Security Gateway Manual

XG-1541

Oct 21, 2020

CONTENTS

This Quick Start Guide covers the first time connection procedures for the Netgate® XG-1541 1U Firewall Appliance and will provide the information needed to keep the appliance up and running.

Tip: Before getting started, we recommend downloading the PDF version of the Product Manual and the PDF version of the pfSense Documentation in case you lose Internet access.

CHAPTER

ONE

OUT OF THE BOX

1.1 Getting Started

The basic firewall configuration begins with connecting the Netgate® appliance to the Internet. Neither the modem nor the Netgate appliance should be powered on at this time.

Establishing a connection to an Internet Service Provider (ISP) starts with connecting one end of an Ethernet cable to the WAN port (shown in the *Input and Output Ports* section) of the Netgate appliance.

> **Warning:** The default LAN subnet on the firewall is `192.168.1.0/24`. The same subnet **cannot** be used on both WAN and LAN, so if the subnet on the WAN side of the firewall is also `192.168.1.0/24`, **disconnect the WAN** interface until the LAN interface has been renumbered to a different subnet.

The opposite end of the same Ethernet cable should be inserted in to the LAN port of the ISP-supplied modem. The modem provided by the ISP might have multiple LAN ports. If so, they are usually numbered. For the purpose of this installation, please select port 1.

The next step is to connect the LAN port (shown in the *Input and Output Ports* section) of the Netgate appliance to the computer which will be used to access the firewall console.

Connect one end of the second Ethernet cable to the LAN port (shown in the *Input and Output Ports* section) of the Netgate appliance. Connect the other end to the network connection on the computer. In order to access the webConfigurator, the PC network interface must be set to use DHCP, or have a static IP set in the `192.168.1.x` subnet with a subnet mask of `255.255.255.0`. Do not use `192.168.1.1`, as this is the address of the firewall, and will cause an IP conflict.

1.1.1 Initial Setup

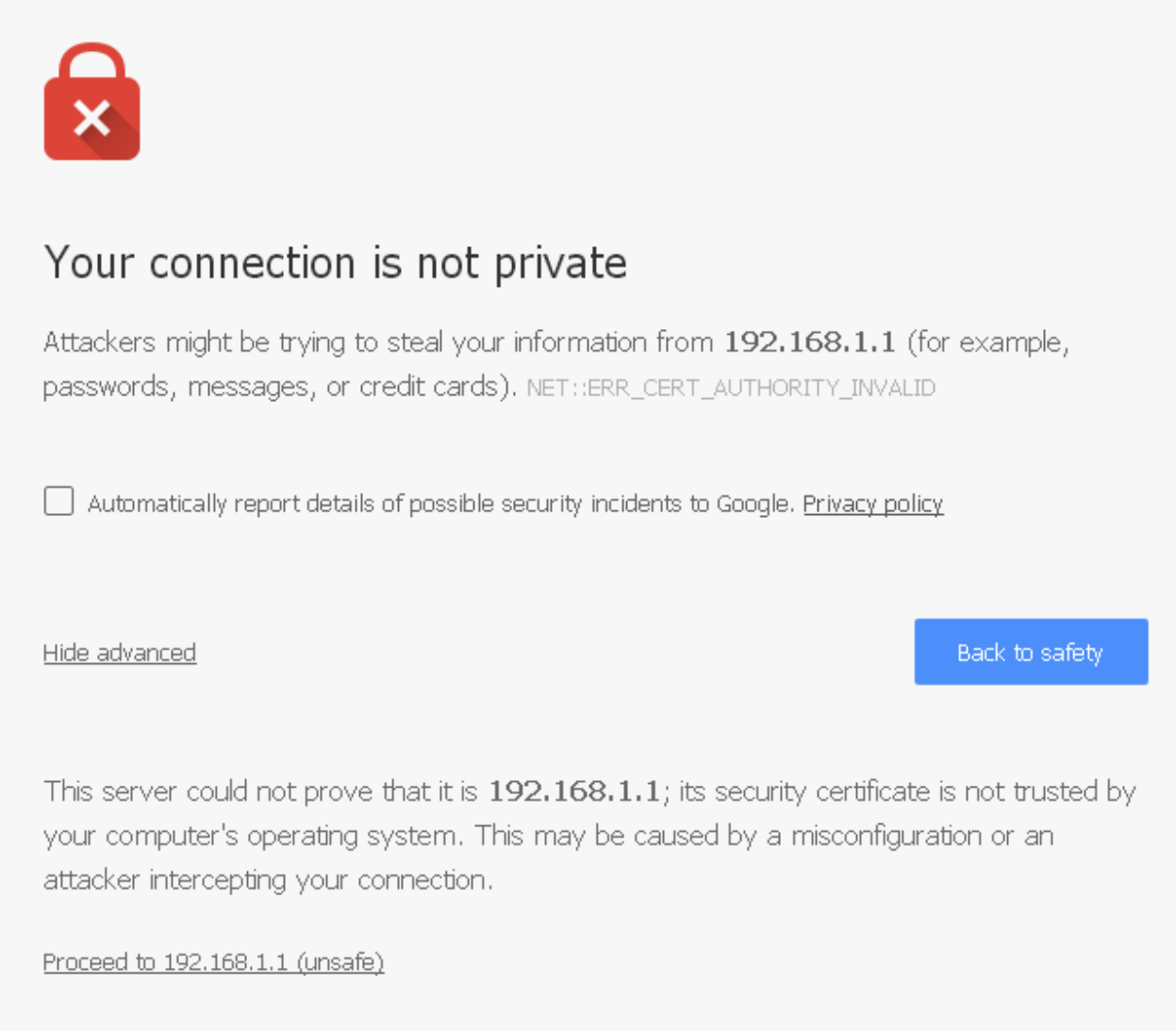
The next step is to power up the modem and the firewall. Plug in the power supply to the power port (shown in the *Input and Output Ports* section).

Once the modem and Netgate appliance are powered up, the next step is to power up the computer.

Once the Netgate appliance is booted, the attached computer should receive a `192.168.1.x` IP address via DHCP from the Netgate appliance.

1.1.2 Logging Into the Web Interface

Browse to https://192.168.1.1 to access the web interface. In some instances, the browser may respond with a message indicating a problem with website security. Below is a typical example in Google Chrome. If this message or similar message is encountered, it is safe to proceed.



At the login page enter the default pfSense password and username:

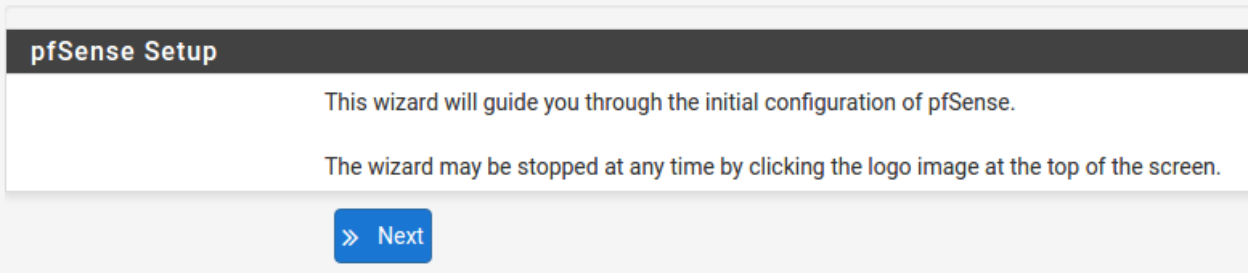
Username `admin`

Password `pfsense`

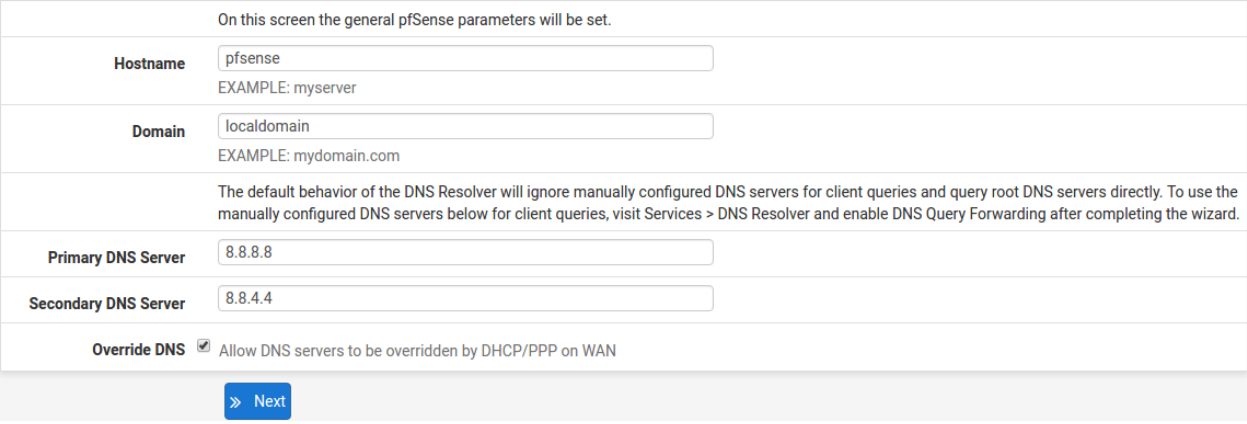
Click **Login** to continue

1.1.3 Wizard

Upon successful login, the following is displayed.



1.1.4 Configuring Hostname, Domain Name and DNS Servers



1.1.5 Hostname

For **Hostname**, any desired name can be entered as it does not affect functionality of the firewall. Assigning a hostname to the firewall will allow the GUI to be accessed by hostname as well as IP address.

For the purposes of this guide, use `pfsense` for the hostname. The default hostname, `pfsense` may be left unchanged.

Once saved in the configuration, the GUI may be accessed by entering http://pfsense as well as http://192.168.1.1

1.1.6 Domain

If an existing DNS domain is in use within the local network (such as a Microsoft Active Directory domain), use that domain here. This is the domain suffix assigned to DHCP clients, which should match the internal network.

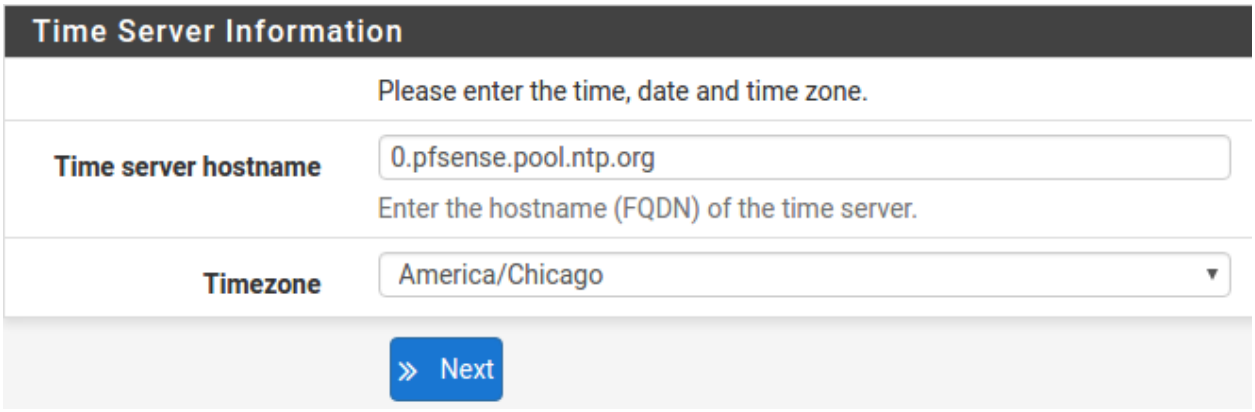
For networks without any internal DNS domains, enter any desired domain name. The default `localdomain` is used for the purposes of this tutorial.

1.1.7 DNS Servers

The DNS server fields can be left blank if the DNS Resolver is used in non- forwarding mode, which is the default behavior. The settings may also be left blank if the WAN connection is using DHCP, PPTP or PPPoE types of Internet connections and the ISP automatically assigns DNS server IP addresses. When using a static IP on WAN, DNS server IP addresses must be entered here for name resolution to function if the default DNS Resolver settings are not used.

DNS servers can be specified here even if they differ from the servers assigned by the ISP. Either enter the IP addresses provided by the ISP, or consider using Google public DNS servers (`8.8.8.8`, `8.8.4.4`). Google DNS servers are used for the purpose of this tutorial. Click **Next** after filling in the fields as appropriate.

1.1.8 Time Server Configuration



1.1.9 Time Server Synchronization

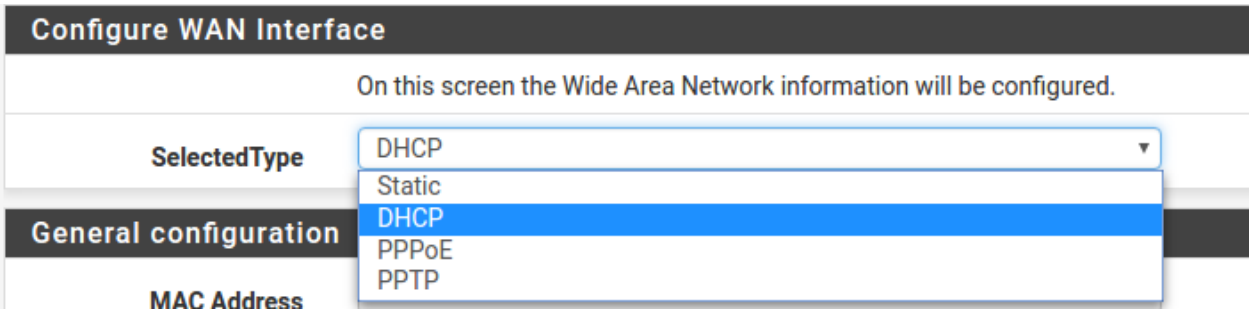
Setting time server synchronization is quite simple. We recommend using the default pfSense time server address, which will randomly select an NTP server from a pool.

1.1.10 Setting Time Zone

Select an appropriate time zone for the location of the firewall. For purposes of this manual, the Timezone setting will be set to `America/Chicago` for US Central time.

1.1.11 Configuring Wide Area Network (WAN) Type

The WAN interface type is the next to be configured. The IP address assigned to this section becomes the Public IP address that this network will use to communicate with the Internet.

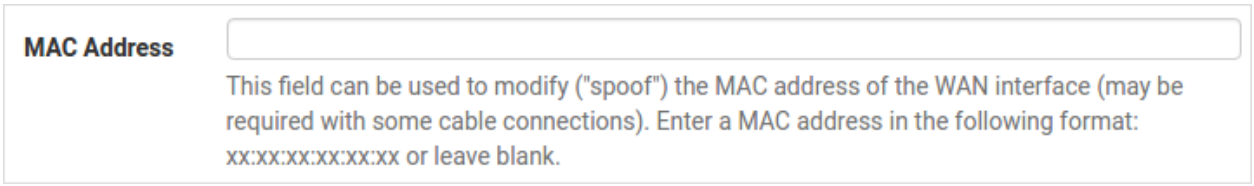


This depicts the four possible WAN interface types. Static, DHCP, PPPoE and PPTP. One must be selected from the drop-down list.

Further information from the ISP is required to proceed when selecting *Static*, *PPPoE* and *PPTP* such as login name and password or as with static addresses, an IP address, subnet mask and gateway address.

DHCP is the most common type of interface for home cable modems. One dynamic IP address is issued from the ISP DHCP server and will become the public IP address of the network behind this firewall. This address will change periodically at the discretion of the ISP. Select *DHCP* as shown and proceed to the next section.

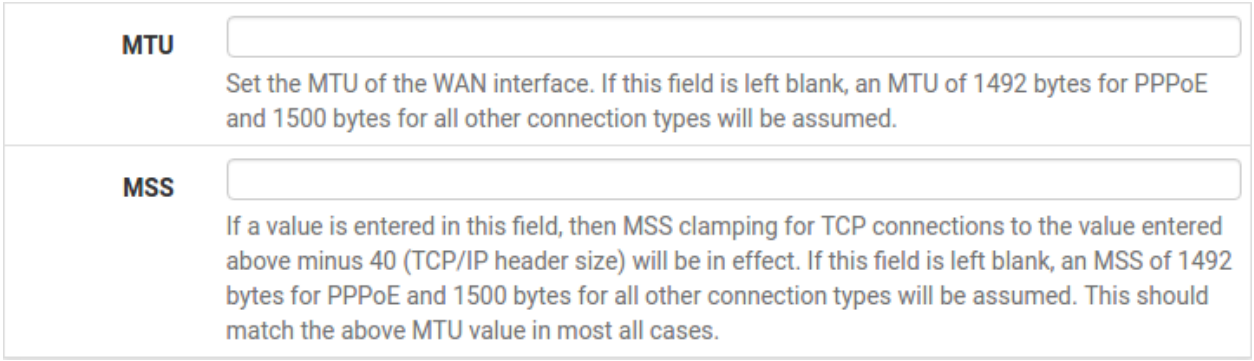
1.1.12 MAC Address



If replacing an existing firewall, the WAN MAC address of the old firewall may be entered here, if it can be determined. This can help avoid issues involved in switching out firewalls, such as ARP caches, ISPs locking to single MAC addresses, etc.

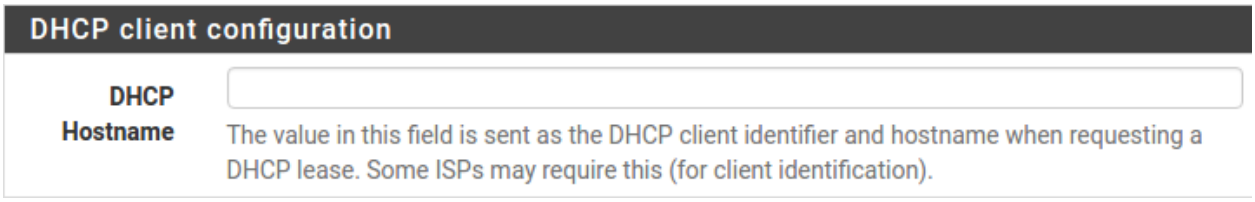
If the MAC address of the old firewall cannot be located, the impact is most likely insignificant. Power cycle the ISP router and modem and the new MAC address will usually be able to get online. For some ISPs, it may be necessary to call them when switching devices, or an activation process may be required.

1.1.13 Configuring MTU and MSS



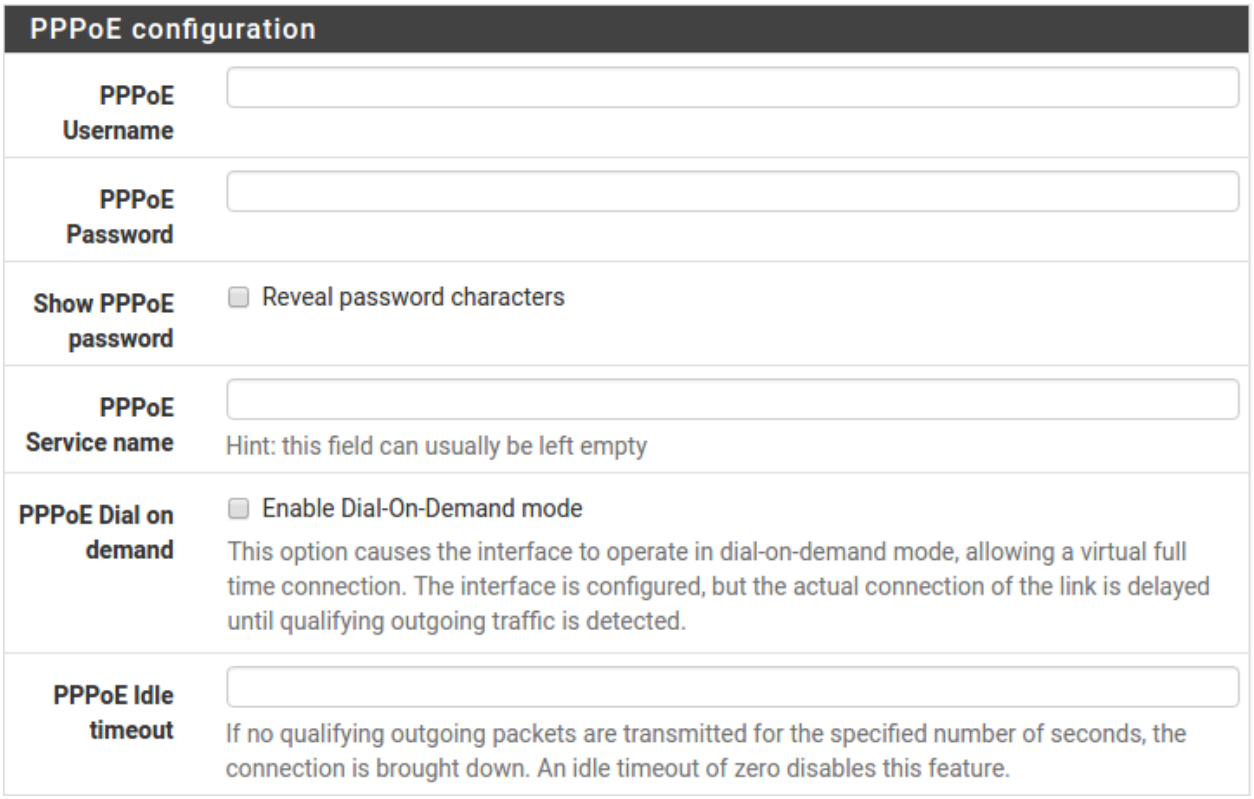
MTU or Maximum Transmission Unit determines the largest protocol data unit that can be passed onwards. A 1500-byte packet is the largest packet size allowed by Ethernet at the network layer and for the most part, the Internet so leaving this field blank allows the system to default to 1500-byte packets. PPPoE is slightly smaller at 1492-bytes. Leave this blank for a basic configuration.

1.1.14 Configuring DHCP Hostname



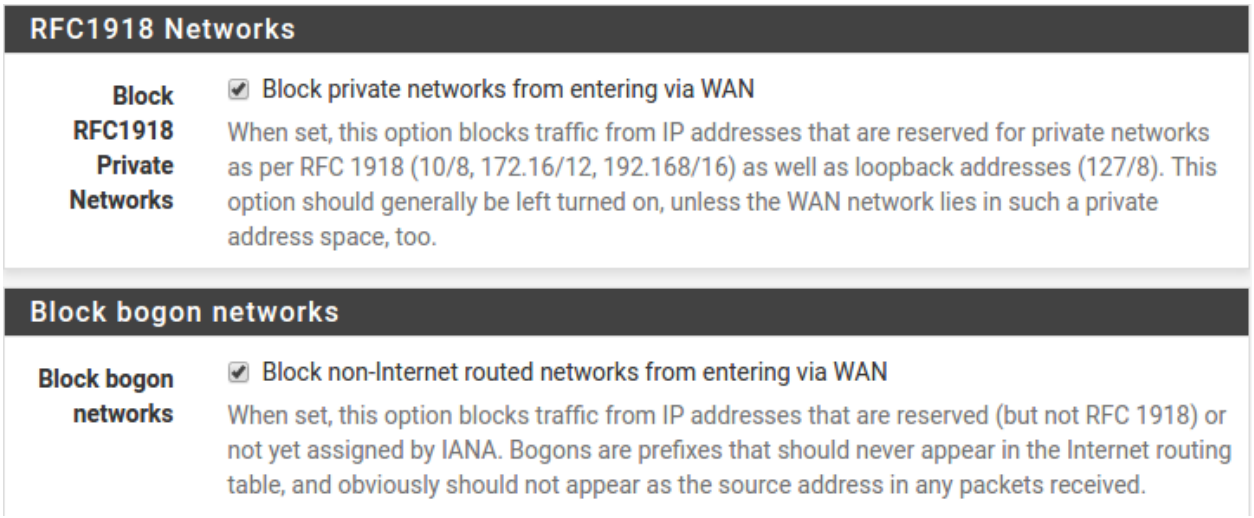
Some ISPs specifically require a **DHCP Hostname** entry. Unless the ISP requires the setting, leave it blank.

1.1.15 Configuring PPPoE and PPTP Interfaces



Information added in these sections is assigned by the ISP. Configure these settings as directed by the ISP

1.1.16 Block Private Networks and Bogons



When enabled, all private network traffic originating on the internet is blocked.

Private addresses are reserved for use on internal LANs and blocked from outside traffic so these address ranges may be reused by all private networks.

The following inbound address Ranges are blocked by this firewall rule:

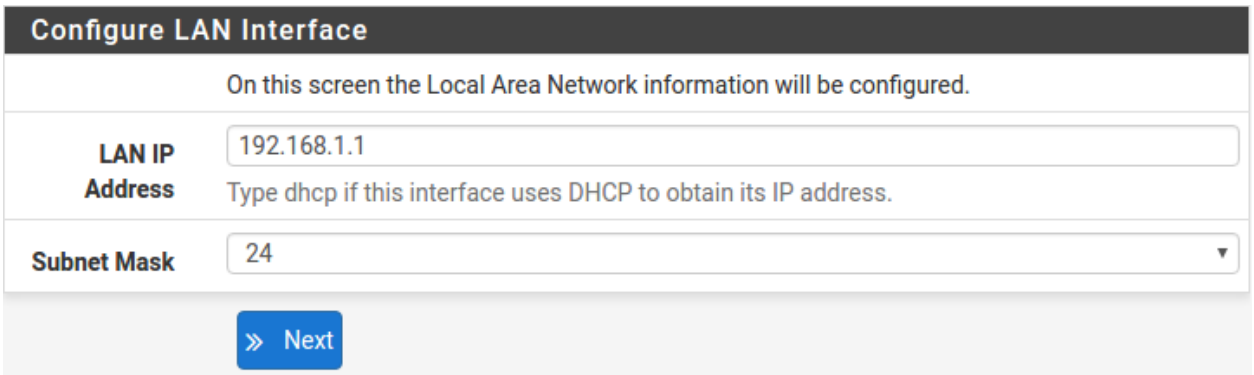
- `10.0.0.1` to `10.255.255.255`
- `172.16.0.1` to `172.31.255.254`
- `192.168.0.1` to `192.168.255.254`
- `127.0.0.0/8`
- `100.64.0.0/10`
- `fc00::/7`

Bogons are public IP addresses that have not yet been allocated, so they may typically also be safely blocked as they should not be in active use.

Check **Block RFC1918 Private Networks** and **Block Bogon Networks**.

Click **Next** to continue.

1.1.17 Configuring LAN IP Address & Subnet Mask

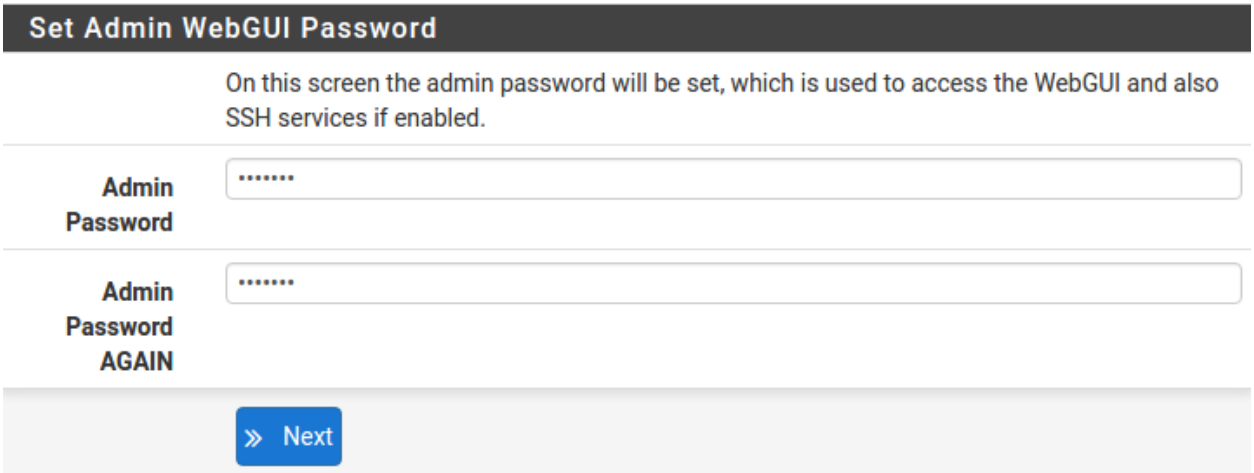


A static IP address of `192.168.1.1` and a subnet mask (CIDR) of `24` was chosen for this installation. If there are no plans to connect this network to any other network via VPN, the `192.168.1.x` default is sufficient.

Click **Next** to continue.

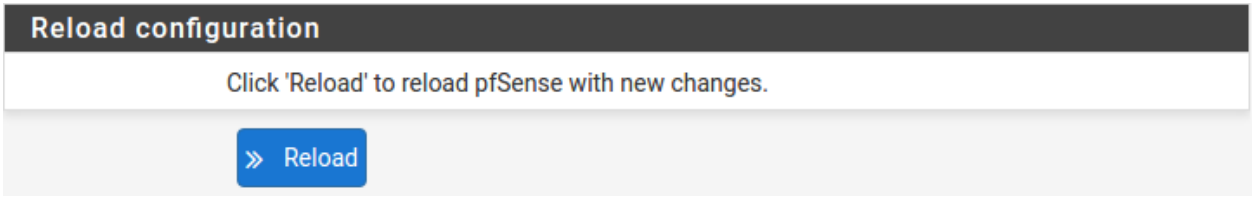
Note: If a Virtual Private Network (VPN) is configured to remote locations, choose a private IP address range more obscure than the very common `192.168.1.0/24`. IP addresses within the `172.16.0.0/12` RFC1918 private address block are the least frequently used. We recommend selecting a block of addresses between `172.16.x.x` and `172.31.x.x` for least likelihood of having VPN connectivity difficulties. An example of a conflict would be If the local LAN is set to `192.168.1.x` and a remote user is connected to a wireless hotspot using `192.168.1.x` (very common), the remote client won't be able to communicate across the VPN to the local network.

1.1.18 Change Administrator Password



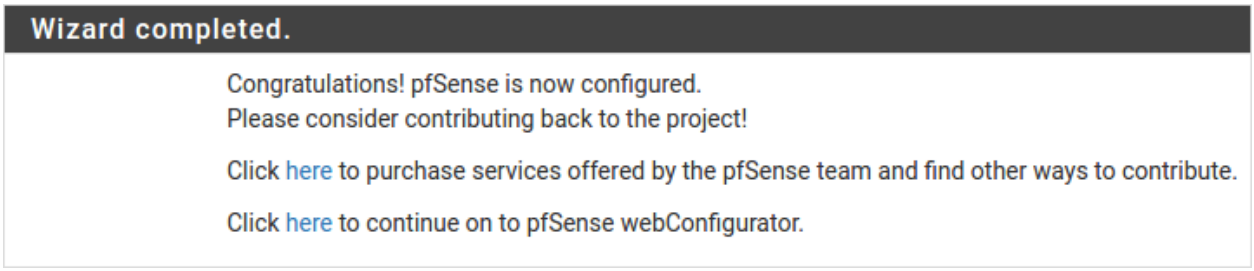
Select a new **Administrator Password** and enter it twice, then click **Next** to continue.

1.1.19 Save Changes

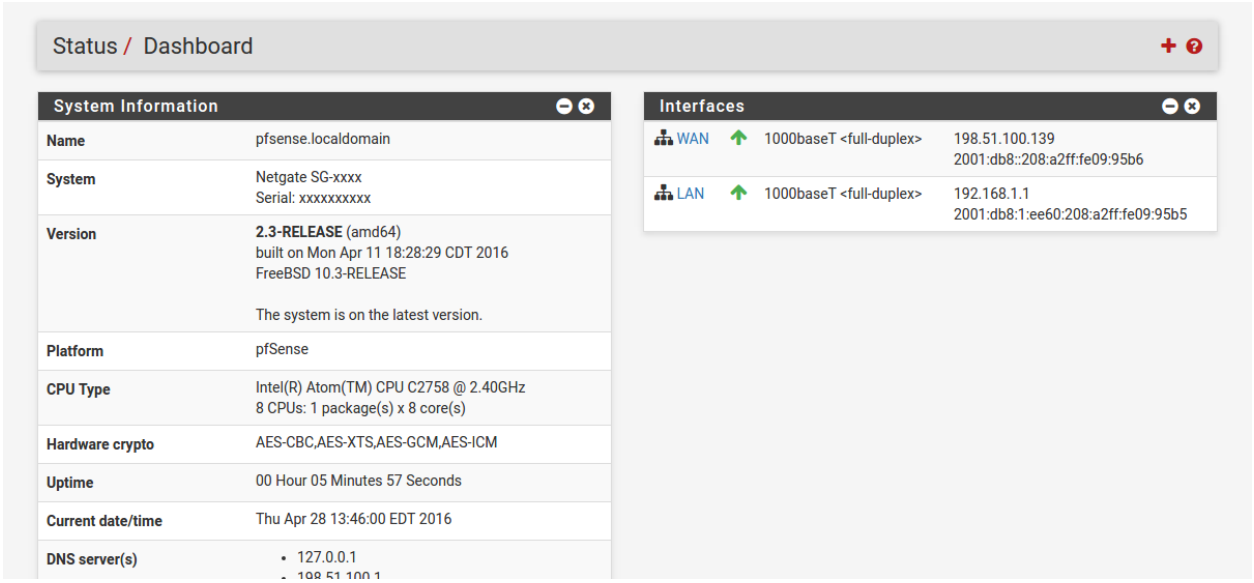


Click **Reload** to save configuration.

1.1.20 Basic Firewall Configured

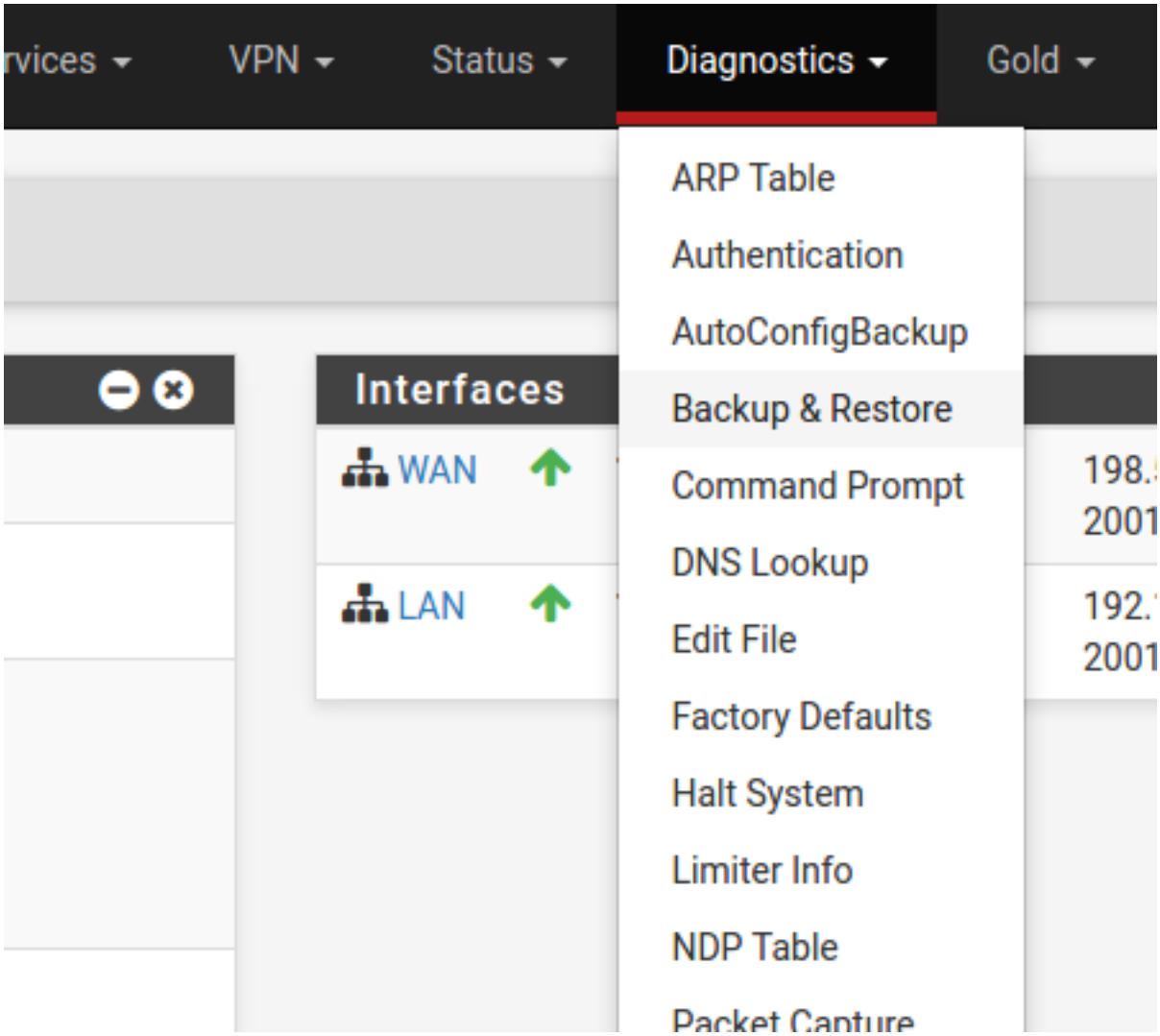


To proceed to the webConfigurator, make the selection as highlighted. The Dashboard display will follow.

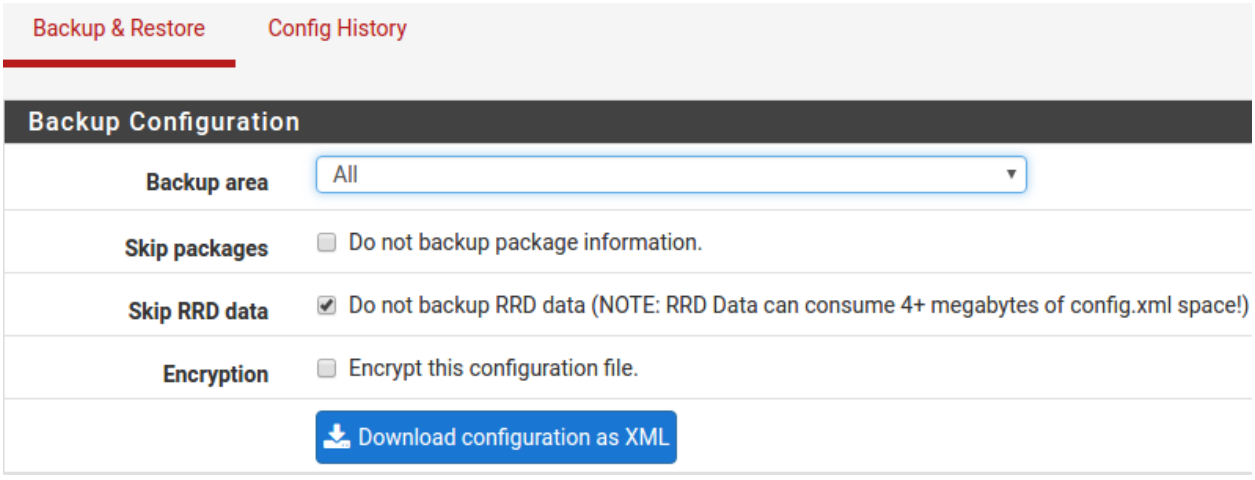


1.1.21 Backing Up and Restoring

At this point, basic LAN and WAN interface configuration is complete. Before proceeding, backup the firewall configuration. From the menu at the top of the page, browse to **Diagnostics > Backup/Restore**.



Click **Download Configuration** and save a copy of the firewall configuration.



This configuration can be restored from the same screen by choosing the backup file under **Restore configuration**.

1.1.22 Connecting to the Console

There are times when accessing the console is required. Perhaps GUI console access has been locked out, or the password has been lost or forgotten.

See also:

Connecting to the Console Port Connect to the console. Cable is required.

Tip: To learn more about getting the most out of your Netgate appliance, sign up for a pfSense Training course or browse our extensive Resource Library.

1.2 Initial Configuration

Plug the power cable into the power port and press the power button on the front left (shown in the *Input and Output Ports* section) to turn on the Netgate® Firewall. Allow 4 or 5 minutes to boot up completely.

Warning: If your DSL or Cable Modem has a default IP Address of 192.168.1.1, please disconnect the Ethernet cable from the WAN port on your XG-1541 1U Netgate Security Gateway before proceeding. You will need to change the default IP Address of the device during a later step in the configuration.

1. From the computer, log into the Web Interface

   Open a web browser (Google Chrome in this example) and type in `192.168.1.1` on the address bar. Press `Enter`.

Fig. 1: Enter the Default LAN IP Address

2. A warning message may appear. If this message or similar message is encountered, it is safe to proceed. Click the `Advanced` Button and the click `Proceed to 192.168.1.1 (unsafe)` to continue.
3. At the **Sign In** page, enter the default pfSense username and password and click `Next`.
   - Default Username: **admin**
   - Default Password: **pfsense**

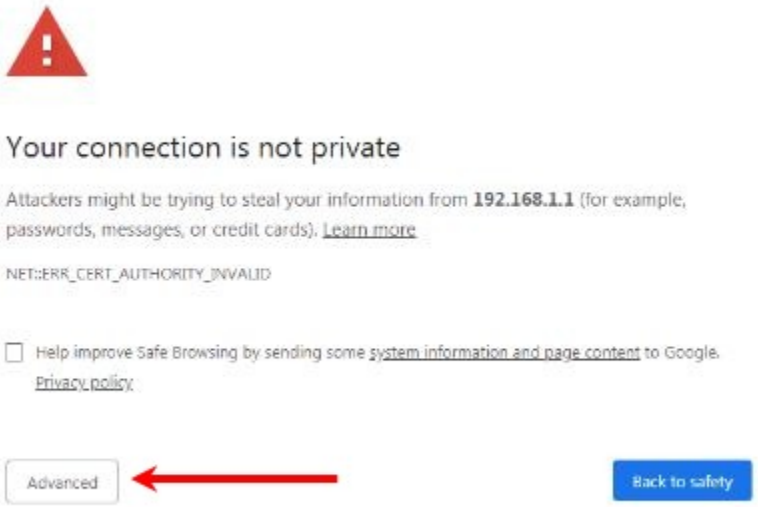


Fig. 2: Click **Advanced** and then **Proceed to 192.168.1.1 (unsafe)**

1.2.1 The Setup Wizard

The following steps will step through the Setup Wizard for the initial configuration of the firewall.

Note: Ignore the warning to reset the 'admin' account password. One of the steps in the Setup Wizard is to change the default password.

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1. Click `Next` to start the Setup Wizard.
2. Click `Next` after you have read the information on Netgate Global Support.
3. On the General Information page, use the following as a guide to configure the firewall.

   Hostname: Any desired name can be entered. For the purposes of this guide, the default hostname `pfsense` is used.

   Domain: The default `localdomain` is used for the purposes of this tutorial.

   DNS Servers: For purposes of this setup guide, use the Google public DNS servers (`8.8.8.8` and `8.8.4.4`).
4. Use the following information for the Time Server Information page.

   Time Server Hostname: Use the default pfSense time server address.

   Timezone: Select the time zone for the location of the firewall. For this guide, the Timezone will be set to `America/Chicago` for US Central time.
5. The WAN interface is the Public IP address the network will use to communicate with the Internet. Use the following information for the WAN configuration page.

   DHCP is the default and is the most common type of interface for home cable modems.

   Default settings for the other items on this page should be acceptable for normal home users.

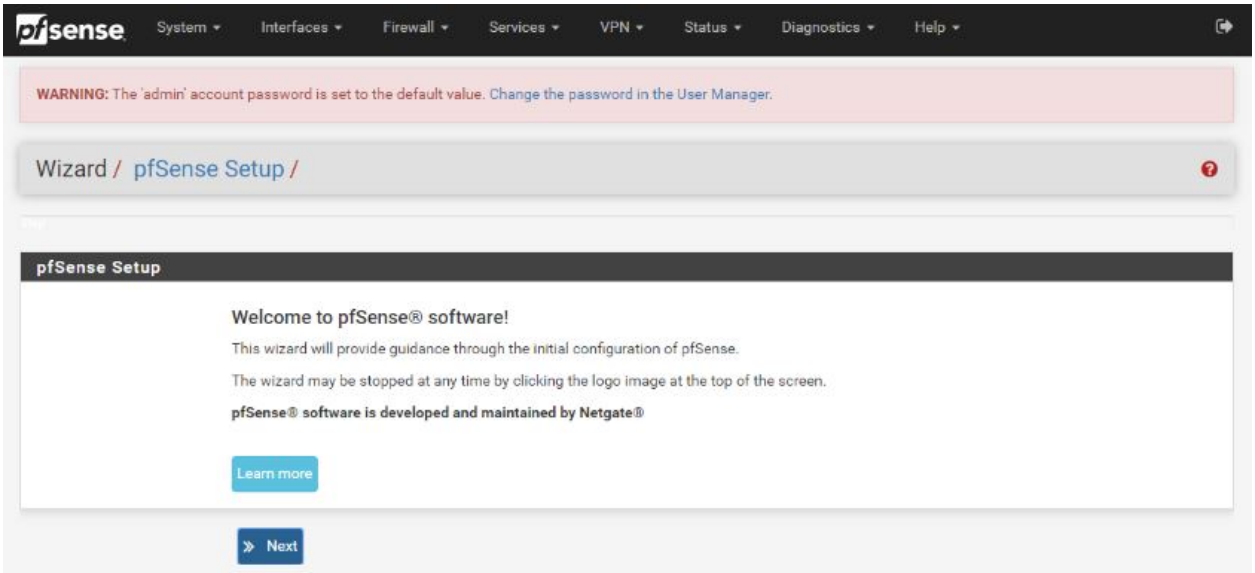


Fig. 3: Click **Next**

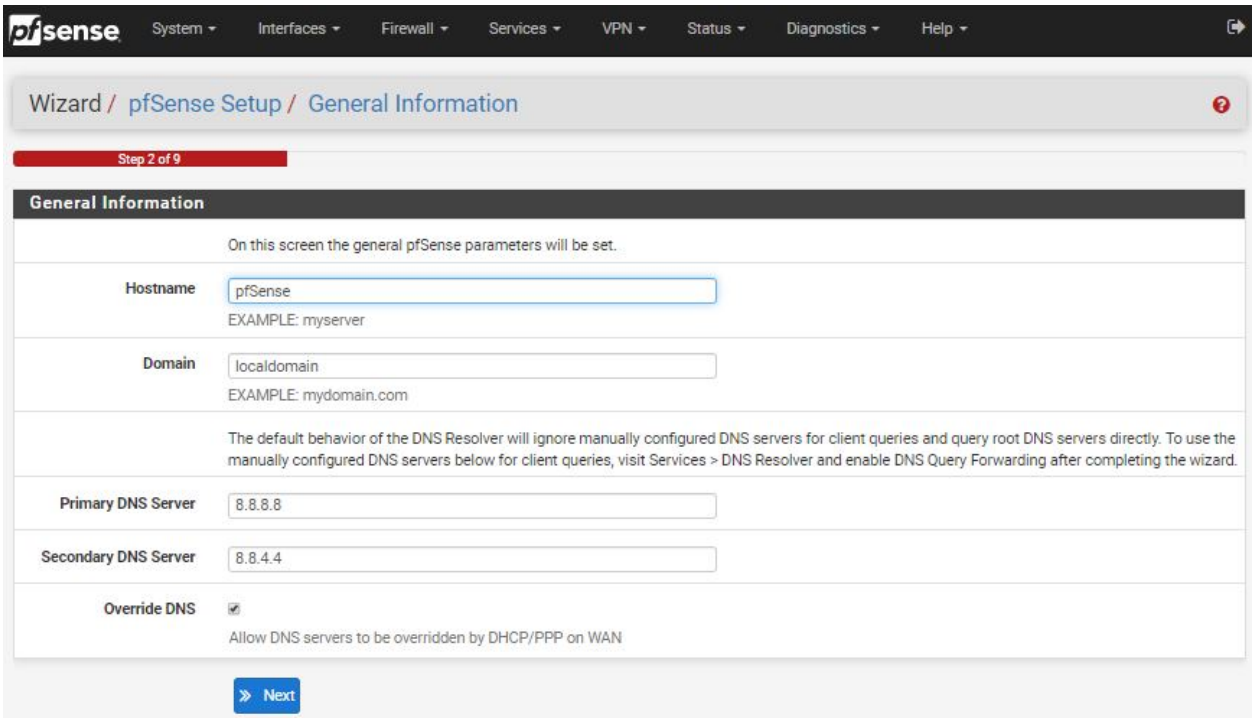


Fig. 4: Type in the DNS Server information and Click **Next**

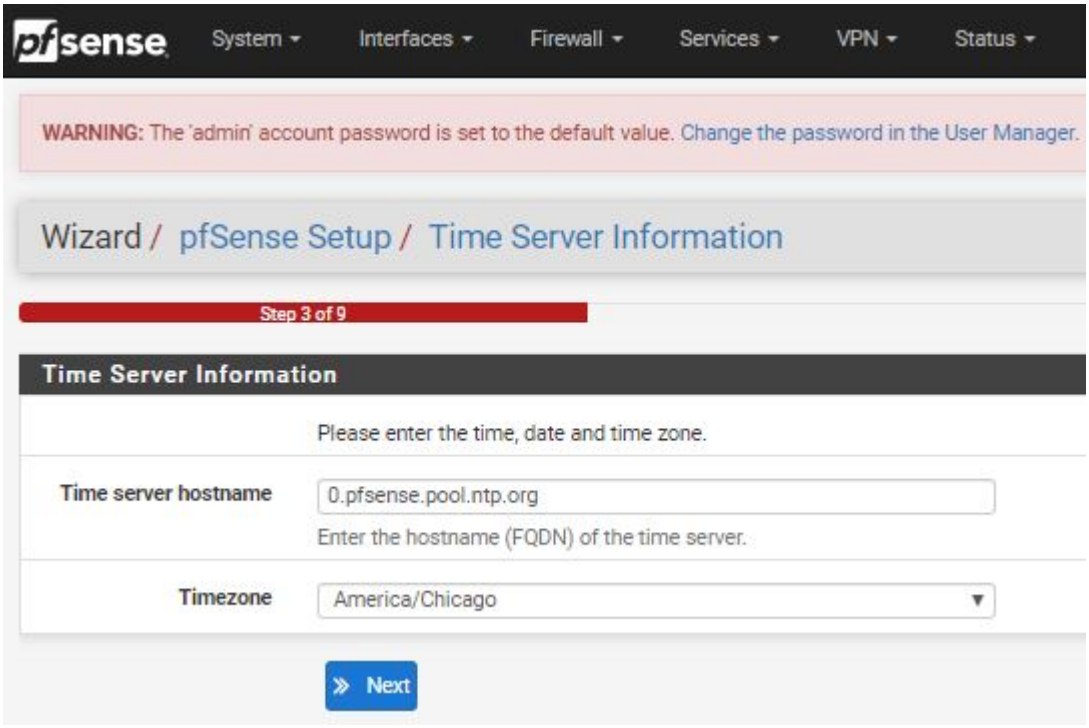


Fig. 5: Change the Timezone and Click **Next**

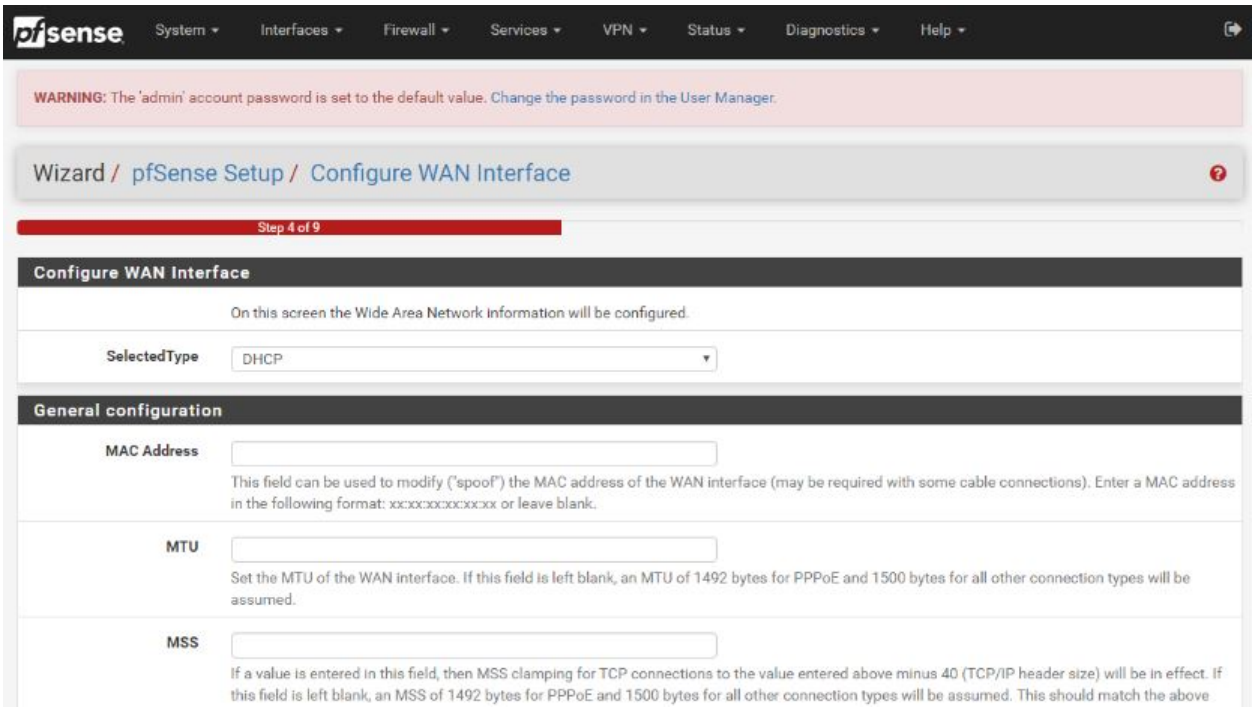


Fig. 6: Default Settings Should be Acceptable. Click **Next**

6. Configuring LAN IP Address & Subnet Mask. The default LAN IP address of `192.168.1.1` and subnet mask of `24` is usually sufficient.

   Tip: If your DSL or Cable Modem has a default IP Address of 192.168.1.1, change the IP Address of your XG-1541 1U Netgate Security Gateway to a different subnet, such as `192.168.2.1` with a subnet mask of `24` to avoid an IP Address conflict.

7. Change the **Admin Password**. Enter the same password in both fields.
8. Click `Reload` to save the configuration.
9. After a few seconds, a message will indicate the Setup Wizard has completed. To proceed to the pfSense dashboard, click `Finish`.
10. A final notification screen will appear stating that **NO COMMERCIAL DISTRIBUTION...** Click `Accept` to continue to the pfSense dashboard.

Fig. 7: Read and Click **Accept**

If you unplugged the Ethernet cable at the beginning of this configuration, reconnect it to the WAN port now.

This completes the basic configuration for the Netgate appliance.

1.3 pfSense Overview

This page provides an overview of the pfSense® dashboard and navigation. It also provides information on how to perform frequent tasks such as backing up the pfSense software and connecting to the Netgate firewall console.

1.3.1 The Dashboard

pfSense software is highly configurable, all of which can be done through the dashboard. This orientation will help to navigate and further configure the firewall.

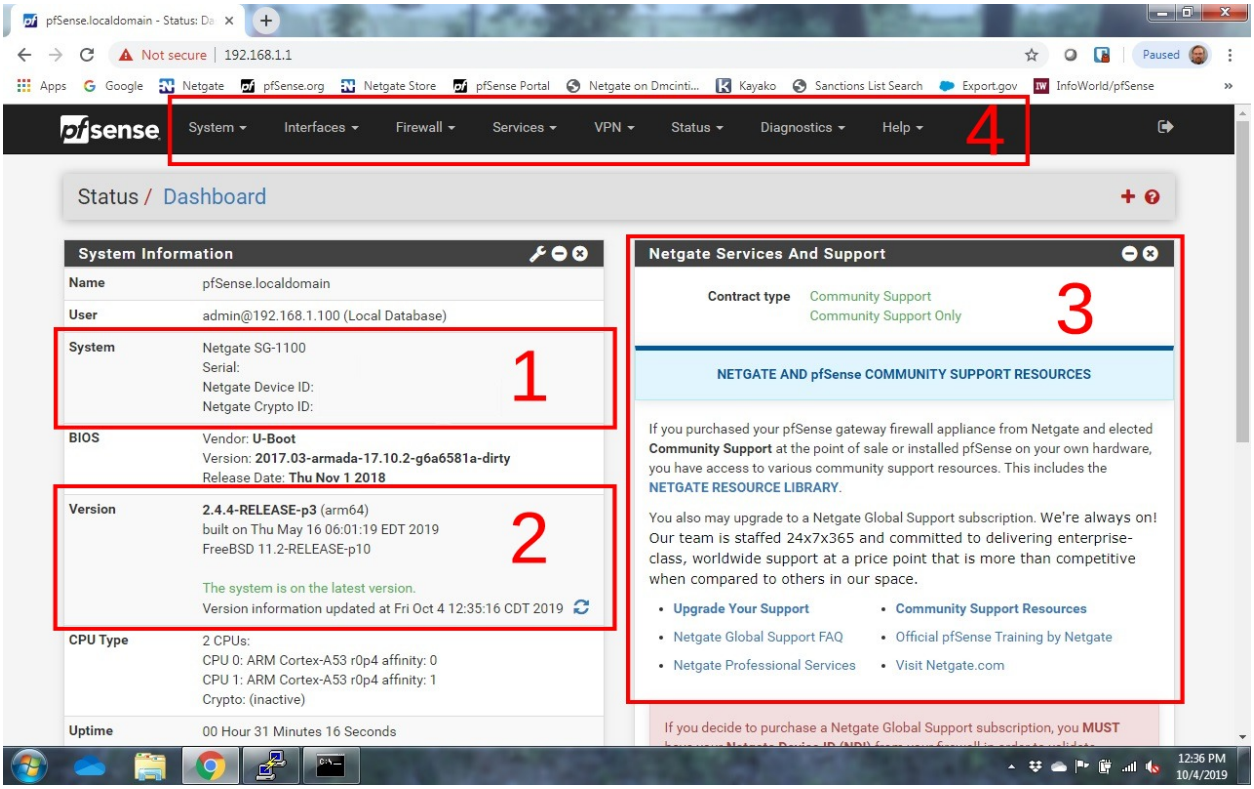


Fig. 8: The pfSense Dashboard

Section 1 shows important system information such as the model, Serial Number, and Netgate Device ID for this Netgate firewall.

Section 2 identifies what version of pfSense software is installed, and if an update is available.

Section 3 describes Netgate Service and Support.

Section 4 shows the various menu headings. Each menu heading has drop-down options for a wide range of configuration choices.

1.3.2 Re-running the Setup Wizard

To re-run the Setup Wizard, navigate to **System -> Setup Wizard**.

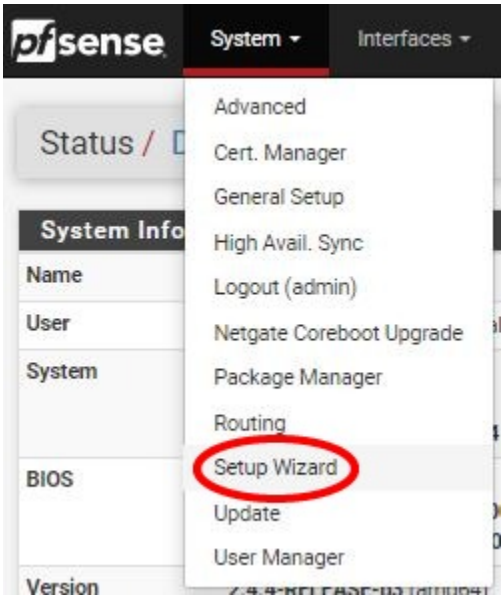


Fig. 9: Re-run the Setup Wizard

1.3.3 Backup and Restore

It is important to backup the firewall configuration prior to updating or making any configuration changes. From the menu at the top of the page, browse to **Diagnostics > Backup/Restore**.

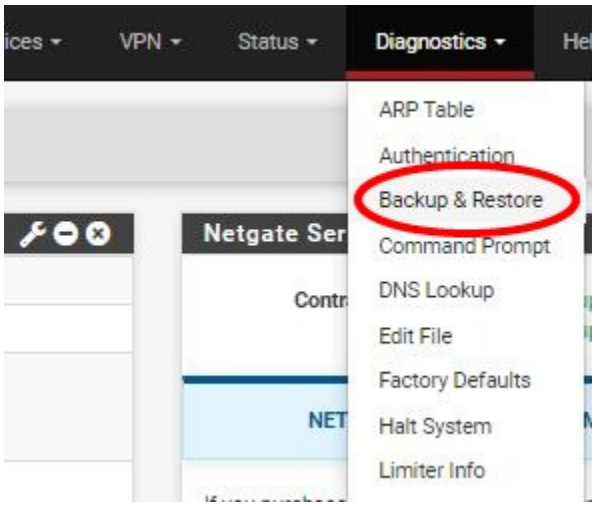


Fig. 10: Backup & Restore

Click `Download configuration as XML` and save a copy of the firewall configuration to the computer connected to the Netgate firewall.

This backup (or any backup) can be restored from the same screen by choosing the backed up file under **Restore Configuration**.

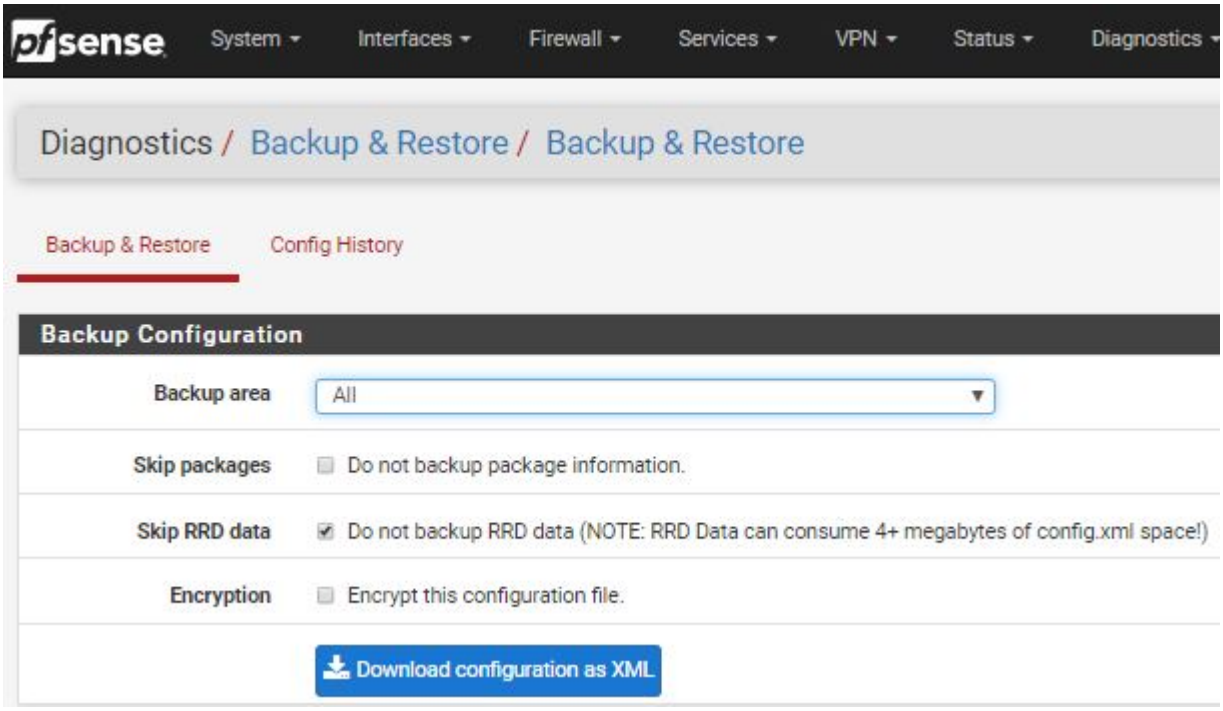


Fig. 11: Click Download configuration as XML

Note: Auto Config Backup is a built-in service located at **Services -> Auto Config Backup**. This service will save up to 100 encrypted backup files automatically, any time a change to the configuration has been made. Visit the Auto Config Backup page for more information.

Connecting to the Console

There are times when accessing the console is required. Perhaps GUI console access has been locked out, or the password has been lost or forgotten.

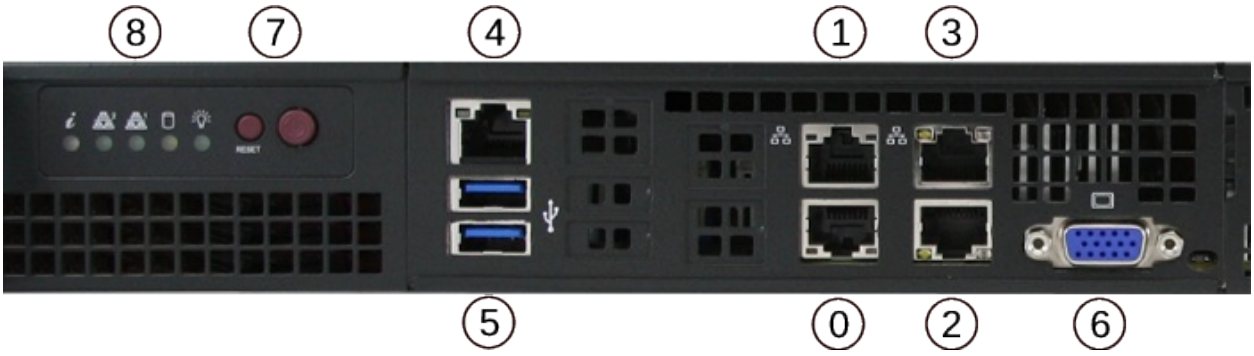
See also:

Connecting to the Console Port Connect to the console. Cable is required.

Tip: To learn more about getting the most out of your Netgate appliance, sign up for a pfSense Training course or browse our extensive Resource Library.

1.4 Input and Output Ports

1.4.1 Front Side



Network Ports

Default Ports

When no expansion card is installed, this is the port configuration.

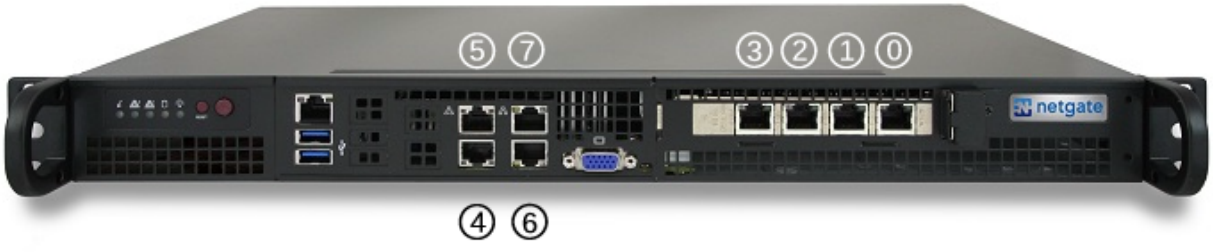
Port	Interface Name	Port Name	Port Type	Port Speed
0	OPT1	igb0	RJ-45	1 Gbps
1	OPT2	igb1	RJ-45	1 Gbps
2	WAN	ix0	RJ-45	10 Gbps
3	LAN	ix1	RJ-45	10 Gbps

Note: Both the WAN and LAN ports of the Netgate® appliance support auto-MDIX and are capable of utilizing either straight-through or crossover ethernet cables.

Warning: The `ix(4)` driver used for ports IX0-IX1 does not support ALTQ traffic shaping directly. Limiters may be used instead, or use tagged VLAN interfaces which can be used with ALTQ traffic shaping.

Optional Intel 1 Gbps Expansion Card Ports

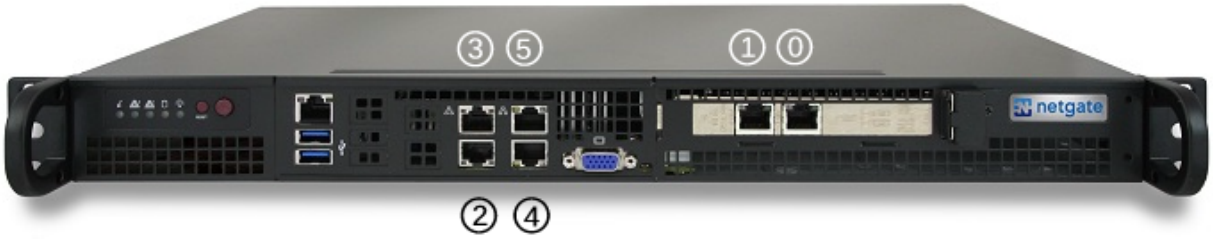
When the 4 port Intel 1 Gbps Ethernet Expansion Card is installed, this is the port configuration.



Port	Interface Name	Port Name	Port Type	Port Speed
0	OPT6	igb0	RJ-45	1 Gbps
1	OPT5	igb1	RJ-45	1 Gbps
2	OPT4	igb2	RJ-45	1 Gbps
3	OPT3	igb3	RJ-45	1 Gbps
4	WAN	igb4	RJ-45	1 Gbps
5	LAN	igb5	RJ-45	1 Gbps
6	OPT1	ix0	RJ-45	10 Gbps
7	OPT2	ix1	RJ-45	10 Gbps

Optional Chelsio 10 Gbps Expansion Card Ports

When the 2 port Chelsio 10 Gbps Ethernet Expansion Card is installed, this is the port configuration.



Port	Interface Name	Port Name	Port Type	Port Speed
0	WAN	cxl0	SFP+	10 Gbps
1	LAN	cxl1	SFP+	10 Gbps
2	OPT1	igb0	RJ-45	1 Gbps
3	OPT3	igb1	RJ-45	1 Gbps
4	OPT2	ix0	RJ-45	10 Gbps
5	OPT4	ix1	RJ-45	10 Gbps

Network Port LEDs

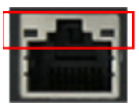
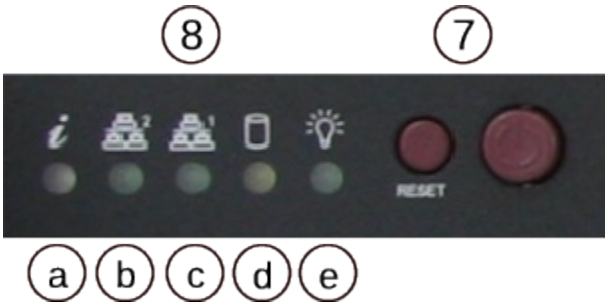


Table 1: RJ-45 LEDs Configuration

Activity LED (Left)	Link Speed LED (Right)
Off = No Connection Yellow Flashing = Activity	Amber = 1 Gbps Green = 100 Mbps (10 Gbps for 10GbE Port) Off = No Connection or 10 Mbps

Note: Reverse the above table for the bottom ports as they are inverted.

Status LEDs



LED	State	Description
8a	Continuously on and red	An overheat condition has occurred. (This may be caused by cable congestion.)
	Blinking red (1Hz)	Fan failure, check for an inoperative fan.
	Blinking red (0.25Hz)	Power failure, check for a non-operational power supply.
	Solid blue	Local UID has been activated. Use this function through IPMI to locate the server in a rack mount environment.
	Blinking blue	Remote UID is on. Use this function through IPMI to identify the server from a remote location.
8b	Flashing	Indicates network activity on igb1 (upper left port).
8c	Flashing	Indicates network activity on igb0 (lower left port).
8d	Flashing	Indicates IDE channel activity on the hard drive.
8e	Illuminated	Indicates power is being supplied to the system power supply units. This LED should normally be illuminated when the system is operating.
	Off	Indicates no power is being supplied to the system power supply. System is powered off.

Other Ports

Port	I/O Type
4	IPMI
5	2x USB 3.0
6	VGA
7	Reset & Power buttons
8	Status LEDs

1.4.2 Rear Side

Other Ports

1. Power port
    - Power Consumption 20W (idle)

1.5 Safety and Legal

1.5.1 Safety Notices

1. Read, follow, and keep these instructions.
2. Heed all warnings.
3. Only use attachments/accessories specified by the manufacturer.

Warning: Do not use this product in location that can be submerged by water.

Warning: Do not use this product during an electrical storm to avoid electrical shock.

1.5.2 Electrical Safety Information

1. Compliance is required with respect to voltage, frequency, and current requirements indicated on the manufacturer's label. Connection to a different power source than those specified may result in improper operation, damage to the equipment or pose a fire hazard if the limitations are not followed.
2. There are no operator serviceable parts inside this equipment. Service should be provided only by a qualified service technician.
3. This equipment is provided with a detachable power cord which has an integral safety ground wire intended for connection to a grounded safety outlet.
    a) Do not substitute the power cord with one that is not the provided approved type. If a 3 prong plug is provided, never use an adapter plug to connect to a 2-wire outlet as this will defeat the continuity of the grounding wire.
    b) The equipment requires the use of the ground wire as a part of the safety certification, modification or misuse can provide a shock hazard that can result in serious injury or death.

c) Contact a qualified electrician or the manufacturer if there are questions about the installation prior to connecting the equipment.

d) Protective grounding/earthing is provided by Listed AC adapter. Building installation shall provide appropriate short-circuit backup protection.

e) Protective bonding must be installed in accordance with local national wiring rules and regulations.

1.5.3 FCC Compliance

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a residential environment.

1.5.4 Industry Canada

This Class B digital apparatus complies with Canadian ICES-3(B). Cet appareil numérique de la classe B est conforme à la norme NMB-3(B) Canada.

1.5.5 Australia and New Zealand

This is a AMC Compliance level 2 product. This product is suitable for domestic environments.

1.5.6 CE Marking

CE marking on this product represents the product is in compliance with all directives that are applicable to it.

1.5.7 RoHS/WEEE Compliance Statement

English

European Directive 2002/96/EC requires that the equipment bearing this symbol on the product and/or its packaging must not be disposed of with unsorted municipal waste. The symbol indicates that this product should be disposed of separately from regular household waste streams. It is your responsibility to dispose of this and other electric and electronic equipment via designated collection facilities appointed by the government or local authorities. Correct disposal and recycling will help prevent potential negative consequences to the environment and human health. For more detailed information about the disposal of your old equipment, please contact your local authorities, waste disposal service, or the shop where you purchased the product.

Deutsch

Die Europäische Richtlinie 2002/96/EC verlangt, dass technische Ausrüstung, die direkt am Gerät und/oder an der Verpackung mit diesem Symbol versehen ist, nicht zusammen mit unsortiertem Gemeindeabfall entsorgt werden darf. Das Symbol weist darauf hin, dass das Produkt von regulärem Haushaltmüll getrennt entsorgt werden sollte. Es liegt in Ihrer Verantwortung, dieses Gerät und andere elektrische und elektronische Geräte über die dafür zuständigen und von der Regierung oder örtlichen Behörden dazu bestimmten Sammelstellen zu entsorgen. Ordnungsgemäßes Entsorgen und Recyceln trägt dazu bei, potentielle negative Folgen für Umwelt und die menschliche Gesundheit zu vermeiden. Wenn Sie weitere Informationen zur Entsorgung Ihrer Altgeräte benötigen, wenden Sie sich bitte an die örtlichen Behörden oder städtischen Entsorgungsdienste oder an den Händler, bei dem Sie das Produkt erworben haben.

Español

La Directiva 2002/96/CE de la UE exige que los equipos que lleven este símbolo en el propio aparato y/o en su embalaje no deben eliminarse junto con otros residuos urbanos no seleccionados. El símbolo indica que el producto en cuestión debe separarse de los residuos domésticos convencionales con vistas a su eliminación. Es responsabilidad suya desechar este y cualesquiera otros aparatos eléctricos y electrónicos a través de los puntos de recogida que ponen a su disposición el gobierno y las autoridades locales. Al desechar y reciclar correctamente estos aparatos estará contribuyendo a evitar posibles consecuencias negativas para el medio ambiente y la salud de las personas. Si desea obtener información más detallada sobre la eliminación segura de su aparato usado, consulte a las autoridades locales, al servicio de recogida y eliminación de residuos de su zona o pregunte en la tienda donde adquirió el producto.

Français

La directive européenne 2002/96/CE exige que l'équipement sur lequel est apposé ce symbole sur le produit et/ou son emballage ne soit pas jeté avec les autres ordures ménagères. Ce symbole indique que le produit doit être éliminé dans un circuit distinct de celui pour les déchets des ménages. Il est de votre responsabilité de jeter ce matériel ainsi que tout autre matériel électrique ou électronique par les moyens de collecte indiqués par le gouvernement et les pouvoirs publics des collectivités territoriales. L'élimination et le recyclage en bonne et due forme ont pour but de lutter contre l'impact néfaste potentiel de ce type de produits sur l'environnement et la santé publique. Pour plus d'informations sur le mode d'élimination de votre ancien équipement, veuillez prendre contact avec les pouvoirs publics locaux, le service de traitement des déchets, ou l'endroit où vous avez acheté le produit.

Italiano

La direttiva europea 2002/96/EC richiede che le apparecchiature contrassegnate con questo simbolo sul prodotto e/o sull'imballaggio non siano smaltite insieme ai rifiuti urbani non differenziati. Il simbolo indica che questo prodotto non deve essere smaltito insieme ai normali rifiuti domestici. È responsabilità del proprietario smaltire sia questi prodotti sia le altre apparecchiature elettriche ed elettroniche mediante le specifiche strutture di raccolta indicate dal governo o dagli enti pubblici locali. Il corretto smaltimento ed il riciclaggio aiuteranno a prevenire conseguenze potenzialmente negative per l'ambiente e per la salute dell'essere umano. Per ricevere informazioni più dettagliate circa lo smaltimento delle vecchie apparecchiature in Vostro possesso, Vi invitiamo a contattare gli enti pubblici di competenza, il servizio di smaltimento rifiuti o il negozio nel quale avete acquistato il prodotto.

1.5.8 Declaration of Conformity

Česky[Czech]

NETGATE tímto prohla uje, e tento NETGATE device, je ve shod se základními po adavky a dal ími p íslu n mi ustanoveními sm rnice 1999/5/ES.

Dansk [Danish]

Undertegnede NETGATE erklærer herved, at følgende udstyr NETGATE device, overholder de væsentlige krav og øvrige relevante krav i direktiv 1999/5/EF.

Nederlands [Dutch]

Hierbij verklaart NETGATE dat het toestel NETGATE device, in overeenstemming is met de essentiële eisen en de andere relevante bepalingen van richtlijn 1999/5/EG. Bij deze verklaart NETGATE dat deze NETGATE device, voldoet aan de essentiële eisen en aan de overige relevante bepalingen van Richtlijn 1999/5/EC.

English

Hereby, NETGATE , declares that this NETGATE device, is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.

Eesti [Estonian]

Käesolevaga kinnitab NETGATE seadme NETGATE device, vastavust direktiivi 1999/5/EÜ põhinõuetele ja nimetatud direktiivist tulenevatele teistele asjakohastele sätetele.

Suomi [Finnish]

NETGATE vakuuttaa täten että NETGATE device, tyyppinen laite on direktiivin 1999/5/EY oleellisten vaatimusten ja sitä koskevien direktiivin muiden ehtojen mukainen. Français [French] Par la présente NETGATE déclare que l'appareil Netgate, device est conforme aux exigences essentielles et aux autres dispositions pertinentes de la directive 1999/5/CE.

Deutsch [German]

Hiermit erklärt Netgate, dass sich diese NETGATE device, in Übereinstimmung mit den grundlegenden Anforderungen und den anderen relevanten Vorschriften der Richtlinie 1999/5/EG befindet". (BMWi)

Ελληνικ**H [Greek]**

ΜΕ ΤΗΝ ΠΑΡΟΥΣΑ NETGATE ΔΗΛΩΝΕΙ ΟΤΙ NETGATE device, ΣΥΜΜΟΡΦΩΝΕΤΑΙ ΠΡΟΣ ΤΙΣ ΟΥΣΙΩΔΕΙΣ ΑΠΑΙΤΗΣΕΙΣ ΚΑΙ ΤΙΣ ΛΟΙΠΕΣ ΣΧΕΤΙΚΕΣ ΔΙΑΤΑΞΕΙΣ ΤΗΣ ΟΔΗΓΙΑΣ 1995/5/ΕΚ.

Magyar [Hungarian]

Alulírott, NETGATE nyilatkozom, hogy a NETGATE device, megfelel a vonatkozó alapvetõ követelményeknek és az 1999/5/EC irányelv egyéb elõírásainak.

Íslenska [Icelandic]

Hér me l sir NETGATE yfir ví a NETGATE device, er í samræmi vi grunnkröfur og a rar kröfur, sem ger ar eru í tilskipun 1999/5/EC.

Italiano [Italian]

Con la presente NETGATE dichiara che questo NETGATE device, è conforme ai requisiti essenziali ed alle altre disposizioni pertinenti stabilite dalla direttiva 1999/5/CE.

Latviski [Latvian]

Ar o NETGATE deklar , ka NETGATE device, atbilst Direkt vas 1999/5/EK b tiskaj m pras b m un citiem ar to saist tajiem noteikumiem.

Lietuviškai [Lithuanian]

NETGATE deklaruoja, kad šis NETGATE įrenginys atitinka esminius reikalavimus ir kitas 1999/5/EB Direktyvos nuostatas.

Malti [Maltese]

Hawnhekk, Netgate, jiddikjara li dan NETGATE device, jikkonforma mal- ti ijiet essenzjali u ma provvedimenti o rajn relevanti li hemm fid-Dirrettiva 1999/5/EC.

Norsk [Norwegian]

NETGATE erklærer herved at utstyret NETGATE device, er i samsvar med de grunnleggende krav og øvrige relevante krav i direktiv 1999/5/EF.

Slovensky [Slovak]

NETGATE t mto vyhlasuje, e NETGATE device, sp a základné po iadavky a v etky príslu né ustanovenia Smernice 1999/5/ES.

Svenska [Swedish]

Härmed intygar NETGATE att denna NETGATE device, står I överensstämmelse med de väsentliga egenskapskrav och övriga relevanta bestämmelser som framgår av direktiv 1999/5/EG.

Español [Spanish]

Por medio de la presente NETGATE declara que el NETGATE device, cumple con los requisitos esenciales y cualesquiera otras disposiciones aplicables o exigibles de la Directiva 1999/5/CE.

Polski [Polish]

Niniejszym, firma NETGATE o wiadcza, e produkt serii NETGATE device, spełnia zasadnicze wymagania i inne istotne postanowienia Dyrektywy 1999/5/EC.

Português [Portuguese]

NETGATE declara que este NETGATE device, está conforme com os requisitos essenciais e outras disposições da Directiva 1999/5/CE.

Română [Romanian]

Prin prezenta, NETGATE declară că acest dispozitiv NETGATE este în conformitate cu cerințele esențiale și alte prevederi relevante ale Directivei 1999/5/CE.

1.5.9 Disputes

ANY DISPUTE OR CLAIM RELATING IN ANY WAY TO YOUR USE OF ANY PRODUCTS/SERVICES, OR TO ANY PRODUCTS OR SERVICES SOLD OR DISTRIBUTED BY RCL OR ESF WILL BE RESOLVED BY BINDING ARBITRATION IN AUSTIN, TEXAS, RATHER THAN IN COURT. The Federal Arbitration Act and federal arbitration law apply to this agreement.

THERE IS NO JUDGE OR JURY IN ARBITRATION, AND COURT REVIEW OF AN ARBITRATION AWARD IS LIMITED. HOWEVER, AN ARBITRATOR CAN AWARD ON AN INDIVIDUAL BASIS THE SAME DAMAGES AND RELIEF AS A COURT (INCLUDING INJUNCTIVE AND DECLARATORY RELIEF OR STATUTORY DAMAGES), AND MUST FOLLOW THE TERMS OF THESE TERMS AND CONDITIONS OF USE AS A COURT WOULD.

To begin an arbitration proceeding, you must send a letter requesting arbitration and describing your claim to the following:

Rubicon Communications LLC
Attn.: Legal Dept.
4616 West Howard Lane, Suite 900

Austin, Texas 78728
legal@netgate.com

The arbitration will be conducted by the American Arbitration Association (AAA) under its rules. The AAA's rules are available at www.adr.org. Payment of all filing, administration and arbitrator fees will be governed by the AAA's rules.

We each agree that any dispute resolution proceedings will be conducted only on an individual basis and not in a class, consolidated or representative action. We also both agree that you or we may bring suit in court to enjoin infringement or other misuse of intellectual property rights.

1.5.10 Applicable Law

By using any Products/Services, you agree that the Federal Arbitration Act, applicable federal law, and the laws of the state of Texas, without regard to principles of conflict of laws, will govern these terms and conditions of use and any dispute of any sort that might arise between you and RCL and/or ESF. Any claim or cause of action concerning these terms and conditions or use of the RCL and/or ESF website must be brought within one (1) year after the claim or cause of action arises. Exclusive jurisdiction and venue for any dispute or claim arising out of or relating to the parties' relationship, these terms and conditions, or the RCL and/or ESF website, shall be with the arbitrator and/or courts located in Austin, Texas. The judgment of the arbitrator may be enforced by the courts located in Austin, Texas, or any other court having jurisdiction over you.

1.5.11 Site Policies, Modification, and Severability

Please review our other policies, such as our pricing policy, posted on our websites. These policies also govern your use of Products/Services. We reserve the right to make changes to our site, policies, service terms, and these terms and conditions of use at any time.

1.5.12 Miscellaneous

If any provision of these terms and conditions of use, or our terms and conditions of sale, are held to be invalid, void or unenforceable, the invalid, void or unenforceable provision shall be modified to the minimum extent necessary in order to render it valid or enforceable and in keeping with the intent of these terms and conditions. If such modification is not possible, the invalid or unenforceable provision shall be severed, and the remaining terms and conditions shall be enforced as written. Headings are for reference purposes only and in no way define, limit, construe or describe the scope or extent of such section. Our failure to act with respect to a breach by you or others does not waive our right to act with respect to subsequent or similar breaches. These terms and conditions set forth the entire understanding and agreement between us with respect to the subject matter hereof, and supersede any prior oral or written agreement pertaining thereto, except as noted above with respect to any conflict between these terms and conditions and our reseller agreement, if the latter is applicable to you.

1.5.13 Limited Warranty

DISCLAIMER OF WARRANTIES AND LIMITATION OF LIABILITY

THE PRODUCTS/SERVICES AND ALL INFORMATION, CONTENT, MATERIALS, PRODUCTS (INCLUDING SOFTWARE) AND OTHER SERVICES INCLUDED ON OR OTHERWISE MADE AVAILABLE TO YOU THROUGH THE PRODUCTS/SERVICES ARE PROVIDED BY US ON AN "AS IS" AND "AS AVAILABLE" BASIS, UNLESS OTHERWISE SPECIFIED IN WRITING. WE MAKE NO REPRESENTATIONS OR WARRANTIES OF ANY KIND, EXPRESS OR IMPLIED, AS TO THE OPERATION OF THE PRODUCTS/SERVICES, OR THE INFORMATION, CONTENT, MATERIALS, PRODUCTS (INCLUDING SOFTWARE) OR OTHER SERVICES INCLUDED ON OR OTHERWISE MADE AVAILABLE TO YOU THROUGH THE PRODUCTS/SERVICES, UNLESS OTHERWISE SPECIFIED IN WRITING. YOU EXPRESSLY AGREE THAT YOUR USE OF THE PRODUCTS/SERVICES IS AT YOUR SOLE RISK.

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IN NO EVENT WILL RCL'S OR ESF'S LIABILITY TO YOU EXCEED THE PURCHASE PRICE PAID FOR THE PRODUCT OR SERVICE THAT IS THE BASIS OF THE CLAIM.

CERTAIN STATE LAWS DO NOT ALLOW LIMITATIONS ON IMPLIED WARRANTIES OR THE EXCLUSION OR LIMITATION OF CERTAIN DAMAGES. IF THESE LAWS APPLY TO YOU, SOME OR ALL OF THE ABOVE DISCLAIMERS, EXCLUSIONS, OR LIMITATIONS MAY NOT APPLY TO YOU, AND YOU MIGHT HAVE ADDITIONAL RIGHTS.

CHAPTER

TWO

HOW-TO GUIDES

2.1 Connecting to the Console Port

Connecting to the VGA console is identical to connecting any computer to a monitor. Just connect the VGA cable (DB-15) between the Netgate® system and the monitor. Use USB or PS/2 keyboard and mouse as applicable to your hardware.

Note: If your system has both USB 2.0 (black) and USB 3.0 (blue) ports, use the USB 2.0 ports, as USB 3.0 is not supported in earlier versions of pfSense software.

Note: If your system has both VGA and serial, it is possible that the boot console will default to serial. If your boot process seems to hang after mounting the root volume, please see Boot Troubleshooting.

2.2 Accessing IPMI and Changing IPMI Password

Note: By default, the IPMI port is configured to be a DHCP client. When connected to a network with DHCP, the IP address will appear in the lower right corner of the screen during boot.

In compliance with new privacy legislation, the Username and Password to access the IPMI port on the **Netgate XG-1541 1U** has been changed to a unique password on each device. Netgate started shipping systems with this change **beginning February 10, 2020**.

Prior to February 10, 2020, the IPMI Username and Password were **ADMIN/ADMIN**.

After February 10, 2020, the IPMI Username is still **ADMIN**, the password is located on a small sticker on the front of the XG-1541 as shown below.

Note: The password is alpha-numeric and the letters are capital letters.

Fig. 1: IPMI Password Sticker Location

2.2.1 Changing the IPMI Password

1. To change the IPMI password, begin by accessing the IPMI GUI using a web browser and the IPMI IP Address. Log in to the IPMI console.
2. Navigate to `Configuration -> Users`.
3. Highlight the Administrator and click `Modify User`.
4. Check the box by `Change Password`, enter the new password and confirm it by typing it a second time, then click `Modify`.
5. Click `OK` on the message window that says "Modified user successfully."

2.3 Reinstalling pfSense Software

1. Please open a support ticket to request access to the factory firmware by selecting **Firmware Access** as the **General Problem** and then select **Netgate XG-1541 1U** for the platform. Make sure to include the serial number in the ticket to expedite access.

   Once the ticket is processed, the latest stable version of the firmware will be attached to the ticket, with a name such as:

   `pfSense-netgate-memstick-2.4.5-p1-RELEASE-amd64.img.gz`

   Note: The pfSense® factory version is the version that is preinstalled on Netgate appliances. The factory image is optimally tuned for our hardware and contains some features that cannot be found elsewhere, such as the AWS VPN Wizard.

   ---

2. Write the image to a USB memstick. Locating the image and writing it to a USB memstick is covered in detail under Writing Flash Drives.
3. *Connect to the console port* of the Netgate device.
4. Insert the memstick into an open USB port and boot the system.

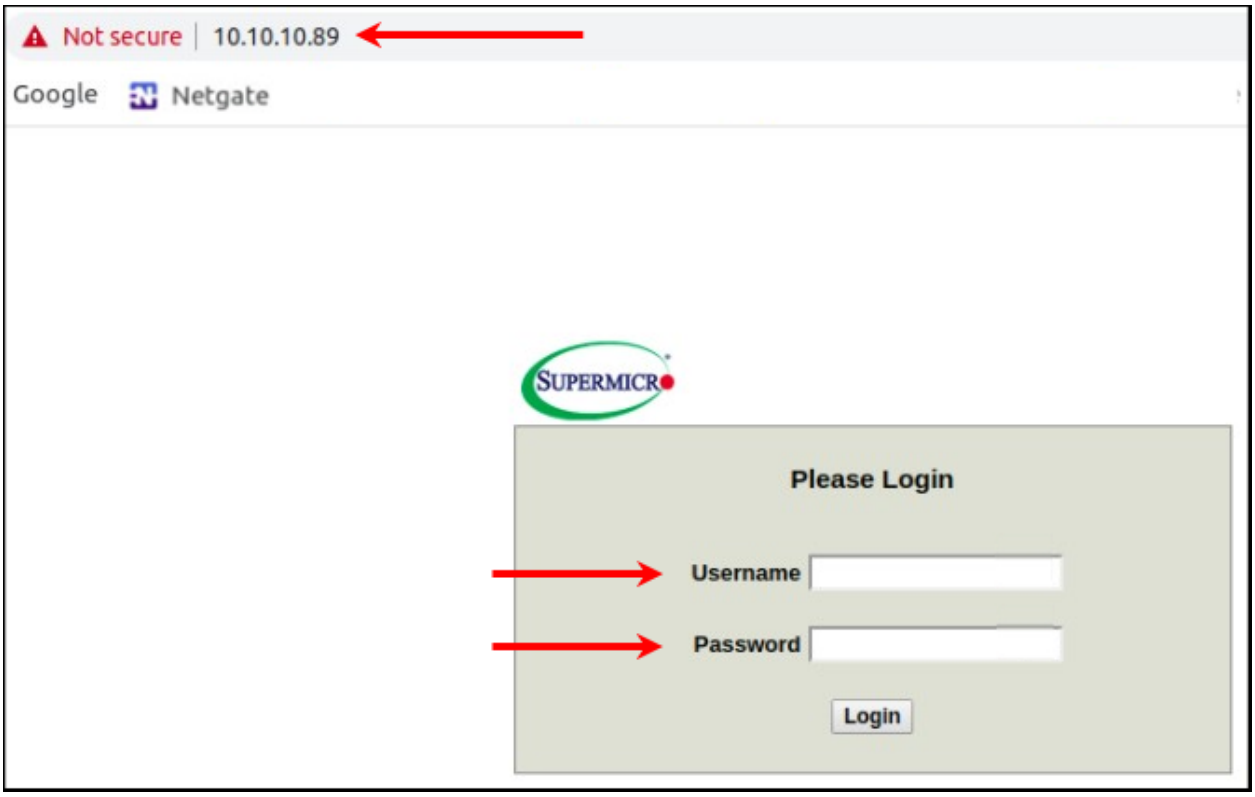


Fig. 2: Log Into IPMI

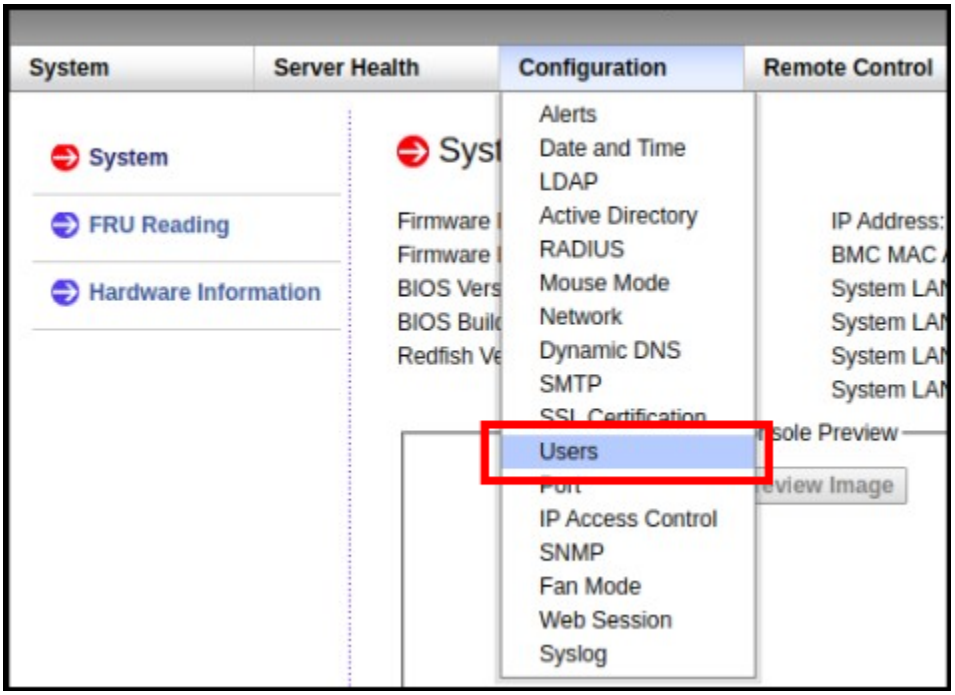


Fig. 3: Configuration -> Users

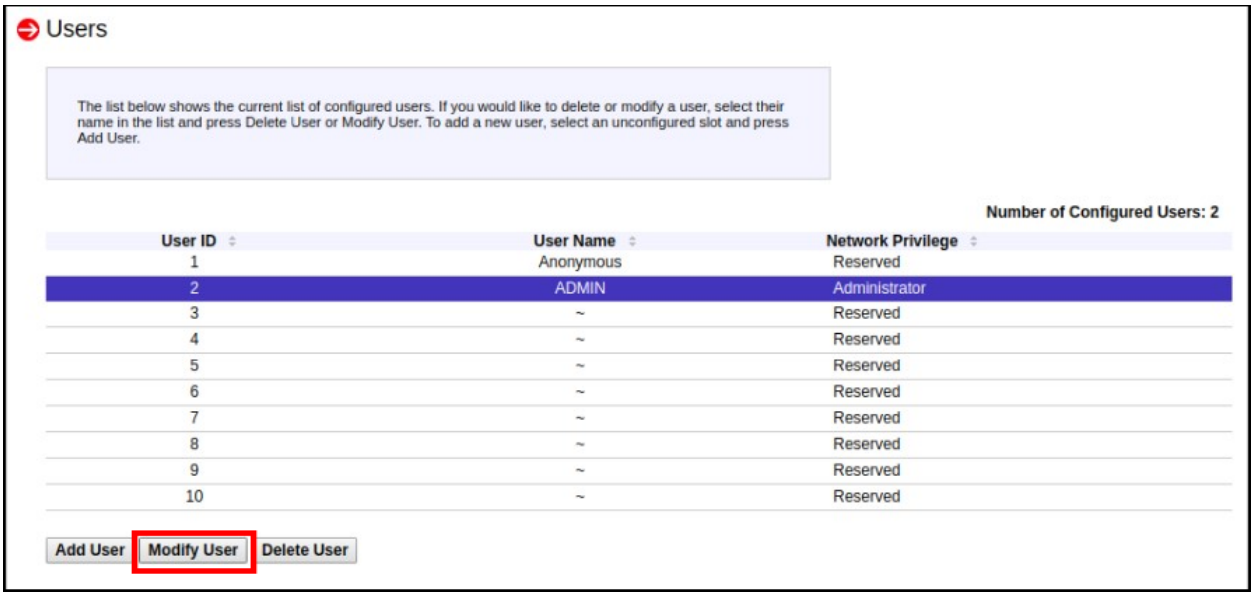


Fig. 4: Modify User

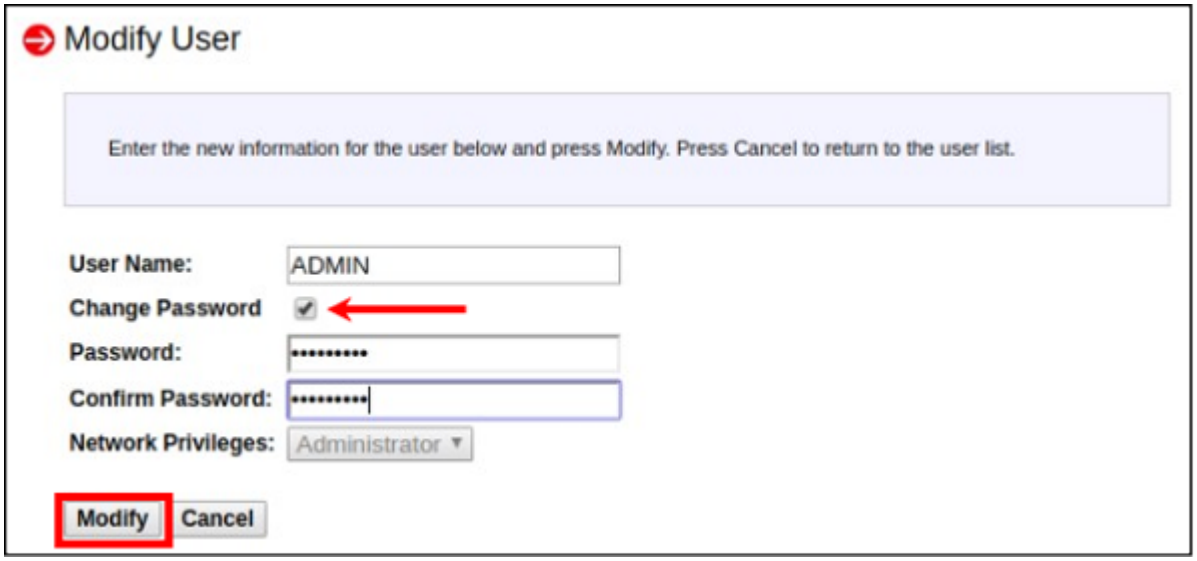


Fig. 5: Change Password and click Modify

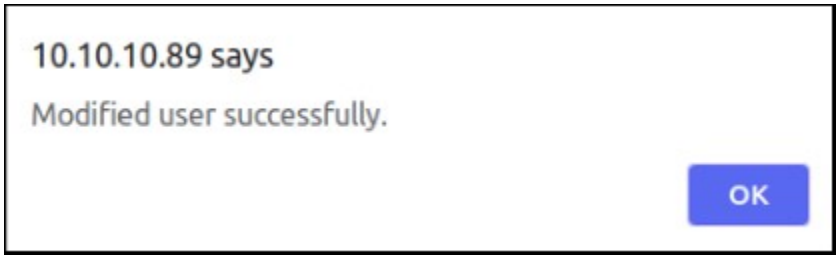
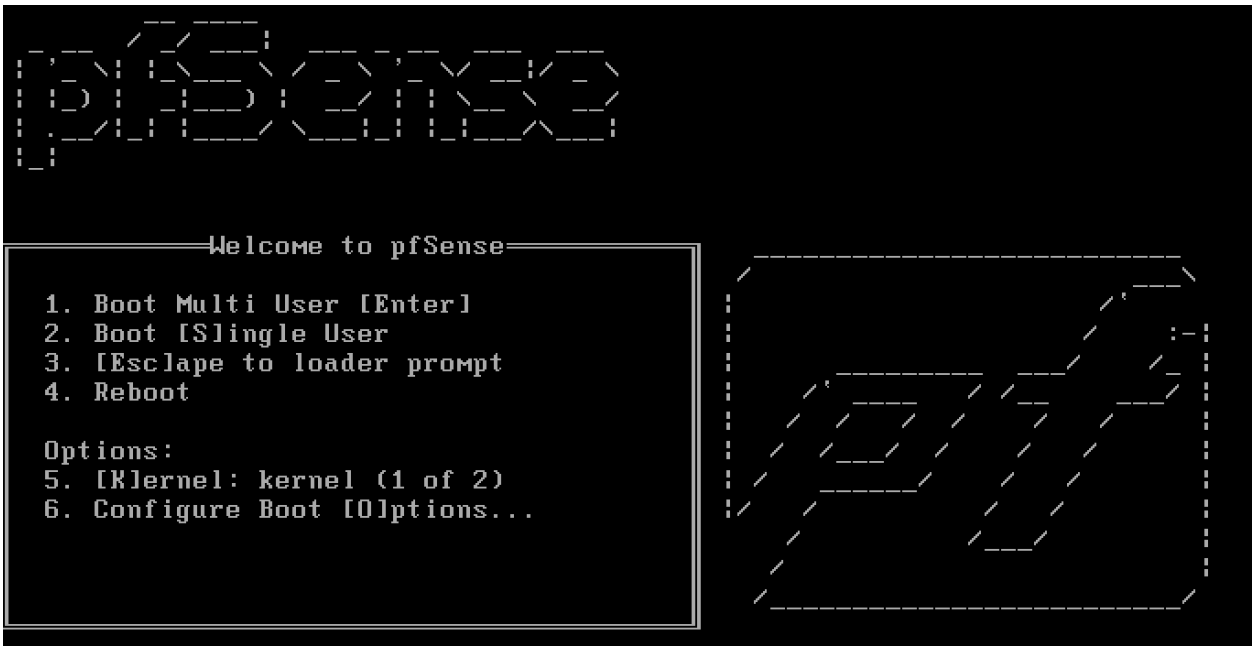


Fig. 6: Click OK

5. After a minute the pfSense loader menu will be displayed with a 3 second timer. Either allow the menu to timeout or press `1` (the default) to continue.



6. Console options are presented for serial console installation. The default option is **vt100**, which should work for most. Choose the correct console output for your system.

```
Please choose the appropriate terminal type for your system.
Common console types are:
   ansi     Standard ANSI terminal
   vt100    VT100 or compatible terminal
   xterm    xterm terminal emulator (or compatible)
   cons25w  cons25w terminal
```

7. The installer will automatically launch and several options will be presented. On Netgate appliances, choosing `Enter` for the default options will complete the installation process.

Note: Options such as the type of disk partition can be modified through this installation if required.

---

8. Once the installer is finished, choose `No` and press `Enter` to skip going to a shell.
9. The installer will then prompt to Reboot the system. Select **Reboot** and press `Enter`. The system will shutdown and reboot.

```
Dec 21 22:41:37 Waiting (max 60 seconds) for system process `vnlru` to stop... d
one
Waiting (max 60 seconds) for system process `bufdaemon` to stop... done
Waiting (max 60 seconds) for system process `syncer` to stop...
Syncing disks, vnodes remaining... 0 0 done
All buffers synced.
Uptime: 5m43s
umass0: detached
umass1: detached
uhub1: detached
```

10. Remove the USB drive from the USB port.

Important: If the USB drive remains attached, the system will boot into the installer again because by default the system firmware is configured so that a device plugged into the USB port will be booted with a higher priority.

See also:

For information on restoring from a previously saved configuration, go to Backup and Restore.

CHAPTER

THREE

REFERENCES

3.1 Additional Resources

3.1.1 Netgate Training

Netgate training offers training courses for increasing your knowledge of pfSense® products and services. Whether you need to maintain or improve the security skills of your staff or offer highly specialized support and improve your customer satisfaction; Netgate training has got you covered.

https://www.netgate.com/training

3.1.2 Resource Library

To learn more about how to use your Netgate appliance and for other helpful resources, make sure to browse our Resource Library.

https://www.netgate.com/resources

3.1.3 Professional Services

Support does not cover more complex tasks such as CARP configuration for redundancy on multiple firewalls or circuits, network design, and conversion from other firewalls to pfSense software. These items are offered as professional services and can be purchased and scheduled accordingly.

https://www.netgate.com/our-services/professional-services.html

3.1.4 Community Options

If you elected not to get a paid support plan, you can find help from the active and knowledgeable pfSense community on our forums.

https://forum.netgate.com/

3.2 Warranty and Support

- One year manufacturer's warranty.
- Please contact Netgate for warranty information or view our Product Lifecycle page.
- All Specifications subject to change without notice

For support information, view our support plans.

See also:

For more information on how to use pfSense® software, see the pfSense Documentation and Resource Library.

