What makes a good filtering solution

- Accuracy of detection — also indicated by rate of false positives (content items that are mistaken for the ones to be filtered) or false negatives (content items that should be filtered but are not);

- Range of detection — what type of contents are recognized and filtered; the broader the content type range, the better;

- Filtered users — some solutions may be filtering only IP addresses or networks, while others may handle other specific types of users;

- Speed — nobody wants a filtering process that takes too long

- Interaction — a good filtering solution should adapt to whatever products are in use;

- Scalability — the ability to adjust to expansion of the networks;

- Logging & reporting — a good filtering solution should be able to log all activity for the administrative staff needs;

- Flexibility and usability — as complex as a system might be, its potential will not be fully achieved if its interface is cumbersome or difficult to use.

Do you know the factors which affect any filtering solution’s ability to reach its highest potential and achieve the desired results?
Intelligent Filtering: Livigent

Our technological approach

We propose an innovative approach that is better suited to these days’ rapid expansion of the Internet.

- URL-based filtering solutions present numerous inconveniences due to the increasing number of available URLs and frequent disassociation of content from URL.

- Livigent’s filtering process does not work on blocking a Web page based only on its ‘label’.

Lивигент analyzes the unfiltered content in real-time and then delivers the filtered content in real-time.

Multi-layered filtering

Lивигент is able to provide complementary filtering techniques. These features combined are effectively creating a multi-layered filtering solution able to face the current challenges of Internet growth.

Self-contained hardware appliance

Lивигент is a self-contained hardware appliance oblivious to the specifics of the user’s hardware or software setup. The user isn’t required to have a certain operating system or a certain network configuration. Livigent will work fine with any operating system that understands current widespread networking standards and protocols.
# Key features explained

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
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<tbody>
<tr>
<td>Content based filtering</td>
<td>Filtering based on the real, live content of each filtered page.</td>
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<td></td>
<td>No need for handling vast amounts of URLs in an ever increasing database.</td>
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<td>Each requested Web page that passes through the filter is analyzed according to the filtering criteria.</td>
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<td>An action is taken: block, allow, coach (warn).</td>
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<td>Image altering</td>
<td>An innovative way of treating images (even for pages with allowed text content).</td>
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<td></td>
<td>Handy when dealing with images returned by a search engine or contained in adult sites with no text.</td>
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<td></td>
<td>The system administrator can set a custom filter which repaints the skin-colored pixels in the filtered pages, or altogether replaces the image.</td>
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<td>The image filter provides an option to change the skin replacement threshold. the image replacement threshold and two custom colors.</td>
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<td>URL filtering</td>
<td>Custom pattern oriented URL filtering</td>
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<td>Support for URL blacklists (lists of blocked URLs) and URL whitelists (lists of allowed URLs).</td>
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<td>URL filtering is done through two filtering items: URL glob lists and URL regexp lists.</td>
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<td>MIME type filtering</td>
<td>An Internet standard widely used in context of e-mail, but also for the HTTP</td>
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<td>Supporting non-text content (like images, binary files etc.)</td>
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<td>Identifies the content type of the transferred files.</td>
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<td>Preconfigured to filter 6 main content type categories (documents, archives, images, audio, video, executables).</td>
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<td>The system administrator can define custom MIME types.</td>
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<td>Protocol filtering</td>
<td>Filtering support for instant messaging protocols (like Yahoo! Messenger).</td>
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<td></td>
<td>Filtering support for peer-to-peer file sharing protocols (like BitTorrent or FTP).</td>
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<td></td>
<td>Email protocols (smtp, pop3, imap). VoIP. Games. networking (SSH, VNC).</td>
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<td>Time-controlled filtering</td>
<td>Applying time restrictions on other filtering options is fully supported by Livigent</td>
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<td>Capable to provide time flexibility in filtering.</td>
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<td>Traffic Shaping</td>
<td>Per-user bandwidth management.</td>
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<td>The system administrator can limit the bandwidth available to each filtered user</td>
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<td>Ensures network availability for critical business operations.</td>
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Putting it all together

Ordering of filtering items is the key to Livigent's filtering process.

The system processes incoming data according to the list of filtering items
Then analyzes each item in order of appearance and applies the predefined policies

For example:

A set (the main policy container) has two items – an URL glob whitelist (`*.website.com`) and a category list (containing Adult and Gambling), each assigned with block actions – and the adult page `www.website.com/xxx` is requested

```
1. CATEGORY LIST
   Adult
   Gambling

2. URL glob list
   website.com
```

The content will still be displayed because the URL glob whitelist was set first and its terminal action (allow) is executed before the next filtering item (the category list).

```
1. URL glob list (whitelist)
   * website.com

2. CATEGORY LIST
   Adult
   Gambling
```

SET
URL GLOB Whitelist SET BEFORE THE CATEGORY LIST

www.website.com/xxx

SET
CATEGORY LIST SET BEFORE URL GLOB WHITELIST

www.website.com/xxx

BOB

BLOCK PAGE
Other features

MULTILINGUAL SUPPORT

Livigent addresses the actual text content of each filtered page. Considering that the Internet and the Web are constantly orienting towards localized content the need to filter content from non-English languages is becoming more stringent.

- Livigent responds to this necessity providing the ability to filter content from 2 languages:
  - English
  - Romanian

- The unsupported languages are detected and classified as a separate category, so they can still be filtered.

LOGGING AND REPORTING

Livigent provides advanced options for logging and reporting based on the logged data.

- Recording of detailed statistical data regarding the user activity and in-depth reporting.
- Logs all filtered requests since ‘day one’, depending on the storage capabilities of the chosen appliance.
ABOUT US

Founded in 2006, RnD Software is a supplier of innovative solutions for web security.
RnD Software offers its customers from corporate, government and education segments, smart and complete value-added solutions, which help increase productivity and streamline internal processes, at the same time protecting organizations from the latest informational threats.

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