



White Paper

**How to Effectively Provide Safe and Productive Web
Environment for Today's Businesses**





Table of Content

The Importance of Safe and Productive Web Environment.....	1
The dangers of unrestricted access	1
Key issues for businesses	1
Content Filter solution is required for today's businesses	3
How to Evaluate Content Filter Solution.....	4
Client Solutions	4
Standalone Solutions.....	4
Integrated Solutions	4
ZyXEL New Generation Content Filter Integrated Solution	5
Introduction	5
Key Features.....	6
Benefits for all businesses	7
How It Works.....	9
What Do I Need.....	9
How Do I Do it?	10
Conclusion.....	14

The Importance of Safe and Productive Web Environment

For business, Internet connectivity is an essential resource today. Utilization of the Internet for communication, transactions and other business-related activity, is on the rise. However, utilization of the Internet for non-business-related or detrimental activities outpaces business-related activity substantially. This phenomenon creates a significant challenge for Network Managers.

The dangers of unrestricted access

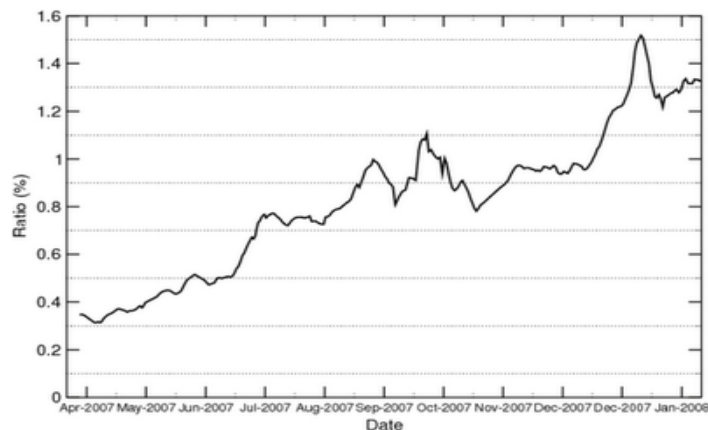
Unrestricted access to inappropriate Web sites cause employees and businesses suffer losses of productivity, bandwidth and expose themselves to legal liabilities. According to a survey by IDC, SexTracker report:

- Lost employee productivity
40% of Internet activity during work hours is non-work related
- Lost bandwidth and use of corporate assets
70% of companies' bandwidth consumed by non-work related surfing
- Limit legal liability
72% of all pornography traffic occurs during the 9-5 work day

Key issues for businesses

- Increasing security risks
According to a research¹ from Google the percentage of harmful URLs keeps increasing. Employees may contact potentially dangerous web pages that attempt to exploit their visitors by installing and running malware automatically. It increases business network security risks

Figure 1. search results containing a URL labeled as harmful



¹ All Your iFrame Are Point to Us, <http://googleonlinesecurity.blogspot.com/2008/02/all-your-iframe-are-point-to-us.html>



- **Employee Productivity Reduced**
Business lose productivity when their employees waste time visiting non business related web content , such as stock, chatting, video, etc. The loss to the business can be measures in the cost of the hours employees spend visiting these t websites.
- **Bandwidth Wasted**
If employees wasted bandwidth accessing content that does not benefit the company, work related activities via Internet will be affected, delaying the processing of activities and the work of colleagues
- **Legal Liability**
Increasing risks surround the downloading of MP3s, full length DVDs (Recording Industry Association of America collected \$1 million in fines from an organization found to have copyrighted music files on the corporate network) The Motion Picture Association of America and other groups have been warned CEOs of Fortune 1000 companies that their corporations will be held liable for breaking copyright laws if employees use company networks to download, store or distribute movies or music illegally
- **Government Regulations Violated**
Federal legislation such as Health Insurance Portability and Accountability Act (HIPAA) and Graham-Leach Bliley Act (GLBA) require companies to adopt content security capabilities (monitoring, blocking and auditing of electronic data and messages to comply with corporate guidelines and policies



Content Filter solution is required for today's businesses

There are increasing network threats coming from internal sources, since your employees could surf unknown Web sites located anywhere. Some Web sites contain malicious software like Trojan horses, spywares or worms that could take tolls to your company; thus finding ways to keep internal users from surfing dangerous Web sites is becoming an important issue.

Content Filter is used to screen and exclude from access or availability Web pages that are deemed objectionable or not business related. Content Filter is used by corporations to enforce corporate policy as well as by schools and universities and home computer owners (for parental controls). Good Content Filter solution can help business (1) Improving employee productivity, (2) Preserving network bandwidth, (3) Minimizing liability exposure, (4) Comply with Government Regulations.



How to Evaluate Content Filter Solution

Content Filter is essential for businesses, however Content Filter can be deployed as a client software installed on everyone computer, standalone hardware, or integrated solution. The three common deployment methods vary in terms of effectiveness, cost and manageability.

Client Solutions

Client solutions are most suited for home use where parental control is the primary application. Client software was installed on the desktop and included a management interface and a database of blocked Web sites; the parent downloads database updates via the Internet. Key vendors of client solutions include Microsoft, Symantec.

Standalone Solutions

Standalone solutions are most suited for large-sized enterprises. Standalone solutions consist of a dedicated database server for defining policies and a separate gateway or firewall that enforces the content management policies. However, it will cause that cost of standalone solutions are the highest. Key vendors of standalone solutions include Bluecoat, Websense, and SurfControl.

Integrated Solutions

Integrated Solutions with cost-effective content management is ideal for small to mid-sized businesses networks. Integrated solutions strengthen management and operation in a single gateway or firewall, hence reducing capital and operational expenses. Key vendors include ZyXEL, Sonicwall, Watchguard.

ZyXEL New Generation Content Filter Integrated Solution

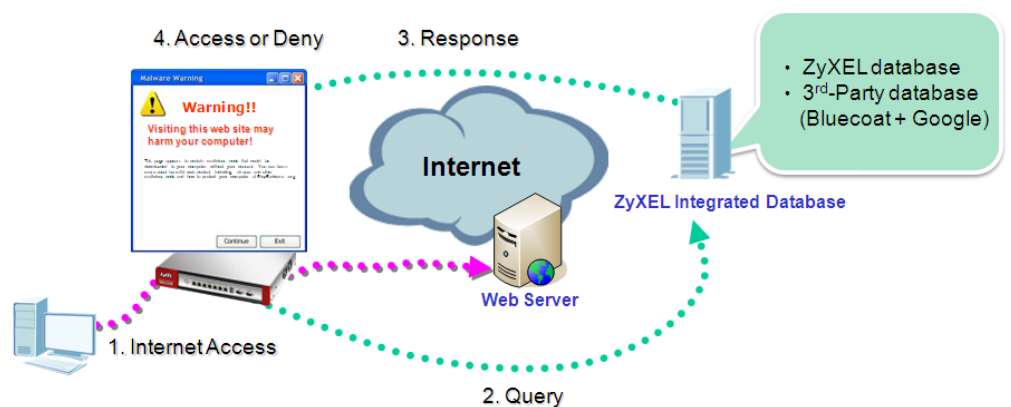
Introduction

ZyWALL Content Filter helps business manage, monitor, and report on users' Internet activity regardless of their location within the business. It is helpful to improve productivity, minimize legal liability, and conserve costly Internet bandwidth within the business. ZyWALL Content Filter provides the most complete and accurate Internet filtering solution of any Internet management provider and enables companies to better manage, secure and protect their Internet investment.

What's New for ZyWALL Content Filter Version 3.0

- More Complete Database to increase accuracy
ZyWALL Content Filter reduces costs and extends protection by combining a comprehensive, continuously integrated database featuring millions of URLs, IP addresses and domains. ZyXEL Integrated Database include ZyXEL and 3rd-Party Database such as Bluecoat, Google. It helps business to manage, restrict and log access to URL's or content categories through ZyWALL Content Filter solutions, as shown in Figure 2.

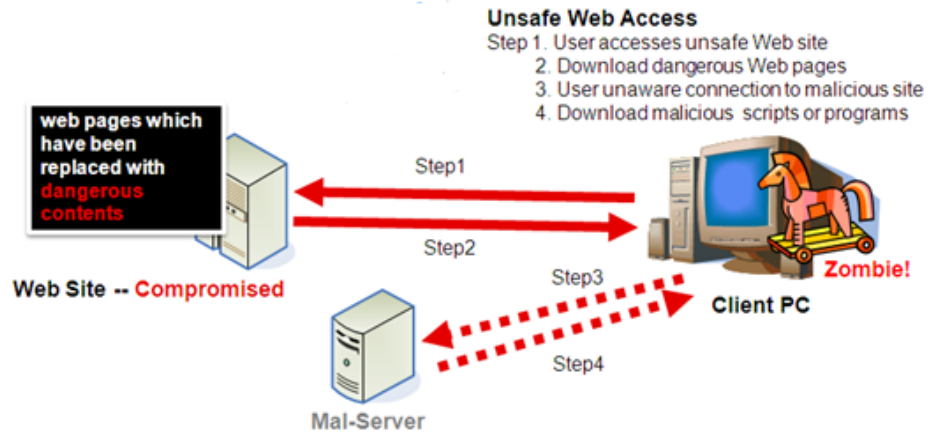
Figure 2. ZyWALL Content Filter



- New ZyXEL Safe Browsing feature to mitigate security risks
New web security features, such as unsafe categories (included Spyware, Malware, Phishing website) protect client from being compromised by malware or spyware on malicious websites, as shown in Figure 3. It keeps

internal users from surfing dangerous Web sites and protect business network environment. As you can see from Figure.3, ZyXEL Safe Browsing feature can prevent from malicious sites (step1) and stop “phone-home” attack sites (step3)

Figure 3. ZyXEL Safe Browsing



- Web Optimization to streamline web surfing experience
 The innovative ZyWALL Content Filter catches URL ratings locally on the ZyXEL USG series. These Web site ratings are stored for all future users that attempt to visit the URLs, reducing response time to access visited sites.

Key Features

- Industry Most Complete Database
 ZyWALL Content Filter solution contains approximately 9 million domains and directories and several million IP addresses to cover billions of unique Web pages, and organized into 60 useful categories.
- Flexible Control Policy
 Content Filter allows business to block certain web site by comprehensive rules.
 - (1) By Categories: The ZyWALL can block access to particular categories of web site content, such as pornography or racial intolerance.
 - (2) By Keyword: The ZyWALL can block access by URL keyword, such as mp3, NASDAQ.



- (3) By Time Periods and Days: The ZyWALL can block access by time of day, such as 08~12, 13~18, Monday to Friday
- (4) By Users and IP Range: The ZyWALL can block access by Users and IP Range, such as all employees except Managers or 192.168.10.x

- Cost-effective solution
ZyWALL Content Filter eliminates the need to purchase, maintain, and administer multiple hardware devices, while maintaining a consistent cost model, even as the user base grows
- Web-based Management Interface.
ZyWALL Content Filter solutions provide an easy-to-use Web-based management interface for simple policy configuration and complete control over Internet usage.
- Comprehensive Reporting with friendly interface
Content Filter reports are generated statistics and charts of access attempt to web sites. It provides complete visibility and reporting to network and security administrators detailing information.

Benefits for all businesses

- More secure Business Network
ZyXEL's Content Filter feature can pinpoint the Web sites with malicious software and warn the users to stay away from potential threats. It keeps internal users from surfing dangerous Web sites and protect business network environment.
- Maximize Employee Productivity
ZyWALL Content Filter helps employees to engage in work-related activities during working hours. It can increase employee productivity by adding web filtering to a business with minimal cost and effort.
- Reduce Liability
ZyWALL Content Filter safeguards business web environments from offensive content. It eliminates inappropriate web surfing and reduce legal liability for business.



- **Increase Available Network Bandwidth**
ZyWALL Content Filter helps network administrators to have the ability to dedicate bandwidth to high-priority traffic. This increases productivity by ensuring that critical traffic does not have to compete with high volumes of traffic with lesser priority.
- **Enforce Company Internet Policies**
ZyWALL Content Filter ensures business focused Internet usage by enforcing your Internet security policy on the network.
- **Comply with Government Regulations**
ZyWALL Content Filter helps business comply with regulations by filtering inappropriate web content , enforcing corporate policies, and providing detailed reports.
- **Track and manage Internet use**
ZyWALL Content Filter enables systems administrators to fully track and manage Internet use. It helps business to manage and control internet resource.



How It Works

What Do I Need

You need ZyWALL USG series and Content Filter license to get content filter solution.

- ZyWALL USG series
The ZyWALL USG (Unified Security Gateway) series is a high performance, deep packet inspection security solution for small business to enterprise. It embodies a Stateful Packet Inspection (SPI) firewall, Anti-Virus, Intrusion Detection and Prevention (IDP), Content Filter, Anti-Spam, and VPN (IPSec/SSL/L2TP) in one box. This multilayered security safeguards your organization's customer and company records, intellectual property, and critical resources from external and internal threats.
- iCard/E-iCard Content Filter Licenses, as shown in Table 1
ZyWALL Gateway Content Filter is an integrated security option to regulate leisure browsing or porn traffic during work hours to decrease non-productive bandwidth consumption and prevent viruses and spyware from forcing your computer to connect with unwanted websites.

Table1. Content Filter Licenses

Applicable Model	Content Filter Licenses
ZyWALL USG 100	iCard/E-iCard Content Filter, 1 year
	iCard/E-iCard Content Filter, 2 years
ZyWALL USG 200	iCard/E-iCard Content Filter, 1 year
	iCard/E-iCard Content Filter, 2 years
ZyWALL USG 300	iCard/E-iCard Content Filter, 1 year
	iCard/E-iCard Content Filter, 2 years
ZyWALL USG 1000	iCard/E-iCard Content Filter, 1 year
	iCard/E-iCard Content Filter, 2 years
ZyWALL USG 2000	iCard/E-iCard Content Filter, 1 year
	iCard/E-iCard Content Filter, 2 years

How Do I Do it?

- Activate License
ZyWALL USG series products provide 1 month Trial and 1year/2year Content Filter. It describe ZyWALL License screen in Figure 4.

Figure 4. ZyWALL License

The screenshot shows the 'Service Management' section of the ZyWALL interface. It contains a table with the following data:

Service	Status	Registration Type	Expiration date	Count
IDP/AppPatrol Signature Service	Licensed	Trial	2011-5-2	N/A
Anti-Virus Signature Service	Licensed	Trial, ZyXEL	2011-5-2	N/A
SSL VPN	Not Licensed			2
Content Filter Category Service	Licensed	Trial	2011-5-2	N/A

Below the table is the 'License Upgrade' section, which includes a 'License Key' input field with an 'Update' button, and a 'Service License Refresh' button. A note at the bottom states: 'Note: Sync with myZyXEL.com to download license Info'.

- Configuration

It enable Content Filter, view and order your list of content filter policies, create a denial of access message or specify a redirect URL and check your external web filtering service registration status, as shown in Figure 5

Figure 5. content filter general setting

General | Filter Profile | Cache

General Settings

Enable Content Filter

Enable Content Filter [Report Service](#)

Policies

Block web access when no policy is applied

#	Address	Schedule	User	Filter Profile	
1	WLAN_FT_02	none	any	RD_CF_PROFILE	
2	LAN_SUBNET	none	any	RD_CF_PROFILE	

Message to display when a site is blocked

Denied Access Message:

Redirect URL:

Content Filter Category Service License Status

License Status: **Licensed**
License Type: **Standard**
Expiration Date: **Standard**
[Apply New Registration](#)

Apply | Reset

Figure 6 and 7 show content filter category setting. It enables Content Filter and selects which web site categories to block and/or log.

Figure 6. configure screen

Category Service **Custom Service**

General Settings

License Status: **Not Licensed**
License Type: **None**

Name

Enable Content Filter Category Service

Action for Unsafe Web Pages	<input type="text" value="Warn"/>	<input checked="" type="checkbox"/> Log
Action for Managed Web Pages	<input type="text" value="Block"/>	<input checked="" type="checkbox"/> Log
Action for Unrated Web Pages	<input type="text" value="Pass"/>	<input checked="" type="checkbox"/> Log
Action When Category Server Is Unavailable	<input type="text" value="Pass"/>	<input checked="" type="checkbox"/> Log

Content Filter Category Service Timeout (1~60 Seconds)

Figure 7. 60 categories

Select Categories

Select All Categories Clear All Categories

Unsafe Categories: Phishing

Spyware/Malware Sources Spyware Effects/Privacy Concerns

Managed Categories: Adult/Mature Content Pornography Sex Education

Intimate Apparel/Swimsuit Nudity Alcohol/Tobacco

Weapons Abortion Hacking

Arts/Entertainment Business/Economy Alternative Spirituality/Occult

Illegal Drugs Education Cultural/Charitable Organizations

Financial Services Brokerage/Trading Online Games

Government/Legal Military Political/Activist Groups

Health Computers/Internet Search Engines/Portals

Job Search/Careers News/Media Personals/Dating

Reference Open Image/Media Search Chat/Instant Messaging

Email Blogs/Newsgroups Religion

Social Networking Online Storage Remote Access Tools

Shopping Auctions Real Estate

Society/Lifestyle Sexuality/Alternative Lifestyles Restaurants/Dining/Food

Sports/Recreation/Hobbies Travel Vehicles

Humor/Jokes Software Downloads Pay to Surf

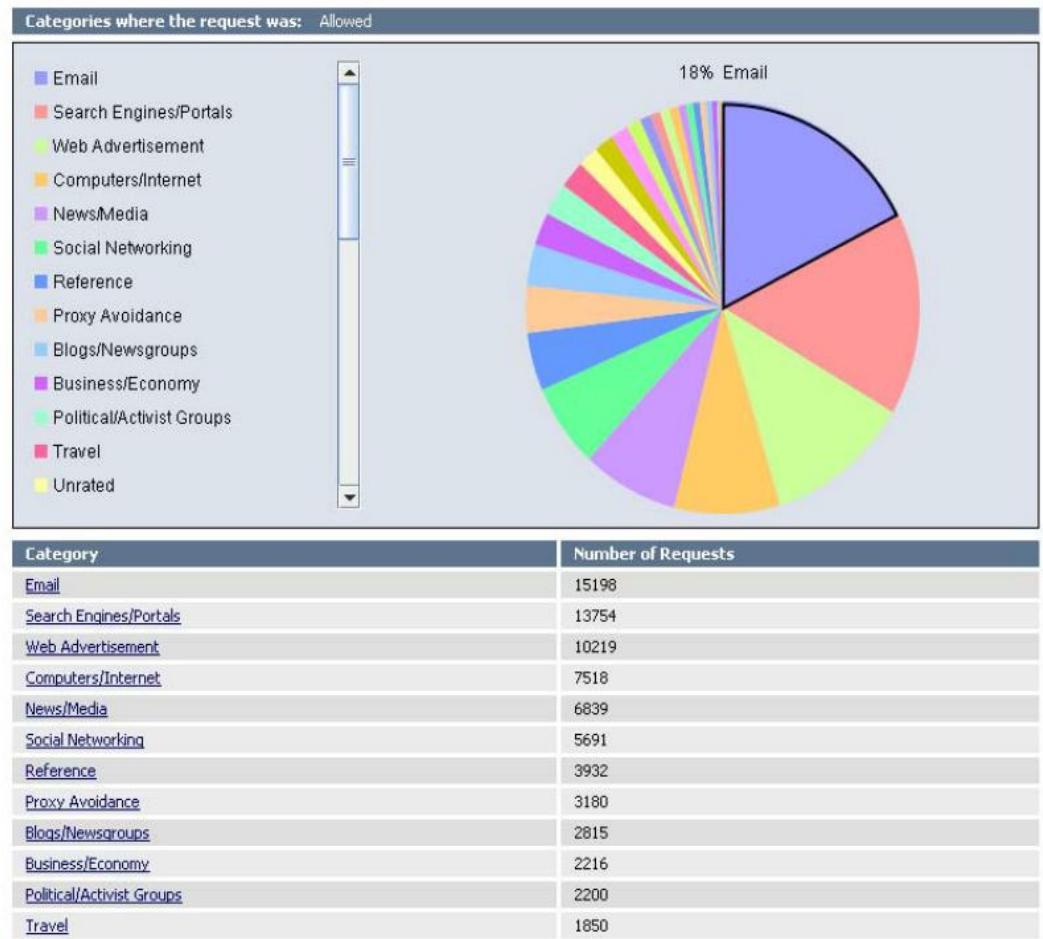
Peer-to-Peer Streaming Media/MP3s Proxy Avoidance

For Kids Web Advertisements Web Hosting

- Report

Users can activate Content Filter report by enabling Content Filter Report Service. By clicking Report button from ZyWALL USG Web GUI, users can be redirected to myZyXEL.com to get the Content Filter report. The report is shown in Figure 8.

Figure 8. Content Filter report





Conclusion

Content Filter Solution is essential for businesses seeking to improve productivity and avoid legal liability. ZyWALL Content Filter offers cost-effective, integrated Content Filter solutions to meet the secure web requirements of today's businesses and makes comprehensive Content Filter available at a breakthrough price point.

The Later to enable Content Filter, the more security risk you suffer, so it's urgent for businesses to activate Content Filter Solution Now. With ZyXEL ZyWALL USG series, it effectively provides safe and productive web environment for your businesses and helps enterprises to gain competitive advantage.

To learn more about ZyXEL ZyWALL USG series and integrated Content Filter solutions, visit:

http://www.zyxel.com/web/product_category.php?PC1indexflag=20040908175941&display=72723