Overview LANCOM Software Version 6.24

October 2006

www.lancom-systems.com

LC.OS 6.24
[LANCOM OPERATING SYSTEM]

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Introduction

LC.OS *6.24*
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The LANCOM operating system LCOS and the corresponding management tools regularly provide free new functions to all LANCOM routers, access points and gateways.

LCOS version 6.24 is focussed on security for wireless LAN networks.

In the following pages we would like to introduce you to the new possibilities for visualizing your wireless LAN to help you to maintain full control over the security and availability of your WLAN installations.

You will also find a short description of the new VoIP, VPN and management functions provided to you by LCOS 6.24.

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Highlights LCOS 6.24

LC.OS *6.24*
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WLAN
- Background scanning of all WLAN channels
- To detect external access points and clients

VoIP
- New voice codec support
- Integration of remote SIP clients

VPN
- Automatic learning from remote networks – proadaptive VPN
- Automatic VPN keep-alive

LANconfig / LANmonitor / WEBconfig
- WLANmonitor with rogue AP detection / rogue client detection
- Script file export from LANconfig
- New Internet Access Wizard in WEBconfig

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WLAN: What is rogue AP detection?

WLAN devices that make unauthorized attempts at accessing a wireless LAN by posing as an access point (AP) or client are called rogues.

The following dangers can arise through rogue APs or clients:

- Disturbance of your own WLAN network
    - By transmissions on the same channel
    - Own clients logging in to external access points
- Break-in attempts / security loopholes
    - External (or poorly configured) access points positioned in your own network

LCOS 6.24 features the following functions for detecting all WLAN stations within range:
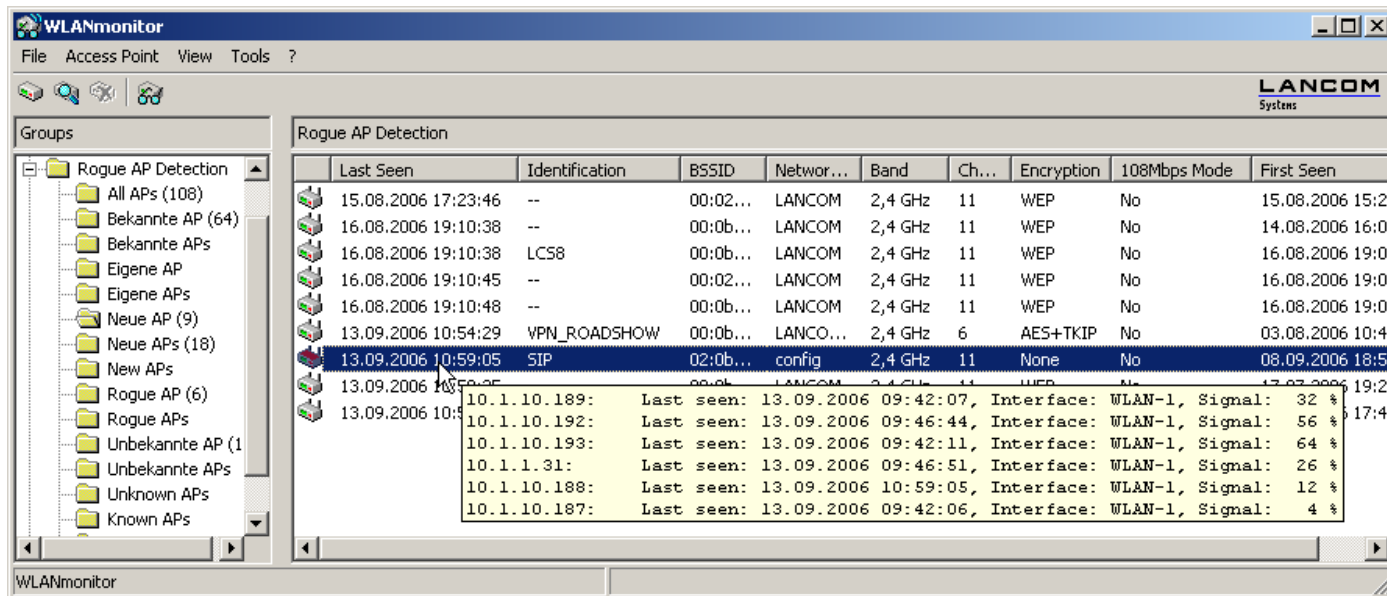
- Background scanning
    - Brief switching (just a few ms) to other channels without interrupting the existing wireless connection
    - Across the entire frequency band as set (2.4 or 5 GHz)

- Client detection
    - Detection of WLAN clients based on their probe requests

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WLAN: Detection of external access points

Information about all WLAN access points found within range can be displayed as follows:

- Channel used, network name (SSID), and the encryption method in use
- Signal strength of a rogue at the access points which detected it

WLAN: Client detection

Information about all WLAN clients found within range can be displayed as follows:

- MAC address, name and signal strength of a rogue client at the access points which detected it
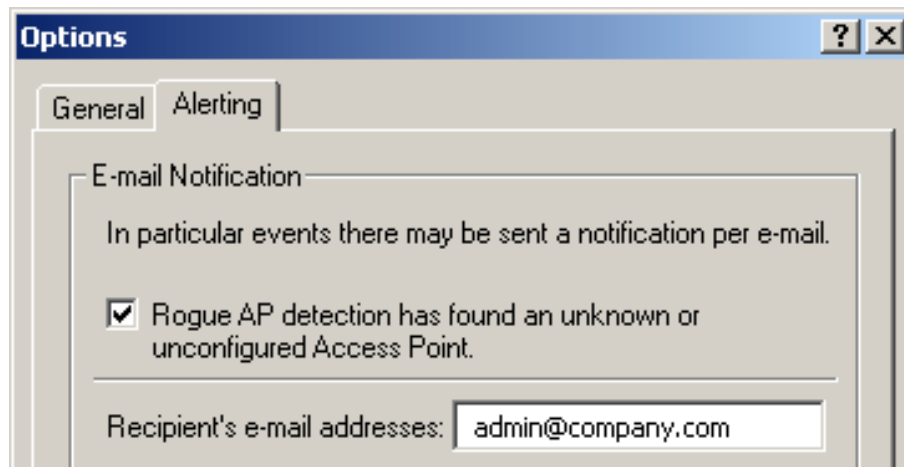
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WLAN: Rogue AP detection - management

- All discovered access points can be categorized into groups by moving them into folders with drag & drop (e.g. own APs, unknown APs, etc.)
- If new rogue access points are detected, WLANmonitor can provide e-mail notification, if desired.

Options

General | Alerting

E-mail Notification

In particular events there may be sent a notification per e-mail.

☑ Rogue AP detection has found an unknown or unconfigured Access Point.

Recipient's e-mail addresses: admin@company.com

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VoIP: Integration of remote SIP clients

SIP clients can now be integrated into the VoIP Call Manager over WAN connections

- For example, mobile users with a notebook and SIP client
- The same VoIP Call Manager functions are available to them as enjoyed by local terminal equipment (depending on the model: SIP, ISDN or analog)

SIP client registration, e.g. via VPN

SIP

LAN

Internet

LANCOM VoIP router

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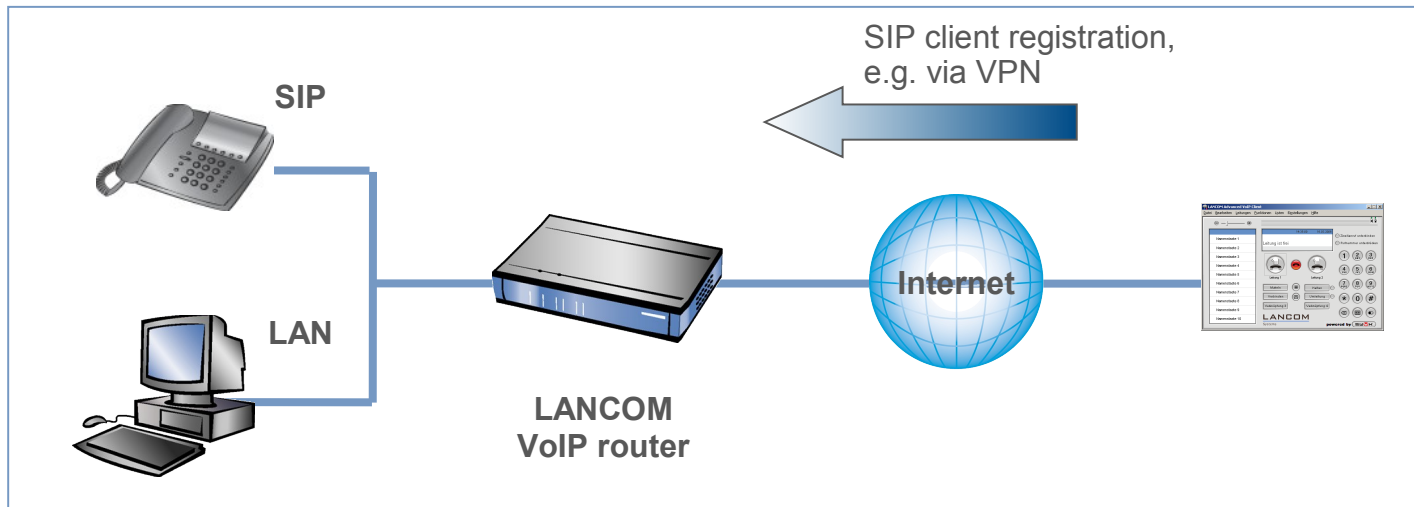
VoIP: New voice codecs

The codec G.729a is especially designed for transmissions over low-bandwidth connections.

Properties of this codec are as follows:

- High compression (8 kbps net data rate, 32 kbps gross IP data rate) with clearly audible speech
- Widespread in VoIP terminal equipment

As opposed to non-compressed voice signals (64 kbps net, 80 kbps at IP level), an ADSL connection with 128 kbps upstream can support 4 parallel voice calls instead of just one.

If, however, the highest possible quality of voice transfer is important, then the codec G.722 can be used.

- Voice quality superior to ISDN due to 16 kHz sampling rate

These new voice codecs are available for "VoIP-ready" devices with the "VoIP Advanced Option" and are activated as standard in all "VoIP-integrated" products.

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VPN: What is "proadaptive VPN"?

In cases where large network infrastructures are coupled via VPN, it is advantageous for the costs and effort in configuring a new subnetwork to be limited to the local VPN router and that the central dial-in router configuration remains unchanged.

If simplified dial-in with certificates is activated in the LANCOM router at the headquarters, then a remote router can communicate its own network to the VPN router at headquarters during the IKE negotiation in phase 2. No individual configuration is necessary.

The result: Simple roll-out of VPN installations!

- All VPN tunnels use a common configuration template
- Automatic learning of the remote network based on IPSec phase 2 information
- Access rights based purely on certificates
  - Temporary access for service providers & maintenance
  - Blockage with short-term certificates or CRLs
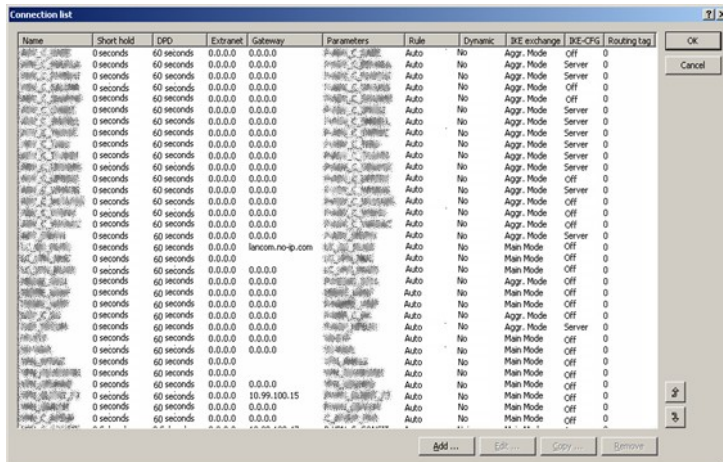
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VPN: Proadaptive VPN - overview

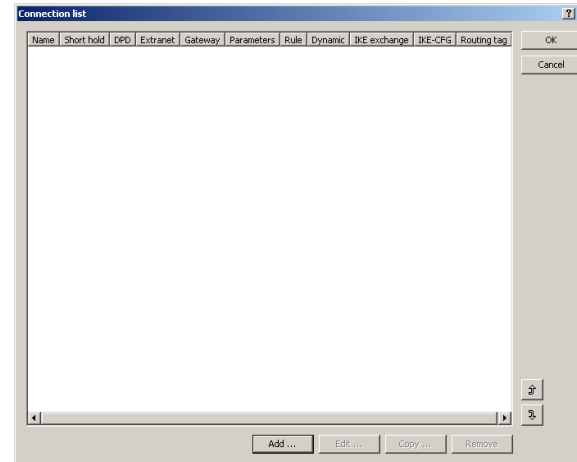No more inconvenient configuration of remote sites!

- The VPN gateway learns all of the required information during connection establishment
- Propagation of routes from VPN remote sites, e.g. per RIPv2
- Access can be revoked conveniently via the CRL

VPN connection list until now:

As of LCOS 6.24:

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Management: Scripts

- Configuration scripts can be saved from LANconfig and uploaded again
  - Unlike with configuration files, the script format has the advantage that entire or partial configurations can be exchanged between different device types and versions
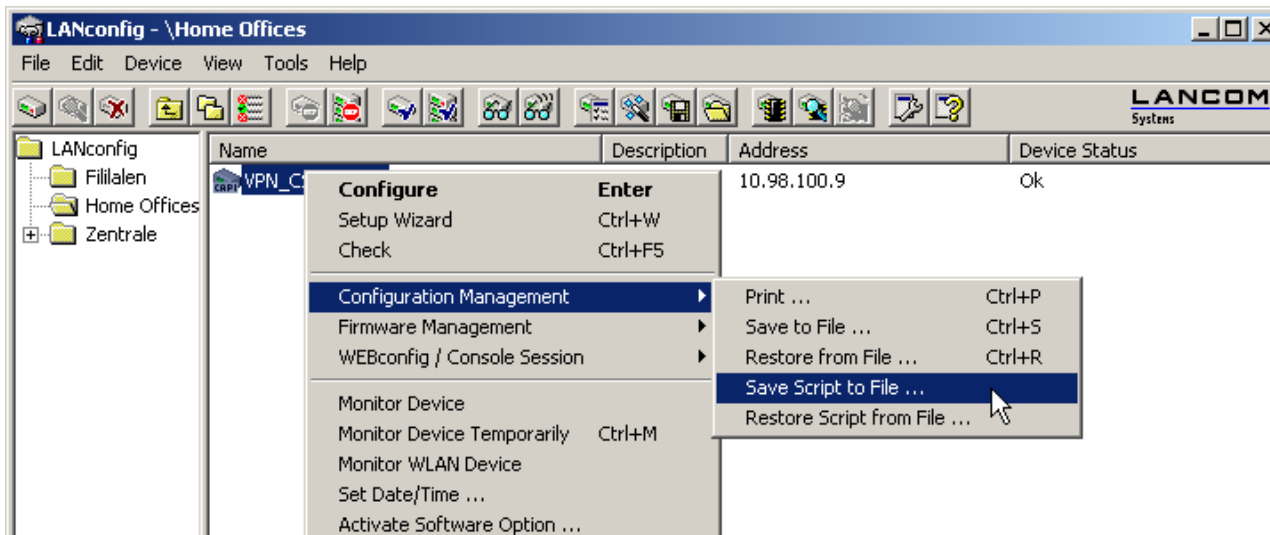
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- WEBconfig has a re-worked design and now has an even more convenient Internet Access Wizard to offer.

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. . . connecting your business

VPN_NHAMEL (root)

(LANCOM 1722 VoIP (Annex B) 6.21.0024 / 08.08.2006)

Set up Internet access

Please enter your account data here.
These data should have been given to you by T-Online when your account was set up.

'Anschlusskennung'	
T-Online number	
'Mitbenutzerkennung'	0001
Personal password (Repeat)	
Personal password	

[Next >] [Reset]

[Terminate this Wizard]

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Further new functions and improvements

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VoIP

- Tone-dialing (DTMF) by means of SIP INFO or RFC 2833
- Transfer of advice of charge (AOC) between the internal and external ISDN buses

WLAN

- 802.1x supplicant: Authentication of an access point in WLAN client mode at another access point via 802.1x (EAP-TLS, EAP-TTLS and PEAP)

VPN

- Extended Cisco interoperability in certificate-based IPSec installations by supporting an optional "CERTREQ" request
- Simplified setup of "always on" VPN connections (no need of separate ICMP connection monitoring)

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LC OS *6.24*
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Management

- Explicit language selection in LANconfig and LANmonitor
- Certificate-based SSH authentication (alternative to PSK)
- Device-specific setting of the communication protocol (TFTP, HTTP, HTTPS) in LANconfig
- Automatic daylight-saving time change of the time-server module
- "Snapshot" function to read out accounting data (transmission volumes) at certain billing intervals, including sorting according to station
- New Internet Access Wizard in WEBconfig
- New design for the WEBconfig graphical user interface

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LCOS reference manual

Further information

More than 40 new pages of detailed information about all new functions in LCOS 6.24 are available in the addendum to the LCOS reference manual

- Available for free from http://www.lancom-systems.com/

The detailed revision history is in the release notes for LCOS 6.24

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Service and Support

We wish you every success with your new LANCOM product!

We look forward to your **praise and criticism, suggestions or questions** to info@lancom.de.

The latest information about Service and Support can be found on our Support flyer, our Internet site or from our **Knowledge Base** under www.lancom-systems.de/eu/support.

If the manual and our current support themes in the Internet are of no help to you, then our **Support Hotline** is available to you in Germany on work days from 9:00 – 17:00h under 0900-1-LANCOM (= 0900-1-526266) (1.24 € / Min. from German landlines).

Your LANCOM Systems Team

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