Information regarding

LCOS Software Release 4.12

for LANCOM Routers and Wireless LAN Access-Points

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Table of contents

1. Introduction

LCOS („LANCOM Operating System“) is the operating system for all Wireless LAN Access Points and Routers. 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 4.12 as well as the modifications since release 4.10.

Note

Devices with firmware equal and newer LCOS 4.0 do have activated WEP128 encryption when reset to factory settings.
The standard key is: L<device’s MAC-Address> (e.g. L00A0570FC91E).
Further information can be found in the installation guide and in the LCOS 4.0 reference manual.

2. New features, modifications and history

LCOS modifications from 4.10.0019 -> 4.12.0031

Corrections/modifications:

WLAN:

- Noise recalibration cycle is now configurable
- The upper 5 Ghz band is now available for Belgium
- Point to Point connections will now be included in the WLAN-Link-LED flashing
- An AES/TKIP key which is used on a Point to Point connection will be discarded immediately, if no beacons are received from the remote site. Thus the slave starting a renegotiation as soon as it receives beacons from the remote site.
- Corrections in the DFS algorithm, so that radar pulses will be recognized more accurate
- Improvements in Point to Point connection monitoring
- Reassociating a WLAN client does no longer affect EAP negotiation.
- Country settings "Switzerland" now using the same bands like "Germany".
  Different from Germany, in Switzerland a TPC of only 3db is required.

VPN:

- Optimization of the VPN Statistics settings now avoids memory exceptions
- The VPN birdcall now establishes the internet connection in the backup case, as base for the VPN tunnel.
- An ISDN LAN-LAN connection may be used as VPN backup again
- corrected VPN connection establishment while using N:N mapping.

Miscellaneous:

- A backup connection now works even if the ADSL router did not have an ADSL-sync since boot
- Entries with blanks may now be edited in WEBconfig.
- Enhancement of the MIB implementation for all logical interfaces
- The internet wizard in WEBconfig works for devices with DSL/DSLoL interface again
- An administrator with read-only rights will no be able to change his password
- The switch now tells the router on which port a packet was received. The bridge uses this information when sending packets.
- It is possible to dial in to an unconfigured device via admin account, even if there is a try to transmit a password in the PPP negotiation, although there is no password set for the unconfigured admin account.
- If there is a DHCP server in the local network, the LANCOM device will not respond to the IP address x.x.x.254, but will have assigned an IP-address from the DHCP server. Only now it can be found by the LANtools. If the internal LANCOM DHCP server is activated, the device may only be accessed via the DHCP server assigned IP address.
- The blinking code of the Power/Message LED was changed. A fast red/(green) blinking shows an unsecure configuration (i.e. no password set). A slow blinking refers to the charge limit.
- An ISDN backup connection, which was configured with keepalive, will now be established, even if there is more than one ISDN remote site (for backup, too) using keepalive.
- A PAP/NAK failure now initiates the backup connection, if the main- and backup-connection use different access data.
- If there is no measurable time difference between two NTP requests, the time is no longer invalid for the Least Cost Router. Thus it may now make the correct routing decision.
- correction of the accounting time display
- The FTP control channel may now be released separately when using inverse masquerading

LCOS modifications from 4.02.0003 -> 4.10.0019 (Project Release)

New Features:

- Extended Ping command; it is now possible to freely specify the sender IP and resolve DNS names.
- The ping command is extended by symbolic sender addresses. Thus ping packets may be sent with different sender addresses (you will find further information by typing „ping ?“)
- The polling table is extended by three IP addresses. All four addresses are polled simultaneously. If any of them answers, the polling is successful.
- The router description comment is extended by four lines.
- It is now possible to load configuration data or firmware from a TFTP server via telnet command.
- ISDN backup connections may now be configured with keepalive
- The LANCOM may be set to answer ARP requests, although the asking station is not part of its own network.
- It is now possible to connect an analog modem or GPRS mobile phone to the serial communications device
- N:N mapping now available for non-VPN devices
- CPU- and memory load may now be polled via SNMP

Corrections/modifications:

WLAN:

- SSIDs shorter than 6 characters may now be configured correctly.
- In a Probe Response, the Access Point now transmits the complete basic information, even if the client did not ask for that. Therefore the new NOKIA communicator is now able to establish WLAN connections.
- Point to Point connections may be encrypted with TKIP again
- Improvements regarding 802.1x
- ARP corrections for using the DSLoL interface on the WLAN

VPN:

- If the VPN gateway is quoted as DNS name, the DNS name will be resolved even if the previous name request was answered by the external DNS server with a validity period of one second.
- A dial-in attempt of an advanced VPN client with a serial number already used by another client will now be signalled for the client making the additional attempt.
- Rekeying with a registered Advanced VPN client no longer results in a loss of the VPN tunnel due to the redundant serial number recognition.
- While rekeying, VPN tunnels will no longer be disconnected due to Initial Contact notifications, if there was no delete notification before.

Miscellaneous:

- If a route includes the whole local network, there will be no proxy-arp for that. Therefore the block-route for the own local network is now superfluous.
- Fragmented packets and VPN packets will be considered correctly again for the accounting.
- Corrections in backup behaviour
- Corrections in TFTP which will inhibit a device lockup (e.g. in LANconfig)

3. Remarks

If you want to upgrade the firmware of your device to a new version, please install the latest LANtools 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.