



## SG-2440 pfSense® SECURITY GATEWAY APPLIANCE

### Quick Start Guide



## Table of Contents

Introduction .....	4
pfSense system .....	4
pfSense SG-2440 System Specifications .....	4
Overview .....	5
Flexibility built in .....	6
Software Features:.....	6
Core features include:.....	7
Stateful firewall based on FreeBSD10.1 packet filter.....	7
Warranty and Support Information.....	7
I/O Ports.....	8
Initial Configuration .....	8
Logging into the web interface .....	8
Dashboard.....	9
Configuring Hostname, Domain Name and DNS Servers.....	10
Hostname .....	10
Domain .....	11
DNS Servers.....	11
Time Server Configuration.....	11
Time Server Synchronization.....	11
Configuring Wide Area Network (WAN) Type.....	12
MAC address .....	12
Configuring MTU and MSS .....	13
Configuring DHCP Hostname .....	13
Configuring PPPoE and PPTP Interfaces .....	14
Configuring LAN IP Address & Subnet Mask .....	15
Change Administrator Password .....	16
Basic Firewall Configuration Complete.....	17
Backing up and restoring.....	18
Console Access by Serial Interface .....	19
Mini USB Serial Interface .....	20
Serial Terminal Emulation Client.....	20
Accessing the Console .....	20
Configuring Serial Terminal Emulator.....	20
Additional Support.....	22
pfSense University .....	22
Other Support Options .....	23
Safety Notices .....	23

1. Read, follow, and keep these instructions. ....	23
2. Heed all warnings.....	23
3. Only use attachments/accessories specified by the manufacturer. ....	23
Electrical Safety Information .....	23
Limited Warranty .....	24
FCC Compliance .....	26
Industry Canada .....	26
Australia and New Zealand.....	26
CE Marking .....	27
RoHS/WEEE Compliance Statement.....	27
English.....	27
Deutsch.....	27
Español .....	27
Français.....	28
Italiano .....	28
Declaration of Conformity .....	28

## Introduction

Thank you for your purchase of the pfSense® SG-2440 Security Gateway Appliance with pfSense® 2.2. X. The hardware platform in combination with the popular open source pfSense software provides a powerful, reliable, cost-effective solution for your network security needs.

This Quick Start Guide will assist with the basic configuration of the PfSense SG-2440 system. The system comes pre-assembled and ready to be configured.

## pfSense system

The pfSense SG-2440 Security Gateway Appliance is a pfSense system, featuring the flexibility of pfSense software as a firewall, LAN or WAN router, VPN router, DHCP Server, DNS Server, or other special purpose Appliance.

This purchase goes directly to support pfSense development. By choosing a pfSense® system you financially support open source software and gain peace of mind that your system has been vetted and tested by the pfSense core team at Netgate.

One common barrier to choosing and implementing open source software is the availability of prompt, professional support from knowledgeable individuals. We eliminate that barrier for pfSense users by providing paid support, consulting and development services to the open source community. Free support is also available on the forums hosted at <https://forum.pfsense.org>

## pfSense SG-2440 System Specifications

- 2 core Intel® Atom™ C2358 CPU, 1.7 GHz
- Standard Mini-ITX 170x170mm form factor
- 4 GB DDR3L Non ECC Memory on board
- 4GB eMMC flash on board
- 4x RJ-45 1 GbE Intel Ethernet ports, Intel i350 (i354 on-die)
- Blue Anodized Enclosure with 5 SMA/RP-SMA sized antenna cutouts
- 1 mini-SATA (mSATA) connector
- 1 SATA II connector
- 2x full length mPCIe slots, one with micro-SIM. Also supports half-length cards.
- 2x USB 2.0 Host ports
- 1 Mini-USB Serial Console Port
- Reset Push button
- Power/Status/SATA Activity LEDs
- Front Panel Header

- Coreboot boot loader
- RTC coin cell backup battery
- 12 VDC Power Input Connector (Call for ATX availability and MOQ)
- AC/DC Auto-Ranging Switching Power Adapter
- Input Voltage: 90 ~ 264 VAC
- Output Voltage: 12 VDC
- Current Output (Max): 4.16A
- Power (Watts): 50W
- Fanless operation from 0°C to 40°C ambient temperature using included heatsink
- FCC, CE Class B Compliance
- RoHS Compliant

## Overview

Designed to serve as your modern low-cost, low-power production platform of choice for cost-sensitive edge and communication appliances. The SG-2440 works as the core for your intelligent CPE, VoIP PBX, Internet Gateway, firewall, VPN router or layered security appliance. This fanless Intel Atom (Rangeley) based advanced communication platform is designed with low power requirements for long life and solid reliability.

The 2 core 1.7 Ghz Intel C2358 processor with Intel QuickAssist integrated accelerator sports four 10/100/1000 Mb Intel Ethernet ports, 4GB of DDR3L memory, and 4 GB of onboard eMMC flash memory for program storage. You can expand this system with additional program and data storage through either the mSATA or SATA II ports. Additional communications options are possible with miniPCIe slots for Wi-Fi or 3G/4G/LTE cellular cards.

The rear panel offers easy access to all interfaces as well as providing 5 SMA/RP-SMA sized antenna cutouts



### pfSense SG-2440 System Board

## Flexibility built in

The base price includes the pfSense SG- 2440 system board preloaded with pfSense software version 2.2.1. Enhance your system to suit your specific needs with:

- mSATA SSD
- Wireless cards, pigtailed and antennas
- Cellular modem
- Other miniPCIe and USB cards

## Software Features:

pfSense is an, open source full featured firewall and router platform based on FreeBSD 10.1.

- Arrives pre-loaded with pfSense software
- IPv6 – support for IPv6 connectivity
- Captive portal – allows for a splash page to all users upon connecting to your network, optionally with authentication. This is commonly used with wireless hot spots, or as an additional layer of protection for wireless networks with authentication against a local user database, or external RADIUS server such as Microsoft Active Directory.
- VPN – Three types of VPNs are supported, IPsec, OpenVPN and PPTP. You can use these options to connect roaming users for remote access, or site to site connectivity to connect multiple locations.

- Multi-WAN – multiple Internet connections with failover and load balancing are supported. In combination with a VLAN capable switch, you can connect numerous Internet connections over a single physical interface on the firewall.
- Dynamic DNS – if your public IP is dynamic, you may want to sign up with a dynamic DNS provider and use the Dynamic DNS client to keep your hostname updated. This is especially helpful if you want to access services like VPN remotely.
- In-place upgrades. No need to disassemble system to upgrade, patch or add packages.
- pfSense provides a software packaging system which allows for the extension of functionality beyond its extensive **core feature** set.

## Core features include:

- Stateful firewall based on FreeBSD10.1 packet filter
- RADIUS support
- NAT support
- Load balancing
- VPN: IPsec, OpenVPN, PPTP
- Dynamic DNS client
- DHCP Server and Relay functions
- PPPoE Server
- Reporting and monitoring features with real time information

## Warranty and Support Information

- One year manufacturer’s hardware warranty.
- Free support for all pfSense questions is available by [pfSense free forum](#) or [mailing list](#).
- Standard 30 day [return policy](#)

pfSense products are bundled with two support incidents, valid for up to a year or until exhausted. Support from pfSense provides you with direct access to our team to assist you with any technical issues related to pfSense.

pfSense support compliments your IT resources, adding value and increasing efficiency by having a pfSense engineer ready to answer your questions and provide best practice advice.

Before using your support incidents, we highly recommend that you take advantage of our on-line documentation and discussion forums. These are complimentary resources available to you 24x7 that may lead directly to the answers you are looking for.

If eligible for support, you will receive a post card sized document with your device with instructions on activating support. For more information on per-incident support, please see the FAQ at

<https://www.pfsense.org/get-support/support-faq.html>

*All Specifications subject to change without notice.*

## I/O Ports

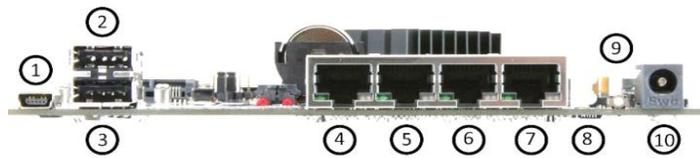


Figure 1

1 Mini-USB Serial Port	6 Opt2 - IGB2
2 USB0 (USB 2.0)	7 Opt3 - IGB3
3 USB1 (USB 2.0)	8 Reset Button
4 WAN - IGB0	9 SATA Activity /Power Indicator
5 LAN - IGB1	10 Power Input

Legend

## Initial Configuration

Connect an Ethernet cable to port **5** as shown in **Figure 1** above. Do not use any other port for initial web configuration. Connect the other end to the Ethernet cable to the computer you will be performing the initial configuration from. **Make certain the network interface card on the PC is configured for DHCP in order to access the web configurator upon initial setup.**

Connect the **WAN** interface from ISP/Modem to port **4** shown in **Figure 1**. Static IP configurations such as PPPoE or PPPT are configured later.

Connect the power cable to port **10** as shown in **Figure 1** of the unit; insert the power adapter connector to a power source and power the unit up. The pfSense SG-2440 will boot and be ready for the initial configuration after approximately two minutes.

Once the system is booted, the attached computer should receive a 192.168.1.1 IP address from the DHCP server that is active on the pfSense appliance.

## Logging into the web interface

Browse to <https://192.168.1.1> to access the web interface. In some instances, the browser will respond with a message indicating a problem with an untrusted certificate. This is normal as the pfSense system issues a self-signed certificate. **Figure 2** is a typical example from Google Chrome. If this message or similar messages are encountered, it is safe to proceed.



Figure 2

## Login Procedure

The login appears as depicted in **Figure 3**



Figure 3

Enter the following default username and password

Username: **admin**

Password: **pfSense**

Select **LOGIN** to continue

## Dashboard

Upon successful login, the following is displayed as shown in **Figure 4**

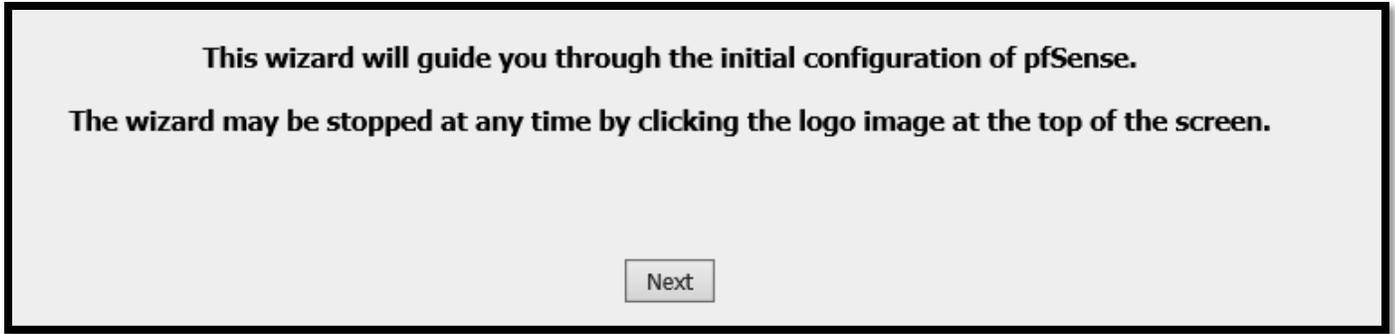


Figure 4

## Configuring Hostname, Domain Name and DNS Servers

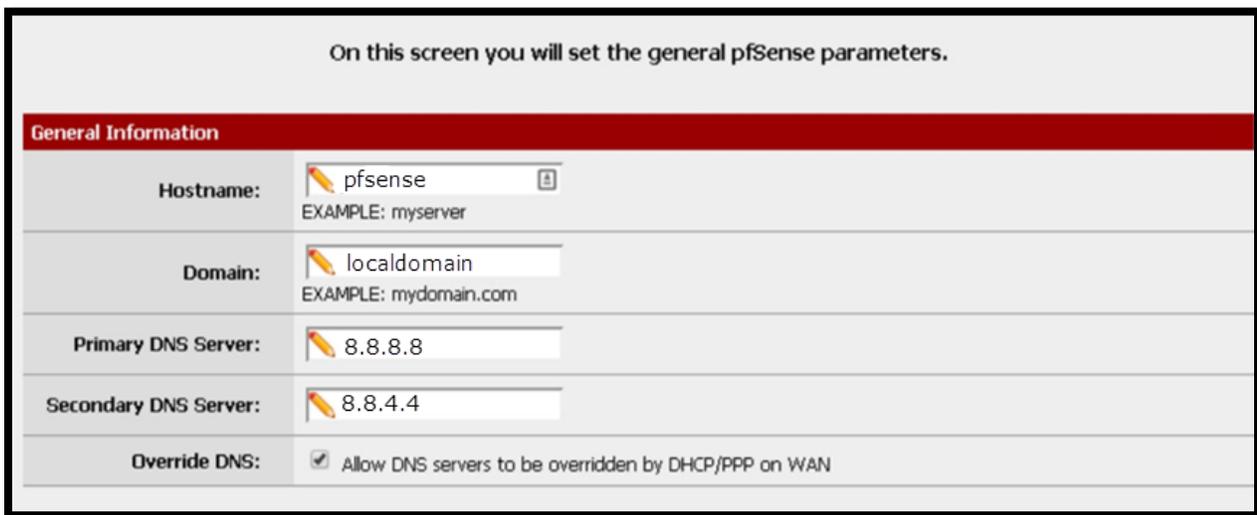


Figure 5

### Hostname

For **hostname**, you may enter anything as it does not affect functionality of the firewall. Assigning a hostname to the firewall will allow you to access the GUI console by hostname as well as IP address.

For the purposes of this guide, we will use *pfsense* for the Hostname as shown in **Figure 5**. The default hostname, **pfsense** may be left unchanged.

Once saved in the configuration, console access can be reached by entering <http://pfsense> as well as <http://192.168.1.1>

## Domain

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

For networks without any internal DNS domains, you can enter anything you want. We have chosen *demodomain* for the purposes of this Quick Start Guide.

## DNS Servers

The DNS server fields may be left blank if you have a WAN connection using DHCP, PPTP or PPPoE types of Internet connections and the ISP assigns DNS server IP addresses. When using a static IP on WAN, you must enter DNS server IP addresses here for name resolution to function. You can specify DNS servers here even if your ISP assigns different ones. Either enter the IP addresses provided by your ISP, or consider using a service like OpenDNS ([www.opendns.com](http://www.opendns.com)) whose service which allows for options such as custom filtering and phishing protection. Using Google's public DNS servers (8.8.8.8, 8.8.4.4) is another popular choice. We have chosen Google DNS servers for the purpose of this Quick Start Guide. Click "Next" after filling in the fields as appropriate.

## Time Server Configuration



Please enter the time, date and time zone.

**Time Server Information**

Time server hostname:  Enter the hostname (FQDN) of the time server.

Timezone:

Next

Figure 6

## Time Server Synchronization

Setting time server synchronization is quite simple. We recommend using the default pfSense time server as displayed in *Figure 6*.

## Setting Time Zone

Select the appropriate time zone for your location. For purposes of this manual, the Timezone setting will be set to US/Central as displayed in *Figure 7*.

## 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 your network uses to communicate with the Internet.

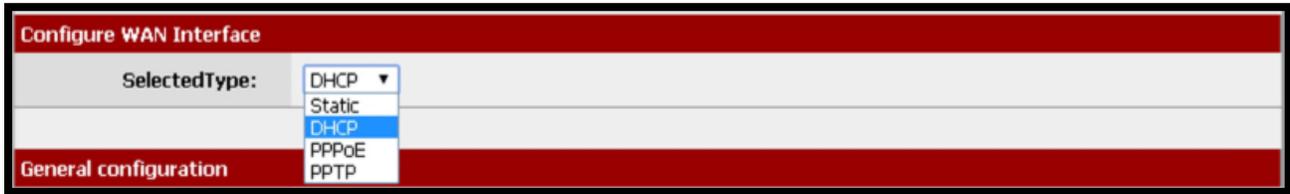


Figure 7

**Figure 7** depicts the 4 possible WAN interface types. Static, DHCP, PPPoE and PPTP. You must select one from the drop-down list to proceed.

You will need further information from your ISP to proceed when selecting Static, PPPoE and PPTP such as login name and password or as with static addresses, 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's DHCP server and will become the public IP address of your network. This address will change periodically at the discretion of the ISP. Choose DHCP as shown in Figure 8 and proceed to the next section, MAC Address, MTU and MSS:



Figure 8

## MAC address

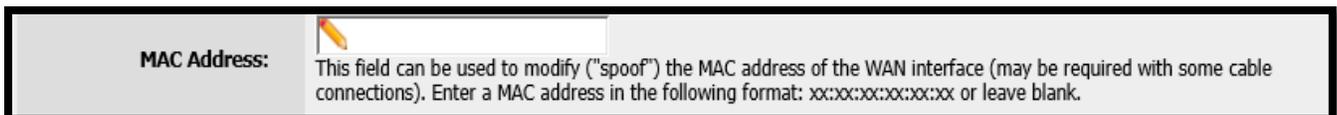


Figure 9

If replacing an existing firewall, you may want to enter the old firewall's WAN MAC address here, if you can easily determine it. This avoids common issues involved in switching out firewalls, such as ARP caches, ISPs locking to single MAC addresses, etc.

If you are not able to enter the MAC address of your current firewall here, the impact is most likely, insignificant. Power cycle your router and modem and your new MAC address will usually be able to get online. For some ISPs, you have to call when switching devices, or go through an activation process.

## Configuring MTU and MSS

<b>MTU:</b>	<input type="text"/>	Set the MTU of the WAN interface. If you leave this field blank, an MTU of 1492 bytes for PPPoE and 1500 bytes for all other connection types will be assumed.
<b>MSS:</b>	<input type="text"/>	If you enter a value in this field, then MSS clamping for TCP connections to the value entered above minus 40 (TCP/IP header size) will be in effect. If you leave this field blank, an MSS of 1492 bytes for PPPoE and 1500 bytes for all other connection types will be assumed. This should match the above MTU value in most all cases.

Figure 10

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. Leaving this field blank allows the system to default to 1500-byte packets. PPPoE packets are slightly smaller at 1492-bytes. We recommend leaving this blank for a basic configuration. MSS and MTU must be set to the same packet size if you configure them.

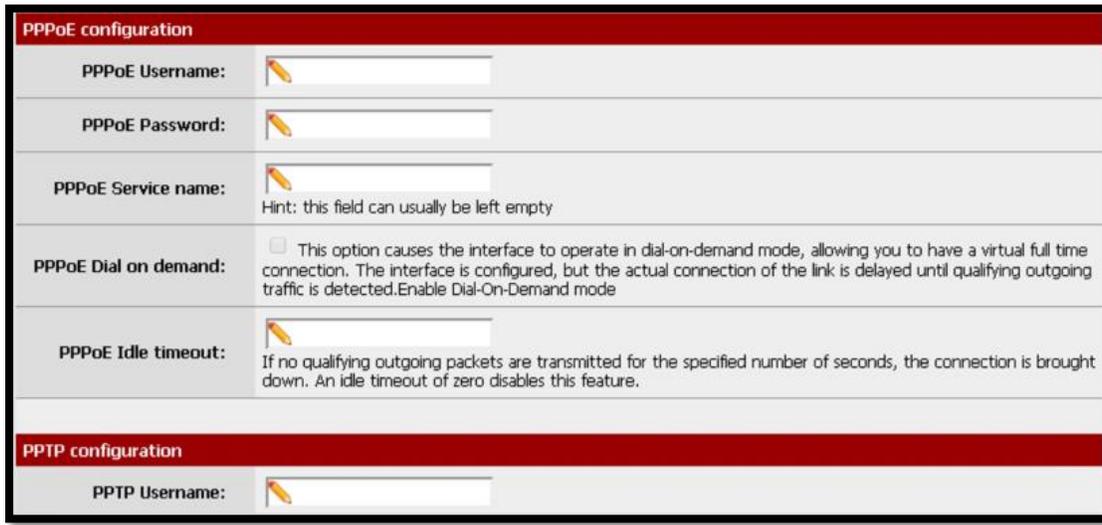
## Configuring DHCP Hostname

<b>DHCP Hostname:</b>	<input type="text"/>	The value in this field is sent as the DHCP client identifier and hostname when requesting a DHCP lease. Some ISPs may require this (for client identification).
-----------------------	----------------------	--

Figure 11

Some ISPs specifically require DHCP Hostname entry. You may leave this blank, otherwise.

## Configuring PPPoE and PPTP Interfaces



The screenshot shows a configuration window with two sections: PPPoE configuration and PPTP configuration. The PPPoE section includes fields for Username, Password, and Service name, a checkbox for Dial on demand, and an Idle timeout field. The PPTP section includes a Username field.

PPPoE configuration	
PPPoE Username:	<input type="text"/>
PPPoE Password:	<input type="password"/>
PPPoE Service name:	<input type="text"/> Hint: this field can usually be left empty
PPPoE Dial on demand:	<input type="checkbox"/> This option causes the interface to operate in dial-on-demand mode, allowing you to have a virtual full time connection. The interface is configured, but the actual connection of the link is delayed until qualifying outgoing traffic is detected. Enable Dial-On-Demand mode
PPPoE Idle timeout:	<input type="text"/> If no qualifying outgoing packets are transmitted for the specified number of seconds, the connection is brought down. An idle timeout of zero disables this feature.

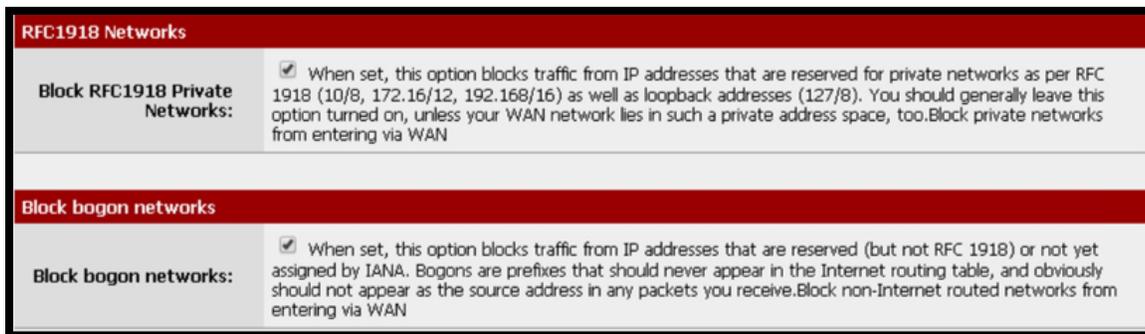
  

PPTP configuration	
PPTP Username:	<input type="text"/>

Figure 12

Information added in these sections are assigned by your ISP. Please populate these fields according to the information provided by your ISP.

## Block Private Networks and Bogons



The screenshot shows two configuration sections: RFC1918 Networks and Block bogon networks. Both sections have a checkbox and a descriptive text.

RFC1918 Networks	
Block RFC1918 Private Networks:	<input checked="" type="checkbox"/> When set, this option blocks traffic from IP addresses that are reserved for private networks as per RFC 1918 (10/8, 172.16/12, 192.168/16) as well as loopback addresses (127/8). You should generally leave this option turned on, unless your WAN network lies in such a private address space, too. Block private networks from entering via WAN

Block bogon networks	
Block bogon networks:	<input checked="" type="checkbox"/> When set, this option blocks traffic from IP addresses that are reserved (but not RFC 1918) or not yet assigned by IANA. Bogons are prefixes that should never appear in the Internet routing table, and obviously should not appear as the source address in any packets you receive. Block non-Internet routed networks from entering via WAN

Figure 13

All private network traffic originating on the Internet is blocked by this rule

**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.

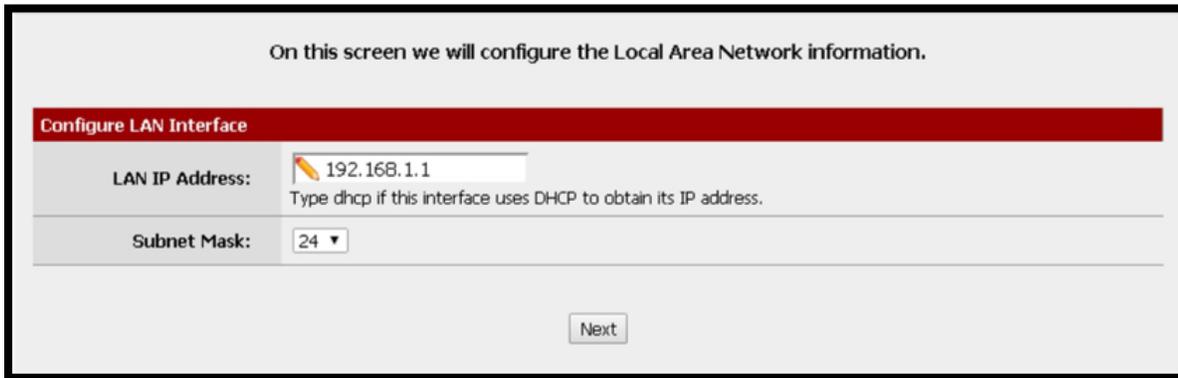
The following in-bound address Ranges are blocked by this firewall rule

10.0.0.1 to 10.255.255.255  
172.16.0.0 to 172.31.255.255

192.168.0.1 to 192.168.255.255  
127.0.0.0/8  
fc00::/7

**Bogons** are IP addresses that are reserved and should not be seen on the Internet. Check Block RFC1918 Private Networks and Block Bogon Networks. Select **NEXT** to continue

## Configuring LAN IP Address & Subnet Mask



On this screen we will configure the Local Area Network information.

**Configure LAN Interface**

LAN IP Address:  Type dhcp if this interface uses DHCP to obtain its IP address.

Subnet Mask:

Next

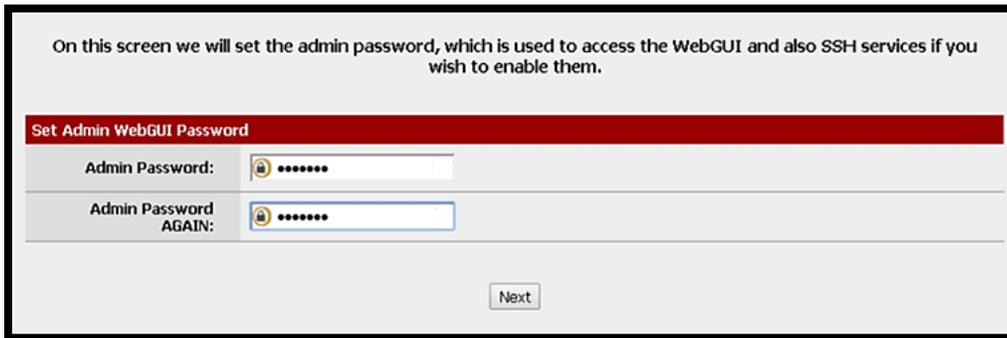
Figure 14

A static IP address of 192.168.1.1 and a subnet mask of /24 (255.255.255.0) was chosen for this installation. If you don't plan to connect your network to any other network via VPN, the 192.2.68.1 default is sufficient.

Select **NEXT** to continue.

**Note:** If you setup a Virtual Private Network (VPN) from remote locations, you should choose a private IP address range more obscure than the very common 192.2.68.1.0/24. IP addresses within the 172.2.6.0.0/12 RFC1918 private address block are least frequently used. We recommend selecting a block of addresses between 172.2.6.x and 172.2.31.x for least likelihood of having VPN connectivity difficulties. An example of a conflict would be If your LAN is set to 192.2.68.1 and you connect to a wireless hotspot using 192.2.68.1 (very common), you won't be able to communicate across the VPN to your local network.

## Change Administrator Password



On this screen we will set the admin password, which is used to access the WebGUI and also SSH services if you wish to enable them.

**Set Admin WebGUI Password**

Admin Password:

Admin Password AGAIN:

Next

Figure 15

Select a new Administrator Password and enter it twice as shown in **Figure 15** and select **NEXT** to continue

## Save Changes



Click 'Reload' to reload pfSense with new changes.

Reload

Figure 16

Click **RELOAD** to save the configuration.

## Basic Firewall Configuration Complete



Figure 17

To proceed to the webConfigurator, make the selection as highlighted in **Figure 17**. The Dashboard display will follow.

## Dashboard

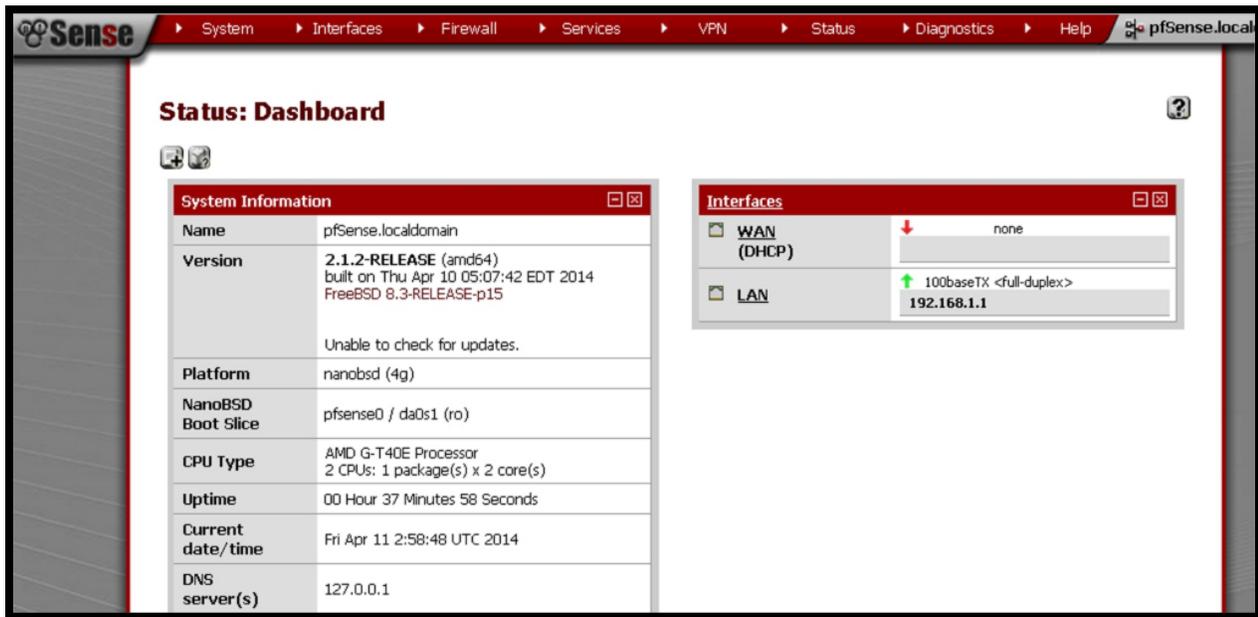


Figure 18

## Backing up and restoring

At this point, basic LAN and WAN interface configuration is complete. Before proceeding, you should backup your configuration. From Dashboard, browse to Diagnostics and select Backup/Restore.

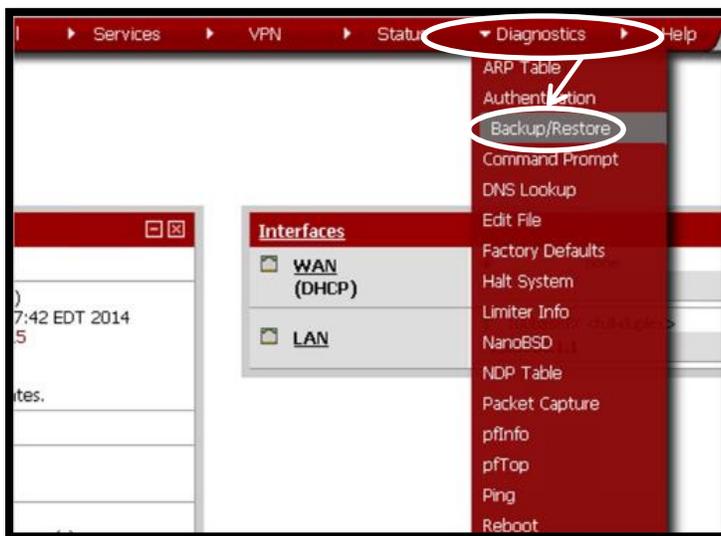


Figure 19

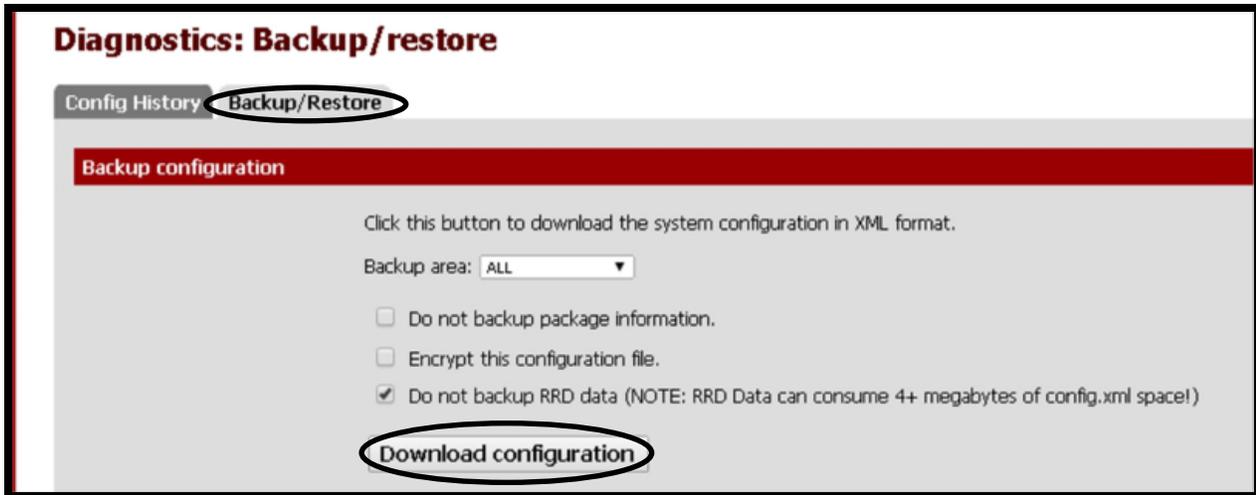


Figure 20

Select **Download Configuration** and save a copy of your configuration.

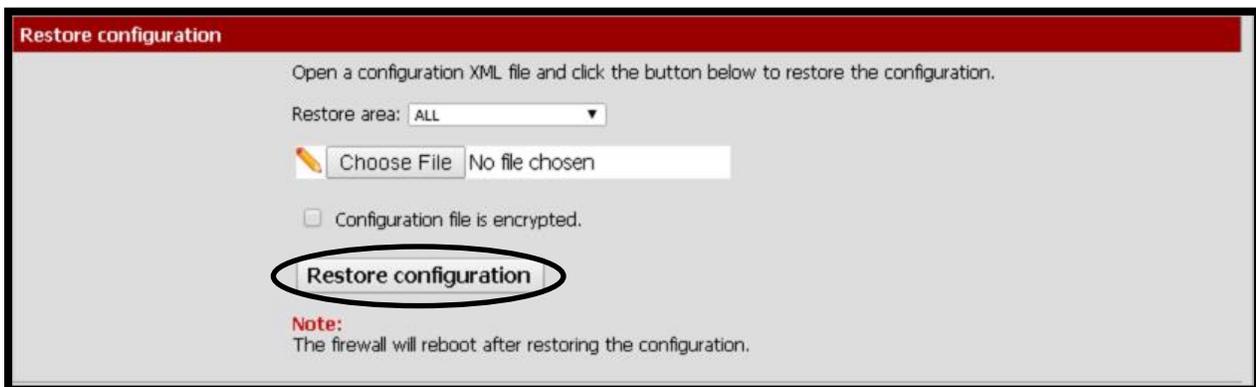


Figure 21

You can restore this configuration from the same screen by choosing your backup file under **Restore configuration**.

**Note:** pfSense SG-2440 can be configured from iOS devices, however, the webConfigurator may not perform as described on an iPhone, iPad, or iPod Touch. When browsing from one of these devices, switching to a different theme will resolve this issue. The default theme functions correctly on an Android browser. Switching to a more simplistic theme will allow for easier navigation, however.

## Console Access by Serial Interface

There are times you may want to access the console through the pfSense SG-2440 serial interface. Perhaps you have accidentally locked yourself out of the GUI console or you may want to assign a new password. To do so, serial console access must be gained. A serial terminal emulation program and a Mini-USB cable are required.

## Mini USB Serial Interface

The pfSense SG-4680 has an integrated Silicon Labs' EFM32™ USB Microcontrollers that makes it simple to access the serial console without the requirement of a null modem cables.

## Serial Terminal Emulation Client

A serial terminal emulation program is required to access the pfSense SG-2440 console through the mini USB serial interface. Microsoft Windows no longer includes *HyperTerminal* in Versions 7 and higher. **PuTTY** is free and can be downloaded from:

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

## Accessing the Console

Connect a Mini USB cable to port #1 as shown in *Figure 1* on the pfSense SG-2440 and the other to a USB 2.0 port on the computer with a terminal emulation program installed.

## Configuring Serial Terminal Emulator

**PuTTY** must be configured to communicate with the pfSense SG-2440. 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.

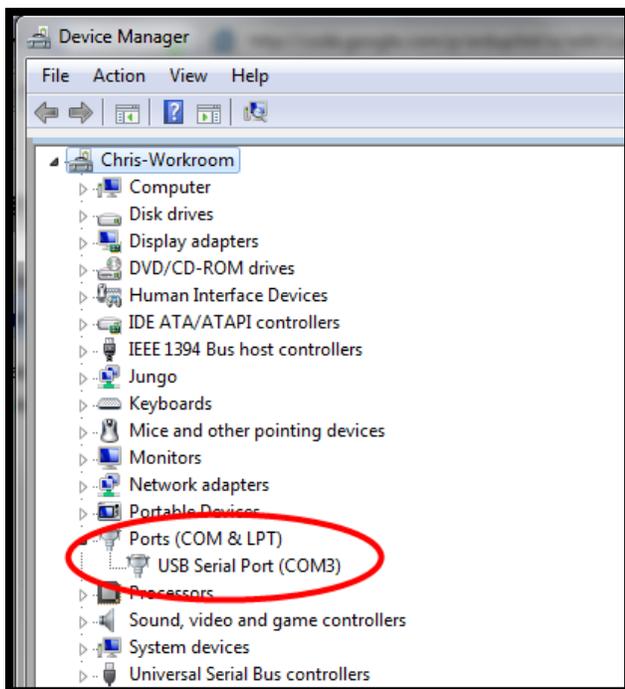


Figure 22

Open PuTTY and locate the Session display as shown in **Figure 23**. Set the COM Port to that which is displayed in **Windows Device Manager** and the Speed to 115200.

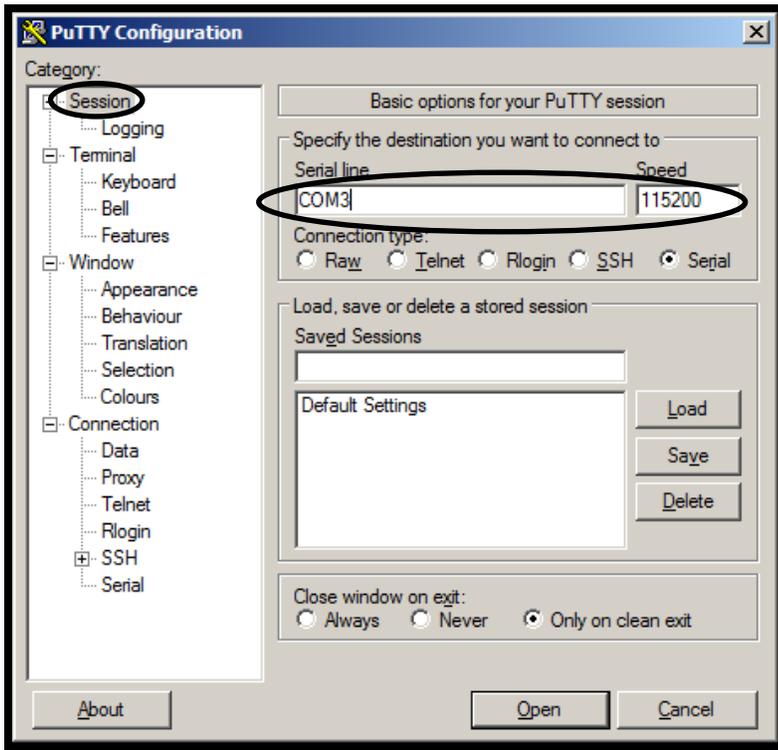


Figure 23

Match the COM Port with what was reported in **Windows Device Manager**. We will use COM3 for this example. The SG-2440 serial port speed is 115200 bits per second. The speed of the BIOS and the speed of the console must match so change the speed in PuTTY to 115200bps.

Select Open and strike the enter key several times and following will be displayed.

```
FreeBSD/amd64 (pfSense.localdomain) (ttyv0)
*** Welcome to pfSense 2.2.1-RELEASE-pfSense (amd64) on pfSense ***

WAN (wan)      -> igb0      -> v4: 192.0.2.255/24
LAN (lan)      -> igb1      -> v4: 192.168.1.1/24
OPT1 (opt1)    -> igb2      ->
OPT2 (opt2)    -> igb3      ->

0) Logout (SSH only)          8) Shell
1) Assign Interfaces          9) pfTop
2) Set interface(s) IP address 10) Filter Logs
3) Reset webConfigurator password 11) Restart webConfigurator
4) Reset to factory defaults   12) pfSense Developer Shell
5) Reboot system              13) Upgrade from console
6) Halt system                14) Enable Secure Shell (sshd)
7) Ping host                  15) Restore recent configuration

Enter an option: █
```

Figure 24

## Additional Support

Newly-purchased eligible firewall products come with one year of Per incident support by Netgate, the company behind the pfSense project. If eligible for support, you will receive a post card sized document with your device with instructions on activating support. The support provided by Netgate covers questions or problems you may experience with pfSense or the hardware appliance purchased from pfSense.

## Configuration Review and Configuration Assistance

Support does not cover 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.pfsense.org/our-services/professional-services.html> for more details.

## pfSense University

pfSense University offers 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; pfSense University has got you covered.

<https://www.pfsense.org/university/>

## Other Support Options

<https://www.pfsense.org/get-support/#community-support>

## Additional Documentation

This guide illustrates the basics for getting up and running with your SG-2440.

There is much more that can be accomplished with pfSense software. The best source of information is the book ***pfSense 2.2.x: The Definitive Guide*** available to Gold pfSense subscribers at <https://portal.pfsense.org>. Community documentation is freely available from the pfSense site at <https://doc.pfsense.org>

## 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

## 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. 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.***

## 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.

TO THE FULL EXTENT PERMISSIBLE BY APPLICABLE LAW, RUBICON COMMUNICATIONS, LLC (RCL) AND ELECTRIC SHEEP FENCING (ESF) DISCLAIM ALL WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. RCL AND ESF DO NOT WARRANT THAT THE PRODUCTS/SERVICES, INFORMATION, CONTENT, MATERIALS, PRODUCTS (INCLUDING SOFTWARE) OR OTHER SERVICES INCLUDED ON OR OTHERWISE MADE AVAILABLE TO YOU THROUGH THE PRODUCTS/SERVICES, RCL’S OR ESF’S SERVERS OR ELECTRONIC COMMUNICATIONS SENT FROM RCL OR ESF ARE FREE OF VIRUSES OR OTHER HARMFUL COMPONENTS. RCL AND ESF WILL NOT BE LIABLE FOR ANY DAMAGES OF ANY KIND ARISING FROM THE USE OF ANY PRODUCTS/SERVICES, OR FROM ANY INFORMATION, CONTENT, MATERIALS, PRODUCTS (INCLUDING SOFTWARE) OR OTHER SERVICES INCLUDED ON OR OTHERWISE MADE AVAILABLE TO YOU THROUGH ANY PRODUCTS/SERVICES, INCLUDING, BUT NOT LIMITED TO DIRECT, INDIRECT, INCIDENTAL, PUNITIVE, AND CONSEQUENTIAL DAMAGES, UNLESS OTHERWISE SPECIFIED IN WRITING.

***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.

## 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.  
7212 McNeil Drive, Suite 204  
Austin, Texas 78729  
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](http://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.

## **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.

## **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.

## 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.

## 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 commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operations of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

## Industry Canada

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

## Australia and New Zealand



**Warning:** This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

## CE Marking

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



## 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 Haushaltsmüll 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.

## Declaration of Conformity

Česky [Czech]	NETGATE tímto prohlašuje, že tento NETGATE device, je ve shodě se základními požadavky a dalšími příslušnými ustanoveními směrnice 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, tyypinen 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". (BMW i)
Ελληνική [Greek]	ΜΕ ΤΗΝ ΠΑΡΟΥΣΑ ΝΕΤΓΑΤΕ ΔΗΛΩΝΕΙ ΟΤΙ ΝΕΤΓΑΤΕ 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 alapvető követelményeknek és az 1999/5/EC irányelv egyéb előírásainak.
Íslenska [Icelandic]	Hér me l sir NETGATE yfir ví a NETGATE device, er í samræmi við 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 ijjiet 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.**

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