Information regarding

LCOS Software Release 9.18 RU3

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1. Preface

LCOS („LANCOM Operating System") is the operating system for all 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 dowload from LANCOM Systems.

This document describes the innovations within LCOS software release 9.18 RU3, as well as the improvements since release 9.18.

Warning hint – Backing up the current configuration

Before upgrading your device to a new LCOS version it is essential to backup the configuration of your router. Due to extensive features it is not possible to downgrade to a previous firmware without using the backup configuration.
Please see the reference manual for instructions on how to backup the router configuration.

If you want to upgrade devices which are only accessible via router connections or WLAN bridges, please keep in mind to upgrade the remote device first and the local device afterwards.

Advice

LANCOM 178x 4G: To avoid delayed connection establishments within mobile radio (eg in case of backup) it is recommended to use the latest firmware version 3.5.24 for the LTE mobile modem (Sierra MC-7710). Please refer also to the following Knowledgebase article: Link

Upgrading central site components

We strongly recommend updating productive systems only after internal tests in client environment. Despite intense internal and external quality assurance procedures possibly not all risks can be eliminated by LANCOM Systems.

Using converter firmwares

To use any firmware from version 8.8 in your LANCOM 1722 1723, 1724 and in the L-320agn, L-321agn and L-322agn (less than hardware release E), enough space must be available in the memory of your device.
Due to the implementation of several new features within the current build of the firmware, it is no longer possible to store two main firmware versions side by side. To gain more free space for the current version, it is now necessary to upload a converter firmware into your device. The converter-firmware has a much smaller size, so that it is now possible to store the main release of the firmware besides the converter-firmware.
This setup is only necessary once for a single device and is done with the so-called converter-firmware (see readme.pdf of the affected devices).
After having flashed the converter-firmware the firmsave function of the LANCOM device is available only on a limited scale. The update to a newer firmware is furthermore possible. However, in case of an update failure the LANCOM will only work with a minimal-firmware which allows just local access to the device. Any extended functionality, in particular remote administration, is not possible when running the minimal-firmware.

Dynamic VPN registration

By reason of patent you have to register the functionality „Dynamic VPN" with IP address transmission over ISDN. This operating mode is usually required when you configure a VPN tunnel with dynamic IP addresses on both sides without dynamic DNS services.
Any other Dynamic VPN operation mode (e.g. transmitting the IP address via ICMP, provoking a callback etc.) does not require registration.
The registration process is fully anonymous - no personal or company data will be transmitted.

The registration of the Dynamic VPN option requires administrator rights on the LANCOM device.

Device specific support of the current LCOS version

As from LCOS 8.84 support for the following devices is discontinued:
- Telekom R800+
- LANCOM 821+
- LANCOM 1611+
- LANCOM 1711
- LANCOM 1821n

As from LCOS 9.00 support for the following devices is discontinued:
- Telekom R1011
- LANCOM 1823 VoIP
- LANCOM L-54 Wireless
- LANCOM 1751 UMTS
- LANCOM 8011
- LANCOM 7111
- LANCOM C-54ag

As from LCOS 9.04 support for the following devices is discontinued:
- LANCOM 1711+ VPN
- LANCOM 1721+ VPN
- LANCOM 1722 VoIP
- LANCOM 1723 VoIP
- LANCOM 1724 VoIP
- LANCOM 1811n Wireless
- LANCOM 1821+ Wireless ADSL
- LANCOM 3850 UMTS
- LANCOM 800+
- LANCOM DSL/I-10+
- LANCOM L-315agn dual Wireless
- LANCOM OAC-54-1 Wireless
- LANCOM OAP-310agn Wireless
- LANCOM OAP-54 Wireless
- LANCOM WLC-4006
- LANCOM WLC-4025
- LANCOM XAC-40-1
- Swyx 1722 VoIP
- Swyx 1723 VoIP
- Swyx 1724 VoIP

Note: Even if devices do not support the latest LCOS version, they will still be maintained with LCOS Release Updates including bugfixes and general improvements on a regular basis.

2.   Known Issues

Latest support notes and known issues regarding the current LCOS version can be found in the download area of our website http://www.lancom.de/en/service-support/instant-help/common-support-tips/

3. New Features, Improvements and History

LCOS improvements 9.18.0023 RU1 ► 9.18.0026 RU3

Bugfixes / Improvements:

Network Connectivity:

- The RADIUS attribute 25 (Class) is evaluated as provided in combination with the XML interface

WLAN:

- The configuration of the LANCOM L-322agn can be written again
- Fixed an issue where an access point was no longer reachable via WLAN for several minutes
- Fixed a problem with the power save mode
- Fixed an error with the TX window synchronization in combination with aggregation

LCOS improvements 9.18.0016 Rel ▶ 9.18.0023 RU1

New Features:

Network Connectivity:

- Using the „%r" variable, the LAN MAC address of the relay agent can be stored within the Circuit- oder Remote-ID
- „Obey DifffServ Field" is enabled by default for routing
- WAN connection prio tags are taken over to the VLAN header
- Support for ChaCha20 and Poly1305 with SSH
- Support for the Rollout Agent (DHCP Option 43)
- The powersave mode of the ethernet interfaces is enabled by default
- NTP client and server support IPv6
- User defined attributes can be configured within the RADIUS client
- Option for changing EAP-TLS settings, if the LANCOM device works as 802.1x supplicant
- The syslog shows the reason for a denied RADIUS server authentication request
- Support for a Challenge Handshake mechanism for WEBconfig authentication
- A backup can be triggered if a memorized route is no longer available
- Using syslog, DNS requests can be forwarded to an external syslog server
- LCOScap supports IPv6
- A Syslog server can be enregistered as DNS name or IPv6 address
- The amount of detected devices is shown with ll2mdetect
- Automatic generation of device depending SSH- and SSL keys

WLAN:

- Configurable size of the PMK cache
- IAPP is disabled automatically with an active CAPWAP tunnel
- Support for Adaptive RF Optimization
- Support for Airtime Fairness
- Surplus blank characters while typing usernames and passwords are removed automatically
- Using the URL variable „%r", the MAC address of the Access Point to which a client is authenticated can be transmitted in a Public Spot redirect.
- Support for Wireless Intrusion Detection System (WIDS)
- Improved WLAN rate adaption
- Configurable option for when to start WLAN RADIUS accounting
- Added a counter for displaying failed WPA authentication attempts
- Specified data rates can be configured per SSID
- The Public Spot function „Accept Terms and Conditions" is utilizable when using PMS
- The displayed columns can be configured within the Public Spot/Manage User wizard
- The assigned bandwidth profile for a Public Spot user can be shown on the voucher
- The absolute elapse time of a Public Spot voucher can be configured in minutes and seconds
- Added a configurable account lock to prevent Brute Force attacks in Public Spot
- Added an option to forward HTTPS connections from unauthenticated clients to the Public Spot gateway
- Added an option to preview the uploaded Public Spot templates via WEBconfig

Bugfixes / Improvements:

WLAN:

- Only two configurable antennas instead of three for the LANCOM LN-830
- WEBconfig2 had to be removed from the LANCOM L-32x due to insufficient free memory

LCOS improvements 9.10.0405 RU2 ► 9.18.0016 Rel

New Features:

WLAN:

■   Support for LANCOM L-822acn dual, LN-830acn dual, OAP-821, OAP-822 and OAP-830
■   Revised and extended LBS-API

Comments

If you want to upgrade the firmware of your device to a new version, please install the latest LCMS version first. **Before running the firmware-upload you should save the router configuration to a file**. After that you can use LANconfig to load the latest LCOS-version into the device.

In principle, we suggest upgrading the firmware of your device only if you are in need of the latest features.

Please note that different firmware files might be available for your device. Further information can be found in the file README.PDF in the download area of our homepage.