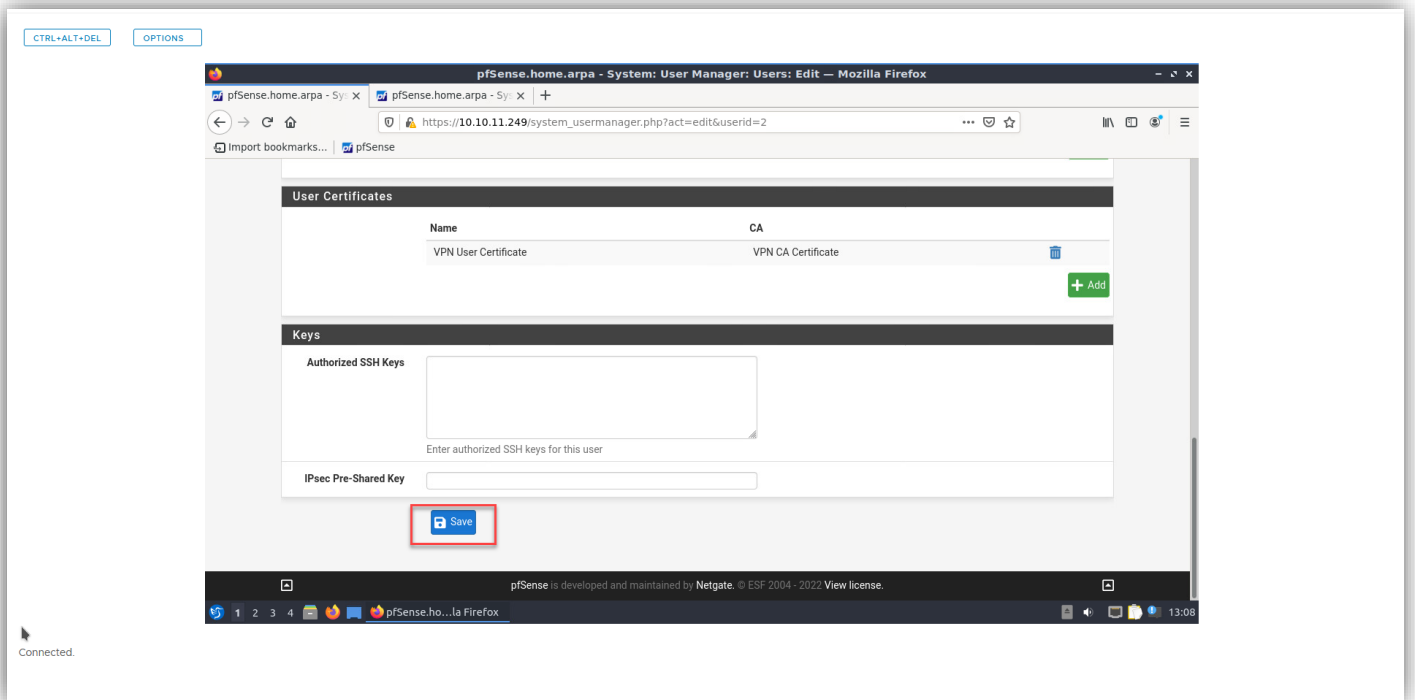
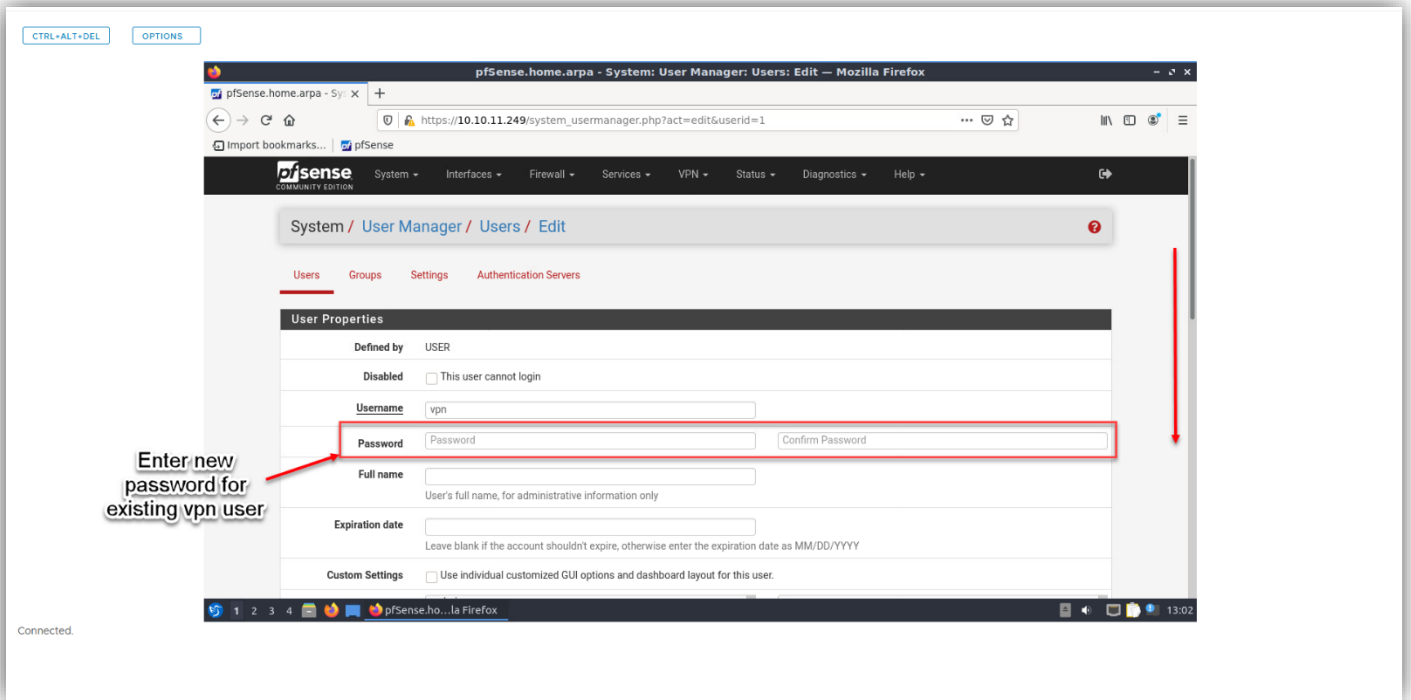
Password: admin



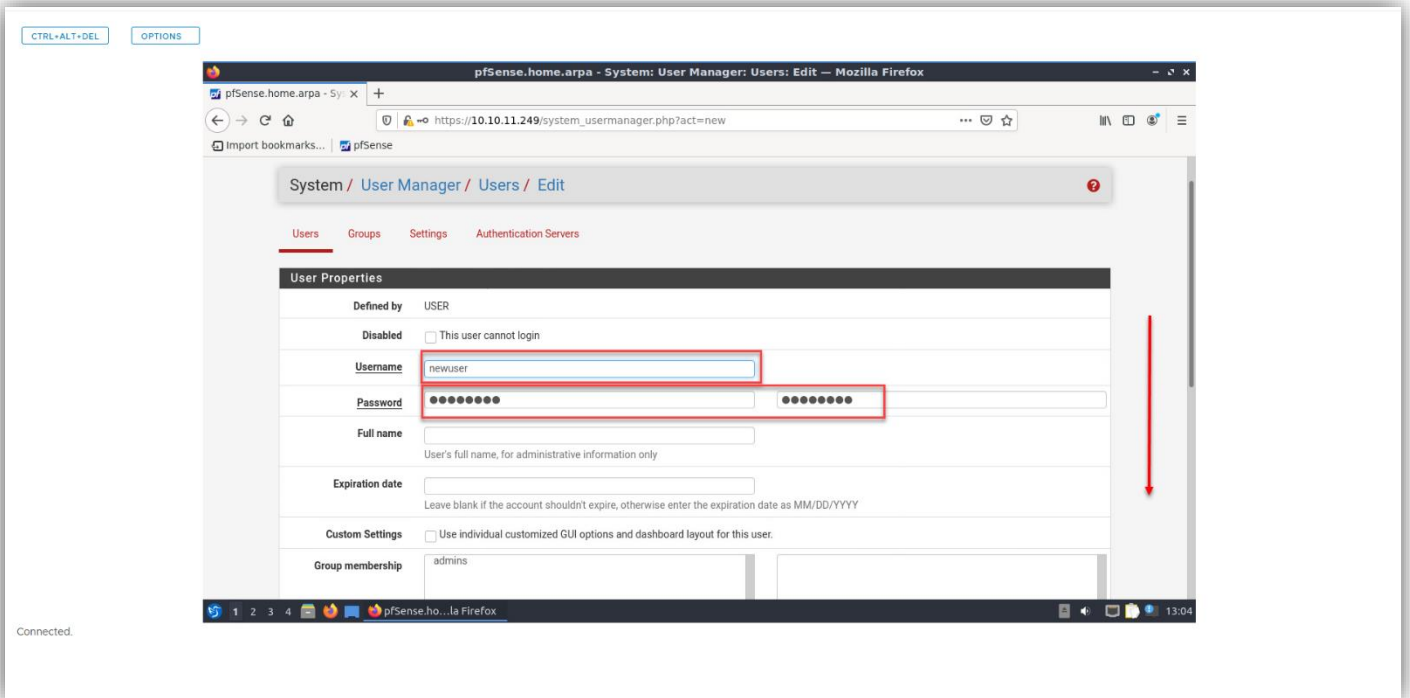
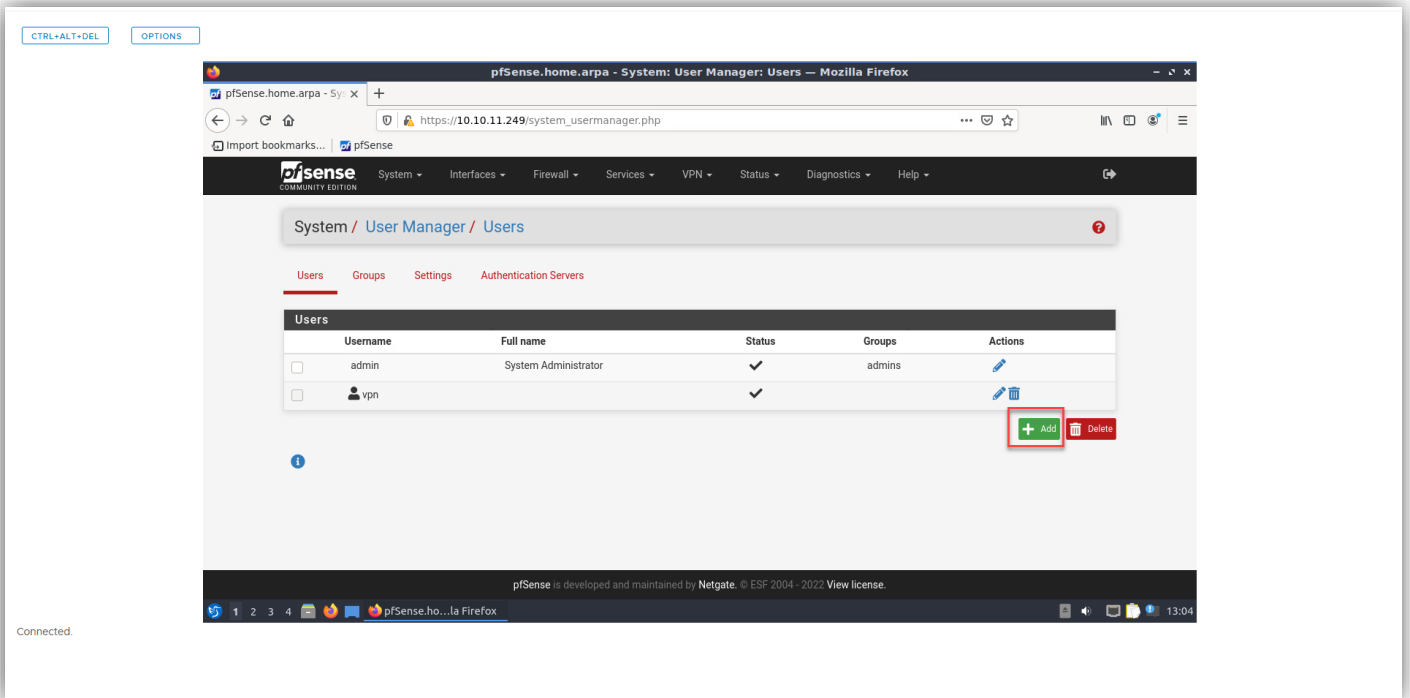
5. Change the admin and vpn user password by following below steps:

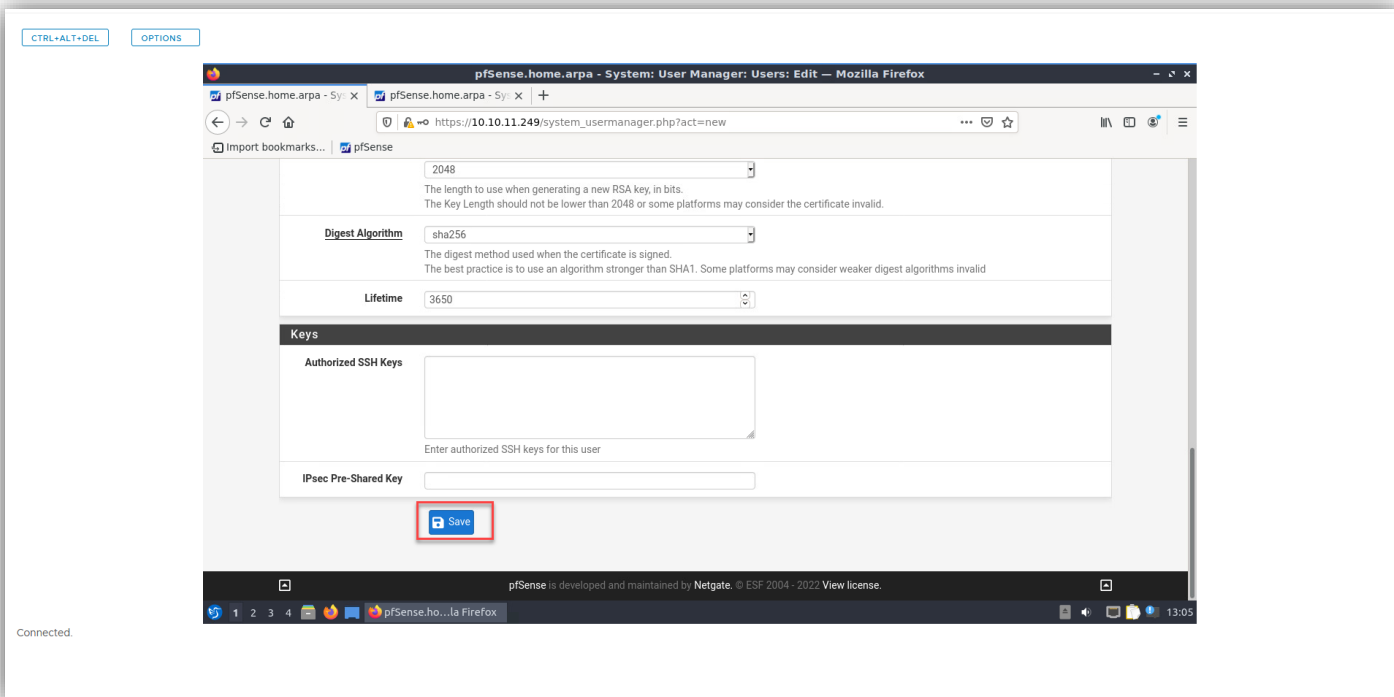
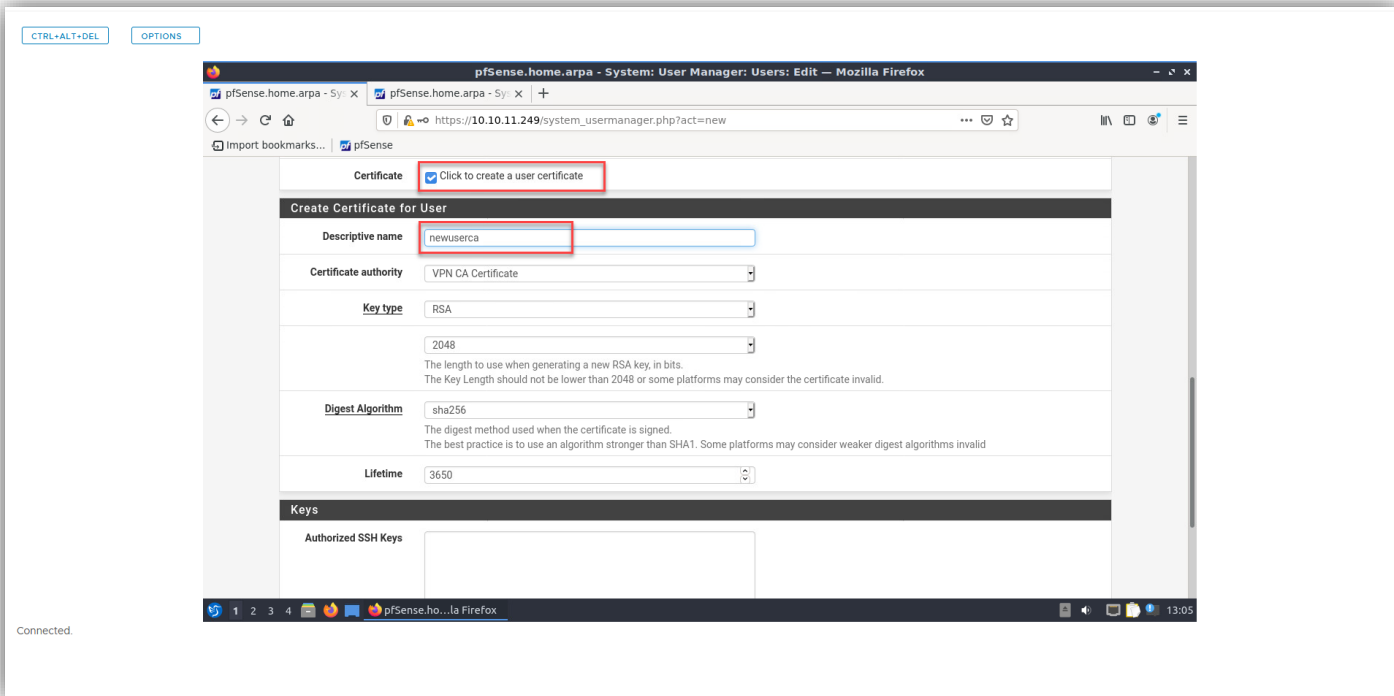




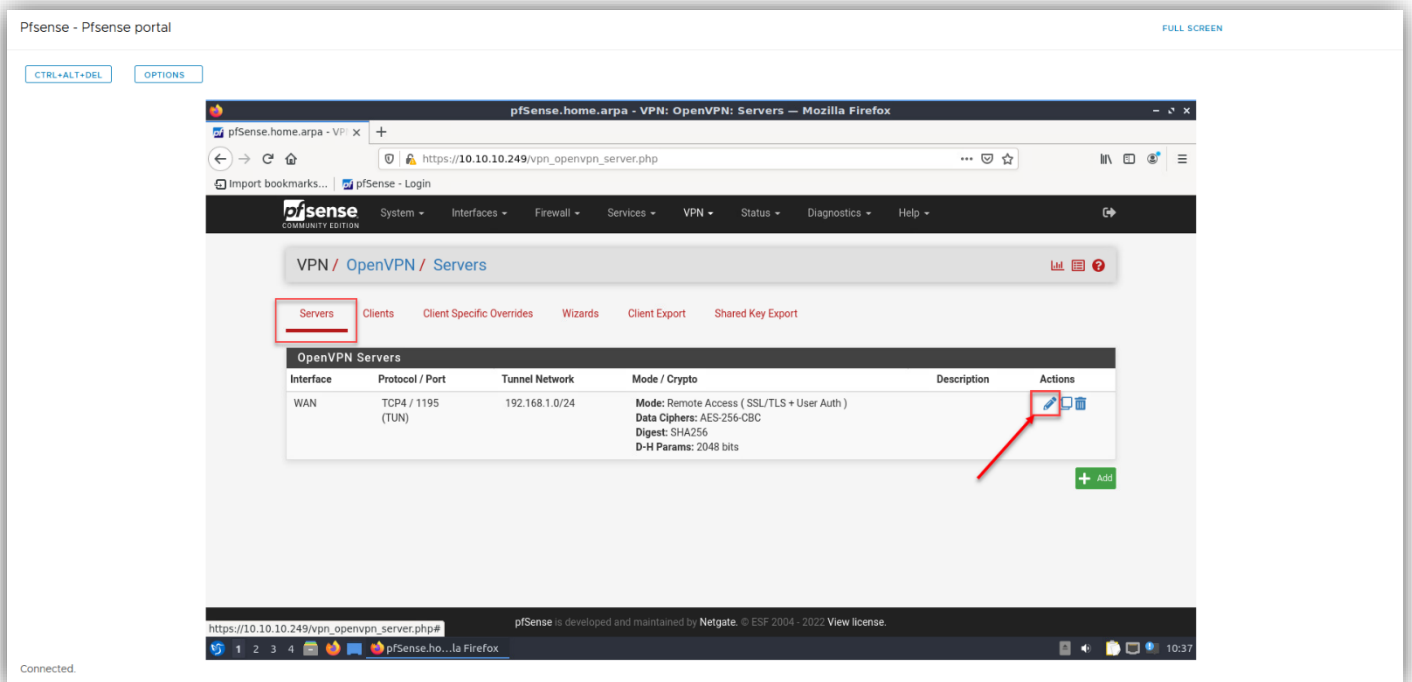
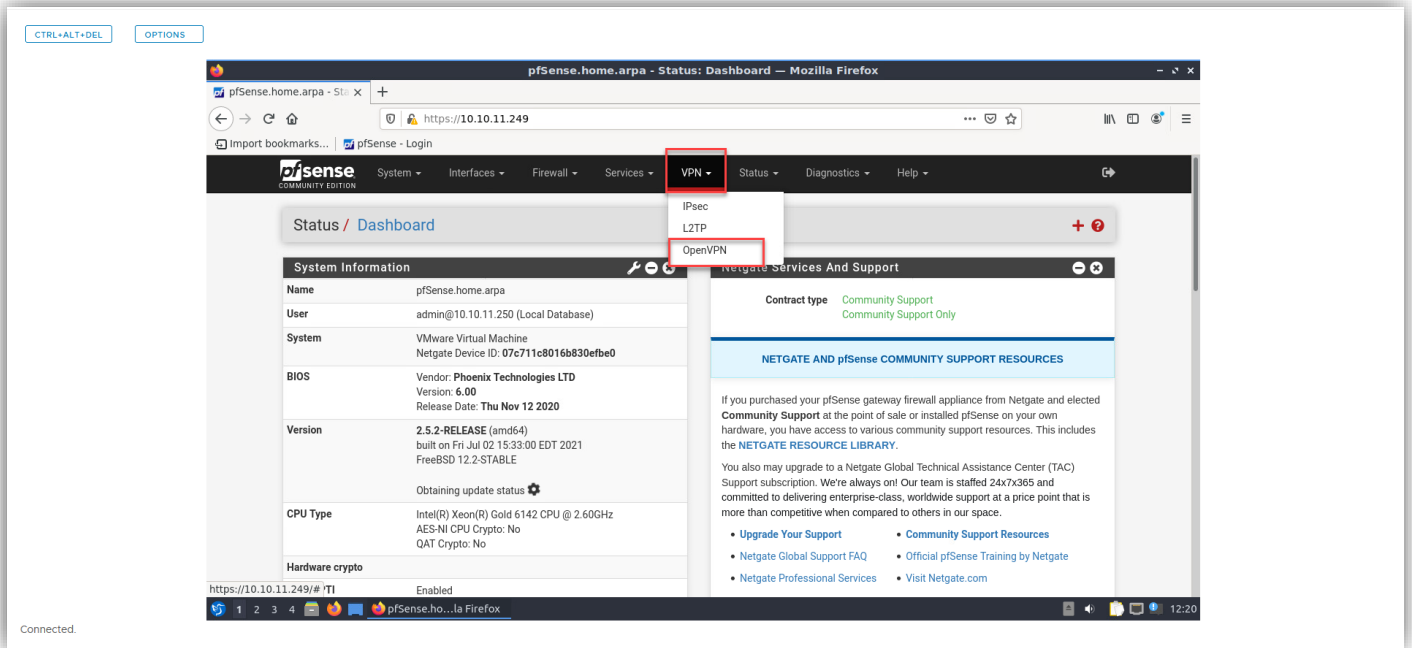


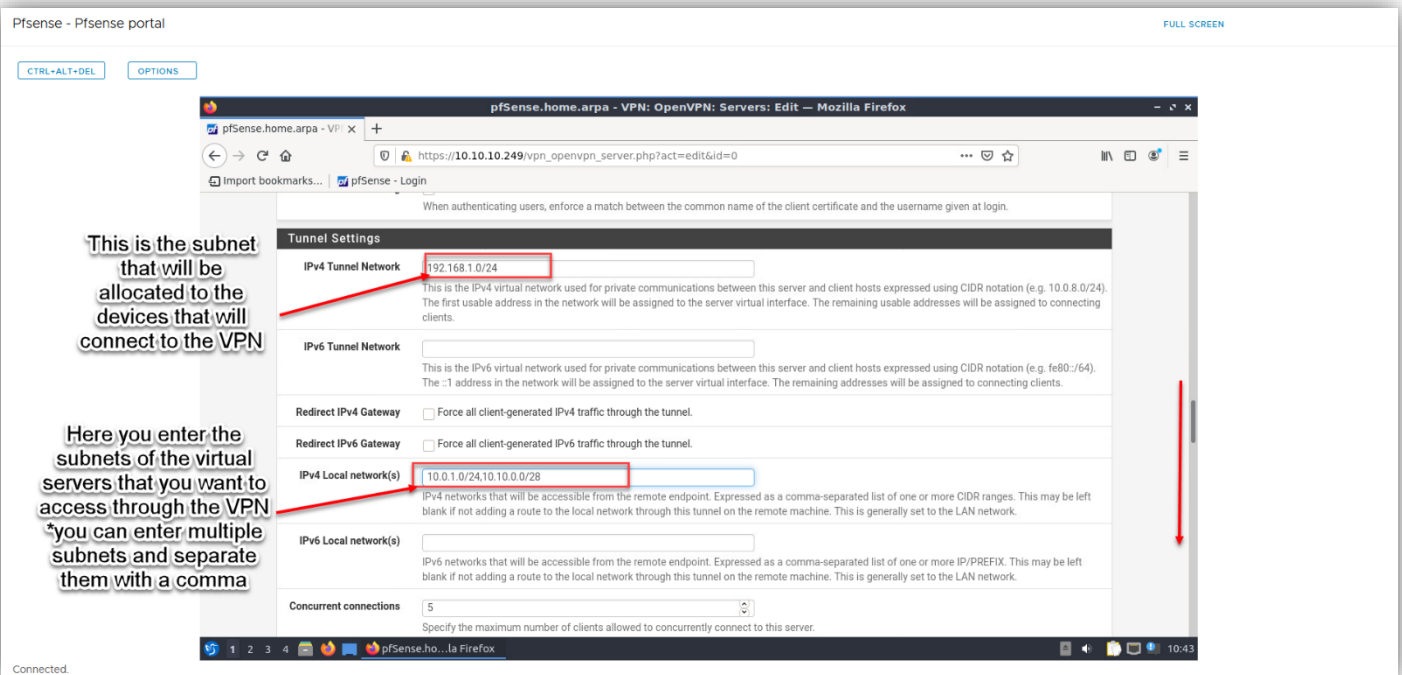
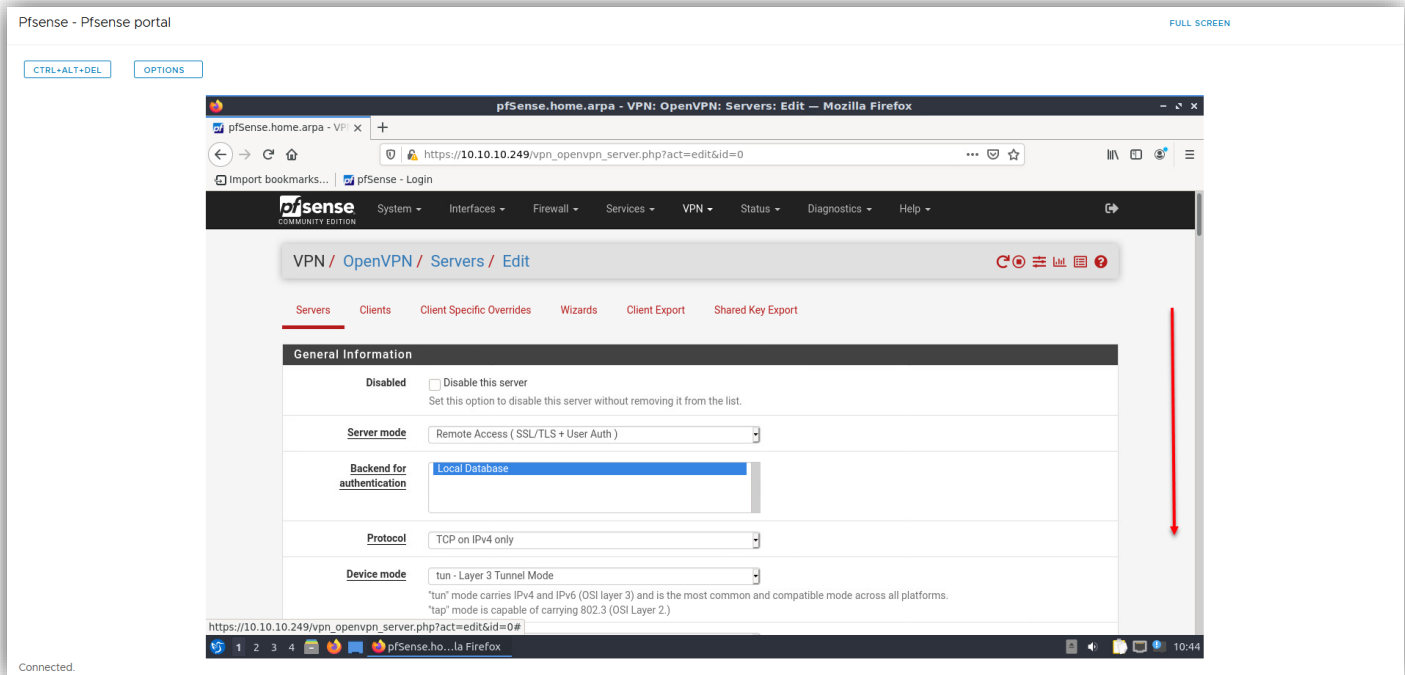
6. Create new VPN user.

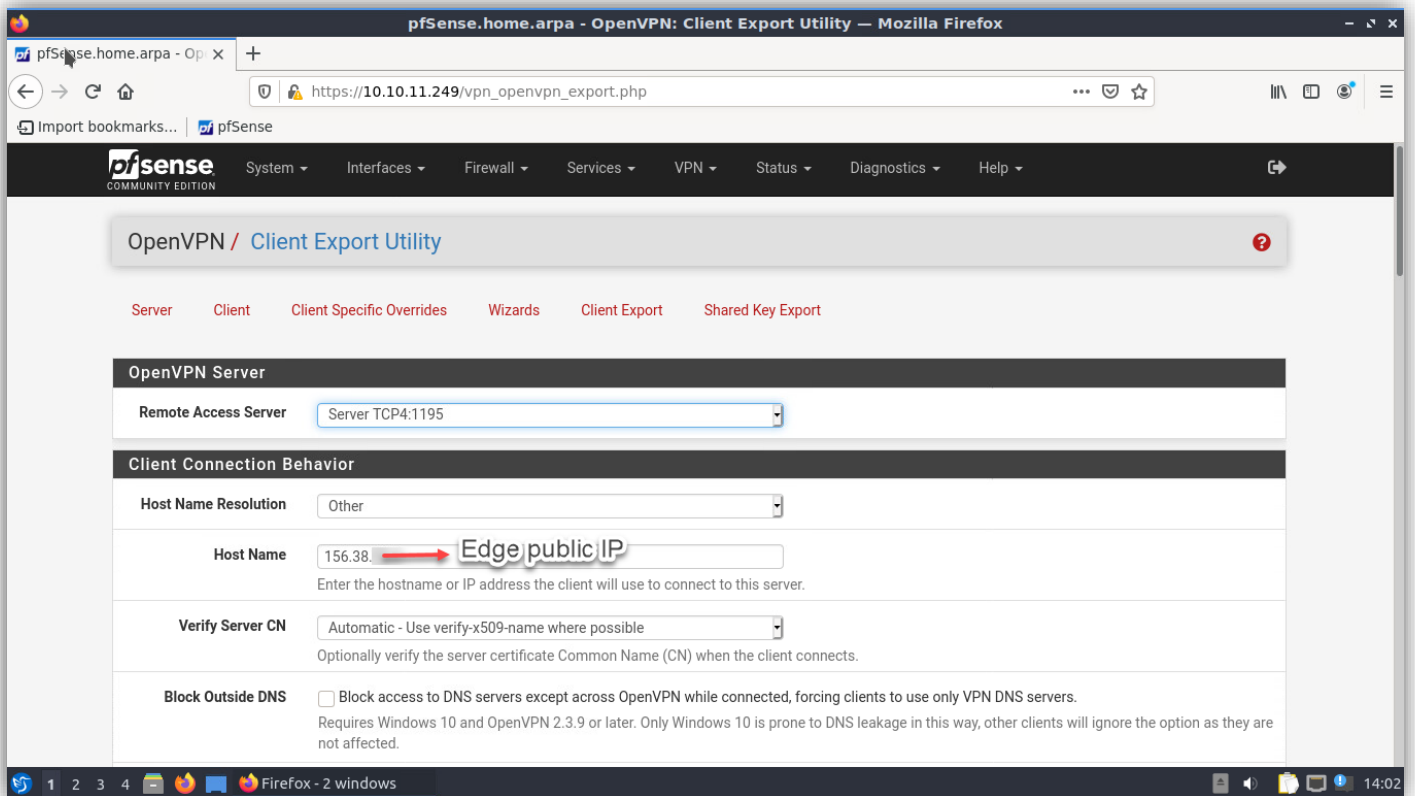
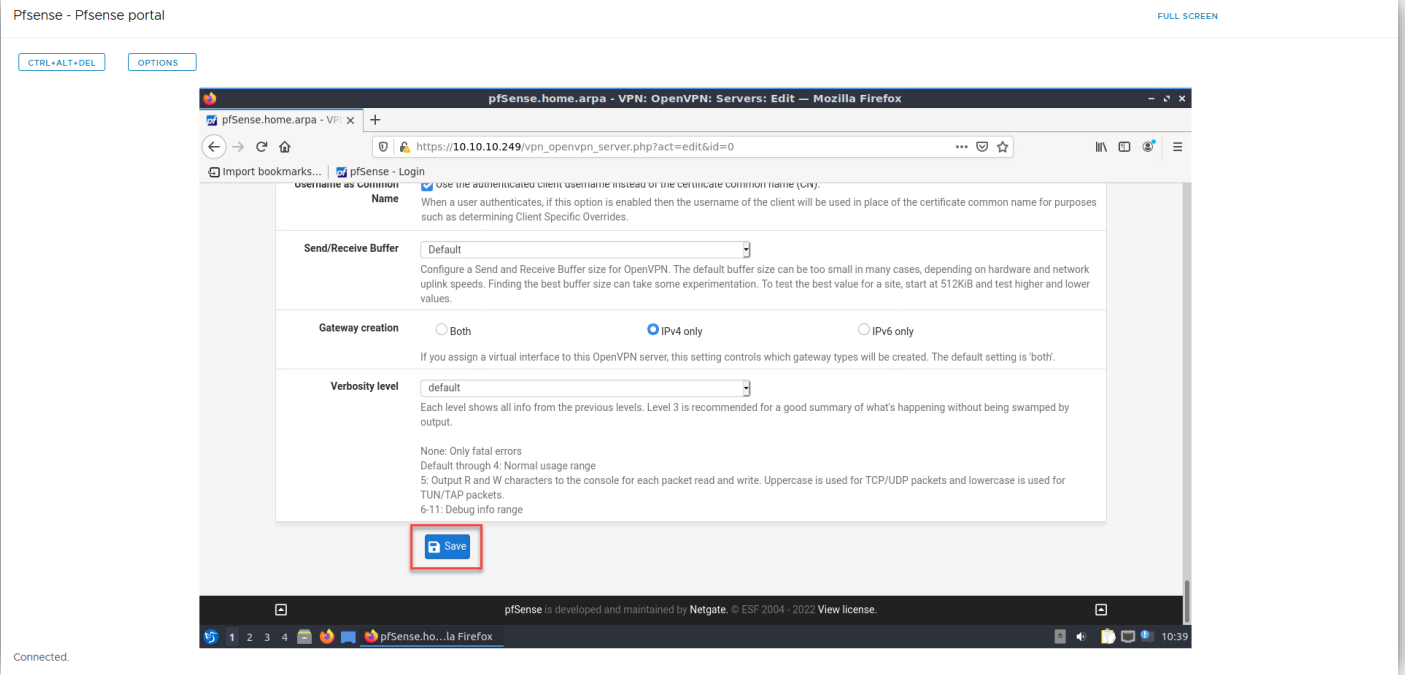


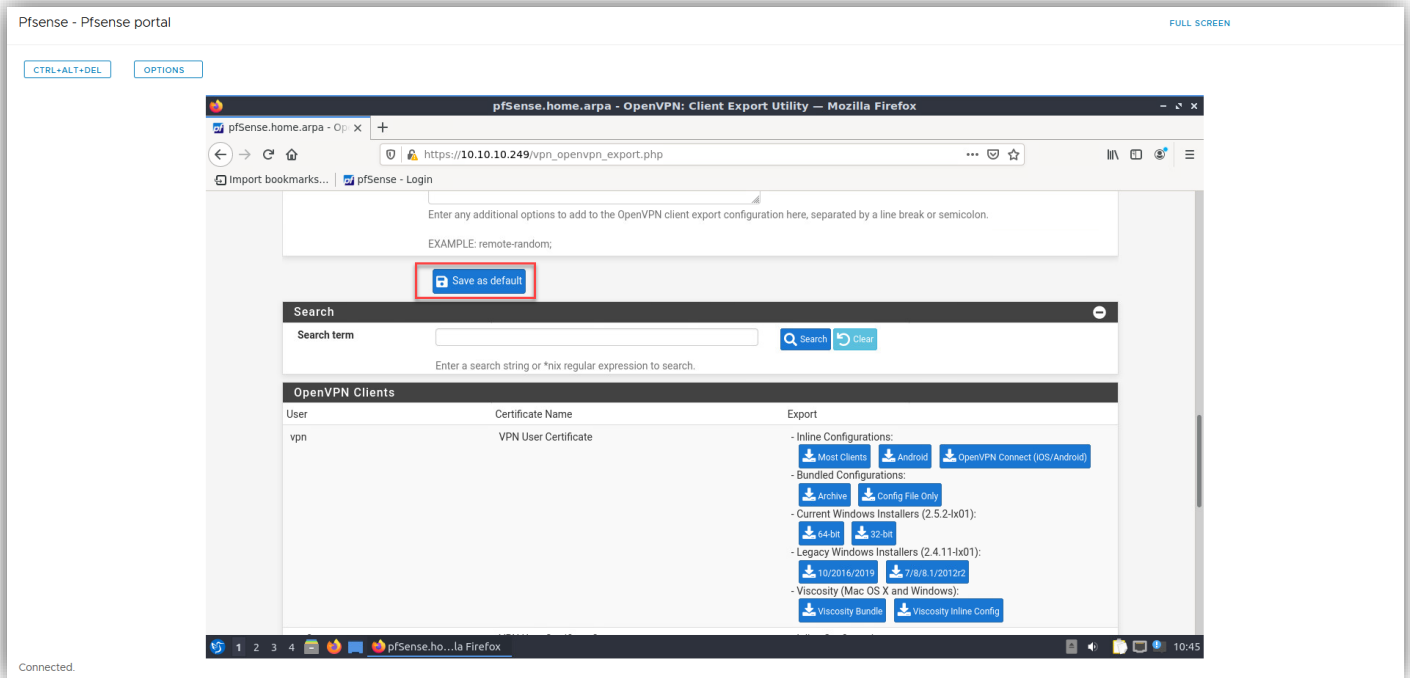


7. Edite tunnel configuration to suite your requirements.

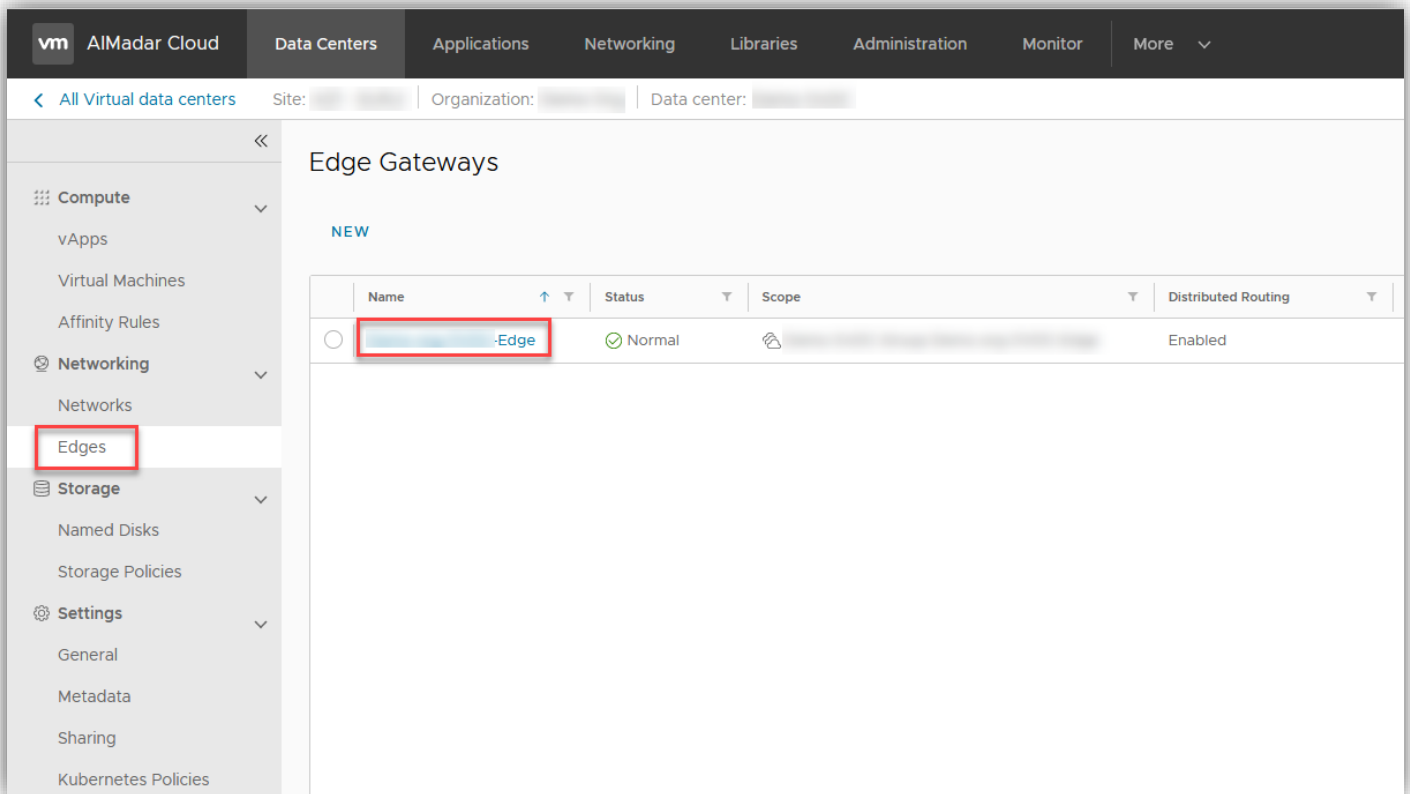








8. Create IP sets for Pfesense IPs and ports to be used in the DNAT and Firewall rules.



vm AlMadar Cloud Data Centers Applications **Networking** Libraries Administration Monitor More v

vcdadmin System Administrator

All Edge Gateways > [Edge Gateway Name]

DELETE DECREASE SCOPE

General

Services

- Firewall
- NAT
- IPSec VPN
- L2 VPN

Load Balancer

- General Settings
- Service Engine Groups
- Virtual Services
- Pools

Security

- Static Groups
- IP Sets**
- Dynamic Groups
- Application Port Profiles

IP Management

- IP Allocations
- DNS
- DHCPv6
- DHCP Forwarding

Displayed ip sets are shared between the Edge Gateway's firewall rules and its owner Vdc Group's distributed firewall rules. Changes in these ip sets will result in changes in the Vdc Group distributed firewall rules.

Name	Status	Description
[Name]	Normal	-
[Name]	Normal	-
[Name]	Normal	-
[Name]	Normal	-
[Name]	Normal	-
[Name]	Normal	-
[Name]	Normal	-
[Name]	Normal	-
[Name]	Normal	-
[Name]	Normal	-

New IP Set

Name * PFsesense-IPs

Description

IP Addresses Enter an IPv4 or IPv6 address, range or CIDR ⓘ

ADD

10.10.11.249

156.38 → Edge Public IP

MODIFY

REMOVE

UNDO

DISCARD SAVE

vm AlMadar Cloud Data Centers Applications **Networking** Libraries Administration Monitor More ▾

All Edge Gateways > [Edge Gateway Name]

[Edge Gateway Name] -Edge DELETE DECREASE SCOPE

General

Services

- Firewall
- NAT
- IPSec VPN
- L2 VPN

Load Balancer

- General Settings
- Service Engine Groups
- Virtual Services
- Pools

Security

- Static Groups
- IP Sets
- Dynamic Groups
- Application Port Profiles**

IP Management

- IP Allocations
- DNS
- DHCPv6
- DHCP Forwarding

Custom Applications ⓘ

NEW

	Name	↑	↓	Status	↓	Description
<input type="radio"/>	[Name]			✔ Normal		-
<input type="radio"/>	[Name]			✔ Normal		-
<input type="radio"/>	[Name]			✔ Normal		-
<input type="radio"/>	[Name]			✔ Normal		-
<input type="radio"/>	[Name]			✔ Normal		-

Default Applications ⓘ

Name	↑	↓	Status	↓	Description
[Name]			✔		[Description]
[Name]			✔		[Description]
[Name]			✔		[Description]
[Name]			✔		[Description]

New Application Port Profile

Name *

Description

ADD PORT PROFILE

Protocol

Ports

Ports separated by comma

10. Create firewall rules for PfSense

The screenshot shows the PfSense web interface. The top navigation bar includes 'vm Almadar Cloud', 'Data Centers', 'Applications', 'Networking', 'Libraries', 'Administration', 'Monitor', and 'More'. The main content area is titled 'All Edge Gateways' and shows a list of firewall rules. The left sidebar contains a menu with categories like 'General', 'Services', 'Load Balancer', 'Security', and 'IP Management'. The 'Firewall' option under 'Services' is highlighted. The main table lists 9 rules with columns for #, Name, Category, State, Applications, Source, Destination, and Action. The 'EDIT RULES' button is highlighted in a red box.

#	Name	Category	State	Applications	Source	Destination	Action
1	...	User defined	Enabled	...	...	...	Allow
2	...	User defined	Enabled	...	...	...	Allow
3	...	User defined	Enabled	...	...	...	Allow
4	...	User defined	Disabled	...	...	...	Allow
5	...	User defined	Enabled	...	...	...	Allow
6	...	User defined	Enabled	...	...	...	Allow
7	...	User defined	Enabled	...	...	...	Allow
8	...	User defined	Enabled	...	...	...	Allow
9	...	Default	Enabled	...	...	...	Drop

The screenshot shows the 'Edit Rules' dialog box. The top left corner has a 'NEW ON TOP' button highlighted in a red box. The dialog contains a table with 9 rules and columns for #, Name, Category, State, Applications, Source, Destination, Action, IP Protocol, and Logging. At the bottom right, there are 'DISCARD' and 'SAVE' buttons.

#	Name	Category	State	Applications	Source	Destination	Action	IP Protocol	Logging
1	...	User defined	Enabled	...	...	...	...	...	Disabled
2	...	User defined	Enabled	...	...	...	...	...	Disabled
3	...	User defined	Enabled	...	...	...	...	...	Disabled
4	...	User defined	Disabled	...	...	...	...	...	Disabled
5	...	User defined	Enabled	...	...	...	...	...	Disabled
6	...	User defined	Enabled	...	...	...	...	...	Disabled
7	...	User defined	Enabled	...	...	...	...	...	Disabled
8	...	User defined	Enabled	...	...	...	...	...	Disabled
9	...	Default	Enabled	...	...	...	...	...	Disabled

After created firewall rule, it will be as shown below

Edit Rules

NEW ON TOP NEW ABOVE REMOVE MOVE UP MOVE DOWN MOVE TO GO TO USER RULES

#	Name	Category	State	Applications	Source	Destination	Action	IP Protocol	Logging
1	Public to PfSense	User defined	Enabled	PfSense-Agent-Port, PfSen...	Any	PfSense-IPs	Allow	IPv4	Disabled
2			Disabled						Disabled
3			Disabled						Disabled
4			Disabled						Disabled
5			Disabled						Disabled
6			Disabled						Disabled
7			Disabled						Disabled
8			Disabled						Disabled
9			Disabled						Disabled
10			Disabled						Disabled

10 rule(s)

DISCARD SAVE