Release Notes

LCOS SX

5.20 RU1

Table of contents

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.

LCOS SX 5.x is the operating system for all LANCOM switches of the XS and GS-4500 series.

The LCOS SX 4.x operating system is available for all LANCOM switches of the GS-3000 series.
The LCOS SX 3.32 / 3.34 operating system is available for all LANCOM switches of the GS-1300 / GS-2300 series.
The release notes for these device series can be found as usual on the LANCOM website in the download area of the respective switch.

This document describes the new features of the LCOS SX software release 5.20 RU1 as well as the changes and improvements to the previous version.

Devices delivered with LCOS SX 5.00 or higher 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 at any time on the device's WEBconfig under "Configuration > LMC". You can manually re-enable the usage of the LMC whenever you want.

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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 has been extensively and successfully tested in practice. It contains new features and improvements over previous LANCOM operating system versions. Recommended for use in productive environments.

Release Update (RU)

This is a further development of an initial release version and contains minor improvements, 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.

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3. Note on the firmware update

Never disconnect the switch from the power supply during a firmware update, as the device will not start properly if the update process is aborted.

Please make sure to **back up your configuration files** before updating your LANCOM devices to a new firmware version!
Due to the partly extensive feature enhancements, a **downgrade** to the old firmware is **no longer possible** automatically **without such a backup**.
Please note that different firmware files may be available for your device.

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4. New features, improvements, and history

LANCOM XS and GS-4500 series - LCOS SX 5.20.0167 RU1

New features
→ Switch port speed and duplex configurations are now available from within the LMC.
→ A rollout agent already integrated in the LANCOM GS-3000 family, which facilitates the automated commissioning of unconfigured devices, has been added.

Bug fixes
→ A vulnerability in the zlib library has been fixed (CVE-2018-25032).
→ A vulnerability in the OpenSSL library has been fixed (CVE-2022-0778).
→ Vulnerabilities in the software suite 'Net-SNMP' have been fixed (CVE-2022-24805 bis CVE-2022-24810).
→ The option to configure a service port was not available in the 'Source Interface Configuration' menus (e.g. Security → RADIUS menu).
→ When a configuration file in which a VLAN was configured was loaded into a GS-4500 series switch via SCP, the switch performed an unmediated reboot.
→ In the status information of an SFP port (menu 'System → Port → SFP Information') the receive level (Mon 3, RX Power) was not displayed.
→ If a loop was plugged in, it was correctly recognized by the system and the port was switched off, but the information in the columns 'Loop Count' and 'Time of last Loop' remained unchanged.
→ In the menu 'System → Advanced Configuration → DNS → Source Interface Configuration' the option 'Loopback' was missing. As a result, no loopback interface could be selected.
→ Due to an error in the DHCP client of a switch of the LANCOM GS-4500 series, it could happen that the switch rebooted after about 22 days.
→ XS and GS-45xx switches were no longer accessible after a reboot if two port mirroring sessions had previously been configured and saved in the configuration. The ports no longer received a link after this.
→ If a default route was stored on the switch, multicast packets with a TTL greater than 1 were not transmitted by it.
→ The port speed of LANCOM XS-6128QF switches managed via the LMC was not displayed correctly in the detailed configuration of the LMC.

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→ If in a stacking group of LANCOM GS-4554XP and/or LANCOM GS-4530XP switches the switch with the designation 'Unit 1' was not the stack manager, PoE status information could not be read out completely via SNMP. When managing such a stacking network via LMC, no PoE information was displayed at all.

→ When using the DHCP server and the DHCP relay agent for different networks at the same time, the DHCP server in the switch sent a DHCP NAK to the DHCP client via the DHCP relay agent. In the configuration of the DHCP relay agent on the console, an exception can now be configured for such a case ('local-dhcp-discard').

→ When setting the 'Summer Time' to EU or USA the values were set correctly, but afterwards the option 'Recurring' was displayed in the selection menu instead. For better understanding, the EU or USA options are now displayed after setting the corresponding option.

→ Via web interface it was possible to assign an 'Authentication List' to the serial port, which did not contain the authentication method 'Enable' or 'Local'. If the other authentication methods failed, no fallback was possible. A corresponding error message is now issued.

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LANCOM XS and GS-4500 series - LCOS SX 5.20.0093 Rel

New features
→ Firmware integration of the new stackable access switch series GS-45xx
→ Support for the stacking and LAG (Link Aggregation Groups) functions in the LANCOM Management Cloud
→ Switch Config Notifier: as from LCOS SX 5.20 Rel the switches of the XS and GS-45xx series report their local configuration changes to the LMC, and this takes the changed parameters into account in the detailed configuration.
→ Note: Please note that the recording of changes does not start until the switch is shown as online in the LMC.

Bug fixes
→ Various bug fixes have been made in the stacking operation environment.
→ Via the detail configuration in the LMC no syslog server could be stored in the menu 'System / Logs / Server'.
→ The console command 'startlmc' can be used in LCOS to pair with the LMC by specifying the serial number and the cloud pin. When executing the command 'startlmc' on LCOS SX, an activation code from the LMC was also requested by mistake.
→ ISDP / CDP (Industry Standard Discovery Protocol / Cisco Discovery Protocol) was active by default. When LLDP was enabled and another network device with LLDP and ISDP / CDP support was used, this caused the device name to be displayed twice on this device.
→ ISDP / CDP is now disabled by default.
→ When the switch configuration was reset to default settings in the detail configuration of the LMC, the order of the VLAN tables changed. This resulted in the configuration not being able to be rolled out after reconfiguring the VLAN settings in the LMC.
→ Various improvements have been made to the stability of the WEB configuration interface (WEBconfig).
→ A system name, which was assigned by the LMC in the configuration of the switch, was not displayed in the command line of the switch (CLI).

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LANCOM XS series - LCOS SX 5.10.0033 RU2

With LCOS SX 5.20 there is a change to the *.upx file format. Since LCOS SX 5.10 RU2 contains preparatory steps for the change to the new file format, this version is required for a later update to LCOS SX from version 5.20 onwards.
Please note that a firmware downgrade to an older version is no longer possible after the update to version 5.10 RU2.

   Bug fixes
   → Due to an index error in some multi-index tables of the LMC, managed aggregation switches displayed an error message about a power supply problem in the LMC, which was not present.
   → In the web interface of a LANCOM XS-6128QF the 'System Name' was not displayed immediately in the dashboard.
   → If a password was set on a switch managed via LMC, login data was requested for this switch when the Secure Terminal was called via the LMC instead of logging the user in directly with the user data of the LMC.
   → With the parameter '?' all available commands can be displayed on the CLI. In the LMC's Secure Terminal, the '?' parameter must also be confirmed with the <Enter> key.
   → When entering the parameter '?' in the Secure Terminal once the command up to the '?' was executed and once the complete command. When entering the command "show ?" this led to the message "Command not found / Incomplete command" being displayed first ("show" on its own is not a complete command), and then all available commands ("show ?") were displayed.

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LANCOM XS series - LCOS SX 5.10.0025 RU1

Bug fixes
→ It could happen that the client for connecting to the LANCOM Management Cloud (LMC) terminated itself after pairing with the LMC. In addition it was not possible to restart the client via command line interface.
→ If the switch was configured as a DHCP client and could not establish a connection to the LMC, no DHCP renew was performed. In this case, the error message "No DHCP server detected" appeared in the LMC control state trace.
→ It could sporadically happen that the switch could not read the information of plugged SFP modules.
→ On the LANCOM XS-6128QF it could happen that only a speed of 10 Gbps was detected when using SFP-DAC25 cables on the rear stacking ports (board type 3 or 4).
→ If errors occurred when rolling out a configuration via the LMC, it could happen that these were transmitted to the LMC incompletely or not at all.
→ Furthermore, a race condition was fixed that prevented a valid VLAN configuration from being rolled out via the LMC.
→ After changing the management VLAN on a switch, it did not perform a DHCP renew and was therefore no longer accessible for connections. A manual DHCP renew request had no effect.

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LANCOM XS series - LCOS SX 5.10.0013 Rel

New features
→ Full Layer-3 functionality through VRRP and policy-based dynamic routing via OSPF v2 / OSPF v3 (all LANCOM XS switches) and BGP4 (XS-6128QF only)
→ The 'Next Active' firmware can now be set on all switches simultaneously in the stack via WebGUI.
→ AES-192/256 and SHA-2 algorithms are now supported. This enables SNMPv3 connections with LANmonitor.

Bug fixes
→ In the logging of the LANCOM XS-6128QF it could happen that due to a readout error an incorrect temperature was determined and this was output as an alarm message.
→ In a stacking scenario, operating data such as fan speeds, CPU temperature, etc. were only displayed by the manager device.
→ The IP routing table of a switch was not read out completely via SNMP, which resulted in the configured local networks not being displayed in LANmonitor, for example.
→ LACP was found in WEBconfig in the path 'Switching / Port Channel'. The menu 'Port Channel' has now been renamed to 'Port Channel/LAG' so that this menu corresponds to the corresponding menu of the other LANCOM switches.
→ If the MTU was changed on several switch ports at the same time, the correct MTU was only set on the first selected port. On the remaining ports, a value corresponding to the stored MTU + 18 was set.
→ If the 'Stacking' and 'Loop Protection' functions of a stacking port were configured via SNMP, this resulted in these ports no longer being visible in the configuration. When configuring the 'Loop Protection' of a stacking port via web interface, this port was subsequently also no longer visible in the configuration.
→ Via console and via web interface it was possible to add unsupported switch types to a stack whose stacking ports are not compatible with each other (e.g. an XS-5110F with an XS-5116QF).
→ If routing was activated for a VLAN after it was created and further VLAN settings were made, the view in the web interface no longer updated and froze. Furthermore, the connection to the web interface was completely lost and it was no longer possible to establish a connection via SSH.
→ It could happen that the SFP inventory data was read out incorrectly or incompletely via CLI.

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LANCOM XS-5xxx - LCOS SX 5.00.0117 RU2

Bug fixes

→ It could happen that incorrect readout data of the module temperature was generated due to incorrect timing on the I2C bus. As a result, the "Fan LED" (status of the fan) on the front of the switch turned red and the function of the switch was affected. However, after a restart, the switch worked normally again.

→ The I2C bus was also completely disturbed in rare cases, resulting in incorrect output values, such as incomplete inventory data of the SFP+ modules. This disturbance was also corrected by correcting the I2C timings.

LANCOM XS-5xxx - LCOS SX 5.00.0116 RU1

This release update is the first for the new LANCOM aggregation switches of the XS-5xxx series.

New features

→ Added the option to redirect HTTP to HTTPS without disabling HTTP completely.

→ Using the CLI command 'erase permanent-storage' it is now possible to reset all persistent data to factory defaults. This means that all settings, sensitive data, and certificates are deleted. After executing this command it is possible to pass the switch on to another customer or partner without hesitation.

→ Until now, not all monitoring information from the switches was recorded in the LANCOM Management Cloud. From this version on all information can be read out as usual in the LMC.

→ When tunneling terminal access from the LMC, it is no longer necessary to enter user name and password. This redundant query has been removed.

Bug fixes
→ During the LANconfig device search via TFTP broadcast it could sporadically happen that a switch answered the request with an 'ICMP port unreachable'. As a result the switch was not found during a device search.
→ If the DHCP client of the switch was active, static IP entries were not saved in order to be added to the configuration and become active when deactivating the DHCP client.
→ Synchronization of the firmware in the stack did not work if a stack member who joined a stack joined another stack with a higher firmware version.
→ A vulnerability existed in OpenSSH 8.3p allowing for potential Denial of Service (DoS) attacks and remote execution of malicious code (CVE-2020-15778).
→ This vulnerability in the OpenSSH library has been fixed.
→ Synchronization of the SSH host key in a stacking network to all members did not work. As a result, if management was moved to another switch while keeping the IP address of the stacking group, an SSH client login to the switch would result in an unknown host key warning message.

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5. Common advice

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.

Support notes & known issues

Latest support notes and known issues regarding the current LCOS SX version can be found in the download area of our website: Common support hints

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