

# URL Filtering



## URL Filtering: A Key Step Towards Reducing Risk

**Fully integrated URL filtering database enables granular control over web browsing activity, complementing safe application enablement policies.**

- Safely enable web usage with the same policy control mechanisms that are applied to applications—allow, allow and scan, apply QoS, block, and more.
- Reduce malware incidents by blocking access to known malware and phishing download sites.
- Tailor web filtering control efforts with white lists (allow), black lists (block), custom categories and database customization.
- Facilitate SSL decryption policies such as “don’t decrypt traffic to financial services sites” but “decrypt traffic to blog sites”.

Tech-savvy users are spending more and more time on their favorite web site or using the latest and greatest web application. This unfettered web surfing and application use exposes organizations to security and business risks including propagation of threats, possible data loss, and lack of regulatory or internal policy compliance.

Stand-alone URL filtering solutions are insufficient control mechanisms because they are easily bypassed with external proxies (PHproxy, CGIproxy), circumventors (Tor, UltraSurf, Hamachi) and remote desktop access tools (GoToMyPC, RDP, SSH). Controlling users’ application activity requires an integrated approach that implements policies to control web activity and the applications that are commonly used to bypass traditional security mechanisms.

Palo Alto Networks™ next-generation firewalls identify and control applications, irrespective of port, protocol, encryption (SSL or SSH) or evasive characteristic. Once identified, the application identity, not the port or protocol, becomes the basis of all security policies, resulting in the restoration of application control. Acting as the perfect complement to safe enablement is a URL filtering database that controls web usage. By addressing the lack of visibility and control from both the application and website perspective, organizations are safeguarded from a full spectrum of legal, regulatory, productivity and resource utilization risks.



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### Flexible, Policy-based Control

As a complement to the application visibility and control enabled by App-ID™, URL categories can be used as a match criteria for policies. Instead of creating policies that are limited to either allowing all or blocking all behavior, URL category as a match criteria allows for exception based behavior, resulting in increased flexibility, yet more granular policy enforcement. Examples of how using URL categories can be used in policies include:

- Identify and allow exceptions to general security policies for users who may belong to multiple groups within Active Directory (e.g., deny access to malware and hacking sites for all users, yet allow access to users that belong to the security group).
- Allow access to streaming media category, but apply QoS to control bandwidth consumption.
- Prevent file download/upload for URL categories that represent higher risk (e.g., allow access to unknown sites, but prevent upload/download of executable files from unknown sites to limit malware propagation).
- Apply SSL decryption policies that allow encrypted access to finance and shopping categories but decrypt and inspect traffic to all other URL categories.

### Customizable URL Database and Categories

To account for each organization's unique traffic patterns, on-device caches are used to store the most recently accessed URLs. Devices can also automatically query a master cloud-based database for URL category information when an unknown URL is found. Lookup results are automatically inserted into the cache for future activity. Additionally, administrators can create custom URL categories to suit their specific needs.

### Customizable End-User Notification

Each organization has different requirements on how best to inform end-users that they are attempting to visit a web page that is blocked according to the corporate policy and associated URL filtering profile. To accomplish this goal, administrators can use a custom block page to notify end users of the policy violation. The custom block page can include references to the username, IP address, the URL they are attempting to access and the URL category. In order to place some of the web activity ownership back in the user's hands, administrators have two powerful options:

- URL filtering continue: when a user accesses a page that potentially violates URL filtering policy, a block page warning with a "Continue" button can be presented to the user, allowing them to proceed if they feel the site is acceptable.
- URL filtering override: requires a user to correctly enter a password in order to bypass the block page and continue surfing.

### URL Activity Reporting and Logging

A set of pre-defined or fully customized URL filtering reports provides IT departments with visibility into URL filtering and related web activity including:

- User activity reports: an individual user activity report shows applications used, URL categories visited, web sites visited, and a detailed report of all URLs visited over a specified period of time.
- URL activity reports: a variety of top 50 reports that display URL categories visited, URL users, web sites visited, blocked categories, blocked users, blocked sites and more.
- Real-time logging: logs can be filtered through an easy-to-use query tool that uses log fields and regular expressions to analyze traffic, threat or configuration incidents. Log filters can be saved and exported and for more in-depth analysis and archival, logs can also be sent to a syslog server.

### Deployment Flexibility

The unlimited user license behind each URL filtering subscription and the high performance nature of the Palo Alto Networks next-generation firewall means that customers can deploy a single appliance to control web activity for an entire user community without worrying about cost variations associated with user-based licensing.