

# Release Notes

## LMC Software Release 1.00.158.0

### Table of contents

04	<b>1. Preface</b>
04	<b>2. Important note</b>
05	<b>3. New features, changes, and history</b>
05	<b>LANCOM Management Cloud 1.00.158.0 / 29.08.2023</b> → Centralized port templates for optimized switch rollout
06	<b>LANCOM Management Cloud 1.00.157.0 / 09.08.2023</b> → Inspiration for your projects: Discover the new LMC website
07	<b>LANCOM Management Cloud 1.00.156.0 / 18.07.2023</b> → Network extension & device setups within minutes
08	<b>LANCOM Management Cloud 1.00.155.0 / 27.06.2023</b> → Efficient, automated workflows with webhooks
09	<b>LANCOM Management Cloud 1.00.154.0 / 07.06.2023</b>
10	<b>LANCOM Management Cloud 1.00.153.0 / 17.05.2023</b> → Two clicks to optimized Wi-Fi installations via the LMC
11	<b>LANCOM Management Cloud 1.00.152.0 / 25.04.2023</b> → Wi-Fi optimization with LANCOM Active Radio Control 2.0
13	<b>LANCOM Management Cloud 1.00.151.0 / 04.04.2023</b> → Maximum data, failure, and access protection with the LMC
14	<b>LANCOM Management Cloud 1.00.150.0 / 14.03.2023</b> → Secure WEBconfig access and CLI tunnel for GS-2000 switches
15	<b>LANCOM Management Cloud 1.00.149.0 / 21.02.2023</b> → Accelerated add-in extension with new developer mode
17	<b>LANCOM Management Cloud 1.00.148.0 / 31.01.2023</b> → Advanced security features in the LANCOM Management Cloud

- 19      **LANCOM Management Cloud 1.00.146.0 / 20.12.2022**  
→ Feedback button in the Public Cloud
- 20      **LANCOM Management Cloud 1.00.145.0 / 29.11.2022**  
→ Improved usability with filtering in log tables
- 21      **LANCOM Management Cloud 1.00.144.0 / 08.11.2022**  
→ General improvements and bug fixes
- 22      **LANCOM Management Cloud 1.00.143.0 / 18.10.2022**  
→ Central management of your network security
- 23      **LANCOM Management Cloud 1.00.142.0 / 27.09.2022**  
→ Blocking websites harmful to minors for LCOS and LCOS FX devices
- 24      **LANCOM Management Cloud 1.00.141.0 / 06.09.2022**  
→ Wi-Fi 6E – The LMC is ready for the Wi-Fi VIP experience
- 25      **LANCOM Management Cloud 1.00.140.0 / 16.08.2022**  
→ Sorting and filtering in tables
- 26      **LANCOM Management Cloud 1.00.139.0 / 26.07.2022**  
→ Search function in the LMC
- 28      **LANCOM Management Cloud 1.00.138.0 / 05.07.2022**  
→ General improvements and bug fixes
- 29      **LANCOM Management Cloud 1.00.137.0 / 14.06.2022**  
→ Application Steering of the LANCOM R&S®Unified Firewalls
- 30      **LANCOM Management Cloud 1.00.136.0 / 24.05.2022**  
→ Cloud-managed hotspot vouchers
- 32      **LANCOM Management Cloud 1.00.135.0 / 03.05.2022**  
→ Firmware updates and device replacement of LANCOM R&S®Unified  
Firewalls via the LMC
- 33      **LANCOM Management Cloud 1.00.134.0 / 12.04.2022**  
→ Protection of minors according to German BPjM filter
- 35      **LANCOM Management Cloud 1.00.133.0 / 22.03.2022**  
→ LAG support for stackable switches
- 37      **LANCOM Management Cloud 1.00.132.0 / 01.03.2022**  
→ Notification on active WAN backup connections
- 39      **LANCOM Management Cloud 1.00.131.0 / 08.02.2022**  
→ Cloud-managed switch stacking
- 41      **LANCOM Management Cloud 1.00.130.0 / 18.01.2022**  
→ Custom fields at organisational level
- 43      **LANCOM Management Cloud 1.00.128.0 / 07.12.2021**  
→ Custom redirection of the Cloud-managed hotspot
- 44      **LANCOM Management Cloud 1.00.127.0 / 16.11.2021**  
→ Link to external syslog servers

- 45      **LANCOM Management Cloud 1.00.126.0 / 25.10.2021**
  - Anti-Virus for secure e-mail traffic
- 47      **LANCOM Management Cloud 1.00.125.0 / 05.10.2021**
  - Cloud-managed Firewalls & SD-WAN
- 48      **LANCOM Management Cloud 1.00.124.0 / 14.09.2021**
  - Vimium support for barrier-free keyboard control
- 50      **LANCOM Management Cloud 1.00.123.0 / 24.08.2021**
  - Dynamic DNS Service for upstream provider routers
- 51      **LANCOM Management Cloud 1.00.122.0 / 03.08.2021**
  - Secure Terminal Access in a separate browser window
- 53      **LANCOM Management Cloud 1.00.121.0 / 13.07.2021**
  - The LMC help portal - clearly arranged and just a one-click away
- 54      **LANCOM Management Cloud 1.00.120.0 / 22.06.2021**
  - Convenient development environment for add-ins
- 55      **LANCOM Management Cloud 1.00.119.0 / 01.06.2021**
  - Open Notification Interface
- 57      **LANCOM Management Cloud 1.00.118.0 / 11.05.2021**
  - Extended Wi-Fi settings
- 59      **LANCOM Management Cloud 1.00.117.0 / 20.04.2021**
  - Automatic license assignment
  
- 60      **4. History of incompatible API changes**
  
- 64      **5. General advice**
  - Disclaimer

## 1. Preface

As an intelligent network management and monitoring system, the LANCOM Management Cloud automates and centralizes the entire network architecture in terms of its WAN, LAN, WLAN, and Security. Even complex networking scenarios with a large number of network components can be easily controlled, managed, and optimized with the LMC, saving valuable resources such as money and time.

The LMC Public Cloud is available at <https://cloud.lancom.de> and is regularly updated with new features and bug fixes.

This document describes the new features of the LMC Software Release 1.00.158.0, as well as the improvements since the previous version.

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## 2. Important note

To ensure continued smooth operation with the LANCOM Management Cloud, LANCOM devices with an old firmware version must be updated to a newer version.

The following firmware versions are the minimum requirement:

- LCOS 10.12.0147 SU3
- LCOS FX 10.4
- LCOS LX 5.20 Rel
- LCOS SX 3.30.0417 RU3

To use all the functions of the LANCOM Management Cloud, we recommend using the latest release version.

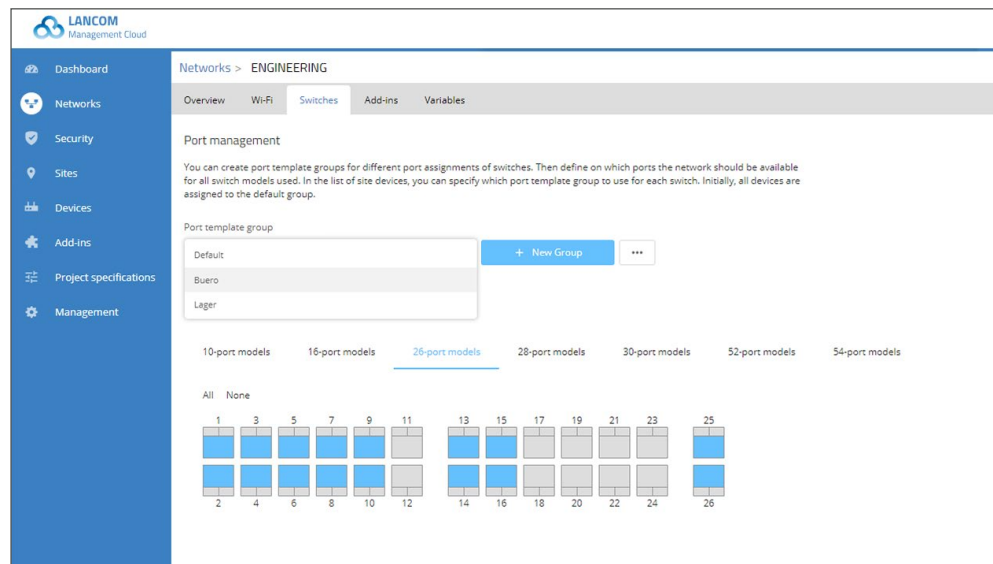


### 3. New features, changes, and history

#### LANCOM Management Cloud 1.00.158.0 / 29.08.2023

##### Centralized port templates for optimized switch rollout

Manual network assignments to switch ports could quickly become a challenge if you needed different port assignments for switches with the same number of ports at multiple locations. This is now remedied by extended, central templates, so-called port template groups. You can create, configure, and apply up to 50 different templates yourself for the networks and device models offered (e.g. 26-port model). Your previous port templates are initially assigned to the default group. You will find the port template groups under ‚Networks > Selection of a network > Switches‘ and can easily map them to your devices on the site level for even more „zero-touch“.



##### Bug fixes

→ The project list could not be selected with the Vimium plugin.

## LANCOM Management Cloud 1.00.157.0 / 09.08.2023

### Inspiration for your projects: Discover the new LMC website

We are pleased that you are using the LANCOM Management Cloud (LMC). With it, you benefit from:

- **Maximum productivity:** Configuration adjustments, firmware updates, monitoring & rollouts are automated and efficient – you save an average of 75% in time.
- **More performance and security:** VPNs, VLANs, ports, and UTM rules are defined and rolled out centrally. You can also securely connect remote workstations in the shortest possible time.
- **Immediate return on investment:** Make efficient use of valuable resources such as manpower, time and money. You can deploy new applications or optimize Wi-Fi infrastructures at the click of a mouse without expensive on-site visits.

We have summarized these and many other benefits and functions as well as customer references and awards on our relaunched [LMC website](#). We invite you to **use these benefits to win further projects** or to use the materials, customer references and use cases listed here as inspiration to further **develop your own network management concept**.

### Bug fixes

- Schedules can be edited and created again.
- Variables with user-defined variable types can again be used correctly in the global add-in assignments.
- Change detection for add-in assignments works correctly again. The buttons for saving or discarding are only displayed when changes are made.
- The auto-correction of the input field for defining the IP network has been adjusted.
- Optimizations of the ARC 2.0 algorithm

## LANCOM Management Cloud 1.00.156.0 / 18.07.2023

### Network extension & device setups within minutes

Are you already benefiting from „zero-touch deployment“? Minimize your workload, especially when integrating many new access points, as this is where the LMC really shows its strengths: activate the project-wide location allocation based on the device IP address and define an initial firmware for new devices under Project specifications > Device startup. You can already register and configure your devices in advance via serial number and PIN independent of location – the LMC will then take care of everything else for you: if an Internet connection is established, your access points are automatically identified, assigned to a location, and immediately equipped with their pre-configuration. You can find more tips for a fast, automated rollout in the [techpaper LMC Rollout](#).

The screenshot displays the 'Preconfigure Device' page in the LANCOM Management Cloud. The page title is 'Devices > Preconfigure device'. Below the title, there is a sub-header 'Preconfigure Device' and a brief instruction: 'You can create configurations for selected device models and firmwares and set up those devices before you physically integrate them into your project. You can merge these devices at any later time with a physical LANCOM device of the same model.' A note indicates that required fields are marked with an asterisk. The form includes the following fields:
 

- Name:** A text input field containing 'LANCOM-LX-6400'. A note below it says 'Will be used as device hostname'.
- Model:** A dropdown menu with 'LANCOM LX-6400' selected. A note below it says 'Must match the physical device'.
- Target firmware:** A dropdown menu with '6.10.0156 Alpha (empfohlen)' selected. A note below it says 'Basis for the configuration'.
- Software-Options:** A section with a checked checkbox for 'FCC standard conformance'.
- Site:** A dropdown menu with 'Würselen' selected.

 At the bottom of the form are 'Cancel' and 'Create' buttons. The footer of the page contains the LANCOM logo, copyright information (© 2014 - 2023 LANCOM Systems GmbH), a 'Guided Tour Project' link, and links for 'Data protection notice', 'Terms of use', and 'Imprint'.

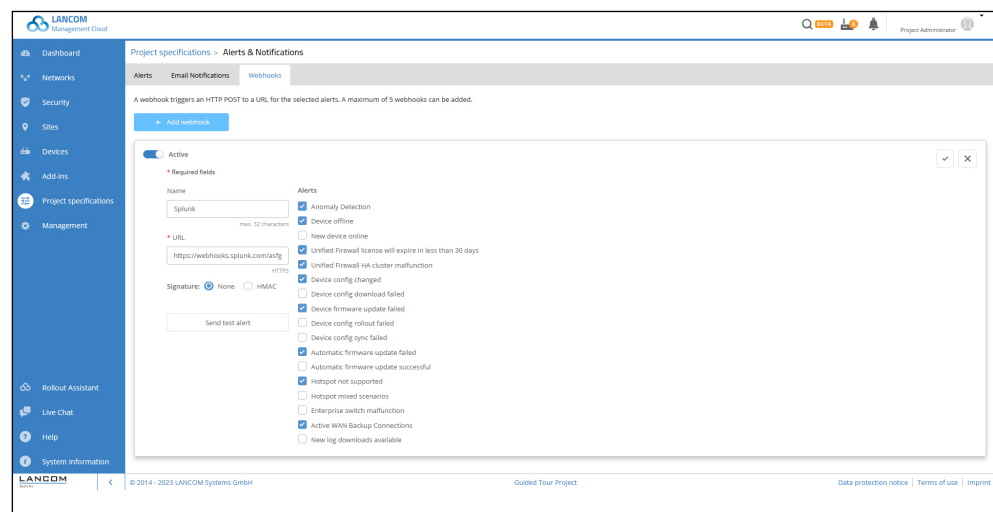
### Bug fixes

- Fixed a problem with rolling out the configuration just before the license expires.
- CSV site and device imports were logged as system users.
- The hotspot password in the site-specific hotspot settings did not work.
- If the devices at a site have changed, the result of an ARC scan can continue to be used for the unchanged devices without a rescan.

## LANCOM Management Cloud 1.00.155.0 / 27.06.2023

### Efficient, automated workflows with webhooks

From monitoring and troubleshooting to deployment and upgrades: As an administrator, you rely on a holistic view of all network activities to respond quickly. Using webhooks in the LMC saves you valuable time by flexibly communicating alerts and notifications to messaging services and automation tools when an event occurs. Set up your webhooks for Slack or IFTTT, for example, under Project specifications > Alerts & Notifications > Webhooks and learn more in the [Webhooks techpaper](#).



### Bug fixes

- In the device license assignment dialog the current license status was not shown.
- A display issue in the project specification dialog after saving the settings has been solved.
- An issue in the guided device replacement process has been solved.

**LANCOM Management Cloud 1.00.154.0 / 07.06.2023****Improvements**

→ In add-ins, the variable contents of particular devices can now be accessed specifically via their serial number in order to use them for the configuration of other devices.

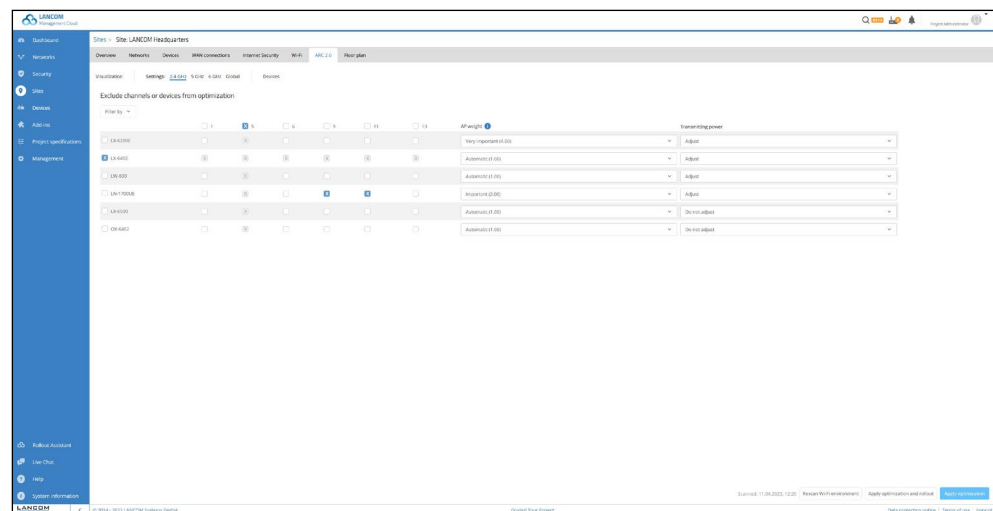
**Bug fixes**

→ The sender interfaces for communication with the LMC and the firmware update server are now also set correctly in scenarios with the cloud-managed hotspot.

## LANCOM Management Cloud 1.00.153.0 / 17.05.2023

### Two clicks to optimized Wi-Fi installations via the LMC

Scan, apply, and roll out – that is all it takes to make your Wi-Fi more efficient, even at sites with data-intensive applications, high user densities, or interfering third-party external networks. LANCOM Active Radio Control 2.0 (ARC 2.0) does exactly that job for you! After scanning the environment, the self-learning Wi-Fi optimization solution automatically takes into account the individual usage behavior of the Wi-Fi clients in your installation, predicts the expected Wi-Fi situation, and evaluates it using the ARC Index. Enhance your ARC Index and get the most out of your Wi-Fi installation! Find out your personal ARC Index potential now! Tips for custom settings are provided in the ARC 2.0 techpaper.



### Further improvements

- To better distinguish the LMC administrative roles from the network users, the menu item 'Management → Users' has been renamed to 'Management → Administrators'.

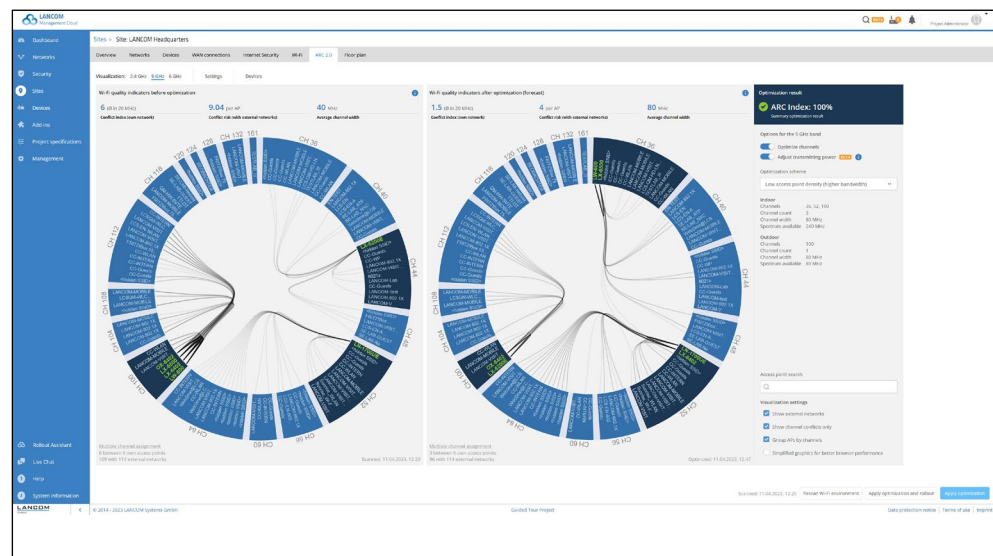
### Bug fixes

- The encryption settings for WPA3 wireless networks have been corrected.
- The behavior of a rollout of linked Central Site devices when the VPN feature is disabled has been corrected.
- Optimizations of the calculation algorithm for ARC 2.0.
- Firmware updates and communication with the LMC could fail in certain scenarios due to incorrect settings of the source interfaces. The selection of source interfaces has been revised.

## LANCOM Management Cloud 1.00.152.0 / 25.04.2023

### Wi-Fi optimization with LANCOM Active Radio Control 2.0

Ensure optimal Wi-Fi for any network size at the push of a button – directly via the LMC! With the self-learning automation solution LANCOM Active Radio Control 2.0 (ARC 2.0), you can forecast the optimization potential of your Wi-Fi network based on learned usage behavior. For this purpose, ARC 2.0 analyzes existing multiple channel occupancies, taking into account external networks and access point densities. In this way, you receive a clear comparison of the actual radio field situation with a preview of the expected network status after adjustment. Clicking on „Apply optimization“ sets the most suitable channels and channel widths to automatically adjust transmitting powers and provide radio capacity where it is needed. Detailed ARC 2.0 settings such as prioritization, reservation, or exclusion of access points or channels can be made for access points as of LCOS LX 6.10 and other devices as of LCOS 10.72 under Sites > Site selection > ARC 2.0. Learn more about ARC 2.0 in this tech paper and try it out right away!



### Further improvements

- The landing page UUID of the cloud-managed hotspot can be set in add-ins via a context variable (context.network.hotspotid).

**Bug fixes**

- The detail configuration now allows the simultaneous deletion of multiple table rows.
- Passwords can now be displayed again in the preview of the detailed configuration.
- ToolTip display errors in switch port information have been corrected.
- Devices are set to ,not up to date' when variables are changed even if they are not assigned to a site or network, but globally assigned add-ins are used.
- The commissioning process for devices with default configurations (manual or automatic assignment during commissioning) has been corrected.
- For globally assigned add-ins, switch variables with user-defined variable type can be used correctly again.
- Add-in developer mode outputs have been optimized for specific device types.
- If VPN is disabled for a network, no rollout of the connected Central Site devices is performed.



## LANCOM Management Cloud 1.00.151.0 / 04.04.2023

### Maximum data, failure, and access protection with the LMC

While you protect your network via the LANCOM Management Cloud (LMC), we take care of protecting the LMC itself in the background. With regular security audits, encrypted data backups, and geo-redundant, certified, and sustainably operated data centers in Germany, we minimize risks such as cyberattacks, data loss, and service outages. For you, this means data sovereignty at the highest level. To find out which data protection standards our LMC hosting meets in detail, visit our [Cloud security of the LMC website](#) or read the [LMC \(Public\) Data Protection and Data Security infopaper](#).



### Bug fixes

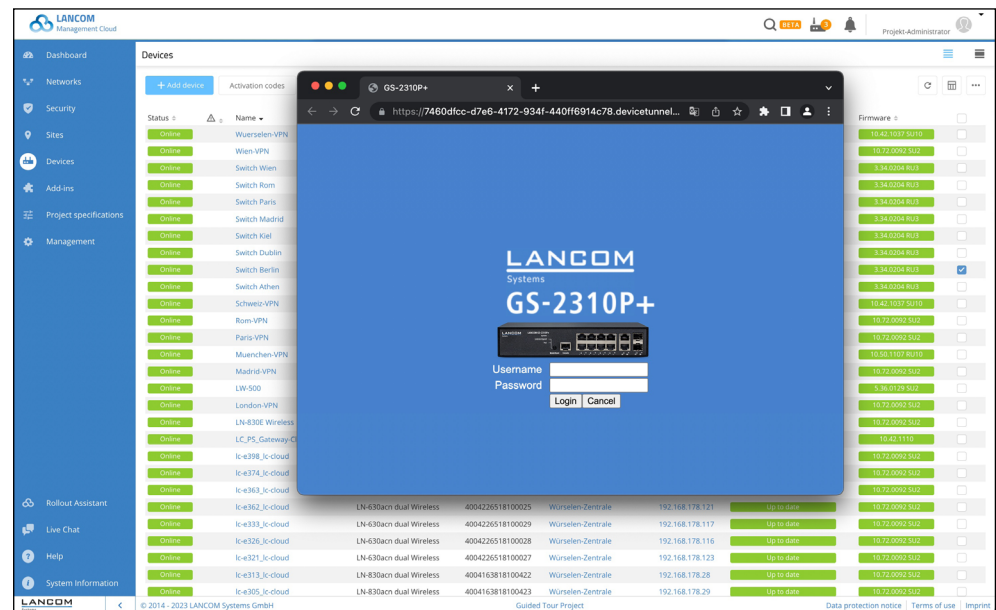
→ A display problem with the help chat has been fixed.

## LANCOM Management Cloud 1.00.150.0 / 14.03.2023

### Secure WEBconfig access and CLI tunnel for GS-2000 switches

We are continuously expanding the management options of the switches for you via the LANCOM Management Cloud (LMC): Direct remote access to a device's WEBconfig or command line interface (CLI) through the LMC saves system administrators valuable time and greatly simplifies device access. With the securely encrypted sessions tunneled through the LMC, you combine individual and global management for GS-2000 series switches in one application as well. To do this, select one or more switches (from firmware version LCOS SX 3.34 RU3) in the device overview and click 'Open terminal' or 'Open WEBconfig' in the selection menu.

Please note that local configuration changes can be overwritten by a configuration subsequently rolled out by the LANCOM Management Cloud.



### Further improvements

→ The structure of routing rules and tables rolled out to LCOS FX devices has been revised. This reduces the complexity of the routing configuration and the overall number of requests required to set up the device, thus increasing roll out speeds.

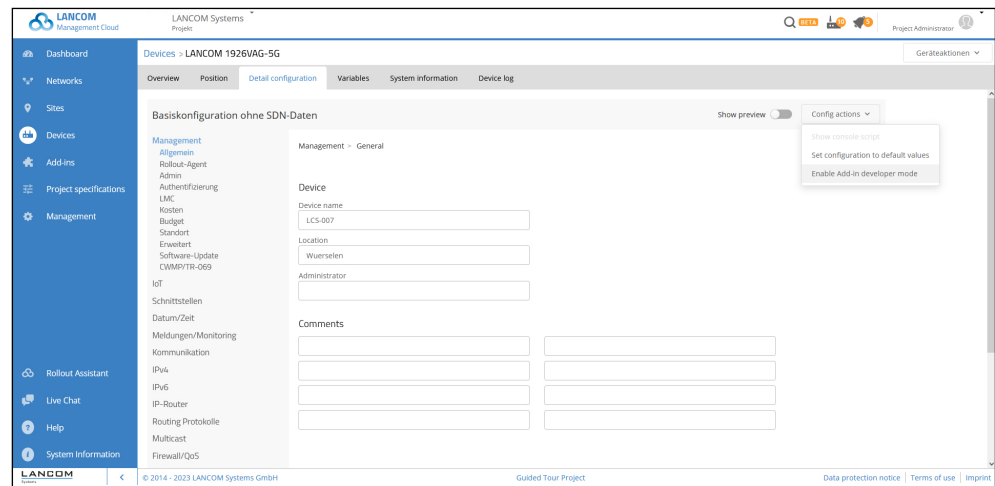
### Bug fixes

→ An issue with the user support chat has been solved.

## LANCOM Management Cloud 1.00.149.0 / 21.02.2023

### Accelerated add-in extension with new developer mode

Individually created add-in scripts are particularly useful for flexibly adapting your LMC configuration to customer-specific network scenarios. Accessing configuration data based on their object ID (OID) from the LMC is now even more convenient: make your adjustments, e.g. for a switch, in the detailed configuration and activate the new add-in developer mode under config actions. The LMC automatically converts your configuration changes into an add-in-compatible format that you can insert directly into your add-ins, saving you a lot of time. Learn more about add-ins in the [add-ins manual](#).



### Further improvements

- When a device in a project goes online for the first time, a notification is displayed.
- The number of filtered locations is now displayed in the location overview.
- Anomaly detection notifications can now be closed.
- If a site's access point does not support the country assigned to the site, the device's configuration will not be written.

### Bug fixes

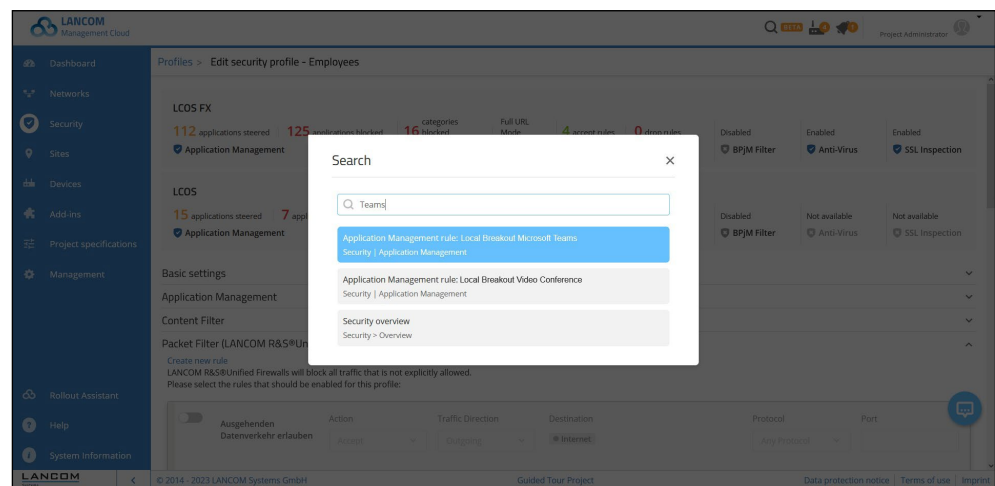
- Fixed an issue with a disappearing filter in the device overview.
- Fixed an issue with a delayed status display (online / offline) in the device detail view.
- Locations can be updated again via CSV import.
- The automatic assignment of locations based on IP addresses works again.
- The notation of MAC addresses in the detailed configuration has been corrected.

- The date selection in the detail configuration works again.
- The VLAN ID of a switch port that is part of an LAG is set correctly when the port is disabled in the individual port configuration.

## LANCOM Management Cloud 1.00.148.0 / 31.01.2023

### Advanced security features in the LANCOM Management Cloud

We are further expanding the "Security" menu for you: For improved usability and a more efficient workflow, you can now generate packet filter rules directly from a security profile. Especially if you have a large number of security profiles and rules, the project-wide search function helps you to locate the profile or rule you are looking for more quickly in the LMC. To do so, simply use the keyboard shortcut "ctrl + K" (Windows) oder "cmd + K" (macOS). An overview of the continuously developed security features can be found in our [tech paper](#).



### Further improvements

- The design of the 'Administration → Licenses' section has been revised.
- Improved overview within the security profiles
- The maximum number of floorplans has been increased to 25.

### Bug fixes

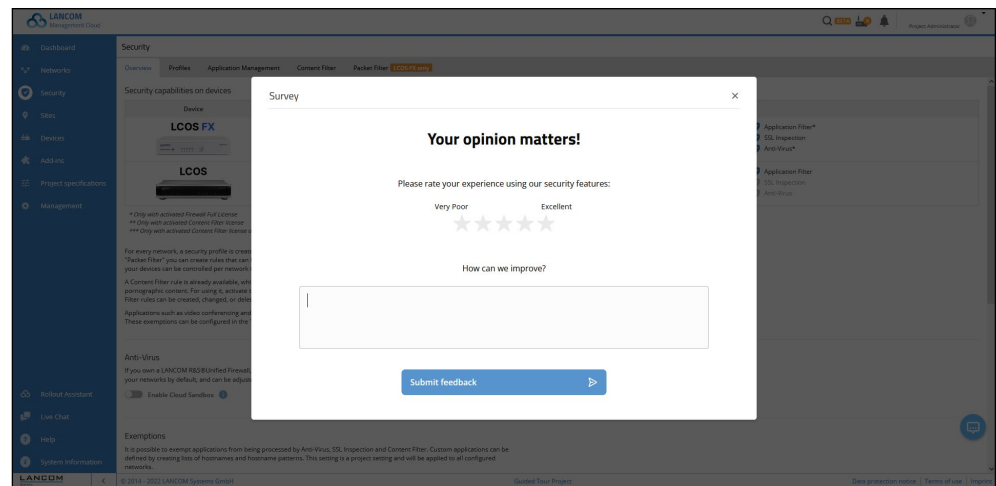
- More robust error handling for the user's language setting
- Added support for 6 GHz in the 'Wi-Fi Users' dashboard.
- The SD-WLAN configuration now enables 802.11ax on 2.4 GHz for the LANCOM routers of the 1800 series.
- The PoE status information for devices in a stack group has been corrected.
- The rollout of the device configuration via the action menu in the detailed configuration now also offers to roll out Central Site locations if required.
- Changes to variables now generate log messages.
- If the setting of the default networks of the Unified Firewalls is changed in the project settings for commissioning, only Unified Firewalls are now switched to 'not up to date'.

- If the device overview of a switch is called up several times, the order of the display of assigned networks remains unchanged.
- The DECT settings have been corrected in the detail configuration.

## LANCOM Management Cloud 1.00.146.0 / 20.12.2022

### Feedback button in the Public Cloud

Your opinion counts – as you know best what enriches your everyday work and what does not (yet): Which features of the LANCOM Management Cloud (LMC) are particularly helpful and understandable? Which ones can we optimize further? We ask questions like these not only to ourselves, but from now on to you as well: By clicking on a feedback button, you can participate anonymously in a survey on a specific function and contribute directly to improving the LMC. The blue buttons can currently be found, for example, at the menu item “Security” or in the hotspot portal. We are looking forward to your feedback!



### Further improvements

- Microsoft Teams was added as an application for application management.
- Packet filter rules can now be generated directly from a security profile.

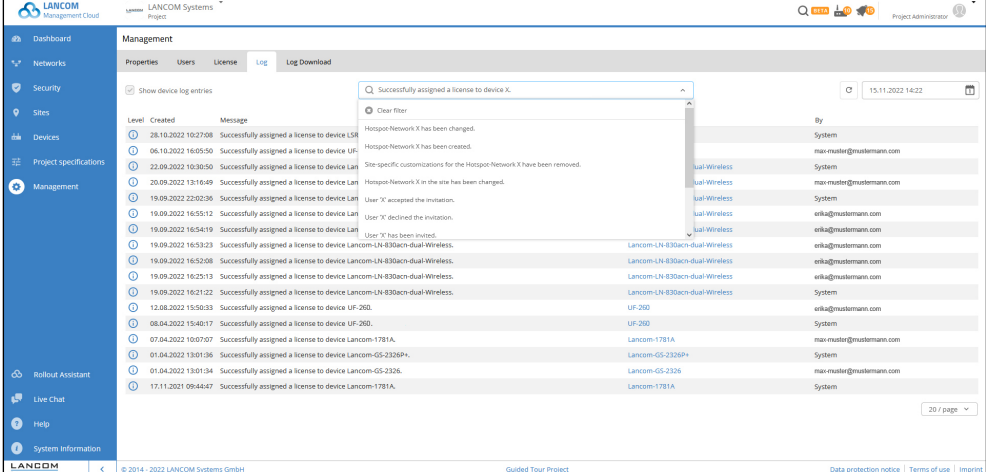
### Bug fixes

- When notification is disabled, no alerts are issued for backup connections.
- Backup connection alerts are now issued when notification is enabled.
- A warning older than 365 days could neither be read nor deleted.
- Improved validation of CSV files when importing locations.
- The usability of dialogs has been improved.
- In a few cases, the location column and the corresponding filter were no longer displayed. This misbehavior has been fixed.
- When transferring multiple devices to a new project, an unnecessarily large number of success messages occurred. This misbehavior has been fixed.

## LANCOM Management Cloud 1.00.145.0 / 29.11.2022

### Improved usability with filtering in log tables

With transparent and complete logging, administrators always have a full overview of who made which change and when. Under 'Management > Log', you can therefore view the log messages and can filter them. Using the drop-down menu, you can either select from a list of predefined events and types or enter your individual search term to find them more quickly. For example, you can view when a license was assigned to which device and by whom. A click on the log entry will then give you further information.



The screenshot displays the LANCOM Management Cloud interface. The 'Management' section is active, and the 'Log' tab is selected. A search filter is applied to the log entries table, showing a list of events. The table has columns for Level, Created, Message, and By. The search filter is set to 'Successfully assigned a license to device X'. The log entries table shows various events, including license assignments and network changes.

Level	Created	Message	By
Info	28.10.2022 10:27:08	Successfully assigned a license to device L58	System
Info	06.10.2022 16:05:50	Successfully assigned a license to device U1	max.muster@mustermann.com
Info	22.09.2022 10:30:50	Successfully assigned a license to device Lari	System
Info	20.09.2022 13:16:49	Successfully assigned a license to device Lari	max.muster@mustermann.com
Info	19.09.2022 22:02:36	Successfully assigned a license to device Lari	System
Info	19.09.2022 16:55:12	Successfully assigned a license to device Lari	uri.a@mustermann.com
Info	19.09.2022 16:54:19	Successfully assigned a license to device Lari	uri.a@mustermann.com
Info	19.09.2022 16:53:23	Successfully assigned a license to device Lancom-LN-830acn-dual-Wireless	uri.a@mustermann.com
Info	19.09.2022 16:52:08	Successfully assigned a license to device Lancom-LN-830acn-dual-Wireless	uri.a@mustermann.com
Info	19.09.2022 16:25:13	Successfully assigned a license to device Lancom-LN-830acn-dual-Wireless	uri.a@mustermann.com
Info	19.09.2022 16:21:22	Successfully assigned a license to device Lancom-LN-830acn-dual-Wireless	System
Info	12.08.2022 15:50:33	Successfully assigned a license to device UF-260	uri.a@mustermann.com
Info	08.04.2022 15:40:17	Successfully assigned a license to device UF-260	System
Info	07.04.2022 10:07:07	Successfully assigned a license to device Lancom-1781A	max.muster@mustermann.com
Info	01.04.2022 13:01:36	Successfully assigned a license to device Lancom-GS-2326P+	System
Info	01.04.2022 13:01:34	Successfully assigned a license to device Lancom-GS-2326	max.muster@mustermann.com
Info	17.11.2021 09:44:47	Successfully assigned a license to device Lancom-1781A	System

### Bug fixes

- Fixed a problem with searching for firmware files in preconfigurations.
- The display of the expiration date for short-term expiring cloud licenses in the device table was incorrect.
- After disabling the security functionality, the exceptions on LCOS FX devices were not removed.
- In some cases, the configuration of a vRouter newly paired with the LMC could not be rolled out.
- Uncritical security aspects of the terminal & webconfig tunneling endpoint of devices have been optimized.



## **LANCOM Management Cloud 1.00.144.0 / 08.11.2022**

### **General improvements and bug fixes**

#### **Improvements**

- The country setting on site level is now automatically used for the country defaults of the WLAN settings if a country is set.
- To correctly determine the Wi-Fi properties of an access point, an indoor or outdoor operating environment can now be specified.
- From the network overview there is now a direct link to the security profile of the networks.
- The search function now also supports searching for security profiles and rules.
- The service overview now also displays the versions of the available description files (DSC) for different firmware states.
- The user interface of the detail configuration has been fundamentally revised.
- In the LMC log filtering can now be done according to a log type.
- In the hotspot operator portal, it is now possible to revoke a voucher.

#### **Bug fixes**

- A problem with the display of the license status in the device overview has been fixed.
- The arrangement of Google Maps icons has been corrected.
- Several problems with the display of licenses have been fixed.

## LANCOM Management Cloud 1.00.143.0 / 18.10.2022

### Central management of your network security

With the new menu entry „Security“ you can now keep an eye on your security settings in one place. A security profile is automatically created for each network in your LMC project, or your existing settings and rules are migrated there. With just a few clicks, you can create rules such as those for Application Management, Content Filter, and Packet Filter globally for all networks and assign them to the corresponding security profiles. Under 'Security > Profiles' you can clearly see which security properties are effective in the respective network. Learn more about the cloud-managed security concept in our [tech paper](#).

**Security capabilities on devices**

Device	Features
LCOS FX	<ul style="list-style-type: none"> <li>Application Management</li> <li>DNS based Content Filter*</li> <li>BPJM Filter*</li> <li>Application Steering / Local Breakout</li> <li>Proxy based Content Filter*</li> <li>Packet Filter</li> <li>Application Filter</li> <li>SSL Inspection</li> <li>Anti-Virus*</li> </ul>
LCOS	<ul style="list-style-type: none"> <li>Application Management</li> <li>DNS based Content Filter**</li> <li>BPJM Filter</li> <li>Application Steering / Local Breakout</li> <li>Proxy based Content Filter</li> <li>Packet Filter</li> <li>Application Filter</li> <li>SSL Inspection</li> <li>Anti-Virus</li> </ul>

\* Only with activated Firewall Full License  
\*\* Only with activated Content Filter license

For every network, a security profile is created automatically. By using the tabs "Application Management", "Content Filter" and "Packet Filter" you can create rules that can be activated inside of the profiles. By using these security profiles, the security features of your devices can be controlled per network in one central location.

A Content Filter rule is already available, which provides typical settings to protect against malware, malicious websites and pornographic content. For using it, activate the rule in the security profile of a network, and roll out the device configuration. Content Filter rules can be created, changed, or deleted on the corresponding tab, and used in a security profile.

Applications such as video conferencing and update services for the major operating systems are bypassing SSL inspection by default. These exemptions can be configured in the "Exemptions" further below.

### Improvements

- Revised license assignment dialog
- The display and assignment of a license is now also possible in the device overview.

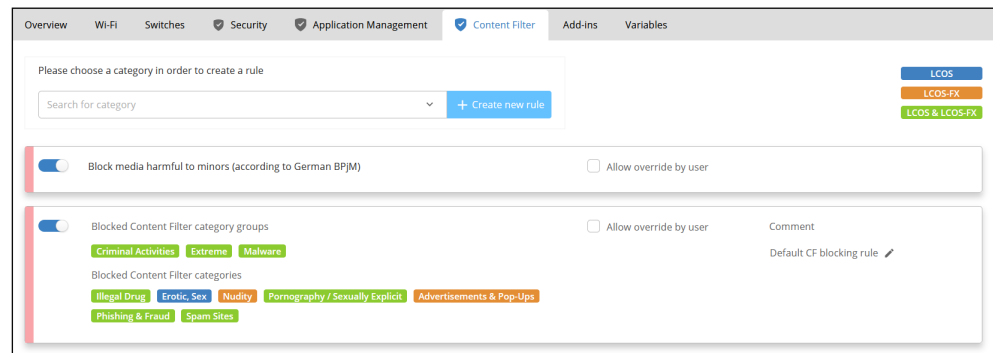
### Bug fixes

- Preconfigurations for GS-4000, XS-5000 and XS-6000 series switches can be created again.
- Hidden tabs are automatically shown again after assigning a license.
- Corrections regarding firmware status output via API
- When querying the site list via the API, sites that have already been deleted are no longer output.

## LANCOM Management Cloud 1.00.142.0 / 27.09.2022

### Blocking websites harmful to minors for LCOS and LCOS FX devices

Reliable and effective youth protection is a top priority, especially in schools and youth facilities. Therefore, the officially recommended website filter of the German Federal Review Board (BPjM) blocks content that is classified as harmful to minors in Germany. Continuous updates and extensions are guaranteed. You can activate the BPjM filter for all LANCOM R&S® Unified Firewalls with LCOS FX 10.8 onwards and now also for all LCOS devices with LCOS 10.70 under Networks > Content Filter.



Blocking websites harmful to minors

### Further improvements

→ Support for UF High Availability in the device table / system information

### Bug fixes

→ A problem with the display of the status of (stacked) enterprise switches has been fixed.

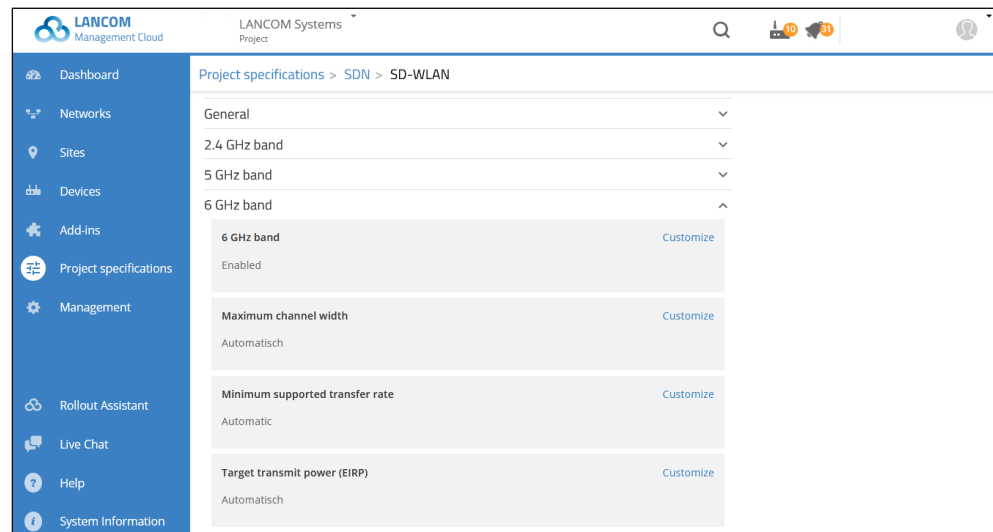
### Announcement

→ Please note that the license management in the LMC will change from 18.10.2022: The terms of multiple licenses assigned to a device will be added up and automatically combined into one license. In the future, a newly designed license dialog will be available for you to conveniently assign compatible licenses from your license pool.

## LANCOM Management Cloud 1.00.141.0 / 06.09.2022

### Wi-Fi 6E – The LMC is ready for the Wi-Fi VIP experience

Wi-Fi 6E uses the 6 GHz frequency band reserved exclusively for Wi-Fi and plays out its advantages to the full, especially in high-density environments. The LANCOM Management Cloud is perfectly prepared for this and provides a 6 GHz view in the Wi-Fi / LAN dashboard. Under Project specifications > SDN > SD-WLAN > 6 GHz band, you can make configuration settings for the entire project and customize them in the Wi-Fi settings at site and device level. With the Wi-Fi 6E-capable access point LANCOM LX-6500, you also benefit from 6 GHz Wi-Fi on the hardware side. Find out more on our [Wi-Fi 6\(E\) technology page!](#)



Wi-Fi 6(E) configuration at project level

### Further improvements

- Support for LANCOM ISG-5000
- BPJM filter for LCOS
- Device name resolution in the archive log
- Metric name resolution in the archive log

### Bug fixes

- An error in the password repetition during user registration could prevent the registration.
- Some minor adjustments in the sites overview dialog
- Fixed a problem with updating the device table in new or empty projects when adding new devices.

## LANCOM Management Cloud 1.00.140.0 / 16.08.2022

### Sorting and filtering in tables

Do you manage large projects with a high number of devices and still want to have a clear overview? Sorting and filtering location, user, and project tables helps you find what you're looking for much faster. Click on the arrows in the table header to sort alphabetically in ascending or descending order. You can activate the filter feature by clicking on the filter icon and entering your search term. For example, you can quickly identify the users of a particular access point in long Wi-Fi user tables under „AP name“.

Name	SSID	Signal	Client IP	Client MAC	AP name	Frequency	Mode	Throughput	Rx rate	Tx rate
6e8dd4bcb349	LANCOM-VISITOR	75%	192.168.2.116	6e:8d:d4:bcb3:49	lc-e201_lc-cloud	5 GHz	ac	826.65 kBit/s	433 MBit/s	433 MBit/s
Galaxy-S7-edge	LANCOM-VISITOR	75%	192.168.2.215	4c:66:41:59:b5:f8	lc-e201_lc-cloud	5 GHz	ac	201.07 Bit/s	585 MBit/s	780 MBit/s
Galaxy-A5-2017	LANCOM-VISITOR	65%	192.168.2.154	80:4e:70:49:cb:1c	lc-e201_lc-cloud	2.4 GHz	n	1.14 kBit/s	72 MBit/s	175 MBit/s
Pixel-4a	LANCOM-VISITOR	44%	192.168.2.112	36:2ca4:b5:ca:1a	lc-e200_lc-cloud	2.4 GHz	n	0 Bit/s	117 MBit/s	144 MBit/s
S10-von-Rene	LANCOM-VISITOR	60%	192.168.2.139	be:b5:e9:f7:75:f5	lc-e200_lc-cloud	5 GHz	ac	62.08 kBit/s	234 MBit/s	351 MBit/s
Galaxy-S7	LANCOM-VISITOR	67%	192.168.2.166	4c:66:41:d4:b2:58	lc-e197_lc-cloud	5 GHz	ac	49.6 Bit/s	45 MBit/s	526 MBit/s
Pixel-6	LANCOM-VISITOR	80%	192.168.2.250	a6:1e:d0:ff:b1:3a	lc-e128_lc-cloud	5 GHz	ac	44.8 Bit/s	780 MBit/s	866 MBit/s
mchittka-1	LANCOM-VISITOR	64%	192.168.2.179	80:38:fb:bc:49:54	lc-e128_lc-cloud	5 GHz	ac	124 Bit/s	39 MBit/s	234 MBit/s

Sorting and filtering in tables

### Further improvements

- The dialog for entering the location position has been revised.
- Numerous endpoints have been adjusted according to the current Swagger OpenAPI specification. Please note that the endpoints marked as ‚deprecated‘ will be removed in one of the upcoming releases. You can see the customizations in chapter 4 “History of incompatible API changes”.

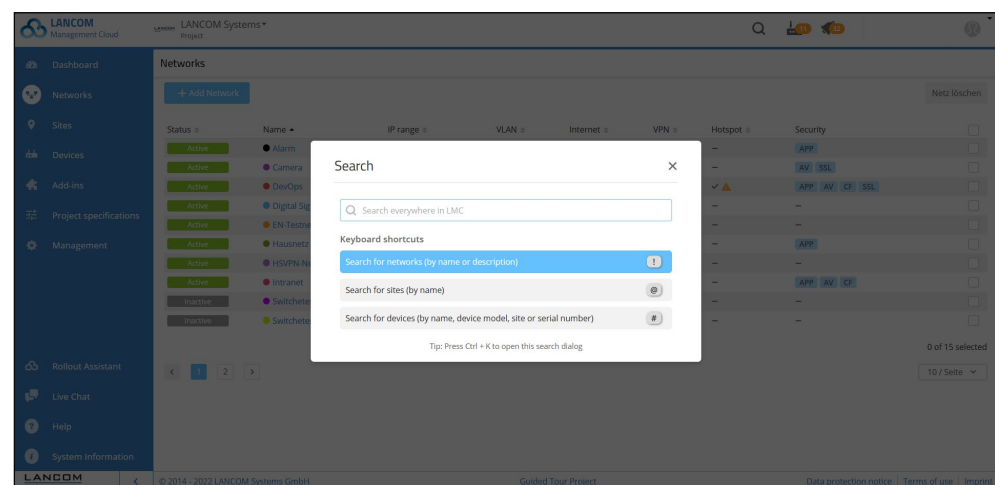
### Bug fixes

- Corrected error handling when checking user input in the registration form
- Improved error handling when registering users without memberships
- When a new network is created, all switch ports are no longer incorrectly selected for it.
- The configuration options of the HSVPN switch in the ‚Networks‘ dialog have been corrected.
- The Layer-7 Detection settings in the ‚Networks‘ dialog have been corrected.

## LANCOM Management Cloud 1.00.139.0 / 26.07.2022

### Search function in the LMC

Find networks, devices, locations, and LMC functions even faster: With the new search engine, you can search your entire project in a quick and easy way with just a few clicks – or, if you prefer, even without any clicks at all. Just use the magnifier icon in the top navigation bar or alternatively the keyboard shortcut 'ctrl + K' (Windows) or 'cmd + K' (macOS). For your given search term, a language-independent search is performed on project level. You can also narrow down the results list with three selectable filters in advance. Try it out right away!



Search function in the LMC

### Further improvements

- The creation of an LMC organization is now also possible for partners outside the DACH region directly via the myLANCOM portal.
- When exporting CSV time series on the dashboard, the times are now also given in Central European Time in addition to the Unix time format.
- The Wi-Fi user table in the device overview can now be filtered and sorted.

### Bug fixes

- The DHCP widget on the device page did not show any linking for network names with special characters.
- The 'Create and Edit' page of a network did not correctly visualize that saving was prevented due to errors in the form.
- The 'Create and Edit' page of a network did not allow changing the subnet size per site.
- The 'Create and edit' page of a network did not allow changing Layer-7 application detection settings.

- The ‚Create and Edit‘ page of a network incorrectly allowed spaces when specifying multiple VPN Central Sites.
- The documentation regarding the add-in editor has been extended to allow the code suggestion window to be opened manually in the editor.
- In the settings dialog for subnets (networks at the site), there was incorrectly the option to declare non-VPN networks as Central Site.

## **LANCOM Management Cloud 1.00.138.0 / 05.07.2022**

### **General improvements and bug fixes**

#### **Announcements**

- When deleting a project, it is now explicitly pointed out that previously unused device licenses in the project expire.
- To execute the action ‚Device exchange‘, the affected device must be offline. This is now indicated to the customer by a message if he wants to execute the action for a device that is still online.

#### **Bug fixes**

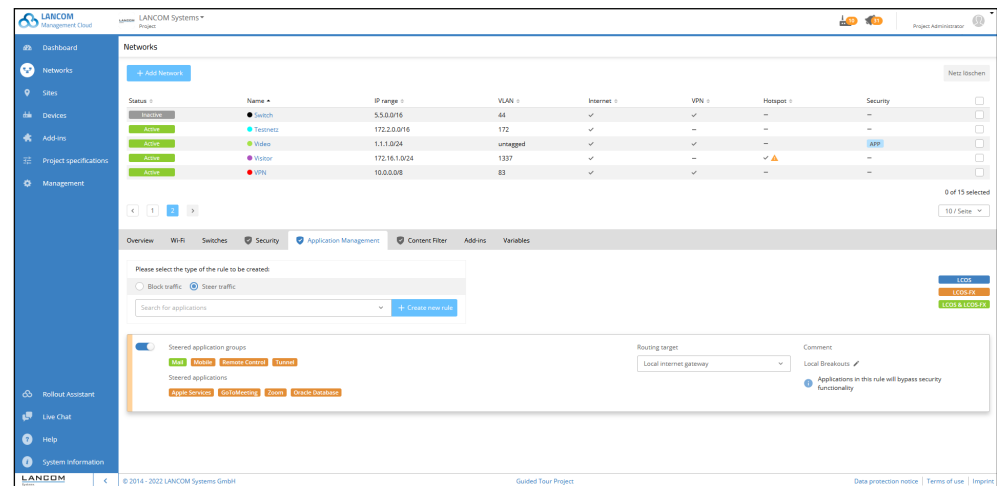
- Fixed an error when moving a project to an organization with an identically named project.
- Login failed if two-factor authentication was enforced for the account that was last accessed, but the user was not using two-factor authentication.
- Disabling SD-WAN no longer hides the network name in the site.
- An access point with LCOS LX could not take over a configuration from the LMC.
- Correction of the interface configuration to the LL2M function.
- When importing locations from CSV, the gateway ID of the network is now correctly taken over.



## LANCOM Management Cloud 1.00.137.0 / 14.06.2022

### Application Steering of the LANCOM R&S® Unified Firewalls

Increase the overall performance of your network by steering specific data traffic (Application Steering): Applications classified as trusted for your network, such as Microsoft 365, can be routed directly to the Internet via a Local Internet Breakout. With just a few clicks, central Application Management configurations of the LANCOM Management Cloud (LMC) are automated and securely applied to all sites. Create your own rules under 'Networks > Application Management > Steer traffic' now also with 'LCOS FX' marked applications and extend the benefits of the Unified Firewalls in combination with the LMC.



Application Steering of 'LCOS FX' marked applications

### Announcement

→ The RSS feed is now available via a new subscription link:  
[www.lancom-systems.com/lmc-rss](http://www.lancom-systems.com/lmc-rss)

### Further improvements

→ The maximum number of networks per project has been increased to 256.

### Bug fixes

→ Switching from the account overview to a project occasionally did not work.  
 → A predefined GoToMeeting security exemption update could not be cloned.

## LANCOM Management Cloud 1.00.136.0 / 24.05.2022

### Cloud-managed hotspot vouchers

In the new hotspot portal of the LANCOM Management Cloud (LMC), you can create any number of vouchers for Wi-Fi access in no time at all and set individual device and time limits for them. You can access the hotspot portal when creating a cloud-managed hotspot under ,Networks/Add network/Hotspot Network/Authentication/Voucher' or even more easily using the new LMC role ,Hotspot Operator'. With the help of a simple user interface, for example, receptionists can also export vouchers for their hotel guests quickly and easily in CSV or PDF format. Learn more about the vouchers and their design customizations in this Knowledge Base article.

The screenshot shows the 'Hotspot Portal' interface. On the left, there is a sidebar with 'Hotspot Networks' and 'Your SSID' selected. The main area is titled 'Your SSID Vouchers' and contains the following fields:

- Number of vouchers:** Input field with '100' and a 'max. 300' limit.
- Devices per voucher:** Dropdown menu with '3' selected and a 'max. 300' limit.
- Valid until including:** Date picker with '17.05.2023' and a 'max. 5 years in the future' limit.
- Usage duration (starting from first usage):** Input field with '1' and a 'max. 1 year' limit.
- Voucher language:** Dropdown menu with 'English' selected.
- Create & download:** Blue button.

At the bottom of the page, there is a footer with '© 2014 - 2022 LANCOM Systems GmbH', 'Guided Tour Project', 'Data protection notice', 'Terms of use', and 'Imprint'.

Creating hotspot vouchers

### Announcement

- Before transferring a device with an active license to an organization, it must first be deposited in the license pool.

### Further improvements

- The help text for the auto-updater has been optimized.

### Bug fixes

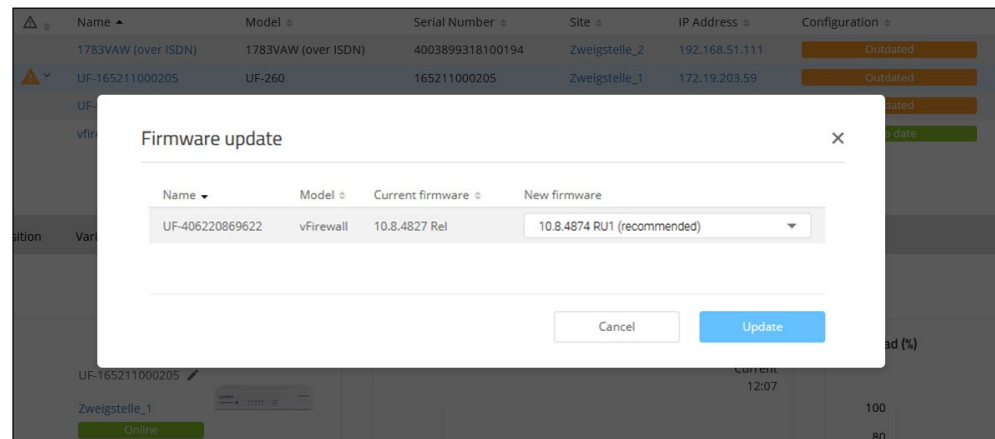
- An issue with the breadcrumb navigation of project defaults has been fixed.
- In the Wi-Fi user table, the filter options for the frequency band have been corrected.
- Added the missing translation for disabling the Internet connection.
- An error in the WAN dashboard when displaying the average values of the VPN connections has been corrected.
- PoE information is now displayed for the GS-4554XP switches.
- For the stacking switches, the port default ,Auto' (Auto Negotiation) is now correctly displayed.

- An error in sorting by IP addresses in the device list has been corrected.
- Optimizations in the evaluation of changes in add-ins regarding the display of the configuration status.

## LANCOM Management Cloud 1.00.135.0 / 03.05.2022

### Firmware updates and device replacement of LANCOM R&S®Unified Firewalls via the LMC

LANCOM Management Cloud (LMC) and LANCOM R&S®Unified Firewalls grow further together: From now on, you can manage firmware updates for your firewalls as of LCOS FX 10.8 centrally via the LMC and conveniently keep an eye on the firmware status in the device table. And there is even more: You can also easily replace your firewalls, including the complete configuration. Simply select the device to be replaced in the device table and enter the serial number of the replacement device under Menu > Transfer – done!



Firmware update via LMC

### Further improvements

- The endpoint GET /account/{accountId}/sites has been changed to streaming.
- Navigation to an assigned floor plan is now possible from the device overview directly from the ‚Position‘ area.

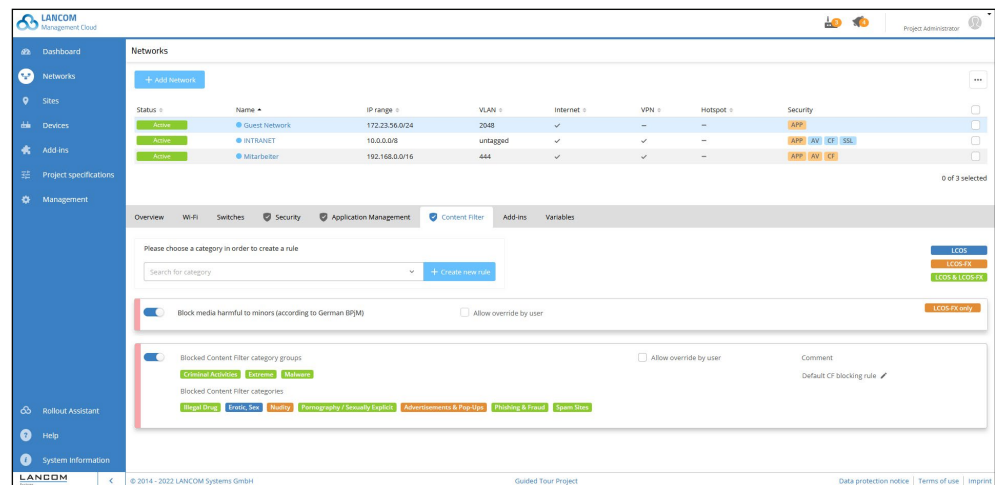
### Bug fixes

- In rare cases, a timeout did not redirect to the login page.
- Fixed a problem with CSV location import when adding new networks afterwards
- Fixed a problem with a filter criterion in the device table
- When setting the serial number of a preconfiguration, the tooltip was partially not closed.

## LANCOM Management Cloud 1.00.134.0 / 12.04.2022

### Protection of minors according to German BPjM filter

With the recommended website filter of the German Federal Review Board (BPjM), you can now protect children and adolescents even more reliably: For example, schools or youth facilities benefit from a constantly updated list of blocked URLs that are classified as harmful to minors in Germany. You can activate the BPjM filter as an extension of the Content Filter for your LANCOM R&S® Unified Firewalls with Full License and LCOS FX 10.8 under Networks > Content Filter.



### Further improvements

- As of LCOS 10.60 Rel, a boot process and its cause are displayed in the LMC device log for LCOS devices after a device has reestablished the connection to the LMC.
- In the add-ins, the gateway IP addresses can be used at the location level via the new variable ‚context.location.gatewayIps‘.
- In the add-ins the device serial number and MAC address are available via the variables ‚context.device.serialNumber‘ and ‚context.device.macAddress‘. Existing devices must reconnect to the LMC once, e.g. by rebooting, so that this information is available.

**Bug fixes**

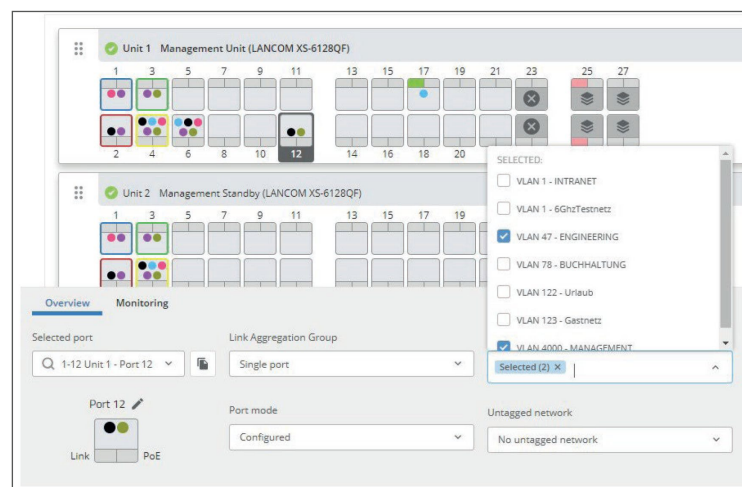
- In rare cases, a user was logged out before the set timeout.
- An error in retrieving deep links has been corrected.
- Setting the configuration status to ,outdated' in connection with add-ins has been optimized.
- A misbehavior in the environment of re-sorting stack units has been fixed. In the affected cases, all units are now displayed again.
- Disabled DHCP server settings are now also correctly displayed as inactive in the networks at the site.
- If no SD functions are activated in a project, the add-ins are not supported and are no longer displayed.
- In the dialog for creating preconfigurations, form fields were sometimes not updated.

## LANCOM Management Cloud 1.00.133.0 / 22.03.2022

### LAG support for stackable switches

Setting up LAGs (Link Aggregation Groups) for stackable switches of the GS-4500 and XS series is easy with the LMC! LAGs are used to realize link aggregation and load balancing: As soon as one active link fails, all other links of the group remain active and share the load of the data traffic among each other. You can set this up conveniently using the graphical interface in the device overview.

Further information is available in the [tech paper LANCOM fail-safe stacking](#).



LAG setup for stackable switches

### Announcement

- The URL for future firmware downloads will be changed to [my.lancom-systems.com](https://my.lancom-systems.com) on 24.03.2022 / 18:00 CET. Existing firewall entries must be adapted or supplemented in advance.
- Prior to a device transfer to an organization, assigned licenses are stored in the project as of one of the next releases. Commissioning licenses then lose their validity when transferred to an organization. Projects are not affected by this.

### Further improvements

- An API endpoint for device data (/accounts/{accountId}/devices) has been optimized for large data sets (> 1500 filter results).
- API to change hotspot timeout for a specific MAC address

**Bug fixes**

- The sorting of IP subnets in the network overview has been corrected.
- The change of the variable type is now applied without reloading the variable page.
- If a variable of the 'Selection field' type is used to assign a global add-in, the associated values can now be selected correctly.
- Variables can only be assigned to a location if at least one network has been assigned.
- Changing the user language now immediately updates the content of a Content Filter rule.
- Error handling when creating exceptions in SD-SECURITY project defaults has been improved.
- The RAM size for ISG routers is now displayed correctly.



## LANCOM Management Cloud 1.00.132.0 / 01.03.2022

### Notification on active WAN backup connections

More transparency of your WAN connectivity: If a router switches to a backup connection, you are directly notified via an alert. In the device table, you can see at a glance whether and which routers are in backup status. This allows you to take early action through targeted troubleshooting and possibly avoid high costs or the consumption of a limited data contingent. Best of all: this feature is now enabled for all LCOS-based routers under Project specifications > Alerts & Notifications.

The screenshot displays the LANCOM Management Cloud interface. On the left is a navigation menu with options like Dashboard, Networks, Sites, Devices, Project specifications, Management, Rollout Assistant, Live Chat, Help, and System Information. The main area shows a 'Devices' table with columns for Status, Name, Model, Serial Number, Site, and IP Address. A notification pop-up is visible, titled 'WAN anomaly detected on 1793VAW', stating 'A WAN backup connection is active, which may arise costs based on the interface'. Below the notification, there are links for 'Show details' and 'Configure settings'. The table below shows two devices: one with status 'Online' and a warning icon, and another with status 'OK (16.03.2022)' and a green 'Up to date' indicator.

Notification and solution methods  
with active WAN backup  
connections

### Further improvements

- To perform a rollout with firewall rules (app filter, AV, etc.) on LANCOM R&S® Unified Firewalls with LCOS FX as of 10.6 Rel, the WAN object on the desktop no longer necessarily has to be named 'WAN'.
- If variables with a user-defined type are used to assign global add-ins, the type definition is now also used at this point. For example, if the variable is defined as a selection box, this selection is available in the assignment dialog.

### Bug fixes

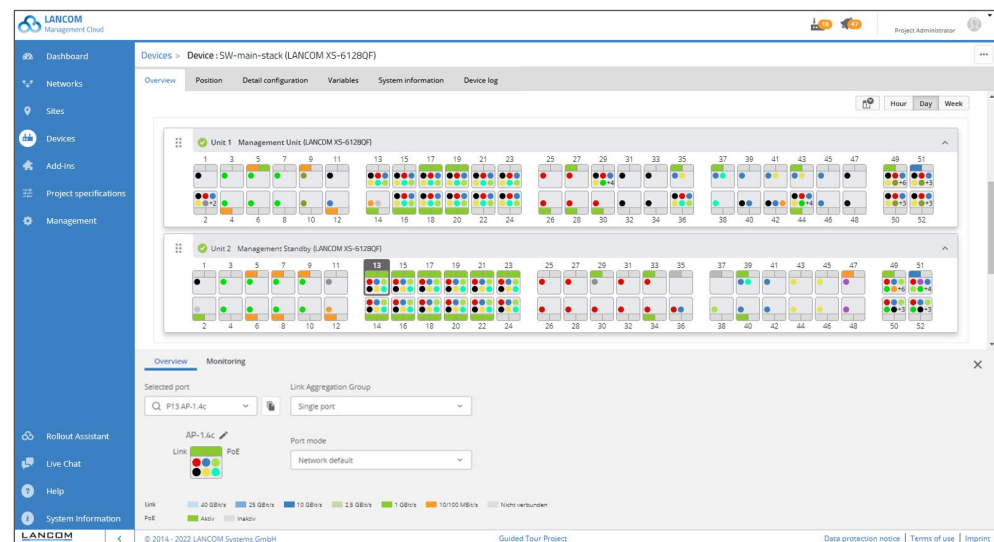
- Corrected the display of the date and timestamp in the history graphs.
- Fixed a display error in the widget selection for dashboards.
- Responsive view (e.g. for mobile devices) has been corrected.
- Fixed a bug in the 'close' function of some dropdown elements (e.g. add-in assignment).
- Fixed broken links in the 'VPN site connections' widget.
- A display error in the menu of floor plans of locations has been fixed.
- Fixed a display error on the 'Application Management' and 'Content Filter' tabs.
- Fixed misleading log messages for users with access to multiple projects.
- A bug with the display of very long open warnings has been fixed.

- A DynDNS WAN connection name (peer) with a first character not equal to A-Z resulted in an error.
- When assigning switch ports in the network configuration, the 'Save' function was not offered in certain situations.
- The add-in page is now displayed correctly when the page is reloaded in the browser.
- A configuration rollout is now performed correctly even if associated central-side devices are not up-to-date.
- The full screen mode of the Add-In editor now hides the side menu bar again.
- If the central site is to be deleted for a network that is assigned to further sites, a corresponding note appears again.
- If an add-in is deleted, it can now be created again under the same name without having to reload the page.
- The filtering in the add-in overview now behaves correctly.
- If VPN is disabled for a network, no DPS data is now collected for the VPN.
- Various display errors in the help texts have been corrected.
- If the still open detail configuration is edited further after a configuration rollout, it is now possible to save it correctly again.

## LANCOM Management Cloud 1.00.131.0 / 08.02.2022

### Cloud-managed switch stacking

Flexible, scalable, highly available: Stacking maximizes reliability and switch capacity in your LAN. Via the management switch (“Management Unit”) and just one device license, the entire preconfigured stack can be conveniently paired with the LANCOM Management Cloud. The cloud independently detects which and how many switches belong to the stack. Further management and monitoring of the switch units can then be done in the device overview of the corresponding switches. For professional network integration and configuration, a [design guide](#) is also available in the help portal.



### Further improvements

- LAG support is now also available for XS and GS-45xx switches.
- In the port templates for switches, 30- and 54-port models are now available at the network level.
- If an LCOS device reports errors when executing addScriptLine commands from add-ins, these are now displayed in the LMC device logs.
- If, when creating a DPS (Dynamic Path Selection) configuration, it is determined that none of the specified WAN connections exist on the device, the LMC aborts the configuration with a warning. This prevents the creation of a non-functional LoadBalancer configuration.
- For new projects, the saving of local configuration changes on the devices in the LMC is activated by default.
- Cloud-managed hotspot: configurable timeout
- Cloud-managed hotspot: Wallpapers and logos can be reset to default settings.

**Bug fixes**

- Fixed various texts in the LMC where HTML control characters were displayed.
- With automatic password assignment by the LMC, the password policy check on GS-3xxx series switches works again.
- If a device is not assigned a role at the site, the VLANs are no longer created.
- Cloud-managed hotspot: A redirection issue has been fixed for devices with iOS operating system.
- A display error in the maps of the device overview has been fixed.

## LANCOM Management Cloud 1.00.130.0 / 18.01.2022

### Custom fields at organisational level

Organization administrators can now manage multiple projects more easily with custom fields: Additional data can be added, edited, sorted, and filtered for each project to keep workflows efficient as the number of projects grows. To do this, add custom fields in the project overview under Project > Configure columns > Add new column. Learn more about the user roles and rights system in the LANCOM Management Cloud in this [infopaper](#).

Project name	Project ID	Device licensing	Land	Stadt	WLAN
Hotel Alice	PS-PB-0010-935-18	CLA	Frankreich	Paris	Ja
Hotel Bob	PS-PB-0010-936-19	CLA	GB	London	Nein
Hotel-ErikaMuehlmann	PS-PB-0010-938-21	CLA	USA	New York	Nein
Hotel-MarkusMuehlmann	PS-PB-0010-937-20	CLA	Deutschland	Berlin	Ja

### Further improvements

- Omitted information from the switch overview has been added again.
- The Wi-Fi 6E view for the map view on the Wi-Fi/LAN dashboard has been added.
- The contents of new DSC parameters are reloaded from the devices as required, provided that the parameters were already present on the devices in earlier versions.
- If changes are made in add-ins that are assigned to specific devices via an assignment variable, only the assigned devices are set to 'not up to date'.
- The robustness of WEBconfig and terminal tunneling via the LMC has been optimized.

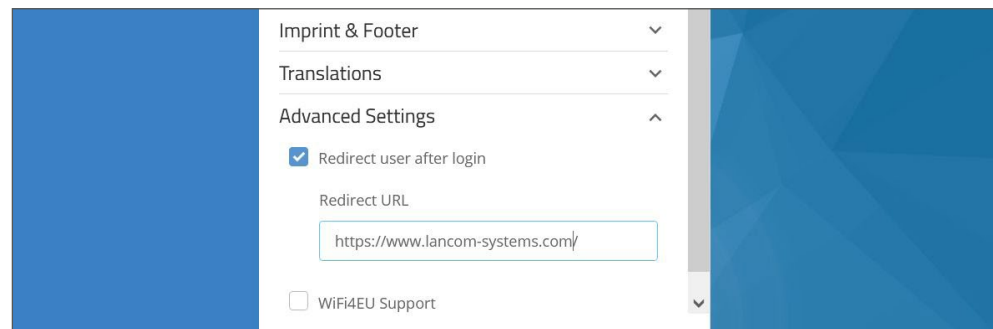
**Bug fixes**

- Fixed the infinite spinner issue when logging in after resetting the password.
- A problem with saving a device image under 'Devices / Position' has been fixed.
- Several bugs in the VPN dashboard have been fixed.
- Log messages for automatic site selection by transmitting the location information have been added.
- The VPN site overview in the WAN/VPN dashboard can again be filtered and sorted by remote site location.
- Pagination in the add-in overview has been corrected in connection with filtering.
- The input set for switch port descriptions in the new switch overview has been corrected (spaces and special characters).
- The display of the new switch overview has been corrected for browser displays with zoom (port link and PoE display).
- The display and filtering of the new switch overview again takes into account the names of connected devices learned via LLDP.
- The 'untagged' network can be set correctly again in the configuration for single ports.
- If a new network is created, the switch ports assignment is displayed correctly again.
- The setting of LMC DHCP options when site assignment is enabled has been corrected.

## LANCOM Management Cloud 1.00.128.0 / 07.12.2021

### Custom redirection of the Cloud-managed hotspot

Customize your Cloud-managed Wi-Fi hotspots: After successfully logging into the Wi-Fi hotspot, an immediate redirection to a website of your choice is now possible. To do this, simply add the desired URL directly when setting up the hotspot network under Networks > Add Network > Hotspot Network > Advanced Settings.



### Further improvements

→ The Switch device overview page has been revised.

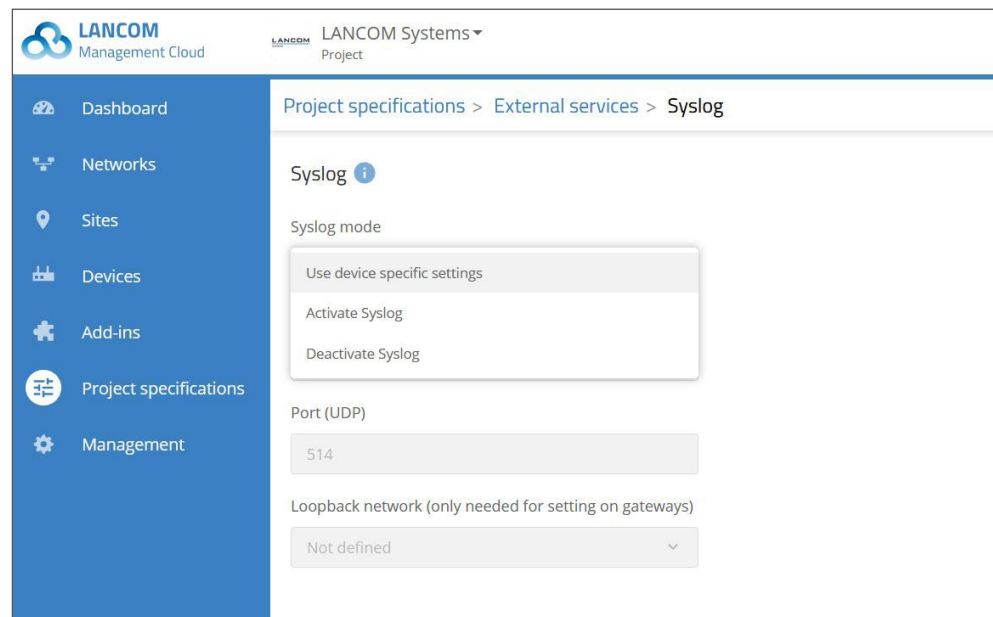
### Bug fixes

- Performance optimization for user name queries
- The link to the device overview page from the floor plan has been corrected.
- When the DPS category of predefined targets changes, the page is updated correctly.
- If a device is not assigned to a network, LLDP is not configured by the LMC.
- Various problems with the filter settings in the device overview have been fixed.

## LANCOM Management Cloud 1.00.127.0 / 16.11.2021

### Link to external syslog servers

More overview in larger projects: You can now define an external syslog server for each project. After a configuration rollout, devices managed in the project report relevant system information to this server for central processing and storage (current exception: LANCOM R&S®Unified Firewalls). You activate the desired syslog server via Project defaults > External services > Syslog.



### Bug fixes

- For sessions tunneled through the LMC to the Webconfig interface of devices, the transport path for HTTP responses has been optimized. Files are now transmitted to the browser in multiple smaller data packets. This solves the timeout problem that can occur with browser requests when accessing a device's webconfig interface if devices are connected to the LMC via a slower or heavily loaded WAN line and the transmission of a complete HTTP response takes an untypically long time.
- In case of repeatedly failed login attempts, the login prompt was displayed instead of the correct error message.
- A problem with linking the WebConfig of R&S®Unified Firewalls from the device table has been fixed.



## LANCOM Management Cloud 1.00.126.0 / 25.10.2021

### Anti-Virus for secure e-mail traffic

Even more cloud-managed Security: Thanks to advanced setting options in the LANCOM Management Cloud, this enables the use of the LANCOM R&S® Unified Firewalls' Anti-Virus engine to scan e-mail traffic for malware. With the Anti-Virus engine enabled, the LANCOM R&S® Unified Firewall automatically analyzes unencrypted e-mail protocols (SMTP, IMAP, POP3). In addition, enabling SSL Inspection ensures maximum security even for encrypted data. Under Networks > Security you will find an overview of the current security settings of your gateways as well as buttons for activating the Anti-Virus engine and SSL Inspection.

The screenshot displays the LANCOM Management Cloud interface. The left sidebar contains navigation options: Dashboard, Networks, Sites, Devices, Add-ins, Project specifications, Management, Rollout Assistant, Live Chat, Help, and System Information. The main content area is titled 'Networks' and has tabs for Overview, WI-FI, Switches, Security (selected), Application Management, Content Filter, Add-ins, and Variables. Below the tabs, a text block explains that the table below provides an overview of current security settings for gateways, with warning icons for problematic settings. The table lists settings for two gateway types: LCOSFX and LCOS. For each gateway, settings for HTTP/HTTPS, Email, and Other traffic are shown, along with Application Management, Content Filter, and Anti-Virus status. Below the table, there are two toggle switches: 'Allow traffic from this network to the Internet (LANCOM R&S® Unified Firewall)' and 'Anti-Virus (LANCOM R&S® Unified Firewall)'. The footer shows the LANCOM logo, copyright information (© 2014 - 2021 LANCOM Systems GmbH), and a 'Guided Tour Projekt' link.

Gateway Type	HTTP/HTTPS	Email	Other traffic
LCOSFX	Application Management, Content Filter, Anti-Virus	Application Management N/A, Content Filter N/A, Anti-Virus	Application Management, Content Filter N/A, Anti-Virus N/A
LCOS	Application Management, Content Filter, Anti-Virus N/A	Application Management N/A, Content Filter N/A, Anti-Virus N/A	Application Management, Content Filter N/A, Anti-Virus N/A

### Further Improvements

→ Static IP Tolerance: In the Project Preferences > Base Configuration area, it is possible to define that a static IP configuration on access points and switches within this project is maintained by the LMC.

**Bug fixes**

- The internal performance of the devicetunnel service for webconfig sessions tunneled through the LMC has been optimized.
- Add-ins can no longer be deleted by project members.
- The switch for disabling Wi-Fi frequencies works correctly again for LCOS LX access points.
- A display problem when removing access points from floor plans has been fixed.
- Missing widgets for WAN throughput are displayed again.
- Fixed sporadic hiding of widgets in the device overview.

## LANCOM Management Cloud 1.00.125.0 / 05.10.2021

### Cloud-managed Firewalls & SD-WAN

Use LANCOM R&S® Unified Firewalls as fully-fledged SD-WAN gateways: The LANCOM Management Cloud takes over the time-consuming, manual firewall configuration as well as the automatic setup of VPN connections between all sites (Auto-VPN). Configurations of the content filter, anti-virus functionality, SSL inspection, and application management are performed centrally and applied automatically to all desired sites. Discover the new possibilities on our "[Cloud-managed Security](#)" topic web page.



### Further Improvements

- The configuration of a device can now be rolled out directly via the configuration status display in the device list.
- Further device-specific functions such as configuration and firmware rollout can be called up directly from the device view.
- In the device overview, the assigned location is displayed as a link.
- The dashboard widget for displaying additional VPN connections can now be filtered.

### Bug fixes

- If a device is removed from a site, it is now also correctly deleted from the floor plan.
- The absolute expiration time for RADIUS user entries can now be set via the detailed configuration.

## LANCOM Management Cloud 1.00.124.0 / 14.09.2021

### Vimium support for barrier-free keyboard control

The LANCOM Management Cloud supports the browser extension Vimium for Google Chrome, which enables keyboard control of web pages. Vimium allows experienced users a significantly faster navigation and control, fits seamlessly into the workflow, especially for power users, and thus offers enormous time savings when operating the LMC. In terms of barrier freedom, operation without a mouse is also made possible. Learn more about setting up and using Vimium in [this Knowledge Base article](#).



### Further Improvements

- Opening the WEBconfig of a device can now also be done via the actions in the device list, if the device supports this feature.
- Opening the WEBconfig and the terminal of a device as well as the device reboot can now also be done directly in the device detail view, provided that the device supports these features. The actions can be found on the right side of the screen via a now displayed '3-dot button'. Accordingly, the previous tab 'WEBconfig remote access' is no longer available in the device detail view.
- The LMC disables all insecure configuration protocols on the managed devices. This feature can now be optionally disabled.
- The error messages in case of a problem with the AFU (Automatic Firmware Updater) now provide more details.
- Long variable names in the add-ins assignment are displayed by 'mouse over'.

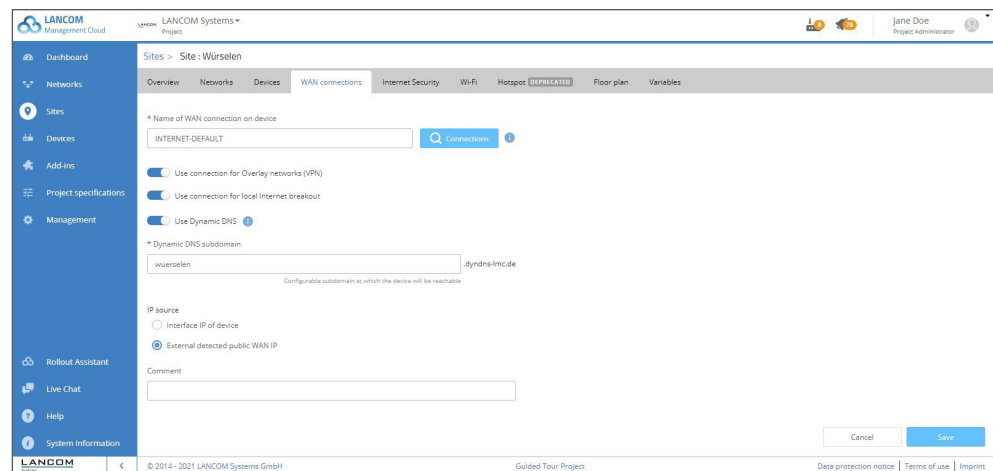
**Bug fixes**

- A problem with device import via CSV has been fixed.
- The sorting of the firmware version in the device list was not correct in individual cases.
- LCOS LX access points are now correctly presented with the Access Point and HotSpot Gateway functions.
- If an LCOS access point is operated as a cloud-managed hotspot, the management network (INTRANET) is now used as the sender for LMC and RADIUS communication.
- Load balancers for DPS are now correctly created by the LMC even if an entry with the same name already exists in the device.
- The warning when assigning networks with the same VLAN tag to a site is now also displayed when all networks are selected.
- After reloading the LMC in the browser by pressing F5, the language is no longer set to German.
- Device names for switches and unified firewalls can be set correctly again.
- LLDP can be configured correctly again at the device level.
- Fixed a bug with the display of the DPS graph.
- Fixed the display of incorrect gateways and networks for site connections in the VPN dashboard.
- Correction of the configuration rollout for cloud-managed hotspots.
- Fixed a white screen when switching between accounts.

## LANCOM Management Cloud 1.00.123.0 / 24.08.2021

### Dynamic DNS Service for upstream provider routers

With the Dynamic DNS function, you simply assign a fixed, self-selected subdomain (mycompany.dyndns-lmc.de) to the gateways used there in the site settings. This practical function can now also be used on connections with an upstream provider router. To do this, select the option "Externally detected public WAN IP" under Sites > WAN Connections > IP Source, and the LANCOM gateway (from LCOS 10.50) uses the usually dynamic WAN IP address of the provider router for the DNS update.



### Further Improvements

- The Notifications and Alerts page contains a variety of configuration options. This section has been redesigned and the configurations for e-mail notifications have been moved to a separate tab. The design of the new tab corresponds to the 'Webhooks' tab in 'Alerts and notifications'.
- The list of projects and organizations in the account overview is now sorted by name.

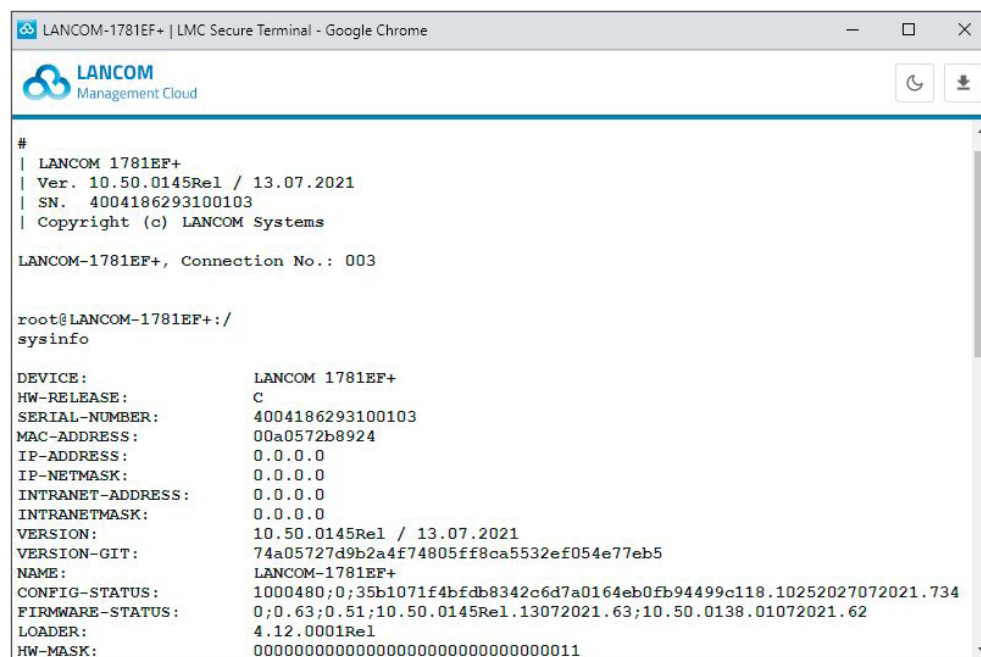
### Bug fixes

- Some areas that were previously not controllable by keyboard via the Vimium plugin have been added.
- In the VPN dashboard, several errors in the display of VPN gateways have been fixed.
- Fixed an error in the display of networks for site connections in the VPN dashboard.

## LANCOM Management Cloud 1.00.122.0 / 03.08.2021

### Secure Terminal Access in a separate browser window

Secure Terminal Access provides direct access to the command line of LANCOM devices (CLI tunneling) — securely encrypted and directly from the LMC interface. A new feature is that the terminal now opens in its own uncoupled browser window. The user can continue working in the LMC window in parallel. In this way, several terminal windows can be used in parallel, individually scaled and moved.



```

#
| LANCOM 1781EF+
| Ver. 10.50.0145Rel / 13.07.2021
| SN. 4004186293100103
| Copyright (c) LANCOM Systems

LANCOM-1781EF+, Connection No.: 003

root@LANCOM-1781EF+:/
sysinfo

DEVICE:                LANCOM 1781EF+
HW-RELEASE:            C
SERIAL-NUMBER:         4004186293100103
MAC-ADDRESS:           00a0572b8924
IP-ADDRESS:            0.0.0.0
IP-NETMASK:            0.0.0.0
INTRANET-ADDRESS:     0.0.0.0
INTRANETMASK:          0.0.0.0
VERSION:                10.50.0145Rel / 13.07.2021
VERSION-GIT:           74a05727d9b2a4f74805ff8ca5532ef054e77eb5
NAME:                  LANCOM-1781EF+
CONFIG-STATUS:         1000480;0;35b1071f4bfdb8342c6d7a0164eb0fb94499c118.10252027072021.734
FIRMWARE-STATUS:      0;0.63;0.51;10.50.0145Rel.13072021.63;10.50.0138.01072021.62
LOADER:                4.12.0001Rel
HW-MASK:               00000000000000000000000000000011

```

### Further Improvements

- The LMC now supports the [browser extension Vimium](#), which also enables keyboard-only and barrier-free control of web pages.
- A firmware update can now be performed model-wide via the device selection.
- The DynDNS status interface now displays an info if a device does not have a license.
- DynDNS can now be configured in the LMC to automatically detect the WAN IP address by an external service; this way the WAN IP address of an upstream third-party gateway can also be detected (requires LCOS 10.50 Rel).
- Support for LCOS LX 5.34
- The signal color for successful admin logins has been adjusted from red to orange.
- Notifications are not sent to unlicensed devices.

**Bug fixes**

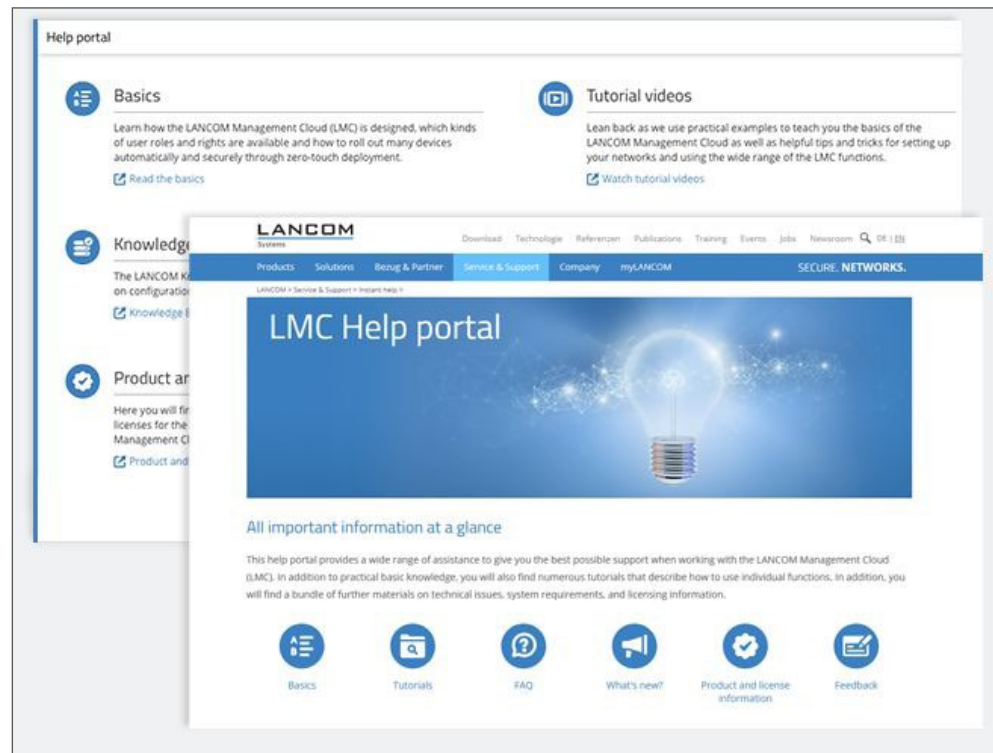
- Fixed a problem with displaying many projects in the map view of the organization dashboard.
- WEBconfig access did not work with a large number of cookies generated by the browser.
- Fixed a problem with DynDNS and multiple WAN ports.
- The Secure Terminal Access content can now be exported as a text file, even after the connection to the device is lost.
- Editing the address in the account properties no longer leads to a gray page.
- The timer for automatic logout is no longer displayed as '15 min'.
- Corrected display of the VPN connection duration if the connection is established for more than one month



## LANCOM Management Cloud 1.00.121.0 / 13.07.2021

### The LMC help portal - clearly arranged and just a one-click away

In the new portal, all helpful information for operating the LMC is easy to find and centrally accessible: information such as basic documentation, tutorial videos, knowledge base articles, FAQ, license information, and the latest features. For this reason, help and system information have been split into two separate areas, creating additional clarity. This makes the LMC even more user-friendly.



### Further Improvements

- The Wi-Fi channel width can now also be specified at project and site level.
- Firmware updates for individual devices can now be done directly via a link in the device table.

### Bug fixes

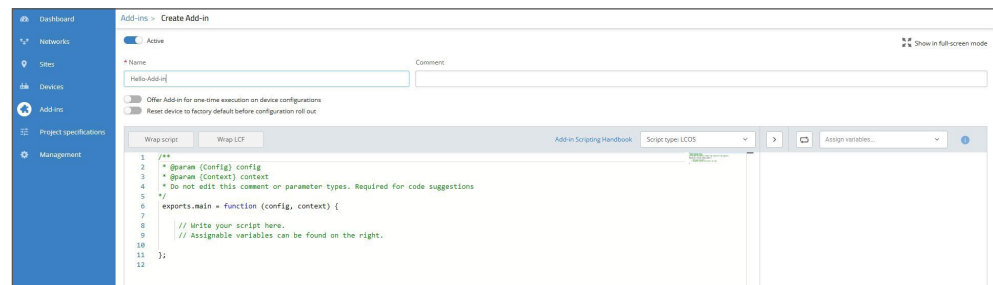
- If supported by access points, the channel widths of 80+80 and 160 MHz can now also be selected in the Wi-Fi device settings.
- A user with the role 'Project member' could previously only open the WEBconfig, but not the device terminal. Now both is possible.

## LANCOM Management Cloud 1.00.120.0 / 22.06.2021

### Convenient development environment for add-ins

Using add-ins in the LANCOM Management Cloud is now much easier: The new add-in editor offers context-based suggestions for code completion with existing functions and OIDs. In addition, you benefit from practical support for code formatting as well as for synchronizing variables used in the script and assigned to the add-in. A full-screen view is now available for a better overview when working with add-ins.

[For more information please see the add-ins manual.](#)



### Further Improvements

- The sender of the LMC emails will be changed from 'noreply@cloud.lancom.de' to 'noreply@mailing.cloud.lancom.de'. The invitation, notification and license summary emails will have a different sender address from now on.
- The firmware update dialog has been revised.
- If there are multiple problems when updating a device with an initial firmware, the customer is now notified manually and can commission the device manually.
- The webhook user data can now be signed with HMAC.

### Bug fixes

- The defaults for variables in add-ins are used correctly again.
- For configurations created with the given default, the correct WLAN country default is now set instead of the country 'unknown'. In addition, the field is now writable.
- A pagination error in the user table has been fixed.
- Performance optimization and reduction of requests when calling floor plans in the dashboard
- Fixed the issue that a device could be partially disconnected from the cloud after being added to and removed from a project.
- A problem with the use of commissioning licenses has been fixed.

## LANCOM Management Cloud 1.00.119.0 / 01.06.2021

### Open Notification Interface

To be able to react early, administrators need to be notified immediately when a network event occurs. Thanks to the Open Notification Interface, collected alerts about various events can now be forwarded to any recipient service, such as Slack, Jira or Splunk, that enables communication with the LMC based on Webhook technology. This allows users to flexibly integrate notifications into their usual work environment and also merge them with alerts from third-party systems.

The screenshot displays the LANCOM Management Cloud interface. The top navigation bar includes the LANCOM logo, the current project name 'LANCOM Systems', and the user 'Jane Doe, Project Administrator'. The left sidebar contains navigation options: Dashboard, Networks, Sites, Devices, Project specifications (selected), and Management. The main content area is titled 'Project specifications > Alerts & Notifications' and features a sub-tab 'Open Notification Interface'. A descriptive text states: 'A webhook triggers an HTTP POST to a URL for the selected alerts. A maximum of 5 webhooks can be added.' Below this is a '+ Add webhook' button. The configuration panel for a new webhook is shown, with an 'Active' toggle switch. It includes a 'Name' field (containing 'Splunk'), a 'URL' field (containing 'https://webhooks.splunk.com/asfg'), and a 'Send test alert' button. A list of alerts is displayed with checkboxes, all of which are checked: Anomaly Detection, Device offline, Device config changed, Device config download failed, Device firmware update failed, Device config rollout failed, Device config sync failed, Automatic firmware update failed, Automatic firmware update successful, and New log downloads available. Below the configuration panel, an existing webhook for 'Slack' is listed with its URL 'https://slack.com' and associated alert types: Anomaly Detection, Device offline, Device config changed, and Device config download failed. The footer contains the LANCOM logo, copyright information '© 2014 - 2021 LANCOM Systems GmbH', and links for 'Guided Tour Project', 'Data protection notice', 'Terms of use', and 'Imprint'.

**Further Improvements**

- New [LMC help portal](#) is available.
- The former "Info area" has been split into "System information" and "Help".
- The color coding of the networks is now also used in the network assignment at the site level.
- The help chat has been revised.
- Automatic license assignment for expiring licenses is enabled by default for new projects.
- The performance of the device list has been optimized.

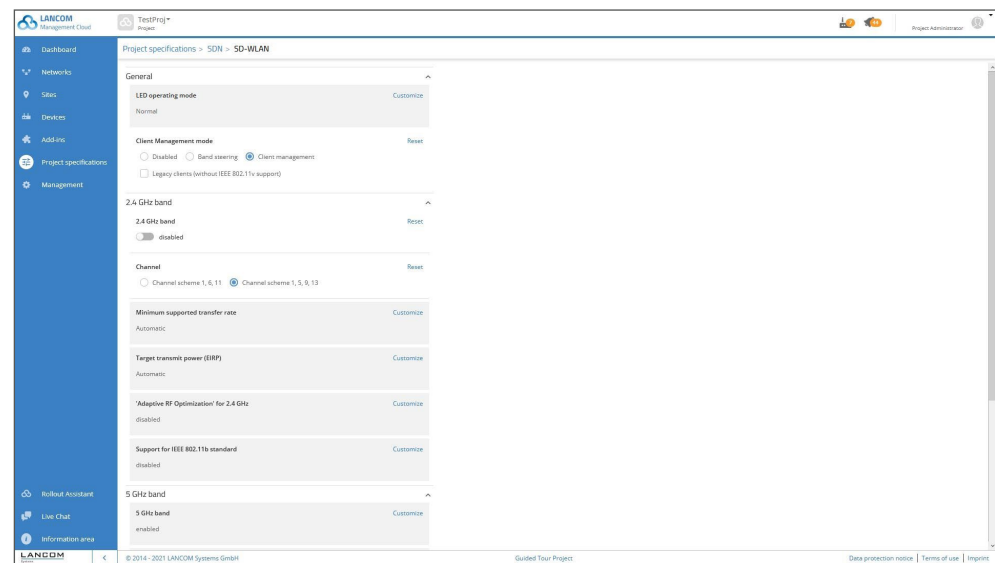
**Bug fixes**

- If the WLAN country setting for a WLAN access point is set to "unknown", it is set to the device default.
- Variables used as conditions for globally assigned add-ins can now be deleted again correctly at the device level.
- A WLAN base data rate set to "automatic" no longer causes a configuration rollout error for individual devices.
- The configuration of VLANs on XS-6128QF switches has been corrected.
- The column header for the channel of WLAN networks has been corrected.
- Error in displaying data in the device overview after manual page reload has been fixed.
- The "WLAN transmit quality" widget now shows the correct values again.
- The widget selection in the dashboard now shows through a scroll bar that there are more items to choose from.
- Fixed a bug in the Dynamic Path Selection widget when there are more than four WAN connections in the statistics.

## LANCOM Management Cloud 1.00.118.0 / 11.05.2021

### Extended Wi-Fi settings

Even more control and time savings in your Wi-Fi projects! With the extended settings options, you can define project-wide, site-specific, and device-specific Wi-Fi configurations such as frequency bands to be used, channel allocation, or channel width with just a few clicks. The settings in the project defaults are conveniently inherited by the site settings, which in turn are inherited by the individual devices. Start right away under Project specifications > SDN > SD-WLAN.



### Further Improvements

- The hotspot function based on a hotspot gateway, which is being phased out, was reactivated in response to numerous customer requests.
- Improvement of the Add-In editor (syntax highlighting, auto completion, general IDE functions) as well as synchronization of Add-In context variables
- The configuration of Dynamic Path Selection (DPS) has been extended by the 'Session Switchover' function and is available with LCOS 10.50.

### Bug fixes

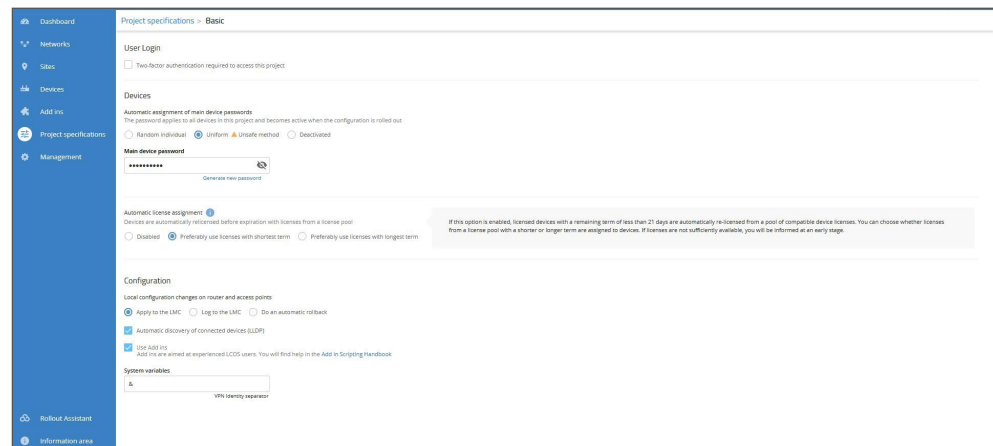
- The configuration converter for IEEE 802.1X has been corrected.
- If a fixed channel is assigned to a Wi-Fi device, other Wi-Fi settings are now correctly inherited from the parent layers.
- The visibility of the user-defined columns was not permanent.
- A display error of the tooltips in the dashboard has been corrected.

- The Unified Firewalls graphs on blocked content now show the difference values per time range instead of the absolute counters.
- The widget selection in the dashboard now shows a scrollbar in all supported browsers.
- Fixed a misrepresentation when there are more than 4 WAN connections in the Dynamic Path Selection graph.
- Improved signal strength formatting for Wi-Fi clients.

## LANCOM Management Cloud 1.00.117.0 / 20.04.2021

### Automatic license assignment

The LANCOM Management Cloud automatically carries out the especially in large projects time-consuming relicensing for you three weeks before the devices' licenses expire. To do this, activate automatic license assignment in the Project settings > Basic > Automatic license assignment area and select whether relicensing should be carried out using licenses with the shortest or longest term. If there are no compatible licenses in the license pool, you will be notified directly and can add additional license keys.



Activation of the automatic license assignment in the Project specifications > Basic area

### Further Improvements

- WEBconfig access from the LMC to an LCOS device is possible in combination from LCOS firmware 10.42 RU3. Access takes place in the device detail view via the 'WEBconfig remote access' tab.
- WEBconfig access to a Unified Firewall can also be found under the 'WEBconfig remote access' tab, and no longer under 'Detailed configuration'.
- The target projects when transferring devices to other projects (or to the parent organization) are now sorted by name.
- Optimization of the category display of device actions in the device table

### Bug fixes

- Fixed a problem with saving the main device password for the 'Uniform' method.
- The counter for out-of-date devices on the Security and Compliance dashboard has been corrected.
- Fixed an issue in the dashboard with linking devices with active alarms.
- Fixed a problem with saving long device descriptions.

## 4. History of incompatible API changes

### LANCOM Management Cloud 1.00.157.0 / 08.08.2023

→ Removed GET /cloud-service-devices/accounts/{accountId}/devices/licenses

**Existing alternative:**

GET /cloud-service-licenses/licenses

GET /cloud-service-licenses/licenses/ids

### LANCOM Management Cloud 1.00.156.0 / 18.07.2023

→ Removed GET /cloud-service-notification/accounts/{accountId}/notifications

**Existing alternative:** GET /cloud-service-notification/accounts/{accountId}/alerts

### LANCOM Management Cloud 1.00.153.0 / 18.05.2023

The following APIs are deprecated and will be phased out in 3 months:

→ Deprecated GET /cloud-service-devices/accounts/{accountId}/devices/licenses

**New:** GET /cloud-service-licenses/licenses/ids

**New:** GET /cloud-service-licenses/licenses

### LANCOM Management Cloud 1.00.142.0 / 27.09.2022

→ Deprecated GET /cloud-service-licenses/accounts/{accountId}/allocations?select=id

**New:** GET /cloud-service-licenses/accounts/{accountId}/allocations/ids

→ Deprecated GET /cloud-service-licenses/licenses?select=id

**New:** GET /cloud-service-licenses/licenses/ids

→ Deprecated GET /cloud-service-licenses/blacklist/records?select=id

**New:** GET /cloud-service-licenses/blacklist/records/ids

→ Deprecated GET /cloud-service-licenses/accounts/{accountId}/records?select=id

**New:** GET /cloud-service-licenses/accounts/{accountId}/records/ids

→ Deprecated POST /cloud-service-licenses/keys?type=decrypted

**New:** POST /cloud-service-licenses/keys/decrypted

→ Deprecated GET /cloud-service-licenses/accounts/{accountId}/pools?select=id

**New:** GET /cloud-service-licenses/accounts/{accountId}/pools/ids



### LANCOM Management Cloud 1.00.140.0 / 16.08.2022

The following APIs are deprecated and will be phased out in 3 months:

- Deprecated: GET /cloud-service-devices/accounts/{accountId}/devices/{deviceId}?type=compatibles  
**New:** /cloud-service-devices/accounts/{accountId}/devices/{deviceId}/compatibles
- Deprecated: GET /cloud-service-devices/accounts/{accountId}/devices?select=id  
**New:** /cloud-service-devices/accounts/{accountId}/devices/ids
- Deprecated POST /cloud-service-devices/accounts/{accountId}/devices?type=shadow  
**New:** /cloud-service-devices/accounts/{accountId}/devices/preconfig
- Deprecated: PUT /cloud-service-devices/accounts/{accountId}/devices/{deviceId}?type=preconfig  
**New:** /cloud-service-devices/accounts/{accountId}/devices/{deviceId}/preconfig
- Deprecated DELETE /cloud-service-devices/devices/serial/{serial}?type=redirected  
**New:** /cloud-service-devices/devices/serial/{serial}/redirected
- Deprecated GET /cloud-service-devices/internal/meta/models?type=blacklisted  
**New:** /cloud-service-devices/internal/meta/models-blacklisted
- Deprecated POST /cloud-service-devices/accounts/{accountId}/devices?type=confirm-current-firmware  
**New:** /cloud-service-devices/accounts/{accountId}/firmware/preferences-confirmed
- Deprecated GET /cloud-service-devices/accounts/{accountId}/sites?select=id  
**New:** /cloud-service-devices/accounts/{accountId}/sites/ids
- Deprecated POST /cloud-service-devices/accounts/{accountId}/firmware/preferences?content=list  
**New:** /cloud-service-devices/accounts/{accountId}/firmware/preferences
- Deprecated GET /cloud-service-devices/accounts/{accountId}/devices?type=table  
**New:** /cloud-service-devices/accounts/{accountId}/devices-table
- Deprecated GET /cloud-service-devices/accounts/{accountId}/devices?select=id&type=table  
**New:** /cloud-service-devices/accounts/{accountId}/devices-table/ids

- Deprecated GET /cloud-service-devices/accounts/{accountId}/  
devices?type=dashboard  
**New:** /cloud-service-devices/accounts/{accountId}/devices-dashboard (only  
for LMC User Interface)
- Deprecated GET /cloud-service-devices/accounts/{accountId}/  
devices?type=all[1-6]  
**New:** /cloud-service-devices/accounts/{accountId}/devices-all[1-6] (only for  
LMC User Interface)
- Deprecated GET /cloud-service-devices/accounts/{accountId}/  
sites?type=table  
**New:** /cloud-service-devices/accounts/{accountId}/sites-table
- Deprecated GET /cloud-service-devices/accounts/{accountId}/sites?type=all1  
**New:** /cloud-service-devices/accounts/{accountId}/sites-all1 (only for LMC  
User Interface)
- Deprecated GET /cloud-service-devices/accounts/{accountId}/  
sites?type=dashboard  
**New:** /cloud-service-devices/accounts/{accountId}/sites-dashboard (only for  
LMC User Interface)
- Deprecated GET /cloud-service-licenses/accounts/{accountId}/  
allocations?select=id  
**New:** /cloud-service-licenses/cloud-service-licenses/accounts/{accountId}/  
allocations/ids
- Deprecated GET /cloud-service-licenses/licenses?select=id  
**New:** /cloud-service-licenses/licenses/ids
- Deprecated POST /cloud-service-licenses/keys?type=decrypted  
**New:** /cloud-service-licenses/keys/decrypted
- Deprecated GET /cloud-service-licenses/accounts/{accountId}/  
pools?select=id  
**New:** /cloud-service-licenses/accounts/{accountId}/pools/ids

### **LANCOM Management Cloud 1.00.136.0 / 24.05.2022**

The following APIs are deprecated and will be phased out in 6 months:

- Deprecated GET /cloud-service-auth/dpa/unaccepted

### **LANCOM Management Cloud 1.00.135.0 / 03.05.2022**

- Filter property subnetGroupId on Endpoint GET /account/{accountId}/sites  
does now accept a list of site ids

**LANCOM Management Cloud 1.00.130.0 / 18.01.2022**

- Deprecation of endpoint GET /cloud-service-devices/accounts/{accountId}/devices?type=table
- Deprecation of endpoint GET /cloud-service-devices/accounts/{accountId}/devices?select=id&type=table

**LANCOM Management Cloud 1.00.128.0 / 07.12.2021**

- Deprecated GET/POST /cloud-service-auth/accounts/{accountId}/custom-fields
- Deprecated GET/POST/DELETE /cloud-service-auth/accounts/{accountId}/custom-fields/{fieldId}
- Deprecated GET /cloud-service-auth/custom-field-targets
- Deprecated GET /cloud-service-auth/custom-field-targets/{targetId}

**LANCOM Management Cloud 1.00.123.0 / 24.08.2021**

The following APIs are deprecated and will be phased out in 6 months (end of February 2022):

- Deprecated GET /accounts/{accountId}/alerts/settings
- Deprecated PUT /accounts/{accountId}/alerts/settings
- Deprecated GET /accounts/{accountId}/notifications/rules/settings
- Deprecated PUT /accounts/{accountId}/notifications/rules/settings
- Deprecated GET /accounts/{accountId}/notifications/settings
- Deprecated POST /accounts/{accountId}/notifications/settings
- Changed GET /accounts/{accountId}/metrics/alerts/device/{deviceId}/value
- Changed GET /accounts/{accountId}/metrics/configurations
- Changed POST /accounts/{accountId}/metrics/configurations

**LANCOM Management Cloud 1.00.118.0 / 11.05.2021**

- Changed GET /cloud-service-monitoring/accounts/{accountId}/processing

**LANCOM Management Cloud 1.00.115.0 / 09.03.2021**

- Deprecated GET /users

**LANCOM Management Cloud 1.00.113.0 / 25.01.2021**

- Changed GET /accounts/{accountId}/firmware/update
- Changed POST /accounts/{accountId}/firmware/update
- Changed PUT /accounts/{accountId}/condition

## 5. General advice

### **Disclaimer**

LANCOM Systems GmbH does not take any guarantee and liability for software not developed, manufactured or distributed by LANCOM Systems GmbH, especially not for shareware and other extraneous software.