Product Manual

SG-5100

Netgate

Sep 21, 2018

CONTENTS

Thank you for your purchase of the pfSense® SG-5100 Firewall Appliance. This appliance provides a powerful, reliable, cost-effective solution.

Quick Start Guide

The Quick Start Guide covers the first time connection procedures and will provide you with the information you need to get your appliance up and running.

CHAPTER

ONE

I/O PORTS

1.1 Rear Side

1.2 Ethernet Ports

Interface Name	Port Name	Port Type	Port Speed
WAN	IGB0	RJ-45	1 Gbps
LAN	IGB1	RJ-45	1 Gbps
OPT1	IX0	RJ-45	1 Gbps
OPT2	IX1	RJ-45	1 Gbps
OPT3	IX2	RJ-45	1 Gbps
OPT4	IX3	RJ-45	1 Gbps

Note: All Ethernet ports of the pfSense appliance support auto-MDIX and are capable of utilizing either straight-through or crossover ethernet cables.

1.3 Other Ports and Indicators

- Console (Mini-USB)
- Status LEDs
- 2x USB 3.0

Status LED	Description
Top LED	Add-on storage activity (does not show eMMC activity)
Middle LED	Activity
Bottom LED	Power

1.4 Front Side

1. Receessed Reset Button
2. Power Button
3. Power (12VDC with threaded locking connector)

Center Pin Positive

CHAPTER

TWO

GETTING STARTED

Tip: Before configuring the pfSense appliance it is best to activate it by following the instructions at https://www.netgate.com/register/.

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

Establishing a connection to the Internet Service Provider (ISP) starts with connecting one end of an ethernet cable to the WAN port (shown in the *I/O Ports* section) of the pfSense 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 *I/O Ports* section) of the pfSense 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 *I/O Ports* section) of the pfSense appliance. Connect the other end to the network connection on the computer. In order to access the web configurator, 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.

2.1 Initial Setup

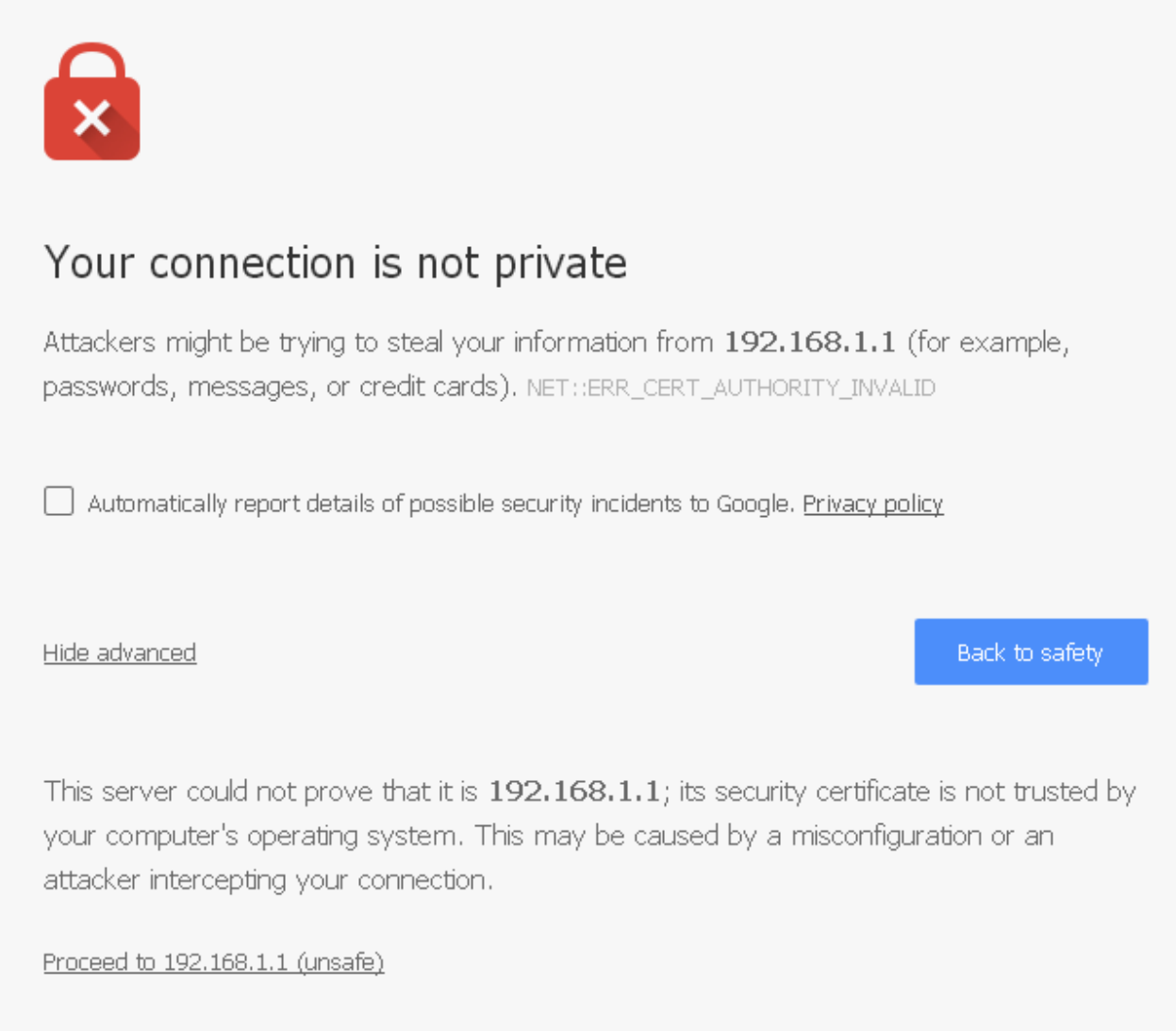
The next step is to power up the modem and the firewall. Plug in the power supply to the power port (shown in the *I/O Ports* section).

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

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

2.2 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:

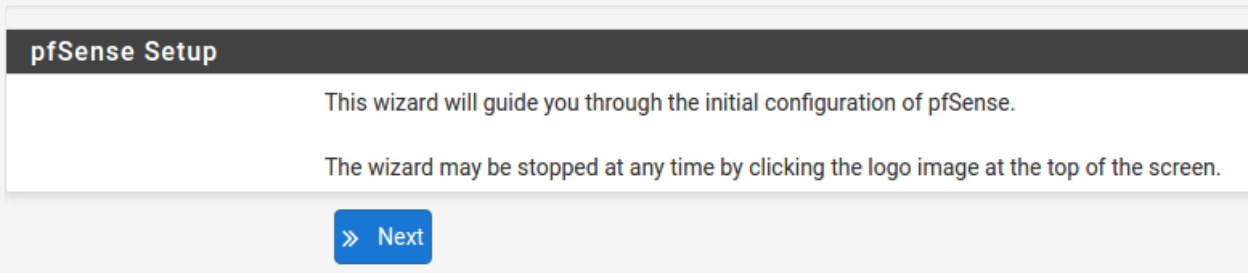
Username `admin`

Password `pfsense`

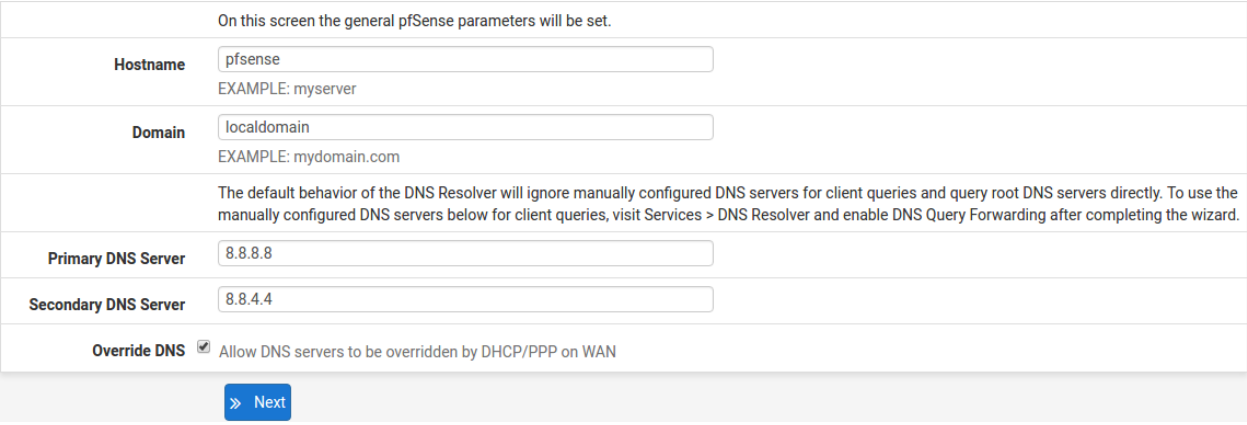
Click **Login** to continue

2.3 Wizard

Upon successful login, the following is displayed.



2.4 Configuring Hostname, Domain Name and DNS Servers



2.5 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

2.6 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.

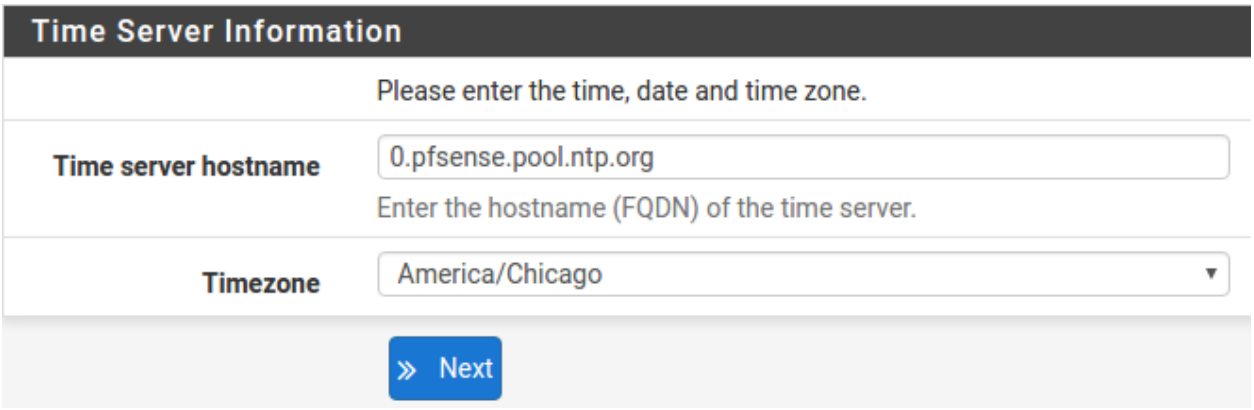
2.7 DNS Servers

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.

2.8 Time Server Configuration



2.9 Time Server Synchronization

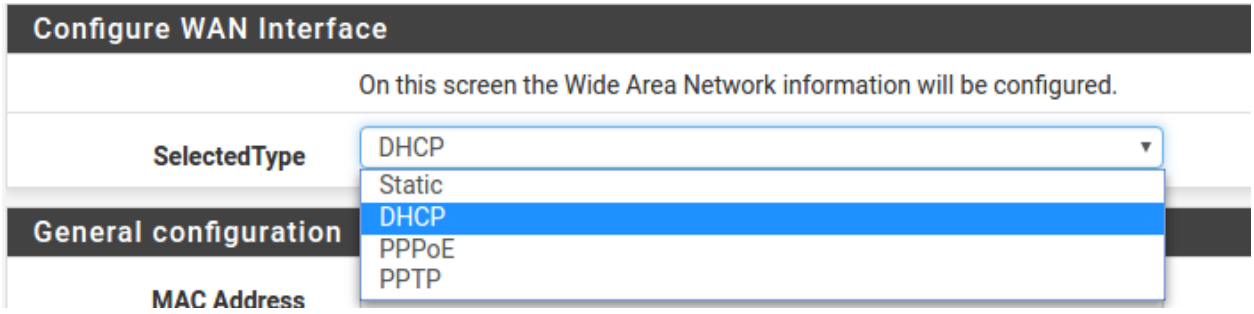
Setting time server synchronization is quite simple. We recommend using the default pfSense time server address, which will randomly select an NTP server from a pool.

2.10 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.

2.11 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.

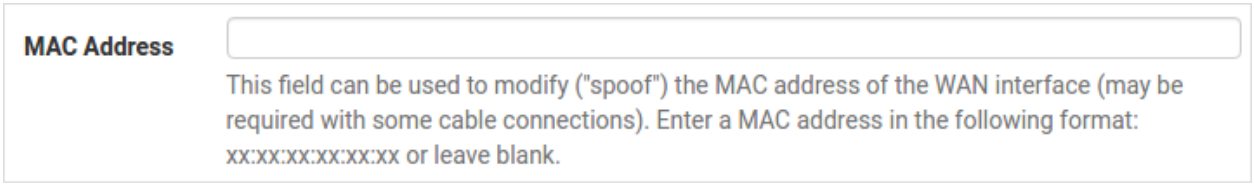


This depicts the four possible WAN interface types. Static, DHCP, PPPoE and PPTP. One must be selected from the drop-down list.

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.

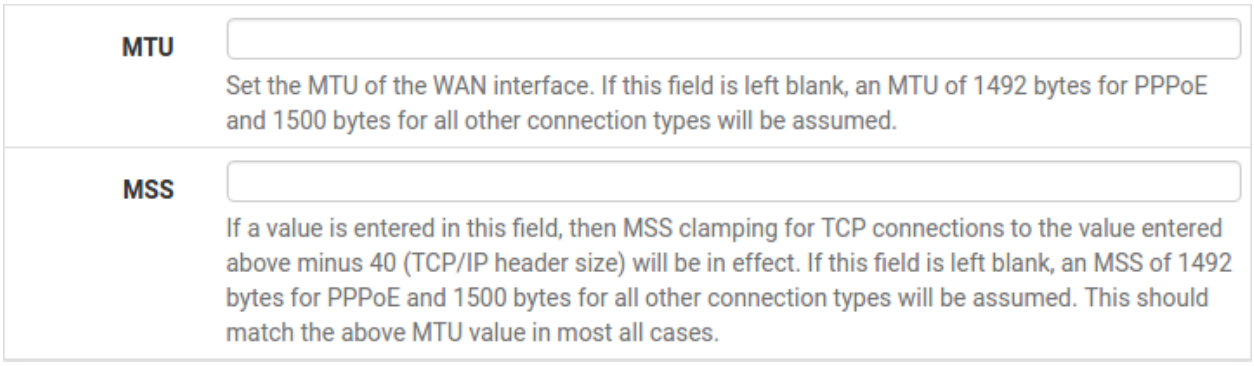
2.12 MAC Address



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.

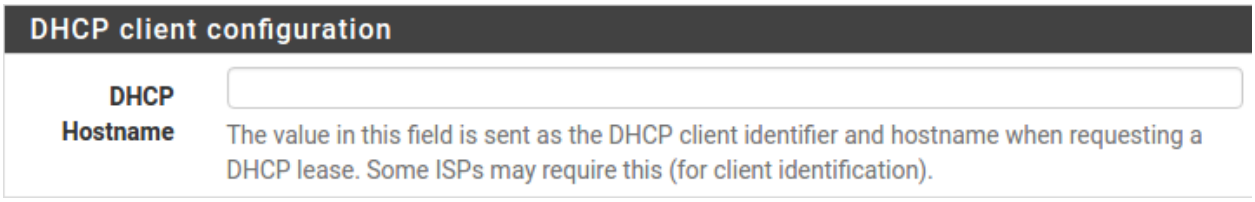
If the MAC address of the old firewall cannot be located, the impact is most likely insignificant. Power cycle the ISP router and modem and the new MAC address will usually be able to get online. For some ISPs, it may be necessary to call them when switching devices, or an activation process may be required.

2.13 Configuring MTU and MSS



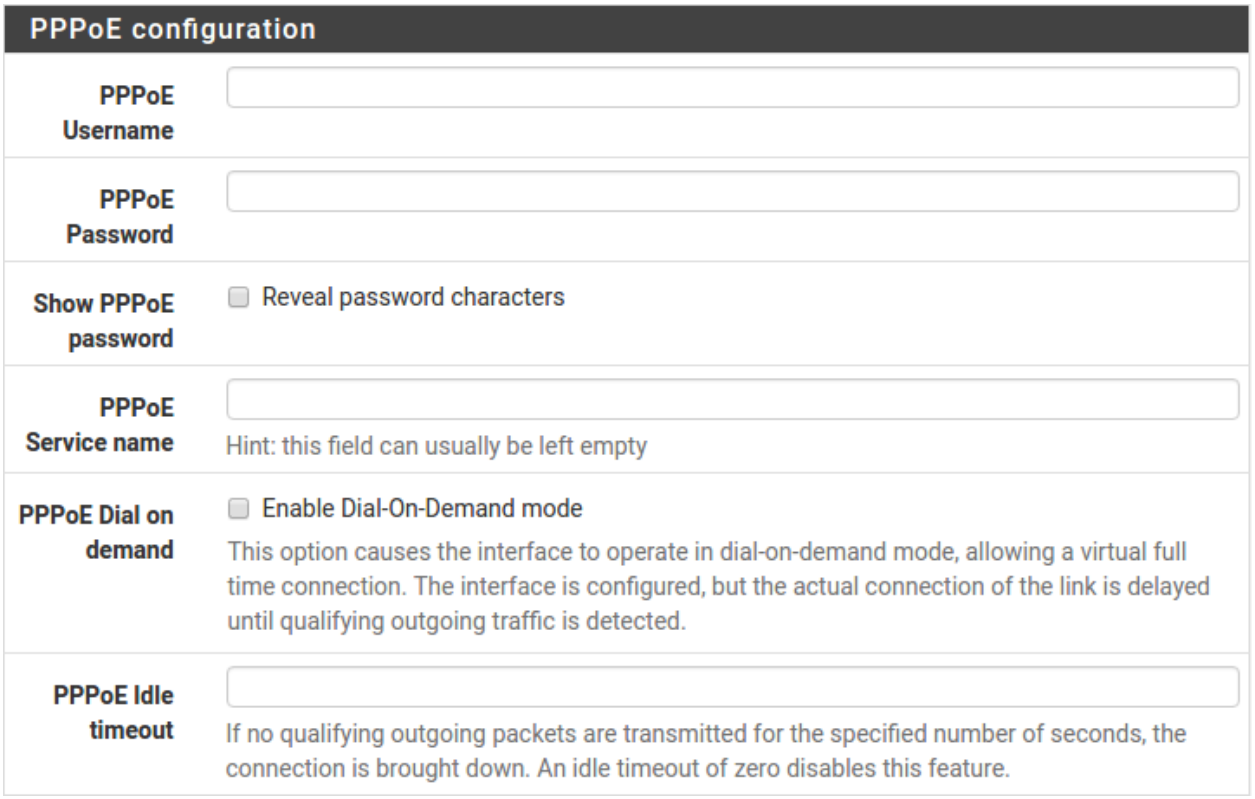
MTU or Maximum Transmission Unit determines the largest protocol data unit that can be passed onwards. A 1500-byte packet is the largest packet size allowed by Ethernet at the network layer and for the most part, the Internet so leaving this field blank allows the system to default to 1500-byte packets.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

2.14 Configuring DHCP Hostname



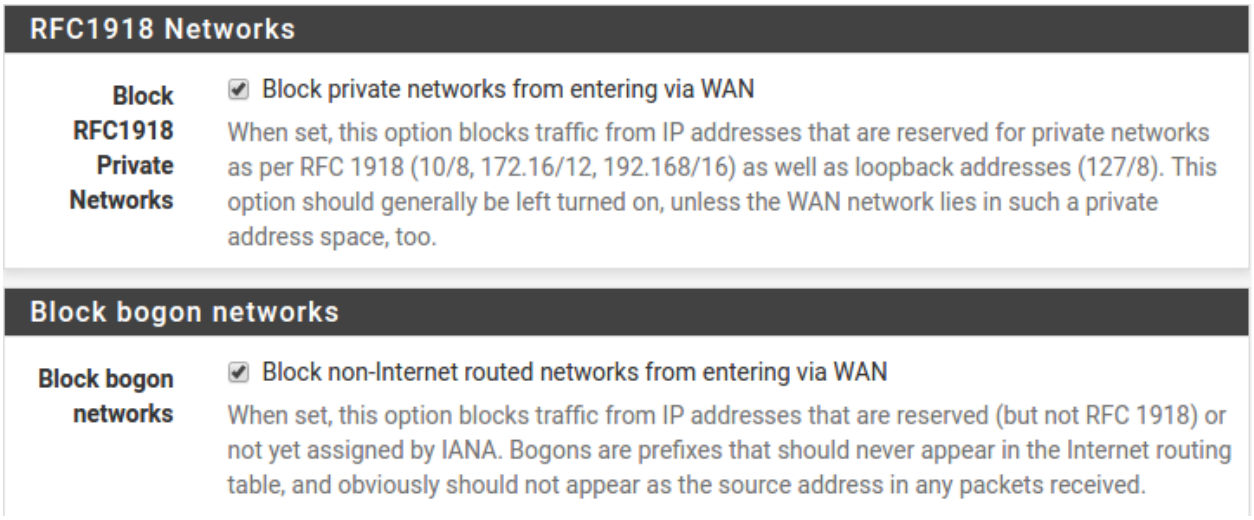
Some ISPs specifically require a **DHCP Hostname** entry. Unless the ISP requires the setting, leave it blank.

2.15 Configuring PPPoE and PPTP Interfaces



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

2.16 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:

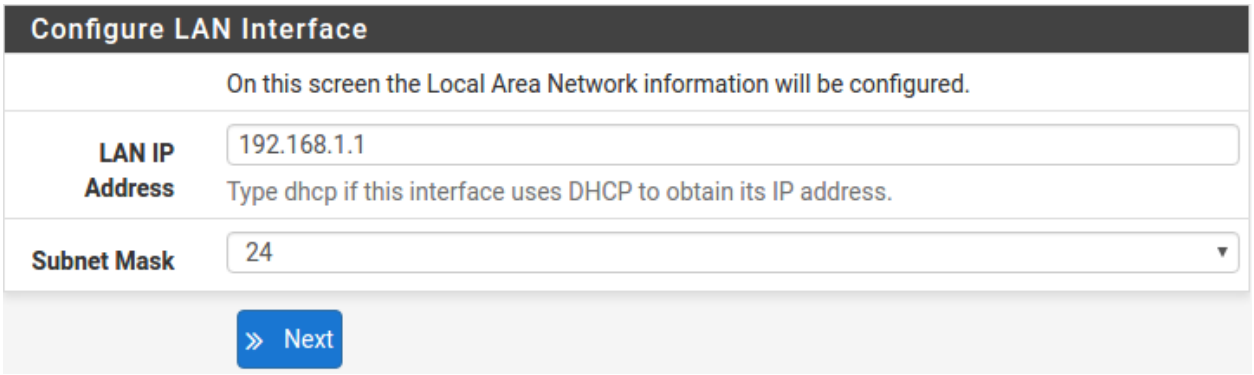
- `10.0.0.1` to `10.255.255.255`
- `172.16.0.1` to `172.31.255.254`
- `192.168.0.1` to `192.168.255.254`
- `127.0.0.0/8`
- `100.64.0.0/10`
- `fc00::/7`

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.

2.17 Configuring LAN IP Address & Subnet Mask

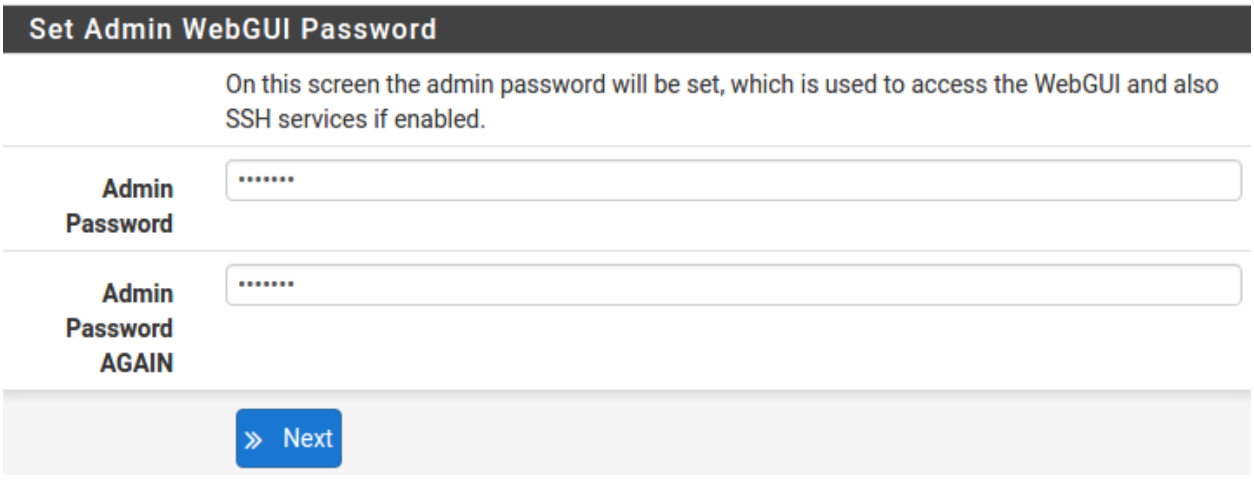


A static IP address of `192.168.1.1` and a subnet mask (CIDR) of `24` was chosen for this installation. If there are no plans to connect this network to any other network via VPN, the `192.168.1.x` default is sufficient.

Click **Next** to continue.

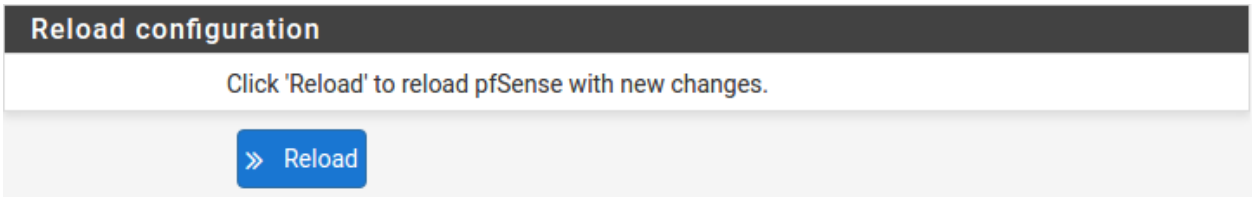
Note: If a Virtual Private Network (VPN) is configured to remote locations, choose a private IP address range more obscure than the very common `192.168.1.0/24`. IP addresses within the `172.16.0.0/12` RFC1918 private address block are the least frequently used. We recommend selecting a block of addresses 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.

2.18 Change Administrator Password



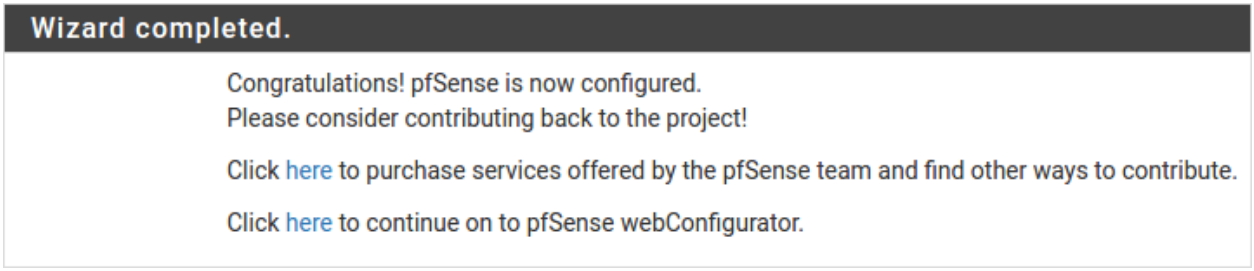
Select a new **Administrator Password** and enter it twice, then click **Next** to continue.

2.19 Save Changes

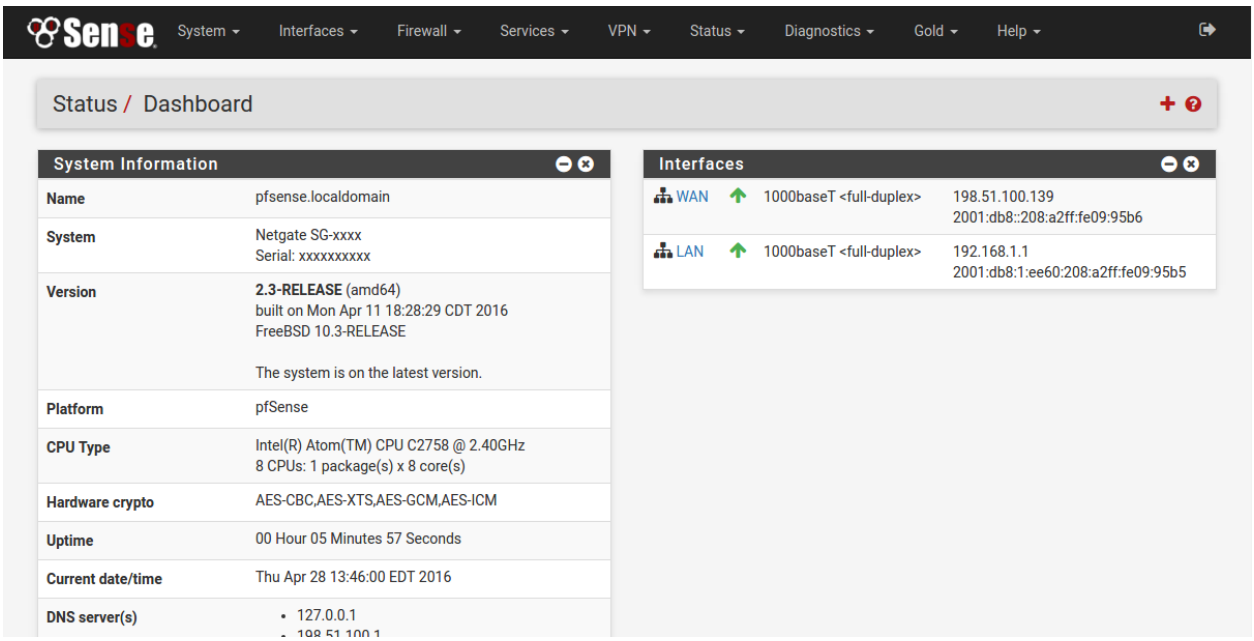


Click **Reload** to save configuration.

2.20 Basic Firewall Configured

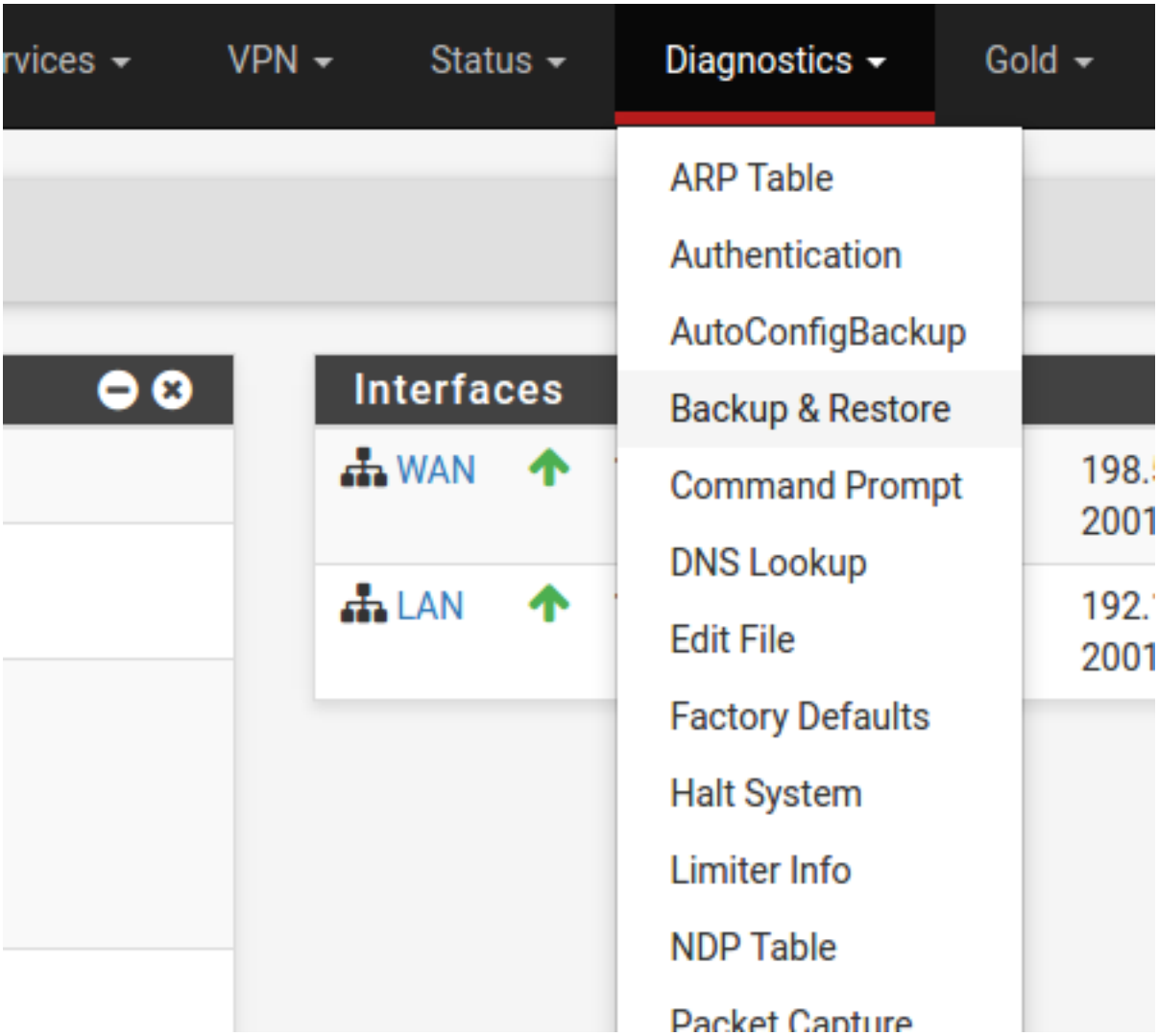


To proceed to the webConfigurator, make the selection as highlighted. The Dashboard display will follow.

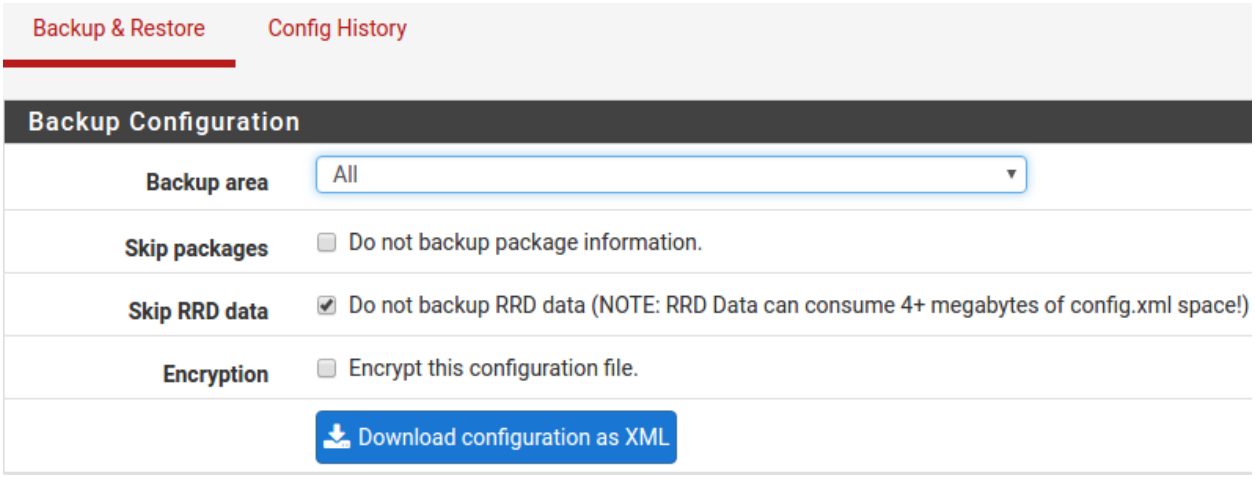


2.21 Backing Up and Restoring

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**.

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

CHAPTER

THREE

CONNECTING TO CONSOLE PORT

3.1 Simple Configuration

Below are the simple instructions for connecting to the console port with Microsoft Windows. If these steps do not work for you or if you're an operating system other than Windows, then please skip forward to *Advanced Configuration*.

3.1.1 Serial Terminal Emulation Client

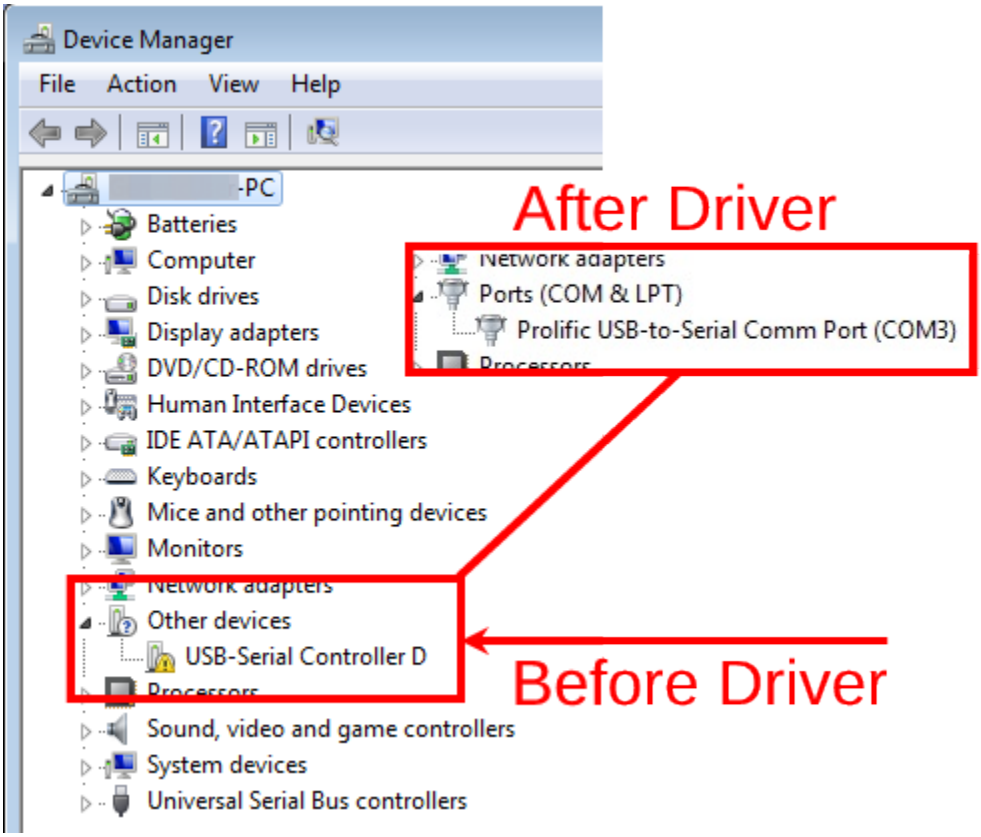
A serial terminal emulation program is required to access the pfSense appliance console through the serial interface. Microsoft Windows no longer includes HyperTerminal in Versions 7 and up. PuTTY is free and can be downloaded from:

http://www.chiark.greenend.org.uk/~sgtatham/putty/download.html

3.1.2 Configuring Serial Terminal Emulator

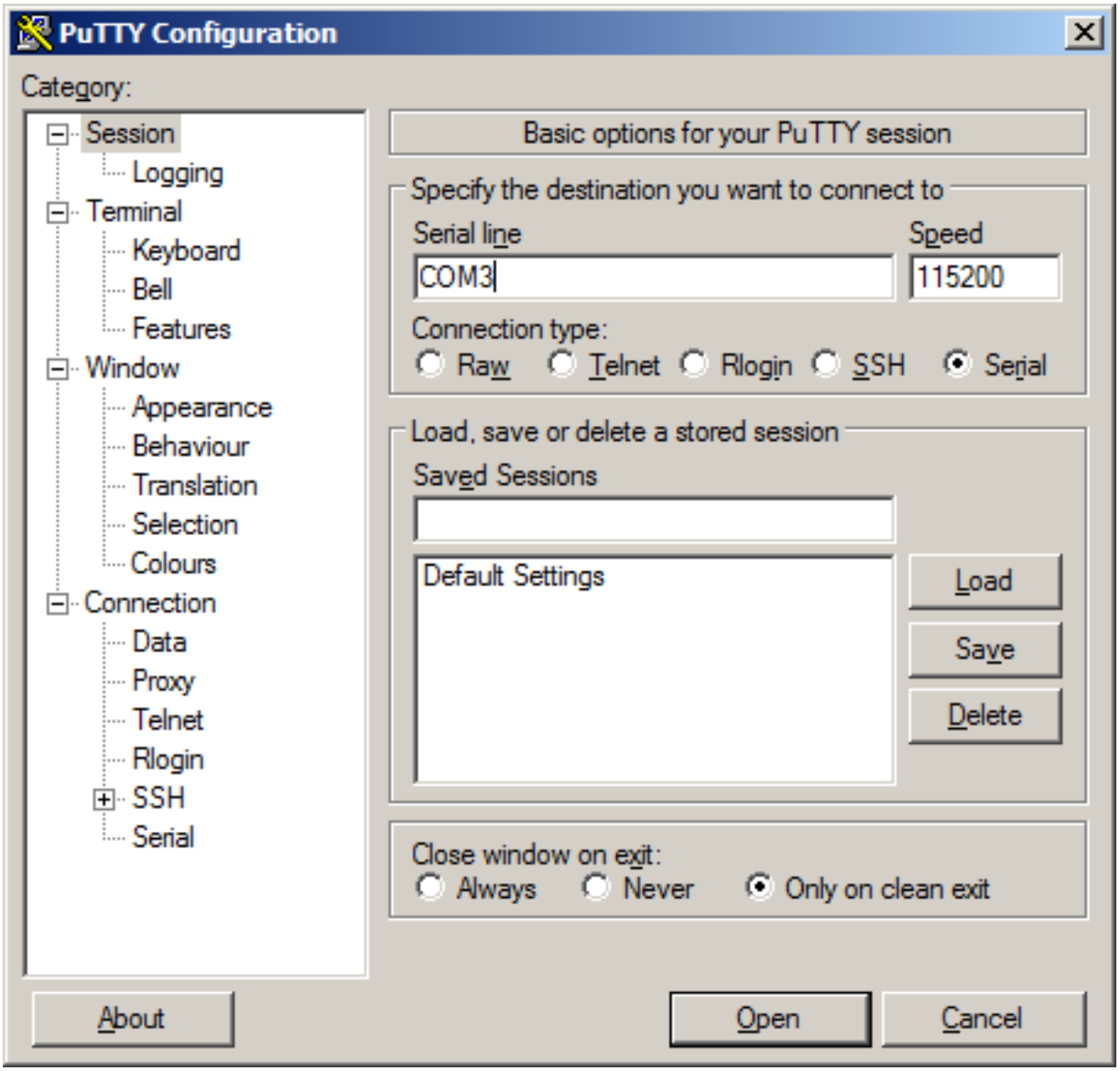
PuTTY must be configured to communicate with the pfSense appliance. In order to do so, you must first know what COM Port your computer has assigned to your serial port. Even if you assigned your serial port to COM1 in the BIOS, Windows may remap it to a different COM Port.

To determine this, you must open Windows Device Manager and view the COM port assignment:



Note: The first time you connect your computer to the SG-5100, it may take up to 3 minutes for the driver to install. It should install automatically for Windows 7 and above.

Open PuTTY and locate the **Session** display as shown below. For the **Connection type**, select **Serial**. Set **Serial line** to the COM Port that is displayed in Windows Device Manager, COM3 for this example, and the **Speed** to `115200` bits per second, the speed of the BIOS in this case.



Select **Open** and the console screen will be displayed.

3.2 Advanced Configuration

A Prolific PL2303 USB-to-UART bridge is used to provide access to the serial port that acts as a system console. This is exposed via a USB Mini-b (5-pin) port on the front of the case. There are several steps required to access the system console via this port.

3.2.1 Install the Driver

Install an appropriate PL2303 USB to UART Bridge VCP (virtual COM port) driver on the workstation used to connect with the system if needed. There are drivers available for Windows, Mac OS X, and Linux available in the Download Software section of the Prolific Website.

Note: Recent versions of FreeBSD and many Linux distributions include this driver and will not require manual installation.

3.2.2 Connect a USB Cable

Next, locate an appropriate USB cable. The type of cable required for the serial console has a USB Mini-b (5-pin) connector on one end and a regular USB (Type A) plug on the other end. These cables are commonly used with smaller USB peripherals such as GPS units, cameras, and so on.

Attach the USB cable between a workstation and the system. Gently push the Mini-B plug end into the console port on the system and connect the USB type A plug into an available USB port on the workstation.

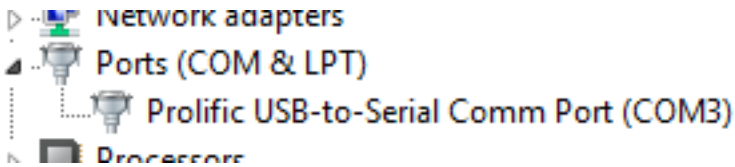
Tip: Be certain to gently push in the Mini-B connector on the system side completely. With most cables there will be a tangible "click", "snap", or similar indication when the cable is fully engaged.

3.2.3 Locate the Console Port Device

The appropriate device to attach the terminal program to each platform varies by platform and must be located before attempting to connect to the console.

Windows

To locate the device name on Windows, open **Device Manager** and expand the section for **Ports (COM & LPT)**. Look for an entry with a title such as **Prolific USB-to-Serial Comm Port**. If there is a label in the name that contains "COMX" where X is a decimal digit (e.g. COM1), that value is what would be used as the port in the terminal program.



Mac OS X

The device associated with the system console is likely to show up as /dev/cu.usbserial.

Linux

The device associated with the system console is likely to show up as /dev/ttyUSB0. Look for messages about the device attaching in the system log files or by running `dmesg`.

Note: If the device does not appear in **/dev/**, see the note above in the driver section about manually loading the Linux driver and then try again.

FreeBSD

The device associated with the system console is likely to show up as /dev/cuaU0. Look for messages about the device attaching in the system log files or by running `dmesg`.

3.2.4 Launch a Terminal Program

Use a terminal program to connect to the system console port. PuTTY is a popular terminal program that is available on various operating systems. Some other choices of terminal programs:

- Linux: screen, PuTTY, minicom, dterm
- Mac OS X: screen, ZTerm, cu
- Windows: PuTTY, SecureCRT, **Do not use Hyperterminal**
- FreeBSD: screen, cu

The settings to use within the terminal program are:

Speed 115200 baud

Data bits 8

Parity none

Stop bits 1

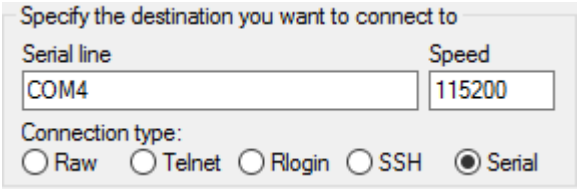
Flow Control Off or XON/OFF. Hardware flow control (RTS/CTS) **must** be disabled.

Client-Specific Examples

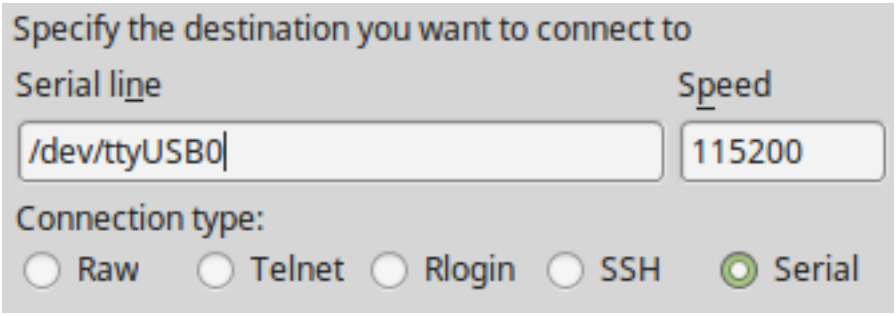
PuTTY

Launch PuTTY and configure it for a **Serial** type connection with a speed of **115200** using the port name located previously.

- Windows Example:



- Linux Example:



PuTTY generally handles most cases OK but can have issues with line drawing characters on certain platforms.

These settings seem to work best (tested on Windows):

Window Columns x Rows = *80x24*

Window > Appearance Font = *Courier New 10pt* or *Consolas 10pt*

Window > Translation Remote Character Set = *Use font encoding* or *UTF-8*

Window > Translation Handling of line drawing characters = *Use font in both ANSI and OEM modes* or *Use Unicode line drawing code points*

Window > Colours Indicate bolded text by changing = The colour

GNU screen

In many cases *screen* may be invoked simply by using the proper command line:

- Mac OS X

  ```
  sudo screen /dev/cu.usbserial 115200
  ```

- Linux

  ```
  sudo screen /dev/ttyUSB0 115200
  ```

- FreeBSD

  ```
  sudo screen /dev/cuaU0 115200
  ```

If portions of the text are unreadable but appear to be properly formatted, the most likely culprit is a character encoding mismatch in the terminal. For example, on OS X this is commonly required

```
sudo screen -U /dev/cu.usbserial 115200
```

Adding the `-U` parameter to the *screen* command line arguments forces it to use UTF-8 for character encoding.

3.2.5 Troubleshooting

No Serial Output

If there is no output at all, check the following items:

- Ensure the cable is correctly attached and fully inserted
- Ensure the terminal program is using the correct port
- Ensure the terminal program is configured for the correct speed. The default BIOS speed is 115200, and many other modern operating systems use that speed as well. Some older operating systems or custom configurations may use slower speeds such as 9600 or 38400.
- Ensure the operating system is configured for the proper console (e.g. `ttyS1` in Linux). Consult the various operating install guides on this site for further information.

Garbled Serial Output

If the serial output apears to be garbled, binary, or random characters check the following items:

- Ensure the terminal program is configured for the correct speed. (See “No Serial Output” above)

- Ensure the terminal program is configured for the proper character encoding, such as UTF-8 or Latin-1, depending on the operating system. (See the previous entry under "GNU screen")

Serial Output Stops After the BIOS

If serial output is shown for the BIOS but stops afterward, check the following items:

- Ensure the terminal program is configured for the correct speed for the installed operating system. (See "No Serial Output" above)
- Ensure the installed operating system is configured to activate the serial console.
- Ensure the installed operating system is configured for the proper console (e.g. `ttyS1` in Linux). Consult the various operating install guides on this site for further information.
- If booting from a USB flash drive, ensure that the drive was written correctly and contains a bootable operating system image.

CHAPTER

FOUR

ADDITIONAL RESOURCES

4.1 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. These items are offered as professional services and can be purchased and scheduled accordingly.

Please see https://www.netgate.com/our-services/professional-services.html for more details

4.2 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. Check us out at https://www.netgate.com/training/

4.3 Community Support Options

You can find out more information about our active forums, subreddit, IRC, mailing lists and more here: https://www.netgate.com/support/contact-support.html#community-support

CHAPTER

FIVE

WARRANTY AND SUPPORT INFORMATION

- 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.

CHAPTER

SIX

SAFETY AND LEGAL

Contents

6.1 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.

6.2 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.

6.3 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.

6.4 Industry Canada

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

6.5 Australia and New Zealand

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

6.6 CE Marking

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

6.7 RoHS/WEEE Compliance Statement

6.7.1 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.

6.7.2 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.

6.7.3 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.

6.7.4 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.

6.7.5 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.

6.8 Declaration of Conformity

6.8.1 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.

6.8.2 Dansk [Danish]

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

6.8.3 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.

6.8.4 English

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

6.8.5 Eesti [Estonian]

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

6.8.6 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.

6.8.7 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)

6.8.8 Ελληνική [Greek]

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

6.8.9 Magyar [Hungarian]

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

6.8.10 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.

6.8.11 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.

6.8.12 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.

6.8.13 Lietuviškai [Lithuanian]

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

6.8.14 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.

6.8.15 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.

6.8.16 Slovensky [Slovak]

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

6.8.17 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.

6.8.18 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.

6.8.19 Polski [Polish]

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

6.8.20 Português [Portuguese]

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

6.8.21 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.

6.9 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.

6.10 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.

6.11 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.

6.12 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.

6.13 Limited Warranty

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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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References

- *Reinstalling pfSense*
- pfSense Documentation

CHAPTER

SEVEN

REINSTALLING PFSENSE

1. Registered users can log in to their Portal account page and download the appropriate factory installer image:

   `pfSense-netgate-memstick-serial-2.4.3-RELEASE-p1-amd64.img.gz`

   If you no longer have an active portal subscription, please contact support to re-enable access to the image free of charge.

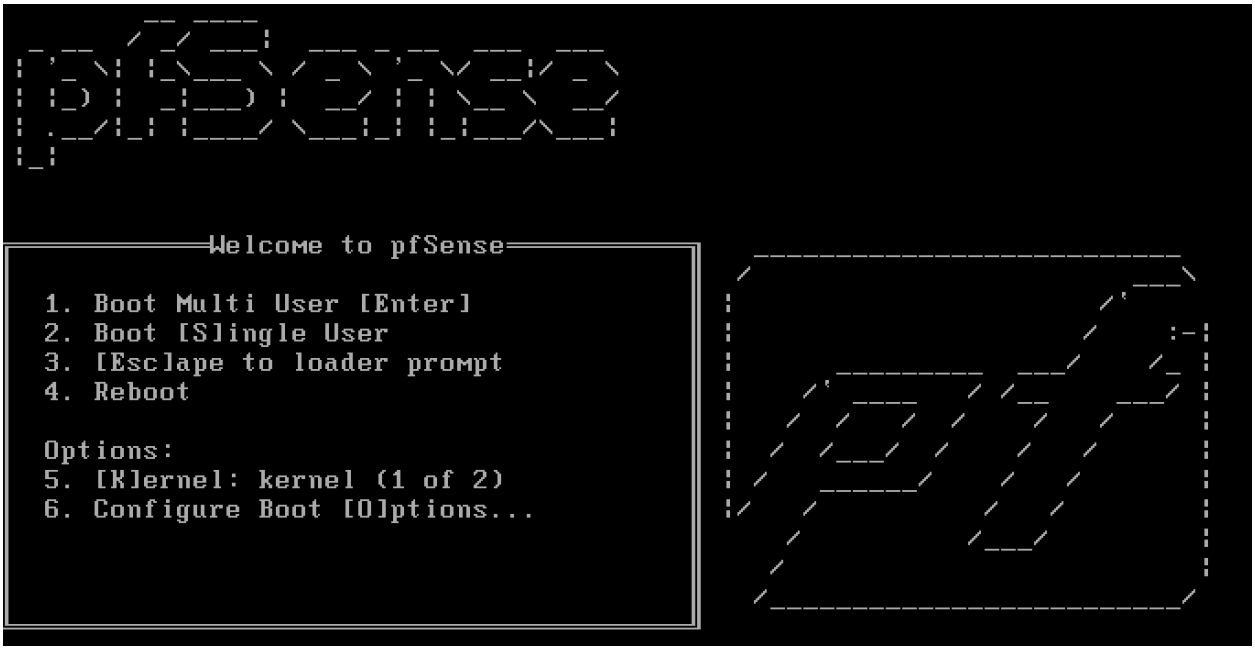
   Note: The pfSense factory version is the version that is preinstalled on units purchased from Netgate. The factory image is optimally tuned for our hardware and contains some features that cannot be found elsewhere, such as the AWS VPN Wizard.

   ---

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 pfSense device.

   See also:

   Connecting to Console Port Connecting to the console port. Cable is required.
4. Insert the memstick into an open USB port and boot the system.
5. After a minute the pfSense loader menu will be displayed that contains options to **Boot Multi User**, **Boot Single User**, **Escape to loader prompt**, **Reboot**, select a non-default kernel or configure boot options. Either allow the menu to timeout and boot on its own, or press `1` to boot normally. The factory images of pfSense already have appropriate console port options.
6. The installer will automatically launch once the boot process completes and offer the choice of a Quick/Easy Install, Custom Install, and several other options. Select **Quick/Easy Install** and press `Enter`. Another screen will prompt for confirmation. Select **OK** and press `Enter` to continue.
7. pfSense will be installed to the first available disk in the system. If the system contains an optional SSD storage disk, it will be chosen. Otherwise, the onboard eMMC will be used. It will take a couple of minutes to copy all of the files to the target disk. When the files have finished being copied, the installer will prompt to select either the **Embedded Kernel** or **Standard Kernel**. Select the **Embedded Kernel** and press `Enter`.
8. If you are on the factory version, the installer will then prompt to choose the type of system being installed, which pre-configures device-specific defaults. Choose the option that exactly matches the unit being reinstalled. If the model is unknown, check the sticker on the bottom of the unit.
9. The installer will then prompt to Reboot the system. Select **Reboot** and press `Enter`. The system will reboot.
10. Remove the USB drive from the USB port. pfSense will restart automatically. 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.




```
pfSense is now rebooting

After the reboot is complete, open a web browser and
enter https://192.168.1.1 (or the LAN IP Address) in the
location bar.

You might need to acknowledge the HTTPS certificate if
your browser reports it as untrusted.  This is normal
as a self-signed certificate is used by default.

*DEFAULT Username*: admin
*DEFAULT Password*: pfsense

Rebooting in 5 seconds. CTRL-C to abort.
Rebooting in 4 seconds. CTRL-C to abort.
Rebooting in 3 seconds. CTRL-C to abort.
Rebooting in 2 seconds. CTRL-C to abort.
Rebooting in 1 second.. CTRL-C to abort.

pfSense is now rebooting.

Dec 14 18:25:18 lighttpd[38936]: (server.c.1567) server stopped by UID = 0 PID =
 35875
```