



■ connecting your business

LCOS 8.82

Feature Notes

LCOS 8.82

[LANCOM OPERATING SYSTEM]

LANCOM
Systems

LCOS 8.82

Introduction



The LANCOM operating system LCOS and the corresponding management tools (LCMS) **regularly provide free new functions** for current LANCOM routers, access points, and gateways.

LCOS 8.82 focuses on the topic “Hotspot” and offers **Hotspot 2.0 support** (802.11u), **automatic re-login**, **WISPr**, and other innovations in the LANCOM Public Spot. You can also look forward to many new features such as **Bandwidth Management, DNS per ARF**, and many more.

Read on for more of the most important features and improvements summarized in brief.

LCOS 8.82

The new highlight features



Hotspot 2.0 – The next-generation hotspot

WLAN as simple as cellular networking

Ready for the future with the new hotspot standard. The new WLAN standard IEEE 802.11u (Hotspot 2.0) allows for a seamless finding and selection of the right WLAN. Authentication methods using SIM card information, certificates or username and password, enable an automatic, encrypted login to WLAN hotspots of roaming partners – without the need to manually enter login credentials!



Public Spot bandwidth management

Individually configurable distribution of bandwidth

The available bandwidth for Public Spot user groups can be individually configured: An ideal functionality for preferring "premium users" and for limiting the bandwidth of standard accounts!

LCOS 8.82

The new highlight features



Public Spot re-login

Automatic re-login for known clients

The Public Spot identifies known WLAN clients for an automatic authentication. After an initial authentication, the hotspot stores the relevant client information (MAC address) for a configurable period so that there is no need for an additional manual entering of login credentials – a significantly increased comfort for regular guests!



LANCOM Public Spot PMS Accounting Plus Option

An easy combination of the hotspot solution and your own accounting system

This extension of the LANCOM Public Spot Option enables the registration and accounting of guest accesses via Property Management Systems (PMS) with a FIAS interface, for example Micros Fidelio. The identification of the hotspot user as well as the billing of Internet usage costs (for paid accesses) can be assigned easily for example to the room number and the last name of the guest.

LCOS 8.82

Highlight feature: Hotspot 2.0

Hotspot 2.0 / 802.11u - Fundamental changes of WLAN

As simple as cellular networking!

- Automatic search and selection of adequate networks based on IEEE 802.11u
- Automatic registration of the client to the WLAN instead of data transfer over 3G/4G (offloading)
- Automatic roaming to the next access point without disconnection
- Ideal for hotspot operators, service provider, and roaming consortia (for example educational institutes)

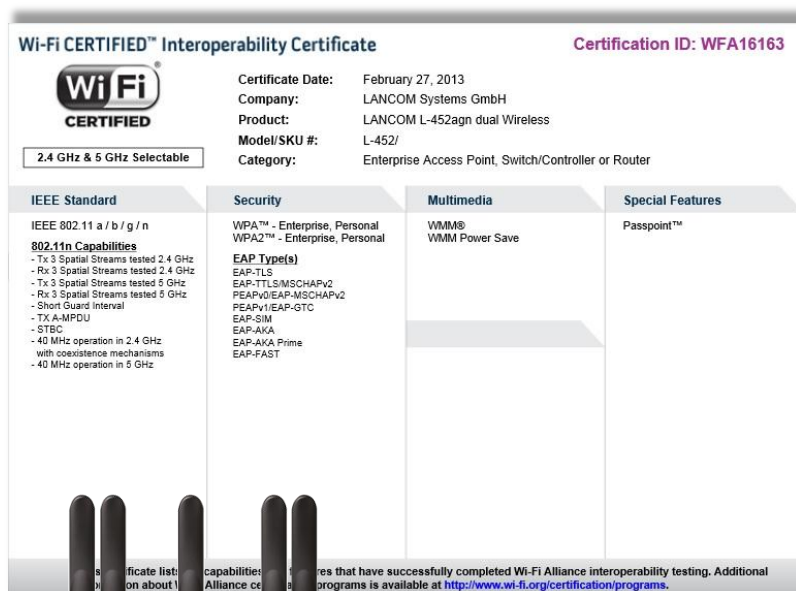
There are already clients in the field that support the new WLAN standard. Software updates for many existing clients are expected to be available later this year.



LCOS 8.82

Highlight feature: Hotspot 2.0

Wi-Fi Alliance Passpoint™ certification*



LANCOM L-451agn
Wireless



LANCOM L-452agn
dual Wireless



LANCOM L-460agn
dual Wireless



LANCOM 1780EW-4G

*Hotspot 2.0 support included in all current devices with WLAN (except LANCOM L-54g Wireless)

LCOS 8.82

Highlight feature: Hotspot 2.0

LANCOM Systems makes hotspots even more comfortable...

- No additional effort of logging in to the web portal
- Automatic selection of the correct SSID
- No unencrypted data is transmitted over the WLAN

...because Hotspot 2.0 provides:

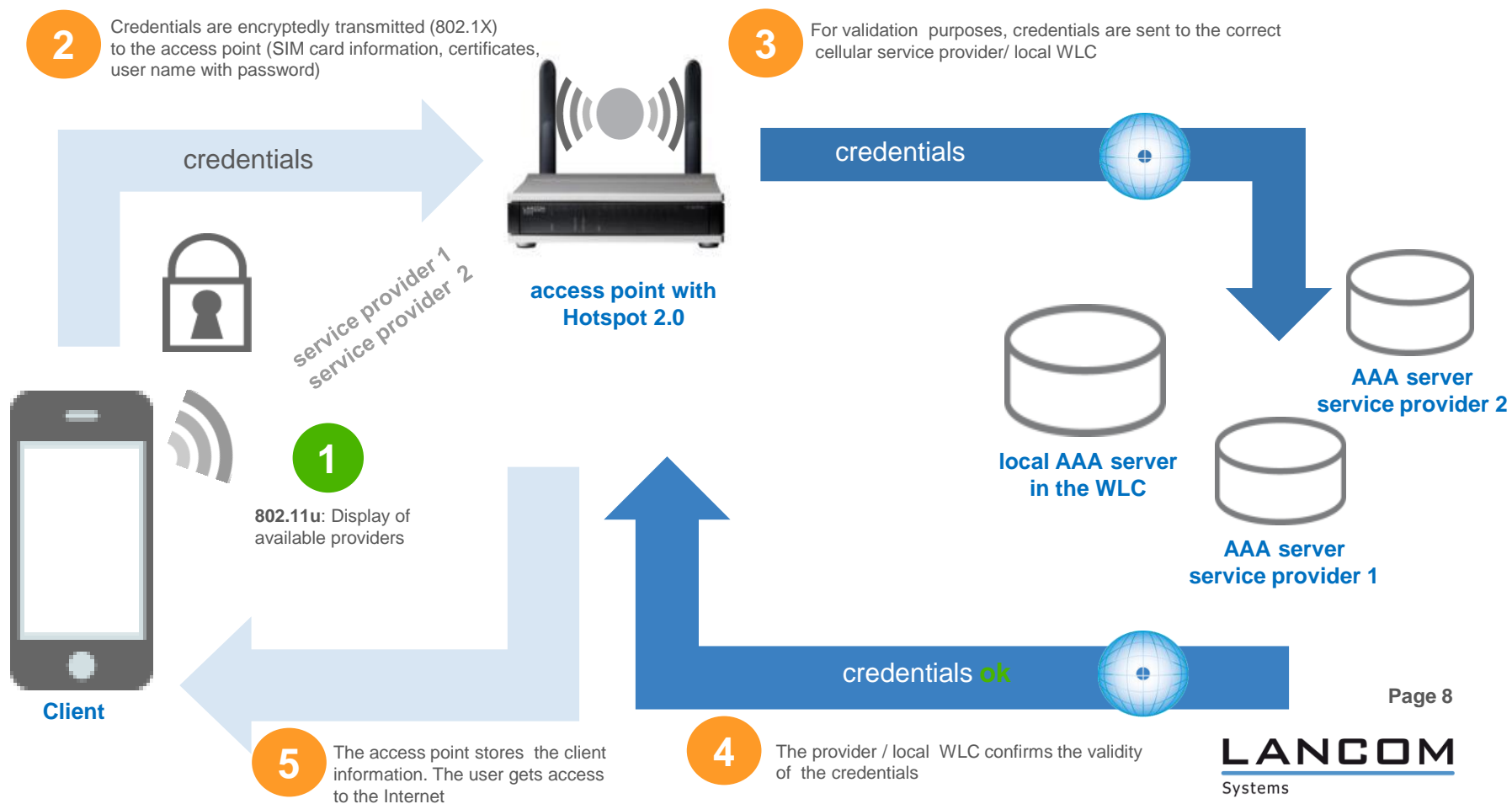
- A fast alternative to cellular networks, which cannot stand up to the strong growth of smartphones and tablets
- Clients are automatically redirected to the WLAN, for example at events where the cellular network is overloaded by many clients
- A wide bandwidth, which is not yet achieved even by LTE



LCOS 8.82

Highlight feature: Hotspot 2.0

Functionality of Hotspot 2.0



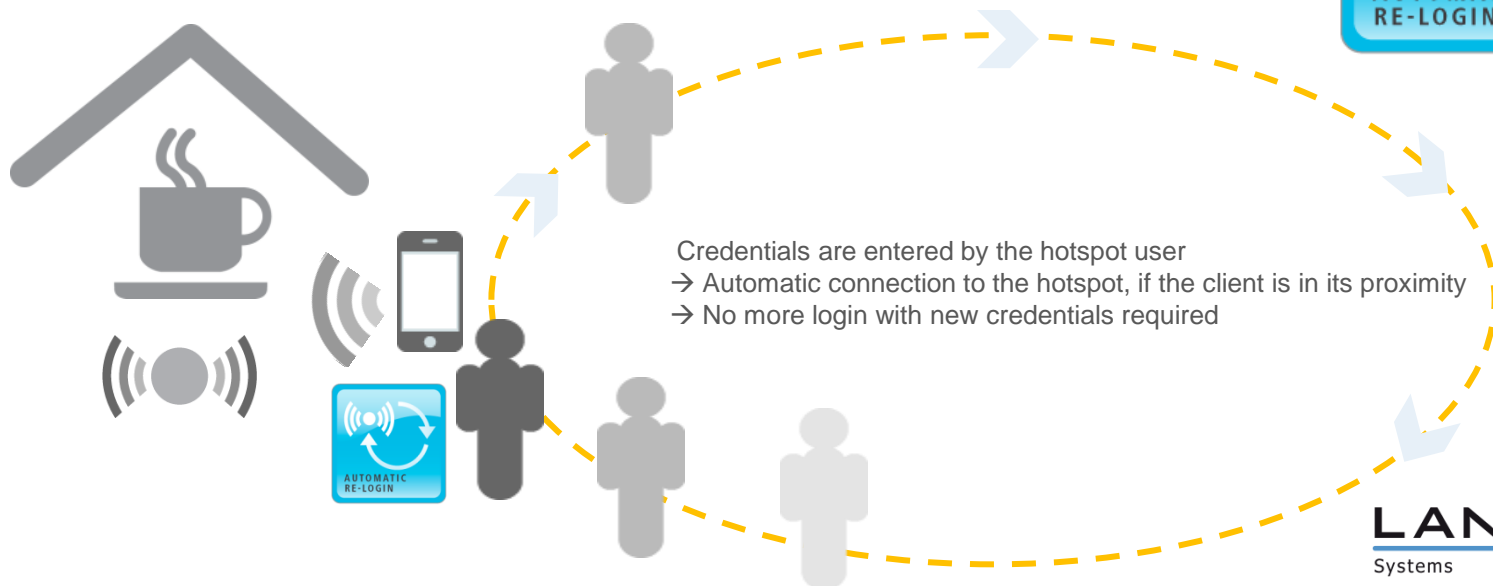
LCOS 8.82

Highlight feature: Public Spot re-login

Functionality of automatic re-login

- One-time authentication of credentials
- Storage of device information after authentication (MAC address)
- Automatic connection to the hotspot
- Period of the automatic re-login is configurable

A significantly increased comfort for regular guests!

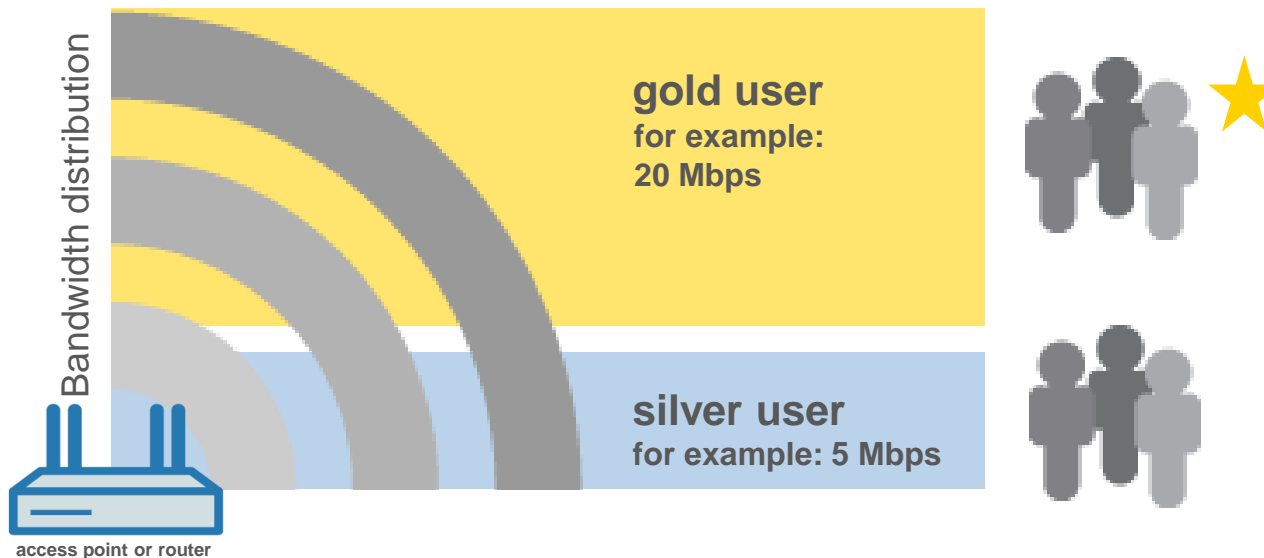


LCOS 8.82

Highlight feature: Public Spot bandwidth management

Bandwidth management in the LANCOM Public Spot

- The available bandwidth for guest accesses can be configured for each user*
- The bandwidth can be split between different user groups
- Possibility of classification into premium users and normal users
- Pricing models depending on classification are possible



*Not configurable in combination with Layer 3 tunneling

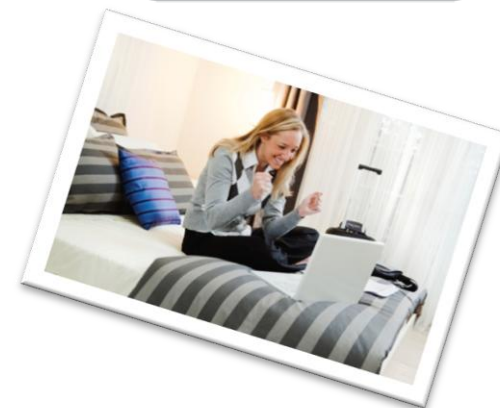
LCOS 8.82

Highlight feature: Public Spot PMS Accounting Plus Option

LANCOM Public Spot PMS Accounting Plus Option

Comfortable user authentication on the hotspot

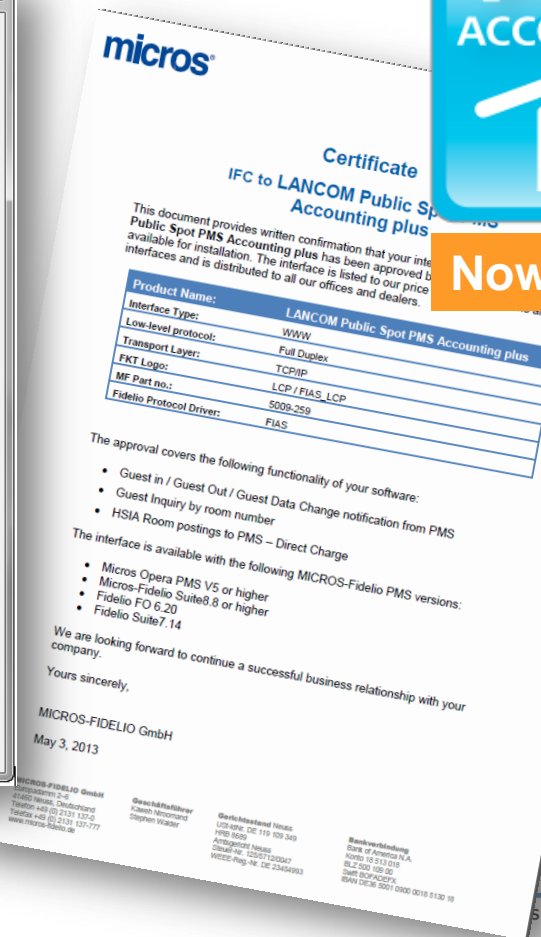
- Interface (FIAS) for connecting the Public Spot to a Property Management Software (PMS)
- Public Spot users are identified according to the hotel database
- Supported scenarios:
 - **Free-of-charge access:** Guests log in with their last name and room no.
 - **Paid access:** Guests choose a rate, the bill is accounted to the room number
- Benefits:
 - No vouchers, no printer necessary
 - Only hotels guests get access to the Internet
 - Suitable for LANCOM devices, such as routers of the 178x series, WLAN controllers, and current central-site gateways.



Note: Public Spot Option is required in addition

Highlight feature: Public Spot PMS Accounting Plus Option

- 
- PMS**
ACCOUNTING+
- Now certified

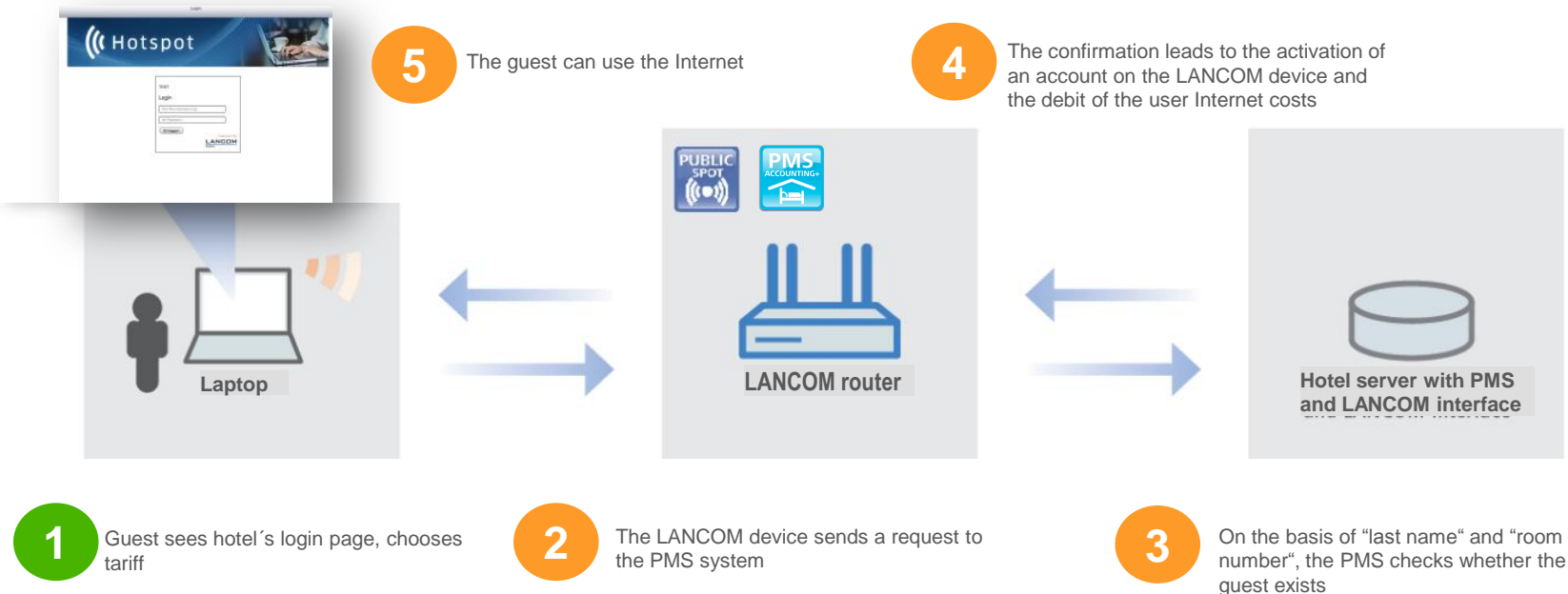


LCOS 8.82

Highlight feature: Public Spot PMS Accounting Plus Option

Example:

Charged Internet access is automatically billed to the guest's hotel room account



LCOS 8.82

Further features: CC Start-up Wizard

Wizard for a comfortable and certified start-up of LANCOM CC devices

- The CC Start-up Wizard easily guides to a secure CC-compliant start-up based on CC EAL 4+

LANconfig - CC Start-up Wizard

LANCOM CC Start-up

This wizard enables the start-up of a LANCOM CC router for an operation in certified CC mode. Please make sure that you have downloaded the certified firmware LCOS CC from the LANCOM website.

Com port: COM100

Firmware: D:\CC LCOS\LC-1781A-4G-8.70.0096-Rel.upx

Checksum: laee65e33b6e9cf8a94361ffc7995164a0f1dc5c72

Configuration: New configuration via setup wizard

Device name: CC-Doku

IP address: 192.168.1.1

IP mask: 255.255.255.0

Password: ☐ Show

Repeat:

Seed: The seed is generated automatically during initiati ☒ Generate automatically

SSH key: The SSH key is generated automatically during init ☒ Generate automatically

By generating a seed, another random number for generating a highly secure SSH key is produced.



Comfortable start-up in combination with
the LANCOM CC Start-up Kit

LANCOM
Systems

LCOS 8.82

Further features: new design of the login interface

New design of the login interface for the LANCOM Public Spot*

- Modern and user-friendly login template
- Automatically adapts to the window width of the used client
- Ideal for the screen size of smartphones and tablets



*When using your own templates, the design does not change

WISPr (Wireless Internet Service Provider roaming)

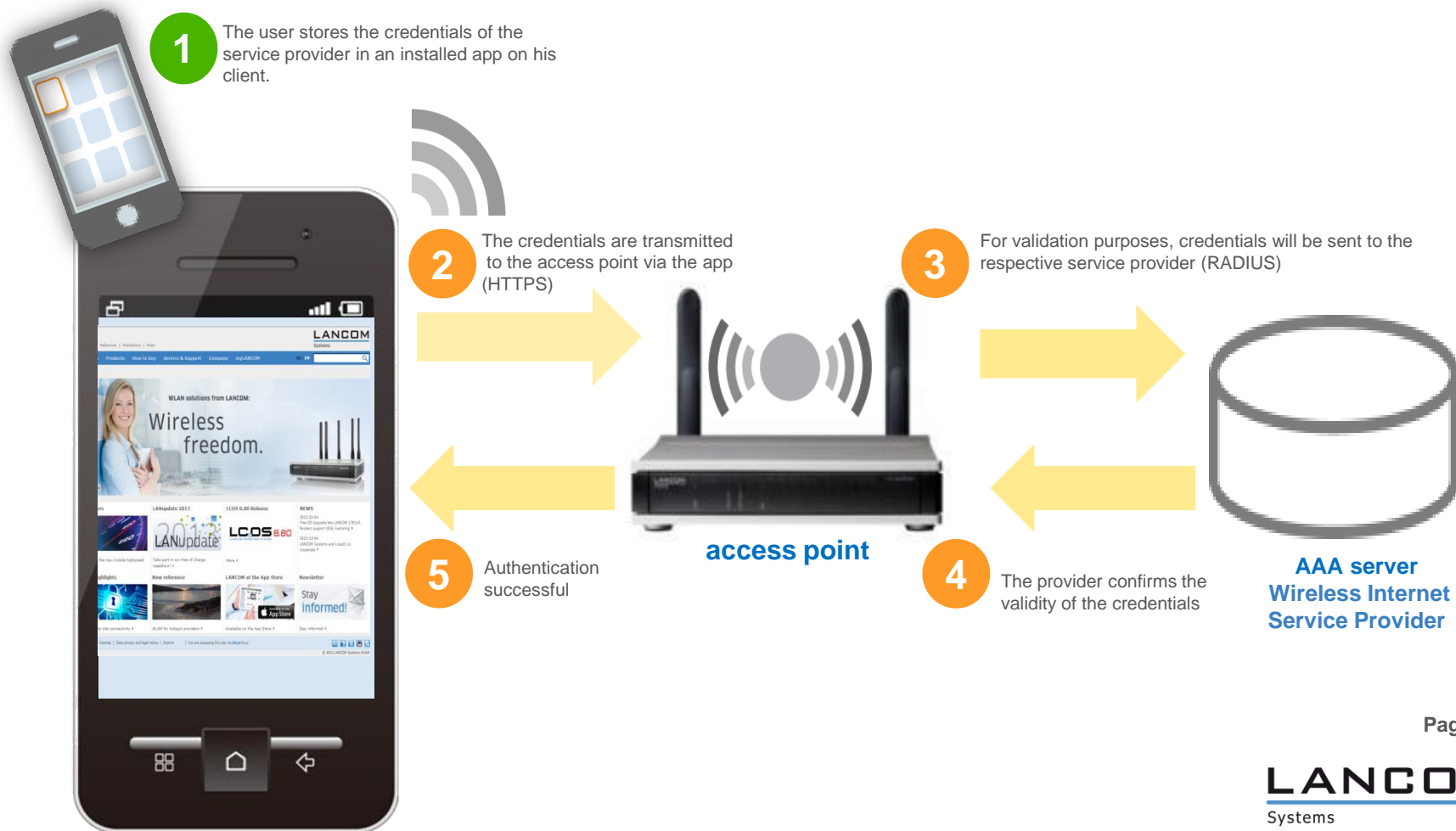
- With his personal login credentials the user gets access to each hotspot which belongs to his WISP
- Credentials are stored in mobile apps
- At return to the hotspot, credentials are automatically transmitted via HTTPS with one click
- Ideal for hotspot providers and service providers who want to provide their customers a hotspot login via app



LCOS 8.82

Further features: WISPr

Functionality of WISPr (Wireless Internet Service Provider roaming)

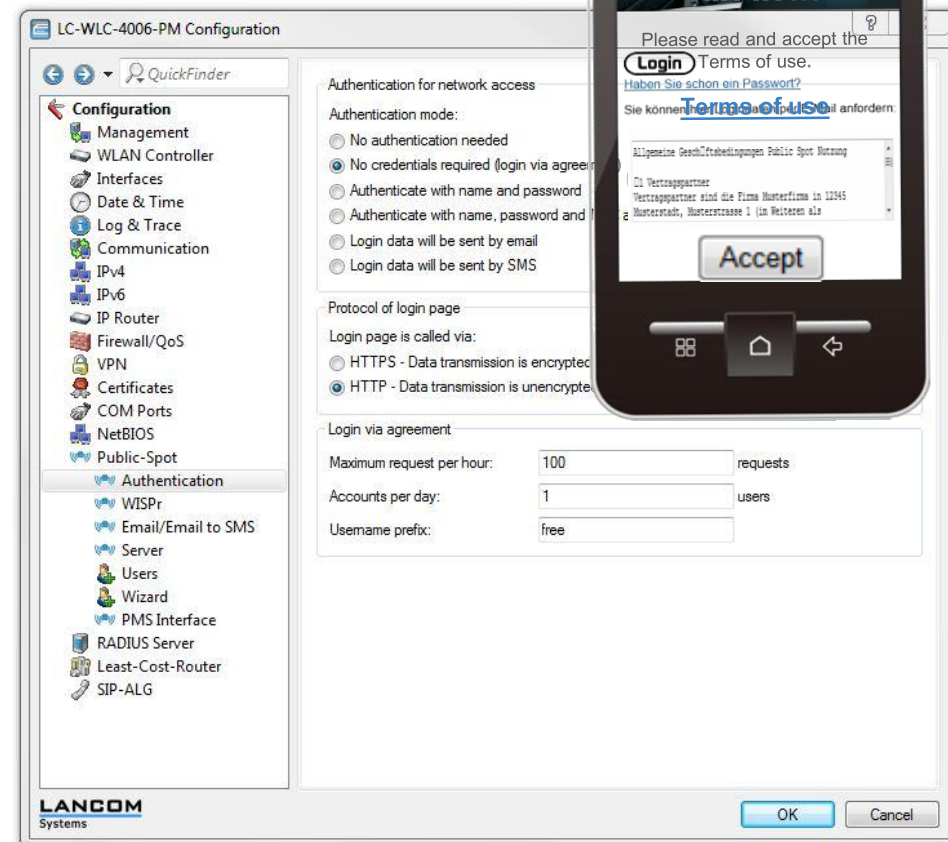


LCOS 8.82

Further features: Login with one click

Simple Public Spot login with one click

- After accepting the terms of use, the user gets WLAN guest access for a definable period
- No registration of the user by username and password required
- Ideal for setting up comfortable and temporary hotspots



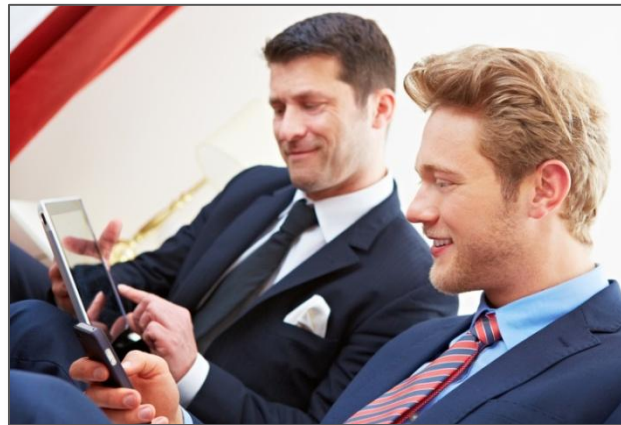
LCOS 8.82

Further features: Smart Ticket

Already available since LCOS 8.80

What is Smart Ticket?

- Comfortable end-user self-service portal for the LANCOM Public Spot
- The user directly receives the credentials for the Public Spot via SMS or e-mail
- Completely without printing vouchers, no staff on-site is necessary!



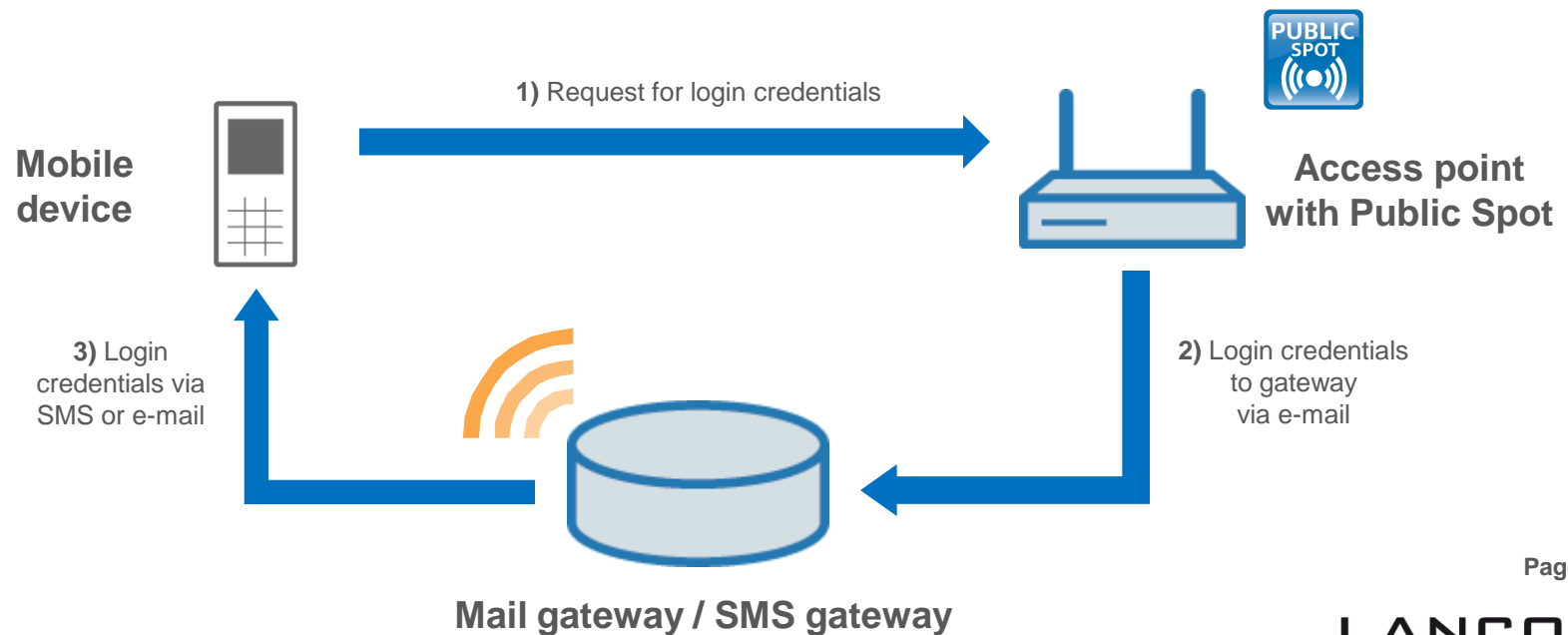
LCOS 8.82

Further features: Smart Ticket

Included in the
LANCOM Public Spot

What does Smart Ticket do?

- Gives the user the possibility to accredit himself for Public Spot access (Captive Portal functionality)
- Automatic transmission of credentials as an SMS via email2sms gateway



LCOS 8.82

Further features: WLC Basic Option for Routers

LANCOM WLC Basic Option for Routers

- Central management of **up to 12** LANCOM access points and WLAN routers
- Simple integration of WLAN management solutions into new and existing networks
- No additional devices necessary



LCOS 8.82

Further features: Improvements in LANconfig

Usability improvements in LANconfig

- More overview thanks to wider application windows, extended tree views, and summary of configuration parameters

The screenshot displays the LANconfig application window for a LANCOM 1781EF+ device. The interface is divided into several sections:

- Configuration Tree (Left):** A tree view showing the configuration structure. The 'IKE' section is highlighted. A callout box labeled 'NEW: optimized configuration bar' points to this tree.
- Main Configuration Area (Center):** Contains sections for 'IKE proposals', 'IKE keys and identities', and 'IPSec proposals'. Each section has a description and buttons to create or manage proposals. A callout box labeled 'NEW: Summary of configuration parameters (previously individually in the configuration bar)' points to the buttons in this area.
- Options Dialog (Right):** A dialog box with tabs for 'General', 'Startup', 'Communication', 'Proxy', 'Application', 'Backup', 'Extras', and 'Update'. The 'General' tab is selected, showing options for 'Configuration of devices' and 'QuickFinder'. A callout box labeled 'NEW: Simplified view of the device features' points to the 'Configuration of devices' section.

At the bottom, a large orange arrow points from the left towards the right, with a callout box labeled 'NEW: wider window'.

LCOS 8.82

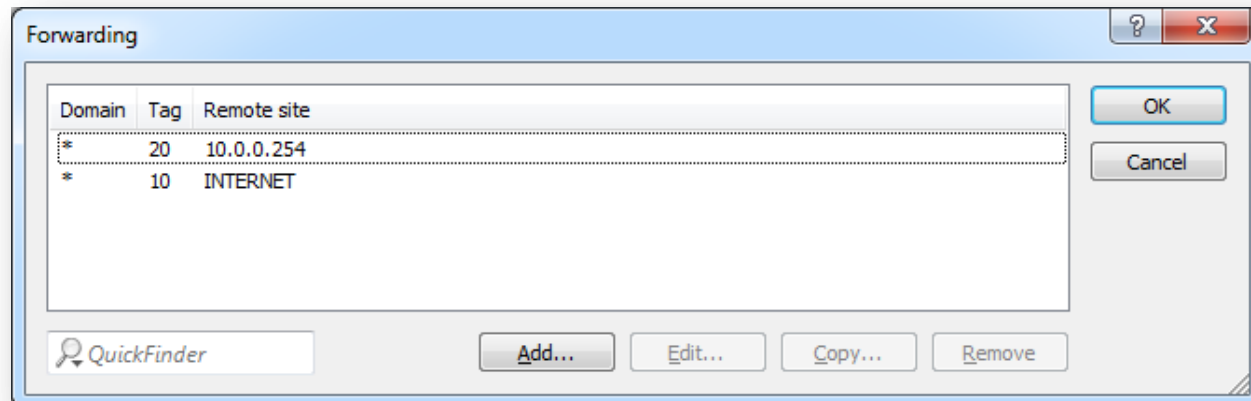
Further features: DNS per ARF

For each ARF network a separate DNS server can be configured

Ideal for logically separate networks that require standalone DNS server configurations

■ **New configuration options:**

- Separate names for domains can be assigned
- Individual host name can be assigned
- Service configurations are configurable for each ARF network
- Forwarding destinations (including wildcards) can be customized
- Context tables to determine the DNS server properties are configurable for each ARF network



LCOS 8.82

Further features: SSHv2 support

SSHv2 support for LANconfig

- For device management via SSHv2

Activation of SSH in LANconfig

The screenshot shows the 'Options' dialog box with the 'Communication' tab selected. The 'Network' section has a checkbox for 'Always clear ARP cache before IP communication'. The 'Protocols' section has checkboxes for 'HTTPS', 'SSH', 'HTTP', and 'IFTP', with 'SSH' highlighted by an orange box. Below this, the 'SSH authentication' section is highlighted by an orange box and contains a checked 'Use public key authentication' checkbox, a 'Private key file' field with the path 'C:\Users\username\Desktop\Folder\S...', a 'Browse...' button, and a 'Passphrase' field with masked characters. At the bottom, there are sections for 'Concurrent RAS device connections' and 'Concurrent IP device connections', each with radio buttons for 'Allow an unlimited number' and 'Restrict the number of concurrent', and a 'Max.' field set to '2'. 'OK' and 'Cancel' buttons are at the bottom right.

SSH authentication with private key

Device access via definable SSH port

The screenshot shows the 'New Device' dialog box with the 'Interface' tab selected. The 'Interface' section has radio buttons for 'Network connection (TCP/IP)', 'Serial port', and 'Dial-Up connection', with 'Network connection (TCP/IP)' selected. Below this are fields for 'IP/Name' (set to '10.1.1.1') and 'Timeout' (set to '10' seconds). The 'Communication protocols and ports' section has checkboxes for 'HTTPS', 'SSH', 'HTTP', and 'TFTP', with 'SSH' highlighted by an orange box. Below these are checkboxes for 'Prefer \'check\' via TFTP (faster)', 'Check the status of this device at startup', and 'Check for possible firmware updates'. The 'General' section at the bottom has fields for 'Administrator', 'Password' (masked), and 'Description'. 'OK' and 'Cancel' buttons are at the bottom right.

LCOS 8.82

Further new features

- **Dynamic VLAN allocation in the LANCOM Public Spot** - Allocation of Public Spot users to individually configurable networks
- **Expansion of SYSLOG entries** - The number of lines stored in the SYSLOG has been expanded from 2,000 to over 20,000 (for countries which require data preservations, configurable for a period of 6 to 24 months)
- **LANCOM WLC Basic Option for Routers** - The number of managable WLAN devices can be upgraded to 12
- **Band Steering is configurable via WLC** – For an improved load distribution, WLAN controllers centrally configure the feature Band Steering for all managed WLAN devices.
- **Advanced display of cellular login attempts** - troubleshooting information on unsuccessful login procedures into cellular networks is available in the SYSLOG
- **Firewall routing tag** - The source routing tag can be used in the firewall to set up rules for different ARF contexts independently from each other
- **...and a wide range of further detail improvements**

Service & support

We wish you every success with your LANCOM product and the new LCOS!

We look forward to your **praise and criticism, suggestions or questions:**

myLANCOM@lancom.eu

The latest information about service and support can be found on our support flyer, our Internet site or from our **Knowledge Base**.

If the manual and our latest support topics on the Internet do not resolve your issue, then feel free to contact our new support hotline at landline rates in Germany from Monday to Friday between 9:00 AM and 5:00 PM (CET).

+49 2405 6459777

Your LANCOM Systems team