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How To Control Access To Unwanted Websites Using URL Blacklist With SafeSquid Proxy Server

SafeSquid - Content Filtering Internet Proxy, has many content filtering features that can be used to decide who is allowed what, when and how much on the net. In this tutorial I will describe how tocontrol access to unwanted categories of websites, by using URL Blacklist database with SafeSquid Proxy Server.

Note: Also see the following articles :
'Deploying A Content Filtering Proxy Server To Distribute Controlled Internet Access With SafeSquid'
Set Up Gateway Level Virus Security With ClamAV And SafeSquid Proxy
How To Set Up Internet Access Control And Internet Filtering With SafeSquid Proxy Server

SafeSquid allows the administrators to use plain text urlblacklist very easily and with a desired level of sophistication. The site http://www.urlblacklist.com maintains a well categorized list of various web-sites and pages like porn, adult, webmail, jobsearch, entertainment, etc. This is an excellent resource for an administrator seeking to granularly enforce a corporate policy that allows or disallows only certain kinds of web-sites to be accessible by specific users, groups or networks.

You can use this feature by downloading the trial urlblacklist database from **HERE**.
Please note that you will be able to download this trial database only once. You need to subscribe to urlblacklist.com to be able to receive regular updates

Copy the downloaded trial database to /usr/local/bin directory on the SafeSquid Server, and untar the files

```
cd /usr/local/src


tar -zxvf bigblacklist.tar.gz
```

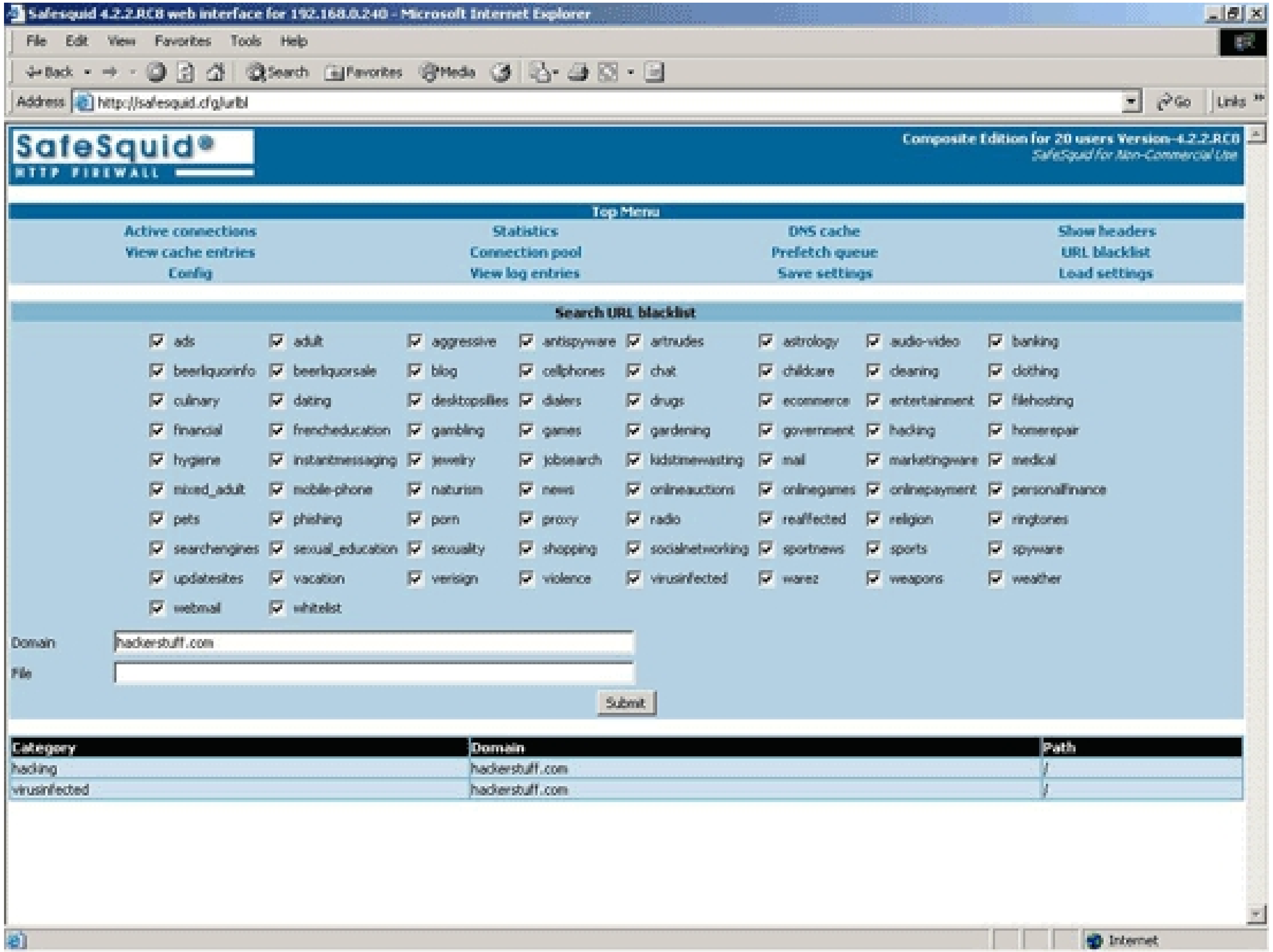
This will create a directory 'blacklist'. Create a directory 'urlbl' in /opt/safesquid and copy the contents of blacklist in this directory.

```
mkdir /opt/safesquid/urlbl

cd blacklist

cp -rf . /opt/safesquid/urlbl
```

Next, restart SafeSquid

```
/etc/init.d/safesquid restart
```

In SafeSquid GUI Interface, click on *URL blacklist* in the Top Menu It should display a list of all the categories copied to the urlbl directory. Here, you can query the database to find out if a website is listed under any category. For example, to find out whatcategory hackerstuff.com belongs to, type hackerstuff.com in the *Domain* field and click on *Submit* below. You should get a screen similar to this -


Safesquid 4.2.2.RC8 web interface for 192.168.0.240 - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites Media
Address http://safesquid.cfg/urlbl
Go Links
SafeSquid® HTTP FIREWALL
Composite Edition for 20 users Version-4.2.2.RC8
SafeSquid for Non-Commercial Use
Top Menu
Active connections
Statistics
DNS cache
Show headers
View cache entries
Connection pool
Prefetch queue
URL blacklist
Config
View log entries
Save settings
Load settings
Submit
Internet

Search URL blacklist

☑ ads ☑ adult ☑ aggressive ☑ antispyware ☑ artnudes ☑ astrology ☑ audio-video ☑ banking
☑ beerliquorinfo ☑ beerliquorsale ☑ blog ☑ cellphones ☑ chat ☑ childcare ☑ cleaning ☑ clothing
☑ culinary ☑ dating ☑ desktopsillies ☑ dialers ☑ drugs ☑ ecommerce ☑ entertainment ☑ filehosting
☑ financial ☑ frencheducation ☑ gambling ☑ games ☑ gardening ☑ government ☑ hacking ☑ homerepair
☑ hygiene ☑ instantmessaging ☑ jewelry ☑ jobsearch ☑ kidstimewasting ☑ mail ☑ marketingware ☑ medical
☑ mixed_adult ☑ mobile-phone ☑ naturism ☑ news ☑ onlineauctions ☑ onlinegames ☑ onlinepayment ☑ personalfinance
☑ pets ☑ phishing ☑ porn ☑ proxy ☑ radio ☑ reaffected ☑ religion ☑ ringtones
☑ searchengines ☑ sexual_education ☑ sexuality ☑ shopping ☑ socialnetworking ☑ sportnews ☑ sports ☑ spyware
☑ updatesites ☑ vacation ☑ verisign ☑ violence ☑ virusinfected ☑ warez ☑ weapons ☑ weather
☑ webmail ☑ whitelist

Domain hackerstuff.com

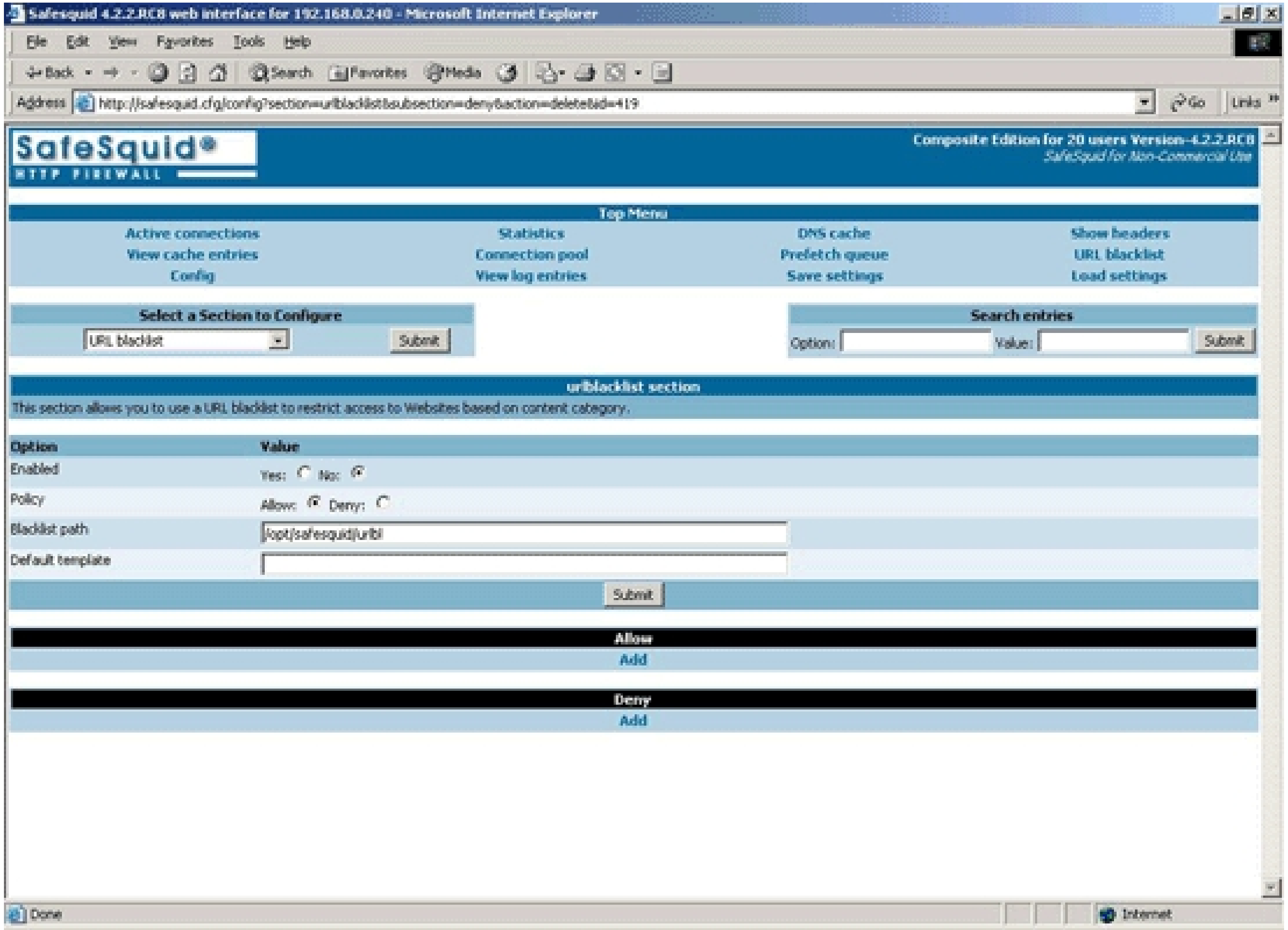
File

Category	Domain	Path
hacking	hackerstuff.com	/
virusinfected	hackerstuff.com	/

SafeSquid Interface - URL Blacklist Database Query

Note: This section only allows you to query the database. Selecting or unselecting a category does not enable or disable it.

Next, click on `Config`, and from the drop-down menu, select `URL blacklist` and click on `Submit`. This is where you allow or deny access the a category, either to a specific Profile, or globally.


Safesquid 4.2.2.RC8 web interface for 192.168.0.240 - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites Media
Address http://safesquid.cfg/config?section=urlblacklist&subsection=deny&action=delete&id=419
Go Links
SafeSquid® HTTP FIREWALL
Composite Edition for 20 users Version-4.2.2.RC8
SafeSquid for Non-Commercial Use
Top Menu
Active connections
View cache entries
Config
Statistics
Connection pool
View log entries
DNS cache
Prefetch queue
Save settings
Show headers
URL blacklist
Load settings
Search entries
Option:
Value:
Submit
Done
Internet

Select a Section to Configure: URL blacklist [Submit]

urlblacklist section

This section allows you to use a URL blacklist to restrict access to Websites based on content category.

Option	Value
Enabled	Yes: ○ No: ●
Policy	Allow: ● Deny: ○
Blacklist path	/opt/safesquid/urlbl
Default template	

[Submit]

Allow

Add

Deny

Add

SafeSquid Interface - URL Blacklist Section

By default, the section is disabled. Enable the section by selecting Enabled - Yes.
The Policy is Allow. So you need to specify what you want to deny under the Deny sub-section.
Now suppose, this is what you want to achieve -

Globally block: Categories `porn, adult` and `dating`
Profile HRD: Allowed `jobsearch` category, but denied to everybody else
Profile Finance: Allowed categories `banking` and `financial`, but denied to everybody else

Note: Creating users and user profiles has been described in **How To Set Up Internet Access Control And Internet Filtering With SafeSquid Proxy Server**.

To achieve the above, click on Add under Deny sub-section, and create the following rules -

Add

Option	**Value**
Enabled	true
Comment	Globally blocked categories
Categories	adult,porn,dating

Edit Delete Clone **Up Down** **Top Bottom**

Option	**Value**
Enabled	true
Comment	Allowed categories for HRD Profile
Profiles	!HRD
Categories	jobsearch

Edit Delete Clone **Up Down** **Top Bottom**

Option	**Value**
Enabled	true
Comment	Allowed categories for Finance Profile

Profiles	!Finance
Categories	banking,financial

Edit Delete Clone

Up Down

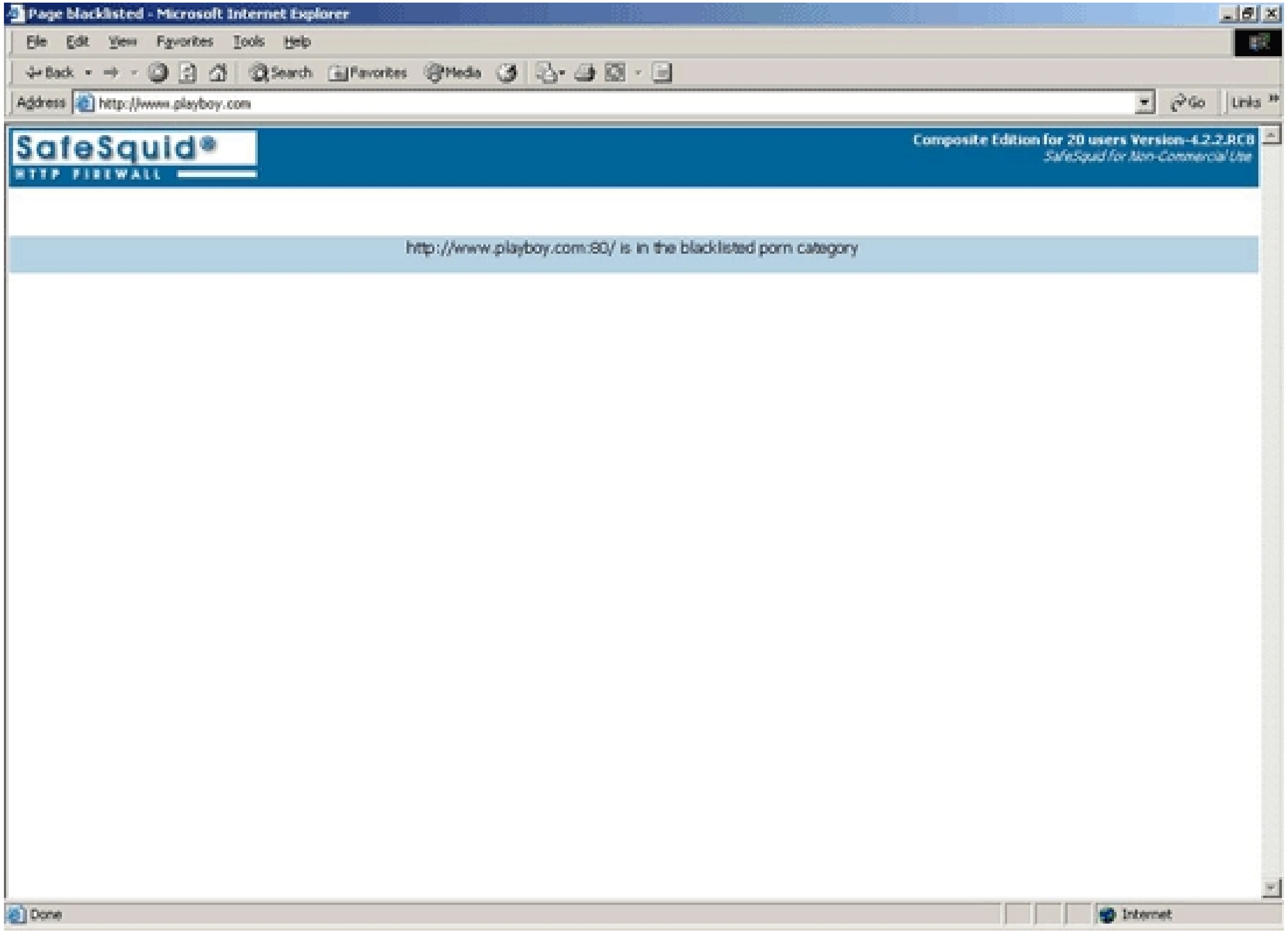
Top Bottom

In the first rule, since the `Profiles` field is left blank, it will apply to every user, and block access to websites listed under `adult`, `porn` and `dating` categories.

In the second rule, the `Profiles` is `!HRD`. The '!' before HRD means NOT HRD, or everyone EXCEPT HRD. So, requests for websites listed under `jobsearch` will be allowed only to `HRD` Profileand denied to all other profiles.

The third rule is similar to the second rule and allows access to websites listed under `banking` and `financial` only to `Finance` Profile..

When a user requests for a website that is blocked by URL Blacklist, a template similar to the below is displayed -



Page blacklisted - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites Media
Address http://www.playboy.com
Go Links
SafeSquid® HTTP FIREWALL
Composite Edition for 20 users Version-4.2.2.RC8
SafeSquid for Non-Commercial Use
Done
Internet

http://www.playboy.com:80/ is in the blacklisted porn category

SafeSquid - URL Blacklist Template

TIP: You might find that many times a website gets blocked since it is listed under a denied category, but you would want to allow access to it. You have two options to achieve this:

Option 1:

Edit the list and delete the entry for that Website, and restart SafeSquid (any changes to the database requires a restart of SafeSquid, since it loads the database in the memory, when it starts up).

E.g. to edit the domains list under ads category -

```
vi /opt/safesquid/urlbl/ads/domains
```

Option 2:

Add a rule under Allow sub-section, to allow access to the whitelist category for everyone, edit the whitelist category, and add the website that you want to allow in domains file.

Add

Option	**Value**
Enabled	true
Comment	Globally allowed category
Categories	whitelist

Edit Delete Clone **Up Down** **Top Bottom**

TIP: You can also create your own customized categories easily. Create a directory in `/opt/safesquid/urlbl` and name it what you want the category to be called, e.g. 'custom', and create a 'domains' file in this directory, listing one website per line.

```
mkdir /opt/safesquid/urlbl/custom

cd /opt/safesquid/urlbl/custom

touch domains

vi domains
```