8e6 Technologies

8e6®**R3000** | Enterprise Filter

QUICK START
GUIDE

Model: R3000
R3000H (5K02-60)

Release 2.0.00 / Updated: 06.18.07

8e6 Enterprise Filter Quick Start Guide

Part# R3000H-QSG-070618

CONTENTS

8e6

R3000H ENTERPRISE FILTER INTRODUCTION

Thank you for choosing to evaluate the 8e6 Technologies R3000H Enterprise Filter. The R3000 tracks end users' online activity, and can be configured to block specific Web sites or service ports, thereby protecting your organization against lost productivity, network bandwidth issues, and possible legal problems that can result from the misuse of Internet resources. This product also features expansive library categories, instant message and peer-to-peer blocking, user authentication, and intuitive screens and fields for ease of use when configuring and maintaining the server, as well as managing user and group filtering profiles. This "H" server model includes RAID technology for fault tolerance and high performance.

About this Document

This document is divided into the following sections:

- **Introduction** - This section is comprised of an overview of the R3000 product and how to use this document

- **Service Information** - This section provides 8e6 Technologies contact information

- **Preliminary Setup Procedures** - This section includes instructions on how to physically set up the R3000 in your network environment

- **Install the Server** - This section explains how to configure the R3000 for filtering

- **Conclusion** - This section indicates that the quick start steps have been completed

- **Specifications** - This section features hardware specifications

- **RAID Maintenance** - This section includes information on troubleshooting RAID on the "H" server

Conventions Used in this Document

The following icons are used throughout this document to call attention to important information pertaining to handling, operation, and maintenance of the server; safety and preservation of the equipment, and personal safety:

NOTE: The "note" icon is followed by additional information to be considered.

WARNING: The "warning" icon is followed by information alerting you to a potential situation that may cause damage to property or equipment.

CAUTION: The "caution" icon is followed by information warning you that a situation has the potential to cause bodily harm or death.

SERVICE INFORMATION

The user should not attempt any maintenance or service on the unit beyond the procedures outlined in this document.

Any initial hardware setup problem that cannot be resolved at your internal organization should be referred to an 8e6 Technologies solutions engineer or technical support representative.

8e6 Corporate Headquarters (USA)

Local	:	714.282.6111
Domestic US	:	1.888.786.7999
International	:	+1.714.282.6111

8e6 Taiwan

Taipei Local	:	2501-5285
Domestic Taiwan	:	02-2501-5285
International	:	886-2-2501-5285

Procedures

When calling 8e6 Technologies regarding a problem, please provide the representative the following information:

- Your contact information.

- Serial number or original order number.

- Description of the problem.

- Network environment in which the unit is used.

- State of the unit before the problem occurred.

- Frequency and repeatability of the problem.

- Can the product continue to operate with this problem?

- Can you identify anything that may have caused the problem?

PRELIMINARY SETUP PROCEDURES

Unpack the Unit from the Carton

Inspect the packaging container for evidence of mishandling during transit. If the packaging container is damaged, photograph it for reference.

Carefully unpack the unit from the carton and verify that all accessories are included. Save all packing materials in the event that the unit needs to be returned to 8e6 Technologies.

The carton should contain the following items:

- 1 R3000 unit
- 1 Bezel to be installed on the front of the chassis
- 2 AC Power Cords
- 1 Serial Port Cable
- 1 CAT-5E Crossover Cable
- 1 CAT-5E Coupler
- Rack Mount Brackets (2)
- 1 End User License Agreement (EULA)
- 1 envelope containing a CD-ROM with PDFs of the R3000 User Guide and R3000 Authentication User Guide. The latest version of the R3000 User Guide can be obtained from our Web site at **http://www.8e6.com/docs/r3000_ug_r2.pdf**. The latest version of the R3000 Authentication User Guide can be obtained from our Web site at **http://www.8e6.com/docs/r3000_auth2_ug.pdf**.

Inspect the server and accessories for damage. If the contents appear damaged, file a damage claim with the carrier immediately.
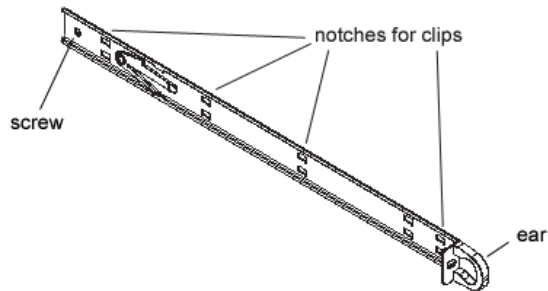
Install the Bezel

Before rack mounting the unit, the bezel should be installed on the front end of the chassis. This portion of the installation process requires you to unpack the unit and bezel.

NOTE: *The bezel has been packaged separately from the unit to prevent damage during shipping.*
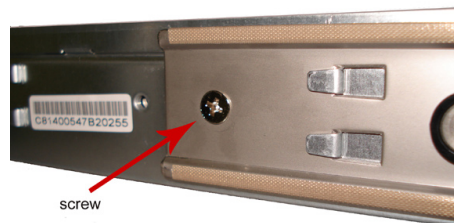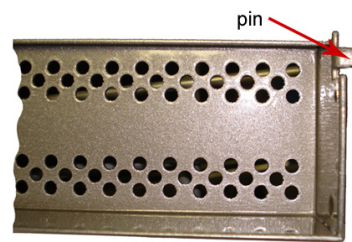

Front of bezel

Outside of left inner rail

Inside front end of left inner rail

Inner left rail attached to chassis

Pin on right side of bezel

![8e6]

A. Remove the plastic wrapping from the left and right ears.

B. On one side of the chassis (left or right), un-screw the inner rail from the chassis.
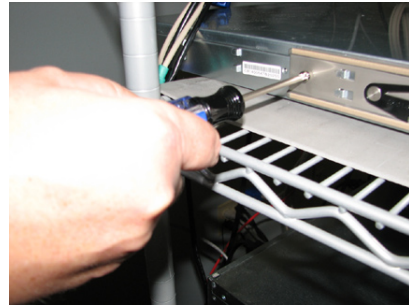
C. Slide the loosened inner rail slightly backwards to release it from the clips at the side of the chassis, and then lay it down beside the chassis, with the inside of the rail facing up.

D. On the inner rail that is still attached to the chassis, insert the bezel pin into the bottom hole of the ear. Be sure the pin is pushed all the way in so that it is flush against the ear.

E. Take up the free end of the bezel and also the loosened inner rail.

F. Return the loosened inner rail to its upright po-
    sition and insert the bezel pin into the bottom
    hole of the ear.

G. Slide the inner rail forward beneath the clips to
    lock it in place.
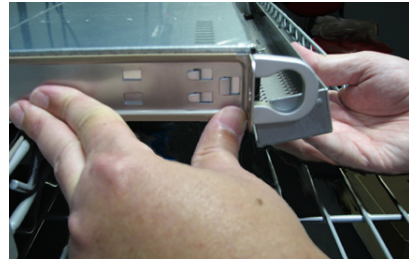
H. Screw the inner rail back on the chassis.

I. After it is installed, the bezel should drop down
    when it is gently tugged forward and down-
    ward. The bezel should remain upright when
    raised up and closed.

Rack Mount the Server

Rack Mount Instructions

Identify the Sections of the Rack Rails

You should have received two rack rail assemblies with the 8e6 server unit. Each of these assemblies consists of two sections: An inner fixed chassis rail that secures to the unit (A), and an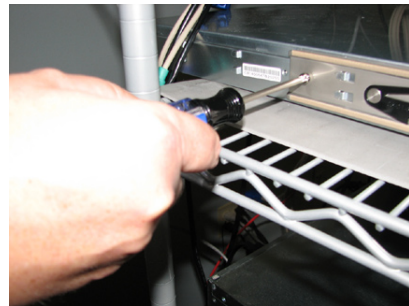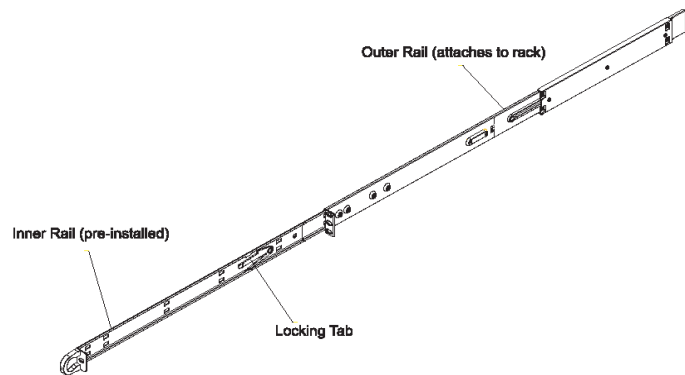 outer fixed rack rail that secures directly to the rack itself (B). Two pairs of short brackets to be used on the front side of the outer rails are also included.


Install the Inner Rails

Both the left and right side inner rails have been pre-attached to the chassis. Proceed to the next step.

Install the Outer Rails

Begin by measuring the distance from the front rail to the rear rail of the rack. Attach a short bracket to the front side of the right outer rail and a long bracket to the rear side of the right outer rail. Adjust both the short and long brackets to the proper distance so that the rail can fit snugly into the rack. Secure the short bracket to the front side of the outer rail with two M4 screws and the long bracket to the rear side of the outer rail with three M4 screws. Repeat these steps for the left outer rail.

Locking Tabs: Both chassis rails have a locking tab, which serves two functions. The first is to lock the server into place when installed and pushed fully into the rack, which is its normal position. Secondly, these tabs also lock the server in place when fully extended from the rack. This prevents the server from coming completely out of the rack when you pull it out for servicing.
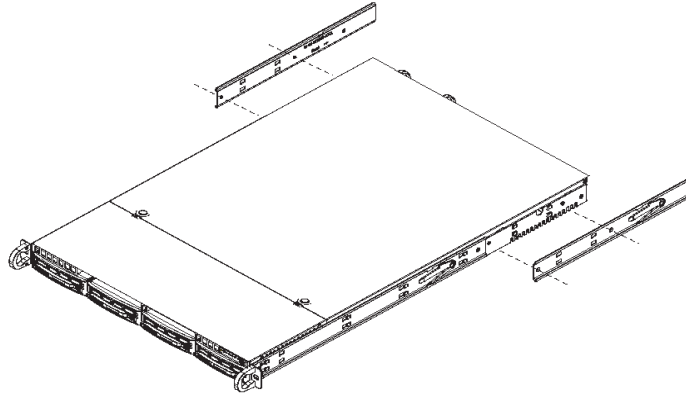
Install the Server into the Rack

You should now have rails attached to both the chassis and the rack unit. The next step is to install the server chassis into the rack. Do this by lining up the rear of the chassis rails with the front of the rack rails. Slide the chassis rails into the rack rails, keeping the pressure even on both sides (you may have to depress the locking tabs when inserting).

When the server has been pushed completely into the rack, you should hear the locking tabs "click." Finish by inserting and tightening the thumbscrews that hold the front of the server to the rack.
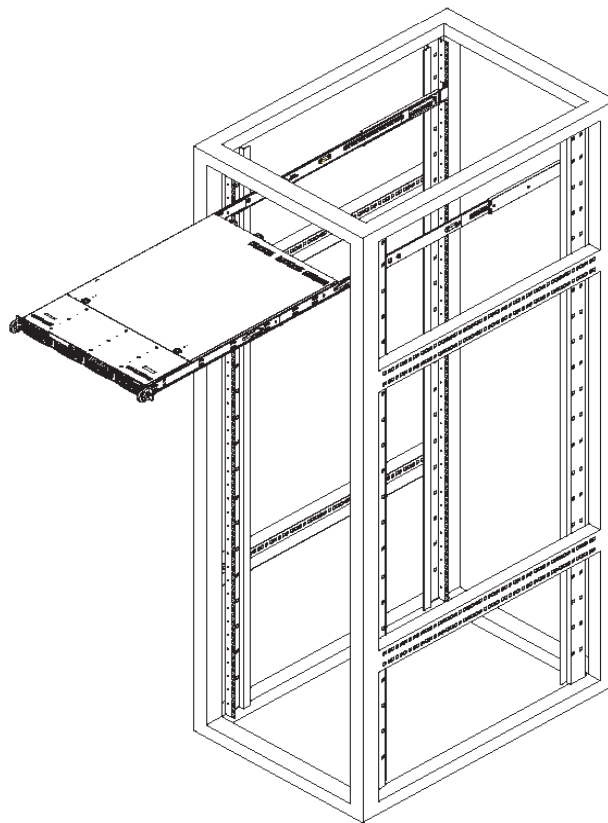
Installing the Server into a Telco Rack

If you are installing the 8e6 server unit into a Telco type rack, follow the directions given on the previous page for rack installation. The only difference in the installation procedure will be the positioning of the rack brackets to the rack. They should be spaced apart just enough to accommodate the width of the Telco rack.
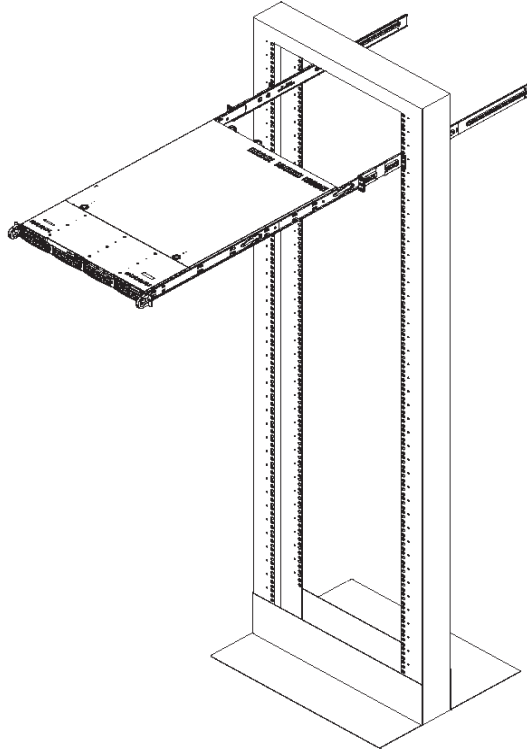
INSTALL THE SERVER

Step 1: Setup Procedures

This step requires you to link the workstation to the R3000. You have the option of using the text-based wizard setup procedures described in Step 1A, or the Administrator console setup procedures described in Step 1B.

Wizard Setup Requirements

The following hardware can be used for the wizard setup procedures:

- R3000 with AC power cord
- either one of two options:
  - PC monitor with AC power cord and keyboard, or
  - PC laptop computer with HyperTerminal and serial port cable (and USB DB9 serial adapter, if there is no serial port on your laptop)

Go to Step 1A to execute Wizard Setup Procedures.

Administrator Console Setup Requirements

The following hardware is required for the Administrator console setup procedures:

- R3000 with AC power cord
- CAT-5E crossover cable and coupler
- PC laptop computer, or PC monitor with AC power cord and keyboard

Go to Step 1B to execute Console Setup Procedures.

Step 1A: Wizard Setup Procedures

Link the Workstation to the R3000

Monitor and Keyboard Setup

A. Connect the PC monitor and keyboard cables to the rear of the chassis.

B. Turn on the PC monitor.

C. Power on the R3000 by dropping down the face plate and pressing the large button at the right of the front panel (see image below).
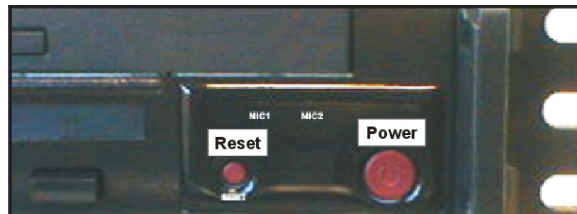
Front of the 1U chassis

Once the R3000 is powered up, proceed to the Login Screen instructions.

Serial Console Setup

A. Using the serial port cable (and USB DB9 serial adapter, if necessary), connect the laptop to the rear of the chassis (see image below).
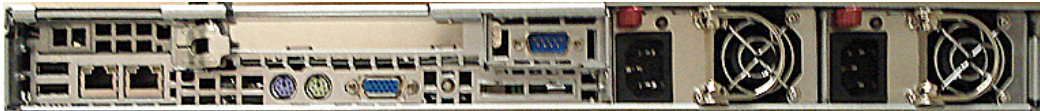
Rear of the 1U chassis

B. Power on the laptop.

C. Power on the R3000 by dropping down the face plate and pressing the large button at the right of the front panel (see first image above).

Once the R3000 is powered up, proceed to the instructions for HyperTerminal Setup Procedures.

HyperTerminal Setup Procedures

If using a serial console, follow these procedures to create a HyperTerminal session.

A. Launch HyperTerminal by going to Start > Programs > Accessories > Communications > HyperTerminal:

B. In the Connection Description dialog box, enter any session **Name**, and then click **OK** to open the Connect To dialog box:

C. At the **Connect using** field, select the COM port assigned to the serial port on the laptop (probably "COM1"), and then click **OK** to open the Properties dialog box, displaying the Port Settings tab:
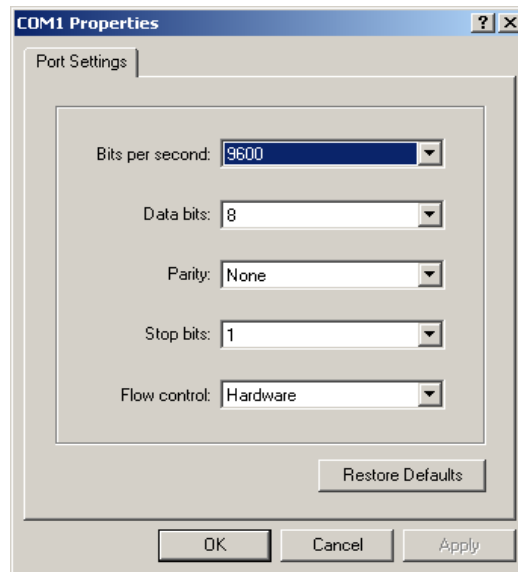
D. Specify the following session settings:

- Bits per second: 9600
- Data bits: 8
- Parity: None
- Stop bits: 1
- Flow control: Hardware

E. Click **OK** to connect to the HyperTerminal session:
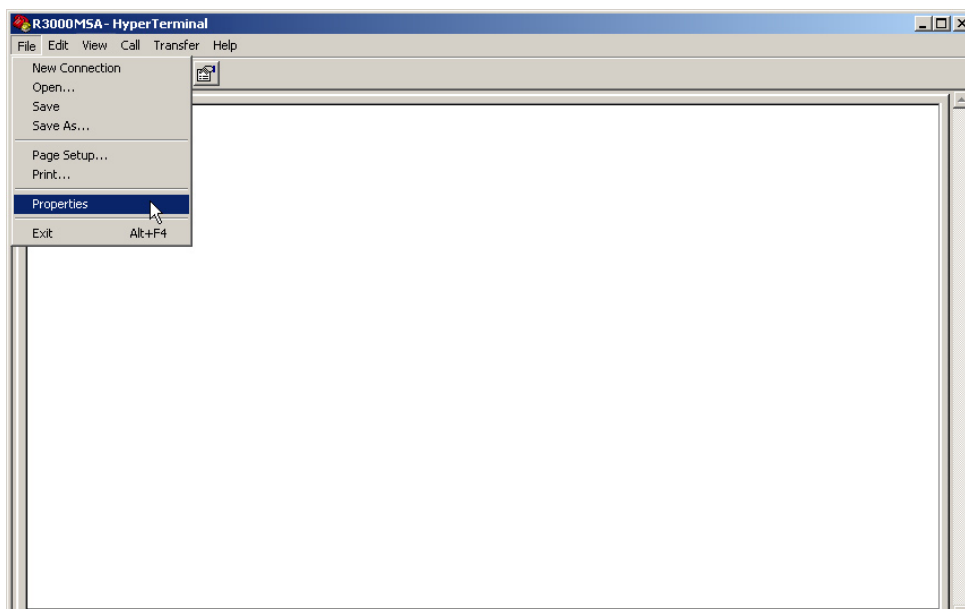
F. In the HyperTerminal session window, go to File > Properties to open the Properties dialog box, displaying the Connect To and Settings tabs:
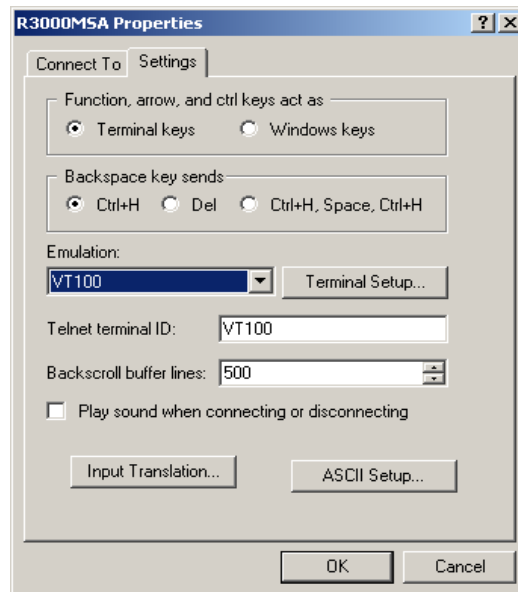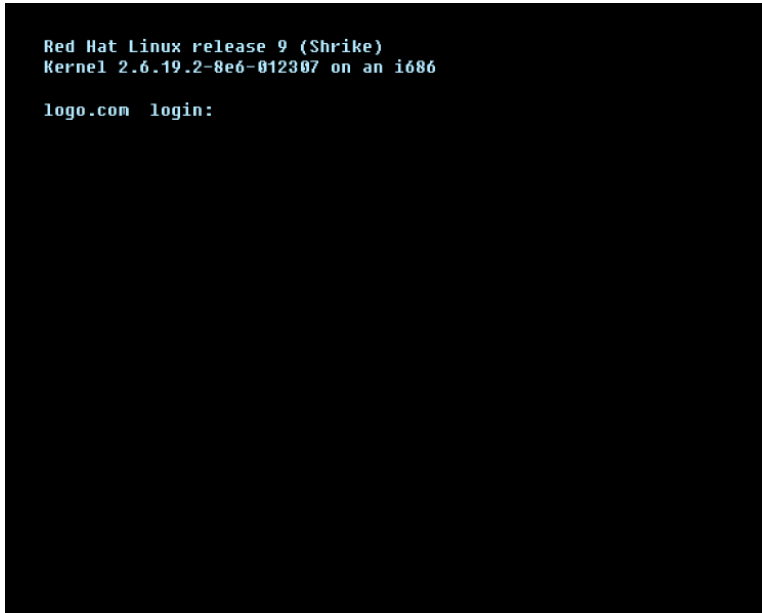
G. Click the Settings tab, and at the **Emulation** menu select "VT100".

H. Click **OK** to close the dialog box, and to go to the login screen.

NOTE: If using a HyperTerminal session, the login screen will display with black text on a white background.

Login Screen

The login screen displays after powering on the R3000 unit using a monitor and key-board:

```
Red Hat Linux release 9 (Shrike)
Kernel 2.6.19.2-8e6-012307 on an i686

logo.com  login:
```

*NOTE: If the screensaver currently displays on your screen, press the **Enter** key to display the login screen.*

A. At the **login** prompt, type in *menu*.

B. Press the **Enter** key to display the Password prompt.

C. At the **Password** prompt, type in the following: *#s3tup#r3k*

D. Press **Enter** to display the System Configuration screen.

System Configuration Screen

```
                               Tue Jul 25 14:04:53 PDT 2006
                        8e6 Technologies
                      System Configuration


            1.  Display Status
            2.  Enter administration password




            9.  Log off




      Press the number of your selection
```
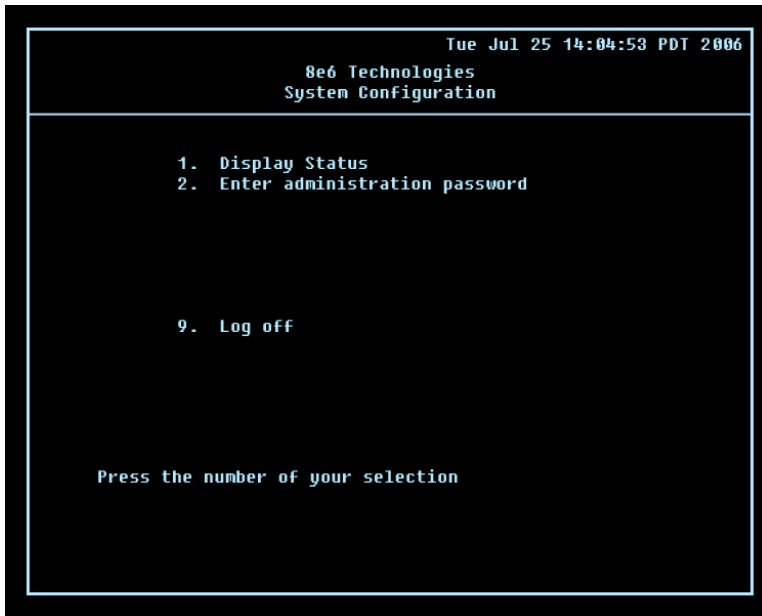
A. At the **Press the number of your selection** prompt, press **2** to select the setup process for the System Configuration wizard.

B. At the login prompt, re-enter your password: ***#s3tup#r3k***

C. Press **Enter** to display the Administration menu where you can begin using the System Configuration wizard.

System Configuration: Administration menu

A. At the **Press the number of your selection** prompt, press **2** to select the "Initial Setup wizard" process.

The wizard takes you to the following system configuration screens to make entries:

- Change filtering mode
- Configure network interface LAN1 (ETH0)
- Configure network interface LAN2 (ETH1)
- Configure default gateway
- Configure DNS servers
- Configure host name
- Time Zone regional setting

NOTE: See the Network screens for Operation Mode, LAN Settings, and Regional Setting in Step 1B for content included in the wizard screens.

B. After making all entries using the wizard, press **X** to return to the System Configuration screen. Or, to verify the status of the R3000 and review the entries you made using the wizard, press **1** to view the System Status screen.

NOTES: Changing your password using option C, "Change administration password", will change the password for the console menu but not the R3000 console login screen. Option A, "Reset system to factory defaults", should only be used by an 8e6 Technologies technical representative.

System Status Screen

```
                                    Tue Jul 25 14:05:16 PDT 2006
                            8e6 Technologies
                      System Status - updates every 10 seconds


        R3000 is configured in Invisible mode
        LAN1 is the Capturing Interface
        LAN1 IP = 1.2.3.4 Mask = 255.255.255.255        Inactive
        LAN2 is the Management and Blocking Interface
        LAN2 IP = 200.10.160.74 Mask = 255.255.0.0      Active
        Default gateway IP: 200.10.160.1
        R3000 host name: logo.com

        DNS server IP address(es):  200.10.160.1
        Regional timezone setting: US/Pacific

        R3000 processing is initializing
        Current Version: R3000 Enterprise Filter 2.0.00.32
        Library was last updated on 2007/06/15


    Press any key to return to menu...
```

The System Status screen contains the following information:

- **Operation Mode** specified in screen 3 (Change filter mode)
- **Capturing Interface** specified in screen 4 (Configure network interface LAN1/ETH0)
- **LAN1 (eth0) IP** address and netmask specified in screen 4, and current status ("Active" or "Inactive")
- **Management and Blocking Interface** specified in screen 5 (Configure network inteface LAN2/ETH1)
- **LAN2 (eth1) IP** address and netmask specified in screen 5, and current status ("Active" or "Inactive")
- **Default gateway** IP address specified in screen 6 (Configure default gateway)
- **R3000 host name** specified in screen 8 (Configure host name)
- **DNS server IP address(es)** specified in screen 7 (Configure DNS servers)
- **Regional timezone setting** specified in screen 9 (Time Zone regional setting)
- Current status of the R3000
- Current R3000 software **Version** installed
- Library update status

NOTE: Modifications can be made at any time by returning to the specific screen of the wizard.

Log Off, Disconnect the Peripherals

A. After completing the wizard setup procedures, return to the System Configuration screen and press **9** to log out.

B. Disconnect the peripherals from the R3000.

Step 1B: Console Setup Procedures

Preliminary Setup

Create a "setup workstation" using a Windows-based laptop or desktop machine with a network card and Internet Explorer 5.5 (or later). The setup workstation will be used for accessing the R3000 server on the network and configuring the unit.

NOTE: The Java Plug-in version specified for the R3000 software version must be installed on your workstation. If your workstation does not have Java Runtime Environment, you will be prompted to install it.

Workstation Configurations

A. From the desktop of the setup workstation, follow the procedures for your machine type:

- **Windows XP** - go to Start > Control Panel. Open Network Connections. Right-click the link for LAN or High-Speed Internet and choose Properties.
- **Windows 2000** - right-click the My Network Places icon and select Properties. Right-click the correct Local Area Connection and choose Properties.
- **Windows NT** - right-click the Network Neighborhood icon and select Properties.
- **Windows ME** - right-click the My Network Places icon and select Properties.

B. Click on **Internet Protocol (TCP/IP)** to highlight it (Windows NT and ME users should select the Protocols or Configuration tab and choose **TCP/IP Protocol**).

C. Click the **Properties** button.

WARNING: Be sure to make note of the current network settings on the setup workstation as you will need to return them for further setup procedures.

D. Choose the option **Use the following IP address** (Windows NT and ME users should choose the option **Specify an IP Address**).

E. Type in the **IP address** of 1.2.3.1.

F. Type in the **Subnet mask** (netmask) of 255.0.0.0 and click **OK**.

G. Close the LAN connection properties box.

Link the Workstation to the R3000

The procedures outlined in this sub-section require the use of the CAT-5E crossover cable.

A. Plug one end of the CAT-5E crossover cable into the R3000's **LAN 2** port.

NOTE: When facing the rear of the chassis, the LAN 2 port is the port on the right.
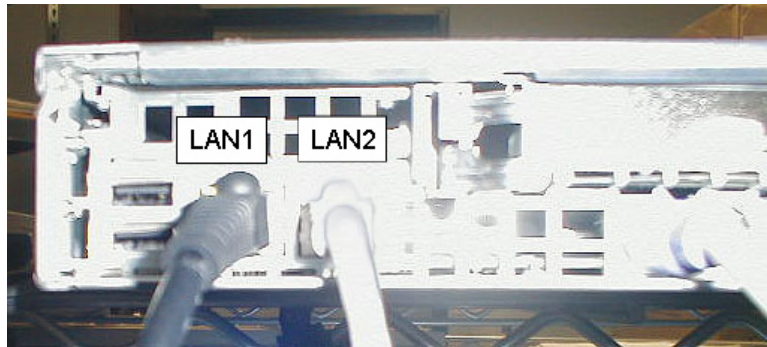
Rear of chassis

B. Plug the other end of the CAT-5E crossover cable into the setup workstation's network card.

NOTE: The CAT-5E coupler can be used if the crossover cable is not long enough for your setup. Plug one end of the CAT-5E crossover cable into the R3000, and the other end into the coupler. Plug a standard CAT-5E cable into the other end of the coupler, and the free end of the standard CAT-5E cable into the setup workstation.

C. Plug the R3000 into a power source with an appropriate rating.

WARNING: It is strongly suggested you use an uninterruptible power supply.

D. Power on the R3000 by dropping down the face plate and pressing the large button. The boot-up process may take 5 - 10 minutes. When the drive light remains off for 30 seconds, the system is booted up.
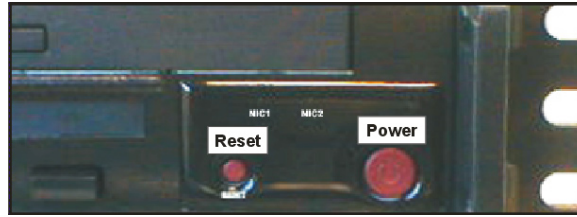
Front of the chassis

The Boot Up Process

The boot-up process may take 5 - 10 minutes. When the drive light remains off for 30 seconds, the system is booted up. (See the Specifications section for a description of Front Panel LED Indicators and Buttons.)

If you wish to verify that the unit has been booted up, you can perform the following test on your workstation:

1. Go to your taskbar and click Start > Run.
2. In the dialog box, type in *cmd* (type in *command* if using Windows ME).
3. Click **OK.**
4. In the cmd.exe window, type in *ping 1.2.3.4*
5. Press **Enter** on your keyboard.

If you receive a reply, the unit is up.

Network Setup

When the R3000 is fully booted, you can configure network settings. For this step, you will need your network administrator to provide you the host name, gateway address, and two unused IP addresses.

Access the R3000 Administrator Console

A. Launch Internet Explorer from the setup workstation.

B. Type in **http://1.2.3.4:88** in the address field.

C. Click **Go** to open the R3000 Introductory Window:
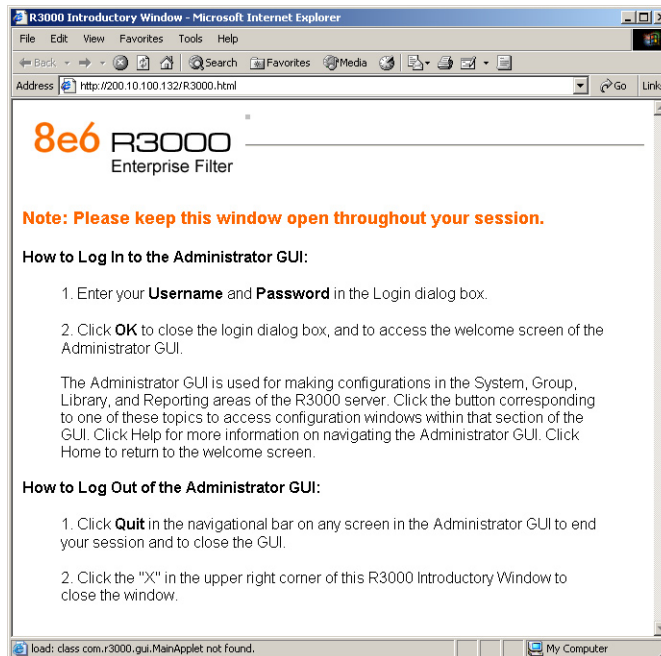
![note icon] *NOTE: This window must be left open throughout your session.*

The Introductory Window displays minimized when the login dialog box of the R3000 Administrator console application opens (see image on the next page).

Log in to R3000 Administrator Console

In the login dialog box, you need to enter the generic Username and Password:

A. In the **Username** field, type in *admin*.

B. In the **Password** field, type in *user3*.

C. Click **OK** to close the login dialog box and to go to the main screen of the R3000 Administrator console:

Network

Click the **System** button at the top of the screen to go to the System section of the console:

In this section of the console you will:

- Specify the operation mode the R3000 will use for filtering the network, listening to traffic, and sending traffic
- Configure LAN settings the R3000 will use on your network
- Select NTP servers the R3000 will use for time synchronization with Internet clocks
- Indicate the region in which the R3000 is geographically located

---

*NOTE: After saving your entries in each of these windows (Operation Mode, LAN Settings, NTP Servers, Regional Setting), you may be prompted to restart or reboot the server. Click **OK** to acknowledge the contents of the alert box, and then proceed to the next sub-step **without** restarting or rebooting the server.*

Network: Operation Mode

From the navigation panel at the left of the screen, click Mode and choose Operation Mode from the pop-up menu:
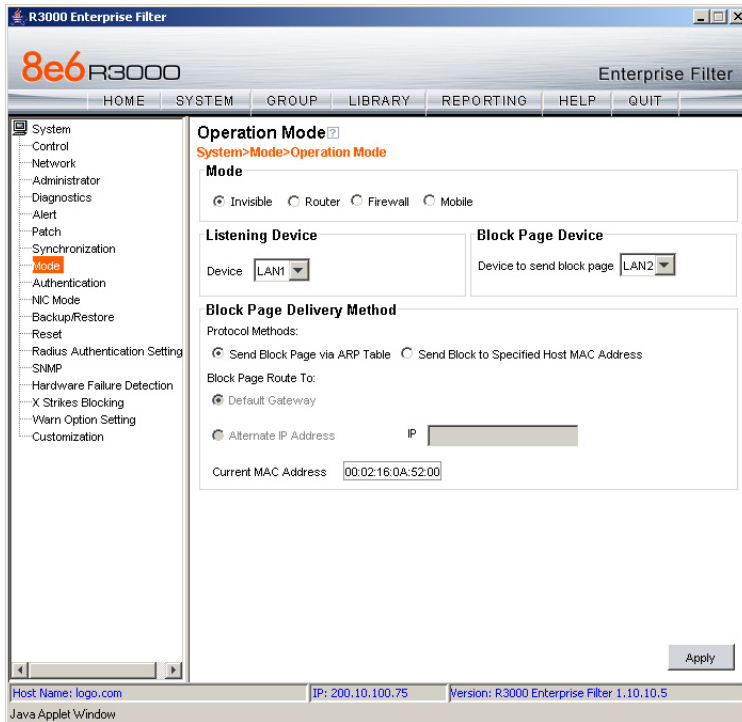
Make the following entries in the Operation Mode window:

A. In the Mode frame, select the operational mode the R3000 will use for filtering: Invisible, Router, Firewall, or Mobile.

NOTE: Refer to the appendix in the R3000 User Guide for information on configuring the R3000 to use the Mobile mode option with the 8e6 Mobile Client.

B. In the Listening Device frame, select the device for listening to traffic:

- **For the invisible mode**: "LAN1" is generally used as the default listening device
- **For the router or firewall mode**: Select the network card that will be used to "listen to"—as opposed to "send"—traffic on the network

C. In the Block Page Device frame, select the device for sending block pages to client PCs:

- **For the invisible mode**: The block page device should be a different device than the one selected in the Listening Device frame—"LAN2" is generally used as the default device for sending block pages
- **For the router or firewall mode**: The device should be the same as the one selected in the Listening Device frame

D. Click **Apply**.

Network: LAN Settings

From the navigation panel, click Network and choose LAN Settings from the pop-up menu:
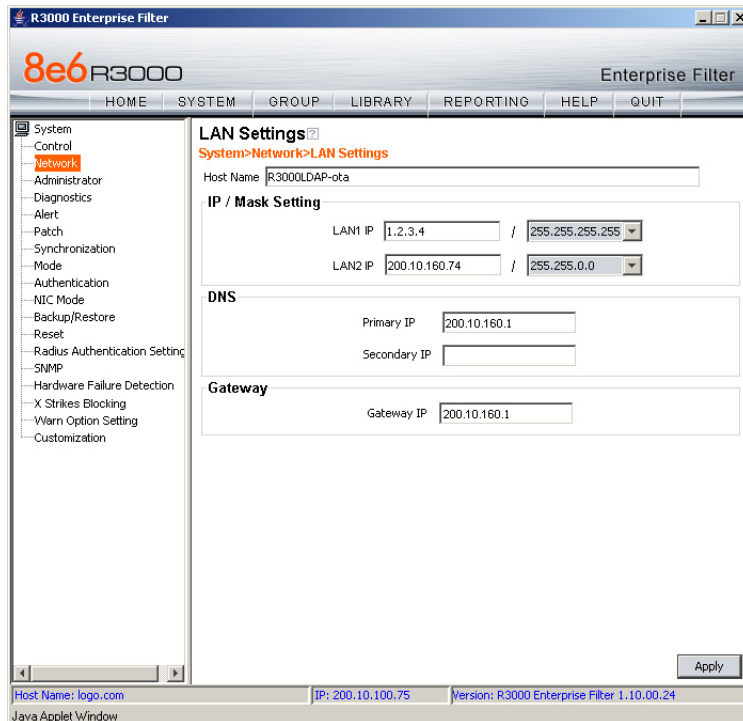
Make the following entries for the R3000 in the LAN Settings window:

A. Enter the **Host Name** that includes your domain name, for example R3000SERVER. myserver.com (the NetBIOS name must be capitalized). It is important to enter something identifiable, because once the product is registered, this host name is used by 8e6 Technologies to recognize your account for library updates. This name needs to be a valid DNS entry.

B. Enter the **LAN1 IP** address and specify the subnet for LAN 1, the R3000's first Ethernet Network Interface Card (NIC).

    For the invisible mode, you may use a non-routeable IP address for the listening interface and a subnet mask of 255.255.255.255 (32 bites).

C. Enter the **LAN 2 IP** address and subnet for LAN 2, the R3000's second Ethernet NIC. The subnet selection is usually 255.255.0.0 (16 bites) or 255.255.255.0 (24 bites), *but cannot be 255.255.255.255 (32 bites)*.

    For the router or firewall mode, the LAN 1 IP address should be in a different subnet than the LAN 2 IP address.

⚠ **WARNING:** *For the router and firewall mode, do not use the same subnet for LAN 1 and LAN 2 or the console will become inaccessible.*

D. Enter the **Primary IP** address of the first DNS name server. The R3000 uses this name server to resolve the domain name requested by users from the LAN.

E. Enter the **Secondary IP** address of the second DNS name server. The R3000 will use this name server to resolve the domain name requested by users from the LAN if the first DNS isn't working.

F. Enter the **Gateway IP** address for the default router or firewall that is the main gateway for the entire network. The R3000 will use this IP address to communicate outside the network.

⚠ ***WARNING: Be sure to take note of the LAN 1 and LAN 2 IP addresses and host name you assigned to the R3000. It is strongly suggested you document and store this information as it is now the only way of communicating with the R3000.***

G. Click **Apply**.

Network: NTP Servers

From the navigation panel, click Network and choose NTP Servers from the pop-up menu:
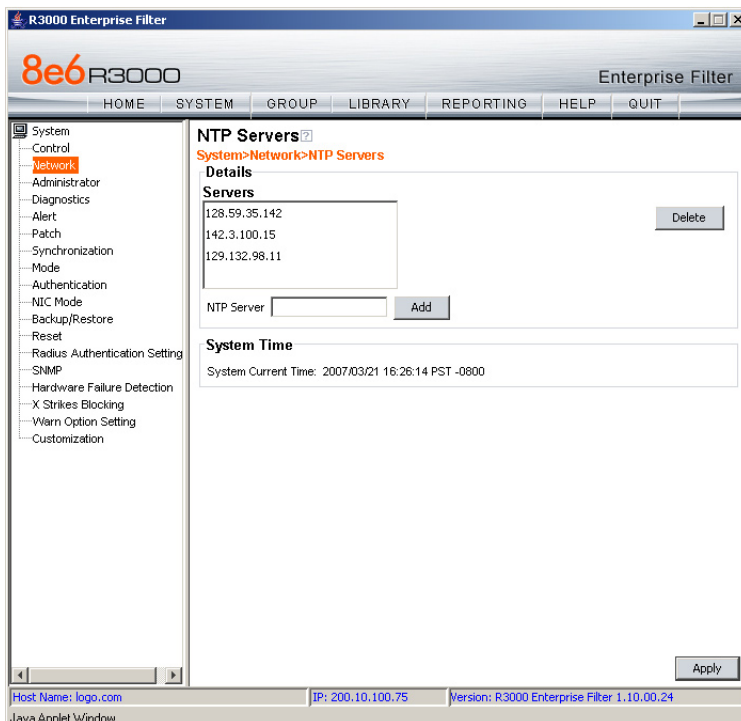
The NTP Servers window is used for specifying the Network Time Protocol (NTP) servers to be used by the R3000, so that the R3000 is synchronized with computer clocks on the Internet.

Note that the following server IP addresses display in the Servers list box: 128.59.35.142, 142.3.100.15, 129.132.98.11. If necessary, any of these servers can be deleted by selecting the IP address and clicking **Delete**.

NOTE: If you need to find another NTP server to use, most university Web sites provide these servers for public usage.

A. In the **NTP Server** field, enter the IP address of the primary NTP server you wish to use for clock settings on your server.

B. Click **Add** to include this IP address in the Servers list box.

C. Enter two more NTP servers, following the procedures in sub-steps A and B. These will be the secondary and tertiary NTP servers, in order as they appear in the list box.

D. Click **Apply**.

NOTE: If the primary server fails, the secondary will be used. If the secondary server fails, the tertiary server will be used.

![8e6 logo]

Network: Regional Setting

From the navigation panel, click Network and choose Regional Setting from the pop-up menu:
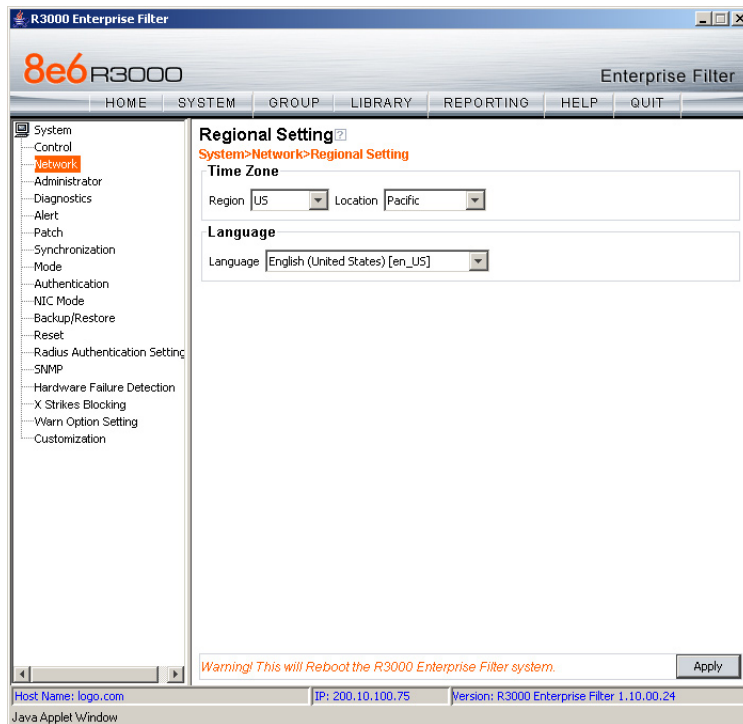
Make the following selections in the Regional Setting window:

A. At the **Region** pull-down menu, select your country from the available choices.

B. At the **Location** pull-down menu, select the time zone for the specified region.

   If necessary, select a language set from the **Language** pull-down menu to display that text in the console.

C. Click **Apply** to apply your settings, and to reboot the R3000.

Physically Connect the R3000 to the Network

Once your R3000 network parameters are set, you must physically connect the unit to your network. This step requires two standard CAT-5E cables.

NOTE: This section requires you to restart the R3000. If you wish to relocate the R3000 before connecting it to the network, you must first shut down the server instead of restarting it. To shut down the R3000, go to the navigation panel, click Control, and then select ShutDown. Once the server is shut down, you must power on the R3000 and then log back into the Administrator console.

A. Restart the server using the steps defined below (i-iii). These steps must always be performed when restarting the R3000. ***Never*** reset the server by using the power or reset buttons.

   i.   From the navigation panel of the System section of the console, click Control and select Reboot from the pop-up menu to display the Reboot window.
   ii. Click the **Reboot** button.
   iii. From the time you click Reboot, you have approximately 2 minutes to perform sub-steps B through E while the R3000 goes through the reboot process.

B. Disconnect the crossover cable from the R3000.

C. Plug one end of a standard CAT-5E cable into the R3000's LAN 1 port.

D. Plug the other end of the CAT-5E cable into an open port on the network hub that handles the Internet traffic you wish to filter.

E. Repeat sub-steps B and C for the R3000's LAN 2 port.

F. Wait until the reboot process has completed, indicated by the drive light staying off for 30 seconds. This process may take 5 to 10 minutes. Proceed to Step 2.

NOTE: If you receive a connection failure message during the reboot process, please disregard it, as this often occurs when there is a change in the IP address.

NOTE:To restart the browser window, close both the R3000 Administrator console and the R3000 Introductory Window. Begin a new session by opening a new browser window and then logging back into the Administrator console.

Step 2: Test the R3000 Console Connection

Now that the R3000 is physically installed on your network and you have configured its network settings, you need to test the unit to see if it is set up properly.

A. Restore the setup workstation you used for the Network Setup to its original settings, and connect it to the network hub to create a "network workstation." (You could also use another workstation already on the network that has Internet access.)

B. Launch IE on the network workstation, and enter the IP address you assigned to LAN 1 (Step 1A, System Configuration: Administration menu, or Step 1B, Network: LAN Settings, sub-step B). Be sure to include the port information **:88** in the address field. For example, if the R3000 were assigned an IP address of 10.10.10.10, you would enter **http://10.10.10.10:88** in the browser window's address field.

C. Click **Go**. You should be prompted to log into the Administrator console, giving the Username and Password.

If you can access the R3000 Administrator console, the R3000 is functioning on your network and you should proceed to Step 3.

If you cannot access the R3000 Administrator console, please verify the status of the LAN connection in Windows on the network workstation, and then try enabling/disabling the LAN connection. If that fails to work, check the following:

- The R3000 is turned on.
- The R3000 is connected to the same hub as your router/firewall.
- Can the PC normally connect to the Internet?
- Is the PC able to ping LAN 1 of the R3000?
- Is the R3000 plugged into a switch instead of a hub?
- Is there a caching server?
- Can the R3000 ping the filtered PC? (Refer to the System Command window in the Diagnostics section of the R3000 User Guide)
- Did you restart the R3000 after changing the network settings?
- Do you have both LAN ports connected to your network hub?
- If still unsuccessful, contact an 8e6 Technologies solutions engineer or technical support representative.

Step 3: Test Filtering or Mobile Client Console Connection

Test Filtering

If this R3000 has been set up in the Invisible, Router, or Firewall mode, once you have accessed the R3000 Administrator console, you should test filtering.

A. Test the R3000's filtering by opening a browser window on a network workstation, and going to **http://test.8e6.net** (an empty site for testing pornography filtering).

B. You should receive a block page. If you do not, contact an 8e6 Technologies solutions engineer or technical support representative.

NOTE: Port 22 (SSH) must be open on your network to allow access by remote technical support.

Test the Mobile Client Console Connection

If this R3000 has been set up in the Mobile mode, you do not need to test filtering. Instead, once you have accessed the R3000 Administrator console, you should verify that the Mobile Client can be accessed by the R3000.

A. Use a workstation on which the Mobile Client is installed that is not on a filtered portion of the LAN. Open a browser window on a network workstation, and then go to **http://test.8e6.net** (an empty site for testing pornography filtering).

B. The connection should be blocked, and the block page served by the R3000 should display in the browser's Address field. If you do not receive a block page, contact an 8e6 Technologies solutions engineer or technical support representative.

NOTE: Port 22 (SSH) must be open on your network to allow access by remote technical support.

Step 4: Set Library Updates

After verifying that the R3000 is correctly installed on your network, you need to activate R3000 library updates. Library updates are critical for filtering as new sites are added to the 8e6 library each day. To activate updates, visit the 8e6 Technologies Web site and enter the activation code that was issued to you by e-mail (also included on the product invoice).

NOTE: Ports 20 and 21 (FTP) must be open for outgoing requests so that the R3000 can receive library updates.

Activate and Register the R3000

Be sure you have a valid host name chosen before activating your account.

A. Open an Internet browser window and go to **http://www.8e6.com/activate**.

B. After reading through the online End User License Agreement, click **Accept** to go to Step 2 of the activation process.

C. Enter your activation code.

D. Click **Submit** to go to the R3000 Activation and Registration page.

E. Verify that your serial number and activation code are the same as shown on this registration page.

F. Fill out the information on this page, including the host name for the public DNS server. *The entry of the unique host name you've chosen is mandatory in order to receive library updates.*

G. After all information is entered, click **Activate** to activate your service. You should receive confirmation that the R3000 at your host name has been activated.

You may wish to print the confirmation page for future reference in dealing with technical issues.

Perform a Complete Library Update

Your R3000 was shipped with the latest library update for the current software release. However, as new updates continually become available, before you begin using the R3000 you must perform a complete library update to ensure you have the latest library updates.

To download the latest library updates, go to the R3000 Administrator console.

A. Click the **Library** button at the top of the screen.

B. From the navigation panel, click Updates and select Manual Update from the menu:
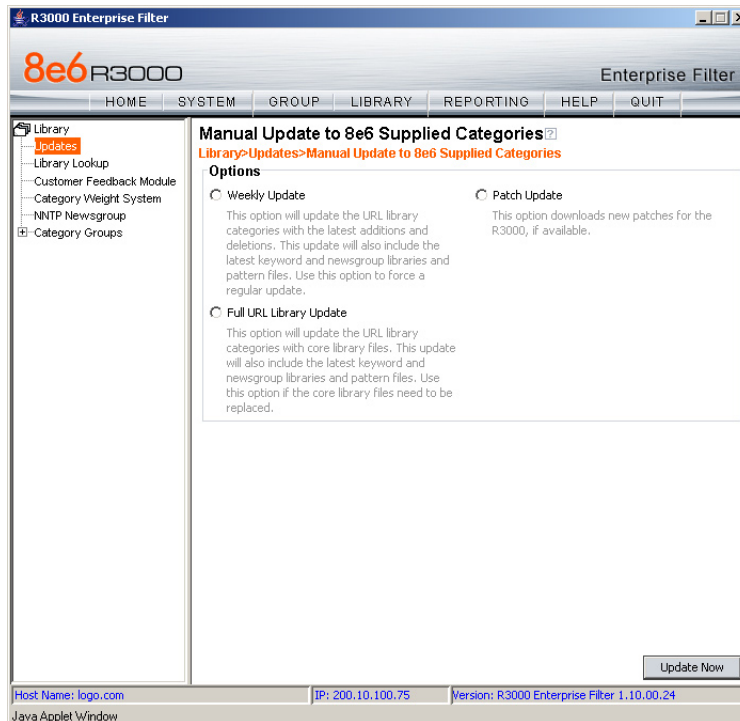
C. In the Manual Update to 8e6 Supplied Categories window, click the radio button corresponding to **Full URL Library Update**.

D. Click **Update Now** to begin the update process.

Monitor the Library Update Process

To verify that the library is being updated:

A. From the navigation panel, click Updates and select Library Update Log from the menu.

B. In the Library Update Log window, click **View Log** to display the update activity:
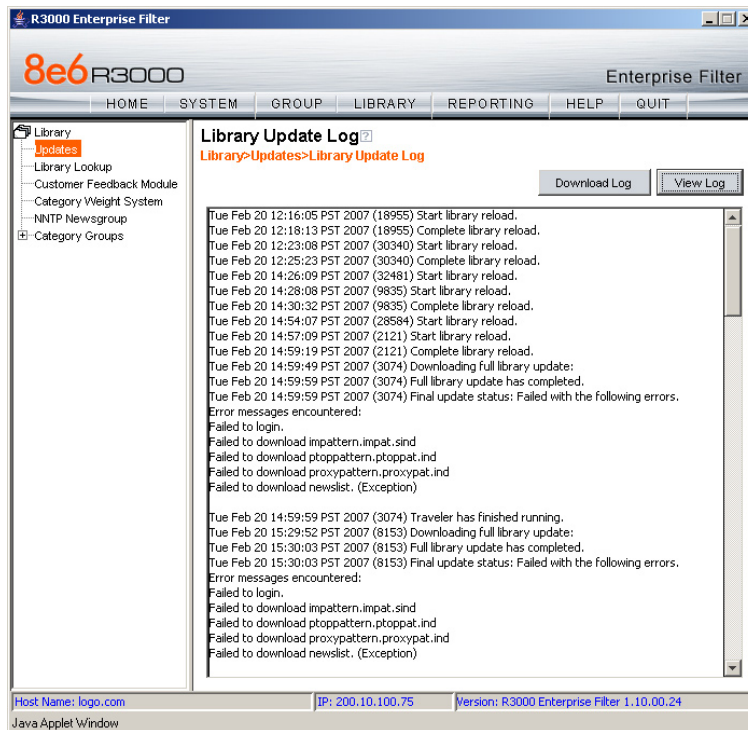
![NOTE icon] *NOTE: You will be notified in the log when the library has been completely updated by the message: "Full URL Library Update has completed." If this message does not yet display, click **View Log** again to view the latest information.*

![WARNING icon] *WARNING: At the conclusion of this step, your R3000 will be actively filtering your network. The R3000 is initially set to filter pornography sites on all of your network traffic associated with the hub to which it is connected.*

CONCLUSION

Congratulations; you have completed the R3000 quick start procedures. Now that the R3000 is filtering your network, the next step is to set up groups and create filtering profiles for group members.

To activate a default filter profile more appropriate for your operations, or to specify a more limited IP range to filter, consult Chapter 2: Group screen in the Global Administrator Section of the R3000 User Guide. Refer to Chapter 1: System screen for information on how to give end users access to acceptable HTTPS sites if strict HTTPS filtering settings are used.

Obtain the latest R3000 User Guide at **http://www.8e6.com/docs/r3000_ug_r2.pdf**.

SPECIFICATIONS

R3000H Unit

Physical Specifications

Specification	Value
Height	1.7" (43mm)
Width	17.2" (438mm)
Depth	26.8" (681mm)
Front clearance	2 inches (76mm)
Side clearance	1 inch (25mm)
Rear clearance	3.6 inches (92mm)
Weight	46.0 lbs (20.86 kg)

Hardware Component Specifications

Specification	Value
Operating temperature range	10° C ~ 35° C (50° F ~ 95° F)
Storage temperature range	-40° C ~ +60° C (-40° F ~ 158° F)
Operating humidity range	8 ~ 90% non-condensing
Storage humidity range	5 ~ 95% non-condensing
Power supply	560W Hot-swap redundant AC power supply with PFC [24-pin, (8-pin = 12V)]
Rated AC input voltage	100 ~ 240V, 60-50Hz, 10-5 Amp per power supply module (two modules included in the chassis)
Rated input frequency	50 ~ 60 Hz
Rated input current	10A (115V) to 5A (230V)
Rated output power	560W
Maximum rated BTU	N/A (see specs below)
Nominal DC output: +3.3V	21.0A
Nominal DC output: +5V	30.0A
Nominal DC output: +12V	42.0A
Nominal DC output: -12V	1.0A
Nominal DC output: +5V standby	4.0A
Regulatory (power supply)	EN 60950/IEC 60950-Compliant UL Listed (USA) CUL Listed (Canada) TUV Certified (Germany)

Internal Product Specifications

| Specification	R3000H
CPU	2x3.6GHz Xeon CPU
Memory	3GB PC2700 / DDR-333 ECC SDRAM
Hard drive capacity	2x160GB HDD
Connectivity	10/100/1000 10/100/1000

RAID MAINTENANCE

This section of the document is divided into three parts: R3000H Hardware Components, Server Interface, and Troubleshooting—in the event of a failure in one of the drives, power supplies, or fans.

NOTE: As part of the ongoing maintenance procedure for your RAID server, 8e6 recommends that you always have a spare drive and spare power supply on hand.

Contact 8e6 Technical Support for replacement hard drives and power supplies.

## Part 1: R3000H Hardware Components

The R3000H RAID server contains two hard drives, two power supplies, and five sets of dual cooling fans (10 in total). These components are depicted in the diagram below:
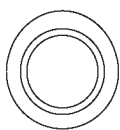
Rear of Chassis
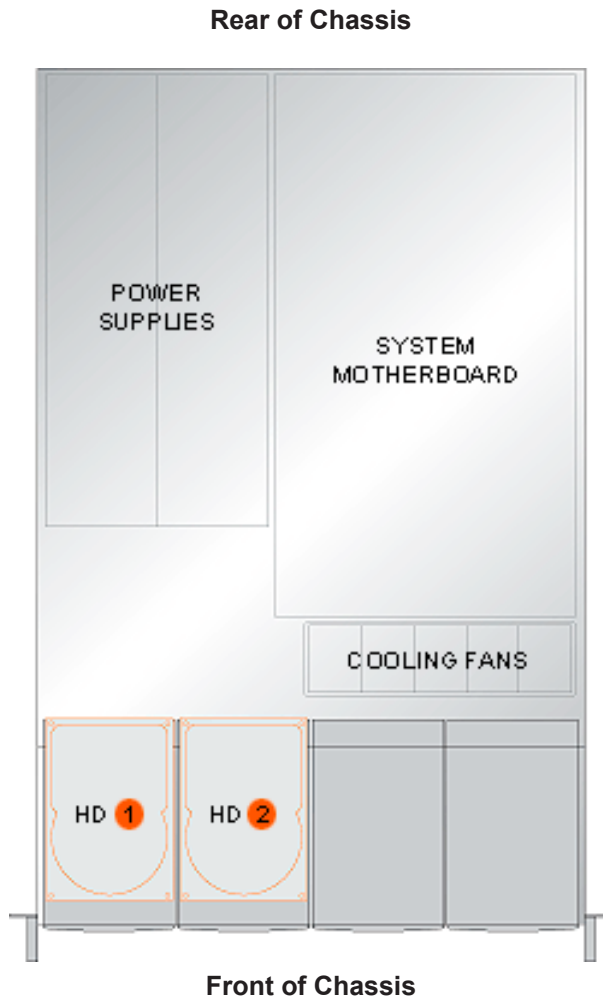
Front of Chassis

Part 2: Server Interface

Front of Chassis: Control Panel

Control panel buttons, icons, and LED indicators display on the right side of the front panel. The buttons let you perform a function on the unit, while an LED indicator corresponding to an icon alerts you to the status of that feature on the unit.

Button   LED
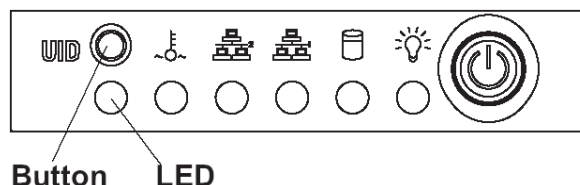
The buttons and LED indicators for the depicted icons function as follows:

UID (button) – When the UID button is pressed, a steady blue LED displays on both the front and rear of the chassis (see also Rear of Chassis). These indicators are used for easy location of the chassis in a large stack configuration. The LED remains on until the button is pressed a second time.

Overheat/Fan Fail (icon) – This LED is unlit unless the chassis is overheated. (See Fan Failure in the Troubleshooting sub-section for information on detecting a fan failure and resolving this problem.)

NIC2 (icon) – A flashing green LED indicates network activity on LAN2.

NIC1 (icon) – A flashing green LED indicates network activity on LAN1.

HDD (icon) – In addition to displaying in the control panel, this icon also displays on the front panel on each hard drive carrier. A green LED indicates hard drive activity. An unlit LED on a drive carrier may indicate a hard drive failure. (See Hard Drive Failure in the Troubleshooting sub-section for information on detecting a hard drive failure and resolving this problem.)

Power (icon) – The LED is unlit when the server is turned off. A steady green LED indicates power is being supplied to the unit's power supplies. (See also Rear of Chassis.) (See Power Supply Failure in the Troubleshooting sub-section for information on detecting a power supply failure and resolving this problem.)

Power (button) – When the power button is pressed, the main power to the server is turned on. When the power button is pressed again, the main power to the server is removed but standby power is still supplied to the server.

Rear of Chassis

UID (LED indicator) – On the rear of the chassis, to the left of the power supplies, a steady blue UID LED indicator displays when the UID button on the control panel is pressed. This LED remains lit until the UID button is pressed again.

VGA Port   Button/LED
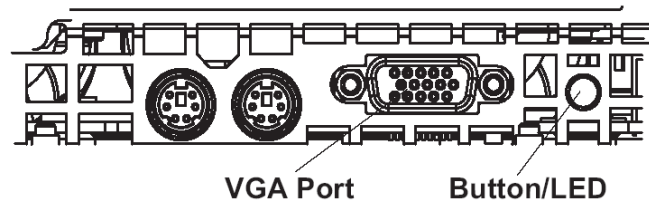
Power Supplies (LED indicators) – The power supplies are located at the right on the rear of the chassis. An LED indicator is located above each of the power plugs. (See Power Supply Failure in the Troubleshooting sub-section for information on detecting a power supply failure and resolving this problem.)
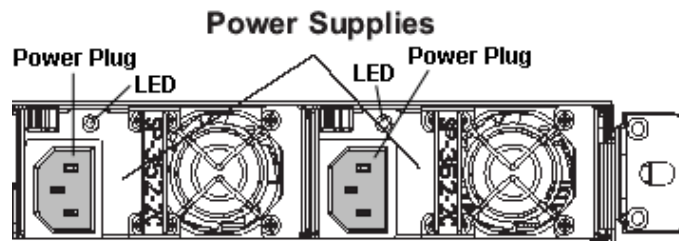
Part 3: Troubleshooting

The text in this section explains how the server alerts the administrator to a failed component, and what to do in the event of a failure.
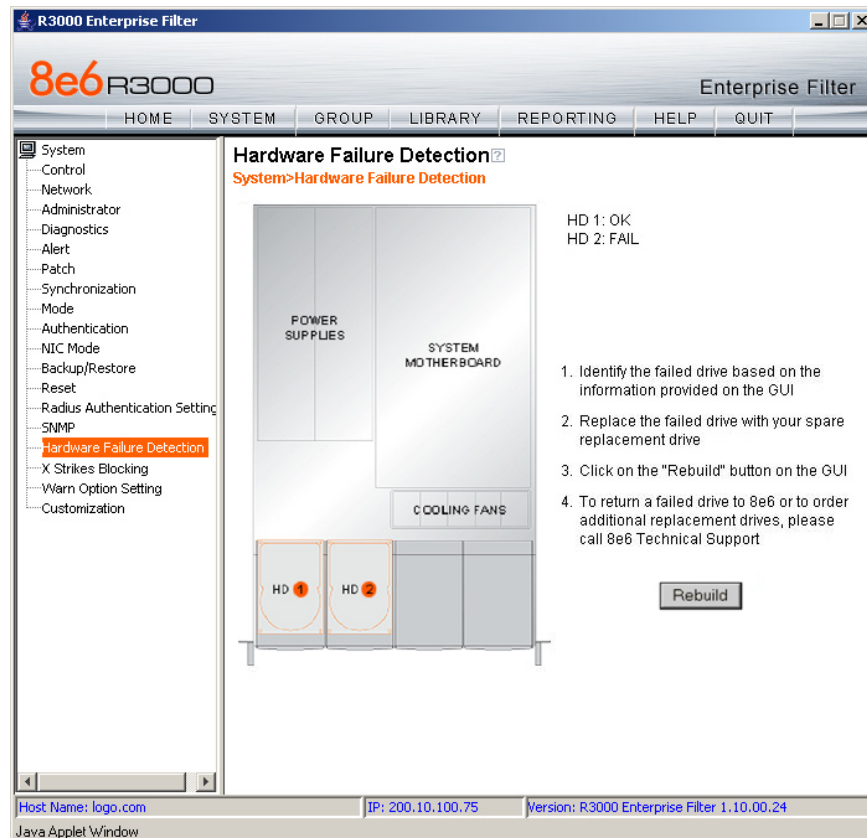
Hard Drive Failure

Step 1: Review the Notification Email

If a hard drive fails, a notification email is sent to the administrator of the server. This email identifies the failed hard drive by its number (HD 1 or HD 2). Upon receiving this alert, the administrator should verify the status of the drives by first going to Hardware Failure Detection screen on the administrator console.

⚠️ *WARNING: Do not attempt to remove any of the drives from the unit at this time. Verification of the failed drive should first be made in the administrator console before proceeding, as data on the server will be lost in the event that the wrong drive is removed from the unit.*

Step 2: Verify the Failed Drive in the Admin Console

The Hardware Failure Detection screen on the R3000 server is accessible via the **System > Hardware Failure Detection** menu selection:

The Hardware Failure Detection screen displays the current RAID Array Status for the two hard drives (HD 1 and HD 2).

Normally, when all two hard drives are functioning without failure, the text "OK" displays to the right of the hard drive number, and no other text displays on the screen.

However, when a hard drive has failed, the message "FAIL" displays to the right of the hard drive number, and instructions for replacing the hard drive display below:

1. Identify the failed drive based on the information provided on the GUI.
2. Replace the failed drive with your spare replacement drive.
3. Click on the "Rebuild" button on the GUI.
4. To return a failed drive to 8e6 or to order additional replacement drives, please call 8e6 Technical Support.
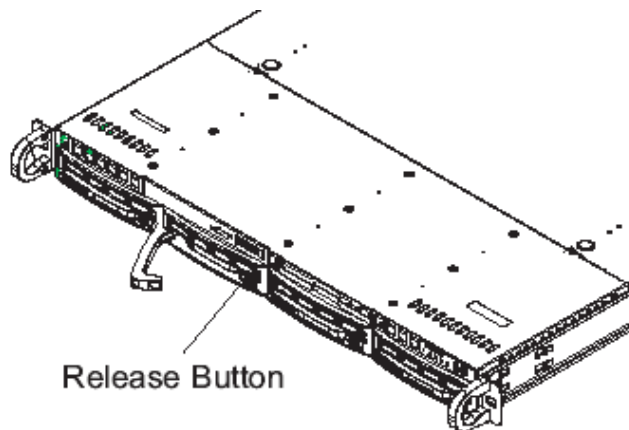
Step 3: Replace the Failed Hard Drive

After verifying the failed hard drive in the Admin console, go to the server to replace the drive.
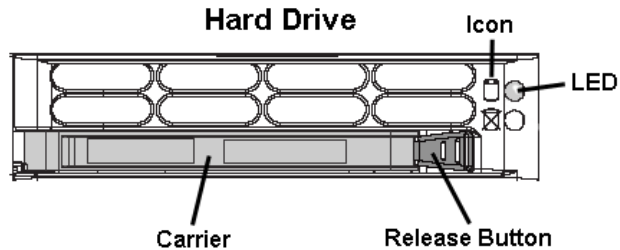
Press the red release button to release the handle on the carrier, and then extend the handle fully and pull the carrier out towards you. Replace the failed drive with your spare replacement drive.

NOTE: Contact Technical Support if you have any questions about replacing a failed hard drive.

Step 4: Click Rebuild in the Admin Console

Return to the Hardware Failure Detection screen in the Admin console and click Rebuild.

Step 5: Contact Technical Support

Contact Technical Support to order a new replacement hard drive and for instructions on returning your failed hard drive to 8e6.

Power Supply Failure

Step 1: Identify the Failed Power Supply

The administrator of the server is alerted to a power supply failure on the chassis by an audible alarm and an amber power supply LED—or an unlit LED—on the front and rear of the chassis.

NOTE: A steady amber power supply LED also may indicate a disconnected or loose power supply cord. Verify that the power supply cord is plugged in completely before removing a power supply.

WARNING: Be sure the correct failed power supply has been identified. Removing the wrong power supply will cause the system to crash.

Step 2: Unplug the Power Cord

To prevent electrical shock to yourself and damage to the unit, unplug the power cord from the failed power supply.

Step 3: Replace the Failed Power Supply

Remove the failed power supply by locating the red release tab (1) and pushing it to the right (2), then lifting the curved metal handle and pulling the power supply module towards you (3).
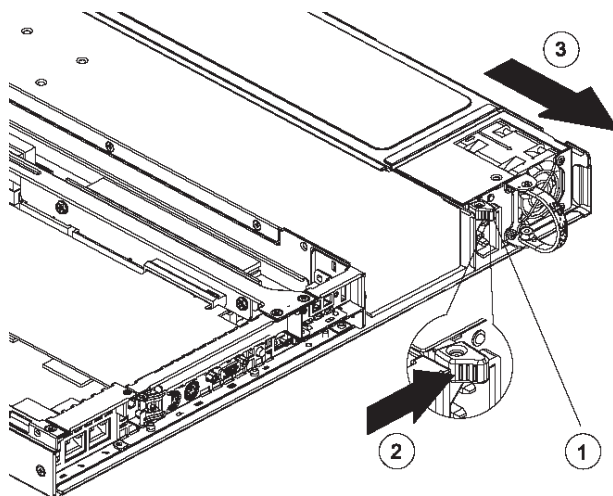
Note that an audible alarm sounds and the LED is unlit when the power supply is disengaged. Replace the failed power supply with your spare replacement power supply. The alarm will turn off and the LED will be a steady green when the replacement power supply is securely locked in place.

Step 4: Contact Technical Support

Contact Technical Support to order a new replacement power supply and for instructions on returning your failed power supply to 8e6.

Fan Failure

Identify a Fan Failure

A flashing red LED indicates a fan failure. If this displays on your unit, contact Technical Support for an RMA (Return Merchandise Authorization) number and for instructions on returning the unit to 8e6.

A steady red LED (on and not flashing) indicates an overheating condition, which may be caused by cables obstructing the airflow in the system or the ambient room temperature being too warm. Check the routing of the cables and make sure all fans are present and operating normally. The LED will remain steady as long as the overheating condition exists.