

Content Filtering 2.0

Security Service

While nobody would dispute that the Internet is an indispensable tool for business, there exist many malicious sites that would trap users, potentially infecting systems with viruses or installing spyware when carelessly accessed. An efficient solution is necessary for administrators to manage web access and control traffic when employees access websites. Zyxel Content Filtering is a fully integrated security subscription service protecting networks against malicious attacks from rogue websites while helping administrators manage and control user access.

Content Filtering 2.0 is introduced with improving visibility and detection coverage. It includes URL filtering, HTTPS domain filter, safe search and GeolP blocking. Now you can upgrade to Content Filtering 2.0 with the USG/ZyWALL ZLD 4.20(or above version) firmware and enjoy the new features that are strongly required by education and other sectors for safe Internet browsing and better detection coverage.

Benefits

Faultless and zero-delay scan structure

Zyxel Content Filtering uses hybrid approaches including local cached database and cloud optimized URL databased, improving performance and accuracy.

- Ultra-low latency via locally cached database scan engine: The locally cached engine automatically adjusts entries according to the needs of each deployment by quickly learning the browsing habits of users. This is the heart of Zyxel Content Filtering, providing high-performance web content scanning and detection.
- Updated cloud database scan engine: Combining a filtering structure with a cloud service helps ensure zero-delay category detection. When a URL is not found in the locally cached database, the querying process will redirect to the cloud database for URL mapping. Cloud query provides instant coverage for sites. The cloud database is rapidly updated so even shortened URLs with short lifecycle can be correctly identified.



Improves security by blocking access to malicious or risky web sites



Prevents malware downloads from malicious or hacked web sites



Keeps your defense updated with evolving cloud database updates



Controls access with integrated firewall policy for highly granular blocking and filtering



Simple license model to quickly enable protection on your security appliances

SSL inspection eliminates hidden threats

The use of Secure Sockets Layer (SSL) encryption has spread globally. Popular examples of websites utilizing SSL encryption include Dropbox and Gmail, which offer users the ability to encrypt their entire sessions. Unfortunately, attackers are also turning to encryption to evade detection and hide their attacks, intrusions, or malware. Now more than ever, enterprises need tools to inspect incoming and outgoing traffic for threats hiding behind SSL encryption.

Zyxel Content Filtering supports deeper policy enforcement, inspecting traffic in SSL encrypted connections while blocking threats. Not only can Content Filtering detect SSL protocol, but it supports TLS (transport layer security), as well. Zyxel Cloud Filtering offers customers the ultimate in optimized security online via public cloud application.

SafeSearch

SafeSearch is a service offered by search engines such as Yahoo, Google, Bing and Yandex that blocks inappropriate adult/mature content, images and videos from user reported results. While some self-hosted not popular websites may not be in the database of URL filtering categories, Safe Search can extend the coverage and effectively banish inappropriate content. However, it's inefficient to enforce safe search in each PC every device in organizations. Thanks to Zyxel's Content Filtering 2.0, powerful feature that enforces SafeSearch in most popular search engines can be activated in a simple step. Moreover, search results with inappropriate contents will be precluded.

Features

- Real-time Malicious Website Filtering
- Block access to questionable content, e.g. pornography sites
- Block or monitor browsers use to optimize employee productivity
- URL blocking and keyword blocking
- 64 URL categories, including 8 unsafe categories
- Dynamic, cloud-based URL filtering database
 - 140+ millions of the most relevant URLs
 - 200+ data sources
 - Hold "up to the minutes" data
- Blacklist and Whitelist support
- Blocks Java Applets, Cookies, ActiveX, and Web Proxy
- Customizable Warning Messages

HTTPs Domain Filter

Becoming aware of HTTP risks, more and more Web sites adopt HTTPS encrypted connections to improve online privacy of users, especially those have person information and financial data involved. Communications delivered with the HTTPs protocol are exceptionally safe as no one is able to see and filter the transaction data. On the contrary, the encrypted HTTPS protocol also creates a blind spot that attackers can exploit to evade security controls. Nowadays, almost half all Internet traffic today is encrypted, which leading to increased vulnerability, risks and even damages to businesses.

In addition to providing comprehensive and thorough check on connections with encrypted HTTPs transfer, Zyxel provides two approaches to have visibility over encrypted traffics. Besides turning on SSL Inspection which execute full, per packet examine, an new and easy to set-up solution, HTTPs Domain Filter, is introduced. HTTPs Domain Filtering checks every user visiting the specific Web domain and blocks connections determined as inappropriate or questionable via the category service, and it is capable of filtering out malware hidden in the encrypted connection as well.

Geo IP Blocking







Nowadays many hackers are attached to business providing service via the Internet, one of the possible solutions is to restrict Web site access based on the geographical locations.

Geo-IP filtering works by checking the IP addresses of and outgoing Internet traffics against databases maintained by various international Internet registries to discern the country of attack origin. Zyxel's Geo IP filtering is based on country locations to monitor traffics and log analysis, so if there are abnormal traffics from visitors with recognizable locations, the Zyxel USG/ZyWALL Series denies access using the GeoIP database to protect the network.

- Redirection URL support
- HTTPs/HTTP support (SSL Inspection)
- Support DNS base filtering (domain filtering)
- Support SafeSearch: automated filter of pornography and potentially offensive content.
 - enforce Google / Yahoo / Bing safe search
- Support YouTube safety mode
- Support YouTube EDU, YouTube for School, and YouTube for Teachers
- Country-based URL filtering (combine Geo-IP function)

Unbeatable Categorical Scanning

Zyxel technology utilizes automated learning to keep data up-to-date by relying on extensive resources like user queries, URL dynamics, security alliances, and more than 200 industry leading web data centers. Zyxel Content Filtering targets more than 60 content categories and covering six primary groupings:

Group	Description	Category
Security threat: 	Websites that might spread malware, spyware, or phishing attacks	<ul style="list-style-type: none"> • Anonymizers • Botnets • Compromised • Malware • Network Errors • Parked Domains • Phishing& Fraud • Spam Sites
Adult: 	Any material not suitable for children, including sexual content and gambling sites	<ul style="list-style-type: none"> • Child Abuse Images • Gambling • Nudity • Pornography/Sexually Explicit • Sex Education • Tasteless • Violence
Illegal: 	Websites pertaining to illegal drugs, or promoting potentially illegal or immoral activity	<ul style="list-style-type: none"> • Alcohol/Tobacco • Criminal Activity • Cults • Hacking • Hate & Intolerance • Illegal Drugs • Illegal Software • School Cheating • Weapons
Life information: 	General information websites relating people's livelihood containing content related to business, education, news, travel, lifestyle etc.	<ul style="list-style-type: none"> • Arts • Business • Computers & Technology • Education • Fashion & Beauty • Finance • Government • Health & Medicine • Job Search • Leisure & Recreation • News • Non-profits & NGOs • Politics • Real Estate • Religion • Restaurants & Dining • Sports • Transportation • Travel
Web entertainment and services: 	Web services providing real-time entertainment over the Internet, such as forums, games, streaming services, chat, etc.	<ul style="list-style-type: none"> • Chat • Dating & Personals • Download Sites • Entertainment • Forums & Newsgroups • Games • Greeting Cards • Image Sharing • Information Security • Instant Messaging • Peer to Peer • Search Engines/Portals • Shopping • Social Networking • Stream Media & Downloads • Translators • Web-based Email
Miscellaneous: 	Unclassified or personal websites	<ul style="list-style-type: none"> • Advertisements & Pop-Ups • General • Personal Sites • Private IP Address

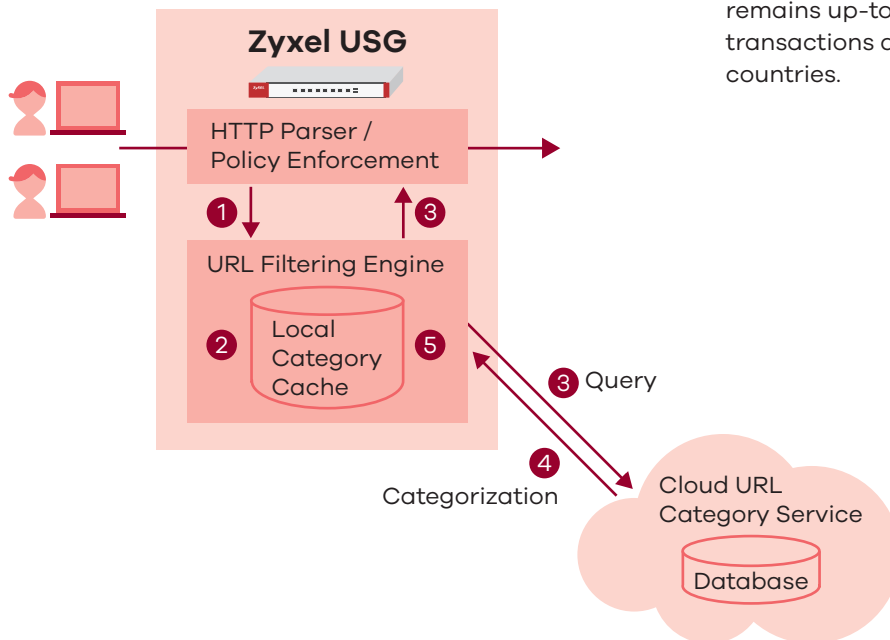
Application Diagram

Ultra-low latency in URL detection






More than 99% of controlled content is detected by locally cached database and it quickly learns the browsing habits of users. This is the heart of Zyxel Content Filtering 2.0, providing high-performance web content scanning and detection.

Up-to-minute coverage from rich cloud database

Combining a filtering structure with a cloud service to ensure zero-delay category detection, Zyxel URL detection provides instant coverage for sites. If a URL is not found in the locally cached database, the querying process will redirect to the security cloud database for URL mapping. The global security cloud database remains up-to-date by processing over 17 billion transactions a day from over 600 million users from 200 countries.



Compatible Security Appliances

Category	Product	
Next-Gen USG Performance Series	USG40/40W/60/60W	
Next-Gen USG Advanced Series	USG110/210/310	
Next-Gen USG Extreme Series	USG1100/1900	
VPN Firewall	USG20-VPN/20W-VPN	
VPN Firewall	ZyWALL 110/310/1100	

Compatible Security Appliances license Overview

License	Anti-Virus		Anti-Spam		Content Filtering 2.0		IDP with Application Patrol		Hotspot Management		Device HA Pro	
	1 year	2 years	1 year	2 years	1 year	2 years	1 year	2 years	1 year	One-time	One-time	
Next-Gen USG Series												
USG40/40W	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-	-	-	
USG60/60W	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-	-	-	
USG110	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
USG210	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
USG310	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
USG1100	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
USG1900	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
VPN Firewall Series												
USG20-VPN	-	-	Yes	Yes	Yes	Yes	-	-	-	-	-	
USG20W-VPN	-	-	Yes	Yes	Yes	Yes	-	-	-	-	-	
ZyWALL 110	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
ZyWALL 310	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
ZyWALL 1100	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	

Compatible Security Appliances Performance Overview

License	Firewall (Mbps)	Firewall + IPS (Mbps)	Firewall + AV (Mbps)	Firewall + UTM (AV+IDP) (Mbps)	Maximum Concurrent Connections	New Session Rate
Next-Gen USG Series						
USG40/40W	400	55	50	50	20,000	1,000
USG60/60W	1,000	120	90	90	40,000	1,000
USG110	1,600	250	300	250	60,000	2,800
USG210	1,900	300	350	300	80,000	2,800
USG310	5,000	500	450	450	200,000	8,000
USG1100	6,000	550	500	500	500,000	8,000
USG1900	7,000	650	550	550	500,000	8,000
VPN Firewall Series						
USG20-VPN	350	-	-	-	20,000	2,000
USG20W-VPN	350	-	-	-	20,000	2,000
ZyWALL 110	1,600	250	300	250	60,000	2,800
ZyWALL 310	5,000	500	450	450	200,000	8,000
ZyWALL 1100	7,000	650	550	550	500,000	8,000

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