



8e6® R3000 Internet Filter

EVALUATION GUIDE



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R3000 INTERNET FILTER EVALUATION GUIDE

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R3000 EVALUATION GUIDE

Market Overview

In order to survive in today's world, businesses continually come up with new products, more sales, and better service. But most often, the corporate world is financially threatened from the inside. Employees harm businesses when they view pornography and other offensive Web content at work, which often result in sexual and hostile work environment lawsuits. Organizations also lose time and money when employees tie up network bandwidth with IM and P2P, and/or allow spyware and malware into the system. And finally, a host of federal and state laws require that organizations protect customer data, or risk severe penalties.

Filtering comes down to four simple objectives: Mitigate legal liabilities created by inappropriate Web content; increase productivity by removing Internet distractions; protect the network from threats delivered by Internet services and applications; and preserve network resources. 8e6 Technologies has more than 10 years of pioneering leadership in filtering technology and is widely recognized as the premier appliance-based filtering solution on the market. The R3000 Internet filtering solution features single-source support, simple and straight-forward pricing, and product design that meets the needs of a wide range of filtering expectations.

8e6 offers a wide range of Internet filtering and reporting appliances that not only help companies maintain compliance with laws such as the California Security Breach Information Act (CSBIA) (see <http://www.8e6.com/resources/internet-security-compliance-laws/>), but also help protect the security of a company's network infrastructure. With no premiums, easy to install and use, and 24-7 technical support, 8e6 is the perfect choice for overburdened IT administrators and managers.

Product Overview

Thank you for choosing to review the 8e6 Technologies R3000 Enterprise Filter. The R3000 tracks end users' online activity and can be configured to block specific Web sites or service ports, thereby protecting organizations against lost productivity, constricted bandwidth and possible legal liability resulting from Internet content.

This product also features expansive content categories (called "libraries"), instant message and peer-to-peer blocking, user authentication, and intuitive administrative navigation. All of these features are provided in a true appliance that provides speed and stability unmatched by any software product. In addition, the R3000 is fail-safe giving administrators the peace of mind that filtering won't ever impact the network's performance—or shut it down.

The R3000 appliance is designed to complement existing security measures by providing protection from threats *inside* the network—the threats most often unseen and discovered too late.

Note to Evaluators

Thank you for taking the time to review 8e6's R3000 Internet Filtering Appliance. Your interest in our company and product is greatly appreciated.

This Evaluation Guide Is designed to provide product evaluators an efficient way to install, configure and exercise the main product features of the R3000 Internet Filter.

INSTALL THE R3000, UPDATE LIBRARIES

To install the appliance, configure the box and to test filtering is operational please refer to the step-by-step instructions found in the **Quick Start Guide** provided in the box.

We also recommend, prior to reviewing the R3000 that you perform a complete library update.

This is done by going into the R3000 Administrator console.

1. Click the **Library** button at the top of the screen.
2. From the control panel, click Updates and select Manual Update from the pop-up menu.
3. In the Manual Update to 8e6 Supplied Categories window, click the radio button corresponding to **Complete Update**.
4. Click **Update Now** to begin the update process.

CONFIGURE AND TEST THE R3000

Understand the most common and useful features

One of the advantages of a hardware appliance, in addition to its compatibility and extremely low profile on the network, is its ease of use. Configuration of the R3000 can seem disarmingly simple at times, but when the hardware and software are designed to work together, the levels of complication decrease and robust power and efficiency significantly increase.

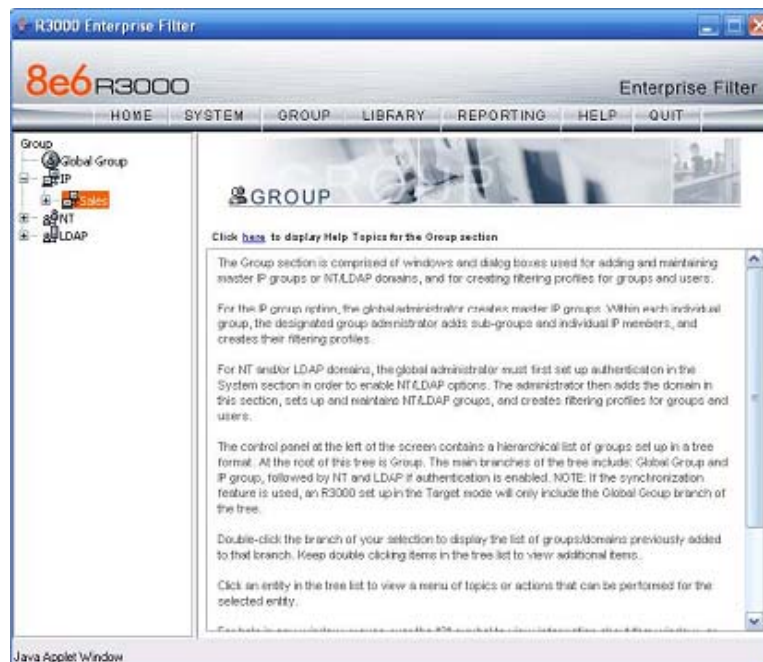
One of the challenges of simplicity is that it offers little variation in the appearance of the interface used to administer the R3000. Spending only a short time configuring and customizing the many capabilities of the R3000 quickly overcomes any confusion related to this “simple similarity,” and the following exercises are meant to provide a very explicit and easy-to-follow way to become comfortable with the administrator console.

This section of the evaluation manual is to guide the evaluator, in a linear fashion, through the most common and useful features of the R3000, starting with the elements that should be configured first and continuing with features that require an understanding of the steps learned while configuring those first elements. Once one “gets” the basic flow of how filtering options are set up, it becomes quite simple to quickly make adjustments, if needed. And, the R3000’s incredible capacity to be configured once and “left alone,” or to support extensive customization and specialization, make it the most versatile and network friendly filter on the market.

Group setup for different user types on the network

Apply different filtering levels for different types of users

Description: There are two primary “Groups” to understand when administering the R3000. The first, the “**Global Group**,” sets the default filtering policy for all users. In other words, the Global Group’s set of filtering parameters (called a “profile,” to be explained later) governs every user’s Internet access restrictions and permissions, *unless* a user or a group that user belongs to, has been assigned custom filtering parameters. Those exceptions to the Global Group (and there can be many) are simply called “**Groups**.” For example, setting aside an IP range for the sales department and altering their filtering restrictions and permissions would be considered creating a “Group,” likely called something as generic as “Sales,” and represented as an IP subset in the Global Group tree.



The main Group screen

The “**GROUP**” administrative feature section on the R3000 allows the administrator maximum control over setting appropriate filtering levels across a broad spectrum of users. In the work environment, this could be represented by sales, accounting, research, marketing and shipping all sharing the same IP range, but requiring different levels of filtering. The “**GROUP**” feature allows the administrator to set up these groups, assign custom filtering parameters to each, and adjust those parameters as needed.

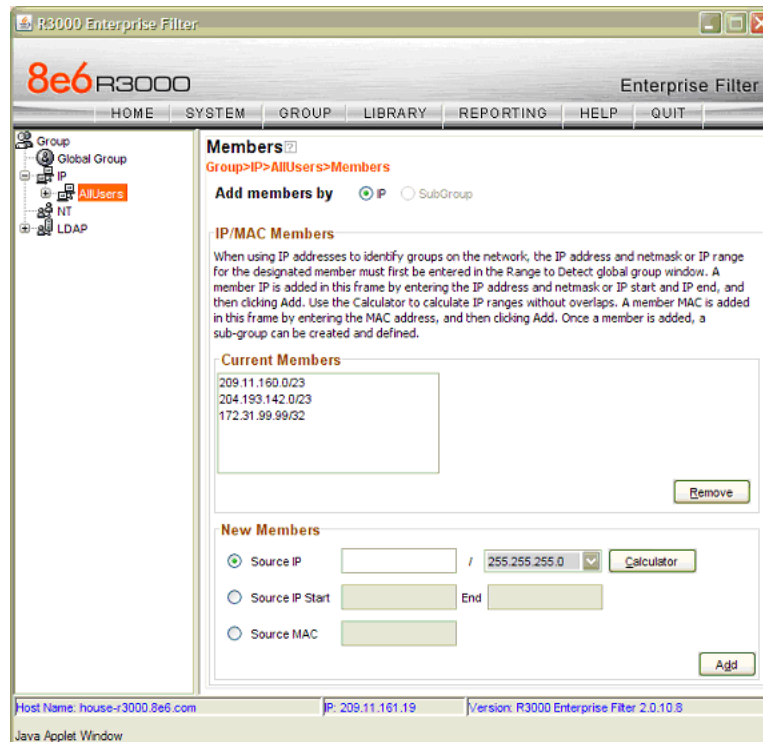
Configuration: For the purpose of evaluating the ease and effectiveness of the R3000’s group filtering, the following example addresses the most common configuration—grouping by IP address. The R3000 can also group by NT and/or LDAP domains. Should you wish to test the group features in one of these configurations, please refer to the Authentication User Guide located in the DOCS directory on the CD you were provided with your evaluation unit. The set up is not complicated, but there are system settings required that must be initiated prior to establishing the

groups in these environments, and it will be helpful and save time to work with a Solutions Engineer the first time these settings are initiated.

How to create an “IP Group”

1. Navigate the top level administrator console to “**GROUP.**”
2. Click on “**IP**” and select “**Add Group.**”
3. Provide the appropriate Group name (use “AllUsers” for this evaluation) and supply a password for this group. Click “**OK.**”

How to define members for this “IP Group”




IP group members

1. Click the newly created Group and select “**Members.**”
2. Add members to this Group by either an IP Range or Subnet within the “Range to Detect” parameters of the “Global Group” defined earlier when setting up the R3000. These IP Addresses should be the IP Addresses of the computers filtered for the purposes of your testing.

Rules and Profiles: Creating and using each

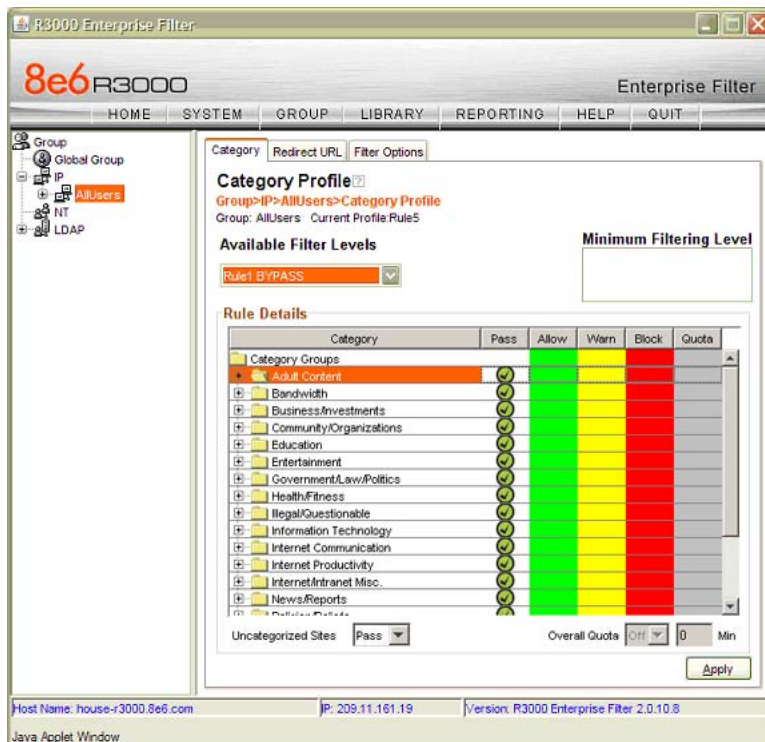
Description: “Rules” and “Profiles” may seem confusing as it often appears that they are used interchangeably. And, while the administrative windows controlling the creation of “Rules” and “Profiles” are very similar, they each serve two distinct purposes.

 **NOTE:** The general rule of thumb: A “Rule” can be applied to a “Profile,” but a “Profile” can’t be applied to a “Rule.” A “Rule” is a custom configuration of “Blocked,” “Passed,” and “Always Allowed” categories. A “Profile” contains the particular filtering parameters that are unique to a group or individual, and consists of “Library Categories,” “Rules,” “Ports” and numerous other filtering features that can be turned on or off.

How is a “Rule” used?

A “Rule” is a custom set of “Library Categories.” For example “RuleX” can be named “LegalLiability” and be set to block the library categories “pornography/adult content,” “child pornography,” “explicit art,” “obscene and tasteless,” and “R-Rated.”

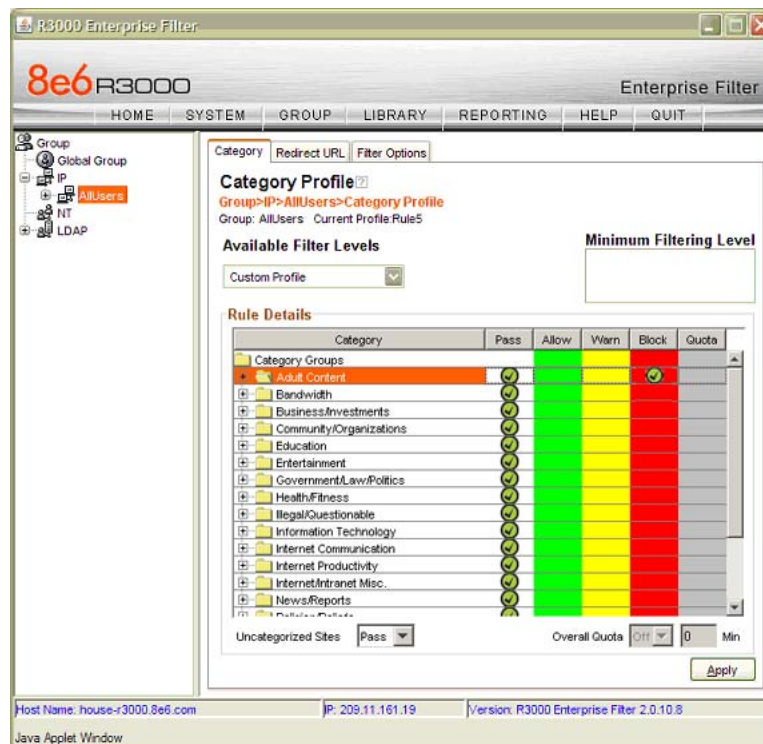
This “Rule” is then saved, eliminating the need to rebuild that set of “Library Categories” the next time that same particular set of categories needs to be applied to a group or individual. The “Rule” becomes part of a “Profile” that defines the filtering parameters for a group or individual.



Rule tab in profile window

How is a “Profile” used?

A Profile defines the particular filtering parameters assigned to a group or individual. There are two kinds of “Profiles.” The first is the “**Global Group Profile.**”




Category Profile tab

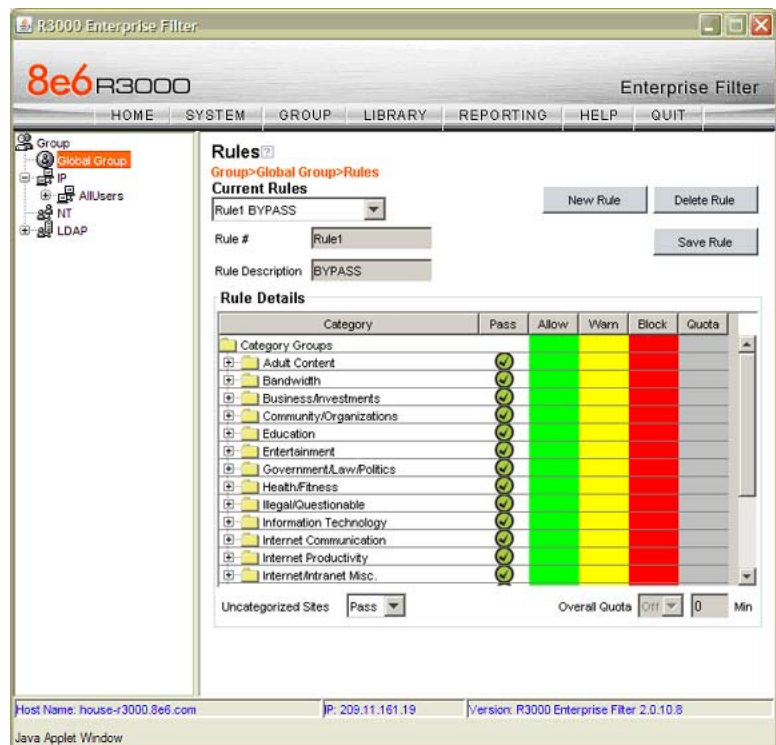
The default for the “Global Group Profile” is set up under the “Category Profile” tab of the Global Group’s administrative controls. Its default is set at “custom” and uncategorized sites are not blocked (note the Uncategorized Sites pull-down menu at the bottom of the window). The “custom” setting allows the administrator to immediately assign “Library Categories” to be “Blocked,” “Passed” or “Always Allowed” to establish the initial default level of filtering assigned to every user (IP address) until that user (IP address) is assigned a sub-group or individual profile. **The “Global Group Profile” setting doesn’t use “Rules,” only “Library Categories.”**

The second profile is the “**Group Profile.**” A “Group Profile” is assigned to an “IP Group” under the “Global Group” and can contain filtering parameters different from the “Global Group” default. For example, a company may have a “Global Group Profile” that blocks access to all sites in the earlier “LegalLiability” Rule example, i.e. “pornography/adult content,” “child pornography,” “explicit art,” “obscene and tasteless,” and “R-Rated.” That means every employee (or every computer the employees use) is subject to those filter parameters. However...

Let’s say the employees in the marketing department need to access photo services, online publications and other sites that might contain some adult content—or at least suggestive images. An administrator can set up a “Group” that is subject to a custom profile, which might be called “Marketing,” which is different* from the “Global Group Profile,” to allow access to the “R-Rated” Library Category. This group, or range of IP addresses, now exists within the “Global Group,” but with different filtering criteria. The rest of the “Global Group” (all other IP


addresses) remain filtered by the default “Global Group Profile, which includes “R-Rated.”

 **NOTE:** * “Different” doesn’t necessarily mean that a group is no longer filtered by the Library Categories in the “Global Group Profile.” In fact, “different” may mean the group is filtered by several categories **in addition to** those in the “Global Group Profile.” There are many ways a “Group” can be set up. The thing to remember is that a “Group” is set up to provide a “different” profile from the “Global Group.”



Rules window

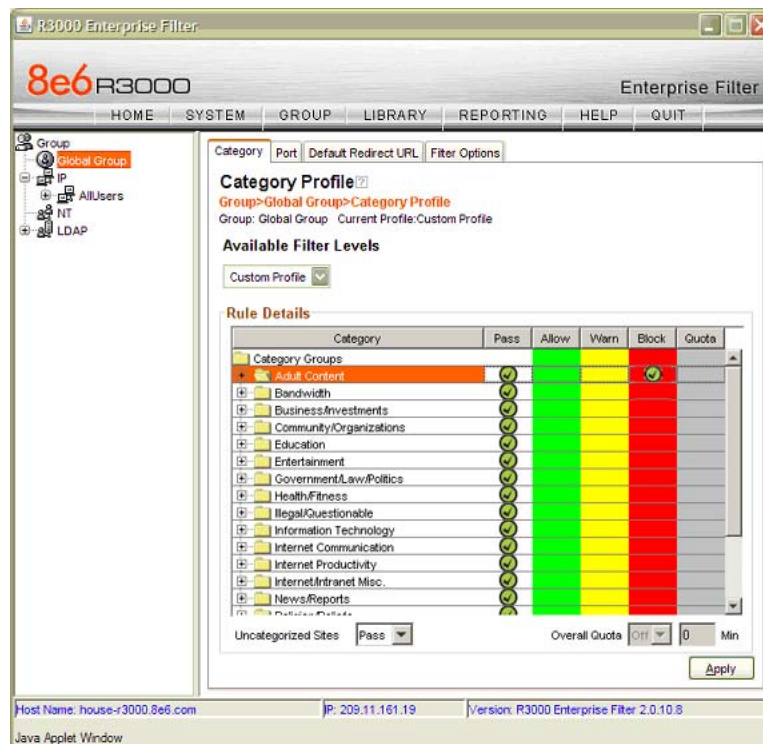
The “Rules” window displays when “Rules” is selected from the “Global Group” menu. This window is used for adding a filtering rule when creating a filtering profile for an entity. By default, “Rule 1 BYPASS” displays in the Current Rules pull-down menu. The other choices in this pull-down menu are “Rule 2 BLOCK PORN”, “Rule 3 Block IM and Porn”, “Rule4 8e6 CIPA Compliance (which pertains to the Children’s Internet Protection Act) and the “Block All” rule. By default, “Rule 1” displays in the “Rule #” field, “BYPASS” displays in the “Rule Description” field, and “Uncategorized Sites” are allowed to pass.

 **NOTE:** “Uncategorized” sites are those sited which have not been identified and placed within one of the 90+ categories in the R3000’s Library database. The “Pass” default will allow those URLs to be viewed. “Block” will prevent those sites from being viewed.

How to create a new “Rule”

1. From the top level administrator console, select “**GROUP.**”
2. Click “Global Group” and select “Rules.”
3. In the “Rule Details” frame click “**New Rule**” to populate the **Rule #** field with the next consecutive rule number available.
4. Enter a unique “**Rule Description**” that describes the theme for that “Rule.”
5. By default, all library categories are included in the “Pass Categories” column. All categories are grouped in logical “Category Groups.” For example, in the “Adult Content” category group you would find the categories “Child Pornography,” “Explicit Art,” “Obscene and Tasteless,” “R-Rated,” and “Pornography.” To move all categories within a category group to another column, select the column next to the category group. To move a single category, expand the category group, and select the column for just that category.
 - Double click the blocked column to move the library category to the “Blocked Categories” column.
 - Double click the allow column to move the library category to the “Always Allowed” column.
6. Select “Pass” “Warn” or “Block” to specify whether all “**Uncategorized Sites**” should pass or be blocked.
7. Click “**Save Rule**” to include your “Rule” to the list that displays in the pull-down menu.

Global Group Profile



Global Group Profile Category tab

The “Global Group Profile” window displays when “Global Group Profile” is selected from the “Global Group” menu.

Set the “Global Group Profile”

The “Category Profile” displays by default when “Global Group Profile” is selected from the “Global Group” menu. This window is used for selecting “Library Categories” that will be “passed” or “blocked” for the “Global Group Profile.”

By default, “Custom Profile” displays in the “Available Filter Levels” pull-down menu, and “**Uncategorized Sites**” are allowed to pass.

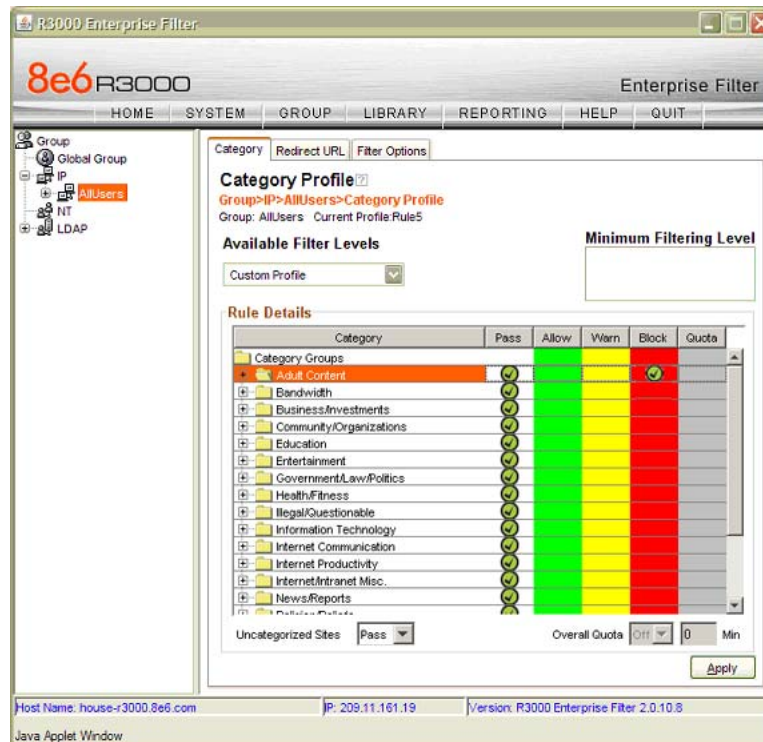
Create, edit a list of selected Categories

To define which categories will be “Blocked,” “Passed,” “Warned” or “Always Allowed” in the “Global Group Profile:”

1. Select a library category from the “Pass Categories” column.
2. Click in the appropriate column:
 - Double click the Blocked column to move the library category to the “Blocked Categories” column.
 - To remove a library category from the “Blocked Categories” column, double click the “Pass Categories” column.
 - Double click the Allow column to move the library category to the “Always Allowed” column.

3. Choose “Pass”, “Warn” or “Block” to specify whether “**Uncategorized Sites**” should pass or be blocked.
4. Click “**Apply**” to save the settings.

Group Profile



Group Profile window, Category Profile tab

The “Group Profile” window displays when “Group Profile” is selected from an “IP Group.”

Set the “Group Profile”

Setting up a “Group Profile” is exactly the same as setting up the “Global Group Profile,” except that “Rules” can be used to define the “Profile.”

“Category Profile” displays by default when “Group Profile” is selected from an “IP Group.” This tab is used for selecting library categories that will be “Passed” or “Blocked” for the “Group” filtering profile.

By default, “Rule0 Minimum Filtering Level” displays in the “Available Filter Levels” pull-down menu, and Uncategorized Sites are allowed to pass.

To set the Profile of the “Group,” the administrator can either select a pre-set “Rule” or go through the process of moving “Library Categories” into the “Blocked,” “Passed,” or “Always Allow” fields—or use both “Rules” and “Library Category” selections to create a unique profile.

Selecting the “Library Categories” to be in the “Blocked,” “Passed,” or “Always Allowed,” columns is just like configuring the “Global Group Profile” “Library Categories.”

Create, edit a list of selected Categories for a Group Profile

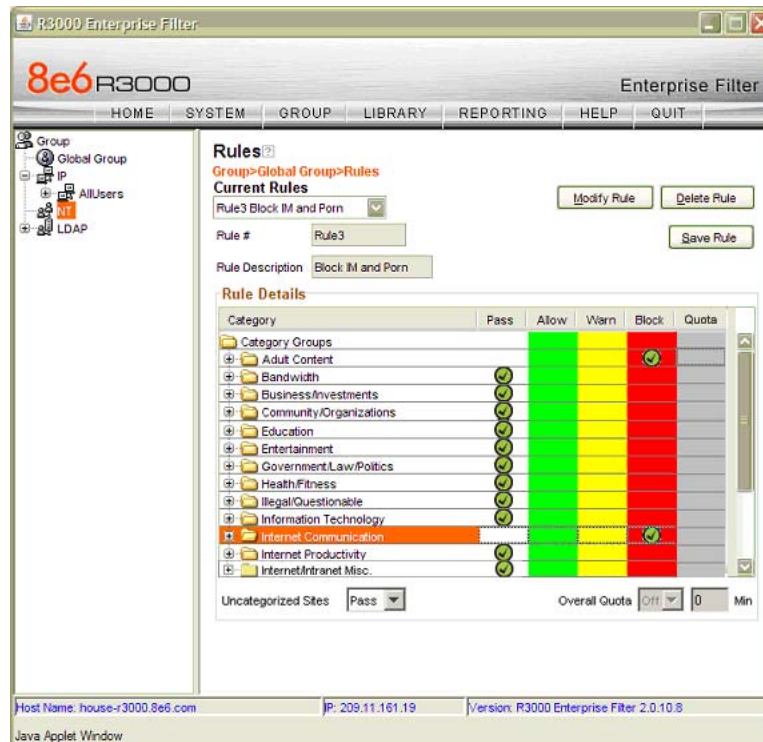
To define which categories will be “Blocked,” “Passed,” or “Always Allowed” in the “Global Group Profile:”

1. Select a library category from the “Pass Categories” column.
2. Click in the appropriate column:
 - Double click the Blocked column to move the library category to the “Blocked Categories” column.
 - To remove a library category from the “Blocked Categories” column, double click the “Pass Categories” column.
 - Double click the Allow column to move the library category to the “Always Allowed” column.
 - To remove a library category from the “Always Allowed” column, double click the pass column to move that category back to the “Pass Categories” column.
3. Choose “Pass”, “Warn” or “Block” to specify whether “**Uncategorized Sites**” should pass or be blocked.
4. Click “**Apply**” to save the settings.

Group settings tests


Test the “Rules” and “Profiles” feature

To test the “Rules” and “Profiles” feature, first define a “Rule.”



Rules window

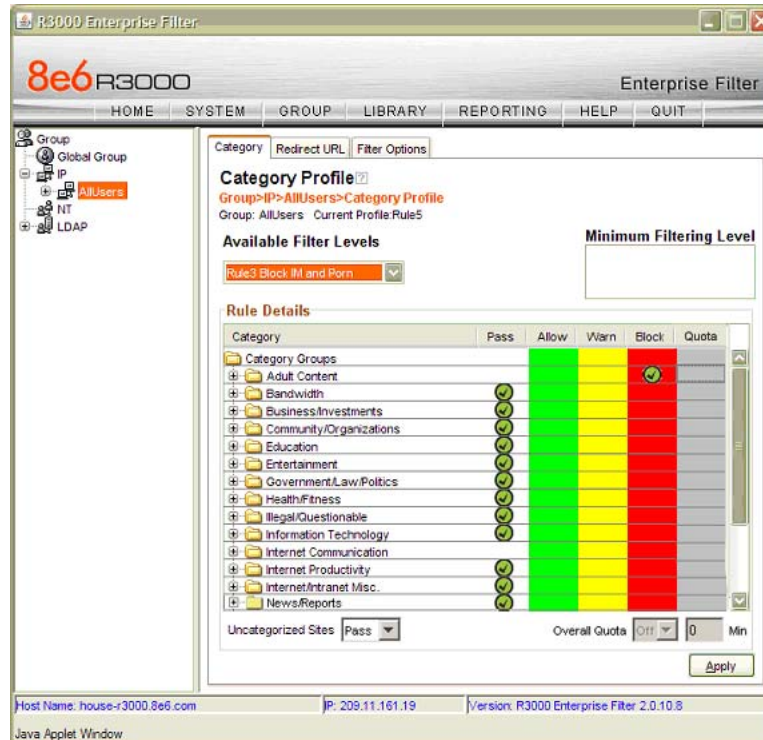
1. Select “**Rules**” under “Global Groups.”
2. Click “**New Rule**” (the Rule # will reflect the next sequential number available for a rule).
3. Move categories from “Pass Categories” to “Blocked” or “Always Allowed” as desired. Leave categories that don’t need to be blocked in “Pass.”

 **NOTE:** For the purposes of the evaluation, it is recommended that you only place two categories in “Block” and ignore “Allow.” Leave the remainder in “Pass.”

4. Specify whether “**Uncategorized Sites**” should pass or be blocked.
5. Give the “Rule” a Description/Name.
6. Click “**Save Rule**.”
7. Select “Yes” when asked if you want to add the “Rule.”

Test the “Rule”

To test the “Rule,” apply it to an “IP Group.”



IP group profile window with rule applied

1. Select “AllUsers” from the “IP Groups”.
2. Select “Group Profile”.
3. In the “**Available Filter Levels**” field, select the “Rule” you created.
4. Click “**Apply**” in the bottom right corner.
5. Access the Internet from an IP address within the “Sales” group.
6. Attempt to access a Web site obviously included within the blocked categories contained in the “Rule”. The site will be blocked.
7. Access the Internet via an IP address *not* included in the “Sales” range and attempt to access the same URLs. Access *will not* be blocked.
8. Repeat with several Web sites and different categories, if desired.

Custom Categories

Create and configure a Custom Category

Description: The R3000 allows an administrator to create a new category not listed among the 90+ options in the “Library Categories.” With literally tens of millions of URLs researched and screened among those existing categories, it might seem like a case of overkill to create a new one, but many of the most useful and powerful features of the R3000 depend on the creation of “Custom Categories.”



Custom Categories in Library tree menu

How to create a Custom Category

1. Navigate the top level administrator console to “**LIBRARY.**”
2. Click “**Custom Categories**” and select “Add Category.”
3. Provide a name and description for your custom category.
4. For evaluation purposes, call the new category “Evaluation Category.”
- 5 Add a Short Name description (7 characters maximum) and click “**Apply.**”

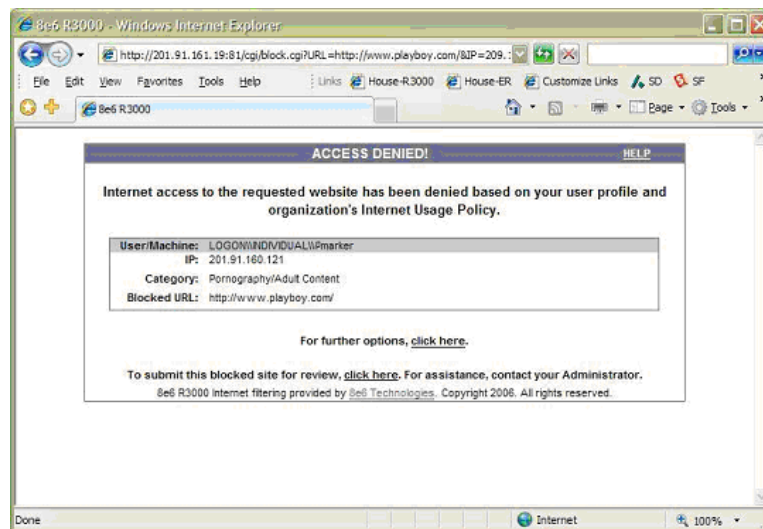
How to add URLs to the “Custom Category”

1. Select the newly created “Custom Category.”
2. Select the “**URLs**” option. The R3000 provides the interface to add and remove sites from the custom category.

3. Type in a URL you want to add.
4. Click **“Add.”** Wait for a moment while the R3000 searches through all URLs in its Library database (including IP addresses) to find URL and IP matches. Matches are listed in the window.
5. Select all URLs and IP addresses you want to add from the list (use Ctrl and Shift keys to allow multiple selects).
6. Click **“Apply Action.”**
7. Repeat for each URL.

Custom Category setup and usage test

1. Create a custom category called “Evaluation Category.”
2. Add any three URLs per the previous configuration instructions.
3. Select **“GROUP”** from the top level administrator navigation.
4. Click “Global Group” and select “Global Group Profile.”
5. In the “Category Profile” tab, select the “Evaluation Category” custom category you created from the “Pass” column, and move it to the “Block” column.
6. Move any other category in the “Block” column to the “Pass” column.
7. Select “Pass” from “Uncategorized Sites.”
8. From an IP address contained within the Global Group range, attempt to access any of the URLs included in the “Evaluation Category.” Access is blocked.
9. Attempt to access a URL not in the “Evaluation Category.” Access is allowed.

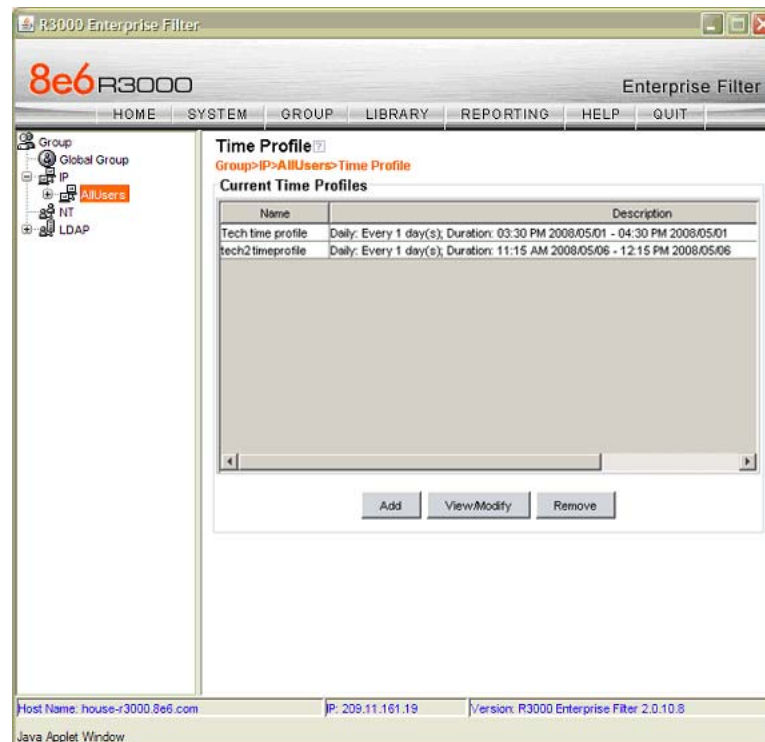


Block page

Filtering profile features

Time Profile feature

Description: The Time Profile feature lets the administrator set up a profile for any user or group to run at a scheduled time period. A user or group can have multiple time profiles, and these can be set to run at various intervals of time throughout a day, week, month, or year.




Time Profile window

Set up a Time Profile

1. Select **“GROUP”** from the top level administrator console.
2. Choose **“AllUsers”** from the **“IP Groups”**, and select **“Time Profile”** from the menu.
3. Click **“Add”**, enter a name for the Time Profile, and then click **“OK.”**
4. Notice that the **“Start”** time is pre-populated with the closest 15-minute time period and the **“End”** time period is pre-populated with the time period an hour after the **“Start”** time. For the purpose of this exercise, change the **“End”** time to be 15 minutes after the **“Start”** time.

Adding Time Profile window

5. Click the “Rule” tab.
6. Double click the “**Society/Lifestyles**” Category to open it.
7. Find “Alcohol”, double click in the “**Block**” column, and click “**OK.**”

 **NOTE:** In order to perform the test that follows, be sure the Alcohol category isn’t blocked in any other profile for this group.


8. Click “**Apply**” in the bottom right corner, click “**Yes,**” and then click “**OK.**”
9. Click “**Close.**”

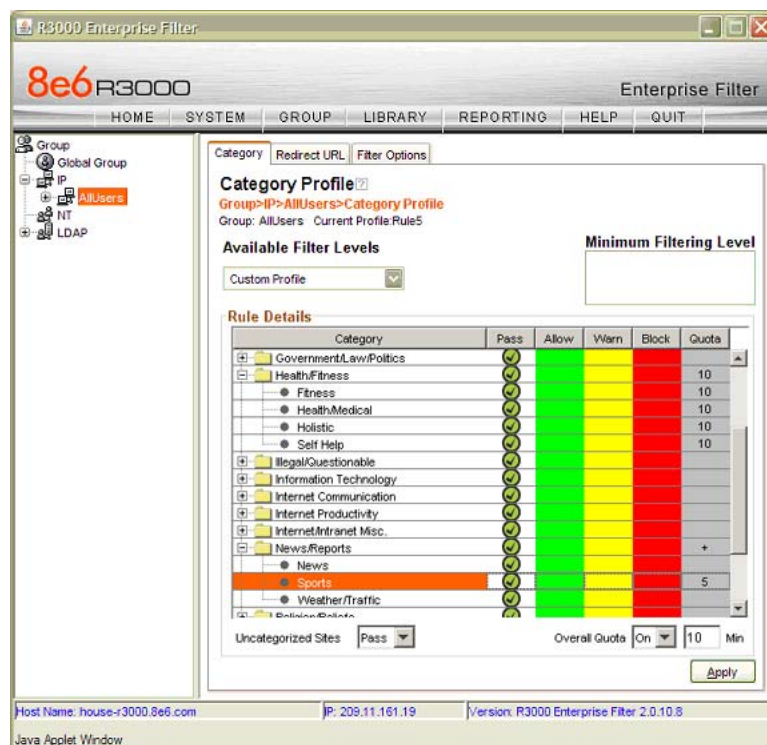
Test the Time Profile

1. From an IP address within the “Sales” group, access countless alcohol-related Web sites on the Internet for a 15-minute period—“coors.com,” “absolut.com,” “budweiser.com,” “wine.com,” etc. You should receive a block page when attempting to access these pages.
2. After the 15-minute period has ended, attempt to access URLs in the Alcohol category; you should be able to access these pages.

Quota feature

Description: The Quota feature restricts the amount of time a user can spend in a passed category. When the user reaches 75 percent of time in a quota-designated category, the quota notice page pops up to warn the user about this information. If 100 percent of quota time is attained, the user receives a quota block page and cannot access that category until quotas are reset.

 **NOTE:** If the Overall Quota is specified in the profile, the user's total quota time for all quota-marked categories is capped by the number of minutes entered in the Minutes field.



| Category | Pass | Allow | Warn | Block | Quota |
|-------------------------|------|-------|------|-------|-------|
| Government/Law/Politics | ✓ | | | | |
| Health/Fitness | ✓ | | | | 10 |
| Fitness | ✓ | | | | 10 |
| Health/Medical | ✓ | | | | 10 |
| Holistic | ✓ | | | | 10 |
| Self Help | ✓ | | | | 10 |
| Illegal/Questionable | ✓ | | | | |
| Information Technology | ✓ | | | | |
| Internet Communication | ✓ | | | | |
| Internet Productivity | ✓ | | | | |
| Internet/Intranet Misc. | ✓ | | | | |
| News/Reports | ✓ | | | | + |
| News | ✓ | | | | |
| Sports | ✓ | | | | 5 |
| Weather/Traffic | ✓ | | | | |

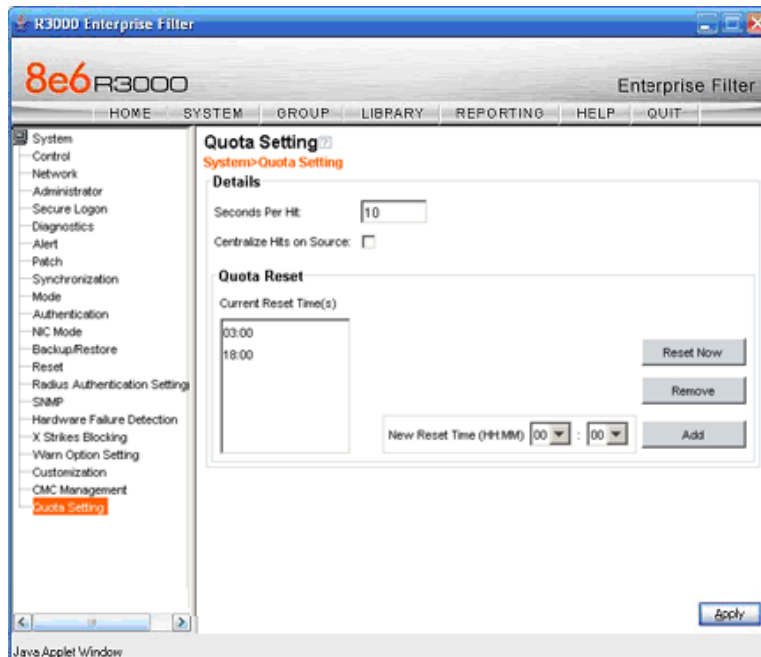
Quota time shown in Quota column and Overall Quota enabled

Set up the Quota feature

1. Select **“GROUP”** from the top level administrator console.
2. Choose **“AllUsers”** from the **“IP Groups”**.
3. Double click the **“News/Reports”** Category to open it.
4. Find **“Sports”**, double click in the Quota column, and enter **“5”**.
5. Click **“Apply”** in the bottom right corner.

Test the Quota feature

1. From an IP address within the “Sales” group, access countless sports-related Web sites on the Internet for a five-minute period—”espn.com,” ”sportsillustrated.cnn.com,” ”tennis.com,” ”soccer.com,” etc. During the course of the five minute period, you should receive a Quota Notice page informing you that 75 percent of quota time has been attained.
2. Continue accessing sports-related Web sites. After the five-minute period has elapsed, you should receive the Quota Block page informing you that your access to the Sports Category is now blocked.

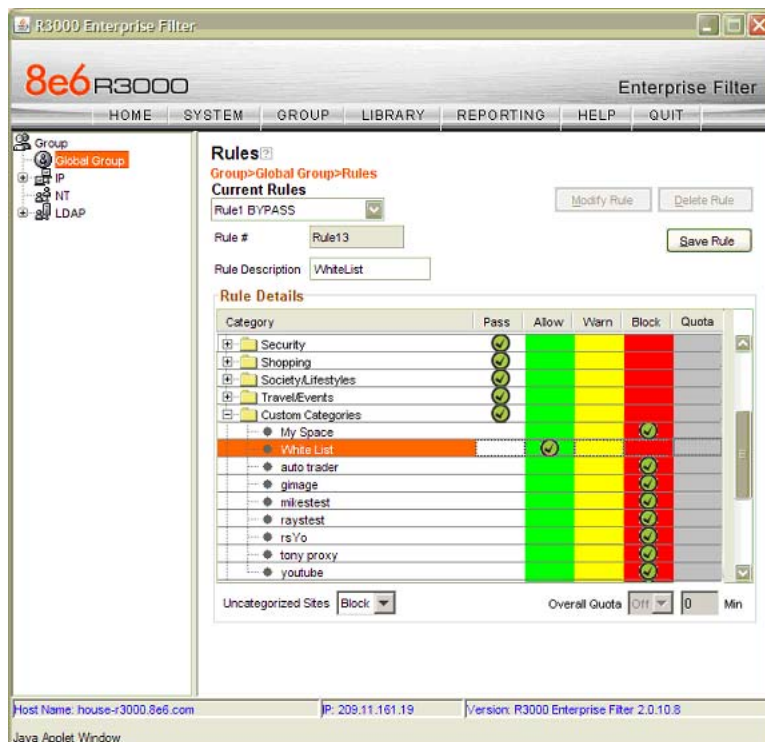


Quota Setting window

3. To reset the quota for your profile, first select “**SYSTEM**” from the top level administrator console.
4. Next choose “Quota Setting”.
5. Click “**Reset Now**” and then click “**Apply**.”
6. Using the same IP in the “Sales” group, attempt to access sports-related sites; you should be able to access these URLs again.

White List feature

Description: White lists are effective when a particular group requires tight control over content options. For example, rather than spend hours determining what employees in shipping shouldn't be viewing, it is much easier to define only the things they *can* view. Restricting that group to specific URLs provides a way to ensure the only Web sites visited are those required for work—without requiring administrators to keep up with employees who find creative ways to bypass black lists.



White list rule setup

How to create and configure a White List

1. Create a custom category called “White Lists”.
2. Add a couple of URLs that students might access for reference.
3. Select “**GROUP**” from the top level administrator navigation.
4. Click “Global Group” and select “Global Group Profile.”
5. In the “Category Profile” tab, select the “White Lists” custom category you created from the “Pass Categories” column. Double click the “Allow” column.
6. Block all other categories by double clicking the “Block” column.
7. Select “Block” from “Uncategorized Sites” pull-down menu.
8. Click “**Apply**”.

Test the White List

After completing steps 1-8 above, then:

1. From an IP address contained within the Global Group range, attempt to access any of the URLs included in the “Evaluation Category.” Access is allowed.
2. Attempt to access a URL not in the “White Lists” category.” Access is denied.

Warn feature

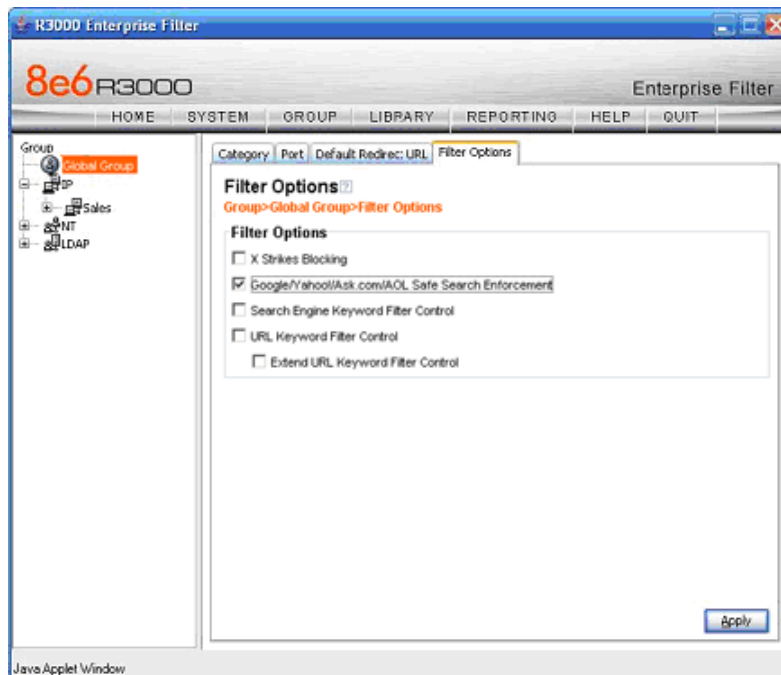
The Warn feature allows the administrator to warn a user that sites within a specific category may violate the acceptable use policy, without actually blocking them from the site outright. The user will be prompted with a warning about the possibility of AUP violation. If the visit to the site is for appropriate business use, the user can elect to continue on to the site. If the user feels that they should not continue on to the site, they can also elect to do this.

How to test the Warn feature

1. Select the category you wish to “Warn.”
2. Double click the Warn column next to that category.
3. Visit that category on a filtered PC.

Google/Yahoo!/Ask.com/AOL Safe Search Enforcement

Description: Google, Yahoo!, Ask.com, and AOL have very effective “safe search” features that can be activated to ensure search results do not contain sexually explicit material. Unfortunately, “safe search” can be deactivated in the preference settings of each search engine. The R3000 allows these filters to stay activated—with the settings remaining unchangeable except by the administrator of the R3000.



Safe Search Enforcement Filter Options

How to configure the Safe Search Enforcement feature

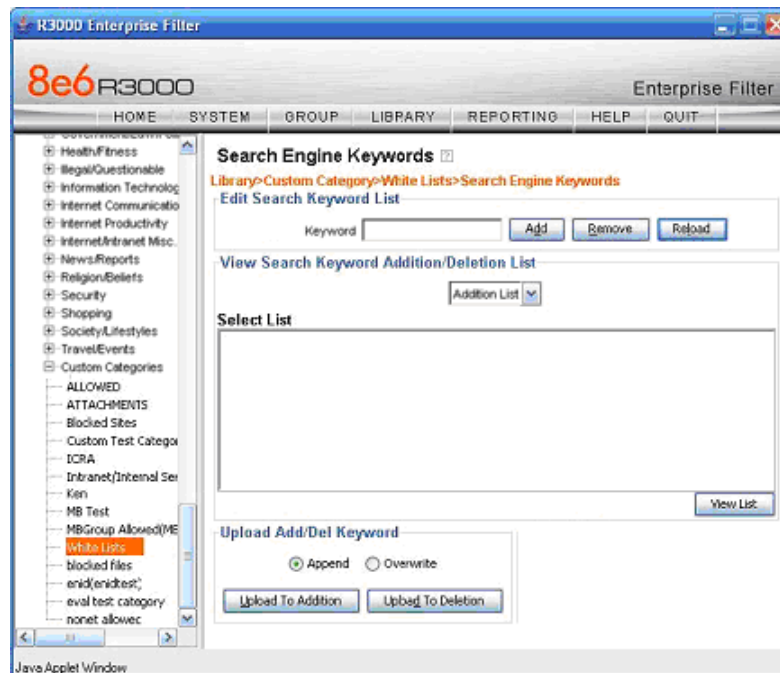
1. Select **“GROUP”** from the top level administrator console.
2. Click “Global Group” and select “Global Group Profile.”
3. Select the “Filter Options” tab.
4. Select the **“Google/Yahoo!/Ask.com/AOL Safe Search Enforcement”** checkbox.
5. Click **“Apply”**.

How to test the Safe Search Enforcement feature

1. Configure the “Google/Yahoo!/Ask.com/AOL Safe Search Enforcement” feature.
2. Access Yahoo! from an IP address within the Global Group range.
3. Manually set the Yahoo! search settings to the lowest filtering option.
4. Search using the term “playboy.” Content is filtered by Yahoo!
5. Repeat for Google, Ask.com, and AOL.


Search Engine Keyword Filtering

Description: There are a number of words and phrases that clearly won't be used to find business-related content on the Web. With "Search Engine Keyword Filtering" administrators can stop a search before it even starts (to cause trouble). The R3000 allows administrators to add words or phrases, up to 75 characters long (alphanumeric), to shut down access to restricted content right at the point an employee clicks "search." These words and phrases can be added either one at a time or by uploading a text file. Instead of questionable content and/or images, a block page appears.

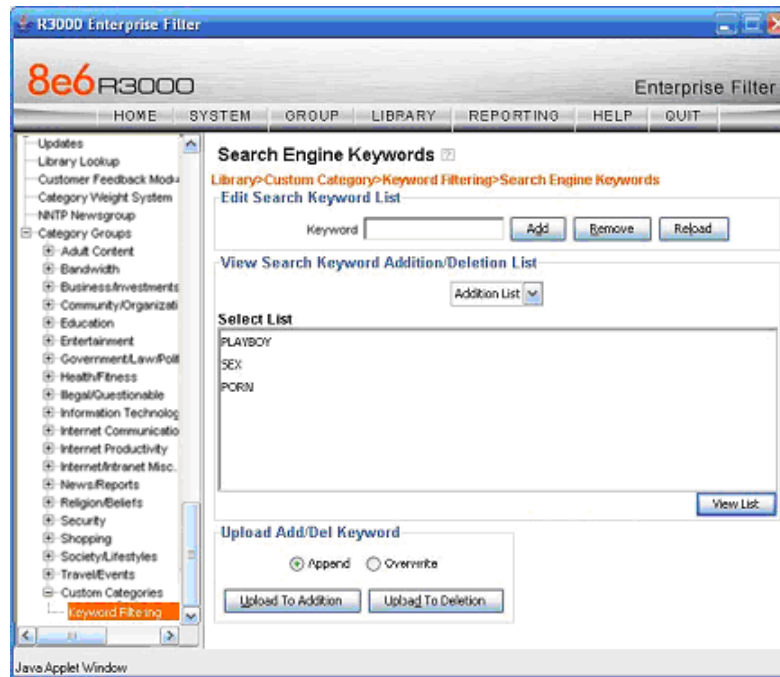


Search Engine Keyword filtering

How to configure Search Engine Keyword Filtering

 **NOTE:** Search Engine Keyword Filtering must be activated as part of a custom category.

1. Select "**LIBRARY**" from the top level administrator console.
2. Create a "Custom Category" (or add Search Engine Keyword Filtering to an existing custom category).
3. Select the "Custom Category" and choose "Search Engine Keywords."
4. Type in a keyword and click "**Add.**"
5. Repeat and follow screen prompts.
6. Select "**GROUP**" from the top level administrator console.
7. Click on "Global Group" and select "Global Group Profile."
8. Click the "Filter Options" tab.
9. Activate the "**Search Engine Keyword Filter Control**" checkbox.
10. Click "**Apply**".



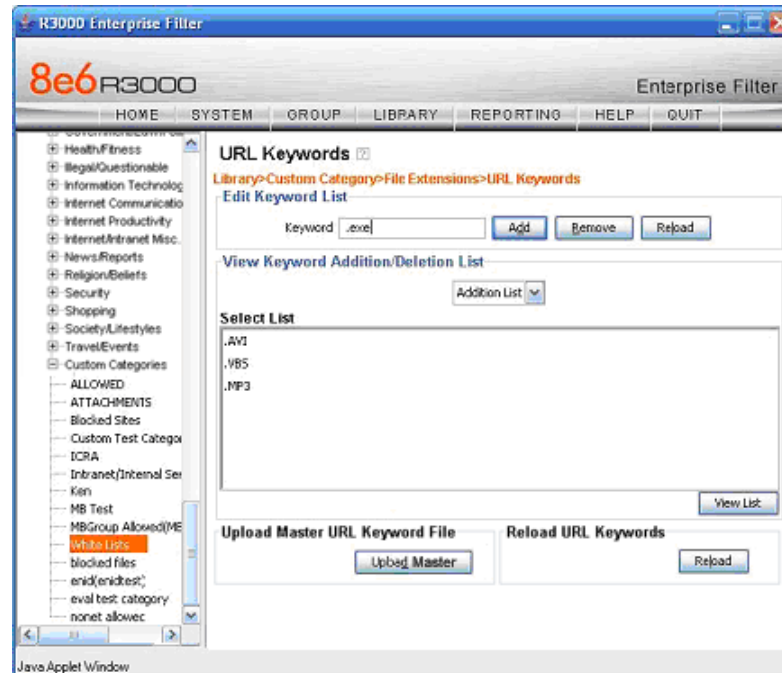
Adding Search Engine Keywords

How to test Search Engine Keyword Filtering

1. Create a custom category called “Keyword Filtering,” using the keywords “playboy,” “sex” and “porn.”
2. Activate “**Search Engine Keyword Filtering**” in the “Global Group Profile.”
3. In the “Global Group Profile,” select the “Category” tab.
4. Move the “Keyword Filtering” category setup selection from “Pass” to “Block.”
5. Click “**Apply**.”
6. Access Yahoo! from an IP address within the Global Group range.
7. Enter “playboy” into the search field and click “search.” The search will be blocked.
8. Repeat for “sex” and “porn.”
9. Test in Google, Ask.com, and AOL as well.

Attachment filtering

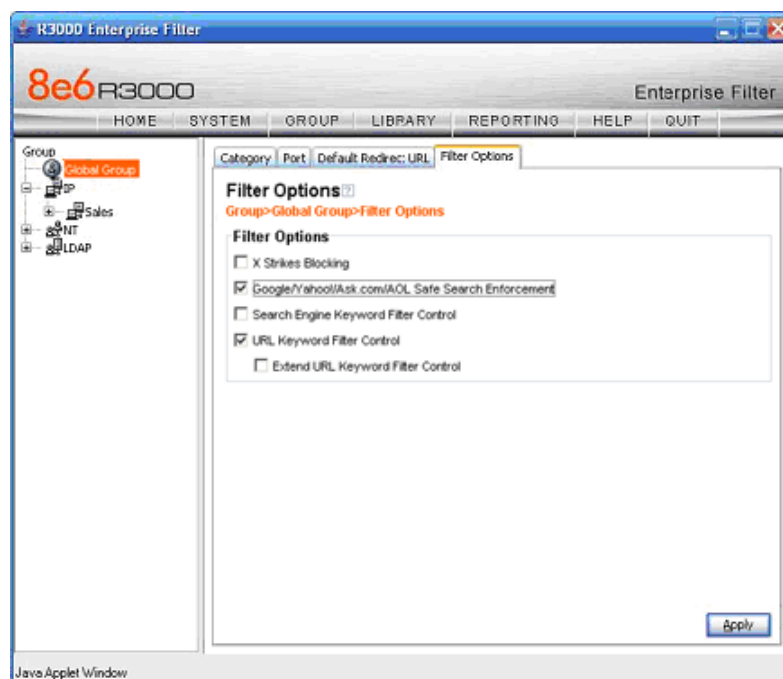
Description: Unchecked and unmanaged, the download of attachments can bring a network to its knees. The R3000's "Attachment Filtering" feature identifies the download of a file as soon as it's initiated, and blocks the download.



Attachment filtering setup in URL Keywords

How to configure attachment filtering

1. Select "**LIBRARY**" from the top level administrator navigation.
2. Add a custom category and call it "**File Extensions**."
3. Select "URL Keywords" from the newly-created "File Extensions" custom category.
4. Add a file extension in the "Keyword" field and click "Add." (When adding the file extensions, make sure you add them with the period before the keyword, e.g. type .mp3 in the keyword field, not mp3).
Keep adding until you have entered all the desired file extensions.
5. Click "**Reload**" to reload the library.
6. Select "**GROUP**" from the top level administrator navigation.
7. Click "Global Group" and select "Global Group Profile".
8. Select the "Filter Options" tab.
9. Enable "**URL Keyword Filter Control**" and click "**Apply**" to save.
10. Select the "Category" tab. Add the "File Extensions" custom category (found in the "Pass" column) to the "Block" column.



Attachment filtering setup in Filter Options tab

How to test attachment filtering

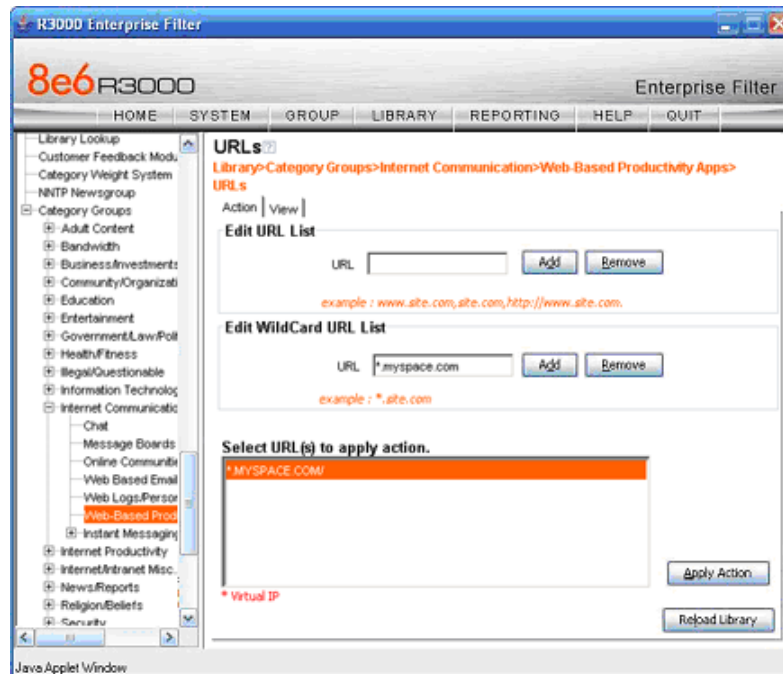
1. Configure the “File Extensions” custom category.
2. Enable “URL Keyword Filter Control” in the Global Group Profile.”
3. Access the Internet from an IP address within the Global Group range.
4. Go to a Web site with file downloads (mp3, shareware, movies, etc.).
5. Attempt to download a file. The attempt will be blocked.

Wildcard filtering

Description: Online communities such as myspace.com continually add numerous sub-domains to house the profiles of their fast growing communities. Rather than manually adding each and every individual domain to the library on an ongoing basis, the R3000 can accept a wildcard to block these types of sites more efficiently. For example, adding “http://*.myspace.com” (where the asterisk [*] is the wildcard indicator) to a customized category’s URL list will ensure that anything on myspace.com will be blocked.

! **IMPORTANT:** If a specific URL was added to a custom library category that is **not** set up to be blocked, and a separate wildcard entry containing a portion of that URL is added to a category that **is** set up to be blocked, the end user will be able to access the non-blocked URL but not any URLs containing text following the wildcard.


For example, if `http://www.cnn.com` is added to a category that is **not** set up to be blocked, and `*.cnn.com` is added to a category that **is** set up to be blocked, the end user **will** be able to access: `http://www.cnn.com` since it is a direct match, but **will not** be able to access `http://www.sports.cnn.com`, since direct URL entries take precedence over wildcard entries.



Wildcard filtering

How to configure wildcard filtering

1. Go to “**LIBRARY**” in the top level administrator navigation.
2. Click an existing custom category or create a new one.
3. Select “URLs” from that category to add the wildcard URL.
4. In the URL text field enter the site in the format of *.site.com and click “**Add.**”
5. Highlight the newly added wildcard URL and click “**Apply Action.**”
6. Continue with any other wildcards you want to add.
7. Click “**Reload Library**” for changes to take effect.

 **TIP:** Wildcards are to be used for blocking only. They are not designed to be used for the exceptions function or the always allowed white listing function. The minimum number of levels that can be entered is three (*.yahoo.com) and the maximum number of levels is six (*.mail.attachments.message.yahoo.com).

How to test wildcard filtering

1. Create a custom category called “Wildcards.”
2. Add the following URLs (or any three URLs) per the previous configuration instructions:
 - a. *.playboy.com
 - b. *.myspace.com
 - c. *.8e6.com
3. Select “**GROUP**” from the top level administration navigation.
4. Click “Global Group” and select “Global Group Profile.”

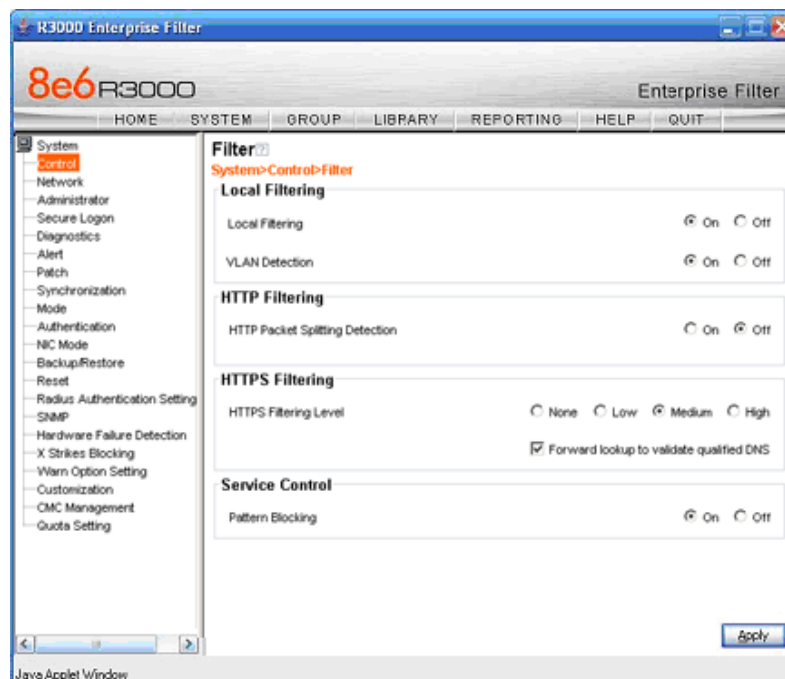
5. In the “Category” tab, move the “Wildcards” custom category you created from the “Pass” column to the “Block” column.
6. Select the “Block” option from “**Uncategorized Sites.**”
7. From an IP address contained within the Global Group range, go to Google.
8. Initiate a search for any of the domains (using keywords “playboy,” “myspace,” and “8e6.” You should get numerous sub-domain choices to select.
9. Attempt to access a link from Google. Access is denied.

Configure, test, block services

Anonymous proxies

Description: Web-based anonymous proxy services provide a method to bypass Web filters. Administrators can block the “**Web-Based Proxies/Anonymizer**” Library Category to keep employees away from sites that offer free anonymous proxy services. As a second layer of protection, the R3000 also offers “**Proxy Pattern Blocking.**”

“**Proxy Pattern Blocking**” prevents users from bypassing the filter if they try to use (unencrypted) Web and client-based proxies. Therefore, if the site is not categorized as Web-Based/Anonymous Proxies, the R3000 will still be able to block access to the site based on signature files in the 8e6 Database.



Block anonymous proxies

How to configure anonymous proxies

1. Select “**SYSTEM**” from the top level administrator console.
2. Click “**Control**” and select “Filter.”
3. Turn the “**Pattern Blocking**” radio button “**On**”.
4. Select “**GROUP**” from the top level administrator console.
5. Click “Global Group” and select “Global Group Profile.”
6. Move the “**Web Based/Anonymous Proxy**” category from the “Pass” column to the “Block” column.
7. Click “**Apply**”.

How to test anonymous proxies

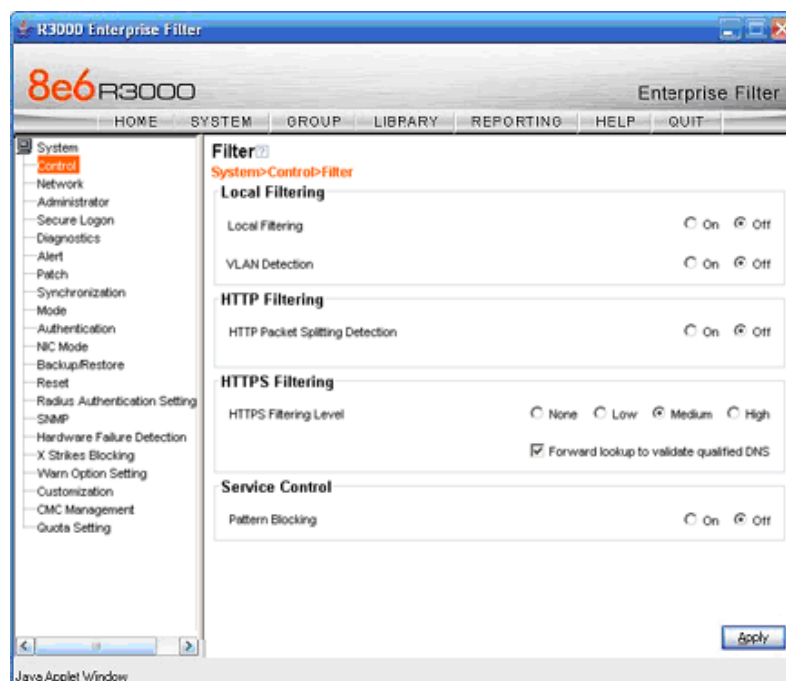
1. From an IP address in the Global Group range, go to <http://proxy.org> and click on "Free Proxy Form."
2. Enter any URL and select "GO." The request is routed through anonymous proxies and is blocked.

The R3000 Internet Filter blocks these proxy types using the Proxy Pattern Detection feature:

- PHPproxy form (unencrypted): v0.3 and 0.4
- CGIProxy - HTTP/FTP proxy in a perl based CGI script (unencrypted) including CGI-redirects: v2.0.1 and 2.1beta6
- Perl based proxy module: v5.8 (backward compatible)
- Accelerator and Split Proxies: GWA v0.2.64 and higher
- Anonymous and Transparent Proxies (unencrypted) used in combination with PHP, CGI, Perl, Accelerator
- Hopster (HTTP Tunnel): v17
- GCD related proxies: UltraReach (web-based), UltraSurf v6.9 and FreeGate v6.0

Block IM, P2P applications and streaming media

Description: The R3000 provides Peer-to-Peer (P2P) and Instant Message (IM) blocking. Peer-to-Peer and Instant Messaging pose significant challenges to administrators due to the risks of content type that can be passed on via these tools (images and video), as well as the ease by which these enable malicious code and viruses to circumvent many networks. Additionally, sites that offer IPTV programming, streaming video, streaming radio Internet programming and other such streaming media create a tremendous demand for network resources and can severely impact network performance. In addition to blocking IM and P2P applications, the R3000 also logs user attempts to run these applications through the R3000's Intelligent Footprint Technology (IFT). IFT blocks these applications based on the traffic patterns they generate.



Block patterns

Configure IM, P2P, streaming media blocking

1. Select **“SYSTEM”** from the top level administrator console.
2. Click **“Control”** and select **“Filter.”**
3. Turn the **“Pattern Blocking”** radio button to **“On.”**
4. Select **“GROUP”** from the top level administrator console.
5. Click **“Global Group”** and select **“Global Group Profile.”**
6. Move the **“Chat,” “Instant Messaging,” “Internet Radio,” “Peer-to-Peer/File-sharing”** and **“Streaming Media,”** from the **“Pass”** column to the **“Block”** column.
7. Click **“Apply”**.

How to test for IM

1. From an IP address in the Global Group range, activate an IM program such as Yahoo! IM or AIM.
2. Attempt to send an instant message to another user. The attempt is blocked.

How to test for P2P

From an IP address in the Global Group range, attempt to access a P2P site such as Limewire.com. The attempt is blocked.

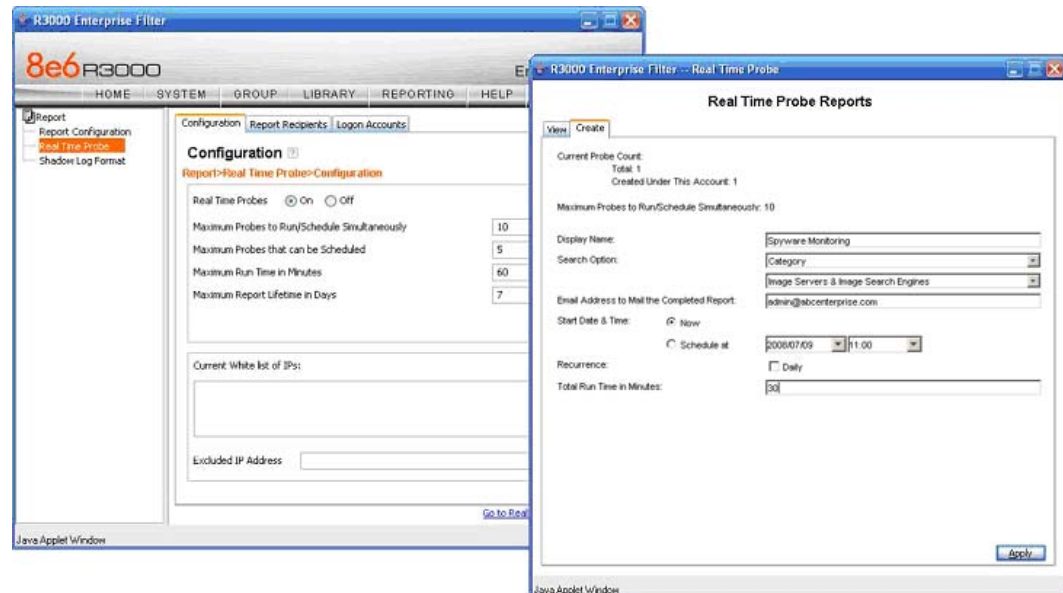
How to test for streaming media

1. From an IP address in the Global Group range, open a streaming media application like Real Audio or Microsoft Media Player.
2. If a stream is not automatically initiated, activate streaming media content. The attempt is blocked.

Real Time Probes and X-Strikes Blocking

Real Time Probes feature

Description: Real time probes allow an administrator to monitor an employee's Internet usage in real time to determine if that user is accessing appropriate Internet content. Reports generated by the probe can be emailed for further review. Using Real Time Probes, an administrator can even monitor for malicious code and spyware in real-time to quickly identify workstations that are currently infected.



Real Time Probe setup

How to configure Real Time Probes

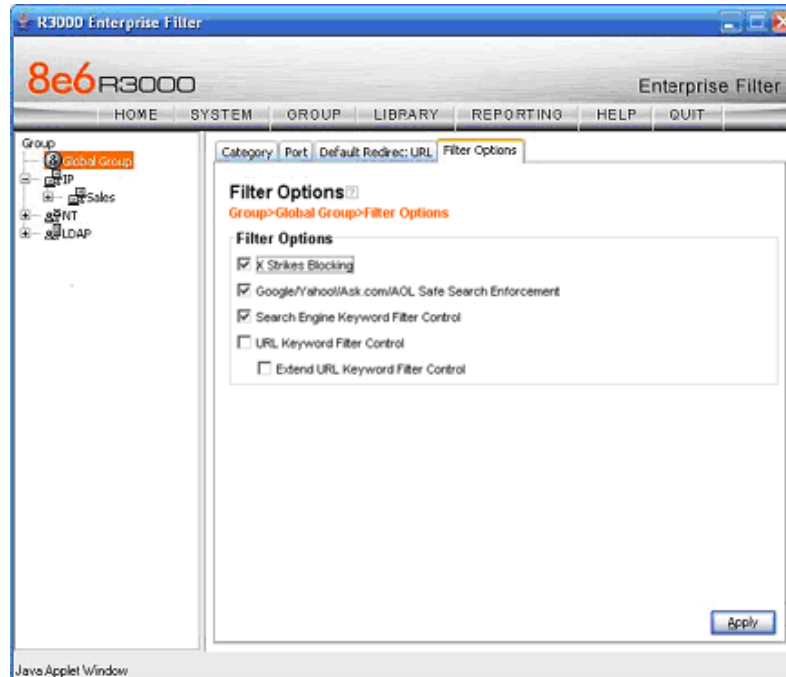
1. Select **“REPORTING”** from the top level administrator console and choose **“Real Time Probe.”**
2. Enable Real Time Probes by selecting **“On”** and clicking **“Save”** to apply your setting.
3. Click the link **“Go to Real Time Probe Reports GUI”** (lower right corner).
4. Select the **“Create”** tab do the following:
 - a. Enter a display name for the report (e.g. **“Spyware Monitoring”**).
 - b. Select **“Category”** for the Search option.
 - c. Select a category to be monitored, using the pull-down menu directly below the **“Search Option”** (the category choices include custom categories, as well).
 - d. Enter an email address where completed reports will be sent (optional).
 - e. Select **“Now”** for the **“Start Date and Time”** (or set a future date and time).
 - f. Enter the **“Total Run Time in Minutes”** you would like the probe to run (e.g. **“30”**).
5. Click **“Apply”** and **“OK”** to confirm the creation of the report.

How to test Real Time Probes

1. Configure a Real Time Probe with the following criteria:
 - Maximum Probes to Run/Schedule Simultaneously: 10
 - Maximum Probes that can be Scheduled: 5
 - Maximum Run Time in Minutes: 60
 - Maximum Report Lifetime in Days: 7
 - Display Name: Sports
 - Search Option: Category
 - Category: Sports
 - Start Date & Time: Now
 - Total Run Time in Minutes: 5
2. Click “**Apply**” and “**OK**”.
3. Click the “**View**” tab to see the probe that you have just created. Its status should show that it’s currently running. Highlight the probe and click “**View**” to see the report run in real time.
4. Access the Web from an IP address included in the Global Group range.
5. Begin to access sports-related Web sites and content (e.g., Sports Illustrated and ESPN).
6. All access to sports-related sites will be identified in this report.

X-Strikes feature

Description: The X-Strikes feature is a very powerful administrator tool that enables both the lockdown of users engaged in severe policy violations, as well as, remote notification of the violations, as they occur. X-Strikes is designed to identify and terminate Internet access of users who are frequent violators of policy, e.g. exhibiting multiple attempts to access blocked sites over short periods of time.

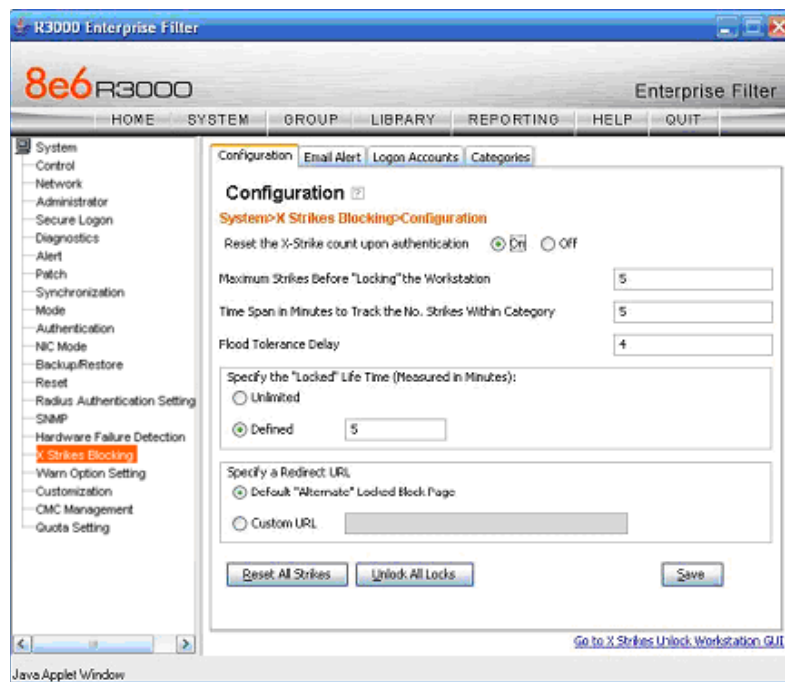


X-Strikes feature

How to configure the X-Strikes feature

There are two sections of the administrator console that must be accessed to configure the X-Strike feature. First, the feature must be activated in the Global Group options.

- 1 Select "**GROUP**" from the top level administrator console.
- 2 Select "Global Group Profile" from the "Global Group."
- 3 Select the "Filter Options" tab in the Global Group window.
- 4 Select the "**X-Strikes Blocking**" checkbox.



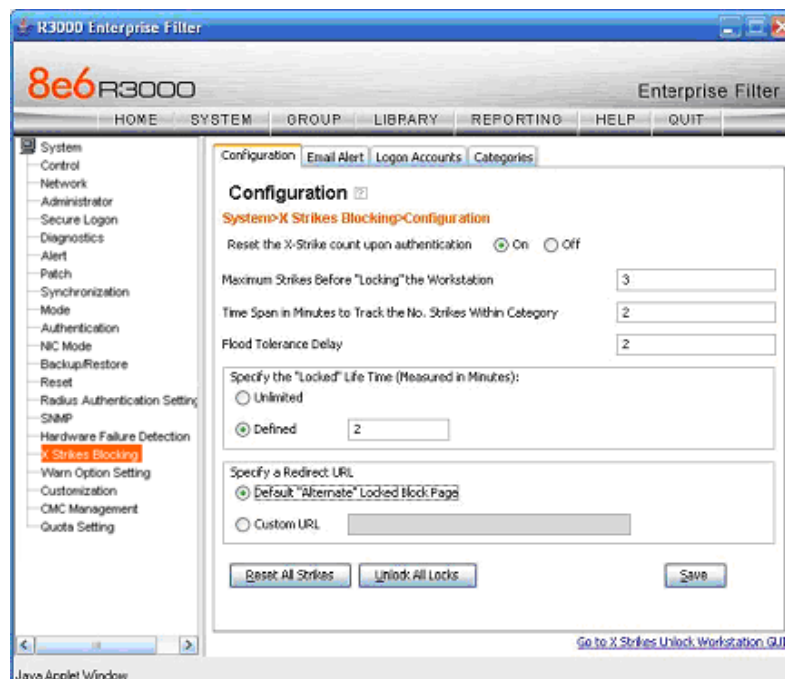
X Strikes Blocking

Next, the actual parameters of the X-Strike feature need to be configured.

1. Select **“SYSTEM”** from the top level administrator console.
2. Click “X Strikes Blocking.”
3. Make the following settings:
 - a. Select **“On”** radio button to reset X-Strike Count upon authentication (resets counter for each new user).
 - b. Set **“Maximum Strikes Before “Locking” the Workstation”**. The number entered in this field determines how many time a user can attempt to access blocked content before that user is prevented from further Internet access. For example, if the threshold is set at 5, then on the user’s fifth attempt to access blocked sites, the computer will be locked down—***if that attempt is made within the time threshold set in step 3b.*** The “lock” disables further access and, instead only displays a block page indicating the reason that access has been blocked.
 - c. Set the **“Time Span in Minutes to Track the No. Strikes Within Category.”** The number entered in this field determines how long the “strikes” will be monitored to qualify for a lockdown. For example, if the threshold is set at 5 (minutes) and the “Maximum Strikes” threshold is set at 5 (attempts), a user who attempts to access five “blocked” sites being monitored by the X-Strikes feature in a five minute (or less) period of time will be locked out of the Internet and the administrator will be notified. However, if the user attempts to access five blocked sites over the course of an entire day, the standard block page will appear and Internet access will not be locked.
 - d. Set the **“Flood Tolerance Delay”** (in seconds) to determine the maximum delay that will occur before a user who accesses the same URL will receive another block page. If a user receives a block page and attempts to “flood” the filter through rapid refresh of the page, the X-Strikes feature will not log a “strike” for every attempt but instead log a strike for each Flood Tolerance

Delay threshold that reached. For example, if an employee accesses a blocked site monitored by X-Strikes (which is set at 3 strikes in 1 minute for lockdown), he receives a block page and X-Strikes logs one strike. If the Flood Tolerance Delay is set at 4 seconds, the employee keeps getting block pages, but won't be locked down until 12 seconds has elapsed—no matter how many times he tries to refresh the blocked site.

- e. **Specify the “Locked Life Time” (Measured in Minutes)** to determine how long Internet access will be denied.
4. Select the “Email Alert” tab, and make the following settings:
 - a. In the “**Minutes Past Midnight Before Starting Time Interval**” field, enter the number of minutes past midnight that a locked workstation email alert will first be sent to the specified recipient(s).
 - b. In the “**Interval Minutes to Wait Before Sending Alerts**” field, enter the number of minutes within the 24-hour period that should elapse between email alerts. For example, by entering 300 in this field and 30 in the previous field, if there are any locked workstations, an email will be sent at 5:30 AM, 10:30 AM, 3:30 PM, 8:30 PM and 12:00 AM (the email alert at midnight fills the gap before the time interval is reset). To check the time(s) the email alert is scheduled to occur, click the “Display Sending Time” button to open the “Daily Schedule” pop up window in the (HH:MM:SS) format.
 - c. Click “**Save**” to save the settings.
 - d. In the “**Email Address**” field, enter the email address(es) of those who will receive locked workstation alerts.
 - e. Click “**Add**” to include them in the list.
 5. Select the “Categories” tab.
 6. Move the categories from the “No Strike” category you want monitored to the “Strike” Categories and vice versa.



X Strikes testing

How to test “X-Strikes”

1. Set up “X-Strikes” with the following settings:
 - a. Configuration:
 - Reset X-Strike Count Upon Authentication: ON
 - Maximum Strikes Before Locking the Workstation: 3
 - Time Span in Minutes to Track the No. of Strikes Within The Category: 2
 - Flood Tolerance Delay: 2
 - Specify “Locked” Life Time: 2
 - Specify a Redirect URL: DEFAULT
 - Email Alert: enter your email address
 - Minutes Past Midnight Before Starting Time Interval: 0
 - Interval Minutes to Wait Before Sending Alerts: 1
 - Enter an email address to receive alerts; Click “Add”
 - b. Categories:
 - “Strike” Categories: Pornography/Adult Content
 - “No Strike” Categories: All others
2. Using an IP within the Global Group range, access www.playboy.com. The site should be blocked.
3. Continue to refresh the page for approximately 6-8 seconds. The workstation’s Internet access will be locked and a block page indicating he locked status will appear.
4. After 2 minutes, access will be available again.
5. In approximately 1-2 minutes (the nuances and security settings of the email server will impact the speed of delivery, as well) a notification should be received at the email address noted in the Email Alert field.