

# LANCOM Release Notes

## LCOS 10.30 RC1

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## 1. Preface

LCOS („LANCOM Operating System“) is the established LANCOM operating system for LANCOM routers, wireless LAN access points and WLAN controllers. In the context of the hardware given by the products the at a time latest LCOS version is available for all LANCOM products and is available free of charge for download from LANCOM Systems.

This document describes the innovations within LCOS software release 10.30 RC1, as well as the improvements since the previous version.

**Before upgrading the firmware, please pay close attention to chapter 6 “General advice” of this document.**

**Latest support notes and known issues** regarding the current LCOS version can be found in the support area of our website

<https://www.lancom-systems.com/service-support/instant-help/common-support-tips/>

## 2. Device-specific compatibility to LCOS 10.30

LANCOM products regularly receive major firmware releases throughout their lifetime which provide new features and bugfixes.

LCOS release updates including bugfixes and general improvements are available on a regular basis for devices which do not support the latest LCOS version. You can find an overview of the latest supported LCOS version for your device under

<https://www.lancom-systems.com/products/lcos/lifecycle-management/product-tables/>

As from LCOS 10.30, support for the following devices is discontinued

- > LANCOM 831A
- > LANCOM IAP-322
- > LANCOM L-451agn
- > LANCOM L-452agn
- > LANCOM L-460agn
- > LANCOM OAP-3G

### 3. Advices regarding LCOS 10.30

#### 3.1 Information on default settings

Devices delivered with LCOS 10.00 or higher automatically connect to the LANCOM Management Cloud (LMC). This functionality provides zero-touch installation for new devices. In case you do not want to use the LMC, this feature can be disabled while running the default setup wizard for the initial configuration, or at any time from within LAN-config under Management > LMC. You can manually re-enable the usage of the LMC whenever you want.

#### 3.2 Information on the LANCOM vRouter

The LANCOM vRouter for Microsoft Hyper-V will be available with a future LCOS release update.

## 4. Feature overview LCOS 10.30

### 4.1 Feature highlights

#### **SD-WAN – Application Routing**

Enjoy significant performance gains when you operate modern business applications in the cloud (e.g. Office 365, Salesforce, etc). SD-WAN Application Routing detects cloud-based applications and routes them directly to the Internet (local break-out). This relieves the VPN path to the headquarters as well as the headquarters' Internet line.

#### **SD-WAN – Layer-7 Application Control in the firewall**

Keep control of which applications can operate on your network. Defining application-related rules in the firewall allows you to decide which Internet applications are allowed, blocked, limited or prioritized.

#### **WLC functions in the vRouter (vWLC)**

You decide which role your LANCOM vRouter should play: VPN gateway or WLAN controller. The LANCOM vRouter now supports the role of a virtual WLC (vWLC). This fully virtualizes the functions of a WLAN controller on virtualization platforms such as VMWare ESXi or Microsoft Hyper-V. The number of managed access points depends on the vRouter license category.

## 4.2 Further features

### TLS 1.3

Support of the new TLS 1.3 protocol increases the security of device access via WEBconfig.

### Elliptic Curve Digital Signature Algorithm (ECDSA)

IKEv2 now supports the Elliptic Curve Digital Signature Algorithm (ECDSA) authentication method. Shorter keys combined with high-efficiency encryption provide the same security.

### IKEv2 split DNS

Split DNS allows DNS to resolve specific internal domains to a VPN tunnel, with other DNS requests using a public DNS server.

### IKEv2 fragmentation

Fragmentation of IKEv2 messages (per RFC 7383) is handled by the VPN router itself, eliminating the need for the transport network to fragment IKE packets.

### Centralized management of Wireless ePaper infrastructures

By supporting an additional protocol (TCP in addition to UDP), you can now manage your LANCOM Wireless ePaper Displays remotely via the Wireless ePaper Server at the data center and control them via VPN.

### Enhanced client reservations in the DHCPv6 server

In the DHCPv6 server, client addresses or prefixes can now be assigned either by means of DUID, MAC address, interface ID (as per RFC 3315) or remote ID (as per RFC 4649).

### Double the number of Public Spot users

For the LANCOM 178x and 179x series with the Public Spot Option, the number of users is increased from 64 to 128.

You can find further features within the individual builds sections in chapter 5 "History LCOS 10.30".

## 5. History LCOS 10.30

### LCOS improvements 10.30.0028 RC1

#### New features

##### General

- › Adaption of the number of simultaneous Public Spot users on routers of the 178x- and 179x series to 128.
- › The SMTP client's internally used SSL/TLS version can now be configured.
- › Jitter display within the ICMP-SLA monitor
- › „clear“ command for deleting the current console display
- › Support for TLS 1.3 in WEBconfig
- › Support for the ThinAP 2.0 protocol for linking Wireless ePaper access points to a central Wireless ePaper Server
- › Support for IPv6 in TACACS+
- › Support for RSA-PSS signing in the SCEP-CA

##### Routing

- › Application routing and -control in the IPv4- and IPv6 firewall
- › Evaluation of DSCP tags in the IPv6 firewall
- › IKEv2 IPv6 CFG mode addresses can be assigned to clients based on the prefix allocated by the provider.
- › Support for address allocation in the DHCPv6 server

##### VPN

- › Support for IKEv2 cookie notification
- › Support for IKEv2 Split DNS
- › Support for IKEv2 fragmentation
- › ECDSA support for IKEv2 authentication

## Wi-Fi

- The e-mail notification for Wi-Fi events can now be enabled/disabled via button.
- The 802.11n Wi-Fi module rate adaption now considers the configured transmission power limitation when selecting rates.
- As an alternative to transmission power limitation the target EIRP (transmission power) is now configurable for Wi-Fi.
- Support for 802.11k in Wi-Fi client mode
- Support for 802.11v in Wi-Fi client mode
- Support for the SAE authentication method in Wi-Fi client mode

## 6. 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.

### Backing up the current configuration

**Before upgrading your LANCOM devices to a new LCOS version it is essential to backup the configuration data!**

Due to extensive features it is **not possible to downgrade** to a previous firmware without using the backup configuration.

If you want to upgrade devices which are only accessible via router connections or Wi-Fi bridges, please keep in mind to upgrade the remote device first and the local device afterwards. Please see the [LCOS reference manual](#) for instructions on how to upgrade the firmware.

**We strongly recommend updating productive systems in client environment only after internal tests.**

Despite intense internal and external quality assurance procedures possibly not all risks can be eliminated by LANCOM Systems.

### Using converter firmwares to free up memory

Due to numerous new functions within the LCOS firmware it may not be possible in some circumstances for older devices to keep two fully-featured firmware versions at the same time in the device. To gain more free memory, a smaller firmware with less functionality has to be uploaded to the device first. As a result, significantly more memory will be available for a second firmware.

This installation has to be done only once by using a "converter firmware".

After having installed the converter firmware, the firmsafe function of the LANCOM device is only available on a limited scale. The update to a new firmware is furthermore possible without any problems.

However, after a failed update the LANCOM device works with the converter firmware which only allows local device access. Any advanced functionality, particularly the remote administration, is not available as long as the converter firmware is active.