LCOS FX 10.11

Addendum

03/2023

LANCOM
SYSTEMS

Contents

Copyright

1 Addendum to LCOS FX version 10.11

This document describes the changes and enhancements in LCOS FX version 10.11 since the previous version.

Along with content changes of the content filter, the user experience was also improved. Therefore, filter categories were sorted into new groups and default profiles were removed (when using default profiles, they remain active after migration).

2 Content filtering and anti-spam services transition

To increase IT security, we equip our firewall technology (LCOS FX) with selected UTM services from specialized OEM partners. These include anti-virus and anti-malware services, application filters, IDS / IPS, as well as content filtering and anti-spam.

On 02/22/23 we received the news that our OEM partner for the Content Filtering and Anti-Spam service has filed for liquidation and plans to cease operations.

Only the two services Content Filter and Anti-Spam are affected, i.e. the Anti-Virus and Anti-Malware services, Application filter, IDS / IPS, and all functions of the LANCOM R&S®Unified Firewalls Basic License are available as before. The Content Filter of LCOS-based routers is also not affected by this situation.

See also *current security information for your LANCOM products.*

With LCOS FX version 10.11, the two services Content Filter and Anti-Spam are provided by another specialized OEM partner.

As far as possible, the migration is automated. However, since the categories cannot always be exchanged unambiguously in some cases, you should check your content filter configuration afterwards and make decisions manually in the event of unclear assignments. For this you will find as a decision support:

> an overview of the previous categories of the service provider Cyren and their assignment to the current categories of the service provider Bitdefender (see *Overview of content filter categories in LCOS FX 10.10 versus LCOS FX 10.11* on page 6)
> an overview of Bitdefender's groups and the categories they contain (see *Overview of LCOS FX 10.11 content filter groups and categories (web client display)* on page 8)
> a detailed description of Bitdefender's categories (see *Detailed description of the categories and their sorting in the web client* on page 10)

Depending on the type of management and the number of your LANCOM R&S®Unified Firewalls, the following migration paths result:

> *Single installations*
> *Multiple active Unified Firewalls*
> *Unified Firewalls managed by the LANCOM Management Cloud*

2.1 Migration of a single LANCOM R&S®Unified Firewall

Procedure:

1. Upgrade your LANCOM R&S®Unified Firewall to LCOS FX 10.11 including automated migration of content filter categories.
2. Check the content filter settings and adjust them if necessary.

2.2 Migration of multiple LANCOM R&S®Unified Firewalls

Procedure:

1. Make backups of your configurations of the currently used LCOS FX 10.4 to LCOS FX 10.10. Older versions are not supported for migration via the web tool.

2. Load one backup at a time into the *Web tool*.
3. Migrate your backups after checking the settings with the web tool.
4. Save your processed backups.
5. Upgrade all LANCOM R&S®Unified Firewalls to LCOS FX 10.11.
6. Import the appropriate edited backup on all LANCOM R&S®Unified Firewalls.

2.3 Migration of LANCOM R&S®Unified Firewalls managed via the LANCOM Management Cloud (LMC)

Procedure:

1. Upgrade all LANCOM R&S®Unified Firewalls to LCOS FX 10.11.
2. Check the content filter settings in your LMC project and adjust them if necessary.
3. Roll out the configuration to the sites or LANCOM R&S®Unified Firewalls.

2.4 Overview of content filter categories in LCOS FX 10.10 versus LCOS FX 10.11

In the following you will find an overview of the content filter categories of LCOS FX 10.10 compared to LCOS FX 10.11. In each case the new or partly also new categories are displayed if two new categories are activated for an old category. In some cases, the new service provider does not offer analogous categories. In such a case you have to decide manually if one or more of the newly added categories could meet your requirements. Under *Detailed description of the categories and their sorting in the web client* on page 10 you will find more detailed descriptions of the new categories.

Table 1: Overview of content filter categories for automated migration

LCOS FX 10.10	LCOS FX 10.11
Alcohol & Tobacco	Alcohol & Tobacco
General	Not available
Anonymizers	Web Proxies & Online Anonymizers
Image Sharing	File Sharing
Child Abuse Images	Illegal
Education	Education
Botnets	Hacking Tools & Exploits
Chat	Chat and Instant Messaging
Computers & Technology	Software
Dating & Personals	Dating
Download Sites	File Sharing
Finance	Banks & Financial Institutions
Forums & Newsgroups	Forums
Leisure & Recreation	Hobbies
Parked Domains	Not available

LCOS FX 10.10	LCOS FX 10.11
Business	Company Web Sites
Tasteless	Not available
Health & Medicine	Alcohol & Tobacco
	Health & Medicine
Violence	Hate, Violence & Racism
Gambling	Online Casinos & Lottery
Greeting cards	Hobbies
Hacking	Hacking Tools & Exploits
Hate & Intolerance	Hate, Violence & Racism
Illegal Drugs	Narcotics
Illegal Software	Illegal
Real Estate	Not available
Information Security	Not available
Instant Messaging	Chat and Instant Messaging
Job Search	Job Search
Compromised	Untrusted
Criminal Activity	Hacking Tools & Exploits
Cults	Religions & Cults
Arts	Entertainment
Malware	Cryptocurrency Miner
	Malware
Fashion & Beauty	Hobbies
News	News
Nudity	Not available
Network Errors	Not available
New	Distraction
New	Suicide Promotion
New	Fraud Web Sites
New	Tabloids
New	Forums
New	Violent Cartoons
New	Online Photo Portals
New	Online Payments & Money Transfer
New	Potentially Unwanted Applications
New	Web Hosting
Non-profits & NGOs	Not available

LCOS FX 10.10	LCOS FX 10.11
Peer-to-Peer	Not available
Personal Sites	Blogs
Phishing & Fraud	Fraud Web Sites
	Phishing Web Sites
Politics	News
Pornography / Sexually Explicit	Mature Audience Content
	Pornography
Private IP Addresses	Web Proxies & Online Anonymizers
Government	Governmental Institutions
Travel	Travel
Religion	Religions & Cults
Restaurants & Dining	Travel
Sex Education	Not available
Shopping	Online Stores
Social Networking	Social Media
Spam Sites	Spam
School Cheating	Not available
Games	Browser Games
Sports	Sports
Streaming Media & Downloads	Online Radio Stations
	Video Portals
Search Engines & Portals	Online News Portals
	Search Engines
Translators	Not available
Entertainment	Entertainment
Transportation	Travel
Weapons	Weapons & Hunting
Web Mail	Web Mail
Advertisements & Pop-Ups	Advertisments

2.5 Overview of LCOS FX 10.11 content filter groups and categories (web client display)

> Potentially Illegal
>> Illegal
>> Hate, Violence & Racism

- Suicide Promotion
- Violent Cartoons
- Narcotics

- Cyberthreats
  - Hacking Tools & Exploits
  - File Sharing
  - Web Proxies & Online Anonymizers
  - Phishing Web Sites
  - Spam
  - Untrusted
  - Malware
  - Fraud Web Sites
  - Cryptocurrency Miner
  - Potentially Unwanted Applications

- Pornography
  - Pornography
  - Mature Audience Content

- Advertising
  - Advertisements

- Games
  - Browser Games
  - Online Casinos & Lottery

- Web Applications
  - Forums
  - Video Portals
  - Online Radio Stations
  - Chat & Instant Messaging
  - Search Engines
  - Online News Portals
  - Social Media
  - Web Mail
  - Online Photo Portals
  - Software
  - Web Hosting
  - Dating
  - Blogs
  - Job Search

- Shopping
  - Online Stores

- Finance
  - Online Payments & Money Transfer
  - Banks & Financial Institutions

- Religions & Cults

> > Religions & Cults
> Information
> > Education
> > Governmental Institutions
> > News
> > Company Web Sites
> > Health & Medicine
> Leisure Time
> > Tabloids
> > Entertainment
> > Distraction
> > Alcohol & Tobacco
> > Travel
> > Sports
> > Hobbies
> > Weapons & Hunting

2.6 Detailed description of the categories and their sorting in the web client

This section describes the groups / categories supported by OEM partner Bitdefender as of LCOS FX-Version 10.11.

2.6.1 Potentially Illegal

2.6.1.1 Illegal

This category covers the websites related to some illegal activity, including:

> Domains hosting peer to peer (BitTorrent, emule, DC++) tracker sites which are known in helping to distribute copyrighted content without the copyright holder consent;
> Domains hosting websites which distribute warez (pirated commercial software) or hosting the relevant discussion boards;
> Domains hosting websites dedicated to unlicensed use of software, such as hosting cracks, key generators and serial numbers to facilitate using of software illegally;
> Domains hosting Child Sexual Abuse Material (CSAM).

Some of those websites may be also detected as pornography or alcohol/tobacco, since they often use porn or alcohol advertisements to earn money.

Example: *http://www.thepiratebay.org*

2.6.1.2 Hate, Violence & Racism

This category is catch-all for the "Hate, Violence, Racism" category, and is intended to block the following category of sites:

> Websites belonging to the terrorist organizations;
> Websites with the racist or xenophobic content;
> Websites discussing aggressive sports, and/or promoting violence;

Example: *http://nirvanaglobal.com*

2.6.1.3 Suicide Promotion

This category covers the websites promoting, offering or advocating the suicide. It does not cover the suicide prevention clinics.

Example: *http://suicidemethods.net*

2.6.1.4 Violent Cartoons

This category covers the websites discussing, sharing and offering the violent cartoons or violent manga which may be inappropriate for minors due to violence, explicit language or sexual content.

This category doesn't cover the sites which offer mainstream cartoons such as "Tom and Jerry".

Example: *http://narutosquared.com*

2.6.1.5 Narcotics

This category covers the websites sharing the information about the narcotics such as recreational and illegal drugs. This category also covers the websites covering the development or growing of drugs.

Example: *http://worldofseeds.eu*

2.6.2 Cyberthreats

2.6.2.1 Hacking Tools & Exploits

This category covers the websites providing the hacking tools, articles and discussion platforms for the hackers. It also covers the websites offering the exploits for common platforms, which faciliate Facebook or Gmail account hacking.

Example: *http://passwordhacking.net*

2.6.2.2 File Sharing

This category covers the file sharing websites where a user could upload a file or files, and share them with the others. It also covers some torrent sharing websites and torrent trackers.

Example: *http://www.mediafire.com*

2.6.2.3 Web Proxies & Online Anonymizers

This category covers the web pages which provide web proxy service. This is a "browser inside a browser" type website when a user opens a web page, enters the requested URL into a form, and presses "Submit". The web proxy site downloads the actual page, and shows it inside the user browser.

There are the following reasons this type is detected (and might need to be blocked):

> For anonymous browsing. Since the requests to the destination web server are made from the proxy web server, only its IP address is visible and if the server administrators trace the user, the trace will end on web proxy – which may or may not keep logs necessary to locate the original user.

> For location spoofing. User IP addresses are often used for profiling the service by source location (some national government websites may only be available from local IP addresses), and using those services might help the user to spoof his true location.

> For accessing prohibited content. If a simple URL filter is used, it will only see the web proxy URLs and not the actual servers the user visits.

> For avoiding company monitoring. A business policy might require monitoring employee Internet usage. Accessing everything through web proxy the user might escape the monitoring, which will not provide correct information.

Since the SDK analyzes the HTML page (if provided), and not just URLs, for some categories the SDK still will be able to detect the content. Other reasons, however, cannot be avoided just using the SDK. Here you can find a large list of web proxies.

Example: *http://www.hidemyass.com*

2.6.2.4 Phishing Web Sites

This means the URL points to a known phishing website. Phishing site is a type of website which pretends to be someone else. For example it may pretend to be a web site of your bank so you would fill in your your credentials.

2.6.2.5 Spam

This means this URL has been seen in the spam e-mails, and hence is promoted by spamvertizing. The URL content however is not necessary malicious, unless other flags are present.

2.6.2.6 Untrusted

This means the URL has certain particularities which cause Bitdefender to believe it is untrusted. The details for this definition are internal and subject to change anytime, so the partner should express caution whether to rely on this verdict or not.

2.6.2.7 Malware

This means the URL contains or serves malware, which could be executables, exploits, malicious JavaScript and so on.

2.6.2.8 Fraud Web Sites

This means the URL points to a known fraudulent website. Unlike phishing site, a fraudulent site doesn't pretend to be someone else. Instead it tries to obtain something from the user (information, payment, credentials) by misrepresentation or fraud. For example, a fraudulent online store may offer very cheap prices for popular items (which it never ships).

2.6.2.9 Cryptocurrency Miner

This means the web site attempts to mine cryptocurrency in the user's web browser, using the computer resources. The website usually hides this fact from the user, although some websites notify the user about it.

2.6.2.10 Potentially Unwanted Applications

This means that this website contains potentially unwanted applications. These are applications that are often installed by third parties and used for malicious purposes. Even if the applications themselves are not malicious, according to Bitdefender's experience, the likelihood that these applications will be installed without the user's consent and then used for malicious purposes is much higher than others. This category includes software such as web or socks proxies, remote management, location tracking and so on.

2.6.3 Pornography

2.6.3.1 Pornography

This category covers sites containing erotic and pornography. It includes both paid and free sites. It covers the websites which provide pictures, stories and video, and will also detect pornographic content on mixed content websites.

Example: *http://www.redtube.com*

2.6.3.2 Mature Audience Content

This category covers the content which was labeled by the web site creator as requiring the mature audience. It covers a wide range of websites from Kama Sutra book and sex education websites to the hardcore pornography.

Example: *http://www.kamasutra.com*

2.6.4 Advertising

2.6.4.1 Advertisements

This category covers the domains which main purpose is to serve ads.

Example: *http://adbooth.com*

2.6.5 Games

2.6.5.1 Browser Games

This category covers the web pages which provide online games—typically Adobe Flash or JAVA applets. It does not matter for detection whether the game is free or requires subscription, however casino-style websites are detected in Gambling category. This category does not cover:

> Official websites of companies who develop video games (unless there are online games);
> Discussion websites where the games are discussed;
> Websites where non-online games can be downloaded (some of them are covered in *Illegal* on page 10 category);
> Games which require the user to download and run the executable, like World of Warcraft. Those can be prevented by different means like using a firewall.

Example: *http://www.flashgames247.com*

2.6.5.2 Online Casinos & Lottery

This category covers the gambling websites. Those are the "online casino" or "online lottery" type websites, which typically require a payment before the user can gamble for money in online roulette, poker, jack or similar games. Some of them are legitimate, meaning there is a chance to win, and some are fraudulent meaning that there is no chance to win. It also detects "beating tips and cheats" websites which describe the "working" ways to make money on gambling, and online lottery websites.

Example: *http://www.888.com*

2.6.6 Web Applications

2.6.6.1 Forums

This category covers the forums, discussion boards and the question-answer type websites where the people can ask questions online and get the answers.

This category does not cover the specific sections on company websites where the customer questions are asked.

Example: *http://stackoverflow.com*

2.6.6.2 Video Portals

This category covers the web pages which host various videos or photos, either uploaded by users or provided by various content providers. This includes websites like Youtube, Metacafe, Google Video, and Photo sites like Picasa or Flickr. It will also detect videos embedded in other sites or blogs.

Example: *http://www.youtube.com*

2.6.6.3 Online Radio Stations

This category covers websites that offer Internet music streaming services, from online radio stations to websites that provide on demand (free or paid) audio content.

Example: *http://grooveshark.com*

2.6.6.4 Chat & Instant Messaging

This category covers the instant messaging and chat websites, which allow users to chat in real time. It will also detect yahoo.com and gmail.com, since they both contain an embedded instant messenger service.

Example: *http://www.meebo.com*

2.6.6.5 Search Engines

This category covers the search engine websites such as Google, Yahoo, Bing and so on.

Example: *http://www.google.com*

2.6.6.6 Online News Portals

This category covers websites that aggregate information from multiple sources and various domains, and that usually offer features such as search engines, e-mail, news and entertainment information.

Example: *http://www.yahoo.com*

2.6.6.7 Social Media

This category covers the social network websites. This include MySpace.com, Facebook.com, Bebo.com, etc. However, the special purpose social networks like Youtube will be listed in Video/Photo category.

Example: *http://www.myspace.com*

2.6.6.8 Web Mail

This category covers websites that provide e-mail functionality as a web application.

Example: *http://mail.google.com*

2.6.6.9 Online Photo Portals

Diese Kategorie umfasst die bekannten Websites, auf denen Fotos geteilt oder verkauft werden.

Example: *http://www.gettyimages.com*

2.6.6.10 Software

This category covers the websites offering the computer software, typically either open source, freeware or shareware. It may also cover some online software stores.

Example: *http://www.bitdefender.com*

2.6.6.11 Web Hosting

This category covers free and commercial website hosting services, which allow private users and organizations to create and publish web pages.

Example: *http://www.godaddy.com*

2.6.6.12 Dating

This category covers the online dating sites—paid and free—where users can search for users person using some criteria. They may also post their profiles to let others search them. This category includes both free and paid online dating websites.

Because most of the popular social networks can be used as online dating sites, some popular sites like Facebook are also detected in this category. It's recommended to use this category with *Social Media* on page 14 category.

Example: *http://www.match.com*

2.6.6.13 Blogs

This category covers personal websites as well as all types of blogs: individual, group and even company ones. A blog is a journal published on the World Wide Web consisting of entries ("posts"), typically displayed in reverse chronological order so the most recent post appears first.

Example: *http://blog.wordpress.com*

2.6.6.14 Job Search

This category covers the websites presenting job boards, job-related classified ads and career opportunities, as well as aggregators of such services. It does not cover recruiting agencies or "jobs" pages on the regular company websites.

Example: *http://monster.com*

2.6.7 Shopping

2.6.7.1 Online Stores

This category covers the known online stores. An web site is considered an online store if it sells goods or service online.

Example: *http://www.bestbuy.com*

2.6.8 Finance

2.6.8.1 Online Payments & Money Transfer

This category covers the websites offering the online payments or money transfers. It detects the popular payment sites like PayPal or Moneybookers. It also heuristically detects the web pages on the regular sites which ask for the credit card information, allowing detection of hidden, unknown or illegal online stores.

Example: *http://www.paypal.com*

2.6.8.2 Banks & Financial Institutions

This category covers the websites belonging to all the banks around the world which provide the online access. Some credit unions and other financial institutions are covered as well. However some local banks however may be left uncovered.

Example: *http://bankofamerica.com*

2.6.9 Religions & Cults

2.6.9.1 Religions & Cults

This category covers the websites promoting a religion or sect. Also cover the discussion forums related to one or multiple religions.

Example: *http://www.scientology.com*

2.6.10 Information

2.6.10.1 Education

This category covers the websites belonging to official education institutions, including those outside the .edu domain. It also includes the educational websites such as encyclopedia.

Example: *http://lp.edu.ua*

2.6.10.2 Governmental Institutions

This category covers the government websites, including the government institutions, embassies and office websites.

Example: *http://www.mid.ru*

2.6.10.3 News

This category covers the news websites which provide text and video news. It strives to cover both global and local news websites, however some small very local news sites may not be covered.

Example: *http://www.cnn.com*

2.6.10.4 Company Web Sites

This is a catch-all category which covers the corporate websites which typically do not belong to any other category.

Example: *http://www.shell.com*

2.6.10.5 Health & Medicine

This category covers websites associated with medical institutions, websites related to disease prevention and treatment,websites that offer information or products about weight loss, diets, steroids, anabolic or HGH products, as well as websites providing information on plastic surgery.

Example: *http://www.webmd.com*

2.6.11 Leisure Time

2.6.11.1 Tabloids

This category is mainly designed for soft pornography and celebrity gossip sites. A lot of the tabloid-style news sites may have subcategories listed here. Detection for this category is also based on heuristics.

Example: *http://www.celebrity-gossip.net*

2.6.11.2 Entertainment

This category covers websites that provide information related to artistic activities, museums as well as websites that review or rate content such as movies, music or art.

Example: *http://www.imdb.com*

2.6.11.3 Distraction

This category covers websites where individuals tend to spend long amounts of time. This can include websites from other categories such as social networks, entertainment etc.

Example: *http://www.9gag.com*

2.6.11.4 Alcohol & Tobacco

This category covers the "Medicine/Alcohol/Tobacco" websites, which are discussing the use, or selling the (legal) medical drugs or paraphernalia, alcohol or tobacco products.

ⓘ   Note that the illegal drugs are covered in a *Narcotics* on page 11 category.

Example: *http://www.cigar.com*

2.6.11.5 Travel

This category covers websites that present travel offers, travel equipment as well as travel destination reviews and ratings.

Example: *http://www.tripadvisor.com*

2.6.11.6 Sports

This category covers websites that offer sports information, news and tutorials.

Example: *http://www.eurosport.com*

2.6.11.7 Hobbies

This category covers websites that present resources related to activities typically performed during an individual's free time, such as collecting, arts and crafts, cycling, etc.

Example: *http://www.stamps.org*

2.6.11.8 Weapons & Hunting

This category covers the websites offering the weapons for sale or exchange, manufacture or usage. It also cover the hunting resources and the usage of air and BB guns as well as melee weapons.

Example: *http://hyattguns.com*