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Chapter 1 – Introduction

Overview
Spyware-blocking techniques
Content-filtering techniques
User and group-based policy control
Application-blocking techniques
Energize Updates minimize administration and maximize protection
Deploying the Barracuda Web Filter
Inline pass-through (transparent) mode
Forward proxy

Chapter 2 – Installation and Configuration

Network considerations
Routers
External DNS
Internal DNS
Enterprise class Layer 3 switch, VLANS, VPN concentrators
Firewall DMZ
Internal servers
Cache
QoS/packet reconfiguration (Quality of Service, packet shapers)
Mounting and cabling considerations
Installing and configuring the Barracuda Web Filter
Step 1. Verify that you have the necessary equipment
Step 2. Install the Barracuda Web Filter
Step 3. Configure the Barracuda Web Filter IP and network settings
Step 4. Configure your corporate firewall
Step 5. Configure the Barracuda Web Filter firmware
Step 7. Verify your subscription status
Step 8. Update the definitions
Step 9. Integrate the Barracuda Web Filter into your network
Step 10. Test and adjust the Barracuda Web Filter
Connecting the Barracuda Web Filter to your network
Advanced installation topics
Inline pass-through with pre-existing proxy deployment
Supported pre-existing proxy types
Connecting inline to your network with a pre-existing proxy server

Chapter 3 – Configuring, Monitoring, and Managing the Barracuda Web Filter

Configuring the Barracuda Web Filter
Configuring system IP information
Setting up linked management ........................................... 32
    Data propagated to the linked systems ............................... 33
    Switching a system to standby mode ................................ 34
Controlling access to the Web interface ................................ 34
Customizing the appearance of the Web interface ....................... 34
Changing the language of the Web interface ............................. 34
Setting the time zone of the system .................................... 34
Enabling and disabling virus protection ................................ 35
Enabling and disabling Web caching .................................... 35
Setting up a syslog server to centrally monitor system logs ........... 35
Creating block and accept filters ....................................... 36
Best practices ............................................................. 36
Filtering and blocking features .......................................... 37
    Content filtering ....................................................... 37
    Application filtering .................................................. 37
    Domain filtering ....................................................... 38
    URL pattern filtering .................................................. 38
    Custom categories filtering .......................................... 38
    MIME type blocking ................................................... 39
    IP-based filtering ..................................................... 39
    IP-based exemption from filtering and blocking .................... 39
Block messages ............................................................ 39
    About the Barracuda Spyware Removal Tool ............................ 40
    Enabling the Barracuda Spyware Removal Tool ....................... 40
Exception policies .......................................................... 40
HTTPS filtering option .................................................... 41
    Scope of HTTPS traffic filtering .................................... 41
    Limitations for HTTPS traffic filtering .............................. 42
    To enable the HTTPS traffic-filtering option ....................... 42
Testing Web site access .................................................... 42
Monitoring the Barracuda Web Filter ..................................... 43
    Viewing performance statistics ....................................... 43
    Understanding the indicator lights ................................... 43
    Viewing the traffic log ................................................. 44
    Viewing the application log .......................................... 45
    Viewing the warned activity list ..................................... 45
    Automating the delivery of system alerts and notifications ....... 46
    Generating system reports ............................................. 46
    Viewing a list of infected clients .................................. 46
    Viewing system tasks .................................................. 46
Managing the Barracuda Web Filter ....................................... 48
    Backing up and restoring system configuration ..................... 48
    Updating the Barracuda Web Filter firmware .......................... 48
    Updating the spyware, virus, and category definitions ............ 48
    Replacing a failed system ............................................. 49
    Reloading, restarting, and shutting down the system ............... 49
    Using the built-in troubleshooting tools .............................. 49
    Rebooting the system in recovery mode ................................ 50
        Reboot options ...................................................... 51
Chapter 4 – Managing Users and Groups ........................................ 53

Overview ................................................................. 54
About local users ....................................................... 54
About domain users .................................................... 54
Creating local users and groups ........................................ 55
Creating local user accounts ........................................... 55
Creating local groups .................................................. 55
Creating IP address groups ........................................... 55
Integrating with a user authentication service ...................... 56
Enabling LDAP domain user authentication ......................... 56
To enable LDAP user authentication .................................. 56
About the optional Barracuda DC Agent software .................. 56
Installing the Barracuda DC Agent on your domain controllers 58
Exempting selected LDAP domain users from filtering ............. 58
Enabling NTLM domain user authentication ......................... 59
About NTLM authentication in Windows 2000 or 2003 AD domains 59
Reasons for using an NTLM authentication server .................. 59
Requirements for using an NTLM authentication server .......... 59
Limitations when using an NTLM authentication server .......... 59
To enable NTLM user authentication ................................ 60
Viewing and managing accounts ....................................... 61

Appendix A – About the Barracuda Web Filter Hardware .......... 63

Front panel of the Barracuda Web Filter ................................. 64
Barracuda Web Filter 210, 310, and 410 ............................. 64
Barracuda Web Filter 610 .............................................. 65
Barracuda Web Filter 810 and 910 .................................... 66
Back panel of the Barracuda Web Filter ................................. 68
Barracuda Web Filter 210, 310, and 410 ............................. 68
Barracuda Web Filter 610 .............................................. 69
Barracuda Web Filter 810 and 910 .................................... 69
Hardware compliance .................................................... 71
Notice for the USA ...................................................... 71
Notice for Canada ....................................................... 71
Notice for Europe (CE Mark) ........................................... 71

Appendix B – Regular Expressions ......................................... 73

Using special characters in expressions ............................... 74
Examples ................................................................. 74

Appendix C – Limited Warranty and License ............................ 75

Limited warranty ......................................................... 75
Exclusive remedy ....................................................... 75
Exclusions and restrictions .............................................. 76
Software license ........................................................ 76
Energize Update Software license ...................................... 77
Open Source Licensing .................................................. 81
Chapter 1

Introduction

This chapter provides an overview of the Barracuda Web Filter and includes the following topics:

- Overview on page 8
- Deploying the Barracuda Web Filter on page 11
Overview

The Barracuda Web Filter is an integrated anti-spyware and content filtering solution that eliminates spyware and other forms of malware from your organization.

The Barracuda Web Filter combines preventative, reactive, and proactive measures to form a complete anti-spyware solution. The Barracuda Web Filter:

- Provides user and group-based policy control
- Stops spyware downloads (including drive-by downloads)
- Uses content filters to block access to Web site categories like gaming or online shopping sites
- Blocks access to applications like instant messaging and music streaming
- Blocks access to spyware Web sites
- Detects spyware access to the Internet
- Identifies infected machines
- Facilitates spyware removal by providing access to the Barracuda Spyware Removal Tool

Spyware-blocking techniques

The Barracuda Web Filter prevents spyware programs from being installed on your users’ systems and also secures your organization against existing spyware by detecting spyware access to the Internet and notifying you of infected systems. You can also configure the Barracuda Web Filter to prompt infected users to run the Barracuda Spyware Removal Tool.

Table 1.1: Spyware Functions

<table>
<thead>
<tr>
<th>Function</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spyware Web site Blocking</td>
<td>Barracuda Networks continuously updates a list containing thousands of known spyware download sites. The Barracuda Web Filter blocks spyware at the source by preventing browser and application access to these locations.</td>
</tr>
<tr>
<td>Spyware Download Blocking</td>
<td>Spyware is everywhere, even in apparently harmless downloads from legitimate sites. The Barracuda Web Filter unpacks and examines every individual file within 17 different types of archives. It also uses techniques to examine password-protected archives.</td>
</tr>
<tr>
<td>Spyware Detection</td>
<td>The Barracuda Web Filter not only identifies infected machines on the network, but also blocks the spyware communication from those infected systems to the spyware servers on the Internet.</td>
</tr>
<tr>
<td>Spyware Removal</td>
<td>The Barracuda Web Filter can be configured to automatically prompt users to run the Barracuda Spyware Removal Tool when spyware is detected on their system. This feature allows users to proactively remove spyware so they do not have to rely on network administrators to perform this task.</td>
</tr>
</tbody>
</table>
The Barracuda Web Filter scans inbound traffic for the following malware over HTTP port 80 and FTP port 21: spyware (such as keyloggers, Browser Helper Objects [BHOs], and data miners), adware, trojans, and viruses. The Barracuda Web Filter also scans outbound traffic on all ports and protocols to prevent spyware from communicating outside of your network.

Content-filtering techniques

In addition to protecting your network from spyware infections, the Barracuda Web Filter also uses filters to protect your users from visiting offensive Web sites and to help enforce your organization’s Internet usage policies.

To block access to offensive sites, the Barracuda Web Filter includes a URL list containing millions of URLs classified into 58 categories for easy and efficient content filtering. This list is continuously updated by engineers at Barracuda Central and delivered hourly via the Energize Updates subscription service sold with the Barracuda Web Filter.

These content filters can help organizations comply with new security initiatives and standards.

User and group-based policy control

The Barracuda Web Filter enables you to create exception policies for specific users and groups so they can override the blocking filters that prevent them from accessing content or applications. These policies are useful in providing executives and departments with additional control over the content they can access.

You can also use exception policies to allow users to bypass blocking filters during specific hours of the day. For example, you can configure the Barracuda Web Filter to allow users to access shopping or gaming sites only during non-business hours.

Application-blocking techniques

Many organizations choose to block access to certain applications so they can minimize the amount of non-essential traffic on their network and to prevent users from running applications that can spread viruses or other malware. For this reason, the Barracuda Web Filter enables you to block access to applications based on their MIME type or port number as well as to common applications like Real Player or Yahoo Messenger.

For example, you can use the MIME type blocking feature to prevent users from running executable files (.exe) or from streaming music and video files over your network.

Energize Updates minimize administration and maximize protection

To provide you with maximum protection against the latest types of spyware, Barracuda Networks maintains Barracuda Central, a powerful operations center. From this center, engineers monitor the Internet for trends in spyware and automatically deploy updates and definitions via Barracuda Energize Updates.

By identifying spyware trends early on, the team at Barracuda Central can quickly develop new and improved blocking techniques that are quickly made available to your Barracuda Web Filter. Barracuda Central has identified over 2,000 spyware applications that are actively blocked and is continuously adding to this list.
The following figure shows how Barracuda Central provides the latest rules and definitions through the Energize Update feature.

*Figure 1.1: Barracuda Energize Updates*
You can deploy your Barracuda Web Filter so it is either inline with your core network components, or you can deploy the system as a forward proxy. The following sections provide a brief overview of each deployment type.

**Inline pass-through (transparent) mode**

Inline pass-through is the recommended type of deployment because it provides the strongest level of protection against spyware. In this deployment, the Barracuda Web Filter is directly inline with your core Internet network components, and all network traffic to the Internet passes through the Barracuda Web Filter. In this mode, your Barracuda Web Filter is able to:

- Filter and scan all Internet traffic requests.
- Perform content filtering and scan downloads for spyware and viruses.
- Detect and block outbound spyware protocol requests.
- Scan all outbound traffic for spyware activity on all ports to detect infected clients.

Inline pass-through deployment requires you to have an understanding of your network topology because even though the Barracuda Web Filter acts as a proxy, it does not participate in routing protocols. As a result, you may need to set up static routes in your Barracuda Web Filter so it knows how to properly route traffic.

The following table describes the advantages and disadvantages of deploying your Barracuda Web Filter in inline pass-through mode.

<table>
<thead>
<tr>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supports application blocking</td>
<td>May require setting up static routes in your Barracuda Web Filter.</td>
</tr>
<tr>
<td>Supports automatic pass-through mode in the event of a system failure</td>
<td>Initial setup requires an interruption to network traffic while you make</td>
</tr>
<tr>
<td>(model 310 and above)</td>
<td>necessary cabling changes.</td>
</tr>
<tr>
<td>Does not require users to configure proxy server settings in their Web</td>
<td></td>
</tr>
<tr>
<td>browser</td>
<td></td>
</tr>
<tr>
<td>Uses perimeter transparency mode that exposes client IP addresses</td>
<td></td>
</tr>
<tr>
<td>(supports corporate firewall rules)</td>
<td></td>
</tr>
</tbody>
</table>

*Figure 1.2 illustrates a basic installation using the Inline Pass-Through deployment.*
Figure 1.2: Inline Pass-through Deployment
Forward proxy

The forward proxy deployment uses a proxy as an intermediary between a client and the Internet to protect the client from being visible from the Internet. In a forward proxy deployment, only HTTP Internet traffic passes through the Barracuda Web Filter. After the Barracuda Web Filter processes clients’ requests, it sends the requests out directly to the Internet.

When deployed as a forward proxy, the Barracuda Web Filter shows all HTTP traffic as coming from its own IP address instead of from the individual client IP addresses as is done in the inline pass-through deployment.

We recommend deploying the Barracuda Web Filter in forward proxy mode in the following situations:

- You need to replace an existing forward proxy (such as Microsoft ISA Server) with the Barracuda Web Filter.
- You do not want the Barracuda Web Filter to reside inline with all your network traffic and are satisfied with the system only scanning HTTP traffic for viruses and spyware.

The following table describes the advantages and disadvantages of deploying your Barracuda Web Filter in forward proxy mode.

<table>
<thead>
<tr>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>The initial setup of forward proxy mode does not require any interruptions to your network traffic.</td>
<td>Because the Barracuda Web Filter only scans outbound HTTP traffic, the system cannot perform the following functions in forward proxy mode:</td>
</tr>
<tr>
<td></td>
<td>• Block access to applications listed on the BLOCK/ACCEPT &gt; Applications page.</td>
</tr>
<tr>
<td></td>
<td>• Block access to applications that use the destination IP address specified on the BLOCK/ACCEPT &gt; IP Block/Exempt page.</td>
</tr>
<tr>
<td></td>
<td>• Block access to applications that use the destination port specified on the BLOCK/ACCEPT &gt; IP Block/Exempt page.</td>
</tr>
<tr>
<td></td>
<td>• Inspect outbound traffic for spyware infection activity.</td>
</tr>
<tr>
<td>Does not require the configuration of static routes.</td>
<td>The Barracuda Web Filter does not scan non-HTTP traffic for viruses and spyware.</td>
</tr>
<tr>
<td></td>
<td>Requires clients’ Web browsers to be configured with the IP information of the forward proxy server (Barracuda Web Filter).</td>
</tr>
</tbody>
</table>

Figure 1.3 illustrates a basic installation using the Forward Proxy Deployment.
Figure 1.3: Forward Proxy Deployment
This chapter provides general instructions for installing the Barracuda Web Filter.

This chapter covers the following topics:

- Network considerations ................................................................. 16
- Installing and configuring the Barracuda Web Filter ......................... 18
- Advanced installation topics ............................................................ 26
Network considerations

The Barracuda Web Filter appliance is a low-risk deployment because it is designed to be a bridge within your network. The appliance can view Internet traffic that passes through the network but does not affect its routing. To reduce the risk of interfering with important network traffic, initially set the Barracuda Web Filter to monitor and log the spyware activity only. Determine which internal servers and clients to exclude from spyware and virus scans.

These pre-installation considerations may help you understand some of the issues that may occur.

Routers

Make sure the default gateway is properly set to reach the Internet. Also, if you are testing the Barracuda Web Filter in one portion of your network and move to another portion of the network for deployment, make sure that you check the default gateway and make changes as necessary.

External DNS

Some of the considerations regarding DNS include the following issues:

Optimal DNS query response time—When the Barracuda Web Filter is in Active mode, it proxies all Internet requests for the clients. As a result, the Barracuda Web Filter needs to resolve website hostnames to IP addresses while proxying the HTTP requests made by the users. The response for DNS queries needs to be optimal to allow the Barracuda Web Filter to look up and quickly process these requests. A slow DNS server will cause the Barracuda Web Filter to respond slowly to clients, which adds latency to their Internet access.

Requests for fully qualified Web application server names—If a user attempts to browse to a Web site by specifying a Web server name is not a fully qualified name that includes the domain name, the Barracuda Web Filter automatically appends the string barracuda.com to the unqualified name in order to resolve the request. For example, if the user enters the server name myserver instead of myserver.mydomain.com, the Barracuda Web Filter resolves the request using the hostname myserver.barracuda.com.

Internal DNS

If you have an internal server that is only resolvable via an internal DNS, make sure that this DNS server is used by the Barracuda Web Filter as a secondary DNS.

Enterprise class Layer 3 switch, VLANS, VPN concentrators

These device types are normally capable of handling multiple subnets and providing default routes to clients. However, they may affect the Barracuda Web Filter deployment in the following ways:

- A Layer 3 switch can also be set up to have multiple VLANs (Virtual Local Networks) using port assignments. There is no side effect by having VLAN tags in the traffic that is visible to the Barracuda Web Filter. However, when the Barracuda Web Filter is set up to a single subnet, it needs to have routes to process requests for other subnets.
- A standard solution is to add static routes to these foreign subnets. All Layer 3 switch subnets should use its IP address as the gateway. In the case of a VPN concentrator, use the IP of the concentrator as the default gateway for all the networks aggregated by that VPN concentrator.
Firewall DMZ

A demilitarized zone (DMZ) is an area where any servers that access the Internet are placed. Servers inside this zone may be configured to access certain servers within an internal network with their own security rules set up. Normally these servers need to be accessible from the Internet such as email servers. The Barracuda Web Filter should not be deployed to protect these machines. The Barracuda Web Filter is not designed to protect servers but to protect end user machines.

Internal servers

In most organizations, internal servers are protected by corporate firewalls that use port forwarding rules to limit access to the servers. Port forwarding rules define the ports that can be used to access the servers (such as HTTP, FTP, and mail servers). These servers should have optimal response time.

As a result, the server traffic must not be interrupted. Barracuda Networks recommends that you exempt or bypass these servers from the Barracuda Web Filter. To reduce Layer 2 bridging overhead, place a switch between the firewall and the Barracuda Web Filter and connect your server farm on a different port on the switch. In this case, set up the servers parallel to the Barracuda Web Filter instead of behind it, and the configure exempt IP addressing feature to exclude these IP addresses from server exemption.

Cache

Caching usually provides faster access to repetitive content by keeping content locally on the Barracuda Web Filter. However, some customers have concerns over how the Barracuda Web Filter keeps the data accurate. The Barracuda Web Filter handles the data by using an LRU (Least Recently Used) algorithm. The Barracuda Web Filter must be configured with the current time since it uses the current time to check for updates for every HTTP request.

QoS/packet reconfiguration (Quality of Service, packet shapers)

There are many products available that can control traffic in a LAN environment, specify priorities, and size these different traffic types. Normally, this is done using a Layer 7 device on different types of applications. The Barracuda Web Filter deployment is affected when the Barracuda Web Filter is placed in front of these devices to benefit from the shaped data. Place the Barracuda Web Filter close to the Internet to help reduce noise and overhead on both the Layer 2 bridging and HTTP proxy.

Mounting and cabling considerations

To install the Barracuda Web Filter you need to:

- Mount it on a rack or shelf
- Cable it to other network devices

The Barracuda Web Filter is designed to be installed in a data center with other networking devices and servers. Its dimensions are suitable for a 19-inch rack. You must position it within cabling distance of any switches or other devices that access the network segments that you want to protect. The appliance can be mounted facing either direction in your rack, so consider which side will have access to the ports and which will have access to the LED lights.

You may need access to the ports during installation, and you may need to use the back panel during initial configuration.
Installing and configuring the Barracuda Web Filter

These are the general steps to set up your Barracuda Web Filter. For more detailed instructions for each step, see the following reference pages.

Step 1. Verify that you have the necessary equipment on page 18
Step 2. Install the Barracuda Web Filter on page 18
Step 3. Configure the Barracuda Web Filter IP and network settings on page 19
Step 4. Configure your corporate firewall on page 20
Step 5. Configure the Barracuda Web Filter on page 20
Step 6. Update the Barracuda Web Filter firmware on page 21
Step 7. Verify your subscription status on page 22
Step 8. Update the definitions on page 23
Step 9. Integrate the Barracuda Web Filter into your network on page 23
Step 10. Test and adjust the Barracuda Web Filter on page 24

Step 1. Verify that you have the necessary equipment

Before installing your Barracuda Web Filter, make sure you have the following equipment:

- Barracuda Web Filter (check that you have received the correct model)
- AC power cord
- Ethernet cables
- Mounting rails and screws (available for models 610, 810, and 910 only)
- VGA monitor (recommended)
- PS2 keyboard (recommended)

Step 2. Install the Barracuda Web Filter

To physically install the Barracuda Web Filter:

1. Fasten the Barracuda Web Filter to a standard 19-inch rack or other stable location.  
   **CAUTION!** Do not block the cooling vents located on the front and rear of the unit.

2. Connect a CAT5 Ethernet cable from your network switch to the LAN port on the front of your Barracuda Web Filter, as shown in the following figure.
The Barracuda Web Filter supports 10BaseT, 100BaseT, and Gigabit Ethernet (higher end models only).

Do not connect any other cables to the unit. The connectors on the back panel are for diagnostic purposes.

3. Connect the following hardware to your Barracuda Web Filter:
   - Power cord
   - VGA monitor
   - PS2 keyboard

   After you connect the AC power cord, the Barracuda Web Filter may power on for a few seconds and then power off. This behavior is normal.

4. Press the Power button located on the front of the unit.

   The login prompt for the administrative console displays on the monitor, and the power light on the front of the Barracuda Web Filter turns on. For a description of each indicator light, refer to Understanding the indicator lights on page 43.

**Step 3. Configure the Barracuda Web Filter IP and network settings**

The Barracuda Web Filter is assigned a default IP address of 192.168.200.200. You can change the address using the administrative console or by pressing and holding the Reset button on the front panel.

Holding Reset for eight seconds changes the default IP address to 192.168.1.200. Holding the button for 12 seconds changes the IP address to 10.1.1.200.
To set a new IP address from the administrative console:

1. Connect your keyboard and monitor directly to the Barracuda Web Filter.

2. At the barracuda login prompt, enter admin for the login and admin for the password.

   The User Confirmation Requested window displays the current IP configuration of the Barracuda Web Filter.

3. Using your Tab key, select Change and click Enter to change the IP configuration.

4. Enter the new IP address, subnet mask, and default gateway IP address for your Barracuda Web Filter. Select Save to enter your changes. The Primary DNS and Secondary DNS files are optional. Select Exit.

   The new IP address and network settings are applied to your Barracuda Web Filter.

**Step 4. Configure your corporate firewall**

If your Barracuda Web Filter is located behind a corporate firewall, refer to Table 2.1 for the ports that need to be opened on your corporate firewall to allow communication between the Barracuda Web Filter and remote servers.

*Table 2.1: Ports to Open on Your Corporate Firewall*

<table>
<thead>
<tr>
<th>Port</th>
<th>Direction</th>
<th>Protocol</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>22</td>
<td>In/Out</td>
<td>TCP</td>
<td>Remote diagnostics and technical support services</td>
</tr>
<tr>
<td>25</td>
<td>Out</td>
<td>TCP</td>
<td>Email and email bounces</td>
</tr>
<tr>
<td>53</td>
<td>Out</td>
<td>TCP/UDP</td>
<td>DNS (Domain Name Server)</td>
</tr>
<tr>
<td>80</td>
<td>Out</td>
<td>TCP</td>
<td>Virus, spyware, category definition updates, and firmware updates</td>
</tr>
<tr>
<td>123</td>
<td>In/Out</td>
<td>UDP</td>
<td>NTP (Network Time Protocol)</td>
</tr>
<tr>
<td>8001, 8002</td>
<td>In/Out</td>
<td>TCP</td>
<td>Synchronization between linked systems. For more information, see Setting up linked management on page 32.</td>
</tr>
</tbody>
</table>

In addition to the ports listed above, you may have to configure your corporate firewall to allow the Barracuda Web Filter to email system alerts and reports. Some organizations create firewall rules that only allow emails to be sent from the IP address of their email server. In this case, you should configure your corporate firewall to allow emails to be sent from the Barracuda Web Filter as well.

If your Barracuda Web Filter is located in a DMZ, you may need to configure your corporate firewall to allow the Barracuda Web Filter to send notifications to your internal email server.

**Step 5. Configure the Barracuda Web Filter**

After specifying the IP address of the Barracuda Web Filter and opening the necessary ports on your corporate firewall, configure the Barracuda Web Filter from the administration interface. Make sure the client’s computer that you configured the Barracuda Web Filter for is connected to the same network and that the appropriate routing is in place to allow connection to the Barracuda Web Filter’s IP address via a Web browser.
To configure the Barracuda Web Filter:

1. From a Web browser, enter the IP address of the Barracuda Web Filter followed by port 8000.

2. To log into the administration interface, enter admin for the username and admin for the password.

3. Select BASIC > IP Configuration, and perform the following steps:
   3a. Enter the IP address of your primary and secondary DNS servers (if these have not yet been set up).
   3b. Set Operating Mode to Audit.
   3c. Set Enable Perimeter Transparency to one of the following depending your type of deployment:
       • For Inline Pass-Through deployment, select Yes to expose the IP addresses of your clients instead of allowing all HTTP traffic coming from the Barracuda Web Filter.
       • For Forward Proxy deployment, select No.
   3d. (Optional) Configure any static routes.
   3e. Click Save Changes.

   Note: If the IP address of your Barracuda Web Filter on the IP Configuration page is changed, you are disconnected from the Web interface. If this occurs, log in again using the new IP address.

4. Select BASIC > Administration, and perform the following steps:
   4a. Assign a new administration password to the Barracuda Web Filter (optional). This step is highly recommended.
   4b. Make sure the local time zone is set correctly.
       Time on the Barracuda Web Filter is automatically updated via NTP (Network Time Protocol). It requires that port 123 is opened for inbound and outbound UDP (User Datagram Protocol) traffic on your firewall (if the Barracuda Web Filter is located behind one).
       It is important that the time zone is set correctly because this information is used to determine the delivery times for messages and is displayed in certain mail reading programs.
   4c. If desired, change the port number used to access the Barracuda Web Filter administration interface. The default port is 8000.
   4d. Enter the amount of time for the session expiration length (in minutes) of your administration interface session.
       At expiration, you are required to log back into the administration interface.
   4e. (Optional) Specify your local SMTP server. Enter the email address for your Administrator to receive system and threat email alerts and notifications.
   4f. Click Save Changes.

Step 6. Update the Barracuda Web Filter firmware

To update the firmware on the Barracuda Web Filter:

1. Select ADVANCED > Firmware Update.

2. Read the release notes to learn about the latest features and fixes provided in the new firmware version.

3. Click Download Now next to Latest General Release. Click OK on the download duration window.
Updating the firmware may take several minutes. Do not turn off the unit during this process.

**Download Now** is disabled if the Barracuda Web Filter is already up-to-date with the latest firmware version.

The Barracuda Web Filter begins downloading the latest firmware version. You can view the download status by clicking **Refresh**. A message displays once the download is complete.

4. Click **Apply Now** when the download completes.

5. Click **OK** when prompted to reboot the Barracuda Web Filter.

A Status page displays the progress of the reboot. Once the reboot is complete, the login page appears.

**Step 7. Verify your subscription status**

After you install the Barracuda Web Filter, your Energize Update and Instant Replacement subscriptions are most likely active. However, it is important you verify the subscription status so your Barracuda Web Filter can continue to receive the latest virus and spyware updates from Barracuda Central. The Energize Update service is responsible for downloading these virus and spyware definitions to your Barracuda Web Filter.

**To check your subscription status:**

1. Select **BASIC > Status**.

2. From the **Subscription Status** section, verify that the word **Current** appears next to **Energize Updates** and **Instant Replacement Service** (if purchased).

*Figure 2.2* shows the location of the **Subscription Status** section.

*Figure 2.2: Subscription Status*
3. Enable your subscription:

3a. Click the **Activate** link as shown in *Figure 2.3*. The product activation displays in a new browser window.

*Figure 2.3: Location of the Activate Link*

3b. In the **Product Activation** window, fill in the required fields and click **Activate**. A confirmation page opens to display the terms of your subscription.

3c. After a few minutes, from the Barracuda Web Filter administration interface, click **Refresh** in the **Subscription Status** section of the **BASIC > Status** page. The status of your subscriptions displays as **Current**.

**Note:** If your subscription status does not change to **Current**, or if you have trouble filling out the **Product Activation** window, call your Barracuda Networks sales representative.

**Step 8. Update the definitions**

To update the spyware, virus, and category definitions:

1. Select **ADVANCED > Energize Updates**.

2. Check to see if the current version is the same as the latest version available for spyware, virus, and category definitions. If the definitions are up-to-date, proceed to Step 9.

3. Click **Update** for each of these sections.

4. In the spyware, virus, and category definition sections, select **Hourly** or **Daily** for **Automatically Update**. The recommended setting is **Hourly** for both spyware and virus definitions, and **Daily** for category definition.

5. Click **Save Changes**.

**Step 9. Integrate the Barracuda Web Filter into your network**

*Table 2.2* describes how to integrate the Barracuda Web Filter into your network depending on your deployment type.

*Table 2.2: Integrating your Barrauda System into your Network*

<table>
<thead>
<tr>
<th>Deployment Type</th>
<th>Next Step</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inline pass-through</td>
<td>Connect your Barracuda Web Filter to your network. For more information, see <a href="#">Connecting the Barracuda Web Filter to your network</a> on page 24.</td>
</tr>
<tr>
<td>Forward proxy</td>
<td>Configure your clients’ HTTP proxy settings from their browser to access the Internet. See your Web browser’s technical documentation for further information.</td>
</tr>
</tbody>
</table>
Step 10. Test and adjust the Barracuda Web Filter

After connecting your Barracuda Web Filter to the network, verify connectivity. Open your Web browser from a machine on your network. If you cannot browse the Web, review the installation steps to make sure your Barracuda Web Filter is properly configured and connected to your corporate firewall and network switch.

If you can browse the Web without any issues, you are ready to adjust the settings on the Barracuda Web Filter. The most common adjustment to make is to create filters that determine what traffic and applications the Barracuda Web Filter blocks and accepts. For more information about the available filters, refer to Creating block and accept filters on page 36.

Go to the BLOCK/ACCEPT > IP Block/Exempt page, and use the IP and Port Exemption section to bypass scanning or filtering for clients or targeted servers. To avoid accidentally specifying a broader than intended an exemption range, be sure to apply the proper subnet mask.

Connecting the Barracuda Web Filter to your network

To connect the Barracuda Web Filter to your network:

1. Connect the Ethernet cable from your corporate firewall to the WAN port on the front panel of the Barracuda Web Filter. This step may require disconnecting your internal network switch from the corporate firewall.

    Note: A crossover cable may be needed if your corporate firewall does not have a switchable port and therefore cannot switch between RX and TX. Another solution is to place a switch between the corporate firewall and the Barracuda Web Filter.

    Note: You do not need to configure the WAN port. The Barracuda Web Filter creates an Ethernet bridge between the WAN and LAN ports.
Figure 2.4: Connecting the Barracuda Web Filter to your Network

2. Connect an Ethernet cable from the LAN port on the Barracuda Web Filter to your internal network switch Uplink port (if one is available).

   **Note:** If your switch records the MAC address of an external device, make sure you delete all pre-existing MAC address records from your switch.

3. Select **BASIC > IP Configuration** page in the administration interface, and set the Operating Mode setting to **Active**.

   **Note:** A hard bypass feature is available on the Barracuda Web Filter 310 and higher models.

4. If necessary, set up static routes on the **BASIC > IP Configuration** page. Setting up static routes is often necessary in complex networks so the Barracuda Web Filter knows the proper way to route traffic on your network.
Advanced installation topics

This section describes advanced installation topics that may apply to your Barracuda Web Filter deployment.

Inline pass-through with pre-existing proxy deployment

Another deployment type that is much less common than either Inline mode or Forward Proxy mode is using the Barracuda Web Filter as an inline device that uses a pre-existing proxy server on your network. This type of deployment is not recommended because it breaks the following features of the Barracuda Web Filter:

- Infection reports do not display the IP addresses of infected clients.
- Infected clients cannot be automatically redirected to the Barracuda Spyware Removal Tool.

To resolve these issues, we recommend that you remove your pre-existing proxy server and deploy the Barracuda Web Filter as described in Inline pass-through (transparent) mode on page 11.

If you choose to deploy your Barracuda Web Filter with a pre-existing proxy server, place the Barracuda Web Filter directly between your Internet firewall/router and your LAN router/switch that connects to all your client machines. The Barracuda Web Filter is also configured to interact with and scan the traffic from your pre-existing proxy server. The placement of your pre-existing proxy server and its functionality may have an impact on the Barracuda Web Filter deployment. Some configurations may require technical assistance from Barracuda Technical Support.

In this deployment, the Barracuda Web Filter detects all network traffic. The proxy server connects directly to the Barracuda Web Filter LAN port. This connection may require a crossover cable. No special port or IP address is required. The Barracuda Web Filter scans for all inbound and outbound HTTP traffic from the proxy server. All outbound traffic on other ports is scanned for normal spyware communication.

*Figure 2.5* illustrates this deployment type.
Supported pre-existing proxy types

Inline pass-through with proxy filtering requires client traffic to pass through the proxy server. Only traffic from the proxy IP address is visible to the Barracuda Web Filter. The Barracuda Web Filter checks each request to determine whether it is allowed or denied. The operation of a proxy can be classified as being a transparent proxy or a nontransparent proxy. Each proxy type provides its own set of installation issues when installing the Barracuda Web Filter.

- **Transparent Proxies:** Transparent deployment of a proxy server relies on a network device (like a switch or a router) to intercept all traffic from clients to Internet servers and divert it to a proxy server.
  
  The network device identifies packets to be intercepted by examining IP headers of all incoming packets. Packets transported by TCP and addressed to port 80 are intercepted. Because HTTP communication occurs over TCP transport and an overwhelming majority of Internet servers use
the default port 80, this method captures most of the HTTP request traffic flowing through the network device.

If you are installing a transparent proxy, the Barracuda Web Filter must be installed on the client side of the proxy. This position allows the Barracuda Web Filter to intercept all Internet traffic.

- **Nontransparent Proxies**: Nontransparent proxy deployment refers to a deployment where the client is made aware of the proxy server’s existence. Then clients send their HTTP requests to the proxy regardless of the servers specified in the URLs.

In addition to document retrieval, these clients also delegate DNS resolutions to the proxy server, and a browser sends to its proxy server the entire requested URL. Then if needed, the proxy server resolves the hostname into an IP address and retrieves the object from that address. This is different from the actions of clients accessing the Web directly. When accessing the Web directly, the client obtains the origin server’s IP address and sends the HTTP request containing just the path portion of the URL to that address.

### Connecting inline to your network with a pre-existing proxy server

To set up the Barracuda Web Filter inline with your existing proxy server, place the proxy server between the Barracuda Web Filter and your internal network switch.

If you have a proxy server, most HTTP requests are routed from your internal network through the proxy server to the Barracuda Web Filter. When a Web site responds, the responding traffic goes through the Barracuda Web Filter, which filters any spyware and viruses before allowing the traffic to go through the proxy server and back to the clients.

The Barracuda Web Filter has been tested with Microsoft ISA and Squid proxy servers.

**To connect your Barracuda Web Filter and existing proxy server to your network:**

1. Connect your LAN port from your proxy server to the **Uplink** port of your internal network switch.
2. Connect the Ethernet cable from your **WAN** port of your proxy server to the **LAN** port on the front panel of the Barracuda Web Filter.

   **Note:** A crossover cable may be needed if your corporate firewall does not have a switchable port and therefore cannot switch between RX and TX. Another solution is to place a switch between the corporate firewall and the Barracuda Web Filter.

   **Note:** You do not need to configure the WAN port. The Barracuda Web Filter creates an Ethernet bridge between the WAN and LAN ports.

3. Connect an Ethernet cable from the **WAN** port on the Barracuda Web Filter to the **LAN** port on your firewall.

4. Select **BASIC > IP Configuration** page in the administration interface, and set the **Operating Mode** setting to **Active**
This chapter describes the configuration, monitoring, and management tasks you can perform from the administration interface. The following topics are covered:

- Configuring the Barracuda Web Filter .................................................. 32
- Creating block and accept filters .......................................................... 36
- Monitoring the Barracuda Web Filter ...................................................... 43
- Managing the Barracuda Web Filter ....................................................... 48

For more detailed information about a specific page in the Web interface, view the online help by clicking the question mark icon on the right side of the interface.
Configuring the Barracuda Web Filter

This section describes the configuration tasks you can perform from the administration interface. This section covers the following topics:

- Configuring system IP information ..................................................... 32
- Setting up linked management ............................................................ 32
- Controlling access to the Web interface .............................................. 34
- Customizing the appearance of the Web interface .............................. 34
- Changing the language of the Web interface ...................................... 34
- Setting the time zone of the system .................................................... 34
- Enabling and disabling virus protection .............................................. 35
- Enabling and disabling Web caching .................................................. 35
- Setting up a syslog server to centrally monitor system logs ............... 35

Configuring system IP information

The BASIC > IP Configuration page contains the network configuration for your Barracuda Web Filter. Use this page to change the following settings:

- System IP address and domain configuration
- DNS servers
- Client IP Visibility for HTTP—Specifies whether the Barracuda Web Filter is to expose client IP Addresses in egress HTTP traffic. If you change this setting to No, all HTTP traffic passing through the system will have the IP address of the Barracuda Web Filter.
- Static routes

Setting up linked management

Use the ADVANCED > Linked Management page to link multiple Barracuda Web Filters together so they can synchronize configuration settings. Linked systems can be geographically dispersed and do not need to be co-located on the same network. Linked management does not provide load-balancing functionality. The Barracuda Web Filter uses ports 8001 and 8002 to synchronize configuration between linked systems.

Linked Management is available on the Barracuda Web Filter 410 and above.

**Note:** Some network environments may not be suitable to linking multiple Barracuda Web Filter systems together. For example, if you have multiple network segments that each require different policies, it may be better to provide a dedicated, unlinked Barracuda Web Filter for each segment. This way you can configure each Barracuda Web Filter without the configuration settings propagating to the other systems.

To link two Barracuda Web Filter devices:

1. Complete the installation process for each system as described in Chapter 2 Installation and Configuration.
2. From the ADVANCED > Task Manager on Barracuda Web Filter 1, verify that no processes are running. Complete this step for the Barracuda Web Filter 2 as well. No processes should be running when you link systems together.
3. From the ADVANCED > Linked Management page on Barracuda Web Filter 1, enter the Cluster Shared Secret password, and click Save Changes.
4. From the **ADVANCED > Linked Management** on Barracuda Web Filter 2:
   
   4a. Enter the Cluster Shared Secret password and the Cluster Hostname. Click **Save Changes**.
   
   4b. In the Linked Systems section, enter the IP address of the first Barracuda Web Filter, and click **Join Cluster**.
   
   4c. Click **Save Changes**.

5. Refresh the **ADVANCED > Linked Management** page, and verify that:
   
   - Each system’s IP address appears in the **Linked Systems** list.
   - The status of each server is green.

*Figure 3.1 shows two servers in a cluster with a green status.*

*Figure 3.1: Two Server Cluster*

6. If you have a load balancing device, configure the device to balance the load on each linked system.

**Data propagated to the linked systems**

Linking systems together not only makes it easier to manage multiple Barracuda Web Filters, but it also provides 100 percent redundant coverage of the propagated data. *Table 3.1* identifies the data that is propagated to the other clustered systems when a new system joins.

*Table 3.1: Data Propagated Between Linked Systems*

<table>
<thead>
<tr>
<th>Propagated Data</th>
<th>Data Not Propagated</th>
</tr>
</thead>
<tbody>
<tr>
<td>System settings (global and domain) configured through the Administration interface. This includes the block/accept filters.</td>
<td>• System IP configuration (IP address, subnet mask, default gateway, and DNS server) configured on the <strong>BASIC &gt; IP Configuration</strong> page.</td>
</tr>
<tr>
<td></td>
<td>• System password and time zone as configured on the <strong>BASIC &gt; Administration</strong> page.</td>
</tr>
<tr>
<td></td>
<td>• Cluster hostname and cluster local host map configured on the <strong>ADVANCED &gt; Linked Management</strong> page.</td>
</tr>
</tbody>
</table>
Switching a system to standby mode

You can also use the ADVANCED > Linked Management page to switch a clustered system from Active to Standby mode. When a system is in standby mode, it does not synchronize its configuration with the other active systems in the cluster.

We recommend switching a system to Standby mode when you need to:

- Upgrade the firmware of all systems in a cluster. If a system is part of a cluster, we recommend changing the system’s mode to Standby before you upgrade its firmware, and then repeat this process on each system in the cluster. Once the firmware on each system has been upgraded, you can then change the mode on each system back to Active. Changing a linked systems to standby mode before upgrading prevents a system on a more recent firmware version from trying to synchronize its configuration with a system on an earlier firmware version.
- Perform maintenance that requires a system to be powered down or disconnected from your network. For example, if you need to physically move a Barracuda Web Filter you should change its mode to Standby so the other systems in the cluster do not try to synchronize their configuration while the system is down.

Controlling access to the Web interface

Use the BASIC > Administration page to perform the following tasks:

- Specify the IP addresses or subnet mask for the systems that you want to access the administration interface. All other systems will be denied access.
- Change the password of the administration account.
- Change the port used to access the administration interface.
- Change the length of time users can be logged into the administration interface (default is 60 minutes).

Customizing the appearance of the Web interface

Use the ADVANCED > Appearance page to customize the default images used on the administration interface and in the email quarantine messages sent to users. This tab is only displayed on the Barracuda Web Filter 410 and above.

Changing the language of the Web interface

You can change the language of the administration interface by selecting a language from the drop-down menu in the upper right corner of the window. Supported languages include Chinese, Japanese, Spanish, French, and others.

The language you select is only applied to your individual administration interface. No other user’s administration interface is affected.

Setting the time zone of the system

Use the BASIC > Administration page to set the time zone of your Barracuda Web Filter.
Enabling and disabling virus protection

Use the BASIC > Virus Checking page to turn off virus scanning, which is not recommended. By default, virus scanning is automatically enabled, and the virus definitions are updated on a regular basis (hourly by default) using Energize Updates.

When virus scanning is enabled, all traffic processed by the Barracuda Web Filter is scanned for viruses and any traffic that contains a virus is blocked.

Enabling and disabling Web caching

Use the ADVANCED > Caching page to enable or disable Web caching. Web caching can accelerate Web page downloads and also reduce the traffic on the external network connections. For these reasons, we recommend you keep Web caching enabled.

Setting up a syslog server to centrally monitor system logs

Use the ADVANCED > Syslog page to specify a server to which the Barracuda Web Filter sends syslog data. Syslog is a standard UNIX/Linux tool for sending remote system logs and is available on all UNIX/Linux systems.

Syslog servers are also available for Windows platforms from a number of free and premium vendors. Barracuda Networks has tested with a Windows freeware syslog server from Kiwi Enterprises (www.kiwisyslog.com). Barracuda Networks makes no guarantees that your Barracuda Web Filter will be completely compatible with this syslog server.

Syslog support is not available on the Barracuda Web Filter 210.
Creating block and accept filters

This section describes the **BLOCK/ACCEPT** tab, which provides a wide range of filters that enhance the default spyware and virus detection capabilities of the Barracuda Web Filter.

This section contains the following topics:

- Best practices ................................................................. 36
- Filtering and blocking features ........................................ 37
  - Content filtering ................................................................. 37
  - Application filtering ............................................................ 37
  - Domain filtering ................................................................. 38
  - URL pattern filtering ............................................................ 38
  - Custom categories filtering .................................................. 38
  - MIME type blocking ............................................................ 39
  - IP-based filtering ................................................................. 39
  - IP-based exemption from filtering and blocking .................. 39
- Block messages ..................................................................... 39
- Exception policies ................................................................. 40
- HTTPS filtering option ............................................................ 41
- Testing Web site access ............................................................ 42

### Best practices

When creating block or accept filters, keep the following best practices in mind:

- You can apply domain, pattern, content, application, and MIME type blocking filters to authenticated and unauthenticated users. Before you create or modify a filter, make sure to use the drop-down menu on the right side of the interface to select which type of user you want the filter applied to.

- Use exception policies to override a filter on per-user or group basis. For example, if you configure your content filters to block access to auction sites for both authenticated and unauthenticated users but a member of your Purchasing department requires access to these sites, you can create an exception policy that allows access to only this individual.

- When a user tries to access content that is blocked by one of the Barracuda Web Filter filters, the user receives a block message that contains login fields (shown in Figure 3.2). If you want to hide the login fields because you have not created any exception policies that allow users to bypass the block filter, go to the **BLOCK/ACCEPT > Block Messages** page and change the **Enable login override of block pages** setting to No.
Filtering and blocking features

This section describes the filtering and blocking features of the Barracuda Web Filter:

- Content filtering
- Application filtering
- Domain filtering
- URL pattern filtering
- Custom categories filtering
- MIME type blocking
- IP-based filtering
- IP-based exemption from filtering and blocking

Content filtering

Use the BLOCK/ACCEPT > Content Filter page to select categories of Web sites that should be blocked, warned, monitored, or allowed. When you block a category, you block all HTTP traffic to the associated URLs in that category.

For example, http://mail.yahoo.com is categorized as a Web-based Email site. If you want to block users from accessing their Web-based email accounts, block the Web-based Email category.

You can also use this page to turn on Safe Search mode for common Web search engines. Safe Search prevents a Web search engine from displaying objectionable thumbnail images in search results. Google, Yahoo, MSN, and Dogpile all allow users to control whether Safe Search mode is applied to their image searches. However, when you enable Safe Search mode through the Barracuda Web Filter, users cannot override the setting when conducting image searches, and only filtered thumbnails are displayed in their search results.

Application filtering

Use the BLOCK/ACCEPT > Applications page to block or allow specific Instant Messenger services and other types of applications. For a user to download or use an application, the user’s application needs to communicate with an external server. When you select to block an application, the Barracuda Web Filter searches for traffic that contains data associated with an application server and then blocks that traffic.
You can use the Applications filter as a pre-emptive measure to protect your network against malware.

For example, you may want to block the IRC application because this type of application often introduces BOTS into networks. BOTS are automated programs that repeatedly run specific tasks, and malicious BOTS activity is common in IRC communications.

You can also use the application blocking feature when you hear about a virus spreading over a specific IM service or tool. In this case, you can proactively protect your network from the infection by blocking that particular service until the threat has been resolved.

**Domain filtering**

Use the **BLOCK/OPT > Domains** page to block (blacklist), warn, monitor, or allow (whitelist) traffic to specific domains and subdomains.

**URL pattern filtering**

Use the **BLOCK/OPT > URL Patterns** page to enter regular expressions or keyword that, if matched to a URL, will block (blacklist), warn, monitor, or allow (whitelist) that URL. For more information about using regular expressions, refer to **Appendix B, Regular Expressions** on page 73.

Examples:

- If you want to block all Web sites that contain *porn* in the URL, then enter *porn* as a blocked pattern.
- Sometimes spyware applications use different hostnames but the same domain name so the URLs appear to be from different hosts. In this case you can enter the domain name as a pattern to block all URLs on that domain.
- Another example is if you want to allow access to *example.com* but want to block *maps.example.com*. In this case, specify *example.com* as an allowed pattern and specify *maps.example.com* as a blocked URL (see Domain filtering on page 38).

*Tip:* Run a test on your regular expressions with special characters before you encode them in a pattern filter.

**Custom categories filtering**

Use the **BLOCK/OPT > Custom Categories** page to create a custom filter, which can consist of the domain names or built-in Web content categories you select.

*Note:* You can select a maximum of three built-in categories per custom category.

Custom categories are used in the same way as the built-in filters:

- You can apply a custom category to either authenticated or unauthenticated users.
- You can define a user- or group- specific exception rule to a custom category policy.

After you define a custom category, allow between five and ten minutes for the Barracuda Web Filter to compile and then fully activate the new category. To verify that a newly created custom category is active, you can use the **Content Filter Lookup** facility in the **Content Filter** page, as described in the online help for the **Custom Categories** page.
MIME type blocking

Use the BLOCK/ACCEPT > MIME Blocking page to specify standard MIME types that you want to block.

**Note:** Web sites that are whitelisted are not subject to the MIME type blocking rules you create.

Many organizations choose to block Internet radio and streaming media because they add load to the internal network, as well as executable files because they can install viruses and various other malware. To block Internet radio, which uses MPEG (.mpg, mpega, or .abs) or Microsoft audio (.wav) files, enter `audio/x-mpeg` or `audio/x-wav` as blocked MIME types.

To block streaming media, which uses MPEG video, enter `video/mpeg` or `video/x-msvideo` as blocked MIME types.

To block access to executables (.exe), enter `application/octet-stream` as a blocked MIME type.

IP-based filtering

If you suspect that certain users are abusing their access to the Internet or using malicious applications, you can use the BLOCK/ACCEPT > IP Block/Exempt page to deny Internet access to those users or to block them from using certain applications.

Use the source IP address or source subnet mask fields to specify the systems that you want to prevent from accessing the Internet. Use the destination fields to specify the applications you want to block.

IP-based exemption from filtering and blocking

Use the BLOCK/ACCEPT > IP Block/Exempt page to specify the IP addresses that you want to bypass the following block filters:

- Content filtering
- IM blocking
- All types of download blocking

**Note:** The IP addresses you add to the exempted list will not be protected against spyware, but the Barracuda Web Filter will still detect spyware activity on these clients.

Block messages

When the Barracuda Web Filter blocks access to a Web site, it displays a message that informs the user why that site is being blocked. The Barracuda Web Filter blocks a Web site if it contains spyware, a virus, content that has been blocked, or a blacklisted URL.

Use the BLOCK/ACCEPT > Block Messages page to perform the following tasks:

- Select the language that the block message is displayed in for all users.
- Customize the message in case the default text is insufficient.
- Select whether login fields appear on the block messages window that users receive when they try to access blocked content. The login fields allow users to access blocked content if an exception policy has been created for the blocking filter.
- Enable the Barracuda Spyware Removal Tool by setting the Infection Warning Threshold field to greater than 0.
- Set a dedicated hostname for the Barracuda Spyware Removal Tool.
About the Barracuda Spyware Removal Tool

The Barracuda Spyware Removal Tool performs a comprehensive scan of your computer for any traces of spyware or other malware. This scan is very thorough and takes several minutes to complete. After the analysis is complete, you can remove all the malware and traces of malware that have been found.

The Barracuda Spyware Removal Tool detects and removes many small traces, cookies, potential spyware files, and temporary files from your computer. Although these files are normally harmless, removing them can cause some Web sites to malfunction, and it is generally not appropriate that the Barracuda Web Filter block them at the network level. As such, the Barracuda Spyware Removal Tool may identify potential files for removal from your computer that are not blocked at the network level by the Barracuda Web Filter.

For maximum security, complete removal of these files from your computer is recommended.

Use the Infection Warning Threshold field to configure whether your users are prompted to run the Barracuda Spyware Removal Tool when spyware is detected on their system. By default, the Barracuda Spyware Removal Tool is disabled.

Note: We recommend that you keep the Infection Warning Threshold field set to 0 in Network Address Translation (NAT) environments because the Barracuda Web Filter uses the IP address to identify an infected system. As a result, if one system becomes infected with spyware, then all systems in the NAT environment are prompted to use the Barracuda Spyware Removal Tool regardless of their infection status. This issue can occur when you deploy the Barracuda Web Filter with a pre-existing proxy server.

Enabling the Barracuda Spyware Removal Tool

To enable users to run the Barracuda Spyware Removal Tool:

1. Clear the Infection Activity log so users are not prompted to run the Barracuda Spyware Removal Tool based on old infection activity data or false positives. To clear the log, go to the BASIC > Infection Activity page and click Clear.

2. Return to the Block Messages page, and enter a value greater than 0 in the Infection Warning Threshold field. When the number of infection activities on a user’s system exceeds the value of this field, the user is prompted to run the Barracuda Spyware Removal Tool. The user can then select to run the tool immediately or postpone running the tool until the following day.

3. (Optional) Create a dedicated fully qualified hostname for the Barracuda Spyware Removal Tool:
   
   3a. In the Dedicated Removal Tool Hostname field, enter a custom fully qualified hostname for the tool.

   3b. Add the custom hostname to your DNS server with the following resolving IP address: 172.27.72.27.

4. Click Save Changes.

Exception policies

Use the BLOCK/ACCEPT > Exceptions page to create exception policies for specific users or groups so they can override the filters that block access to applications and Web sites.

For example, by default the Barracuda Web Filter uses a content filter to block access to game playing sites. If you want to allow users to access gaming sites during non-business hours, create an allow exception policy between the hours of 18:00 (6pm) and 8:00 (8am) for the Content Filter category and Game Playing subcategory.
Or you may want to create an exception policy that allows a subset of your users to access content that is blocked for other users. For example, some organizations configure their content filters to block access to Job Search and Career Development sites like Monster.com. However, your Human Resources department may require access to such sites. In this case, you can create an allow exception for the Job Search and Career Development subcategory and assign the policy to your Human Resources group.

You can create exception policies for the following types of filters:

- Domains
- URL Patterns
- MIME type blocking
- Content
- Applications
- All Web traffic

When a user tries to access content that is blocked by one of the Barracuda Web Filter filters, the user receives a block message containing login fields (shown in Figure 3.2). If an exception policy exists for the blocked content, the user can enter the username and password for the account that was assigned to the exception policy. After the user enters the correct account information, the Barracuda Web Filter applies the effective policy for that authenticated user.

**HTTPS filtering option**

By default, the Barracuda Web Filter does not block or scan SSL (https://) traffic because most Web traffic is non-encrypted. However, you do have the option to enable HTTPS traffic filtering.

**Scope of HTTPS traffic filtering**

When the HTTPS traffic-filtering option is enabled, filters created using the following mechanisms will block HTTPS traffic:

**Content filters (both built-in and custom)**—When HTTPS filtering is enabled, content filters specified in the Content Filters page and the Custom Categories page will also filter HTTPS traffic.

**Domain-based filters**—When HTTPS filtering is enabled, filters specified in the Domains page will also filter HTTPS traffic.

**URL pattern filters**—When HTTPS filtering is enabled, filters specified in the URL Patterns page will also filter HTTPS traffic for which the hostname portion of the URL matches.

**Blocking exceptions**—When HTTPS filtering is enabled, HTTPS traffic is included in any exceptions to the following types of blocking-exception rules that are in effect:

- All Web traffic
- Content category filters (both built-in and custom)
- Domain-based filters
- URL pattern filters
Limitations for HTTPS traffic filtering

When the HTTPS traffic-filtering option is enabled, the following limitations apply:

- If HTTPS access is denied, the user is not presented with a block page because the traffic is blocked at Layer 3.
- If HTTPS access to a particular domain name is denied, HTTPS access to any subdomain of that same domain will also be denied for the same users.
- For any filtering policy that is set to Warn, the HTTPS request is Blocked instead.
- For URL pattern filters, only the unencrypted portion of the requested HTTPS URL can be checked for a match with the specified pattern.

To enable the HTTPS traffic-filtering option

To expand your HTTP filtering policies to include HTTPS filtering, enable the HTTPS Filtering option in the BLOCK/ACCEPT > Configuration page.

Note: Immediately after you enable this option, any client machines that had previously established an HTTPS session are communicating with an IP address and will not be blocked. In this situation, the HTTPS Web site IP address remains in the DNS client resolver cache (as well as in the DNS table on the core router or domain controller) until the DNS request time-to-live (TTL) expires. This can take up to a day or two, depending upon how the HTTPS sites configure TTL.

Testing Web site access

To determine if a specific Web site is allowed or blocked, based on the filters you set up, go to the BLOCK/ACCEPT > Browse Test page to perform a URL test.

Enter the URL in the field provided, and click Go. If the Web site appears in the display area on that page, then your users will be able to access the site. If you receive a message that the Web site has been blocked, then your users will not be able to access the site.

It is recommended that you make a list of the sites you want to block and allow, and then use the Browse Test page to test each URL and verify the filters have been set up correctly.
Monitoring the Barracuda Web Filter

This section describes the monitoring tasks you can perform from the administration interface and from the front panel of the Barracuda Web Filter. This section covers the following topics:

- Viewing performance statistics ........................................................... 43
- Understanding the indicator lights ...................................................... 43
- Viewing the traffic log ........................................................................ 44
- Viewing the application log ................................................................ 45
- Viewing the warned activity list ......................................................... 45
- Automating the delivery of system alerts and notifications .............. 46
- Generating system reports ................................................................. 46
- Viewing a list of infected clients ........................................................ 46
- Viewing system tasks ......................................................................... 46

Viewing performance statistics

The BASIC > Status page provides an overview of the health and performance of your Barracuda Web Filter:

- Filtering statistics (such as threats blocked by the filtering rules, blocked visits to known spyware Web sites, blocked downloads of spyware or viruses) for the past day and hour, as well as total statistics since installation (or last reset) of the Barracuda Web Filter.
- Performance statistics, such as CPU temperature and system load.
- Subscription status for Energize Updates, Instant Replacement, and Premium Support.
- Lists of infected clients blocked Web requests.
- A set of bar graphs that illustrate an hourly breakdown of requests made by your users in the last 24 hours, and a set of bar graphs that illustrate a daily breakdown of requests made by your users in the last 30 days. Both sets of graphs illustrate the following data:
  - Number of requests blocked
  - Number of requests received
  - Number of kilobytes per second used by the requests allowed

Each bar graph is accompanied by two Top Ten lists: domains represented in the graph and Web content categories represented in the graph.

Performance statistics displayed in red signify that the value exceeds the normal threshold.

Understanding the indicator lights

The Barracuda Web Filter has five indicator lights on the front panel that blink when the system processes HTTP traffic.

Figure 3.3 displays the location of each of the lights.
Figure 3.3: Indicator Lights

Table 3.2: Description of the Indicator Lights

<table>
<thead>
<tr>
<th>Light</th>
<th>Color</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spyware Access</td>
<td>Red</td>
<td>Blinks when the Barracuda Web Filter blocks installed spyware from accessing external sites.</td>
</tr>
<tr>
<td>Spyware Download</td>
<td>Yellow</td>
<td>Blinks when the Barracuda Web Filter blocks a spyware application from being downloaded.</td>
</tr>
<tr>
<td>Traffic</td>
<td>Green</td>
<td>Blinks when the Barracuda Web Filter processes traffic.</td>
</tr>
<tr>
<td>Disk</td>
<td>Green</td>
<td>Blinks during disk activity.</td>
</tr>
<tr>
<td>Power</td>
<td>Green</td>
<td>Displays a solid green light when the system is powered on.</td>
</tr>
</tbody>
</table>

Viewing the traffic log

The BASIC > Log page displays a list of system logs for your Barracuda Web Filter. On a regular basis you should view the Log page to monitor the Web and spyware traffic (both HTTP and non-HTTP) passing through your Barracuda Web Filter. Use this page to view the following information about each entry in this log:

- Date and time the Barracuda Web Filter processed the request.
- IP address of the client that originated the request.
- IP address of the requested Web site or application.
- Type of file contained in the request, as designated by the HTTP header. For a list of common MIME types, see the help page for the MIME Type Blocking feature.
- The user name or group that sent the request.
- The action taken by the Barracuda Web Filter.
- The reason the Barracuda Web Filter performed the action.
- Detailed information about the actions.
- Number of bytes of data processed for this request.
You can perform the following operations on the Log page:

- Apply filters to locate specific log entries
- Refresh to update the log. The most recent entry is at the top of the list.
- Clear the log to purge all the current entries.

**Viewing the application log**

The BASIC > Application Log page displays the log of all the Web application traffic processed by the Barracuda Web Filter. Use this page to view the following information about each entry in this log:

- Date and time the Barracuda Web Filter blocked the request.
- IP address of the client that initiated the request.
- Action taken by the Barracuda Web Filter
- Reason the Barracuda Web Filter performed the action.
- Name of the application that was blocked.
- Number of bytes of data processed for the request.

You can perform the following operations in the Application Log page:

- Customize the appearance of the display
- Update the contents displayed in this page
- Clear the contents of the traffic log itself
- Filter the entries displayed
- Export the displayed entries to a CSV file

**Viewing the warned activity list**

The BASIC > Warned Activity page displays the list of all warned activity that is in effect for the client machines protected by the Barracuda Web Filter system. Use this page to view the following information about each entry in this log:

- Date and time that the warned activity was triggered.
- IP address of the client machine that triggered the warned activity.
- Username that triggered the warned activity. This field indicates whether the user account is from the local, LDAP or NTLM realm.
- The URL that the user was attempting to access when the warned activity triggered.
- The domain names that triggered the warned activity.
- The Web content category that triggered the warned activity.

You can perform the following operations in the Warned Activity page:

- View details about a warned activity
- Clear all warned activity

A warned activity remains in effect until it times out (as configured in the BLOCK/ACCEPT > Configuration page) or until it is explicitly removed by the Administrator (using the BASIC > Warned Activity page). If the user attempts to access the same Web site after a warned activity times out or is deleted, the user must click the Proceed button to re-acknowledge the warning and then access the Web site again.
## Automating the delivery of system alerts and notifications

Use the **BASIC > Administration** page to configure the Barracuda Web Filter to automatically email system alerts to the email addresses you specify.

System alerts notify you when:

- Your Energize Update subscription is about to expire
- New virus definitions are available
- New firmware updates are available
- Your system is low on disk space

## Generating system reports

Use the **BASIC > Reports** page to choose from over 30 types of system reports that can help you keep track of spyware-blocking and Web-filtering activity performed by the Barracuda Web Filter. You can either generate a system report on demand, or configure the Barracuda Web Filter to automatically generate the system reports on a daily basis and email the reports to specific email addresses.

Reports are available for the following activity categories:

- Bandwidth use
- Web sites requested or visited
- Web-filtering actions (blocked, warned, or monitored requests)
- Spyware activity
- Actions by hour or by time of day
- User activity
- Spyware and virus downloads

These same reports provide information about the following user-specific or Web-specific categories:

- User activity by time
- User-specific activity
- Domain-specific activity
- Category-specific activity
- Web site-specific activity

For detailed descriptions of the system reports, see the online help for the **Reports** page.

## Viewing a list of infected clients

Use the **BASIC > Infection Activity** page to view a list of clients that are infected with a virus or spyware.

You can use this list to determine if any of your clients have been prompted to use the Barracuda Spyware Removal Tool. By default, this tool is disabled but you can enable the tool on the **BLOCK/ACCEPT > Block Messages** page.

## Viewing system tasks

The **ADVANCED > Task Manager** page provides a list of tasks that are in the process of being performed and also displays any errors encountered when performing these tasks.
Some of the tasks that the Barracuda Web Filter tracks include:

- Linked management setup
- Configuration restoration

If a task takes a long time to complete, you can click **Cancel** next to the task name and then run the task at a later time when the system is less busy.

The Task Errors section will list an error until you manually remove it from the list. The errors are not phased out over time.
Managing the Barracuda Web Filter

This section describes how to manage and maintain your Barracuda Web Filter using the administration interface. This section covers the following topics:

- Backing up and restoring system configuration ...................................... 48
- Updating the Barracuda Web Filter firmware .......................................... 48
- Updating the spyware, virus, and category definitions ............................. 48
- Replacing a failed system ....................................................................... 49
- Reloading, restarting, and shutting down the system ............................... 49
- Using the built-in troubleshooting tools .................................................... 49
- Rebooting the system in recovery mode ................................................... 50

**Backing up and restoring system configuration**

The **ADVANCED > Backup** page lets you back up and restore the configuration of your Barracuda Web Filter. You should back up your system on a regular basis in case you need to restore this information on a replacement Barracuda Web Filter or in the event your current system data becomes corrupt.

If you are restoring a backup file on a new Barracuda Web Filter that is not configured, you need to assign your new system an IP address and DNS information on the **BASIC > IP Configuration** page.

Note the following about the backup file:

- Do not edit backup files. Any configuration changes you want to make need to be done through the administration interface. The configuration backup file contains a checksum that prevents the file from being uploaded to the system if any changes are made.
- You can safely view a backup file in Windows WordPad or Microsoft Word. You should avoid viewing backup files in Windows Notepad because the file can become corrupted if you save the file from this application.
- The following information is not included in the backup file:
  - System password
  - System IP information
  - DNS information

**Updating the Barracuda Web Filter firmware**

Use the **ADVANCED > Firmware Update** page to manually update the firmware version of the system or revert to a previous version. The only time you should revert back to an old firmware version is if you recently downloaded a new version that is causing unexpected problems. In this case, call Barracuda Networks Technical Support before reverting back to a previous firmware version.

If you have the latest firmware version already installed, the **Download Now** button is disabled.

*Note:* Applying a new firmware version results in a temporary loss of service. For this reason, you should apply new firmware versions during non-business hours.

**Updating the spyware, virus, and category definitions**

Use the **ADVANCED > Energize Updates** page to manually update the current spyware, virus, and category definitions, as well as change the interval at which the Barracuda Web Filter checks for updates. Energize Updates provide the Barracuda Web Filter with the latest definitions.
We recommend that the **Automatically Update** setting for your spyware and virus definitions be set to **Hourly** so your Barracuda Web Filter receives the latest definitions as soon as new threats are identified by Barracuda Central.

**Replacing a failed system**

Before you replace your Barracuda Web Filter, use the tools provided on the **ADVANCED > Troubleshooting** page to try to resolve the problem.

In the event that a Barracuda Web Filter system fails and you cannot resolve the issue, customers that have purchased the Instant Replacement service can call technical support and receive a new unit within 24 hours.

After receiving the new system, ship the failed Barracuda Web Filter back to Barracuda Networks at the address below. Barracuda Networks Technical Support can provide details on the best way to return the unit.

Barracuda Networks  
3175 S. Winchester Blvd  
Campbell, CA 95008

*Note:* To set up the new Barracuda Web Filter so it has the same configuration as your old failed system, restore the backup file from the old system onto the new system, and then manually configure the new system’s IP information on the **BASIC > IP Configuration** page. For information on restoring data, refer to **Backing up and restoring system configuration** on page 48.

**Reloading, restarting, and shutting down the system**

Use the **System Reset/Shutdown** section on the **BASIC > Administration** page to shutdown, reset, and reload the Barracuda Web Filter.

Shutting down the system powers off the unit. Restarting the system reboots the unit. Reloading the system re-applies the system configuration.

You can also reset the system by pressing the **RESET** button on the front panel of the system. The following actions occur:

- Reboots the system
- Resets the firmware version to the factory setting

Do not press and hold the **RESET** button for longer than a few seconds. Doing so changes the IP address of the system. Pushing and holding the **RESET** button for 5 seconds changes the default IP address to **192.168.1.200**. Holding the button for 12 seconds changes the IP address to **10.1.1.200**.

**Using the built-in troubleshooting tools**

The **ADVANCED > Troubleshooting** page provides various tools that help troubleshoot network connectivity issues that may be impacting the performance of your Barracuda Web Filter.

For example, you can test the connection between the Barracuda Web Filter to Barracuda Central to make sure it can successfully download the latest virus and spyware definitions. You can also ping devices from the Barracuda system, perform a traceroute from the Barracuda system to a destination server, and other tasks.
Rebooting the system in recovery mode

If your Barracuda Web Filter experiences a serious issue that impacts its core functionality, you can use diagnostic and recovery tools that are available at the reboot menu to return your system to an operational state.

Before you use the diagnostic and recovery tools, do the following:

- Use the built-in troubleshooting tools on the ADVANCED > Troubleshooting page to help diagnose the problem.
- Perform a system restore from the last known good backup file.
- Contact Barracuda Networks Technical Support for additional troubleshooting tips.

As a last resort, you can reboot your Barracuda Web Filter and run a memory test or perform a complete system recovery, as described in this section.

To perform a system recovery or hardware test:

1. Connect a monitor and keyboard directly to your Barracuda Web Filter.

2. Reboot the system by doing one of the following:
   - In the Web interface: Go to the BASIC > Administration page, navigate to the System Reload/Shutdown section, and click Restart.
   - At the front panel of the Barracuda Web Filter: Press the Power button on the front panel to turn off the system, and then press the Power button again to turn the system on.

The Barracuda splash screen displays with the following three boot options:

Barracuda
Recovery
Hardware_Test

3. Use your keyboard to select the desired boot option, and press the Enter key.

You must select the boot option within three seconds after the splash screen appears. If you do not select an option within three seconds, the Barracuda Web Filter starts up in Normal mode (first option).

For a description of each boot option, refer to Reboot options on page 51.

Note: To stop a hardware test, reboot your Barracuda Web Filter by pressing the Ctrl-Alt-Del keys.
Reboot options

Table 3.3 describes the options available at the reboot menu.

Table 3.3: Reboot Options

<table>
<thead>
<tr>
<th>Reboot Options</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barracuda</td>
<td>Starts the Barracuda Web Filter in the normal (default) mode. This option is automatically selected if no other option is specified within the first three seconds of the splash screen appearing.</td>
</tr>
</tbody>
</table>
| Recovery       | Displays the Recovery Console, where you can select the following options:  
  • Perform filesystem repair—Repairs the file system on XFS-based Barracuda Web Filter. Select this option only if the serial number on your Barracuda Web Filter is below 24364; otherwise select the Perform Full System Re-image option.  
  • Perform full system re-image—Restores the factory settings on your Barracuda Web Filter and clears out the configuration information. Select this option if the serial number on your Barracuda Web Filter is 24364 or above.  
  • Enable remote administration—Turns on reverse tunnel that allows Barracuda Networks Technical Support to access the system. Another method for enabling remote administration is to click Establish Connection to Barracuda Central on the ADVANCED >Troubleshooting page.  
  • Run diagnostic memory test—Runs a diagnostic memory test from the operating system. If problems are reported when running this option, we recommend running the Hardware_Test option next. |
| Hardware_Test  | Performs a thorough memory test that shows most memory related errors within a two-hour time period. The memory test is performed outside of the operating system and can take a long time to complete. Reboot your Barracuda Web Filter to stop the hardware test. |
Chapter 4

Managing Users and Groups

This chapter explains how to manage users and groups on your Barracuda Web Filter. This chapter covers the following topics:

- Overview .................................................................................................................. 54
- About local users ....................................................................................................... 54
- About domain users ................................................................................................... 54
- Creating local users and groups ............................................................................... 55
  - Creating local user accounts .................................................................................. 55
  - Creating local groups ............................................................................................. 55
- Creating IP address groups ......................................................................................... 55
- Integrating with a user authentication service ......................................................... 56
  - Enabling LDAP domain user authentication ......................................................... 56
  - Enabling NTLM domain user authentication ......................................................... 59
- Viewing and managing accounts .............................................................................. 61
Overview

The Barracuda Web Filter distinguishes between two basic classes of the users who access Web sites and Web applications from client machines that it has been configured to protect: local users and domain users.

You can apply filtering and blocking policies as well as exception rules to both classes of users.

You can also view the following information about both classes of users:

- Account View
- Traffic Log
- Applications Log
- Warned Activity
- Reports output

Local users are shown as anonymous until they authenticate in the Barracuda Web Filter system by providing login information in order to proceed to a blocked or warned Web page or application.

Domain users are shown as anonymous until they become authenticated in the Barracuda Web Filter system by providing credentials to their respective authentication service that has been integrated with the Barracuda Web Filter. Authenticated domain users are shown by username, client IP address, and group membership.

In some cases, you may need to create local accounts as well as enable your Barracuda Web Filter to look up domain accounts. For example, if your regular employees have LDAP accounts but contract employees do not, then you might need to create local accounts for the contractor employees.

About local users

Local users that you define by listing their existing usernames in the USERS/GROUPS > New Users page. The Barracuda Web Filter authenticates these users from its local database. To apply Web filtering policies (and exception rules to your filtering policies) to multiple local users, you can assign local users to local groups that you define in the USERS/GROUPS > Local Groups page.

You can also create IP subnet-based groups, locally define groups of users who access Web sites and Web applications from client machines within specific ranges of IP addresses. Define IP subnet-based groups of local users in the USERS/GROUPS > IP Groups page.

For more information, see Creating local users and groups on page 55.

About domain users

The Barracuda Web Filter can authenticate domain users using your existing authentication service. You can integrate the Barracuda Web Filter with any of the following types authentication servers:

- LDAP
- NTLM

Doing so enables you to apply Web filtering policies and policy exceptions to your domain users without having to re-create local accounts for these users.

For more information, see Integrating with a user authentication service on page 56.
Creating local users and groups

This section describes how to create local accounts that you can assign to exception policies. This section contains the following topics:

- Creating local user accounts ............................................................... 55
- Creating local groups ........................................................................ 55
- Creating IP address groups ................................................................. 55

Creating local user accounts

Use the USERS/GROUPS > New Users page to create new users that the Barracuda Web Filter will authenticate locally from its database. If you want users to be authenticated using your existing user authentication service instead, go to the Authentication Services page and enter the information for your authentication server.

**Note:** Local user accounts cannot be used to log into the administration interface. You can only use the default admin account to log into the administration interface.

If you want a new user account to be a member of a group, be sure the group already exists. If you need to create a group, go to the USERS/GROUPS > Local Groups page.

Creating local groups

Use the USERS/GROUPS > Local Groups page to create groups for your local users. The most common reason to create a group is so you can apply an exception policy to multiple users at the same time instead of to individual users.

To create a group, enter the group name in the provided field and click Add.

To assign an existing user to this group, go to the Accounts View page and click Edit next to the account that you want to join the group. A user can belong to multiple groups.

Creating IP address groups

The USERS/GROUPS > IP page lets you create a group for a single or range of IP addresses. The most common reasons to create an IP group is to apply an exception policy to:

- Multiple users on the same subnet. In this case, enter the subnet mask for the subnet in the provided field.
- A static IP address. In this case, enter the static IP address in the provided field.

After you enter the IP address or subnet mask and click Add, you can assign an exception policy to the IP group on the BLOCK/ACCEPT > Exceptions page.
Integrating with a user authentication service

You can integrate the Barracuda Web Filter with your existing authentication server to gain the following benefits:

**Web filtering policy exceptions can be applied to domain users**—If you do not integrate with your LDAP or NTLM authentication server, you can apply filtering policy exceptions only to local users and groups that you create in the USERS/GROUPS tab.

**Domain users can be authenticated in the Barracuda Web Filter**—LDAP users are authenticated when credentials are provided in order to proceed to a blocked or warned Web page or application. NTLM users are authenticated by single sign-on access against the NTLM authentication service.

Authenticated domain users are known by username, client IP address, and group membership:

- Usernames and client IP addresses of authenticated domain users are visible in the Account View page (with the exception of NTLM users), the Log page, the Applications Log page, and in Reports output.
- Group membership information about authenticated domain users is available by opening the Lookup facility (accessed by clicking Lookup in the USERS/GROUPS > Exceptions page) and using the Active Directory User/Group section of that window.

Domain users that are unauthenticated in the Barracuda Web Filter appear as anonymous users.

Use the USERS/GROUPS > Authentication Services page to integrate the Barracuda Web Filter with your existing authentication server:

- Enabling LDAP domain user authentication................................. 56
- Enabling NTLM domain user authentication................................. 59

### Enabling LDAP domain user authentication

If your network uses a Lightweight Directory Access Protocol (LDAP) or Active Directory authentication (AD) server, your LDAP domain users can use the LDAP or AD authentication service to become authenticated in the Barracuda Web Filter system.

**To enable LDAP user authentication**

To enable LDAP domain user authentication against your LDAP or AD server, go to the USERS/GROUPS > Authentication Services page. In the LDAP tab, provide information about connecting to the LDAP server, binding to the LDAP server, and the encryption type.

**About the optional Barracuda DC Agent software**

If your LDAP directory authenticates against a domain controller running Windows Server 2003 with Service Pack 1 (SP1), you can enable the Barracuda Web Filter to recognize your LDAP domain users whenever those users authenticate against the LDAP domain controller server. To enable the Barracuda Web Filter to transparently track user login activity in your Windows domains, install the Barracuda DC Agent software on each relevant LDAP domain controller server, and configure each relevant Barracuda Web Filter to communicate with each DC agent.

**Note:** If this feature is not enabled (or cannot be supported by your domain controller), an LDAP domain user surfs anonymously until providing credentials for a second time, in order to proceed past a blocked or warned Web activity.
Communication between the LDAP domain controller servers and the Barracuda Web Filters in your network enable the Barracuda Web Filter to transparently track user login activity in your LDAP domains. This communication is managed by the following software components:

**Domain controller audit policies**—The local audit policies are configured so that the domain controller audits user log-on and log-off activity and generates an account log-on event when a domain user account is authenticated on this domain controller.

**Barracuda DC Agent**—The DC Agent is a Windows service that you install and configure on each LDAP domain controller server that runs Windows Server 2003 with SP1. Configuration of the service consists of specifying the Barracuda Web Filter devices with which the DC Agent is to communicate. Each instance of this service maintains a record of all the users that have been authenticated by the LDAP server.

The DC Agent service appears in the Control Panel > Services window. You can manually stop and start the DC Agent like all other Windows services. You should configure this service to start automatically. The DC Agent service does not impact the performance of your domain controller.

**Session Manager**—This is the process that you enable and configure on each Barracuda Web Filter that is to communicate with the DC Agent running on the domain controller. This process has the capability to communicate with multiple DC Agents.

**Note:** The Barracuda DC Agent software should not be installed on your NTLM domain controller. Moreover, no additional authentication services can be configured in the Barracuda Web Filter system if NTLM authentication is enabled.

The DC Agent performs the following functions:

- Enables the Barracuda Web Filter to track authenticated accounts in your LDAP directory.
- Keeps a record of all the users that have been authenticated by the domain controller, and then provides this information to the Session Monitor on the Barracuda Web Filter. The Session Monitor polls the DC Agent every 15 seconds to obtain the list of authenticated users. You can change the polling frequency on the USERS/GROUPS > Configuration page.
- All logging information for the DC Agent is stored in the DCDebug.txt log, which is located in the C:\Program Files\Barracuda directory. The DC Agent creates a new log file daily or when the size of existing log file exceeds 100 KB, whichever comes first. For example, DCDebug.txt_2 is automatically created when the size of DCDebug.txt_1 reaches 100 KB or passes the daily marker. Only the last ten log files are kept on the system. After the tenth log is created, the first log file is overwritten with new data. For this reason, it is important to view the time stamp on the log file to determine which file contains the latest data. Logging information is also shown on the Logs tab of the Barracuda DC Agent management interface. To open this interface, go to your domain controller and select Start > Programs > Barracuda > DCAgent.

The following figure illustrates this process.
1. A user logs into their domain and is authenticated by the domain controller.
2. The DC Agent keeps a record of the newly authenticated user.
3. The Session Monitor polls the DC Agent (every 15 seconds by default) and retrieves the latest list of authenticated users.
4. The user attempts to access a Web site that is blocked by the Barracuda Web Filter. The Barracuda Web Filter prompts the user to enter account information that will allow them to override the filter.
5. The user enters account information, and the Barracuda Web Filter determines if an exception policy exists that allows the account to override the filter. If an exception policy does exist, the user is allowed to access the previously blocked content.

**Installing the Barracuda DC Agent on your domain controllers**

To download, install, and configure the Barracuda DC Agent software, go to the USERS/GROUPS > Configuration page and navigate to the DC Agent Configuration section.

**Exempting selected LDAP domain users from filtering**

To exempt LDAP domain users from policy engine processing, go to the USERS/GROUPS > Configuration page and navigate to the DC Agent Configuration section. One use for this feature is to prevent traffic caused by script logic or other background users from appearing in the traffic log.
Enabling NTLM domain user authentication

If your network uses an NT LAN Manager (NTLM) authentication server, your NTLM domain users transparently become authenticated in the Barracuda Web Filter using their Microsoft Windows credentials. This single sign-on (SSO) method of access control is provided by transparent proxy authentication against the your NTLM server.

To enable transparent proxy authentication against your NTLM server, you must join the Barracuda Web Filter to the NTLM domain as an authorized host. The process of joining the domain also synchronizes NTLM group information from your domain controller to the Barracuda Web Filter.

About NTLM authentication in Windows 2000 or 2003 AD domains

Windows Server 2000 with Active Directory runs the NTLM authentication protocol by default. With Windows Server 2003, NTLM authentication is available only in a mixed mode Active Directory domain. In a native mode Active Directory domain, Windows Server 2003 runs the Kerberos authentication protocol.

Reasons for using an NTLM authentication server

Typical reasons for using an NTLM authentication server are listed below:

• If you are replacing an existing forward proxy server that uses NTLM authentication.
• If your network cannot rely on all users presenting a unique IP address.

For detailed descriptions of these scenarios, see the online help for the Authentication Services page.

Requirements for using an NTLM authentication server

Before you integrate with an NTLM authentication server, verify the following requirements:

• The Barracuda Web Filter must be deployed as a forward proxy.
• No other authentication services may be configured.
• No Barracuda DC Agents may be in use on any of your domain controllers.
• You must enable the Forced Proxy Authentication option in the USERS/GROUPS > Configuration page.
• Web browsers must use the Barracuda Web Filter as the HTTP proxy.

For detailed descriptions of these requirements, see the online help for the Authentication Services page.

Limitations when using an NTLM authentication server

The following limitations apply when using an NTLM authentication server with the Barracuda Web Filter:

• No login override of blocked pages for NTLM domain users who encounter a block message.
• No logout option for NTLM domain users who proceed to a blocked Web page.
• NTLM domain users not listed in the Account View page.
• NTLM realm is not listed for users listed in the syslog output.

For detailed descriptions of these restrictions, see the online help for the Authentication Services page.
To enable NTLM user authentication

To enable NTLM user authentication, go to the USERS/GROUPS > Authentication Services page and see the online help topic for NTLM.
Viewing and managing accounts

The USERS/GROUPS > Account View page displays all the user accounts that have either been created locally on your Barracuda Web Filter or that reside in your LDAP database. This page lets you view details about each account and make the following changes to any locally created accounts:

- Edit a local account by assigning it to a group or enabling/disabling the account
- Change the password of a local account
- Delete a local account

To quickly locate a specific account, use the filter feature at the top of the page to search for specific patterns in the account details.
Appendix A

About the Barracuda Web Filter Hardware

This appendix provides hardware information for the Barracuda Web Filter. The following topics are covered:

- Front panel of the Barracuda Web Filter ............................................. 64
- Back panel of the Barracuda Web Filter ............................................. 68
- Hardware compliance ....................................................................... 71
Front panel of the Barracuda Web Filter

Figure A.1, Figure A.2, and Figure A.3 illustrate the front panels for each model.

Barracuda Web Filter 210, 310, and 410

Figure A.1 shows the front components as described in Table A.1.

Table A.1: Front Panel Descriptions

<table>
<thead>
<tr>
<th>Diagram Location</th>
<th>Component Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>WAN port</td>
<td>Port for WAN connection</td>
</tr>
<tr>
<td>2</td>
<td>LAN port</td>
<td>Port for LAN connection</td>
</tr>
<tr>
<td>3</td>
<td>Spyware Activity</td>
<td>Displays spyware activity</td>
</tr>
<tr>
<td>4</td>
<td>Spyware or Virus Downloads</td>
<td>Displays download activity</td>
</tr>
<tr>
<td>5</td>
<td>Internet Activity</td>
<td>Displays normal Internet activity</td>
</tr>
<tr>
<td>6</td>
<td>Hard Disk</td>
<td>Displays hard disk activity</td>
</tr>
<tr>
<td>7</td>
<td>System Power</td>
<td>Displays system power</td>
</tr>
<tr>
<td>8</td>
<td>Reset Button</td>
<td>Resets the Barracuda Web Filter</td>
</tr>
<tr>
<td>9</td>
<td>Power Button</td>
<td>Powers on or off the Barracuda Web Filter</td>
</tr>
</tbody>
</table>
Barracuda Web Filter 610

Figure A.2 shows the front components as described in Table A.2.

Figure A.2: Barracuda Web Filter 610 Front Panel

Table A.2 describes the front components on the Barracuda Web Filter 610.

Table A.2: Barracuda Web Filter 610 Front Panel Descriptions

<table>
<thead>
<tr>
<th>Diagram Location</th>
<th>Component Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Hard Disk Drive #1</td>
<td>Location of #1 hard disk drive</td>
</tr>
<tr>
<td>2</td>
<td>Hard Disk Drive Inactivity</td>
<td>Displays the hard disk is inactive</td>
</tr>
<tr>
<td>3</td>
<td>Hard Disk Drive Activity</td>
<td>Displays the hard disk drive is active</td>
</tr>
<tr>
<td>4</td>
<td>Hard Disk Drive #2</td>
<td>Location of #2 hard disk drive</td>
</tr>
<tr>
<td>5</td>
<td>Hard Disk Drive Inactivity</td>
<td>Displays the hard disk is inactive</td>
</tr>
<tr>
<td>6</td>
<td>Hard Disk Drive Activity</td>
<td>Displays the hard disk drive is active</td>
</tr>
<tr>
<td>7</td>
<td>Spyware Activity</td>
<td>Displays spyware activity</td>
</tr>
<tr>
<td>8</td>
<td>Spyware or Virus Downloads</td>
<td>Displays spyware or virus downloads</td>
</tr>
<tr>
<td>9</td>
<td>Internet Activity</td>
<td>Displays normal Internet activity</td>
</tr>
<tr>
<td>10</td>
<td>WAN port</td>
<td>Port for WAN connection</td>
</tr>
<tr>
<td>11</td>
<td>Hard Disk</td>
<td>Displays hard disk activity</td>
</tr>
<tr>
<td>12</td>
<td>System Power</td>
<td>Displays system power</td>
</tr>
<tr>
<td>13</td>
<td>LAN Port</td>
<td>Port for LAN connection</td>
</tr>
<tr>
<td>14</td>
<td>Reset Button</td>
<td>Resets the Barracuda Web Filter</td>
</tr>
<tr>
<td>15</td>
<td>Power Button</td>
<td>Powers on or off the Barracuda Web Filter</td>
</tr>
</tbody>
</table>
Barracuda Web Filter 810 and 910

Figure A.3 shows the front components as described in Table A.3.

Table A.3 describes the front components on the Barracuda Web Filter 810 and 910.

**Table A.3: Barracuda Web Filter 810 and 910 Front Panel Descriptions**

<table>
<thead>
<tr>
<th>Diagram Location</th>
<th>Component Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Hard Disk Drive Locks</td>
<td>These locks are security features to prevent access from the hard disk drives</td>
</tr>
<tr>
<td>2</td>
<td>Hard Disk Drive #1</td>
<td>Location of #1 hard disk drive</td>
</tr>
<tr>
<td>3</td>
<td>Hard Disk Drive #2</td>
<td>Location of #2 hard disk drive</td>
</tr>
<tr>
<td>4</td>
<td>Hard Disk Drive #3</td>
<td>Location of #3 hard disk drive</td>
</tr>
<tr>
<td>5</td>
<td>Hard Disk Drive #4</td>
<td>Location of #4 hard disk drive</td>
</tr>
<tr>
<td>6</td>
<td>USB Port</td>
<td>USB port for a mouse or keyboard</td>
</tr>
<tr>
<td>7</td>
<td>Hard Disk Drive #4 Activity</td>
<td>Displays the activity for hard disk drive #4</td>
</tr>
<tr>
<td>8</td>
<td>Hard Disk Drive #1 Activity</td>
<td>Displays the activity for hard disk drive #1</td>
</tr>
<tr>
<td>9</td>
<td>Reset Button</td>
<td>Resets the Barracuda Web Filter</td>
</tr>
<tr>
<td>10</td>
<td>System Power</td>
<td>Displays the power for the Barracuda Web Filter</td>
</tr>
<tr>
<td>11</td>
<td>LAN</td>
<td>Displays the management for LAN connection</td>
</tr>
<tr>
<td>12</td>
<td>Hard Disk Drive #6 Activity</td>
<td>Displays the activity for hard disk drive #6</td>
</tr>
</tbody>
</table>
### Table A.3: Barracuda Web Filter 810 and 910 Front Panel Descriptions

<table>
<thead>
<tr>
<th>Diagram Location</th>
<th>Component Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>13</td>
<td>Hard Disk Drive #4</td>
<td>Displays the activity for hard disk drive #4</td>
</tr>
<tr>
<td></td>
<td>Activity</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>WAN Port</td>
<td>Port for WAN connection</td>
</tr>
<tr>
<td>15</td>
<td>LAN Port</td>
<td>Port for LAN connection</td>
</tr>
</tbody>
</table>
Back panel of the Barracuda Web Filter

Figure A.4, Figure A.5, and Figure A.6 illustrates the back panels for each model.

Barracuda Web Filter 210, 310, and 410

Figure A.4 shows the back components as described in Table A.4.

Table A.4 describes the back components on the Barracuda Web Filter 210, 310, and 410.

**Table A.4: Barracuda Web Filter 210, 310, and 410 Back Component Descriptions**

<table>
<thead>
<tr>
<th>Diagram Location</th>
<th>Component Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Power Supply</td>
<td>Connection for the AC power cord; standard power supply</td>
</tr>
<tr>
<td>2</td>
<td>Fan</td>
<td>Location of the fan</td>
</tr>
<tr>
<td>3</td>
<td>Mouse Port</td>
<td>Connection for the mouse</td>
</tr>
<tr>
<td>4</td>
<td>Keyboard Port</td>
<td>Connection for the keyboard</td>
</tr>
<tr>
<td>5</td>
<td>Serial Port</td>
<td>Connection for the serial console cable</td>
</tr>
<tr>
<td>6</td>
<td>Parallel Port</td>
<td>Connection for the parallel cable</td>
</tr>
<tr>
<td>7</td>
<td>Monitor Port</td>
<td>Connection for the monitor</td>
</tr>
<tr>
<td>8</td>
<td>USB Ports (4)</td>
<td>Connection for USB devices</td>
</tr>
<tr>
<td>9</td>
<td>LAN Port</td>
<td>Connection for the LAN</td>
</tr>
</tbody>
</table>
Barracuda Web Filter 610

Figure A.5 shows the back components as described in Table A.5.

Figure A.5: Barracuda Web Filter 610 Back Panel

Table A.5 describes the back components on the Barracuda Web Filter 610.

Table A.5: Barracuda Web Filter 610 Back Component Descriptions

<table>
<thead>
<tr>
<th>Diagram Location</th>
<th>Component Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Fan</td>
<td>Location of the fan</td>
</tr>
<tr>
<td>2</td>
<td>Power Supply</td>
<td>Connection for the AC power cord; standard power supply</td>
</tr>
<tr>
<td>3</td>
<td>Mouse Port</td>
<td>Connection for the mouse</td>
</tr>
<tr>
<td>4</td>
<td>Keyboard Port</td>
<td>Connection for the keyboard</td>
</tr>
<tr>
<td>5</td>
<td>USB Ports (2)</td>
<td>Connection for USB devices</td>
</tr>
<tr>
<td>6</td>
<td>Serial Port</td>
<td>Connection for the serial console cable</td>
</tr>
<tr>
<td>7</td>
<td>Monitor Port</td>
<td>Connection for the monitor</td>
</tr>
<tr>
<td>8</td>
<td>LAN Port</td>
<td>Connection for the LAN</td>
</tr>
</tbody>
</table>

Barracuda Web Filter 810 and 910

Figure A.6 shows the back components as described in Table A.6.

Figure A.6: Barracuda Web Filter 810 Front Panel
Table A.6 describes the back components on the Barracuda Web Filter 810 and 910.

Table A.6: Barracuda Web Filter 810 and 910 Back Component Descriptions

<table>
<thead>
<tr>
<th>Diagram Location</th>
<th>Component Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Fans (4)</td>
<td>Locations of the fans</td>
</tr>
<tr>
<td>2</td>
<td>Power Supplies (2)</td>
<td>Connection for the AC power cord; standard power supply</td>
</tr>
<tr>
<td>3</td>
<td>Mouse Port</td>
<td>Connection for the mouse</td>
</tr>
<tr>
<td>4</td>
<td>Keyboard Port</td>
<td>Connection for the keyboard</td>
</tr>
<tr>
<td>5</td>
<td>USB ports (2)</td>
<td>Connections for USB devices</td>
</tr>
<tr>
<td>6</td>
<td>Serial Port</td>
<td>Connection for the serial console cable</td>
</tr>
<tr>
<td>7</td>
<td>Monitor Port</td>
<td>Connection for the monitor</td>
</tr>
<tr>
<td>8</td>
<td>LAN Port</td>
<td>Connection for the LAN</td>
</tr>
</tbody>
</table>
Hardware compliance

This section contains compliance information for the Barracuda Web Filter hardware.

Notice for the USA

Compliance Information Statement (Declaration of Conformity Procedure) DoC FCC Part 15: This device complies with part 15 of the FCC Rules.

Operation is subject to the following 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. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user in encouraged to try one or more of the following measures:
   • Reorient or relocate the receiving antenna.
   • Increase the separation between the equipment and the receiver.
   • Plug the equipment into an outlet on a circuit different from that of the receiver.
   • Consult the dealer or an experienced radio/ television technician for help.

Notice for Canada

This apparatus complies with the Class B limits for radio interference as specified in the Canadian Department of Communication Radio Interference Regulations.

Notice for Europe (CE Mark)

You can use regular expressions in many of the Barracuda Web Filter features. Regular Expressions allow you to flexibly describe text so that a wide range of possibilities can be matched.

The following caveats apply when using regular expressions:

- Be careful when using special characters such as |, *, '.' in your text. For more information, refer to Using special characters in expressions on page 74.
- All matches are not case sensitive.

Table B.1 describes the most common regular expressions supported by the Barracuda Web Filter.

Table B.1: Common Regular Expressions

<table>
<thead>
<tr>
<th>Expression</th>
<th>Matches...</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Operators</strong></td>
<td></td>
</tr>
<tr>
<td>*</td>
<td>Zero or more occurrences of the character immediately preceding</td>
</tr>
<tr>
<td>+</td>
<td>One or more occurrences of the character immediately preceding</td>
</tr>
<tr>
<td>?</td>
<td>Zero or one occurrence of the character immediately preceding</td>
</tr>
<tr>
<td></td>
<td>Either of the characters on each side of the pipe</td>
</tr>
<tr>
<td>()</td>
<td>Characters between the parenthesis as a group</td>
</tr>
<tr>
<td><strong>Character Classes</strong></td>
<td></td>
</tr>
<tr>
<td>.</td>
<td>Any character except new line</td>
</tr>
<tr>
<td>[ac]</td>
<td>Letter 'a' or letter 'c'</td>
</tr>
<tr>
<td>[*ac]</td>
<td>Anything but letter 'a' or letter 'c'</td>
</tr>
<tr>
<td>[a-z]</td>
<td>Letters 'a' through 'z'</td>
</tr>
<tr>
<td>[a-zA-Z.]</td>
<td>Letters 'a' through 'z' or 'A' through 'Z' or a dot</td>
</tr>
<tr>
<td>[a-zA-Z]</td>
<td>Letters 'a' through 'z' or a dash</td>
</tr>
<tr>
<td>\d</td>
<td>Digit, shortcut for [0-9]</td>
</tr>
<tr>
<td>\D</td>
<td>Non-digit, shortcut for [*0-9]</td>
</tr>
<tr>
<td>\a</td>
<td>Digit, shortcut for [0-9]</td>
</tr>
<tr>
<td>\w</td>
<td>Part of word: shortcut for [A-Za-z0-9_]</td>
</tr>
<tr>
<td>\W</td>
<td>Non-word character: shortcut for [*\w]</td>
</tr>
</tbody>
</table>
Using special characters in expressions

The following characters have a special meaning in regular expressions and should be prepended by a backward slash (\) when you want them interpreted literally:

**Table B.2: Special Characters**

<table>
<thead>
<tr>
<th>Character</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>.</td>
<td>$</td>
</tr>
<tr>
<td>[</td>
<td>(</td>
</tr>
<tr>
<td>]</td>
<td>)</td>
</tr>
<tr>
<td>\</td>
<td></td>
</tr>
<tr>
<td>*</td>
<td>^</td>
</tr>
<tr>
<td>?</td>
<td>@</td>
</tr>
</tbody>
</table>

Examples

*Table B.3* provides some examples to help you understand how regular expressions can be used.

**Table B.3: Regular Expressions**

<table>
<thead>
<tr>
<th>Example</th>
<th>Matches...</th>
</tr>
</thead>
<tbody>
<tr>
<td>viagra</td>
<td>viagra, VIAGRA or v1aGRA</td>
</tr>
<tr>
<td>d+</td>
<td>One or more digits: 0, 42, 007</td>
</tr>
<tr>
<td>(bad</td>
<td>good)</td>
</tr>
<tr>
<td>^free</td>
<td>letters 'free' at the beginning of a line</td>
</tr>
<tr>
<td>v[i1]agra</td>
<td>viagra or v1agra</td>
</tr>
<tr>
<td>v(ia</td>
<td>1a)gra</td>
</tr>
<tr>
<td>v</td>
<td>agra</td>
</tr>
<tr>
<td>v(|1</td>
<td>)?agra</td>
</tr>
<tr>
<td>^&quot;FREE!&quot;</td>
<td><em>FREE</em></td>
</tr>
<tr>
<td>^&quot;FREE!&quot; v.&quot;GRA</td>
<td><em>FREE</em> VIAGRA, <em>FREE</em> VEHICLEGRA, etc</td>
</tr>
</tbody>
</table>
Appendix C

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Index

A
accounts, creating 55
Active mode 16, 25, 29
administration interface
  logging in 21
Administration page 34, 46, 49
alerts, email 46
Appearance page 34
Applications page 37
Audit mode 21
authentication server
  LDAP 56
  NTLM 59

B
back panel details 68
backing up configuration 48
Backup page 48
Barracuda reboot option 51
Barracuda Spyware Removal Tool
  about 40
  enabling 40
  viewing a list of prompted clients 46
Barracuda Web Filter
  configuring 20, 32
  connecting to network 24
  installing 18
  linking 32, 34
  managing 48
  monitoring 43
Block Messages page 39
block/accept filters 36
Browse Test page 42

C
Caching page 35
character tags 75
configuring, Barracuda Web Filter 20
Content Filter page 37
creating
  local accounts 55
  local groups 55
Custom Categories page 38

D
definitions, updating 23, 48
deployment types
  forward proxy 13
  inline pass-through 11
diagnostic memory test 51
domain users
  LDAP 56
  NTLM 59
Domains page 38

E
Energize Updates 9, 48

F
failed system, replacing 49
files system repair 51
filters
  block messages 39
  blocked IP addresses 39
  content 37
  custom categories 38
  domains and subdomains 38
  exempt IP addresses 39
  MIME-type blocking 39
  URL patterns 38
  Web applications 37
firewall, configuring 20
Firmware Update page 48
forward proxy deployment 13
front panel details 64

G
groups, creating 55

H
hardware compliance information 71
hardware test 51
Hardware_Test reboot option 51
HTTPS filtering option 41

I
indicator lights 43
infected clients list 46
Infection Activity page 46
inline pass-through deployment 11
installing, Barracuda Web Filter 18
IP address, setting 19
IP Block/Exempt page 39
IP Configuration page 32

L
language, changing in administration interface 34
LDAP authentication server 56
LEDs (on front panel) 43
lights (on front panel) 43
Linked Management page 32, 34
local users 55
See also domain users 54
Log page 44

M
MIME Blocking page 39
monitoring spyware and Web activity
  Account View page 56, 59, 61
  Application Log page 45
  Infection Activity page 40, 46
  Log page 44
  Reports page 46
  Status page 43
  Warned Activity page 45
monitoring system status
  Barracuda Web Filter 210, 310, and 410 front panel 64
  Barracuda Web Filter 610 front panel 65
  Barracuda Web Filter 810 and 910 front panel 66
  Status page 43
  Troubleshooting page 49, 50, 51

N
network planning 16
network time protocol (NTP) 21
notifications, email 46
NTLM authentication server 59

O
operating mode, Barracuda Web Filter
  Active mode 16, 25, 29
  Audit mode 21

P
pre-existing proxy server 26

R
reboot options 50, 51
Recovery Console reboot option 51
recovery mode 50
regular expressions, about 73
re-imaging system 51
reloading the system 49
remote administration 51
repairing, file system 51
replacing failed system 49
Reports page 46
RESET button, using 49
restarting the system 49
restoring configuration 48

S
shutting down the system 49
standby systems 32, 34
Status page 43
subscription
  activating 23
  status 22
Syslog page 35

T
Task Manager page 46
TCP ports 20
testing memory 51
testing URLs 42
time zone, setting 34
transparent mode 11
Troubleshooting page 49

U
UDP ports 20
updating
  definitions 23, 48
  firmware 48
URL Patterns page 38

V
Virus Checking page 35

W
Warned Activity page 45