



White Paper

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





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## The Importance of a Safe and Productive Web Environment

For businesses, Internet connectivity is an essential resource today. Utilisation of the Internet for communication, transactions and other business-related activities is on the rise. However, utilisation of the Internet for non business-related or detrimental activities outpaces business-related activities substantially. This phenomenon creates a significant challenge for network managers.

### **The Dangers of Unrestricted Access**

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

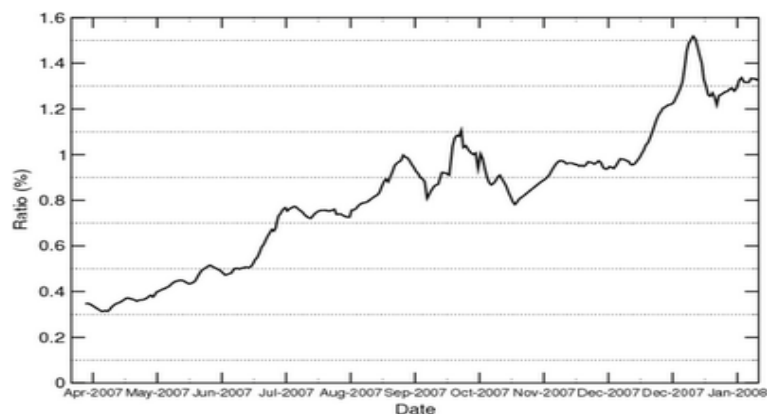
- Lost employee productivity  
40 % of Internet activity during work hours is non-work related (IDC)
- Lost bandwidth and use of corporate assets  
70 % of companies' bandwidth consumed by non-work related surfing
- Limit legal liability  
72 % of all pornography traffic occurs during the 9-5 work day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

### **Key Issues for Businesses**

- Increasing Security Risks

According to a research<sup>1</sup> from Google the percentage of harmful URLs keeps increasing. Employees may contact potentially dangerous web pages which attempt to exploit their visitors by installing and running malware automatically. It increases business network security risks.

Figure 1: Search results containing a URL labelled as harmful



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



- **Employee Productivity Reduced**  
Businesses 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 measured in the cost of the hours employees spend visiting these web sites.
- **Bandwidth Wasted**  
If employees waste bandwidth accessing content which does not have any benefits for 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 (the Recording Industry Association of America collected \$1 million in fines from an organisation found to have copyrighted music files on the corporate network). The Motion Picture Association of America and other groups have 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 the Health Insurance Portability and Accountability Act (HIPAA) and Graham-Leach Bliley Act (GLBA) requires companies to adopt content security capabilities (monitoring, blocking and auditing of electronic data and messages) to comply with corporate guidelines and policies.



### **A 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 which could take tolls to your company; thus finding ways to keep internal users from surfing dangerous web sites is becoming an important issue.

A content filter is used to screen and exclude web pages from access or availability which are deemed objectionable or not business-related. A content filter is used by corporations to enforce corporate policy as well as by schools, universities and home computer owners (for parental control). A good content filter solution can help businesses (1) improving employee productivity, (2) preserving network bandwidth, (3) minimising liability exposure, (4) comply with government regulations.



## **How to Evaluate Content Filter Solutions**

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A content filter is essential for businesses, however a content filter can be deployed as a client software installed on everyone's 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 is installed on the desktop and includes a management interface and a database of blocked web sites, which updates the parent downloads database via the Internet. Key vendors of client solutions include Microsoft and 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 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 are ideal for small to mid-sized business networks. Integrated solutions strengthen management and operation in a single gateway or firewall, hence reducing capital and operational expenses. Key vendors include ZyXEL, Sonicwall and Watchguard.

## ZyXEL New Generation Content Filter Integrated Solution

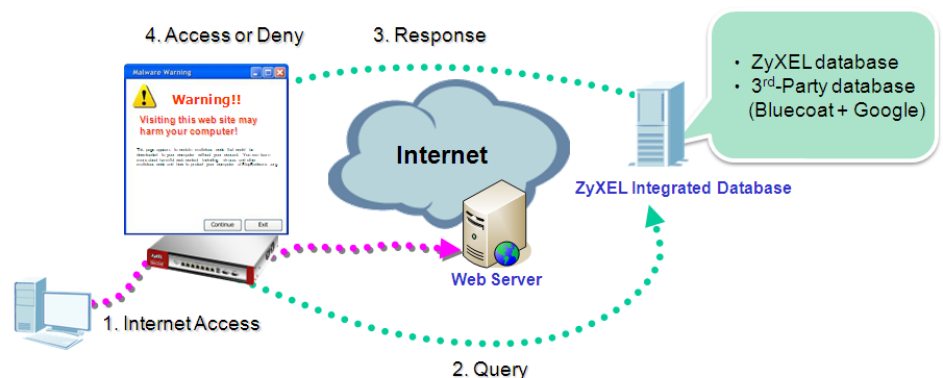
### Introduction

The ZyWALL Content Filter helps businesses manage, monitor and report on users' Internet activities regardless of their location within the business. It is helpful to improve productivity, minimise legal liability and conserve costly Internet bandwidth within the business. The 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  
The ZyWALL Content Filter reduces costs and extends protection by combining a comprehensive, continuously integrated database featuring millions of URLs, IP addresses and domains. The ZyXEL integrated database includes ZyXEL and 3rd party databases such as Bluecoat and Google. It helps businesses to manage, restrict and log access to URLs or content categories through ZyWALL Content Filter solutions as shown in figure 2.

Figure 2: ZyWALL Content Filter

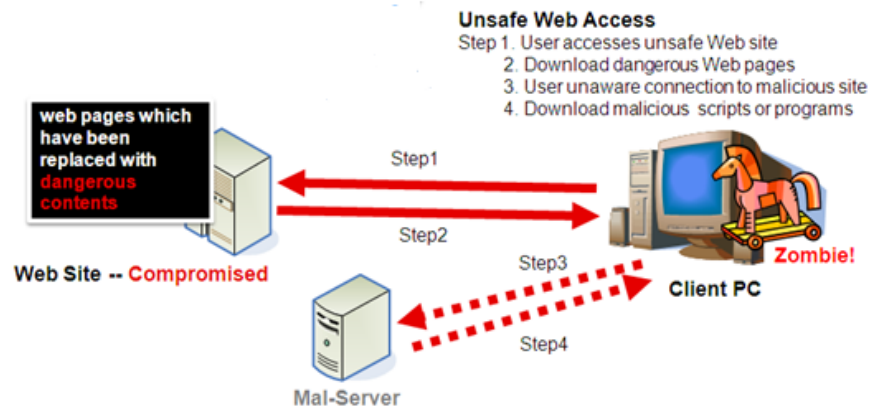


- New ZyXEL Safe Browsing Feature to Mitigate Security Risks  
New web security features such as unsafe categories (including spyware, malware, phishing web sites) protect the client from being compromised by malware or spyware on malicious web sites as shown

in figure 3. The new feature keeps internal users from surfing dangerous web sites and protects business network environment.

As shown in figure 3 the ZyXEL Safe Browsing feature can prevent from malicious sites (step 1) and stop “phone-home” attack sites (step 3).

Figure 3: ZyXEL Safe Browsing



- Web Optimisation 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’s most complete database  
 The ZyWALL Content Filter solution contains approximately 9 million domains and directories and several million IP addresses to cover billions of unique web pages and is organised in 60 useful categories.
- Flexible control policy  
 A content filter allows businesses blocking certain web sites by comprehensive rules.
  - (1) By categories: The ZyWALL can block access to particular categories of web site contents such as pornography or racial intolerance.
  - (2) By keyword: The ZyWALL can block access by URL keywords 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**  
The ZyWALL Content Filter eliminates the need to purchase, maintain and administer multiple hardware devices, while maintaining a consistent cost model, even when 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 user-friendly interface**  
Content filter reports generate statistics and charts of access attempts to web sites. They provide complete visibility and reporting to network and security administrators with detailed information.

#### **Benefits for all Businesses**

- **More secure business network**  
ZyXEL's Content Filter feature can pinpoint 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 protects business network environments.
- **Maximise employee productivity**  
The 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**  
The ZyWALL Content Filter safeguards business web environments from offensive content. It eliminates inappropriate web surfing and reduces legal liability for businesses.



- Increase available network bandwidth  
The 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  
The ZyWALL Content Filter ensures business-focused Internet usage by enforcing your Internet security policy on the network.
- Comply with government regulations  
The ZyWALL Content Filter helps businesses comply with regulations by filtering inappropriate web content, enforcing corporate policies and providing detailed reports.
- Track and manage Internet use  
The ZyWALL Content Filter enables systems administrators to fully track and manage Internet use. It helps businesses to manage and control Internet resources.



## How it Works

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### What Do I Need

You need ZyWALL USG series and a content filter licence to get a content filter solution.

- **ZyWALL USG series**  
The ZyWALL USG (Unified Security Gateway) series is a high performance, deep packet inspection security solution for small businesses to enterprises. 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 organisation's customer and company records, intellectual property, and critical resources from external and internal threats.
- **iCard/E-iCard Content Filter licences as shown in table 1**  
The 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 web sites.

Table 1: Content Filter Licences

Applicable model	Content Filter licences
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 a Licence

ZyWALL USG series products provide a 1-month trial and 1-year/2-year content filter. The activation of a ZyWALL licence is shown in figure 4.

Figure 4: ZyWALL Licence

The screenshot shows the 'Service Management' section of the ZyWALL interface. It features 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 right states: 'Note: Sync with myZyXEL.com to download license Info'.

- Configuration

It enables to use the content filter, view and order your list of content filter policies, create a denial of access message or specify a redirect URL and to 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:

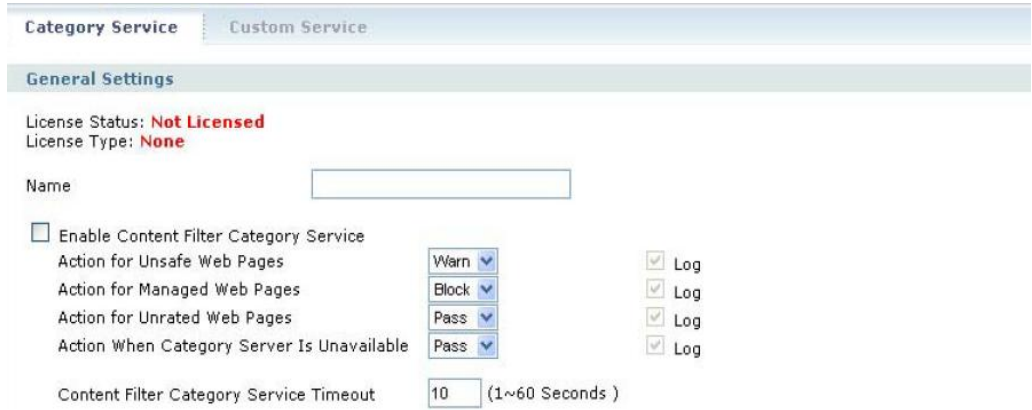
**Content Filter Category Service License Status**

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

Apply | Reset

Figures 5 and 6 show a content filter category setting. It enables to use the content filter and select which web site categories to block and/or log.

Figure 6: Configuration screen



**Category Service** Custom Service

**General Settings**

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

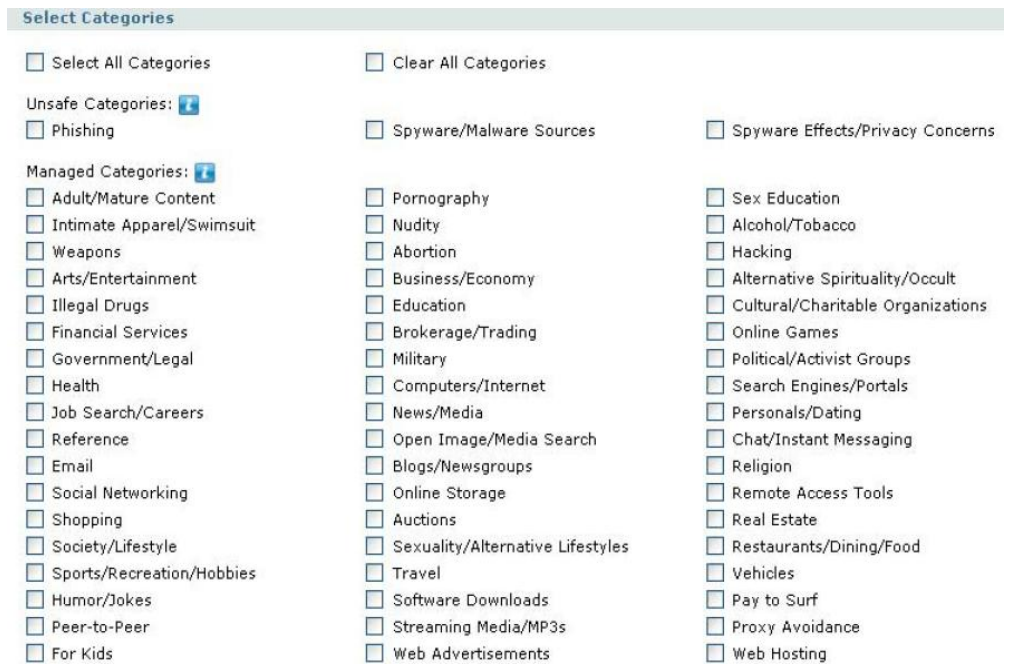
Name:

Enable Content Filter Category Service

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

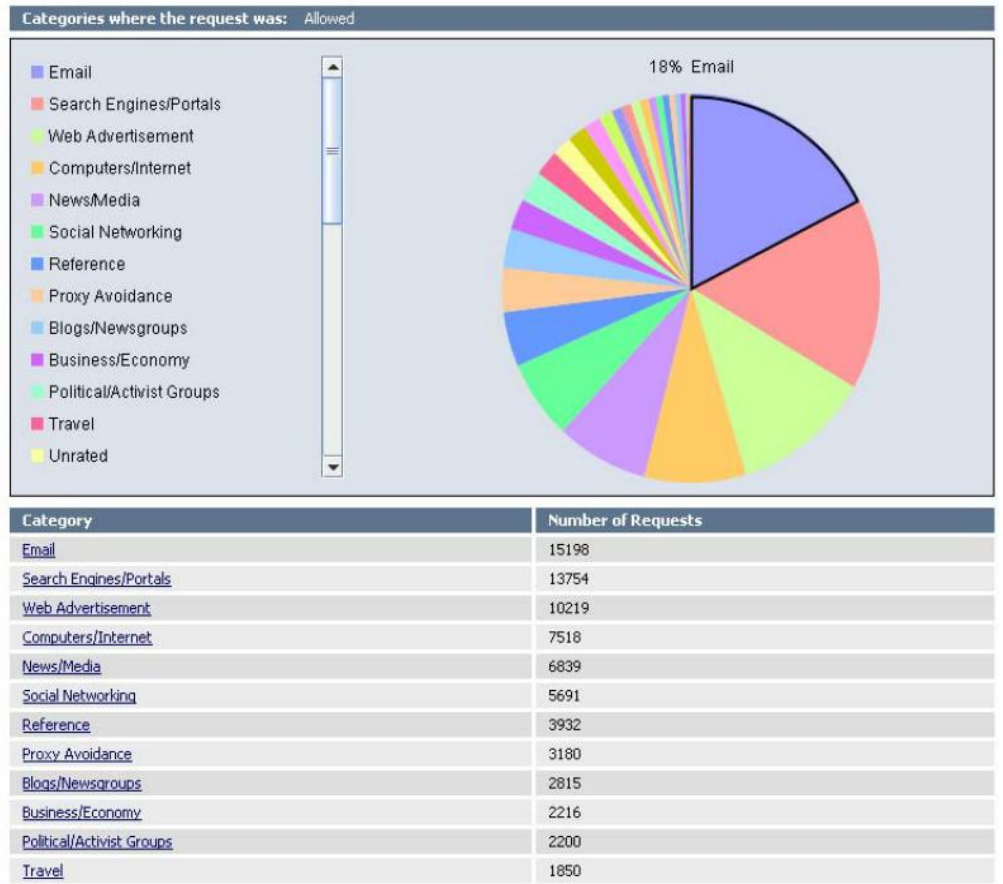
- Phishing
- Spyware/Malware Sources
- Spyware Effects/Privacy Concerns

Managed Categories: +

- Adult/Mature Content
- Intimate Apparel/Swimsuit
- Weapons
- Pornography
- Nudity
- Sex Education
- Arts/Entertainment
- Abortion
- Alcohol/Tobacco
- Illegal Drugs
- Business/Economy
- Hacking
- Financial Services
- Education
- Alternative Spirituality/Occult
- Government/Legal
- Brokerage/Trading
- Cultural/Charitable Organizations
- Health
- Military
- Online Games
- Job Search/Careers
- Computers/Internet
- Political/Activist Groups
- Reference
- News/Media
- Search Engines/Portals
- Email
- Open Image/Media Search
- Personals/Dating
- Social Networking
- Blogs/Newsletters
- Chat/Instant Messaging
- Shopping
- Online Storage
- Religion
- Society/Lifestyle
- Auctions
- Remote Access Tools
- Sports/Recreation/Hobbies
- Sexuality/Alternative Lifestyles
- Real Estate
- Humor/Jokes
- Travel
- Restaurants/Dining/Food
- Peer-to-Peer
- Software Downloads
- Vehicles
- For Kids
- Streaming Media/MP3s
- Pay to Surf
- Web Advertisements
- Web Hosting

- Report  
Users can activate a content filter report by enabling Content Filter Report Service. By clicking the Report button in the 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

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

The later you enable a content filter, the more security risks you suffer, so it is urgent for businesses to activate a content filter solution now. The ZyXEL ZyWALL USG series effectively provides a safe and productive web environment for 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](http://www.zyxel.com/web/product_category.php?PC1indexflag=20040908175941&display=72723)