ethershield®

Internet Filtering Appliance

User's Guide

VERSION 1.2

ethershield®

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3979 South Main Street • Suite 230
Acworth, GA 30101
Phone 678 384 5300 • Fax 678 384 5299

Table of Contents

CHAPTER 1

Introduction

THIS DOCUMENT PROVIDES DETAILED INSTRUCTIONS FOR USING YOUR ETHERSHIELD. IT WILL DESCRIBE HOW TO INSTALL, CONFIGURE, AND MAINTAIN THE ETHERSHIELD IN YOUR NETWORK ENVIRONMENT.

Proper Care For Your EtherShield Hardware

Your EtherShield hardware should be cared for in much the same way you care for server or network equipment. Exposure to extreme heat or dusty conditions can limit the life of your hardware.

Your EtherShield contains a hard drive. It is recommended that when shutting down the EtherShield that you do so from the EtherShield interface so the hard drive will be shut down properly. If the EtherShield is not shut down through the administrator interface, please allow a longer time for the EtherShield to reboot. The EtherShield will need to verify the integrity of the hard drive, and can take several minutes to boot.

What is a Bridge?

The EtherShield is a network device that is commonly called a bridge. But what is a network bridge? A network bridge is very similar to a bridge over a river. The two banks of the river are “connected” by the bridge. The only way to travel from one bank to the other is by crossing the bridge. A network bridge accomplishes the same task; it “connects” two network segments. All traffic traveling from one segment to the other must cross the bridge. When this bridge is used to connect your LAN to the Internet it becomes an effective place to deploy Internet Filtering just as a toll booth becomes an effective way to control access to a bridge over a river.

This becomes important when you decide where in your network to place the EtherShield. While our recommendation is directly behind your Internet router or firewall, there are other possibilities in advanced networks. You should bear in mind that a computer will only be filtered if its traffic to the Internet MUST cross the bridge.

GPL Code

Your EtherShield contains software that is covered under GNU General Public License. While all of the GPL-code can be downloaded from various Internet websites, the source code in its entirety can be purchased in a multi-CD set for $19.95. This fee covers the cost of media and CD preparation only. To order, please call 678-384-5300.

ICON KEY

 Valuable information

 Trouble-shooting guide

 Notes Section

A brief note about the "Picture" icons

The "picture" icons are used throughout this manual to provide a quick visual reference. Information following these icons will either represent valuable information, trouble-shooting tips or the notes section. The icons located to the left will be used throughout this manual.

CHAPTER 5

Getting Started

This section provides the basics for installing your EtherShield. This chapter covers the following topics:

- **Wiring Your EtherShield.**
- **Completing the Initial Configuration Wizard**
- **Logging in to the EtherShield Administration**
- **Shutting Down or Restarting Your EtherShield**

Connecting Your EtherShield

Connecting your EtherShield is simple 3-step process.

1. Plug an Ethernet cable into jack "1" on the back of the EtherShield unit. Connect the other end of the cable into an available Ethernet jack on your Internet router's hub or switch.

2. Plug an Ethernet cable into jack "2" on the back of the EtherShield unit. Connect the other end of the cable into an available Ethernet jack on the LAN hub or switch to which other computers in your network are connected. This should not be the same hub or switch that your Internet router is connected to.

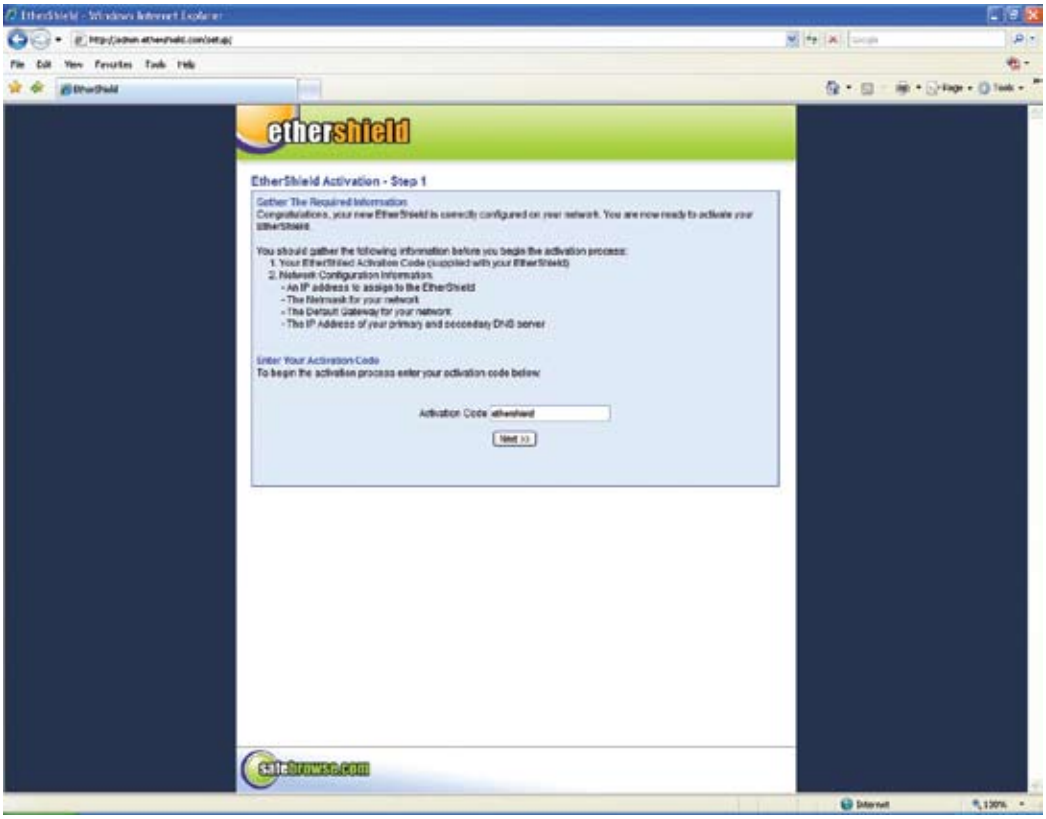
3. Plug the power adapter into the EtherShield and then plug the power into an AC power source.

At this point your EtherShield will begin to start up and configure itself on your network. This process will take about 2 minutes. Once the EtherShield is started up, you should have "Link" lights on Ports "1" and "2" as shown below. You should also be able to access the Internet just as you had prior to installing your EtherShield. At this point the filter will not be active.

If a "Link" light is not lit, first check that all cables are securely connected and have "clicked" into the port. After you have checked the connections, if a "Link" light is still not lit it is possible that you need to use a "Crossover" cable. Once link lights for ports "1" and "2" are lit, you can test your Internet connection which should function as it did prior to installation of the EtherShield.

Activating Your EtherShield

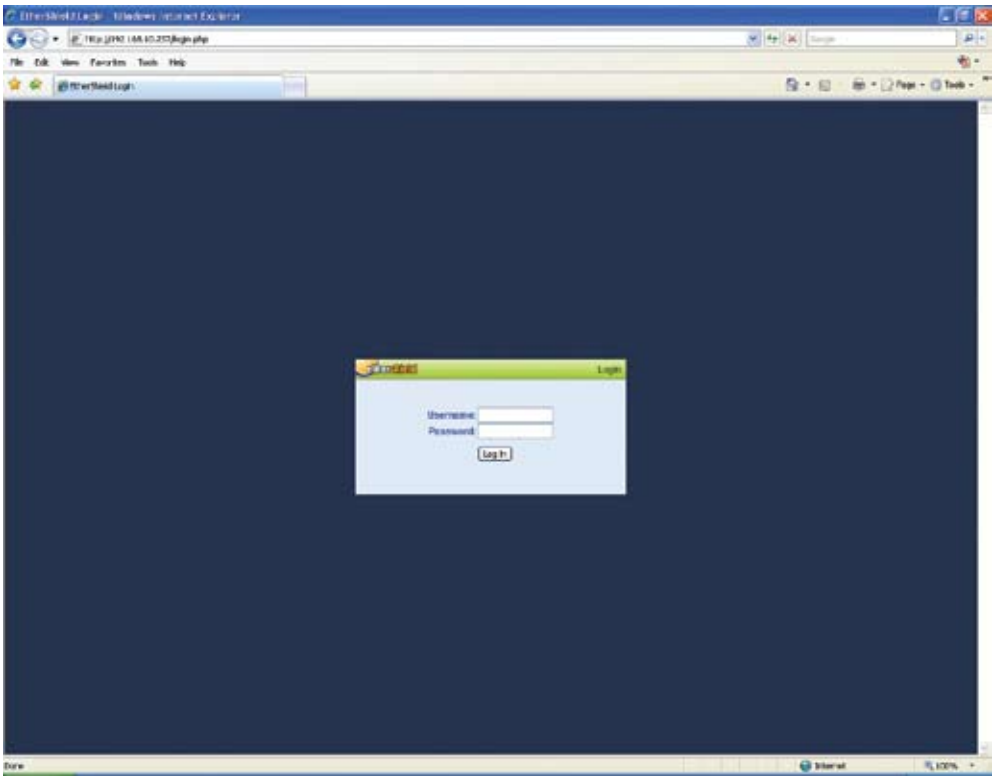
Once your EtherShield is connected to your network and powered up you need to activate your EtherShield. To do this, open the Internet browser on your computer and go to the following address: **http://admin.ethershield.com/activate.** The following screen will appear:



The on-screen instructions will guide you through the activation process. At the end of the activation process the EtherShield will be restarted again, and your Internet connection will be filtered. You will be redirected to the EtherShield administrator interface once the appliance has restarted.

Logging in to the EtherShield Administration

To access the EtherShield administrator interface, open the Internet Browser on your computer and go to the following address: **http://admin.ethershield.com.** The following login box will appear:



When the login screen appears enter **admin** as the username and **admin** as the password, then click **"Login."**

Shutting Down and Restarting Your EtherShield

From time to time you may need to restart or shut down your EtherShield. You should always do this using the administrative interface. Failure to shut down your EtherShield properly can damage your hard drive. To shut down or restart the EtherShield:

1. Log in to the administrative interface.

2. From the Home Page under **"System Controls"** click either **"Restart"** or **"Shut down."**

When restarting the EtherShield it will take about 2-3 minutes to completely restart. If you have shutdown the EtherShield you should wait 1-2 minutes before unplugging the EtherShield.

CHAPTER 5

EtherShield Configuration

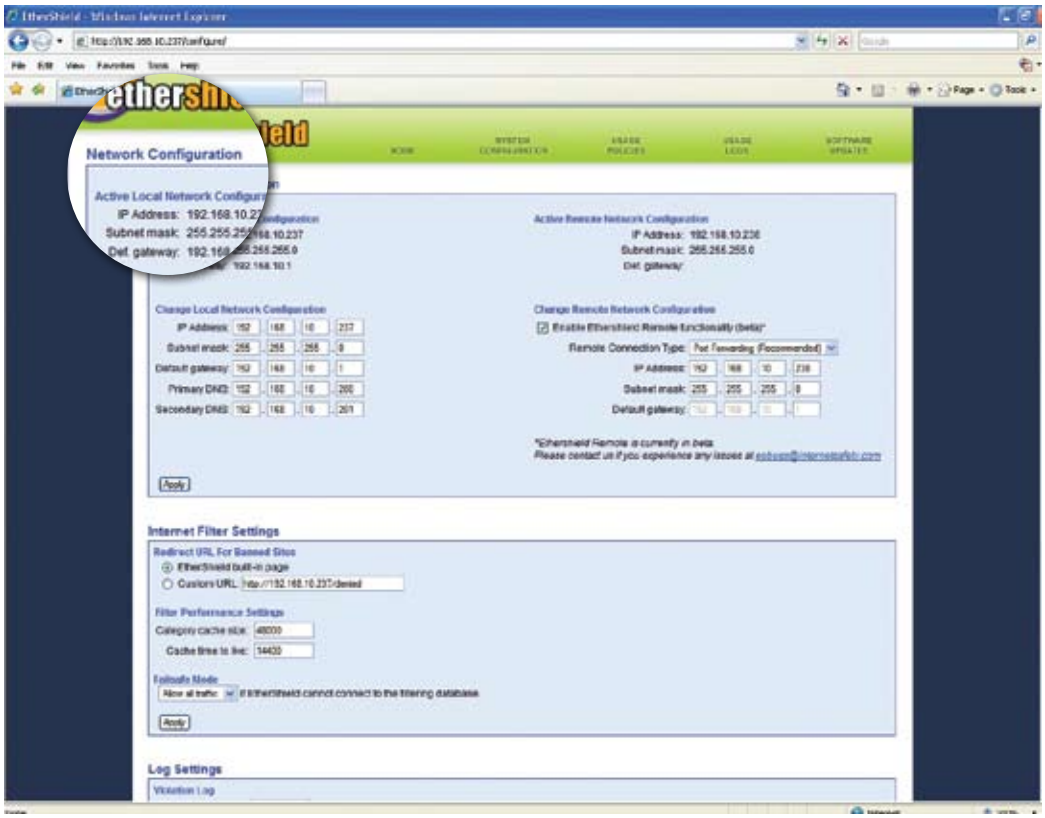
This section provides detail instructions for configuring the system settings of your EtherShield. This chapter covers the following topics:

- **Changing the Network Configuration**
- **Changing the Filtering Defaults**
- **Changing the Administrator Password**

After you have successfully logged into the EtherShield Administration interface, click on the **"System Configuration"** link located in the blue bar.

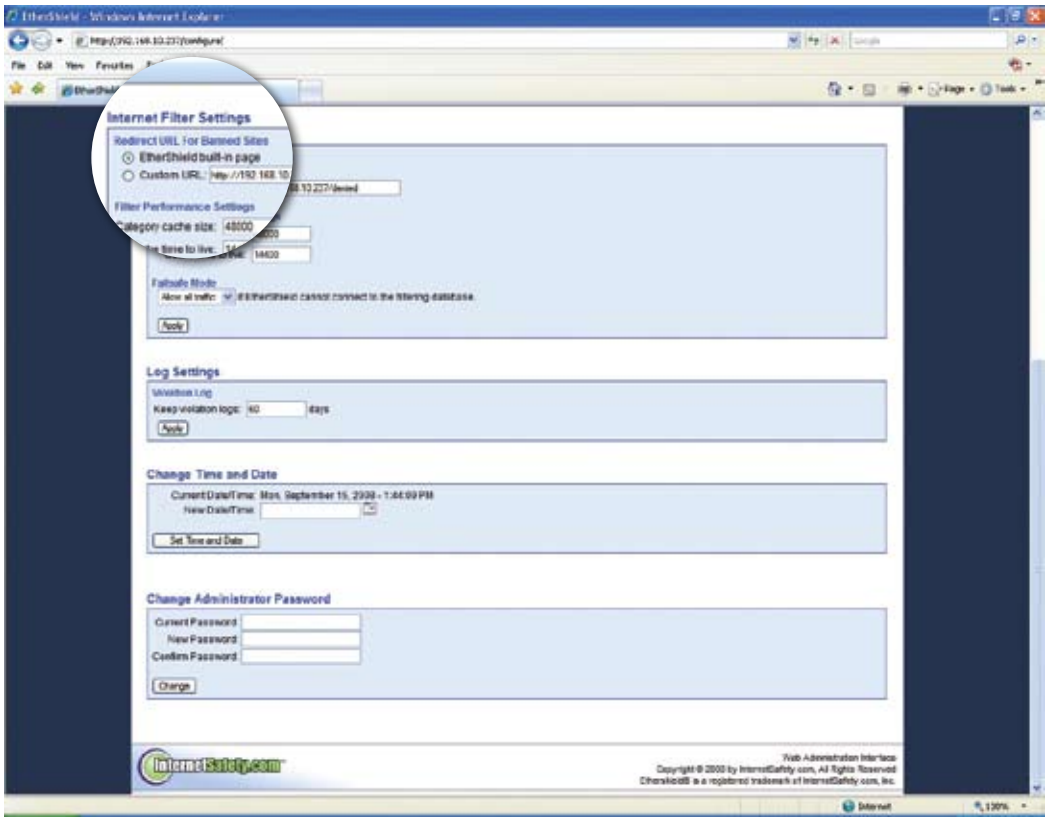
Changing the Network Configuration

The network configuration of the Ethershield can be changed at anytime, but the Ethershield will need to be restarted for changes to take effect. The "**Network Configuration**" section shows the current IP information for the local bridge, and if applicable the remote interface. You would use this section to enable and configure the Ethershield Remote functionality, which is defined in Chapter 6. Once you have chosen the desired settings and have completed any necessary configuration, click the "**Apply**" button.



Changing the Filtering Defaults

Several defaults control how the Internet is filtered by the EtherShield. These settings do not control what is filtered but rather how the filtering acts in general. (How to configure the type of content that is filtered is covered in the Chapter 4.)



Redirect banned websites to:

1. **EtherShield built-in page** — This is a built in page that the EtherShield will display to indicate that a website has been banned.

2. **Custom URL** — This allows you to specify your own site to send users to when a page is banned by the filter. This allows you to create a custom denied page for your organization.

Category Cache Size and Time To Live:

These values have been preset by the EtherShield engineers and should only be changed under the guidance of technical support. Changing them can adversely affect the performance of your EtherShield.

Keep Violation Logs:

This setting allows you to specify how many days to keep violation logs on your EtherShield. Setting this to zero will mean that the EtherShield will not keep any violation data.

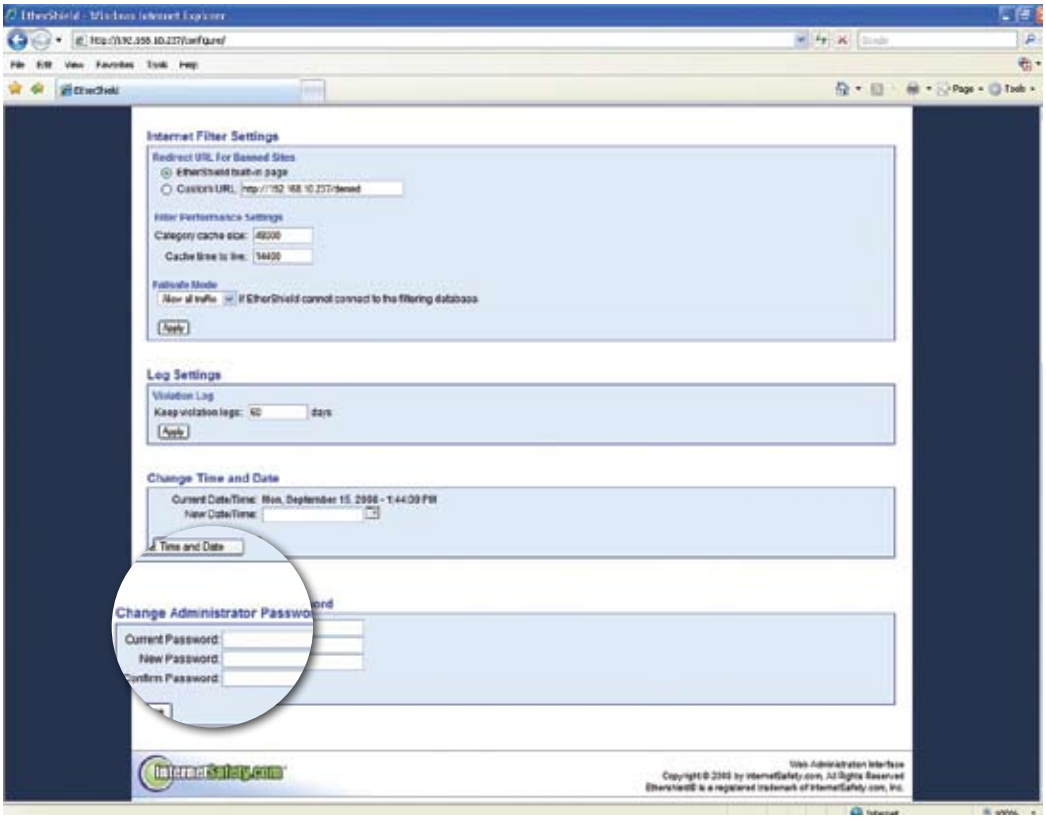
Failsafe Mode:

In the event that the EtherShield is unable to connect to the filtering database do you want it to **"Drop all Traffic"** which would cause all websites to be blocked, or **"Allow all Traffic"** which would allow all websites, even ones that are normally filtered, to be accessed.

Once you have set these settings to the desired values, click **"Apply."** These settings do not require a restart to become effective.

Changing the Administrator Password

The password used to access the administrative interface can be changed at anytime. Simply enter the old password, the new password and reenter the new password to confirm and click **"Change."** The new password will take effect immediately.



CHAPTER 4

Defining Usage Policies

A Usage Policy is the basis for all filtering with your EtherShield. Policies are used to determine what things should be blocked on what computers. You can define multiple policies and assign computers to them so that different computers can have different types of content blocked. To make changes to your policies, login to the EtherShield administrator interface and click **"Usage Policies."**

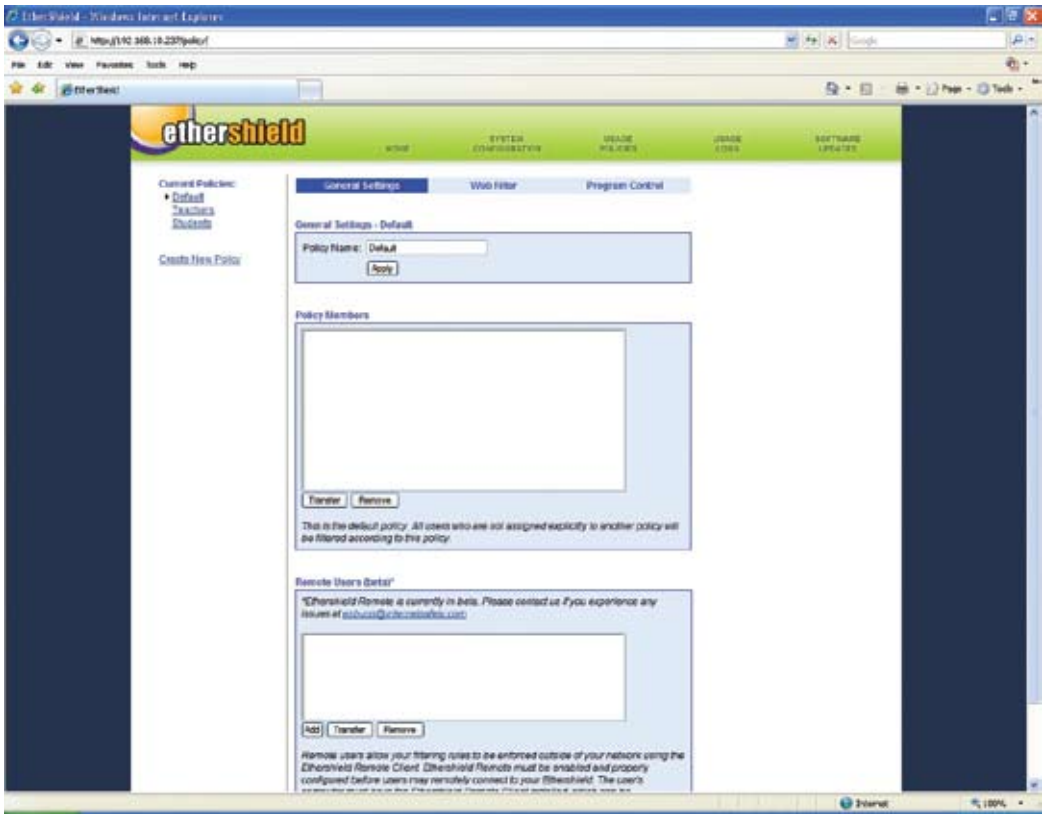
The "Default" Policy

The **"Default"** policy is a special policy on your EtherShield. This policy is used for all computers that are not assigned to other policies. When your EtherShield is first installed this is the policy that every computer protected by the EtherShield will be using. In addition, when you register a computer with the EtherShield (a process covered later) it will initially be assigned to the Default policy. For this reason, we recommend that the default policy be configured to be used by the largest number of computers and use other policies to define exceptions to your default policy. As new computers join your network they will have the Default policy applied unless you choose to move them to a different policy.

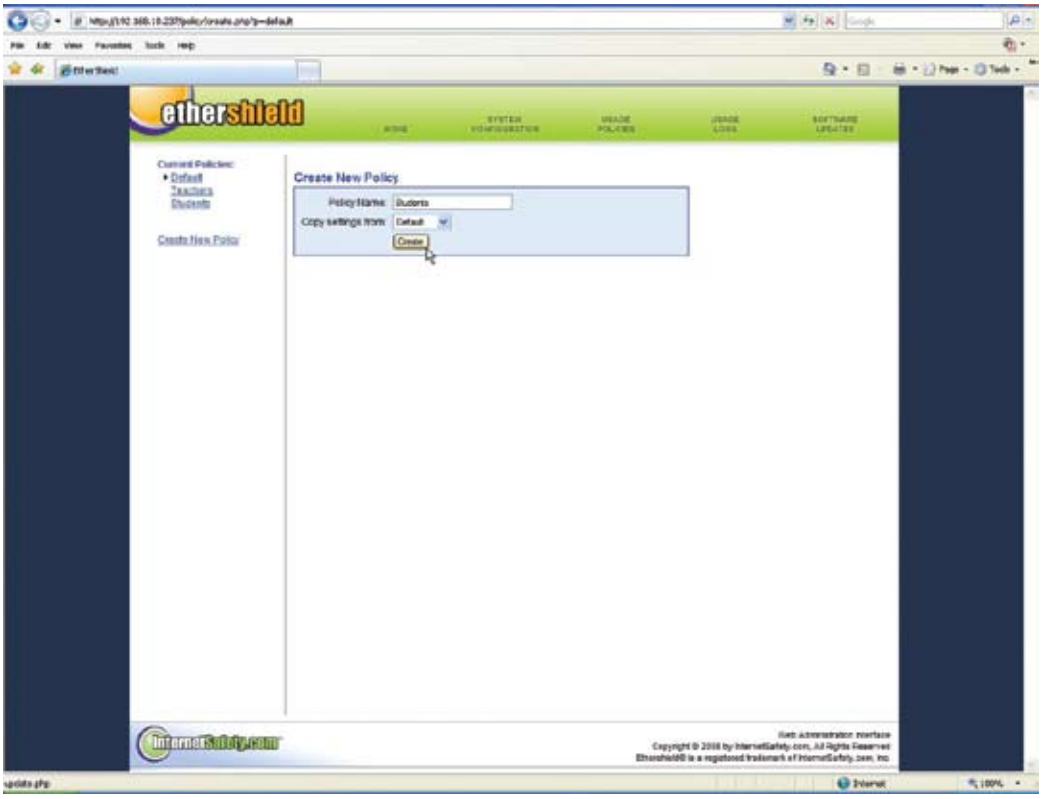
When you receive your EtherShield your default policy is the only one configured and it is configured to block websites categorized as *Pornography, Nudity, Sex and Tasteless or Gross*. However, you can adjust this default setting at any time. The Default policy cannot be deleted.

Creating a New Policy

To create a new policy you need to first login to the administrator interface and click **"Usage Policies."** You should see a screen similar to this:



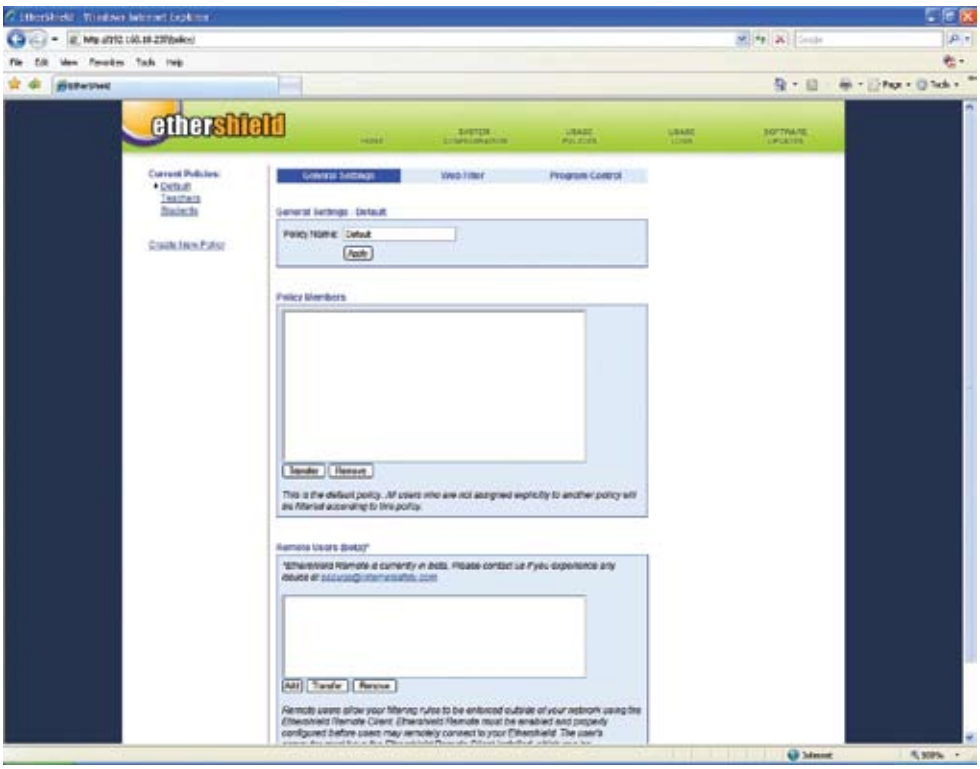
From the bar on the left hand side of the screen click **"Create New Policy."** The **"Create New Policy"** screen will appear as shown below:



Enter a policy name for the new policy. If you wish to copy settings from another policy as a starting point for this new policy choose the policy you wish to copy the settings from in the **"Copy Settings From"** box. When you are finished click **"Create"** and the new policy will be created.

Changing an Existing Policy

To change a policy you need to first login to the administrator interface and click **"Usage Policies."** You should see a screen similar to this:



From the bar on the left hand side of the screen click the policy that you want to edit. There are three different areas of a policy that you can edit.

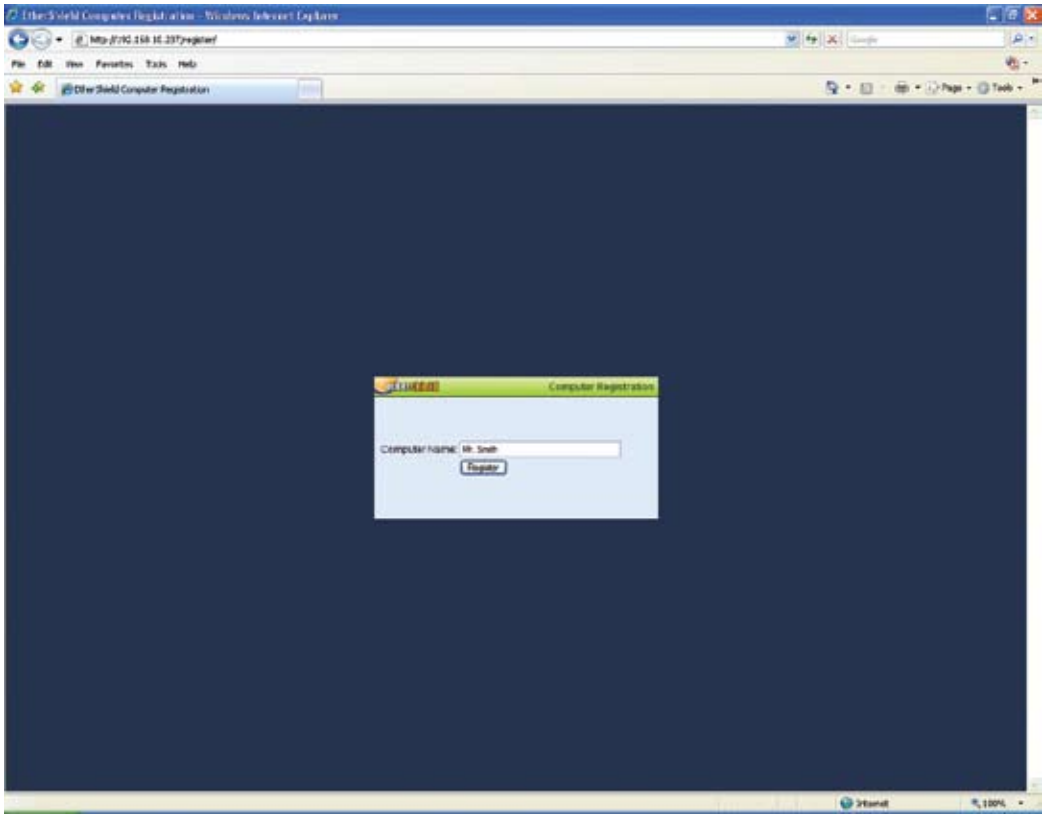
1. **General Settings** – These include the name of the policy and the computers that are members of that policy.

2. **Web Filter** – This are allows you to set the types of websites filtered, create your own list of allowed or banned websites and setup banned keywords.

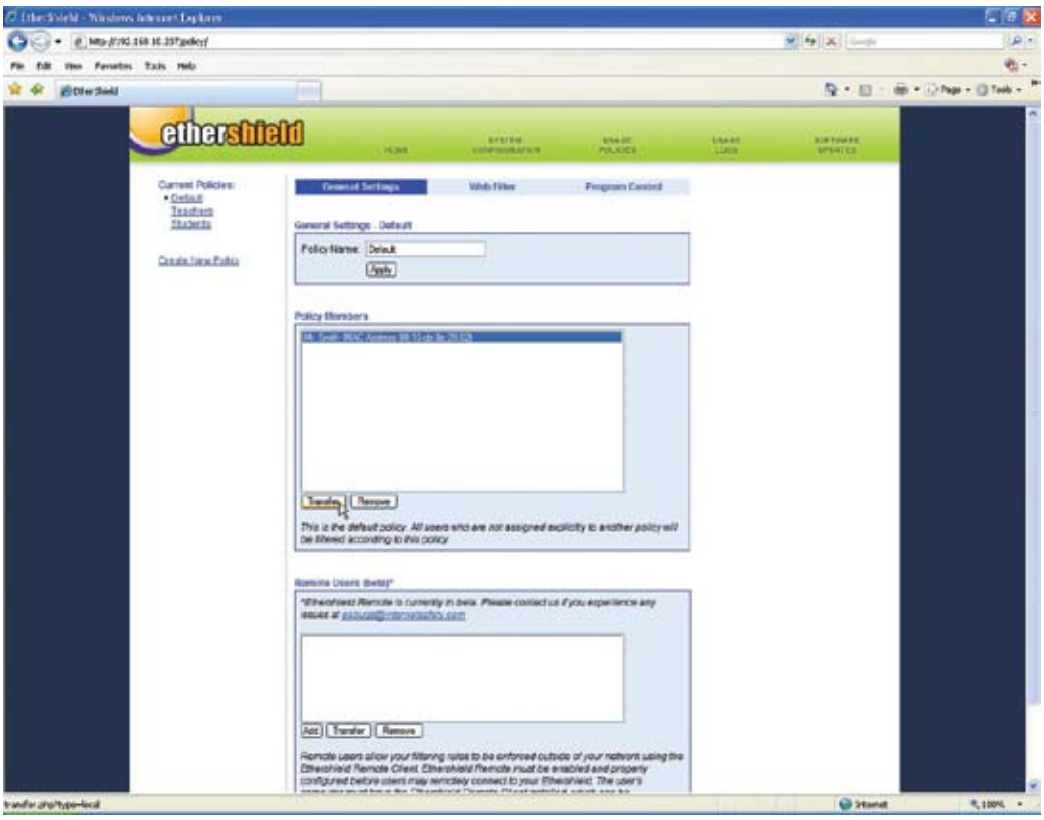
3. **Program Control** – With program control you can block non-browser based applications such as peer-to-peer file sharing, instant messaging and others.

Registering Computers With Your EtherShield

If you want a computer to be assigned to any policy other than the Default policy then it is necessary to register that computer with your EtherShield. The EtherShield uses a number of different methods to identify a computer on your network and will pick the best fit for you network. Currently all users of that computer will be assigned to the policy for the computer; policies cannot be assigned based on Microsoft Windows usernames. To register a computer with your EtherShield visit **http://admin.EtherShield.com/register** from the computer you wish to register. You will see the following **"Registration"** screen:



Simply enter a **"Computer Name"** that can be used to later identify this computer. ***This computer name does not need to match the computer name setting in your operating system.*** Once you have entered a name, click **"Register."** You will receive a message saying that your computer was successfully registered. Since all newly registered computers are automatically assigned to the Default policy you can find this newly registered computer in the **"Policy Members"** box of the Default policy as shown here:



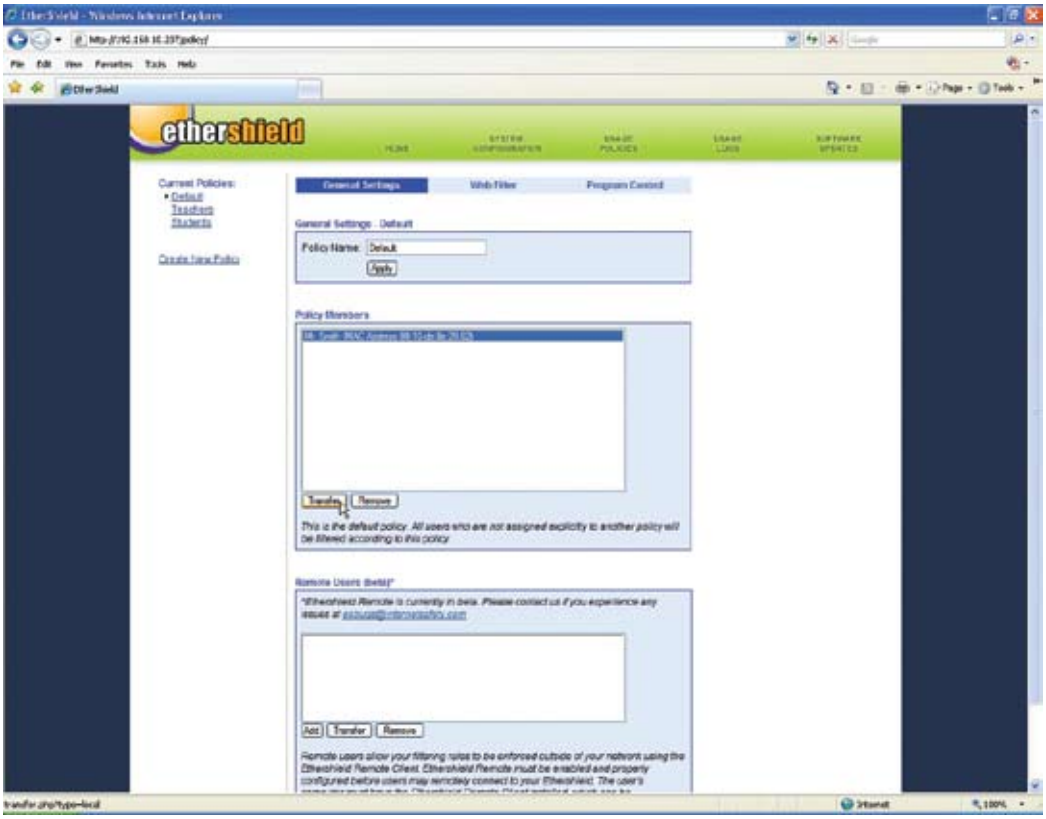
Once a computer is registered you can move it from policy to policy at anytime, or completely remove the registration.

You can only register the number of computers that you are currently licensed for. You can view the number of licenses currently available on the Home page in the "Product Information." To purchase more licenses contact the EtherShield sales team.

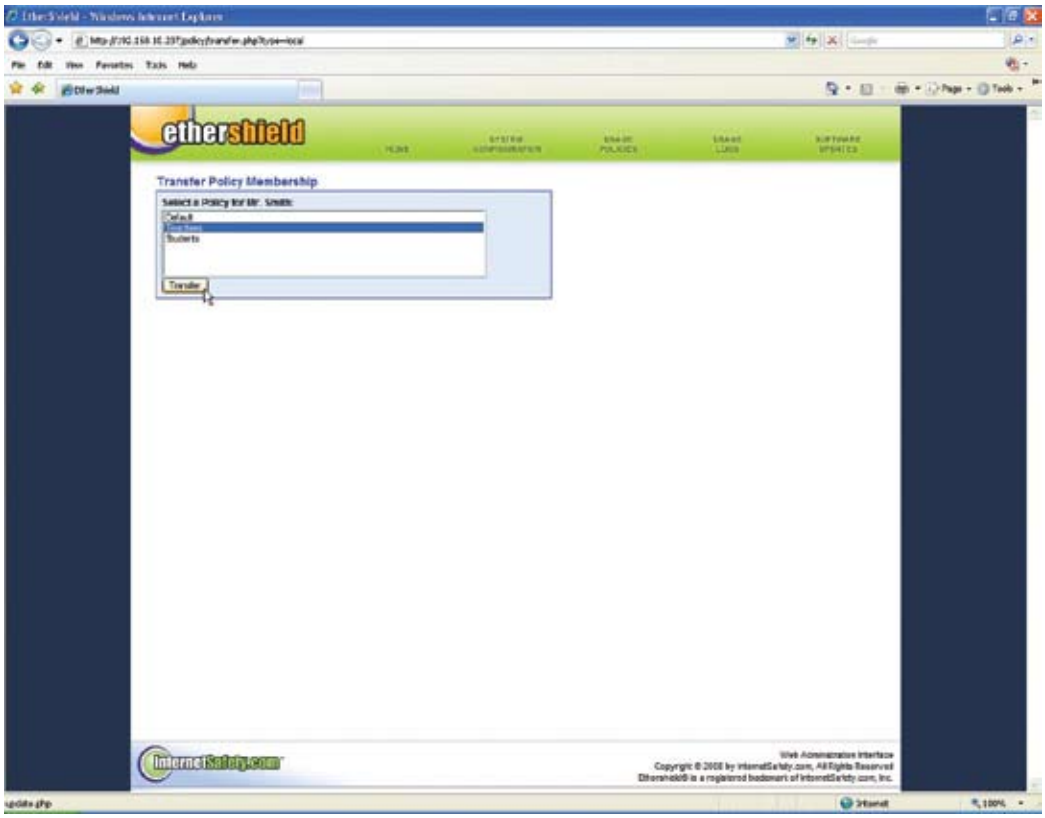
If you need to find out what name a computer is registered under you can return to the registration URL at anytime and the name will be displayed.

Changing the Policy Assigned to a Computer

After a computer is registered it is automatically assigned to the Default policy. You may want to change this. You can transfer computers from policy to policy as needed. Once you have entered the administrator interface, and clicked on **"Usage Policies,"** click on the policy that the computer is currently assigned to. You will see the computer listed in the **"Policy Members"** box as shown below:



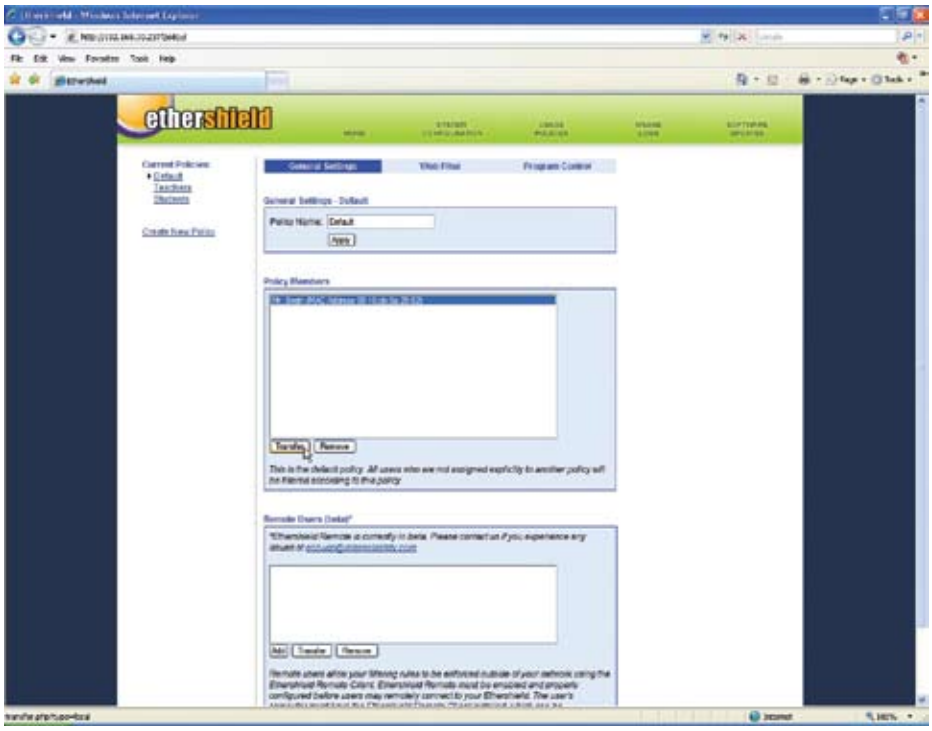
Click on the computer name you wish to transfer to another policy then click **"Transfer."** You will then be asked to pick the policy you want to transfer the computer to:



Once you have selected the appropriate policy, click **"Transfer."** The policy transfer will take effect immediately.

Removing A Computer's Registration

To free up licenses you may want to remove the registration for an old computer. Once you have entered the administrator interface, and clicked on **"Usage Policies"**, click on the policy that the computer is currently assigned to. You will see the computer listed in the **"Policy Members"** box as shown below:



Click on the Computer Name you wish to remove then click **"Remove."** The registration will be removed immediately.

CHAPTER 5

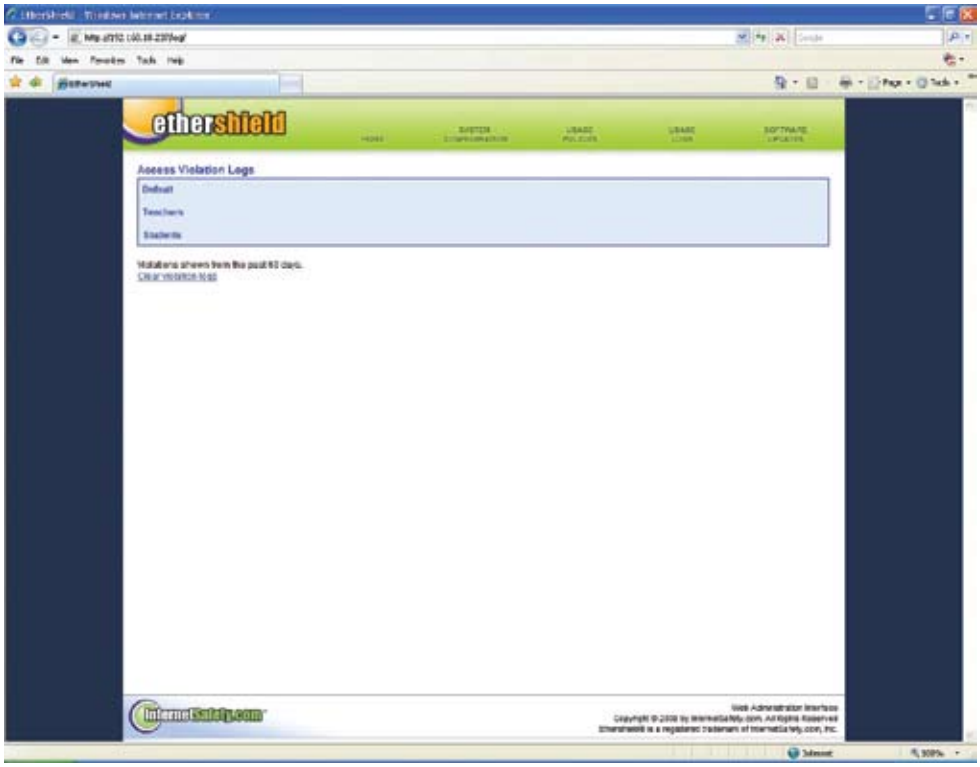
Usage Logs

Your EtherShield can be configured to keep logs of all policy violations. By default, logs will be kept of the last 30 days; however, this number can be changed as outlined in Chapter 3. To access the logs you must first log into the administrator interface and then click **"Usage Logs."**

The usage logs will be divided by policy and will show which computers have violations. If a computer is registered, the registered computer name will be shown. If the computer has not been registered with the EtherShield, then the EtherShield will display the Windows computer name or IP address of the system. To view details on the violations click the computer name.

Clearing the Usage Logs

The logs will automatically purge themselves as the records move past the time you have set to keep logs. However, you may wish to clear the logs early. You can do this from the **"Usage Logs"** screen by clicking **"Clear Violation Logs."**



You will be asked to confirm that you really wish to clear the logs by clicking **"Clear."** Once you have confirmed that you wish to clear the logs, the logs will be purged.

CHAPTER 6

Ethershield Remote

Ethershield Remote is a feature that will allow you to administer your filtering policies to computers outside your network. This feature is particularly useful for users with laptops that take them home, or employees that travel. Typically, when a computer is protected by the Ethershield on your network, the Internet traffic is inspected and categorized, and action is taken to either block or allow that traffic. Essentially, Ethershield Remote works in a similar way. The traffic is inspected on the actual client computer, but your Ethershield is queried for filtering rules and policies over the Internet.

In order to use Ethershield Remote, you must configure your Ethershield to act as a remote server, and you must install and configure the Ethershield Remote client on the client's computer to connect to the Ethershield. You will need at least Ethershield firmware version 1.2.0 to use Ethershield Remote.

Configuring Your Ethershield

Although configuring an Ethershield for Ethershield Remote is slightly more complicated than configuring an Ethershield for local filtering, it only requires a few simple steps. The configuration of the Ethershield Remote functionality is intended for network administrators. If you have any questions or need assistance, please refer to the section "Reporting Bugs and Technical Support" for contact information.

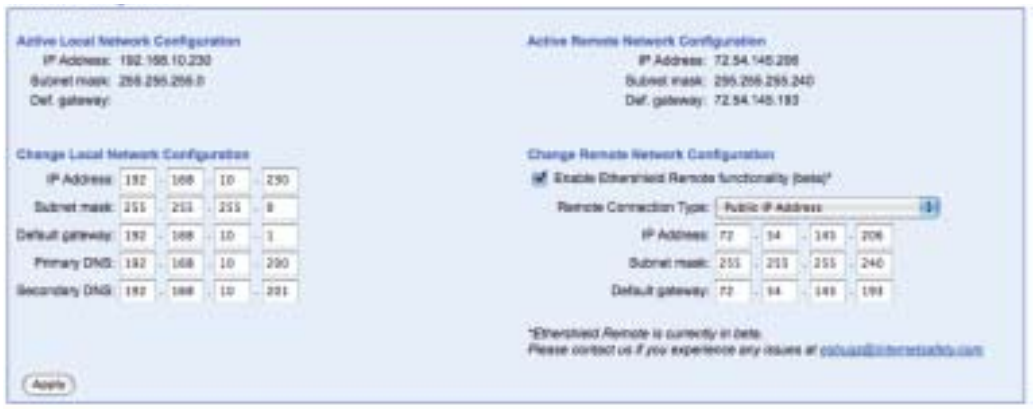
1. **Configure Remote Network Interface**

   Before the Ethershield can act as a remote server, port 4 of the Ethershield must be configured to handle the remote server traffic. Basically, this can be done with one of two different configuration styles: Port Forwarding and Public IP Address.

   - **Port Forwarding (Recommended)**
     With Port Forwarding, port 4 on the Ethershield is wired into your local network just like any other client. You will need to configure your router to forward incoming ports 80 and 443 TCP traffic to the IP address you will choose for port 4. This IP address is different than the one you have selected for the bridge over ports 1 and 2. Once you have configured your router in this manner, you will need to access the Ethershield administration interface at http://admin.ethershield.com and click on **"System Configuration."** At the System Configuration page, select **"Enable Ethershield Remote functionality"** and select Port Forwarding as your Remote Connection Type. Enter your IP Address, Netmask, and default gateway for port 4. Finally, click **"Apply"** and verify that your settings have been saved successfully.

❖ Public IP Address

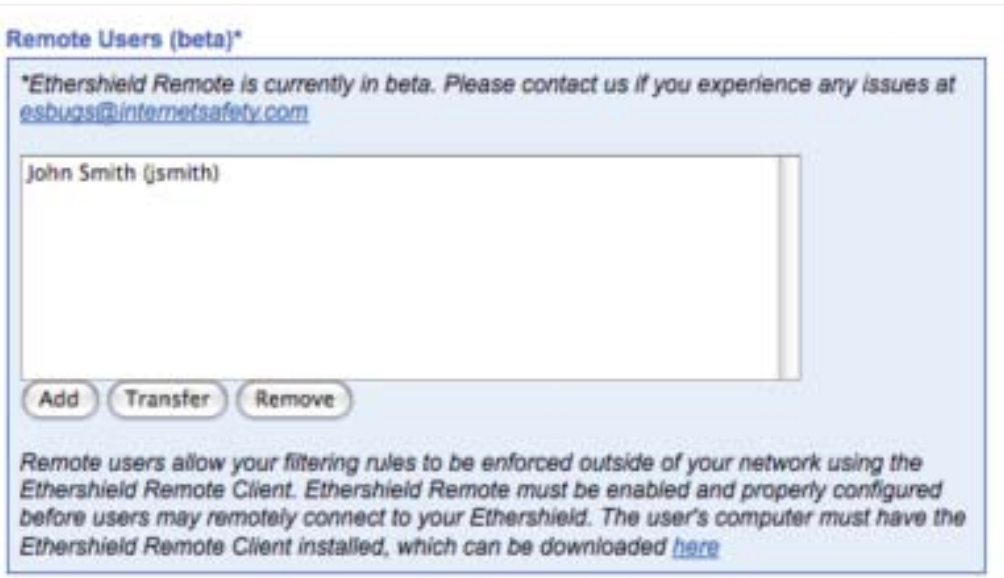
Another possible way to configure your Ethershield remote server connection is by Public IP Address. Port 4 will be wired as a publicly available IP address. The only caveat of using this configuration is that since the Ethershield can only have one default gateway, all your local and remote traffic will go back out over the Internet. In most cases this is acceptable and does not cause noticeable latency. You will need to access the Ethershield administration interface at http://admin.ethershield.com and click on **"System Configuration."** At the System Configuration page, select **"Enable Ethershield Remote functionality"** and select **"Public IP Address"** as your Remote Connection Type. Enter your IP Address, Netmask, and default gateway for port 4. Make sure this default gateway is accurate, since it will be the one your Ethershield will use. Finally, click **"Apply"** and verify that your settings have been saved successfully.



Once you have configured your Remote Network configuration, you will need to restart your Ethershield for these settings to take effect. If after 10 minutes since restarting, your Ethershield is not responding, please verify your settings and attempt to reactivate your Ethershield at http://admin.ethershield.com/activate.

2. **Configure Remote Users**

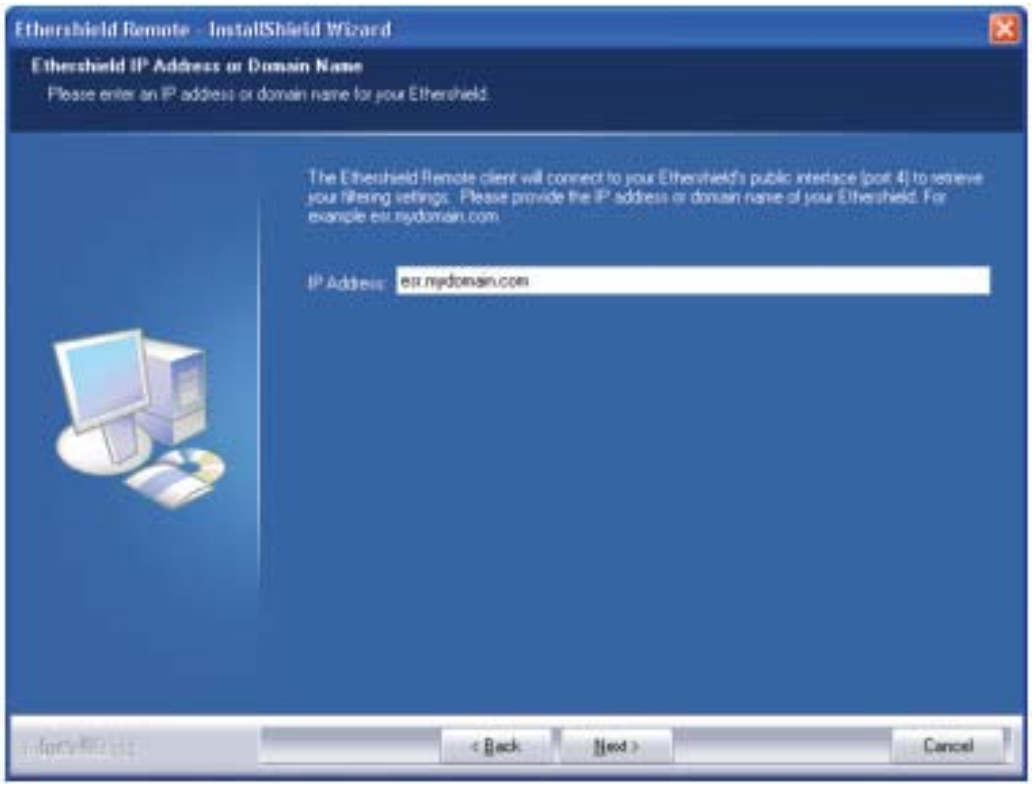
Before a client can connect to your Ethershield remotely, you must add them to a policy. In the Ethershield's administration interface, click on **"Usage Policies"**. Under the General Settings tab of each policy, you will be able to view, add, transfer, and delete remote users. To add a user, click **"Add"** and enter the real name, username, and password on the following page. To transfer a user, select that user, click **"Transfer"**, and select the policy you would like to transfer that user to on the following page. To remove a user, select that user and click **"Remove."**



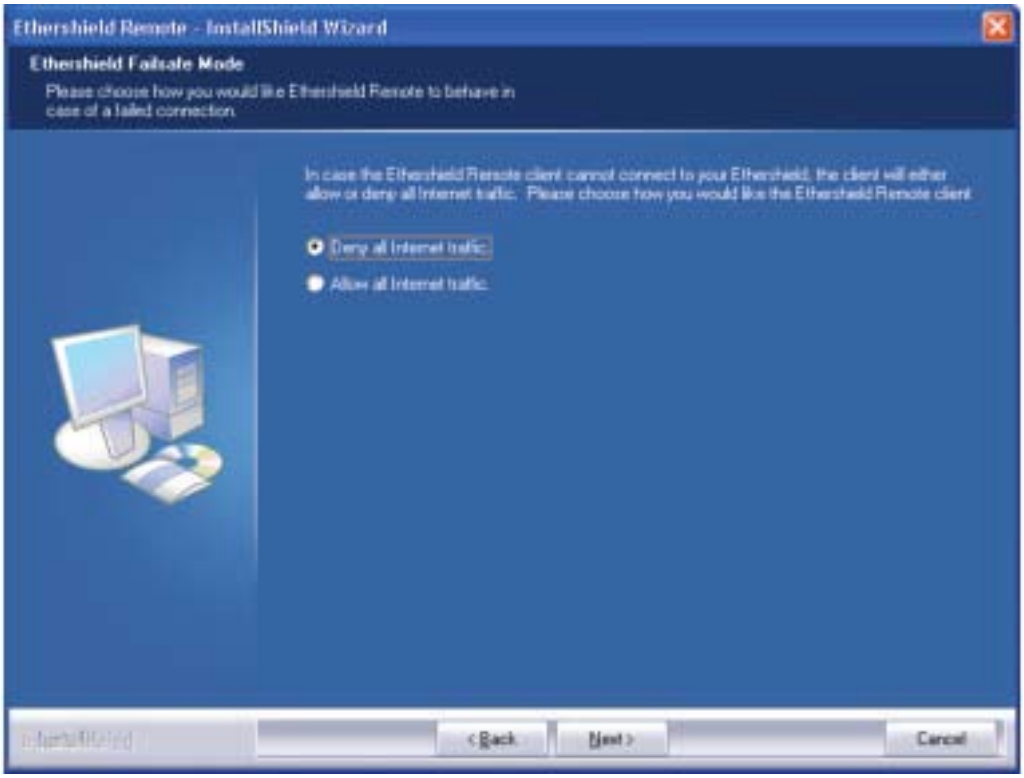
Upon configuring the remote network interface, and adding all the remote users you would like to add, you are now ready to deploy the Ethershield Remote client application on the clients' computers.

Configuring Your Client

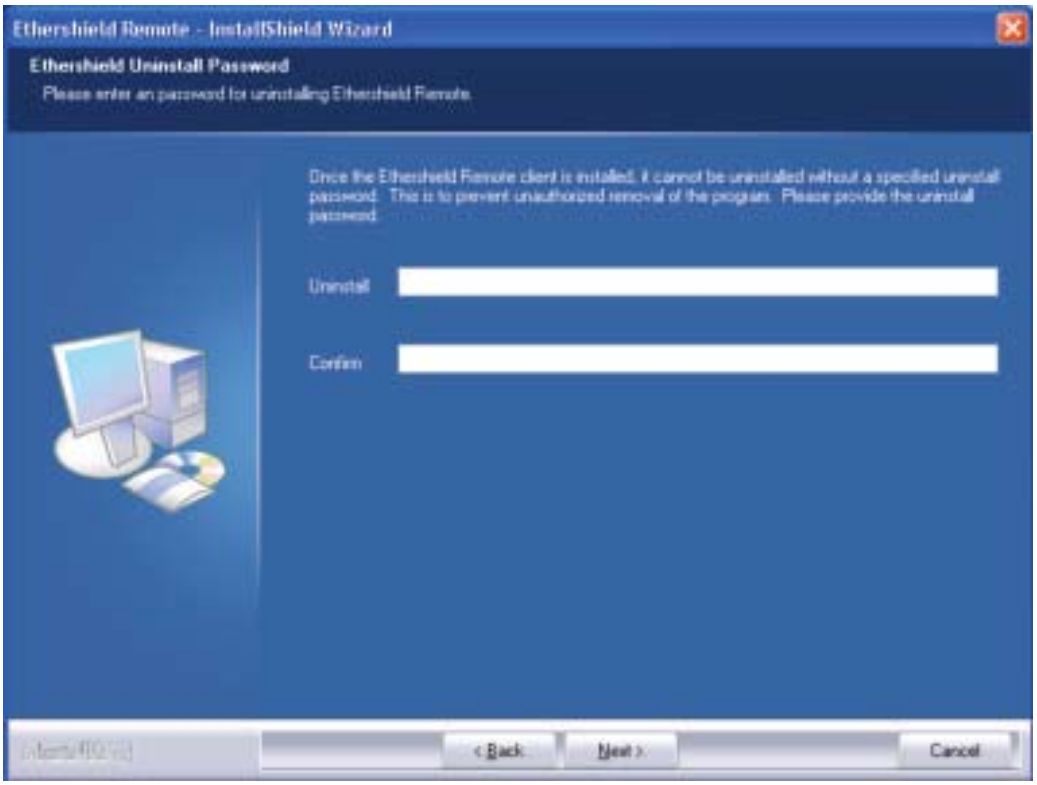
Configuring the client computers with the Ethershield Remote Client is a simple matter of installing the application. From the Ethershield administration interface's main page, you can download the Ethershield Remote client. It is an executable self-extracting installer. The installer operates like most windows install packages and will require you to accept a license agreement. The first step that will require input is when you enter your IP address or domain name of your Ethershield's remote interface. If you are using a domain name, ensure the domain name is public on the Internet and not just on your internal domain since your remote clients will most likely be using whatever DNS was assigned to them. Using a domain name is recommended, as this will allow you to change the IP address without having to reconfigure each client.



The next step will require you to select how you would like the clients to operate if your Ethershield is not reachable over the Internet. You can choose to deny or allow all traffic in this instance. This operates just like the failsafe mode configuration for your local Ethershield clients.



Finally, you will need to provide an uninstall password for each installation of the Ethershield Remote client. This prevents unauthorized uninstallation of the client. Please make sure you document this uninstall password to retrieve later, and that you keep it in a secure location.



Reporting Bugs and Technical Support

While the Ethershield Remote functionality is in beta, we highly value any input you may have. Please use the following email addresses to contact us, depending on the topic.

Bug reports: esbugs@internetsafety.com

Please include a detailed description of the problem, the firmware version you are running, and any specific details necessary to reproducing it.

Technical Support: essupport@internetsafety.com

Please include a detailed description of the problem, and the best possible way and time to contact you.

Feedback: esfeedback@internetsafety.com

Please let us know how we can improve our product even more!

CHAPTER 7

Software Updates

As part of your EtherShield subscription we will from time to time update the firmware of the EtherShield. These updates are not used to keep your filtering list up-to-date, but instead to update the software running on the EtherShield. It is important that you do your best to ensure your EtherShield is always kept up to date.

Checking for Updates

To check for updates log in to the administrator interface and click **"Software Updates."**

The **"EtherShield Maintenance"** screen will appear. Click the **"Check for Updates"** button and the EtherShield will see if there are any new updates available. If updates are available follow the on-screen instructions for downloading and installing the update.

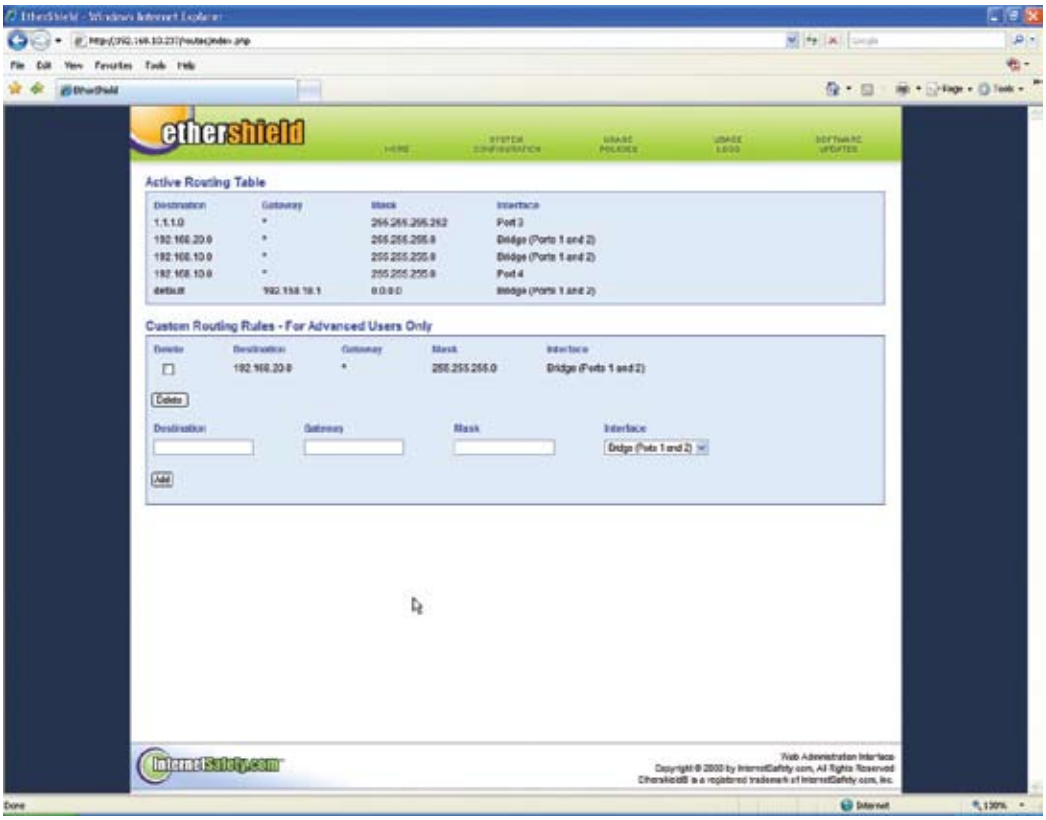
Appendix

Advanced Configurations

The Ethershield is designed to work with almost all networks right out of the box with only a minimal amount of configuration. However, some exceptions will exist. Please refer to this section to configure more specific network issues.

Routing Tables

The Ethershield includes an interface to view and edit its own routing tables. Just point your browser to **http://admin.ethershield.com/routes**. You should see the following screen.



If you need to add a custom route, all you need to do is fill in the appropriate fields and click **"Add."** The network route will be added and used instantly, and will persist after a reboot. The network route will remain in use until you remove it. You can remove it by selecting it from the list of custom routes and clicking **"Delete."**

The network routes interface is only for advanced users. Do not attempt to add or edit network routes unless you are sure it is necessary.

3979 South Main Street • Suite 230
Acworth, GA 30101
Phone 678 384 5300 • Fax 678 384 5299