

LANCOM Management Cloud

Award-winning network management



A fully functional network is the heart of any business. Building it up and controlling it, however, can be time-consuming and error-prone. In an IT world with increasing complexity and a widespread shortage of skilled workers, what your network needs is a reliable control center.

- A solution that automatically organizes and optimizes network operations.
- A system that implements and monitors security policies and compliance requirements.
- A platform that sustainably reduces complexity and your operating costs and enables central, scalable, and future-proof network management.

Dynamically control all your network operations in the WAN, LAN, Wi-Fi, and security from a single cloud platform – as automated as you like.

Become a network designer and get to know the LANCOM Management Cloud!

[Get a look into the cloud](#)



LANCOM Management Cloud

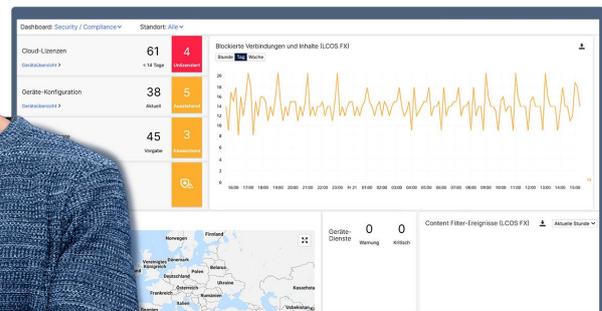
More performance. More security.

The success of your business closely depends on a powerful and secure network infrastructure. By optimally coordinating all the components involved, the LANCOM Management Cloud enormously optimizes the speed and efficiency of your network. Traffic analysis and optimization functions make the best possible use of your network bandwidth.

And you can be sure of maximum security with a minimum of effort: VPNs, VLANs, ports, UTM rules, and passwords are defined centrally and rolled out with a click. Remote workstations are also securely connected in the quickest possible time.

Your performance advantage

- Auto-VPN
- Auto-VLAN
- Cloud-managed secure network access with LANCOM Trusted Access (Trusted Internet Access operating mode: full tunnel operation and activated gateway security functions for secure office-like working)
- Dashboards with 24/7 monitoring and anomaly detection
- SD-WAN with HSVPN, active-active & dynamic path selection
- Monitoring of security & compliance requirements
- Automated security configuration for all sites with content and application filtering for malware and virus protection, including German BPjM filter
- Automatic configuration rollback in case of connection loss
- Geo-redundant hosting only in German data centers according to ISO 27001





LANCOM Management Cloud

Immediate return on investment.

On average, IT administrators spend 40 percent of their working time troubleshooting. Especially in distributed networks with numerous sites, the LMC makes much more efficient use of valuable resources such as manpower, time, and money.

Put entire sites into operation without expensive on-site visits, provide new applications, or use real usage data to optimize even the most complex Wi-Fi infrastructures with a click of the mouse. The LMC helps to keep running costs under control and to set up companies to be lean and sustainable for the future.

The benefits at a glance

- Remote troubleshooting at any time—without expensive on-site visits
- Zero-touch commissioning of entire sites
- Self-learning Wi-Fi automation solution [LANCOM Active Radio Control 2.0](#)
- Quick and easy provision of new networks and services such as cloud-managed hotspots
- Transparent costs thanks to the flexible license model
- Available as a Public oder Private Cloud





LANCOM Management Cloud

Product variants

Public Cloud	A geo-redundant version of the LANCOM Management Cloud hosted by LANCOM in two German data centers
Private Cloud	A variant of the LANCOM Management Cloud operated by LANCOM customers on their own premises. Further information can be found in the private cloud data sheet .

Security

Data hosting service (Public Cloud)	All device and personal data is hosted geo-redundantly in two ISO 27001-certified data centers in Germany and is fully subject to German and European data protection guidelines
IT security "Made in Germany"	LANCOM Systems bears the quality seal "IT security made in Germany" from TeleTrusT for compliance with the following requirements: <ul style="list-style-type: none"> → The company is headquartered in Germany. → The company offers trusted security solutions. → The products contain no hidden access paths. → Research and development in IT security takes place in Germany. → The company is committed to satisfying the requirements of German data protection regulations.
Security auditing	Regular security auditing and pentesting by external test laboratories, CVE tracking
Secure device communication	HTTPS- / TLS-secured communication between all managed devices, certificate-based authentication, secure and unambiguous assignment of equipment and projects (claiming & pairing)

Scope of services - network management

Firmware management	Central distribution of firmware versions to single or multiple devices
SD-WAN	<p>Automatic networking of sites via VPN, including network virtualization over the wide-area route. SD-WAN Application Routing also enables certain applications defined by the administrator to be routed directly to the Internet (local break-out). Network management via IPv4 is supported.</p> <p>SD-WAN functions for LANCOM R&S®Unified Firewalls:</p> <ul style="list-style-type: none"> → Automatic 1-click VPN networking → ARF network virtualization with end-to-end transmission of separate IP networks / VLANs <p>SD-WAN capabilities for LCOS-based routers and gateways:</p> <ul style="list-style-type: none"> → Automatic 1-click VPN networking → ARF network virtualization with end-to-end transmission of separate IP networks / VLANs (also overlapping) → Layer-7 application routing (local break-out) → Dynamic Path Selection (quality-based routing with up to 4 WAN connections, incl. session switching and sub-second failover) → Dynamic Traffic Steering (application-dependent routing)
Cloud-managed LAN	<ul style="list-style-type: none"> → Auto Subnetting → Simple configuration of switch ports with visual network assignment with automatic VLAN port mode and LAG configuration → Reuse of port configurations through port template groups across multiple switches → Convenient management and monitoring for units of a switch stack → Visualization of switch stack status information → Network management via IPv4 is supported
Cloud-managed Wi-Fi	<ul style="list-style-type: none"> → Automatic configuration of all access points and Wi-Fi routers incl. multi-SSID → Active Radio Control 2.0 (Band Steering, Adaptive RF Optimization) → Fast Roaming → VLAN → Authentication and Wi-Fi anomaly detection → Floor plans per site, incl. graphical Wi-Fi channel management, utilization monitoring and transmission power adjustment → Support for the 6 GHz frequency band (Wi-Fi 6E), hierarchical inheritance of settings (project, location, device level) → Network management via IPv4 is supported



LANCOM Management Cloud

Cloud-managed Security	<p>Centralized and highly automated configuration of network-wide compliance policies, network security, and optimal bandwidth utilization across all network components such as Unified Firewalls and LCOS-based routers and gateways.</p> <p>Applications or Content Filter categories can be blocked or allowed direct access. Unified Firewalls also protect against viruses and malware, and thanks to SSL Inspection, scanning, filtering, and application detection can also be used for encrypted data packets, and security policies can be successfully implemented.</p> <p>Security tab with security profiles for networks (LANCOM Trusted Access (public cloud), connection targets, application management, content filtering)</p> <p>Cloud-managed Security functions for LANCOM R&S®Unified Firewalls:</p> <ul style="list-style-type: none"> → Anti-Virus for web- and e-mail data traffic → SSL Inspection for web- and e-mail data traffic → Application Management with Ipoque R&S®PACE2 engine → Content Filter for web data traffic with extension for blocking websites harmful to minors (BPjM filter) → High Availability (HA) <p>Cloud-managed Security functions for LCOS-based routers and gateways:</p> <ul style="list-style-type: none"> → Application Management → Content Filter with BPjM filter for web data traffic
Two-factor authentication	<p>Network management protection by two-factor authentication on LMC login, as well as when managing single projects. Besides the access data, the login can be secured by adding a time-based one-time 160 bit key password according to RFC-6238.</p>
Wi-Fi hotspot	<p>Convenient setup of a simple hotspot (cloud-managed hotspot) incl. on-demand VLAN for secure network separation and roaming support for LANCOM access points. Landing page, welcome text, terms and conditions, and login password, custom URL forwarding, and temporary hotspot vouchers as PDF or CSV exports in the hotspot portal.</p>
Scope of services – monitoring	
Anomalies information	<p>In the LMC, the data from the managed WLAN devices is evaluated using various metrics and compared with previously defined threshold values. As soon as this threshold value is repeatedly exceeded in a certain interval, the affected device is marked accordingly in the LMC and the administrator receives an alert.</p>
Site, user and project tables	<p>Filtering or sorting according to criteria such as device type, serial number, firmware version, and configuration status, etc., individual comment fields available</p>
E-mail notifications	<p>Automatic information by e-mail, if the system does not work faultlessly. The convenient notification center allows an overview of important network events at any time and sends an e-mail if a notification has been closed. This covers: device suddenly offline; device configuration has been changed, could not be loaded or deployed; firmware update failed, automatic firmware update failed or successful; automatic licensing was not successful; WAN backup connection is active.</p> <p>Related events can be displayed consolidated — without the risk of spam.</p>
Webhooks	<p>Centralized monitoring and alerting system to route event notifications (anomaly detection, configuration rollout, etc.) from devices bound to the LMC to umbrella monitoring systems (e.g. Splunk, Spectrum) or messaging systems (e.g. Slack, Telegram)</p>
Individual device monitoring	<p>Detailed display of device-specific information such as:</p> <ul style="list-style-type: none"> → Wi-Fi channel → Wi-Fi quality → Total throughput → Cloud latency → CPU load → Switch usage → Blocked threats (LANCOM R&S®Unified Firewalls only)
Organization dashboard	<p>Convenient overview of all projects, location-aware placement of projects on a map, traffic-light indicators of device status</p>
Projekt-Dashboard Security & Compliance	<p>Clear overview if all network devices are configured according to corporate security policies.</p>
Projekt-Dashboard WAN / VPN	<p>Overview of all VPN connections including status (active/inactive)</p>
Projekt-Dashboard WLAN / LAN	<p>Aggregate monitoring information about sites, floor plans, devices, error states, clients, and applications (layer 7) for a project.</p> <p>Clear proportional display of the online- / offline status for all devices in the site overview map.</p> <p>A complete list of LANCOM devices supporting Layer-7 application detection is available in the LANCOM Systems Knowledge Base.</p>



LANCOM Management Cloud

Scope of services – logging

Logging system	Detailed logging of configuration changes and error conditions on project and device level (PCI DSSI compliant audit log, incl. storage of all administrative changes for the duration of 1 year and monthly export)
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Scope of services – device management

Auto configuration	<ul style="list-style-type: none"> → Automatic configuration assignment for new devices added to a site → Assigning device functions or network assignments for individual devices
Automatic license allocation	Automatic allocation of LMC licenses from the license pool to devices three weeks before the previous license expires, as well as notification if there is no longer a compatible license available. The terms of multiple licenses assigned to a device are added up and automatically combined into one license.
Auto Updater	<p>In the project defaults a version guideline can be specified for the LCOS and LCOS LX Auto Updater which controls the display of the available firmware versions for a device update. Possible values:</p> <ul style="list-style-type: none"> → Latest version for all releases → Latest version for all releases without release version → Latest version within a release → Only security updates within a release <p>LCOS / LCOS LX devices with activated Auto Updater are tagged with an Auto Updater icon in the firmware column of the device table.</p>
Bulk import	In big scenarios, creating sites, allocating networks or adding new devices can make work. Alternatively, big scenarios can be prepared using a spreadsheet tool, and the information can then be imported as a .csv file to the LANCOM Management Cloud.
Device exchange	Transfer of firmware and configuration to a new device of the same model by entering its serial number
Device integration	Available for all current LANCOM products from LCOS 10.x, LCOS LX 4.00, LCOS SX 3.30, and LCOS FX 4.1 (all available as a free S/W update)
Easy port config	The LANCOM Management Cloud allows simple configuration rollout for all switches of a location. Since network configurations are usually not created from identical trunk and port configurations, it is now possible to set the desired networks and properties for each port individually via single device monitoring of the switch. A graphical interface offers the highest level of transparency and ease of use!
Flexible device handling	Devices are easily moved between organizations and projects
Individual device configuration	Full, detailed configuration of all parameters for individual devices
Initial commissioning firmwares	Updating the firmware to a previously defined version in the course of initial commissioning
LMC Config Sync	Local configuration adjustments on individual devices are automatically adopted, detected and logged, or immediately reset by the LMC.
Offline acknowledgements	Distinguish between offline devices and devices that are scheduled to be offline
Password management	Central change of all device passwords
Pre-configuration	Creation of a detailed configuration of new devices even before they are connected to the LMC
REST-API	An extensive programming interface (API defined by 'Swagger') is available for system integration and process automation.
Rollout Assistant	Easy commissioning via photo scan of serial number and cloud PIN using cell phone camera, automatic project and site assignment and commissioning.
Secure Terminal Access	For all LANCOM products with operating system LCOS 10.32, LCOS SX 4.00 RU1 / 5.00 REL
Secure Webconfig Access	For all LANCOM products with operating system LCOS 10.42 RU3, LCOS SX 4.00 RU4 / 5.00 REL, and LCOS FX 10.4 RU2



LANCOM Management Cloud

Scripting

Self-expandability of the system by freely definable LCOS scripts, which can be activated on device-, location-, and network level and thus provide automated full access to all device parameters. These scripts themselves can access self-defined and system variables and can contain input screens for user-defined values.

Scripting is available on request for system administrators; the resulting GUI elements are available on user level.

IDE is available with code completion in the cloud and in the [add-in manual](#).

Assignment of scripts per network or project-wide, execution conditions through user-defined variables

Overview of currently supported add-in methods:

Operating system	CLI-based add-ins Support of all parameters on the CLI, preview as a script separate from the detailed configuration	OID-based add-ins Support of all parameters of the detail configuration / DSC, preview via direct integration into the detail configuration
LCOS	x	x
LCOS LX	-	x
LCOS SX 3.x	x	x
LCOS SX 4.x	x	x
LCOS SX 5.x	x	x
LCOS FX	x (on REST-API basis)	-

Zero-touch deployment

When being integrated into a network, access points and switches are automatically detected by the LANCOM Management Cloud and, after entering a device PIN, included into the administration. Routers and gateways generally need to be set up with Internet access in advance, e.g. with the LANCOM setup wizards or have to be connected per Ethernet WAN- or LAN port to a DHCP network with Internet access (operation behind a network termination router or with already existing Internet access).

Scope of services – project management

Organization

Project administration area for specialist resellers, system vendors, and system integrators; any number of projects per organization

Key features:

- Live project status as a map view
- Device pool, from which you can move devices into projects
- Freely definable organisation and project properties, i.e. customer number, contact person, etc.

Projects

Area for creating and managing multiple, independent projects

Roles and rights

Support of different roles for users in organizations and projects:

- Organization administrator (all rights within the organization)
- Organization viewer (read-only access to organizational information)
- Project administrator (all rights within a project)
- Technical administrator (rights to make site, network and device settings. No rights to manage or invite new users, cannot change project properties).
- Project member (rights to conduct network, site and device management and monitoring within a project)
- Rollout wizard (rights to add devices to the project and read device information using the LMC rollout app)
- Hotspot operator (rights to create vouchers in the hotspot portal)
- Project observer (read-only rights within a project)

Using administrator inheritance, roles and rights can be centrally controlled or revoked by the organization administrator. Administrators can temporarily enable or disable users. Any number of users can be added to each project. Users can be active in multiple projects.



LANCOM Management Cloud

License category C

LANCOM Management Cloud license for the management & monitoring of a category C device. Specification of the LMC project ID and project information needed, incl. support & updates

Device assignment: www.lancom-systems.com/products/network-management/management-cloud/lmc-licenses

Available with validity periods as follows:

→ 1 year	LANCOM LMC-C-1Y	item no. 50106
→ 3 years	LANCOM LMC-C-3Y	item no. 50107
→ 5 years	LANCOM LMC-C-5Y	item no. 50108
→ monthly	LANCOM LMC-C-1M License (SPLA)	item no. 50114

License category D

LANCOM Management Cloud license for the management & monitoring of a category D device. Specification of the LMC project ID and project information needed, incl. support & updates

Device assignment: www.lancom-systems.com/products/network-management/management-cloud/lmc-licenses

Available with validity periods as follows:

→ 1 year	LANCOM LMC-D-1Y	item no. 50109
→ 3 years	LANCOM LMC-D-3Y	item no. 50110
→ 5 years	LANCOM LMC-D-5Y	item no. 50111
→ monthly	LANCOM LMC-D-1M License (SPLA)	item no. 50115

Item

LANCOM LMC Private Appliance

Appliance for operating a Private LMC, supports up to 1,000 network devices, for use in 19" rack, price for hardware plus costs for installation, preconfiguration, commissioning, and support, without licenses for connected devices. Only available on request directly from LANCOM

Item no. 50210

LANCOM LMC Private Appliance Support

LANCOM LMC Private Appliance support fee. Includes at least 2 updates of the LMC per year. Service will be done remote via LANCOM. Incl. LANCOM Premium Support (10/5). Separate Private Cloud contract necessary. Only available on request directly from LANCOM

Available with validity periods as follows:

→ 1 year	LANCOM LMC Private Appliance Support (1 Year)	Item no. 50212
→ 3 years	LANCOM LMC Private Appliance Support (3 Years)	Item no. 50213
→ 5 years	LANCOM LMC Private Appliance Support (5 Years)	Item no. 50214

LANCOM LMC Private Support Package

LANCOM LMC Private support fee. Includes at least 2 updates of the LMC per year. Service will be done remote via LANCOM. Incl. LANCOM Premium Support (10/5). Separate Private Cloud contract necessary. Only available on request directly from LANCOM

Available with validity periods as follows:

→ 1 year	LANCOM LMC Private Support Package (1 Year)	Item no. 50206
→ 3 years	LANCOM LMC Private Support Package (3 Years)	Item no. 50215
→ 5 years	LANCOM LMC Private Support Package (5 Years)	Item no. 50216

LANCOM LMC Private Cloud License

License to operate the LMC as a private cloud on customer provided server cluster applicable separate requirements. Separate Private Cloud contract necessary.

Only available on request directly from LANCOM

Item no. 50201

LANCOM LMC Private Base Fee

Basic fee for the operation of a private LANCOM Management Cloud without maintenance costs. Maintenance is billed separately. Invoicing due in advance.

Only available on request directly from LANCOM

Available with billing periods as follows:

→ 1 year	LANCOM LMC Private Base Fee (1 Year)	Item no. 50215
→ 1 month	LANCOM LMC Private Base Fee (1 Month)	Item no. 50216



LANCOM Management Cloud

LANCOM LMC Private Secondary Testing Instance (1 Year)	Provision and support of a second private LMC instance for test purposes. Includes installation, proactive maintenance and the installation of software updates. Attention: Only available in combination with an existing Private LMC instance. Only available on request directly from LANCOM	Item no. 50217
LANCOM LMC Private On-Site Installation Service	On-site installation and setup for one LMC Private Cloud through LMC Professional Services team, travel expenses within Germany included (per day) Only available on request directly via LANCOM	Item no. 50202
LANCOM LMC Private On-Site Installation Service - Travel EU / CH / UK	Travel expenses for "LMC On-Site Installation Service" within EU/CH/UK (per day) Only available on request directly via LANCOM	Item no. 50203
LANCOM LMC Private On-Site Installation Service - Travel ROW	Travel expenses for "LMC On-Site Installation Service" outside EU/CH/UK (per day) Only available on request directly via LANCOM	Item no. 50204
LANCOM LMC Private Remote Installation Service	Remote installation and setup for one LMC Private Cloud through LMC Professional Services team (per day) Only available on request directly via LANCOM	Item no. 50205