Release Notes

LCOS LX
6.14 RU1

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1. Preface

The LANCOM family of operating systems—LCOS, LCOS SX, LCOS LX, and LCOS FX—forms the trusted basis for the entire LANCOM range of products. Within the scope of the hardware specified by the products, the latest firmware version is available for all LANCOM products and is offered by LANCOM Systems for download free of charge.

This document describes the innovations within LCOS LX software release 6.14 RU1, as well as the improvements since the previous version.

Before upgrading the firmware, please pay close attention to chapter 7 "General notes" of this document.

Latest support notes and known issues regarding the current LCOS LX version can be found in the support area of our website www.lancom-systems.com/service-support/instant-help/common-support-tips.

2. The release tag in the software name

Release Candidate (RC)
A Release Candidate has been extensively tested by LANCOM and includes new LCOS featurses. It is suitable for testing and is not recommended for use in productive environments.

Release Version (REL)
The release version has been extensively and successfully tested in practice. It contains new features and improvements over previous LANCOM operating system versions and is therefore recommended for use in productive environments.

Release Update (RU)
A release update is a further development of an initial release version in productive environments and contains minor improvements, security fixes, bug fixes and smaller features.

Security Update (SU)
Contains important security fixes for the respective LANCOM operating system version and ensures that your security level remains very high on an ongoing basis in your productive environment.

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3. Device-specific compatibility to LCOS LX

LANCOM products regularly receive major firmware releases throughout their lifetime which provide new features and bugfixes. LCOS LX release updates including bugfixes and general improvements are available on a regular basis for devices which do not support the latest LCOS LX version. You can find an overview of the latest supported LCOS LX version for your device under www.lancom-systems.com/lifecycle.

4. Notes on LCOS LX

Information on default settings
Devices delivered with LCOS LX 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 LANconfig under Management > LMC. You can manually re-enable the usage of the LMC whenever you want.

5. Known restrictions

→ Local configuration changes are not transferred to the LMC.
→ The scripting of the device from the LMC is currently not supported, but the use of add-ins is.

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6. History LCOS LX

LCOS LX improvements 6.14.0070 RU1

Bugfixes / improvements

→ In a scenario with dynamic VLAN, the PCP and DEI bits of the VLAN header were incorrectly interpreted as part of the VLAN ID when sending a frame in the direction of the wireless LAN. If these bits were not equal to 0, this resulted in an invalid VLAN ID, which meant that the dynamic VLAN had no function in this case.

→ Due to an error in the dynamic VLAN, communication within tagged VLANs via a WDS connection was not possible. The untagged VLAN on WDS connections was not affected.

→ As of LCOS LX 6.12, uploading several wireless clients at the same time could result in a heavily increased channel load in the 2.4 and 5 GHz bands. This resulted in lower data throughput and high packet losses.

→ In a scenario with multiple access points, if access point A received a packet from a wireless client that was connected to access point B, access point A registered the connection source of the wireless client as Ethernet and stored the MAC address in its forwarding database. Incoming packets from the Ethernet with the wireless client's MAC address as the destination were then discarded. If the wireless client then switched from access point B to access point A (roaming), the entry in the database with the connection source Ethernet remained in place. As a result, the wireless client was unable to communicate via Ethernet until the entry in the forwarding database expired (180 seconds).

→ In large scenarios, the use of Dynamic VLAN via 802.1X or LEPS could lead to sudden restarts of the access points.

→ A security vulnerability in the SSH protocol has been fixed ('Terrapin' vulnerability / CVE-2023-48795).

LCOS LX improvements 6.14.0035 Rel

New features
→ Support for 802.11k RRM Neighborhood Reports
→ When using external WLAN antennas, antenna interfaces can now be switched on and off individually.
→ The LANCOM LX-6500 access point supports the following operating modes with 802.3at PoE power supply: 2.4 GHz: 2 streams; 5 GHz: 4 streams; 6 GHz: 4 streams; ETH1: 2.5 Gbps; ETH2: 100 Mbps; USB: off
→ Support of a LANCOM-specific UUID for grouping multi-radio APs in Site Survey Tools

Bugfixes / improvements
→ It was not possible to obtain the sub-CA from a WLAN controller if a 'Distinguished Name' with more than 64 characters was used in the CA. As a result, the access point could not be managed by the WLAN controller.
The maximum size of the 'Distinguished Name' has now been adjusted from 64 to 251 characters.
→ Wireless clients in different dynamically assigned VLANs (e.g. via LEPS) were able to communicate with each other if they were logged into the same access point.
→ During an ARC 2.0 scan, only the first configured SSID of a frequency band was ever transmitted to the LMC. As a result, the ARC analysis in the LMC was incomplete.
→ A large number of messages were output in the syslog of an access point when a 'Discover' was sent. The output has now been limited to three messages per Discover process.
→ If the command line command 'readscript' was used, an immediate restart of the access point could occur.
→ After resetting an access point to factory settings, the command history was not deleted.
→ WPA3-SAE with the hash-to-element method is now used in the 6 GHz band.
→ Advertisements from BLE beacons configured with a high advertisement interval are now detected more reliably.

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7. General notes

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 LX 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.

Please see the LCOS LX 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.