LCOS FX 10.8

Maximum connection quality and youth protection!

The new release version LCOS FX 10.8 gives your LANCOM R&S®Unified Firewalls a real plus in terms of connection quality and youth protection. The highlight feature Traffic Shaping, for example, allows you to customize your lines so that prioritized applications always meet your high quality requirements. In addition, the expansion of the content filter to support the website list of the German „Bundesprüfstelle für jugendgefährdende Medien" (Federal Review Board, BPjM) offers even more protection for minor end users.

→ Traffic Shaping

→ Maximum protection of minors

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LCOS FX 10.8 Highlights	
Traffic Shaping	Traffic Shaping enables full control over the packet flow of your data traffic, thus guaranteeing that the applications that are important to you always perform at the best quality. For example, you can define a guaranteed or maximum bandwidth per desktop connection, as well as line prioritization. It is also possible to preconfigure common scenarios, such as VoIP telephony or video conferencing, so Traffic Shaping not only increases the quality of your prioritized data traffic, while also saving configuration time.
Maximum protection of minors	LCOS FX 10.8 maximizes the protection of underage end users, e.g. in schools or youth facilities. For example, the official website list of the „Bundesprüfstelle für jugendgefährdende Medien" (German Federal Review Board, BPjM) is now also part of the content filter of LANCOM R&S®Unified Firewalls. This means that URLs whose content is officially classified as harmful are not accessible to the relevant target group in Germany. Continuous updates and extensions of this list are guaranteed.

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LCOS FX 10.7 Highlights

Re-Design Certificate Management

Until now, certificate management has been a time-consuming challenge for administrators. In order to simplify the handling considerably, LANCOM offers you a multitude of improvements for efficient certificate management with LCOS FX 10.7. The redesign offers full support for deep certificate hierarchies, flexible configuration options for key usage attributes and subject alternate names, and practical templates that can be used as templates for similar certificates. In addition, support for elliptic curve certificates and new hash algorithms means you are well prepared for future technologies.

Netmap

Network extension couldn't be easier! Thanks to Netmap (also called 1 to 1 NAT or N : N NAT), entire networks can now be mapped to other address ranges. This is a huge advantage whenever network extensions (for example due to expansions or company takeovers) are carried out and IT subnets between different locations overlap. Instead of adapting or reconfiguring entire networks or network areas, conflicts can simply be resolved with a few clicks by a suitable mapping on the firewall.

LCOS FX 10.6 Highlights

**Extended feature set for cloud-managed firewalls
(Support of these features in the LANCOM Management Cloud will follow soon)**

LANCOM FX 10.6 upgrades the LANCOM R&S®Unified Firewalls with many additional functions for operation with the LANCOM Management Cloud (LMC) and turns them into a fully-fledged stand-alone VPN gateway for branch offices: From now on, secure VPN networking of sites, including network virtualization, is fully automated. Thanks to the support of LMC's DynDNS service, firewalls are also easily reached via a self-selected subdomain. Furthermore, applications can now also be blocked by the firewall in stand-alone mode at layer 7 level.

Zone management for DNS

From now on, the LANCOM R&S®Unified Firewalls support different DNS servers for different zones. In addition, the DNS configuration for individual networks can be adjusted separately. This allows separate DNS configuration for individual networks so that, for example, local zones can be accessed exclusively from the employee network and not from the guest network.

LCOS FX 10.5 Highlights

IMAP proxy

The IMAP protocol is especially interesting for users who do not operate their own e-mail server, but instead handle their e-mail traffic via an external service provider. E-mails are processed on the provider's server, so that the respective message is available in the same version on all end devices. Now, the LANCOM R&S®Unified Firewalls also have an IMAP proxy for the first time, which can be used to scan the entire mail traffic of the IMAP server for trojans, viruses, and other threats. Spam mails are detected and sorted out. Even zero-day protection is possible thanks to the use of sandboxing and machine learning of the firewalls.

Content-Filter Override

Especially in school networks a content filter is essential. Pupils should be protected from content that is harmful to young people or illegal, and even visiting otherwise unproblematic websites and content can quickly become a major factor of distraction in class. But although it makes sense to block YouTube, for example, during school hours, it can also make sense to use this service selectively. For this purpose, the teacher can now send a code to his pupils, which temporarily overrides the filter rule. As soon as the lesson is over, the filter rule is applied again and denies access to the website or application.

Application Based Routing

Recognized protocols and applications can be specifically routed using the PACE2 DPI Engine. Three different options are available for this. In a specific multi-WAN scenario, for example, the usable connection can be specifically selected for certain outgoing connections and, for example, streaming services can be routed via the slower line, while VPN, as the carrier of business-critical data traffic between the branch office and the headquarters, can be routed via the faster line. Trusted cloud applications can be excluded from the proxy or certain applications can be routed directly to the provider at the branch office instead of via IPSec tunnels, despite the fact that the rest of the Internet traffic is sent to the headquarters via a secure connection.

Further Features

Desktop search

DThe desktop tags filter is extended to the desktop filter. It can now be used to search for both desktop objects and desktop connections. Objects and connections that do not match are hidden. This function can be used to search for a variety of parameters such as the name of the relevant desktop object, IP addresses, networks and areas, VPN SSL connection names or proxy flags.

Creating rules from the protocol

New rules can be created directly from alarm or system log entries about denied access. If, for example, the firewall with the current rules blocks certain network traffic that is actually desired, a new rule can be created with a few clicks based on the corresponding protocol entry to allow traffic in the future.

Recovery points

Upgrading to the next firmware version is now no longer a cause for concern. A recovery point is automatically created before the process starts. If not everything works to your complete satisfaction after that, simply reset your firewall to the working initial state.

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VPN-SSL bridging	With this function, two or more networks at different locations can now be securely and reliably connected on layer-2. The two networks that are separated from each other thus act as one network and communication of non-IP based protocols can take place in between.
Multiple administrators logged in	Now it is possible for multiple administrators to be logged in to the web client of the LANCOM R&S®Unified Firewall at the same time. Only the first administrator who logged in first is allowed to write to the web client and can thus make changes to the configuration. All other administrators are granted read-only rights. As soon as the first administrator logs off, the write permission is transferred to the next administrator logged in. A significant simplification, especially in larger administration teams.

LCOS FX 10.4 Highlights

Setup Wizard	With this release version, the firewall gains an intuitive installation wizard for easy initial configuration in under five minutes—a few clicks of the mouse is all it takes. Internet access and IP address assignment, as well as UTM features such as anti-malware, IDS/IPS, and URL & content filtering, are now set up quickly and easily.
Cloud-managed firewall	The LANCOM R&S®Unified Firewalls are now cloud-ready! Devices are connected to the LANCOM Management Cloud (LMC) by a simple yet secure PIN- or activation code-based pairing procedure. They then appear in the device overview, which offers clearly structured monitoring of the device status and also features an alerting function. A web tunnel provides access to the firewall management interface for remote configuration from the LMC.

Further Features

Layer 7 Application Management within the LANCOM Management Cloud	Via the LMC, firewalls can now be used stand-alone or in conjunction with LANCOM routers to create rules and then rolled out to the individual locations to block particular applications or allow direct access.
Ready-to-use integration of the LANCOM Advanced VPN Client	This firmware release makes it easy to create turnkey import profiles for the LANCOM Advanced VPN Client. These profiles are exported as *.ini files and can be imported into the client in just a few steps. This then uses the available connection medium to establish a secure VPN connection to the remote site.
Alerting and e-mail notification	As of this firmware version, the firewalls send e-mails with information about important events. This is performed either immediately when the event occurs, or in aggregated form. You can configure how often e-mails are sent for each type of event. Events include network disconnects, connection re-establishment, firewall restarts, or high availability switch-over.
User-specific application filter rules	As of this firmware release, the LANCOM R&S®Unified Firewalls also support the combination of user authentication and application filters. Specific application rules can be assigned to certain groups or even to individuals in the organization.

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	Basic License	Full License	Feature description
Content Filter	√	√	URL and content filter (incl. BPjM filter) Customizable rules for users Blacklists / whitelists Import / export of URL lists Category-based website blocking (individually definable) Online scan technology HTTP(S) proxy support Override function
Application Management *	√	√	Layer-7 packet filter (DPI) Filter by applications (e.g. Facebook, YouTube, BitTorrent, etc.) Blacklists / whitelists Protocol validation HTTP and IEC 104 decoder R&S®PACE 2 (Protocol and Application Classification Engine)
Anti-Virus **	√	√	HTTP/S, FTP, POP3/S, SMTP/S, IMAP/S Configurable exceptions Multi-level scanning (local and cloud-based) Sandboxing Fast classification of zero-day threats through AI technologies (machine learning)
Anti-Spam **	√	√	POP3/S, SMTP/S, IMAP/S Configurable scan levels GlobalView Cloud using Recurrent Pattern Detection (RPD) – spam detection based on the e-mail distribution patterns Blacklists / whitelists Automatic e-mail rejection/deletion
IDS (Intrusion Detection System) / IPS (Intrusion Prevention System) *	√	√	Protection from DoS, port scans, malware, botnets, exploits, and vulnerabilities More than 40,000 active signatures Configurable exceptions Scans all interfaces
Proxies	√	√	HTTPS, FTP, POP3/S, SMTP/S, IMAP/S, SIP HTTP (transparent/non-transparent) Reverse proxy Supports Active Directory and local users Time-controlled
LAN/WAN support	√	√	Ethernet 10/100/1,000 Mbps Configurable MTU (Ethernet/DSL) Link aggregation xDSL Multi-WAN (weighted policy-based routing/failover) Load balancing Time restrictions for Internet connections Multiple, dynamic DNS support DHCP DMZ SNAT
VLAN	√	√	4096 VLANs per interface 802.1q header tagging (packet-based tagged VLANs) Compatible with bridging
Bridge mode	√	√	Layer-2 firewall Spanning Tree (bridge ID, port costs) Unlimited number of interfaces per bridge
Monitoring & statistics	√	√	Statistics (IDS/IPS, application control, surf control, antivirus/antispam) Logging to external syslog servers Export as CSV and XLS files SNMP/v2c and v3 Connection tracking

*	Not available for LANCOM R&S®Unified Firewall UF-50 and UF-100
**	Not available for LANCOM R&S®Unified Firewall UF-50

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	Basic License	Full License	Feature description
Administration	√	√	Object-oriented configuration Role-based administration Command-line interface (SSH) Saves desktop as PDF and HTML IP-based access restriction for SSH and web client
Web interface	√	√	Self-explanatory functions Practical wizard for initial setup Overview of the entire network Overview of all active services Browser-based, platform-independent View filtering based on custom tags
QoS	√	√	Guaranteed QoS bandwidth configurable for Internet connections QoS with ToS flags QoS in VPN connections
X.509 certificates	√	√	CRL (Certificate Revocation List) OCSP (Online Certificate Status Protocol) – network protocol for X.509 certificate status validation Multi-CA support Multi-host certificate support
VPN	√	√	User authentication High availability Site-to-site and client-to-site Client configuration packages
IPSec	√	√	Full-tunnel mode IKEv1 (deprecated, upgrade to v2 strongly recommended), IKEv2 PSK (pre-shared key) / certificates DPD (Dead Peer Detection) NAT-T XAUTH, EAP Port configuration
SSL-VPN	√	√	Routing mode VPN Bridging mode VPN TCP/UDP Specification of WINS and DNS servers
Backup and restore	√	√	Local or remote access Automatic import during installation Automatic and scheduled backups Automatic upload (FTP, SCP) Disaster recovery from USB drive
User authentication	√	√	Active Directory import Local user administration Authentication via web or client Single sign-on (Kerberos) Multiple logins Captive portal Terminal Server Support (via Remote Desktop IP Virtualization)
HA (High availability) *	√	√	A second Unified Firewall of the same type is required Stateful failover Active/passive Hot standby

*   Not available for LANCOM R&S®Unified Firewall UF-50 and UF-100